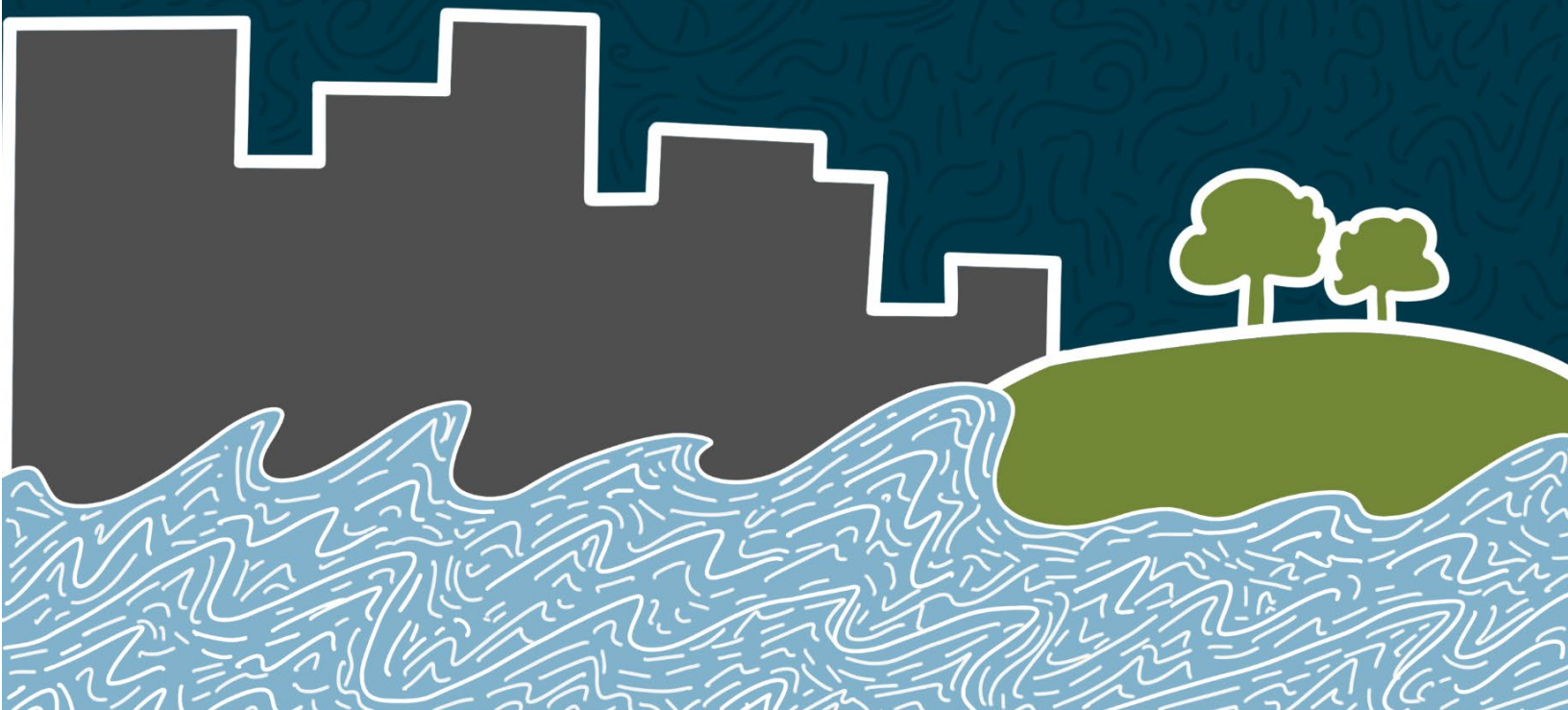
Prince George's County & City of Laurel

HAZARD MITIGATION PLAN 2023

APPENDICES



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Appendix A. Mitigation Advisory Committee

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    a. Presentation
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3. Mitigation Strategy Workshop
    a. Presentation
    b. Agenda
    c. Notes
    d. Attendance
4. Mitigation Strategy Feedback Survey
    a. Prince George's County Survey
    b. City of Laurel Survey
5. Plan Review Meeting
    a. Presentation
    b. Agenda
    c. Notes
    d. Attendance

A. Kick-Off Meeting

A.1. Presentation

Dewberry





Introductions

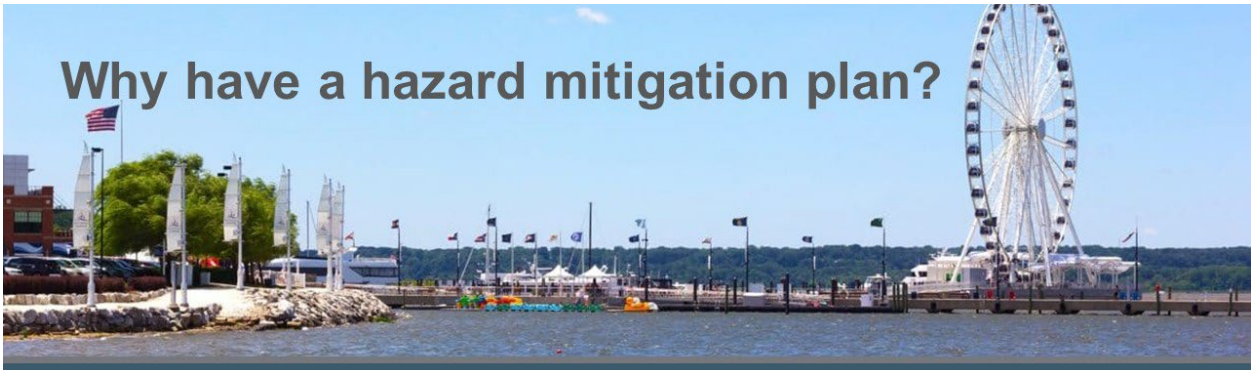
The Decision Makers

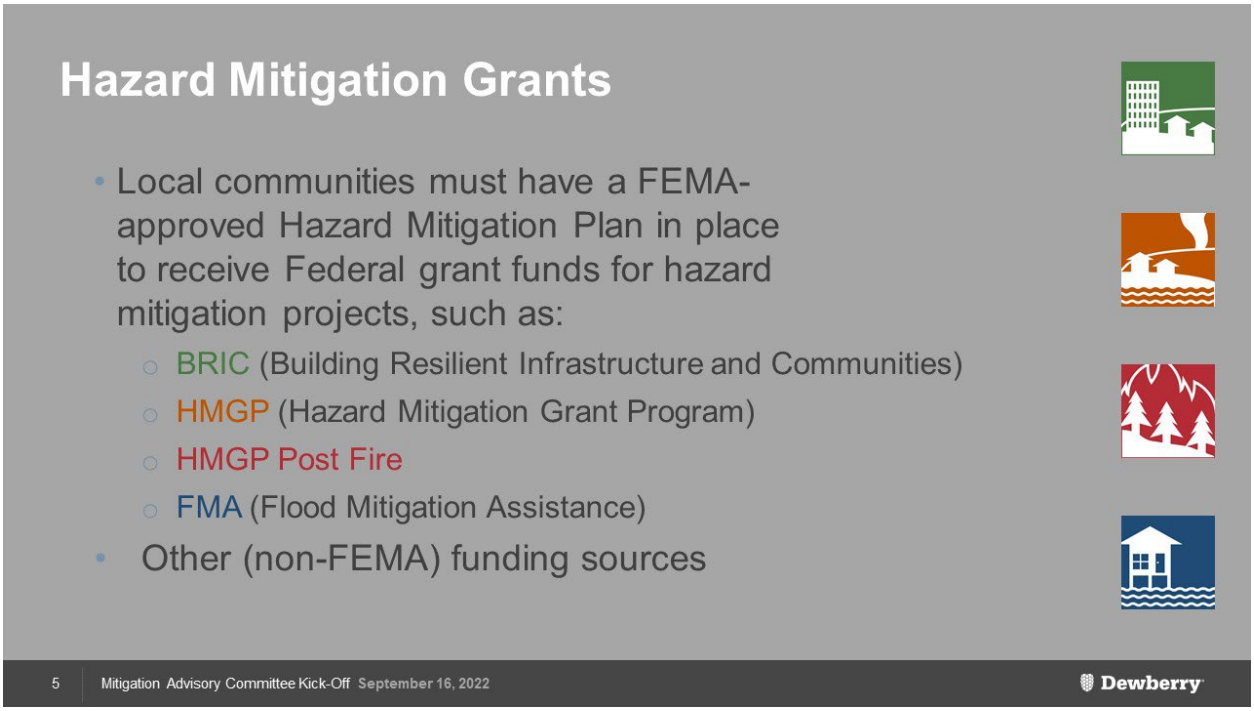
- Mitigation Advisory Committee (MAC)
- Maryland Department of Emergency Management (MDEM)
- FEMA Region III

Dewberry Team

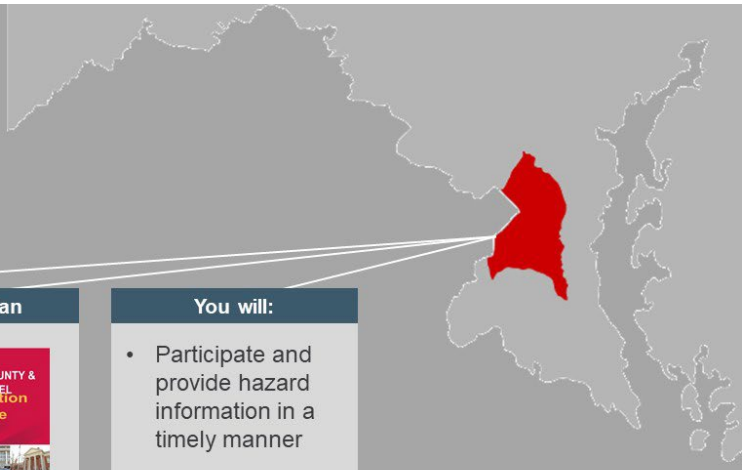
- Scott Choquette, Project Manager
- Jade Payne, Deputy Project Manager
- Hanna Rush, Mitigation Planner and HIRA Lead
- Jesse Nelson, Mitigation Planner
- Jillian Browning, Hazus Lead
- Other SMEs as-needed

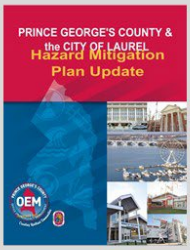
3 Mitigation Advisory Committee Kick-Off September 16, 2022 Dewberry


Why have a hazard mitigation plan?
• Reduces or eliminates the need to respond (Lessens resource burden)
• Creates resiliency and sustainability
• Promotes Data sharing between different levels of government and academia
• Supports decision-making
• Disaster Mitigation Act of 2000
◦ Certain FEMA Public Assistance (State Plans)
◦ FEMA's Hazard Mitigation Assistance Programs
4 Mitigation Advisory Committee Kick-Off September 16, 2022
Dewberry


Hazard Mitigation Grants
• Local communities must have a FEMA-approved Hazard Mitigation Plan in place to receive Federal grant funds for hazard mitigation projects, such as:
◦ BRIC (Building Resilient Infrastructure and Communities)
◦ HMGP (Hazard Mitigation Grant Program)
◦ HMGP Post Fire
◦ FMA (Flood Mitigation Assistance)
• Other (non-FEMA) funding sources
5 Mitigation Advisory Committee Kick-Off September 16, 2022
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Prince George's
Planning Context



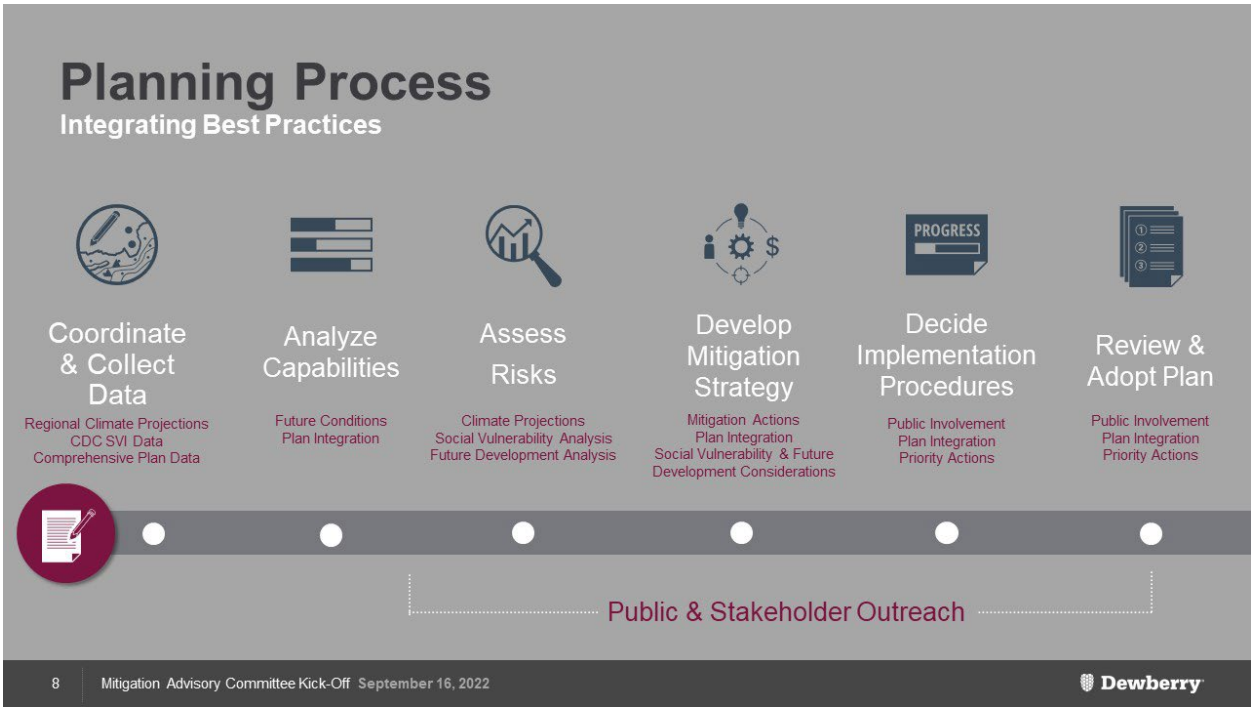
Dewberry will:	2017 HM Plan	You will:
• Facilitate the process • Provide technical expertise and consultation • Do the heavy lifting		• Participate and provide hazard information in a timely manner • Make final decisions • Provide local context

6 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry

Hazard Mitigation Plan Update

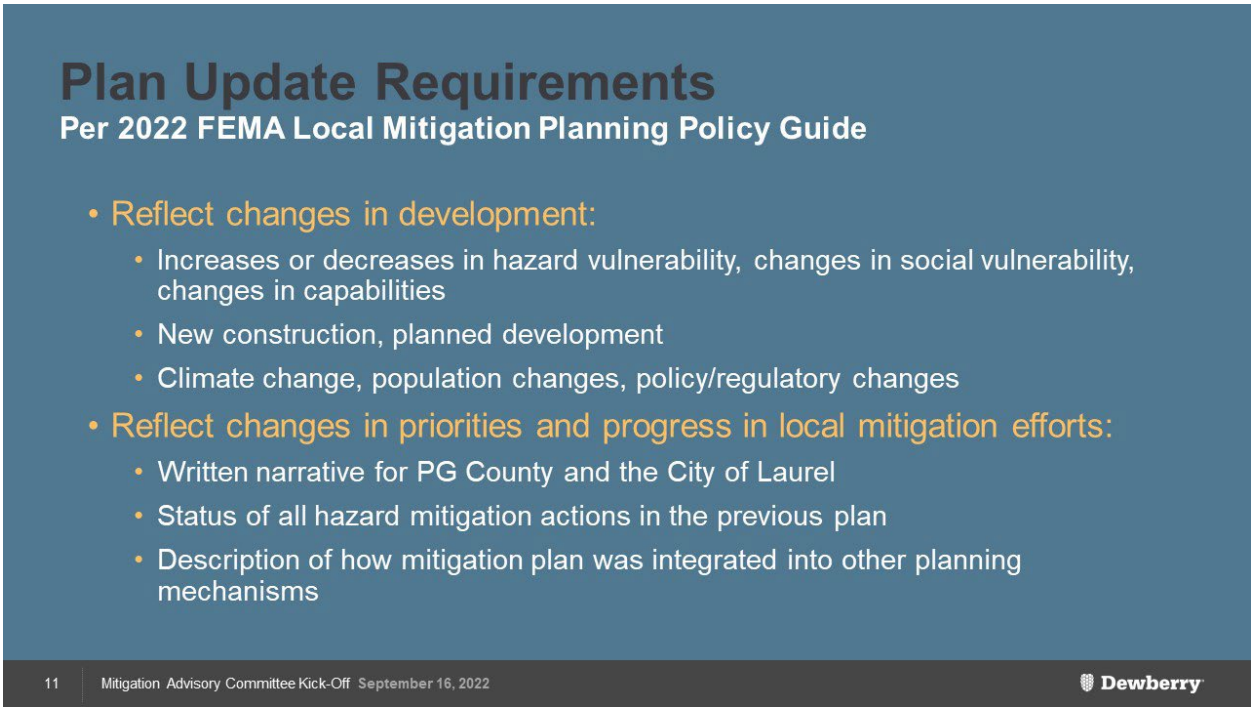
Overview

7 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry


Planning Process
Integrating Best Practices
Coordinate & Collect Data
Regional Climate Projections
CDC SVI Data
Comprehensive Plan Data
Analyze Capabilities
Future Conditions
Plan Integration
Assess Risks
Climate Projections
Social Vulnerability Analysis
Future Development Analysis
Develop Mitigation Strategy
Mitigation Actions
Plan Integration
Social Vulnerability & Future Development Considerations
Decide Implementation Procedures
Public Involvement
Plan Integration
Priority Actions
Review & Adopt Plan
Public Involvement
Plan Integration
Priority Actions
PROGRESS
Public & Stakeholder Outreach
8
Mitigation Advisory Committee Kick-Off September 16, 2022
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Public Outreach Strategy
Stakeholder & Community Champion Engagement
Project Website
Online Survey
Virtual Workshops / Public Meetings
Neighboring Jurisdictions Engagement
Videos
Story Map
Hazard Mitigation Plan
9
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Project Milestones
We are here
Pre-Planning
Kickoff Meeting
Workshop 1
Workshop 2
Workshop 3
Final Review
2017 plan review
Initial research and online data collection
Data collection
Capability assessment survey
Outreach website
Stakeholder lists
Public Survey
Capability assessment
Hazard ID & risk assessment
Mitigation goals & objectives
1st Public Meeting
Mitigation strategy
Plan maintenance procedures
Draft Plan
2nd Public Meeting
MDEM and FEMA Reviews
Adoption
10
Mitigation Advisory Committee Kick-Off September 16, 2022
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Plan Update Requirements
Per 2022 FEMA Local Mitigation Planning Policy Guide
Reflect changes in development:
Increases or decreases in hazard vulnerability, changes in social vulnerability, changes in capabilities
New construction, planned development
Climate change, population changes, policy/regulatory changes
Reflect changes in priorities and progress in local mitigation efforts:
Written narrative for PG County and the City of Laurel
Status of all hazard mitigation actions in the previous plan
Description of how mitigation plan was integrated into other planning mechanisms
11
Mitigation Advisory Committee Kick-Off September 16, 2022
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Right-Sizing the Update Scope

Per 2022 FEMA Local Mitigation Planning Policy Guide

- The participants choose the scope
- "Where hazard risk has not significantly changed, a jurisdiction may simply use the update process to review, fill in gaps and verify existing information. The updated plan must document that the information was reviewed and remains accurate."
- "The update may be small if relatively little has changed, or it may be large if more engagement is needed to bring together partners and stakeholders due to changes in demographics, development, and disaster frequency and intensity."

12 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry

Improvements to the Plan

- Hazus Loss Estimation
- Expanding stakeholder and public outreach
- Address future conditions (i.e., climate change land use change, population change)
- Integrate equity and social vulnerability
- Include Community Lifelines
- Emphasizing building codes and land use and development ordinances
- Align with NFIP, CRS, and Risk MAP (flood risk mapping)
- Meet high hazard potential dam grant program requirements (include all dam risks)
- Plan integration (e.g., Prince George's PLAN 2035, 2021 MD State HMP)

13 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry

Current Plan Status & Updates

Discussion

HIRA Components



Hazard Ranking



Hazard Profiles



Climate Change Impacts



Hazard History (Locations, Extents, Occurrences)



Vulnerability, Exposure, and Loss Estimations



Probability of Future Events



Potential Impacts



State HMP Integration

Hazard Type	2017 Ranking	2023 Consideration Level
Riverine Flooding	High	Changes?
Coastal Flooding	Medium-Low	
Severe Storms (Flood-Related)	High	
Flood Risk – Dam Failures	Medium	
Flood Risk – Levee Failures	Medium	
Tornadoes	High	
Severe Storms (Wind-Related)	Medium-High	
High Winds	Medium-High	
Hurricanes/Tropical Storms (Wind-Related)	Medium-High	
Winter Storms/Blizzards	Medium-High	
Wildfire	Low	
Drought	Medium-Low	
Earthquakes	Medium	
Land Movement/Landslides	Medium-Low	
Sinkholes	Low	
Extreme Heat	Medium	
Extreme Cold	Medium-Low	

Hazard Ranking Priority

Dewberry

Goal & Objective Development

Proposed Changes to be More Specific

2017 Goal

It is the goal of Prince George's County and the City of Laurel, Maryland, to protect and improve the public health, safety, and welfare of its communities, and to expand the resiliency of livable communities by:

- Increasing public awareness of natural hazards and risk reduction measures; and
- Mitigating risks due to natural hazards.

+ MD State HMP

+ PLAN 2035

+ 2022 FEMA Mitigation Policies

Strategic Categories

- Physical projects
- Capability and Capacity Building
- Public Awareness and Education
- Forward-Looking Policy and Planning

17 | Mitigation Advisory Committee Kick-Off September 16, 2022

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Mitigation Strategy

What do you want to focus on?



- Emphasize future conditions in the STAPLE/E action prioritization method
  - Climate projections, social vulnerability, community lifelines and future development
- Integrate actions from other related State, Regional, County, and City plans or reports
- Start thinking about what projects and actions you want to see happen over the next 5 years.

18 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry

Discussion: Developments Since 2017

- What hazard events have you experienced?
- What mitigation projects have you completed?
- What are your current priorities?
- What about the 2017 plan would you like to see changed?
- How can we make the plan more useful?
- How can we make going from actions in the plan to implementing projects easier/more likely?

Discussion

19 | Mitigation Advisory Committee Kick-Off September 16, 2022 | Dewberry

Next Steps

Schedule & Action Items

	Sep	Oct	Nov	Dec	Jan '23	Feb	March
HM Plan Milestone:	Kick-Off	Outreach Begins	HIRA & Strategy Workshops	Draft Plan	MDEM Review	FEMA Review	Adoption
Review 2017 HMP							
Data Collection							
HIRA							
Capability Assessment							
Revise Goals + Objectives							
Mitigation Strategy Development							
Public Engagement							
HMP Writing / Revising							
MDEM Review / Approval							
FEMA Review / Approval							
Plan Adoption, Approval Letters, Plan Distribution							

Project Schedule

Dewberry

What We Need From You:

1. Contact List (suggested stakeholder list already sent)
2. Requested Data for HIRA (list already sent)
3. Comments received from FEMA Region 3 in 2017 (FEMA review tool) (new request)
4. Capability Assessment Worksheet – County and City each get one (*coming soon*)
5. Mitigation Strategy Status Update (*coming soon*)

Please email to Jade Payne (jpayne@dewberry.com)

22 Mitigation Advisory Committee Kick-Off September 16, 2022 Dewberry

Questions?



23 Mitigation Advisory Committee Kick-Off September 16, 2022 Dewberry

A.2. Agenda

Dewberry

Prince Georges Proud

Meeting Agenda

Title:	Prince George's County Hazard Mitigation Plan Update Kick-Off	Location:	Microsoft Teams (Virtual)
Date:	Friday, September 16th, 2022	Time:	12:00 – 1:00 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the planning process and the input that will be needed from the County and the City of Laurel to update the plan.		

Agenda Items

Topic	Presenter	Time
Introduction: - Roles - Purpose - Expectations for Mitigation Advisory Committee	Scott Choquette, Dewberry	12:00 – 12:05 pm
Local Hazard Mitigation Plan Update Overview: - Planning Process - Milestones - Update Requirements - "Right-Sizing" the Update Scope - Improvements to the Plan	Jade Payne, Dewberry	12:05 – 12:20 pm
Current Plan Status Discussion: - Hazard Ranking - Recent Updates/Hazard Events - Mitigation Strategy Update	Scott Choquette	12:20 – 12:40 pm
Next Steps: - Project Schedule - Action Items	Jade Payne	12:40 – 12:50 pm
Questions	All	12:50 – 1:00 pm

Prince George's County Hazard Mitigation Plan – 2023 Update 1

A.3. Notes

Dewberry

Meeting Notes

Title:	Prince George's County Hazard Mitigation Plan Update Kick-Off	Location:	Microsoft Teams (Virtual)
Date:	Friday, September 16th, 2022	Time:	12:00 – 1:10 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the planning process and the input that will be needed from the County and the City of Laurel to update the plan.		

Attendees:

1. Scott Choquette, *Dewberry (Presenter)*
2. Jade Payne, *Dewberry (Presenter)*
3. Ehsan Bahador, *Prince George's County*
4. Joey Henderson, *Prince George's County*
5. Dawn Hawkins-Nixon, *Prince George's County*
6. Ronald E. Gill, *Prince George's County*
7. Lilantha Tennekoon, *Prince George's County*
8. Tiatte M. Day, *Prince George's County*
9. Christina Cornwell, *City of Laurel*
10. Alexandra D. Harris, *Prince George's County*

Meeting Summary

Scott Choquette (Project Manager, Dewberry) and Jade Payne (Deputy Project Manager, Dewberry) met with the Prince George's County Mitigation Advisory Committee (MAC) on September 16, 2022 to provide an overview of the mitigation plan update process. A PowerPoint presentation was used to review the project purpose, schedule, public outreach plan, and the planned updates to each section. Discussions were held throughout the presentation so Dewberry could gather feedback from the MAC on how the plan update should proceed. Discussion and presentation topics are grouped below with input and questions from the MAC.

Meeting Notes

Introduction
No Comments
Local Hazard Mitigation Plan Update Overview
No Comments

Prince George's County Hazard Mitigation Plan – 2023 Update 1

Dewberry

Prince Georges Proud

- Lilantha: MDE alerted the County that we should designate more of our dams as HHPD or significant dams. We have 35 high-hazard/significant dams in the county. Many are owned by the County, Laurel has one, and a few others are city/municipal managed. The new tally is 35. The MDE website has the spreadsheets, but we can also provide them.
- Ron: Dawn -- can we talk about the climate change task force soon?
  - Dawn: Sure.
- Christina (City of Laurel): CRS progress – we are now officially a part of it. We may have done some floodproofing to city facilities, but I have to double-check. We should have recommendations from USACE on a regional project (technical study) that gives recs for regional projects. Within that, USACE did a flood study that we have as well. We have an EAP for our HHPD. We had an inspection done and a tabletop exercise. There may be a few questions that I have later on since I wasn't involved last time. Drought response/planning was supposed to happen with WSSE and the County--not sure if that happened. After this plan was approved, the city did a flood addendum that was submitted and approved. That was supposed to be adopted by the county but I don't think it was.

Action Items: Data Request Questions

- Ehsan: Regarding critical facilities – much of that information is considered sensitive data from the county (e.g., federal facilities)
  - Ron: I'm fine with providing addresses and types of facilities (hospitals, police departments, etc.) since that can be found online anyway.
- Ehsan: Regarding population projections, that information can come from the census.
- Ehsan: What do you mean by 'future development'?
  - Scott: An area of redevelopment or planned development/improvement

Next Steps: Action Items

1. Contact List (*suggested stakeholder list sent to County*)
2. Requested Data for HIRA (*list sent to County*)
3. Comments received from FEMA Region 3 in 2017 (FEMA Review Tool) (*action item from meeting*)
4. Provide flood addendum to 2017 plan (*action item from meeting*)
5. Provide updated dam spreadsheet (*action item from meeting*)
6. Christina (City of Laurel): Provide information on mitigation projects since 2017 (floodproofing city facilities) (*action item from meeting*)
7. Christina (City of Laurel): Provide any information you have on USACE technical studies and recommendations. (*action item from meeting*)
8. Capability Assessment Worksheet – County and City each get one (*coming soon*)
9. Mitigation Strategy Status Update (*coming soon*)

Please email to Jade Payne at jpayne@dewberry.com

Prince George's County Hazard Mitigation Plan – 2023 Update 3

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Prince Georges Proud

Current Plan Status Discussion – Hazard Ranking

- Ehsan: The ratio of flash flooding has been increasing. We've seen changing rainfall patterns.
- Dawn: I agree about flash flooding as an emerging hazard. Is the mapping of pluvial flooding a requirement to consider it a hazard in the plan? If we know the general areas of the flooding often, can we use that?
  - Scott: Yes, we can use that anecdotal information in the plan. I would recommend including an action to create a "rain on grid" type model in the mitigation strategy. We will figure out some way to include it.
- Dawn: The County completed a climate action plan where extreme heat was included as an emerging/high hazard in the County. We could change it to "Medium-High"
  - Scott: We can do that, and we have seen communities include action around shade tree plantings, cooling centers, etc.
- Joey: Do we see more power outages from severe storms (wind-related)?
  - Dawn: We've had a couple in the summer associated with microbursts. It is becoming a little bit more common, but it is still medium-high ranking in my opinion.

Current Plan Status Discussion – Mitigation Goal

- Ehsan: We focus on all four categories already, but the main aspect of mitigation strategies should be the same.
  - Scott: We will take the first pass at the new goals and objectives and run it by you for review.

Current Plan Status Discussion – Developments Since 2017

- Dawn: We've created a Climate Action Plan.
- Dawn: Flooding – With the availability of federal funding to address infrastructure issues, the County has been able to put more of our CIP efforts toward addressing the small residential drainage issues. Our programming has been modified a little bit to reflect this and put more effort toward flood mitigation based on grant availability.
- Dawn: We are embarking more on efforts to reduce our GHG emissions. There is some overlap with flood mitigation efforts on natural resources side (e.g., green infrastructure). Some of our county-level priorities are moving in the direction of climate adaptation and incorporating flood mitigation.
- Ehsan: We have been encouraging more nature-based solutions based on FEMA priorities (combo of green/grey infrastructure). This would be more innovative mitigation actions. We integrated community lifelines and SVI for HMA applications to enhance equity with socially vulnerable populations. We have been focusing more on hazards that will be amplified or intensified by climate change.
- Ehsan: I would like to see the plan updated based on what the new policy from FEMA says. That would be the biggest change I'd want to see.
- Dawn: We should ensure that we are accounting for recommendations coming from other plans underway in the county. We have a climate implementation task force that will be working to identify priority projects/efforts for the county to invest in to reduce or carbon footprint. We are also embarking on watershed studies with USACE and a consultant to identify mitigation measures in specific watersheds to reduce flood risk. We should have some recommended projects from those in the next phase of the study.
  - Scott: Do you know the timeline for the studies or task force?
  - Dawn: The task force should have findings by the end of this fiscal year (June/July 2023). As for the watershed studies, the timeline is underway still.
  - Lilantha (leading studies): We are looking at 2 years for the bigger watersheds, but smaller ones maybe Oct 2023/end of fiscal year 2024.

A.4. Attendance

1. Summary

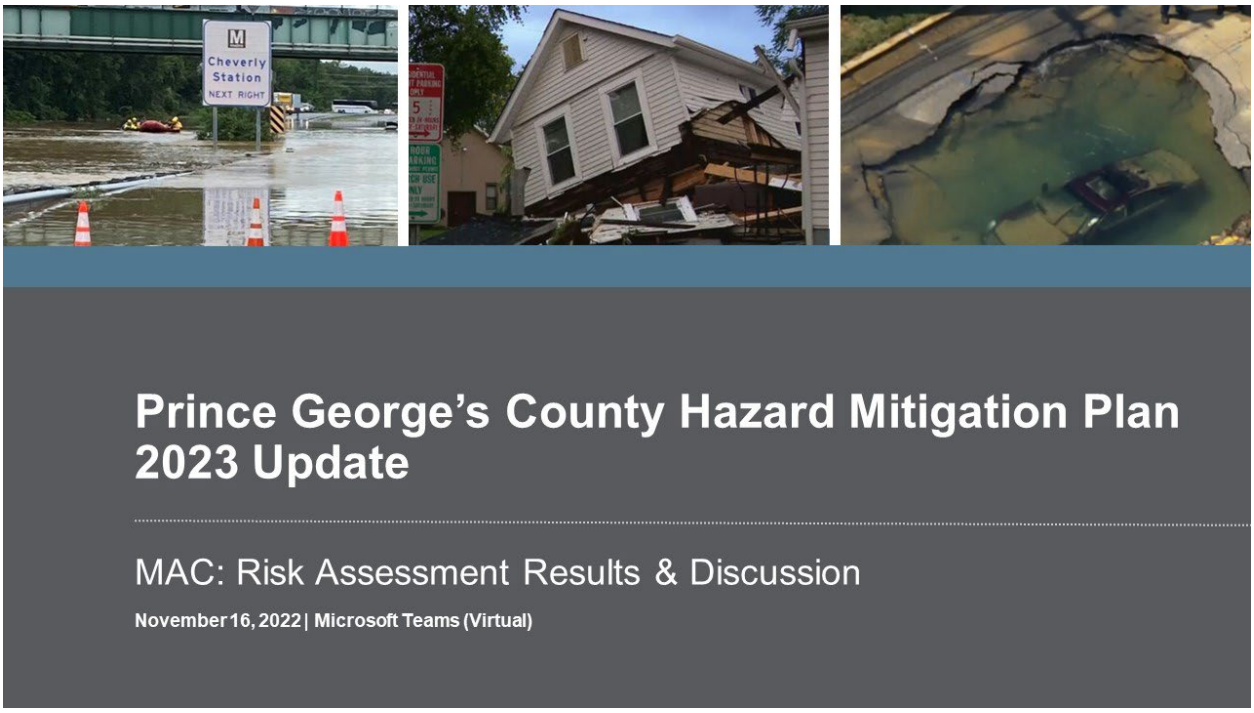
Meeting title	Prince George's County HMP Update Kick-Off
Attended participants	10
Start time	9/16/22, 11:55:55 AM
End time	9/16/22, 1:09:48 PM
Meeting duration	1h 13m 53s
Average attendance time	1h 6m 43s

2. Participants

Name	First join	In-meeting duration	Email
Choquette, Scott	9/16/22, 11:56:08 AM	1h 13m 27s	[redacted]
Bahador, Ehsan	9/16/22, 11:57:10 AM	1h 12m 27s	
Henderson, Joey L.	9/16/22, 11:59:10 AM	1h 10m 25s	
Payne, Jade Hawkins-	9/16/22, 12:00:26 PM	1h 9m 22s	
Nixon, Dawn Gill,	9/16/22, 12:01:13 PM	1h 8m 21s	
Ronald E. Tennekoon,	9/16/22, 12:01:13 PM	1h 8m 22s	
Lilantha Day, Tiatte M.	9/16/22, 12:02:11 PM	1h 6m 15s	
Christina Cornwell	9/16/22, 12:05:16 PM	1h 4m 21s	
Harris, Alexandra D.	9/16/22, 12:05:27 PM	1h 4m 4s	
	9/16/22, 12:10:07 PM	50m 8s	

B. Risk Assessment Results Meeting

B.1. Presentation





Project Status

Planning Process Updates & Milestones

3 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

Planning Process

We Are Here!

Coordinate & Collect Data	Assess Risks	Analyze Capabilities	Develop Mitigation Strategy	Decide Implementation Procedures	Review & Adopt Plan
Regional Climate Projections CDC SVI Data Comprehensive Plan Data	Climate Projections Social Vulnerability Analysis Future Development Analysis	Future Conditions Plan Integration	Mitigation Actions Plan Integration Social Vulnerability & Future Development Considerations	Public Involvement Plan Integration Priority Actions	Public Involvement Plan Integration Priority Actions

Public & Stakeholder Outreach

4 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

	Sep	Oct	Nov	Dec	Jan '23	Feb	March
HM Plan Milestone:	Kick-Off	Outreach Begins	Risk Assessment & Strategy Workshops		Draft Plan & MDEM Review	FEMA Review	Adoption
Review 2017 HMP							
Data Collection							
HIRA							
Capability Assessment							
Revise Goals + Objectives							
Mitigation Strategy Development							
Public Engagement							
HMP Writing / Revising							
MDEM Review / Approval							
FEMA Review / Approval							
Plan Adoption, Approval Letters, Plan Distribution							

Project Schedule

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Capability Assessment

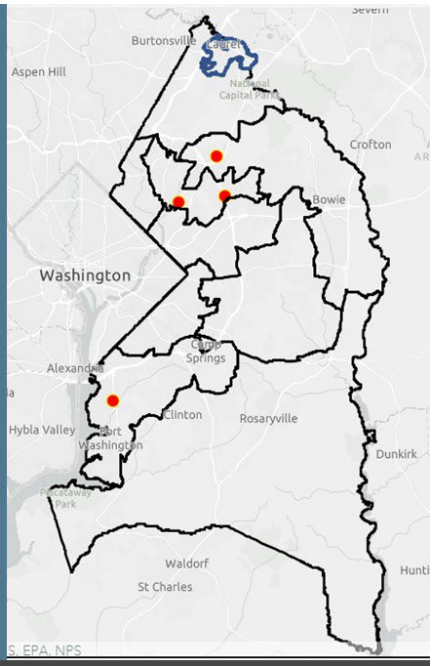
- Currently underway!
- Most of the information remains consistent with the 2017 plan
- A handout or survey will be sent out to County & City representatives to fill in any remaining gaps once the initial review & update is complete

6 | MAC: Risk Assessment Results & Discussion November 16, 2022

Dewberry

Public Outreach Progress

- Public Meeting #1 Turnout:
  - 19 Attendees = 6 Stakeholders + 5 General Public + 8 MAC/County
- Public Survey: 14 responses
- Social Media Advertisements: 475+ views & interactions
- Community Hazard Mapping: 4 responses (see figure)



7 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

Hazard Identification & Risk Assessment (HIRA)

Results Highlights

8 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

What will we cover today?

- New components will be reviewed: climate projections, social vulnerability, and future development
- The following slides will provide an overview of the new/emerging risks as compared to the 2017 results
- The full draft HIRA chapter will be circulated to the MAC for review in the next couple of weeks and then sent to MDEM for a preliminary review.

9 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

Future Conditions: Climate Projections



Temperature

Days above 90^{0}F to more than double & days with max temp below 32^{0}F to decrease to near 0 by 2044

Precipitation

Decrease in total "wet" days but 1.4" increase in annual precipitation by 2044

Sea Level Rise

0.2% of county impacted by global sea level rise by 2044

Severe Storms

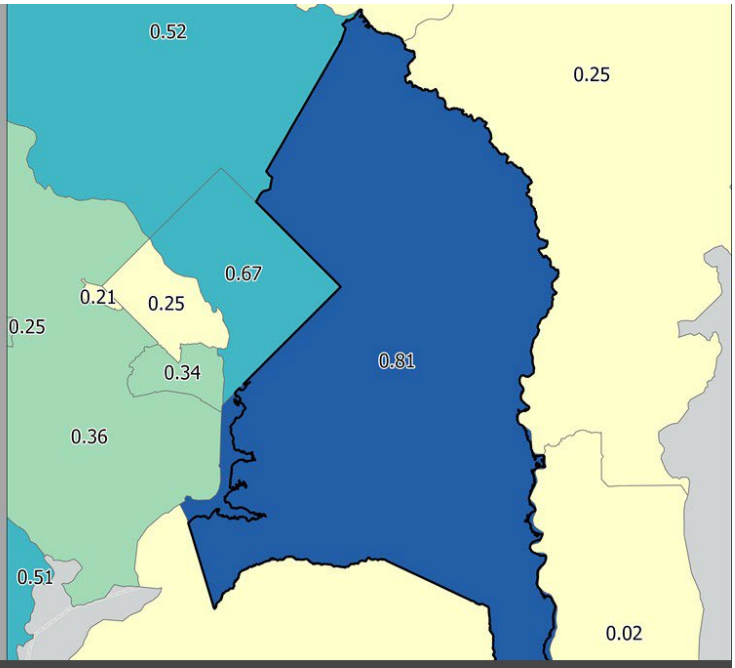
Hurricanes expected to bring upwards of 25% more rainfall & rapidly intensify

10 | MAC: Risk Assessment Results & Discussion November 16, 2022 | Dewberry

Social Vulnerability

SVI Theme	National Score
Overall SVI	0.8148
Socioeconomic Status	0.6970
Household Characteristics	0.5099
Racial & Ethnic Minority Status	0.9911
Housing Type & Transportation	0.8810

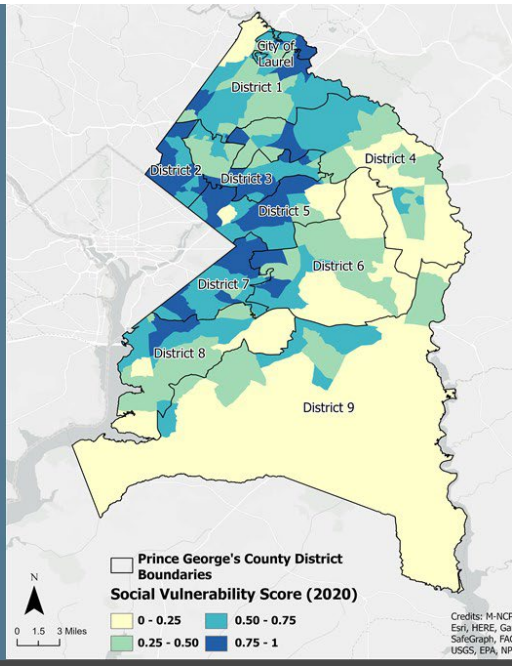
SVI Theme	Maryland Score
Overall SVI	0.9130
Socioeconomic Status	0.9565
Household Characteristics	0.5217
Racial & Ethnic Minority Status	1.0000
Housing Type & Transportation	0.8696



11 MAC: Risk Assessment Results & Discussion November 16, 2022 Dewberry

Social Vulnerability

- Relatively lower vulnerability in Districts 4 and 9
- Overall, this will help us identify potential project locations in the Mitigation Strategy that will provide the most benefits to those that need them most.

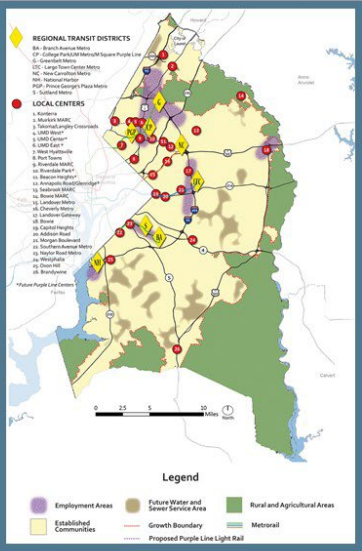


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Comprehensive Planning Integration

- Comprehensive planning data was incorporated
  - Environmental Features
  - Existing and Planned Transportation Investments
  - Existing Development Patterns
  - Projected Growth
- Overlaid with hazard areas to help identify areas of future risk due to increased exposure from future development

PG Plan 2035: Growth Policy Map



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Hazard Type	2017 Ranking	2022 Ranking
Riverine Flooding	High	High
Severe Storm (Flood Related)	High	High
Tornado	High	High
Tropical Storm / Hurricane	Medium-High	Medium-High
Winter Storm	Medium-High	Medium-High
High Winds	Medium-High	Medium-High
Extreme Heat	Medium	Medium-High
Earthquake	Medium	Medium
Dam and Levee Failure	Medium	Medium
Extreme Cold	Medium-Low	Medium-Low
Drought	Medium-Low	Medium-Low
Coastal Flooding	Medium-Low	Medium-Low
Land Movement	Medium-Low	Medium-Low
Wildfire	Low	Low
Sinkholes	Low	Low

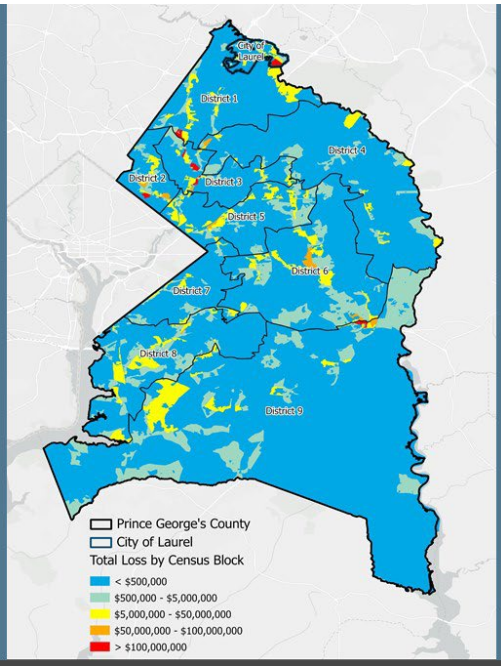
Hazard Ranking Priority

Dewberry

Total Flood Loss

Hazus-MH v5.1

- 1-percent-annual-chance flood (100-year flood)
- Combined riverine flooding & coastal flooding modules

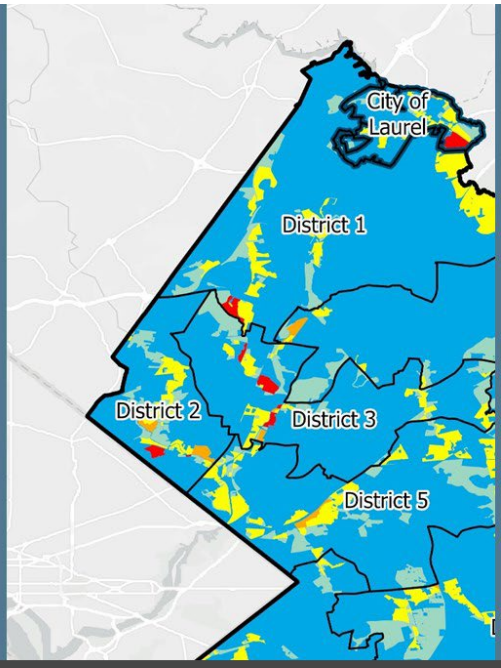


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Total Flood Loss

Hazus-MH v5.1

- 1-percent-annual-chance flood (100-year flood)
- Combined riverine flooding & coastal flooding modules

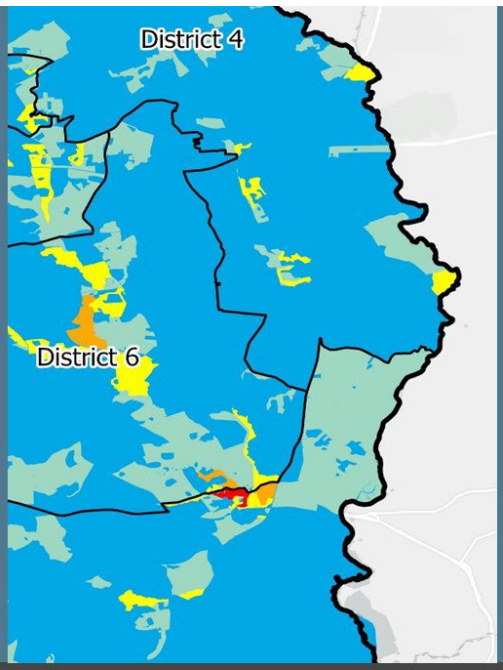


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Total Flood Loss

Hazus-MH v5.1

- 1-percent-annual-chance flood (100-year flood)
- Combined riverine flooding & coastal flooding modules

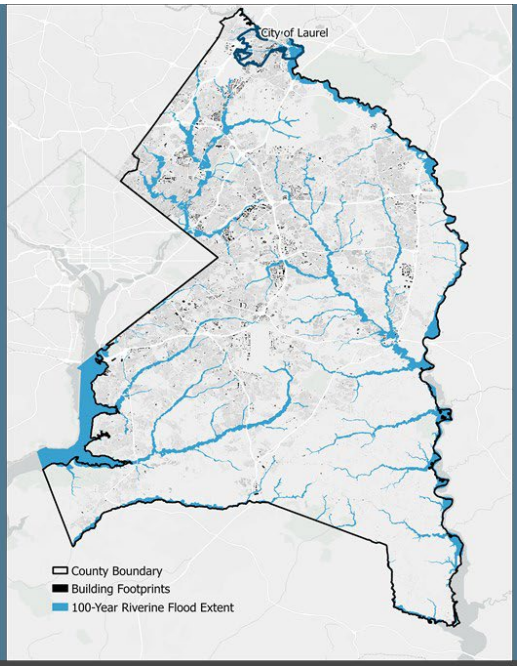


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Riverine Flooding Extent and Exposure

Hazus-MH v5.1

- 100-Year Flood
- Hazus estimates:
  - 2,358 buildings would be at least moderately damaged
  - 2,183 buildings would be completely destroyed



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Riverine Flooding Losses

Hazus-MH v5.1

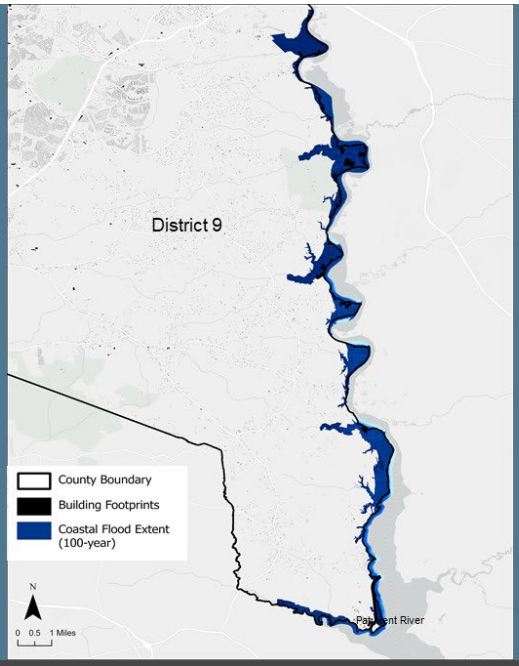
Prince George's County	100-Year Riverine Flood Losses (in whole dollars)				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	$130,144,361,000	$26,242,415,000	$5,564,076,000	$7,454,437,000	$169,405,289,000
Direct Losses					
Building	$834,296,000	$323,906,000	$73,819,000	$72,724,000	$1,304,745,000
Contents	$392,305,000	$408,446,000	$125,548,000	$93,673,000	$1,019,972,000
Inventory	$0	$10,790,000	$19,217,000	$298,000	$30,305,000
Subtotal	**$1,226,601,000**	**$743,142,000**	**$218,584,000**	**$166,695,000**	**$2,355,022,000**
Business Interruption					
Income	$2,398,000	$232,281,000	$2,882,000	$28,440,000	$266,001,000
Relocation	$111,416,000	$76,858,000	$2,826,000	$17,990,000	$209,090,000
Rental Income	$57,472,000	$57,232,000	$543,000	$3,069,000	$118,316,000
Wage	$5,694,000	$260,289,000	$4,002,000	$269,408,000	$539,393,000
Subtotal	**$176,980,000**	**$626,660,000**	**$10,253,000**	**$318,907,000**	**$1,132,800,000**
TOTAL	**$1,403,581,000**	**$1,369,802,000**	**$228,837,000**	**$485,602,000**	**$3,487,822,000**

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Coastal Flooding Extent and Exposure

Hazus-MH v5.1

- Southeast portion of the County affected (District 9)
- Along the Patuxent River
- Low development area



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Coastal Flooding Losses

Hazus-MH v5.1

Prince George's County	100-Year Coastal Flood Losses (in whole dollars)				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	$130,144,361,000	$26,242,415,000	$5,564,076,000	$7,454,437,000	$169,405,289,000
Direct Losses					
Building	$840,000	$4,000	$1,000	$2,000	$847,000
Contents	$505,000	$9,000	$1,000	$12,000	$527,000
Inventory	$0	$0	$0	$0	$0
Subtotal	$1,345,000	$13,000	$2,000	$14,000	$1,374,000
Business Interruption					
Income	$20,000	$9,000	$0	$1,000	$30,000
Relocation	$136,000	$0	$0	$0	$136,000
Rental Income	$53,000	$0	$0	$0	$53,000
Wage	$47,000	$2,000	$0	$5,000	$54,000
Subtotal	$256,000	$11,000	$0	$6,000	$273,000
TOTAL	**$1,601,000**	**$24,000**	**$2,000**	**$20,000**	**$1,647,000**

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Severe Storm (Flood-Related): Events in NCEI Database

(2012- October 2022)

Event Type	Number of Events	Current Total Annual Damages	Annualized Deaths	Annualized Injuries	Annualized Events
Flash Flood	21	$139,000	0	0.30	2.10
Heavy Rain	0	$0.00	0	0.00	0.00
Total	**21**	**$139,000**	**0**	**0.30**	**2.10**

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Tornado

Annualized Losses, NCEI (1950-2022)

Fujita Scale	Date	Community Affected	Deaths	Injuries	Total Property Damages
EF	05 Jul 2022	Collington	0	0	$250,000
EF0	29 Sep 2015	Laurel	0	0	$0
EF0	01 Jul 2013	Crestview Manor	0	0	$500
EF0	19 Apr 2013	Westphalia	0	0	$25,000
EF0	01 Jun 2012	Buena Vista	0	0	$2,000

- Total tornadoes (2012-2022): 5
- Annualized events: 0.5
- Total Annual Damages: $38,200

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Hurricane: Annualized Loss/Exposure

Hazus -MH v5.1

Building Related Economic Loss

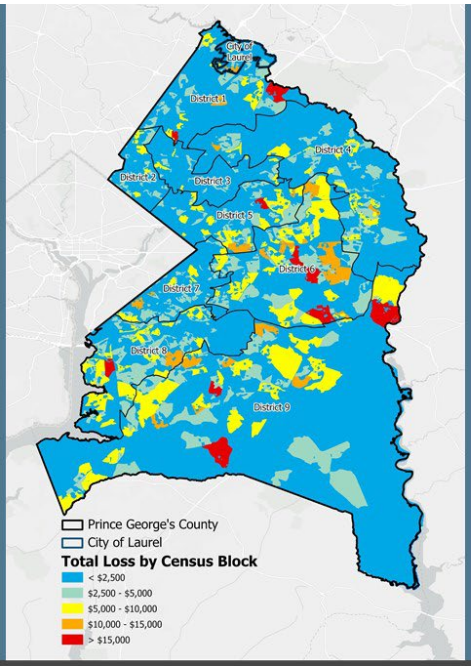
Municipality	Return Period	Building Loss	Content Loss	Inventory Loss	Other Loss	Total Loss
City of Laurel	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,141	$50,404	$0	$142	$55,687
	100-year	$1,432,367	$206,920	$0	$1,231	$1,640,517
	200-year	$6,458,414	$770,401	$0	$83,391	$7,312,206
	500-year	$16,437,818	$1,841,697	$226	$929,092	$19,208,833
	1,000-year	$20,310,087	$2,337,410	$781	$1,302,886	$23,951,165
Joint Base Andrews	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$32,442	$4,621	$0	$40	$37,103
	100-year	$226,181	$18,175	$0	$160	$244,516
	200-year	$746,942	$56,061	$0	$9,623	$812,626
	500-year	$2,350,838	$196,799	$728	$161,273	$2,709,637
	1,000-year	$3,798,750	$385,439	$3,082	$325,410	$4,512,681
Prince George's County	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,462,149	$3,335,161	$0	$1,181	$8,798,491
	100-year	$69,406,206	$13,043,695	$8	$48,202	$82,498,111
	200-year	$216,153,155	$36,505,346	$0	$735,491	$253,393,992
	500-year	$629,343,871	$100,034,917	$71,658	$31,125,278	$760,575,723
	1,000-year	$1,050,214,593	$169,899,270	$453,233	$57,533,511	$1,278,100,608
Total	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,462,149	$3,335,161	$0	$1,181	$8,798,491
	100-year	$69,406,206	$13,043,695	$8	$48,202	$82,498,111
	200-year	$216,153,155	$36,505,346	$0	$735,491	$253,393,992
	500-year	$629,343,871	$100,034,917	$71,658	$31,125,278	$760,575,723
	1,000-year	$1,050,214,593	$169,899,270	$453,233	$57,533,511	$1,278,100,608

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Hurricane: Annualized Loss

Hazus-MH v5.1

- Total Annualized Loss for Hurricane Model
- Probabilistic scenario run to produce annualized loss



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Winter Storm: Annualized Events & Damages

NCEI, since 2012

Event Type	Number of Events	Current Total Annual Damages	Annualized Deaths	Annualized Injuries	Annualized Events
Blizzard	1	$0	0	0	0.3
Heavy Snow	0	$0	0	0	0
Winter Storm	10	$0	0	0	1
Winter Weather	47	$0	0	0	4.7
Ice Storm	2	$0	0	0	0.2
Total	**60**	**$0**	**0**	**0**	**6.2**

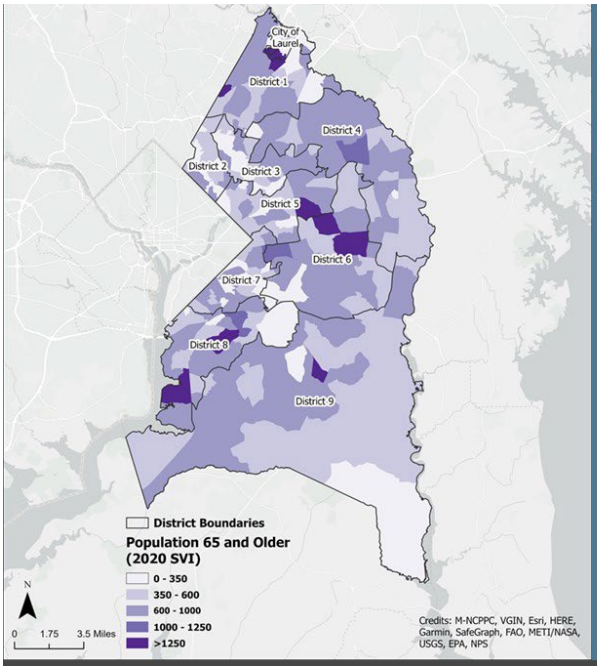
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High/Strong Winds: Historic Event Data

NCEI, since 2012

Event Type	Number of Events	Period of Record	Days with Event and Deaths	Annualized Cost of Damages	Days with Event and Injuries or Death	Annualized Injuries	Annualize Events
High Wind	10	2012-2022	0	$313,300	4	0.40	1.00
Strong Wind	1	2012-2022	0	$100	0	0.00	0.10
All Wind Events	**11**	**2012-2022**	**0**	**$131,400**	**4**	**0.40**	**1.10**

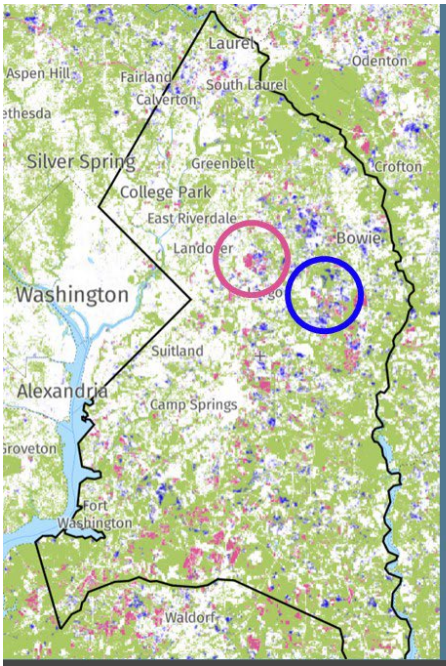
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Heat Vulnerability: 65+, children, single-parent household, disability

- The most at-risk districts which contain the largest population of senior citizens are Districts 1 (City of Laurel), 5, 6, and 8
- Annualized heat and excessive heat events have increased to 3.1

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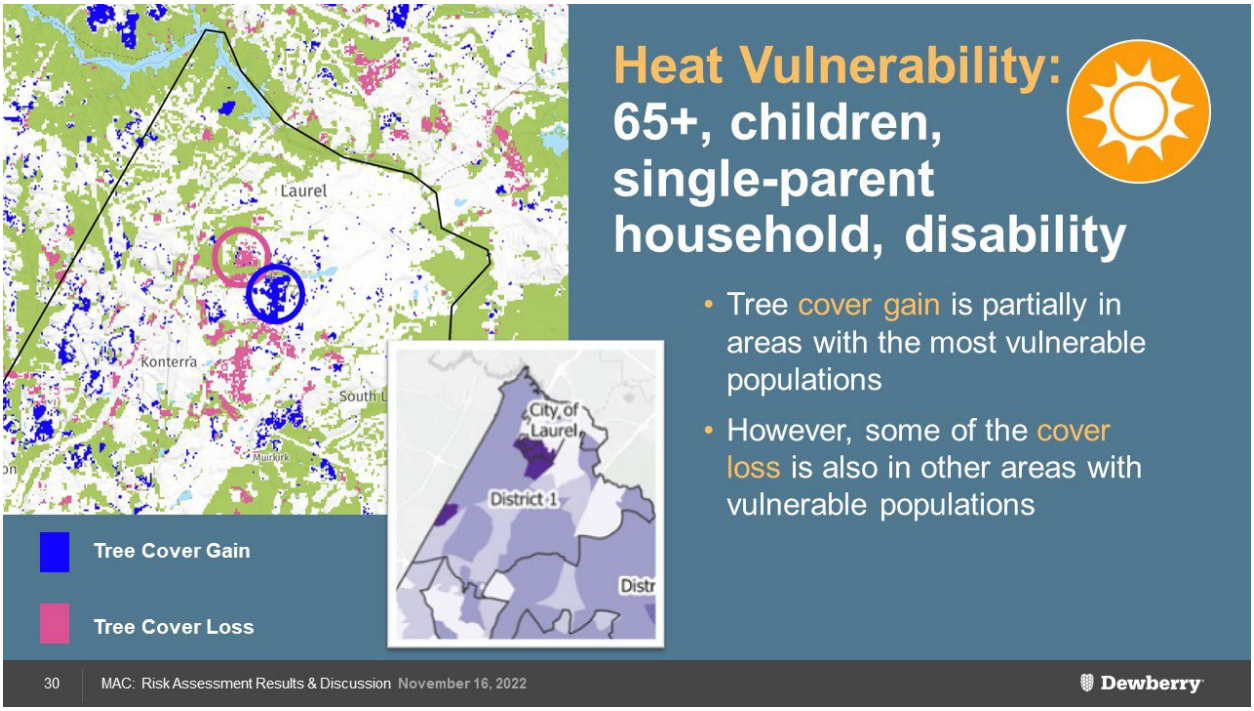
Heat Vulnerability: 65+, children, single-parent household, disability

- Tree cover gain is partially in areas with the most vulnerable populations
- However, some of the cover loss is also in other areas with vulnerable populations

Tree Cover Gain

Tree Cover Loss

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Heat Vulnerability: 65+, children, single-parent household, disability

- Tree cover gain is partially in areas with the most vulnerable populations
- However, some of the cover loss is also in other areas with vulnerable populations

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Dam Exposure

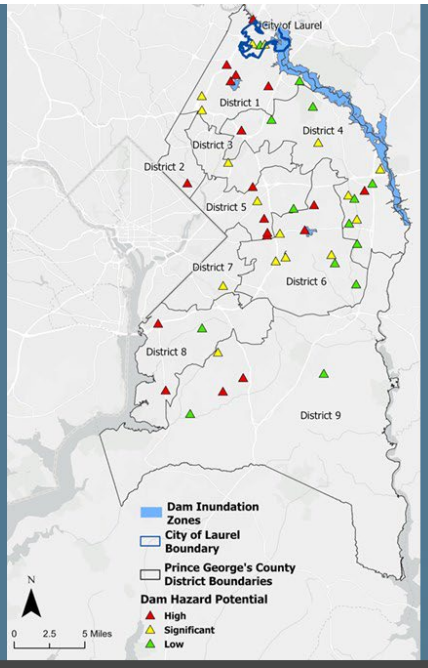
- Dam inundation zones mapped for 7 dams

Dam	Hazard Potential	Buildings in Inundation Zone	Property Exposure
Duckett Dam	High	964	$692,272,613
Tinkers Creek Dam	Significant	10	$669,767
Heritage Glen Dam	Significant	17	$6,005,665
Indian Creek 2 & 3	High	182	$151,537,770
Lake Arbor Dam	High	126	$50,393,250
Largo Town Center Dam	Significant	3	$44,463,996
Laurel Lakes No 1 Dam	Significant	103	$327,589,022
Total	--	**1405**	**$1,272,932,083**

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Dam Failure Inundation Map

- Mapped inundation zones located in the City of Laurel & Districts 1,4,6,9

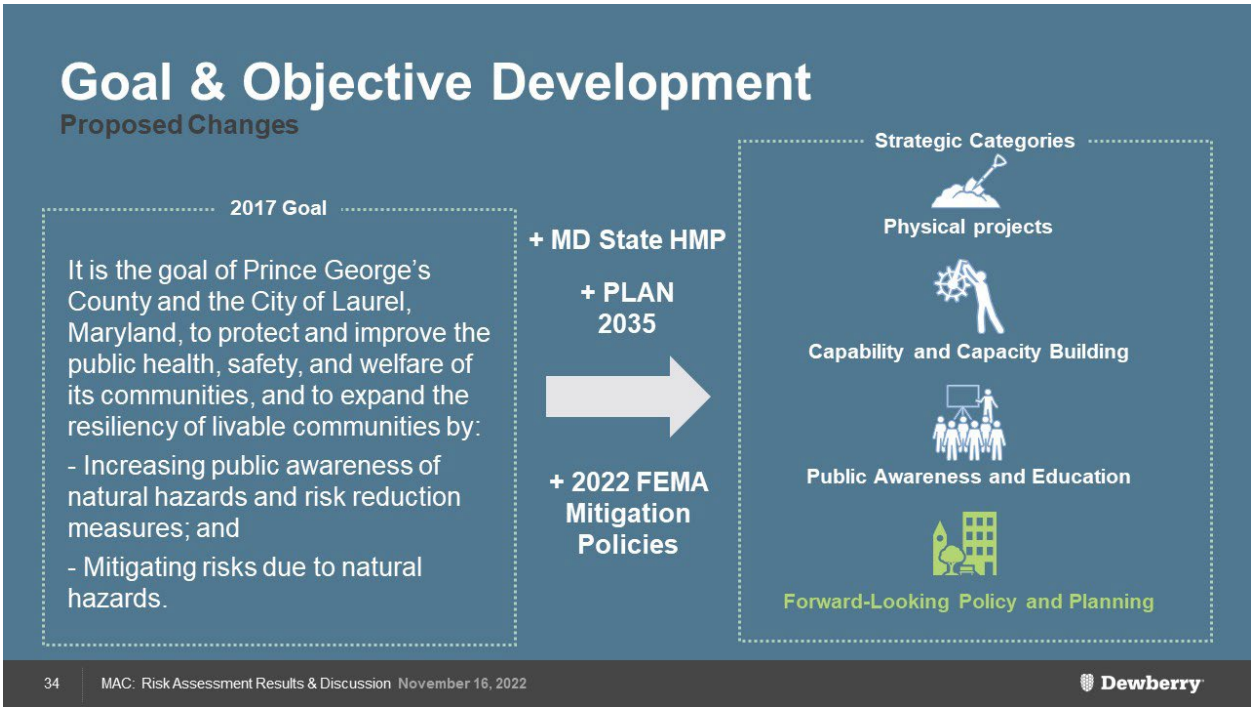


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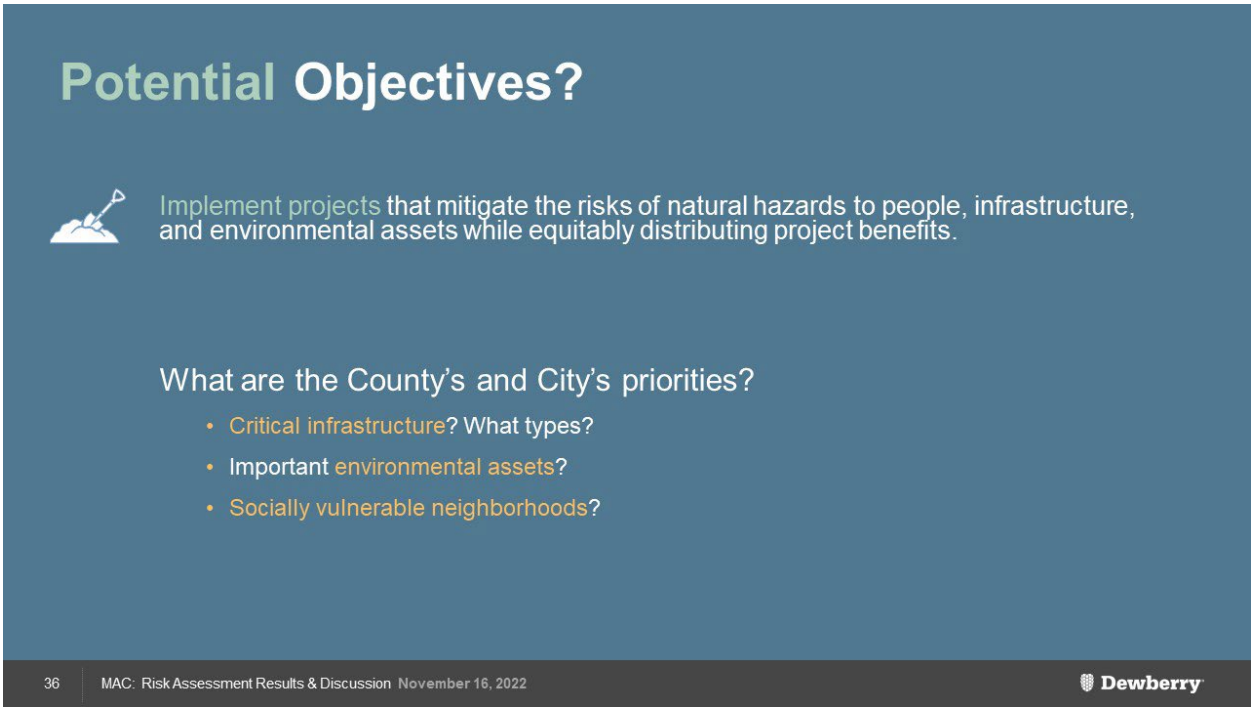
Draft Mitigation Goals

Discussion

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Goal & Objective Development
Proposed Changes
2017 Goal
It is the goal of Prince George's County and the City of Laurel, Maryland, to protect and improve the public health, safety, and welfare of its communities, and to expand the resiliency of livable communities by:
- Increasing public awareness of natural hazards and risk reduction measures; and
- Mitigating risks due to natural hazards.
+ MD State HMP
+ PLAN 2035
+ 2022 FEMA Mitigation Policies
Strategic Categories
Physical projects
Capability and Capacity Building
Public Awareness and Education
Forward-Looking Policy and Planning
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Potential Mitigation Goal Revisions
Implement projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.
Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.
Increase public awareness of natural hazard risks to people and property and promote current and new opportunities to participate in mitigation planning.
Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans that are aligned with regional and state resilience and equity goals.
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Potential Objectives?
Implement projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.
What are the County's and City's priorities?
• Critical infrastructure? What types?
• Important environmental assets?
• Socially vulnerable neighborhoods?
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Potential Objectives?



Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.

What are the County's and City's priorities?

- Are there departments or offices that should focus on hazard mitigation more?
- Who is responsible for carrying out mitigation activities and priorities year-round? Do they need additional help?
- Staff training?
- Capability/Capacity concerns around applying for mitigation grants?

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Potential Objectives?

What are the County's and City's priorities?

- How is the public involved year-round? How do you want to improve this?
- Are there certain groups/communities that outreach should be increased?



Increase public awareness of natural hazard risks to people and property and promote current and new opportunities to participate in mitigation planning.

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Potential Objectives?

What are the County's and City's priorities?

- Are there specific goals/objectives from other county/city/regional/state plans you want to include?
- Are there ordinances changes that would be politically feasible? Adopting higher building code standards? Stricter regulations in the floodplain?
- Any policy changes we could focus on?



Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans that are aligned with regional and state resilience and equity goals.

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Project Identification

Brainstorm

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Risk Assessment & Potential Projects Discussion

What does your **current project selection process** look like?

How can this process/plan be **more useful** to you when choosing and implementing projects?



Are there **mitigation projects or actions** you want to be included?

What can we include in the **risk assessment** to help identify projects and project locations?

Do you know a **hazard problem area** you'd like addressed?

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Next Steps

In the planning process

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How You Can Stay Involved:

1. Take the Hazard Mitigation Survey: https://www.surveymonkey.com/r/Prince-Georges-HM-Survey-Social
2. Tell us about hazard problem areas you know about: https://bit.ly/HazardProblemAreas
3. Review the draft HIRA sections once distributed
4. Provide input on draft goals and potential objectives you'd like to see (*you can send rough ideas*)
5. Provide mitigation projects and actions that would benefit the community (ask others!)

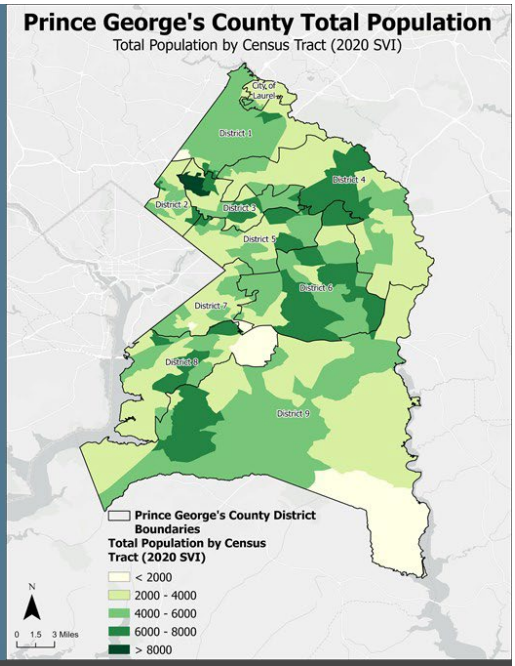
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HIRA Appendix

Reference Maps & Tables

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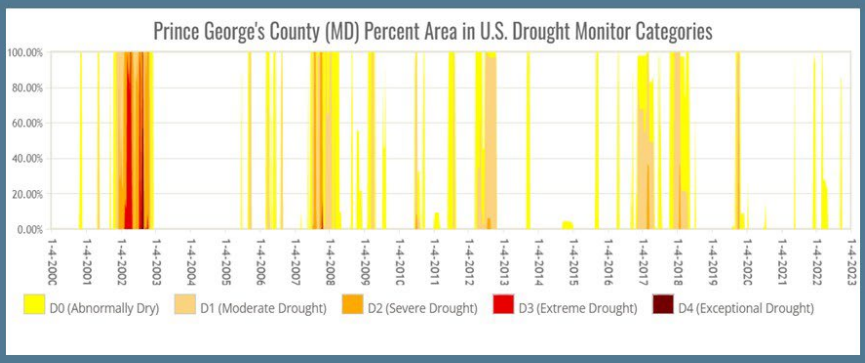
Population



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Drought: Previous Occurrences

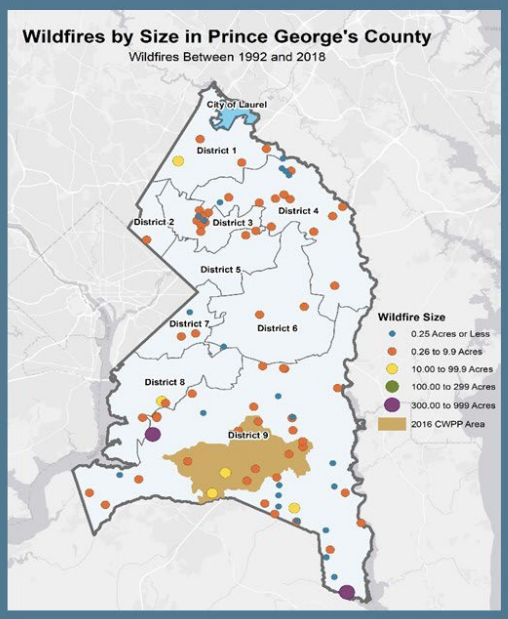
- October 15, 2019: 100% of the county experienced a D2 drought



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Wildfire: Events

	Total Events	Cumulative Damage	Total Years of Record
PG County	88	N/A	26
Annualized	**3.4**	**N/A**	**---**



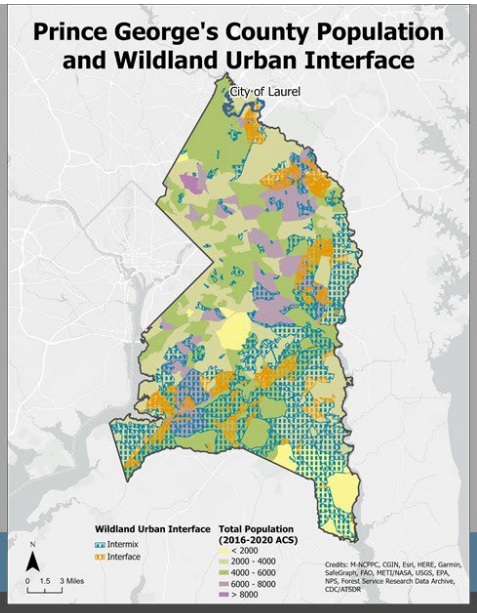
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Wildfire: Structures Exposed

- As of 2020, Prince George's County 36.9% of 358,183 housing units (HUs) are directly exposed to wildfire risk

Area	Total number of HUs	Fraction of Total HUs Directly Exposed	Fraction of Total HUs Indirectly Exposed	Fraction of Total HUs Not Exposed	Total number of exposed HUs	Fraction of Exposed HUs Directly Exposed	Fraction of Exposed HUs Indirectly Exposed
Prince George's County	358,183	36.9%	35.1%	28.0%	257,883	51.3%	48.7%
City of Laurel	10,211	23.6%	74.2%	2.2%	9,987	24.2%	75.8%

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Wildfire Risk in Prince George's County

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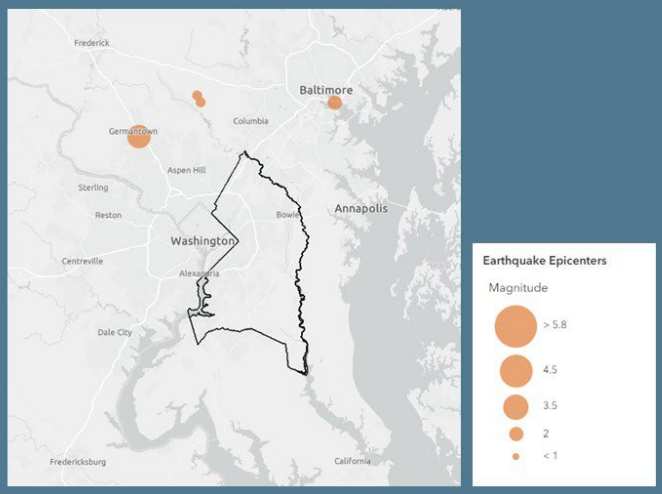
Earthquake: Loss & Exposure

Hazus-MH v5.1

Jurisdiction	Building	Contents	Inventory	Other	Total Loss	Total Exposure
City of Laurel	$11,676.46	$2,435.77	$31.16	$5,419.10	$19,562.50	$5,528,165,000.00
Joint Base Andrews	$3,203.14	$703.16	$11.03	$1,482.25	$5,399.58	$710,416,000.00
Prince George's County	$503,352.59	$99,097.76	$1,512.81	$182,387.35	$786,350.52	$169,405,289,000.00
Total	$518,232.19	$102,236.70	$1,555.00	$189,288.70	$811,312.59	$175,643,870,000.00

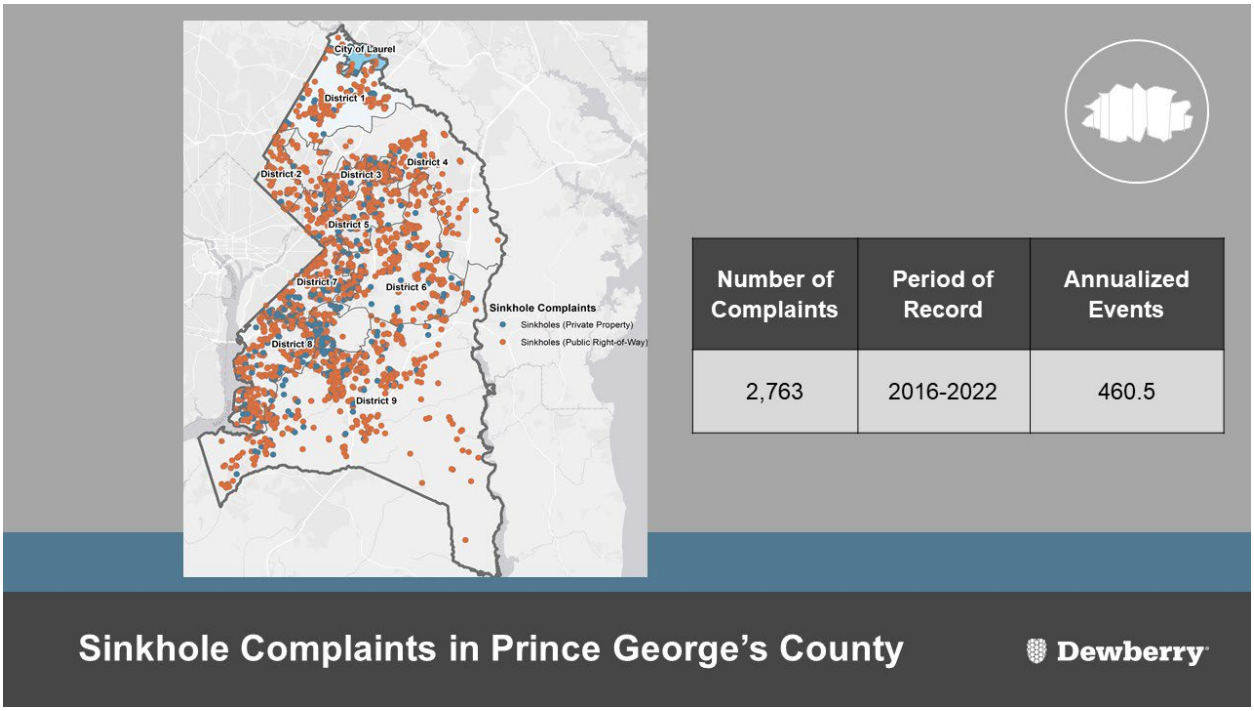
50 MAC: Risk Assessment Results & Discussion November 16, 2022 Dewberry

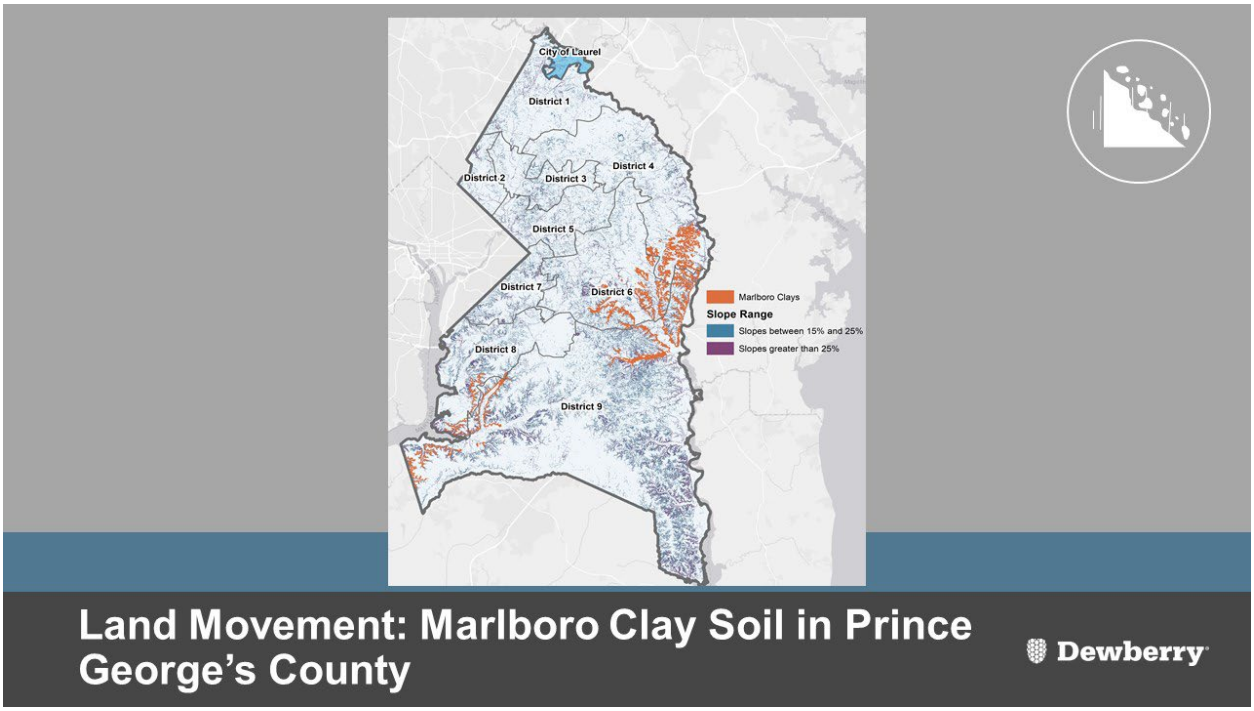
Earthquakes in Maryland since 2000



- 10 earthquakes in Maryland since 2000
- None inside Prince George's County

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City of Laurel
District 1
District 2
District 3
District 4
District 5
District 6
District 7
District 8
District 9
Sinkhole Complaints
Sinkholes (Private Property)
Sinkholes (Public Right-of-Way)
Number of Complaints
Period of Record
Annualized Events
2,763
2016-2022
460.5
Sinkhole Complaints in Prince George's County
Dewberry


City of Laurel
District 1
District 2
District 3
District 4
District 5
District 6
District 7
District 8
District 9
Marlboro Clays
Slope Range
Slopes between 15% and 25%
Slopes greater than 25%
Land Movement: Marlboro Clay Soil in Prince George's County
Dewberry

Extreme Cold: Events (2012-2022)

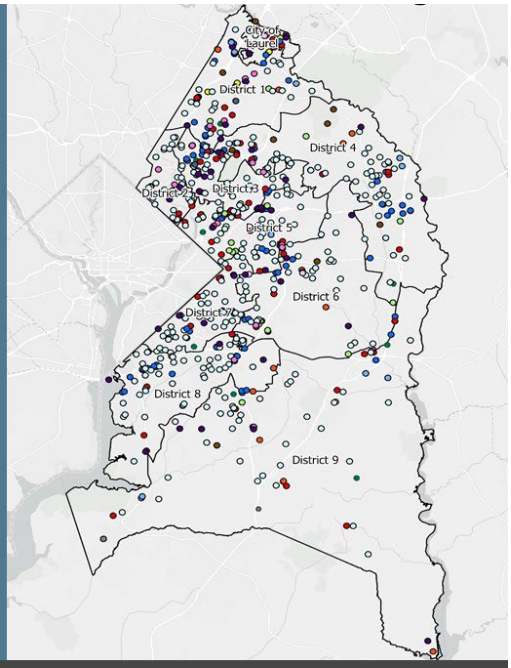
Event Type	Number of Events	Current Total Annual Damage	Annualized Deaths	Annualized Injuries	Annualized Events
Cold/Wind Chill	3	$0	0	0	0.30
Extreme Cold/ Wind Chill	0	$0	0	0	0.00
All events	**3**	**$0**	**0**	**0**	**0.30**

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Critical Facilities

Changes reflected in the map:

- New critical facilities
- Moved critical facilities



CRITICAL FACILITIES TYPE

- CHEMICAL
- COMMERCIAL FACILITIES
- COMMUNICATIONS
- DEFENSE INDUSTRIAL BASE
- EMERGENCY SERVICES
- ENERGY
- FOOD AND AGRICULTURE
- GOVERNMENT FACILITIES
- HEALTHCARE AND PUBLIC HEALTH
- INFORMATION TECHNOLOGY
- NUCLEAR
- TRANSPORTATION
- WATER AND WASTEWATER SYSTEMS

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B.2. Agenda

Dewberry

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Mitigation Advisory Committee Meeting Agenda

Title:	Mitigation Advisory Committee Meeting - HIRA Results	Location:	Microsoft Teams (Virtual) Meeting ID: 261 772 567 187 & Passcode: eRvdqH
Date:	Wednesday, November 16th, 2022	Time:	3:00 – 4:30 pm ET
Purpose:	Dewberry will provide a status update on the project's progress and public outreach efforts, followed by an overview of substantial changes in risk assessment results from the 2017 plan. There will be a discussion of proposed mitigation goals and objectives, as well as a brainstorming session for potential projects/actions and project locations. We will close with next steps and questions.		

Agenda Items

Topic	Presenter	Time
Project Status - Planning Process Milestones - Schedule - Capability Assessment - Public Outreach Progress	Jade Payne, Dewberry	3:00 – 3:15 pm
Risk Assessment Results - Climate Projections - Social Vulnerability - Future Development - Substantial Results Differences	Scott Choquette & Jade Payne, Dewberry	3:15 – 3:45 pm
Draft Mitigation Goals Discussion - Review & Revise Goals - Provide thoughts on objectives	Jade Payne, Dewberry	3:45 – 3:55 pm
Potential Project Brainstorm - Actions & Projects - Project Locations	Jade Payne & Scott Choquette, Dewberry	3:55 – 4:10 pm
Next Steps - Survey & Problem Area Identification - Review draft HIRA sections - Input on goals and objectives - Provide projects & actions	Jade Payne, Dewberry	4:10 – 4:15 pm
Questions & Comments	Open Forum	4:15 – 4:30 pm

Prince George's County Hazard Mitigation Plan – 2023 Update 1

B.3. Notes

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Mitigation Advisory Committee Meeting Notes

Title:	Mitigation Advisory Committee Meeting - **HIRA Results**	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, November 16th, 2022	Time:	3:00 – 4:30 pm ET
Purpose:	Dewberry will provide a status update on the project's progress and public outreach efforts, followed by an overview of substantial changes in risk assessment results from the 2017 plan. There will be a discussion of proposed mitigation goals and objectives, as well as a brainstorming session for potential projects/actions and project locations. We will close with next steps and questions.		

Attendees:

1. Scott Choquette, Dewberry
2. Jade Payne, Dewberry
3. Jesse Nelson, Dewberry
4. Hanna Rush, Dewberry
5. Joanne Hall Barr, City of Laurel
6. James E. McClelland, Fire/EMS Services
7. Robert Love, Economic and Commerce Department, City of Laurel
8. Stephanie Robinson, Emergency Management, City of Bowie
9. Joey L. Henderson, OHS/OEM
10. Dr. Toye Lattimore, Founders Woods HOA
11. Carreen Koubek, Office of the City Administrator, City of Laurel
12. Patrick T. Callahan, DOE
13. Wanda Ramos, Maryland-National Capital Park and Planning Commission
14. Kelly Flint, Dam Safety, MD DOE
15. Michael Block, WSSC Water Representative
16. Ehsan Bahador, OHS/OEM
17. Frank L. Galosi, DOE
18. Jeffrey M. DeHan, Stormwater Management, DOE
19. Sudhanshu Mishra, DOE
20. Dawn Hawkins-Nixon, DOE
21. Kim Finch, Environmental Section, Planning Department
22. Reynaldo S. De Guzman, Floodplain Administrator, Department of Permitting, Inspections, and Enforcement
23. Anthony J. Cline, Bureau of Homeland Security & Intelligence
24. Mary C. Sherrill, Department of Public Works and Transportation
25. Pete Pedersen, PEPCO
26. James A. Carter, OHS
27. Katina Shoulars, Department of Parks and Recreation
28. Joanna M. Smith, DOE
29. Miles Roesner, Department of Information Technology

Meeting Summary

Scott Choquette (Project Manager, Dewberry) and Jade Payne (Deputy Project Manager, Dewberry) held a public meeting as representatives of the Prince George's County Office of Homeland Security/Office of Emergency Management on September 16, 2022. A PowerPoint presentation was used to review the project status and highlight key risk assessment results. Discussions were held to solicit MAC feedback on draft

Prince George's County Hazard Mitigation Plan – 2023 Update 1

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mitigation goals, objectives, and potential mitigation projects. Discussion and presentation topics are grouped below with input and questions from the attendees.

Meeting Notes

Introduction

No Comments

Project Status

No Comments

Risk Assessment Results

- Ehsan - A couple questions about SVI – for District 9 and 4 during the SVI analysis, it was lower. Is this because of the population? No transportation to District 9. District 1,2,3 transportation an issue. What is the reason for the low SVI?
  - Jade – population differences in the area leads to the difference. The makeup of the population and density created the different SVI scores. A more in depth look at the breakdown of the scores is necessary and really honing in on the census tracts, highlighting those that reach the bar of SVI that FEMA is looking for, and for those that don't reach that FEMA set bar, looking at the different themes and seeing what makes it not reach that bar.
- Ehsan - For the dams – they have high hazard dams. Are we considering these high hazard dams or just consider the 7 dams mentioned in the slides?
  - Jade - Dam failure section itself has all of the dam data sent over. We have information for all of the dams and levees. It gets more into detail there, so we only presented on the failures.
- Ehsan - We missed the College Park tornadoe – was a EF3.
  - Jade - We only included the tornadoes since 2012, cutoff date since there is a much more detailed list in the plan. It goes in the appendix since it is very lengthy.

Draft Mitigation Goals Discussion

- Joey – knows the objective is fairly broad but would like to hear on if we should be more specific. If we are more specific, FEMA would hold us to that. Things are constantly changing, so our priorities outlined in the plan may change in 2 years.
  - Jade – That's true. These goals we try to identify are the main areas we can focus on. We can get more specific for objectives, but very valuable to find out specificity
- Frank with DOE – It mentioned equitably aligning benefits. The part they work the most with is property owner buy in. Property rights. Property benefits, but don't want to be restricted with what they can do with the property. Flood benefits, but not with restrictions on the property. While reserving property rights is a critical component of every CIP they implement.
- Frank - I would start with a basic awareness of all staff having an HMP
  - Jade – Definitely agree, that is one of our questions in the Hazard Mitigation Survey. That is always one of the biggest things that stands out in any Hazard Mitigation
- Dawn – There is a huge need for awareness of the federal dollars coming down to state and local governments for specific types of hazard mitigation and climate resilience projects. Due to that abundance of dollars, it is very important to know which federal dollars apply to what.

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  - Jade – Absolutely. Would this be addressed with more time spent on a section spelling out the projects and actions that align with different grant opportunities?
    - Dawn – That would be very helpful.
- Jade – When these notices of grant opportunities come out, are there internal notices sending this information around the county or city?
  - Dawn – Usually that comes from Joey.
  - Joey – OHS tries to push out that information to partnering agencies and the whole county. Some grants aren't from FEMA though and they don't have visibility on these. If it comes from Maryland DEP or others. They only know the grants coming from FEMA
- Dawn – by advancing heat to medium high hazard, other departments might be interested in grants that would be made available to address extreme heat
  - Joey – that gives a whole other line of grants. They might not directly tie into hazard mitigation, but there is a possibility.
  - Jade – if you emphasize co-benefits, that can help to create more funding. But it seems to be difficult to find visibility for breadth of funding availability. We will try and incorporate that into the Mitigation Strategy. A potential action to include will be tasking someone with the responsibility to go down list of grants to see what funding is available
- Ehsan – Regarding capability and capacity concerns. Most counties/municipalities need technical assistance. Most municipalities don't have capacity to do BCAs themselves, and don't have trained staff. Good to consider technical assistance.
  - Jade – is this just the jurisdictions in the county or county itself?
    - Ehsan – County itself too. County needs BCA applications, but they don't know how to do it properly. Need assistance.
- Kelly – just reading through HHPD (?) NOFO for 2022, you need a hazard mitigation plan to qualify. The hazard mitigation plan has to include risk to dams and comply with disaster mitigation plan.
  - Jade – One of goals was to meet HHPD requirements. This will be out for review soon, making sure we're hitting all of these points and making them eligible for grant.
- Joanne –in our community recognizing non-English speaking residents of the community making sure they are receiving this information.
  - Jade – does county and city have ongoing communication in other languages covering topics of hazard mitigation?
    - Joanne – They do, social media platform has increased, and local newspaper reaches out to people. Not sure if they are reaching those without English as their first language. Can't gauge with complete accuracy.
- Dawn – how does the public find out about Hazard mitigation plans? Is there validity to setting up a county webpage for hazard mitigation plan? People can go in there to find information. Create greater awareness. At this time, on DOEs webpage there is information on the Hazard mitigation plan. Homeland security webpage too. Not sure if there is one centric webpage.
  - Ehsan – No, there is not one centric webpage.
    - Jade – Yes, that is a good point. One centric would be good. Homeland Security page is only for 5-year build out process. Creating a more year-round information webpage would be a helpful tool to have.
- Stephanie – They have CAP for 2022-2025, specifically outlines resiliency. Implementing electrical grids and natural gas actions. They can send that. A hazard mitigation plan – stressing building codes to keep people out of flood plain should be very important.,
  - Joey – County does have a CAP
  - Jade – we have both of those and we have been reviewing it. Glad Stephanie mentioned grids. FEMA does provide funding for microgrids. If they want us to include information on that funding, we can include it.
    - Dawn/Stephanie – We would love to see that included.

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- Patrick - Sorry, slow to get this out, but the County has a public outreach website for Vision Zero built in house using the Esri Hub site: https://visionzero-princegeorges.hub.arcgis.com/
    - Jade – thank you for sending. We will include this in the mitigation strategy.

Potential Project Brainstorm

- Ehsan – Generally, from a year ago, FEMA is emphasizing nature-based solutions. Long term strategies, instead of just looking at short term. This needs to be considered in our HMP since FEMA is shifting this way. HMP should justify projects based on that. We do have a couple nature-based solutions, but not too much. Sometimes the project depends on location of mitigation project, a combo of both would be perfect and not just one of them.
    - Jade – Especially with FEMA grants, including SVI requirements that can get a lot of points and nature-based solutions get points, stacking these all together will make it a lot more likely to get these grants.
- Jeffrey – As important to identify routine work or maintenance that helps to contribute to flood reduction. New projects are fantastic and can better existing conditions (infrastructure or dams, etc.). Stormwater management ponds, channels, rehabilitation or cleaning storm drains, there should be a way to integrate these existing routine work and maintenance and their effects with the new projects. Measurement and data are important. Performance metrics can help to quantify how their work is increasing capacity or increasing volume of control, mitigating CFS through flood area. Important to capture this information. Not sure it resonates with the HMP. HMP should have a metric in there that provides or drives this data capture and communication. Will lend to perception of what the government is doing.
    - Jade – Can incorporate it in there, whether or not they include it as an action. Useful to do it and can try and come up with ways that while they are performing actions and projects to keep the data in one place, to show that the county has been effective in the past.
- Dawn – Where would we fit in the need for resilience? With all of the various hazards the county is at risk for, there is some need for centers where communities can go to, to receive basic needs until their homes/utilities/service are restored, and until they can get other assistance with housing. How do we fit this need into the HMP?
    - Jade – Can definitely include this as an action in the mitigation strategy. Additionally helpful to identify areas of interest in the risk assessment that can help to determine what the needs are. Baltimore does this, so we can use their model or aspects of their model to form our own.
    - Jade – Are these resiliency hubs similar to Baltimore? Deal with natural hazards, but also in partnership with health dept and social services?
        - Dawn – Yeah.

Next Steps

No Comments

Questions & Comments (Open Forum)

No Comments

B.4. Attendance

1. Summary

Meeting title	Mitigation Advisory Committee Meeting - HIRA Results
Attended participants	29
Start time	11/16/22, 2:45:21 PM
End time	11/16/22, 4:32:28 PM
Meeting duration	1h 47m 7s
Average attendance time	1h 26m 43s

2. Participants

Name	First join	In-meeting duration	Email
Joanne Hall Barr	11/16/22, 2:53:39 PM	1h 38m 29s	[redacted]
McClelland, James E.	11/16/22, 2:53:40 PM	1h 38m 31s	
Choquette, Scott	11/16/22, 2:54:51 PM	54m 22s	
Robert Love	11/16/22, 2:55:25 PM	1h 36m 39s	
Stephanie Robinson	11/16/22, 2:55:44 PM	1h 36m 30s	
Henderson, Joey L.	11/16/22, 2:56:12 PM	1h 36m 3s	
[redacted]	11/16/22, 2:56:36 PM	1h 35m 30s	
Nelson, Jesse	11/16/22, 2:56:40 PM	1h 35m 42s	[redacted]
Carreen Koubek	11/16/22, 2:57:04 PM	1h 35m 6s	
Payne, Jade	11/16/22, 2:57:15 PM	1h 35m 2s	
Callahan, Patrick T.	11/16/22, 2:57:50 PM	1h 34m 24s	
Ramos, Wanda	11/16/22, 2:57:58 PM	1h 34m 19s	
Kelly Flint (Guest)	11/16/22, 2:58:12 PM	1h 33m 57s	
Block, Michael (Contractor)	11/16/22, 2:58:56 PM	1h 33m 16s	[redacted]
Bahador, Ehsan	11/16/22, 2:59:22 PM	1h 32m 56s	
Galosi, Frank L.	11/16/22, 3:00:29 PM	1h 31m 37s	
DeHan, Jeffrey M.	11/16/22, 3:00:50 PM	1h 31m 22s	
Rush, Hanna R.	11/16/22, 3:00:55 PM	49m 50s	
Mishra, Sudhanshu	11/16/22, 3:01:05 PM	1h 31m 3s	
Hawkins-Nixon, Dawn	11/16/22, 3:01:36 PM	1h 30m 33s	
Finch, Kim	11/16/22, 3:01:48 PM	1h 30m 39s	
De Guzman, Reynaldo S.	11/16/22, 3:01:52 PM	1h 30m 13s	
Cline, Anthony J.	11/16/22, 3:02:57 PM	1h 29m 15s	
Sherrill, Mary C.	11/16/22, 3:03:31 PM	1h 28m 36s	
[redacted]	11/16/22, 3:03:37 PM	1h 28m 17s	
Carter, James A.	11/16/22, 3:03:52 PM	1h 28m 22s	[redacted]
Shoulars, Katina	11/16/22, 3:05:03 PM	1m 21s	
Smith, Joanna M.	11/16/22, 3:05:23 PM	1h 26m 51s	
Miles Roesner	11/16/22, 3:06:20 PM	1h 25m 51s	

C. Mitigation Strategy Workshop

C.1. Presentation





Project Status

Planning Process Updates & Milestones

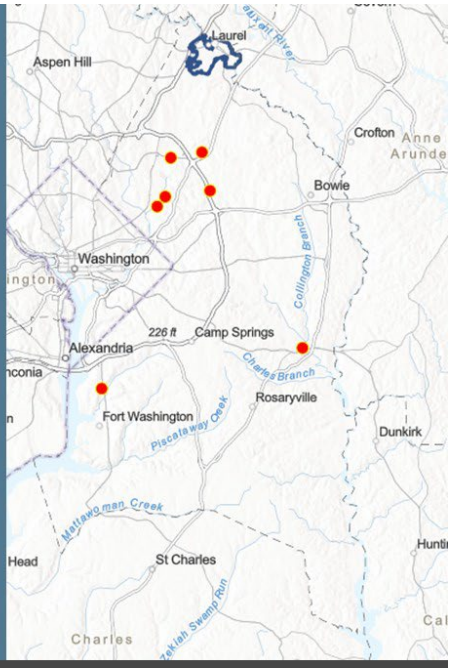
	Sep	Oct	Nov	Dec	Jan '23	Feb	March
HM Plan Milestone:	Kick-Off	Outreach Begins	Risk Assessment Workshop	Strategy Workshop	Draft Plan & MDEM Review	FEMA Review	Adoption
Review 2017 HMP							
Data Collection							
HIRA							
Capability Assessment							
Revise Goals + Objectives							
Mitigation Strategy Development							
Public Engagement							
HMP Writing / Revising							
MDEM Review / Approval							
FEMA Review / Approval							
Plan Adoption, Approval Letters, Plan Distribution							

Project Schedule

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Public Outreach Progress

- Public Survey: 38 responses
- Community Hazard Mapping: 7 responses (see map)
- Social Media Advertisements: 500+ views & interactions
- Survey will end Friday, 12/23



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What is Technical Assistance and why is it important?

- Direct support to a community that builds community capacity and capabilities in ways that meet the unique needs of communities.
- Across FEMA and other federal agency partners, there are various technical assistance programs.
- Better understanding community interests and needs, followed by tailored support to fill those gaps, is a key way to support communities and equity.
- Acknowledges there are no one-size-fits-all solutions to supporting communities.

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Examples

- More robust assessments of risks and priorities.
- Project alternatives analysis
- Assessment of benefits, including BCA support
- Tracking progress and assessing changing risk and priorities
- Training and outreach

Themes of what's included



Increase understanding of risk and mitigation



Inspire communities to action



Help prepare for implementation, including alternatives analyses or BCAs.

Technical Assistance Integration

- 1-2 sentences added to existing Mitigation Strategy sections on how technical assistance can be considered:
  - Prioritization: Related to feasibility and community capacity
  - Implementation: Review opportunities for technical assistance and determine if needed
- New Section: Technical Assistance Overview
  - What it is
  - Examples
  - Existing federal and state opportunities
  - Process to access

Finalize Mitigation Goals

Discussion

Final Mitigation Goals/Objectives

Implement projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.

Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.

Increase public awareness of natural hazard risks to people and property and promote current and new opportunities to participate in mitigation planning.

Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans that are aligned with regional and state resilience and equity goals.

Prioritize Actions

STAPLE/E Criteria

STAPLE/E Prioritization

- **Social**
  - Is the proposed action socially acceptable to the community(s)?
  - Are there equity issues involved that would mean that one segment of a community is treated unfairly?
  - Will the action cause social disruption?
- **Technical**
  - Will the proposed action work?
  - Will it create more problems than it solves?
  - Does it solve a problem or only a symptom?
  - Is it the most useful action in light of other community(s) goals?

STAPLE/E Prioritization

- **Administrative**
  - Can the community(s) implement the action?
  - Is there someone to coordinate and lead the effort?
  - Is there sufficient funding, staff, and technical support available?
  - Are there ongoing administrative requirements that need to be met?
- **Political**
  - Is the action politically acceptable?
  - Is there public support both to implement and to maintain the project?

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STAPLE/E Prioritization

- **Legal**
  - Is the community(s) authorized to implement the proposed action? Is there a clear legal basis or precedent for this activity?
  - Are there legal side effects? Could the activity be construed as a taking?
  - Is the proposed action allowed by a comprehensive plan, or must a comprehensive plan be amended to allow the proposed action?
  - Will the community(s) be liable for action or lack of action?
  - Will the activity be challenged?

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STAPLE/E Prioritization

- **Economic**
  - What are the costs and benefits of this action?
  - Do the benefits exceed the costs?
  - Are initial, maintenance, and administrative costs taken into account?
  - Has funding been secured for the proposed action? If not, what are the potential funding sources (public, non-profit, and private)?
  - How will this action affect the fiscal capability of the community(s)?
  - What burden will this action place on the tax base or local economy?
  - What are the budget and revenue effects of this activity?
  - Does the action contribute to other community goals, such as capital improvements or economic development?
  - What benefits will the action provide?

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STAPLE/E Prioritization

- **Environmental**
  - How will the action affect the environment?
  - Will the action need environmental regulatory approvals?
  - Will it meet local and state regulatory requirements?
  - Are endangered or threatened species likely to be affected?

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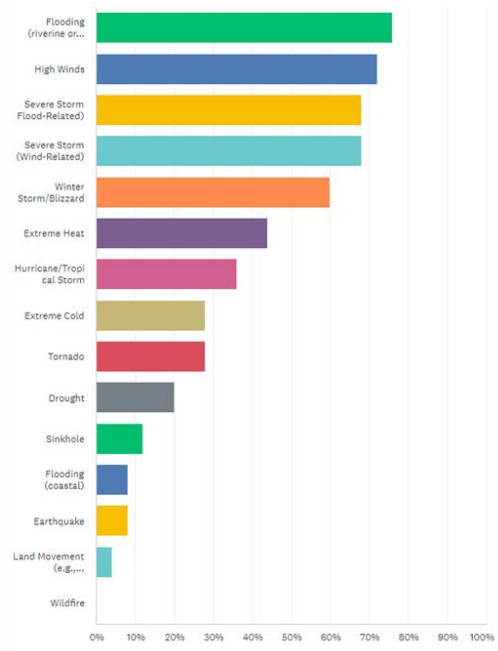
Survey Feedback

Community Input

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Community Feedback

- Question: Please select all hazards that have had the biggest impact on Prince George's County (i.e., your home, business, or neighborhood).



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Community Feedback

- Top Projects:
  - Localized flood risk reduction
  - Technical assistance for property owners
  - Outreach and education
  - Ordinance updates

ANSWER CHOICES	RESPONSES	
Conduct localized flood risk reduction projects, such as stormwater management projects or stabilizing roads/bridges	85%	22
Provide technical assistance to residents, businesses, jurisdictions, and organizations to help them preform hazard mitigation projects	62%	16
Provide outreach and education to residents, business, jurisdictions, and organizations to help them understand risks and mitigate hazards	58%	15
Enact and enforce regulations, codes and ordinances, such as zoning regulations and building codes	58%	15
Implement a warning system to alert the public of impending hazards	54%	14
Acquire/buyout properties to create open space and reduce flooding	50%	13
Floodproof buildings	42%	11
Demolish either an entire building or part of a building in order to rebuild it in a way that mitigates it from flooding	38%	10
Conduct non-localized flood risk reduction projects, such as rehabilitating dams and levees	38%	10
Stabilize the ground on slopes to prevent slope failures/landslides	35%	9
Retrofit buildings to reduce future damages from erosion, high winds, earthquakes, or snow.	35%	9
Purchase and install generators	35%	9
Elevate buildings to avoid potential floodwaters	15%	4
Construct safe rooms for hurricanes, tornadoes, etc.	12%	3
Perform wildfire mitigation projects, such as creating defensible space, retrofitting buildings with ignition-resistant building materials, or vegetation management	8%	2
Other (please specify) Responses	4%	1

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Community Feedback

- "Review and update stormwater systems to meet current conditions" (4 similar stormwater responses)
- "Take care of some of the flooding areas that continue to recur. Someone needs to take responsibility and fix issues between PEPCO and town."
- "Respond to residents' needs and develop a simple plan to help residents that are vulnerable."
- "Flood mitigation projects along the Collington Branch that flows through the Town of Upper Marlboro."
- "Conduct Risk Assessments on every community in PG County"

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Community Feedback

- "Continue to trim trees around power lines to avoid power outages."
- "Reduce development in floodplains and make significant strides on reducing the amount of impervious surfaces/protect more open space within the county to avoid sudden riverine flooding"
- "Consider an open space ordinance, similar to Montgomery County's farm preserve, to protect open space from development and encourage smarter, denser development."

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Mitigation Strategy Update

Airtable

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C.2. Agenda

Dewberry

Prince Georges Proud

Meeting Agenda

Title:	Prince George's County Mitigation Advisory Committee: Mitigation Strategy Development	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, December 14th, 2022	Time:	3:00 – 4:30 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the project status and the Committee will decide on actions to include in the Mitigation Strategy.		

Agenda Items

Topic	Presenter	Time
Welcome and Introductions	Scott Choquette, Dewberry	3:00 – 3:05 pm
Project Status Update	Scott Choquette and Jade Payne, Dewberry	3:05 – 3:10 pm
Mitigation Goals Review	Jade Payne, Dewberry	3:10 – 3:15 pm
Action Prioritization	Scott Choquette, Dewberry	3:15 – 3:20 pm
Public Survey Feedback	Jade Payne, Dewberry	3:20 – 3:25 pm
Mitigation Strategy Update	Jade Payne, Dewberry	3:25 – 4:30 pm

Prince George's County Hazard Mitigation Plan – 2023 Update 1

C.3. Notes

Dewberry

Mitigation Advisory Committee Meeting Notes

Title:	Prince George's County Mitigation Advisory Committee: Mitigation Strategy Development	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, December 14th, 2022	Time:	3:00 – 4:30 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the project status, and the Committee will decide on actions to include in the Mitigation Strategy.		

Attendees:

1. Finch, Kim
2. Stephanie Robinson
3. Payne, Jade
4. Kelly Flint
5. Henderson, Joey L.
6. Bahador, Ehsan
7. Carter, James A.
8. Callahan, Patrick T.
9. Cline, Anthony J.
10. Erin Meyer (UMD) (Guest)
11. Quattrocchi, Dominic
12. Choquette, Scott
13. Wright, David A:(BGE)
14. Christina Cornwell
15. Gill, Ronald E.
16. Sherrill, Mary C.
17. Rush, Hanna R.
18. Tennekoon, Lilantha
19. Robert Love
20. Brandy Alexis Espinola
21. Galosi, Frank L.
22. Batten-Mickens, Meloyde R.
23. Gary 2 Cunningham - Office of Safety and Security Services
24. Smith, Joanna M.
25. Mishra, Sudhanshu
26. Miles Roesner
27. Hawkins-Nixon, Dawn
28. De Guzman, Reynaldo S.

Meeting Summary

Scott Choquette (Project Manager, Dewberry) and Jade Payne (Deputy Project Manager, Dewberry) met with the Prince George's County Mitigation Advisory Committee (MAC) on December 14, 2022, to discuss the actions that would be included in the updated Hazard Mitigation Plan. A PowerPoint presentation was used to review the project status, mitigation goals, and action prioritization methodology. An Airtable database was used to discuss and make decisions on the actions for the updated Mitigation Strategy. Discussions were held throughout the presentation so Dewberry could gather feedback from the MAC. Discussion and presentation topics are grouped below with input and questions from the MAC.

Meeting Notes

Introduction
No Comments

Dewberry

Prince Georges Proud

Project Status

- Scott explained that the HIRA section is in quality review now
- Now we are working on creating the mitigation strategies for the Plan
- Scott showed the results of the public outreach strategy – 7 people have designated community hazard areas, 38 responses to the Public survey
- Jade introduced Technical Assistance and its importance for the County or City
- Jade gave a brief overview of Technical Assistance, its capabilities for helping the County or City with project implementation, grant applications, etc.
- Jade gave examples of Technical Assistance, including BCAs, which was mentioned in the previous meeting
- Jade explained how Technical Assistance will be incorporated in the Mitigation Strategy sections

Mitigation Goals Review

- Jade presented the mitigation goals/objectives that were decided upon by the MAC at the previous meeting
- These goals incorporated feedback from the MAC meeting as well as feedback from individuals through email response

Action Prioritization

- Action prioritization is using the STAPLE/E Prioritization, which looks at a project through a variety of lenses including: social, technical, administrative, political, legal, economic, environmental
- Joey asked in terms of legal, do we keep into account new laws/policies that have come into effect?
- Scott responded yes, and that all projects will comply with current laws and policies

Public Survey Feedback

- Jade explained the feedback that has been received through the public survey
- Hazards that were the highest ranked as issues are: flooding, high winds, and severe storms
- Top projects from the survey were: localized flood risk reduction, technical assistance to property owners, outreach and education, and ordinance updates
- Jade showed comments from the survey. The majority of comments related to pluvial flooding and stormwater management, as well as incorporating more tree trimming to reduce damage from high winds and severe storms, expanding open space
- Joey asked if there were more comments from one area of the county?
- Jade replied there was a cluster around the Collington Branch area, but otherwise the respondents were spread throughout the County

Mitigation Strategy Update

- Jade presented the Airtable, which includes mitigation strategies and suggestions for updating the mitigation strategies
- Scott explained that FEMA is looking for more actionable, meaningful strategies as opposed to actions that the County routinely does (ex: strategies that begin with "continue...."), the actions that the County routinely does will be included in the Capability Assessment section of the plan
- Jade will consolidate any feedback and changes on the mitigation action strategies and send them to the MAC for review

Dewberry

Prince Georges Proud

- Scott explained that FEMA likes to see the updates on progress of mitigation action strategies from the previous hazard mitigation plan when creating new mitigation action strategies
- The group went through each mitigation action strategy and provided feedback on all strategies
- Dawn said on an annual basis, the County will be able to acknowledge where they have updated information from upcoming studies that may be more up to date than FEMA's information
- Dawn said since the 2017 plan, the County has added 2 new staff to the flood management group which has allowed for more capacity
- Dawn asked if the Elevation Certificates are being phased out with the new RiskRating2.0
- Scott replied they are not being totally phased out, but they will be slightly less important in setting premiums
- Frank asked if "natural hazards" could be expanded to include non-natural hazards that may occur in urban areas for Strategy 7; Ehsan agreed that we should make it more general wording, and include acquisition for all endangered structures as well as flood-prone structures as an eligible project
- Frank said he will talk with Dawn offline to see what tweaks can be made in the wording of Strategy 7
- Dawn said that we should keep Strategy 9 because the Upper Marlboro Emergency Response Plan because it hasn't been updated since 1999
- Frank said the MS4 Permit mandates water quality practices (Strategy 11), and he can provide specific verbiage if needed
- Frank said the MS4 Permit also requires watershed assessment plans (Strategy 12) so we should keep that action as well, but not use the M-NCPPC 2016 study should use
- The City of Laurel mitigation strategies will be reviewed at a later date with a representative from the City
- Dawn suggested it would be helpful to determine what Pepco is responsible for (tree trimming, etc.) and what the County is responsible for

Questions & Comments (Open Forum)

- Jade will be following up with the mitigation strategies list to allow for more feedback to finalize the actions
- Jade asked if there are any other projects that should be added to the list before it is sent out for more feedback.
- Frank suggested we have a meeting with the MNPPC group to discuss their plans and studies and incorporating those into the mitigation strategies

Prince George's County Hazard Mitigation Plan – 2023 Update 3

C.4. Attendance

1. Summary

Meeting title	Mitigation Advisory Committee: Mitigation Strategy Development
Attended participants	28
Start time	12/14/22, 2:51:57 PM
End time	12/14/22, 4:32:01 PM
Meeting duration	1h 40m 5s
Average attendance time	1h 19m 34s

2. Participants

Name	First join	In-meeting duration	Email
Finch, Kim	12/14/22, 2:55:23 PM	1h 30m 52s	[redacted]
Stephanie Robinson	12/14/22, 2:57:08 PM	1h 34m 44s	
Payne, Jade	12/14/22, 2:57:23 PM	1h 34m 31s	
Kelly Flint	12/14/22, 2:57:29 PM	1h 34m 21s	
Henderson, Joey L.	12/14/22, 2:57:29 PM	1h 34m 31s	[redacted]
Bahador, Ehsan	12/14/22, 2:57:29 PM	1h 34m 25s	
Carter, James A.	12/14/22, 2:57:29 PM	1h 34m 29s	
Callahan, Patrick T.	12/14/22, 2:57:40 PM	1h 34m 13s	
Cline, Anthony J.	12/14/22, 2:57:46 PM	1h 34m 5s	
Erin Meyer (UMD) (Guest)	12/14/22, 2:58:06 PM	1h 33m 44s	
Quattrocchi, Dominic	12/14/22, 2:58:48 PM	1h 29m 26s	[redacted]
Choquette, Scott	12/14/22, 2:58:51 PM	1h 20m 52s	
Wright, David A:(BGE)	12/14/22, 2:59:47 PM	1h 5m 44s	
Gill, Ronald E.	12/14/22, 2:59:58 PM	55m 22s	
Sherrill, Mary C.	12/14/22, 3:00:31 PM	1h 31m 21s	
Rush, Hanna R.	12/14/22, 3:00:43 PM	1h 31m 10s	
Tennekoon, Lilantha	12/14/22, 3:00:55 PM	1h 30m 57s	
Robert Love	12/14/22, 3:01:20 PM	1h 17m 39s	
Brandy Alexis Espinola	12/14/22, 3:01:33 PM	1h 30m 18s	
Galosi, Frank L.	12/14/22, 3:03:31 PM	1h 28m 21s	
Batten-Mickens, Meloyde R.	12/14/22, 3:04:23 PM	56m 37s	
Gary 2 Cunningham - Office of S	12/14/22, 3:04:33 PM	1h 27m 28s	
Smith, Joanna M.	12/14/22, 3:04:59 PM	53m 53s	
Mishra, Sudhanshu	12/14/22, 3:05:07 PM	1h 26m 45s	
Miles Roesner	12/14/22, 3:05:07 PM	23m 5s	
Hawkins-Nixon, Dawn	12/14/22, 3:05:31 PM	1h 26m 21s	
De Guzman, Reynaldo S.	12/14/22, 3:09:17 PM	51m 44s	
Christina Cornwell	12/14/22, 3:30:21 PM	21m 2s	

D. Mitigation Strategy Feedback Survey

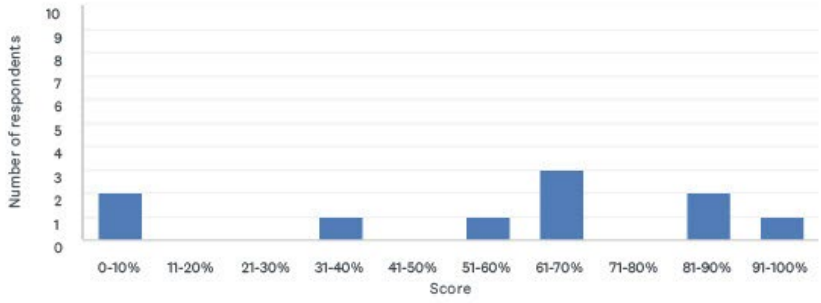
D.1. Prince George's County Survey

Prince George's County: Mitigation Actions Feedback

Quiz Summary

AVERAGE SCORE

56% • 55/99 PTS



STATISTICS		
Lowest Score	Median	Highest Score
2%	68%	92%
Mean: 56%		
Standard Deviation: 32%		

Question Ranking

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Prince George's County: Mitigation Actions Feedback

QUESTIONS (33)	DIFFICULTY	AVERAGE SCORE
Q1 Select all that apply:	1	54%
Q28 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	2	58%
Q13 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	2	58%
Q40 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	2	58%
Q43 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	2	58%
Q25 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	2	58%
Q54 Develop a program to utilize vacant land (both publicly and privately owned) for stormwater management. Acquire land to serve the dual purpose of green infrastructure/stormwater infiltration and recreational/open space.	7	62%
Q22 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	8	63%
Q10 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	8	63%
Q34 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	8	63%
Q57 To preserve environmentally sensitive land and to encourage development in the Regional Transit Districts, evaluate a transfer of development rights program, density exchanges, or purchase of development rights program for the Rural and Agricultural Areas. Explore opportunities to transfer development rights within areas and to coordinate with the Watershed Implementation Plan and Maryland Accounting for Growth Policy.	11	67%
Q19 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	12	71%
Q63 Office of the County Executive must introduce and support a County Council resolution requiring the County to integrate extreme weather and energy-efficiency criteria into building codes.	13	71%
Q68 Conduct Countywide Thermal Mapping of Tree Canopy Cover with Shade Study, and Aerial Utility Mapping exercises. Then conduct a neighborhood-level Heat Vulnerability Assessment.	13	71%
Q56 Use conservation subdivisions or other site planning and landscape conservation tools when developing in Established Communities near Rural and Agricultural Areas to cluster development and preserve land for resource protection or open space.	15	76%
Q55 Use conservation subdivisions in areas adjacent to Rural and Agricultural Areas to transition density and to encourage preservation of green infrastructure corridors as defined by the County's Green Infrastructure Plan.	15	76%
Q60 Adopt and Enforce Policies to Require Green Infrastructure Practices for New and Existing Properties, especially native plantings, rain gardens, green corridors, runoff retention, and other nature-based ways to reduce and naturally filter runoff on private and public properties. Insert specific enforceable language in guiding County documents related to proposed and existing development.	15	76%
Q4 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	18	79%
Q16 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	18	79%

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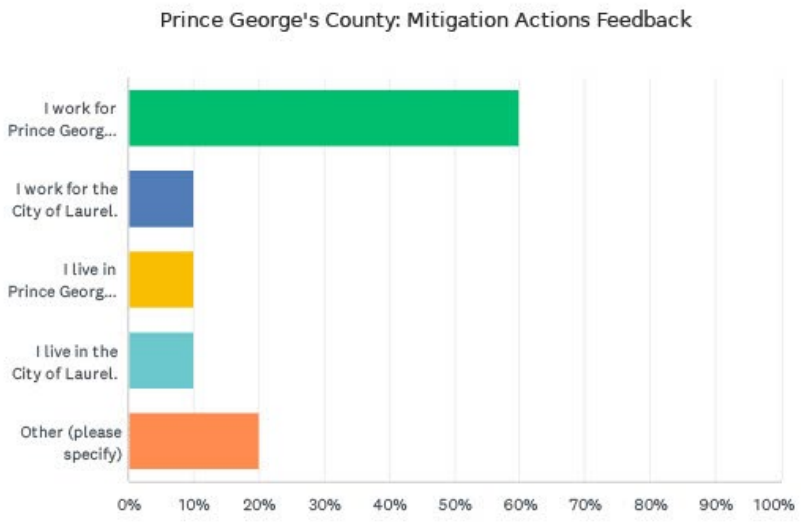
Prince George's County: Mitigation Actions Feedback

Q7 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	18	79%
Q66 Assess Climate Projections and Consequences of Dam and Levee Failure. Analyze baseline conditions against local/regional climate projections to highlight future vulnerabilities and risk. Model hydrological loads to the consequences of failure under present and future conditions and jointly evaluate dams, levees, and interdependent components. Incorporate Findings in Emergency Action Plans.	21	81%
Q61 Revise Prince George's County Code of Ordinance to Incorporate and Require Climate-resilient Practices.	21	81%
Q62 Update County's Stormwater Regulations to require climate resilient design and criteria.	21	81%
Q37 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	24	83%
Q58 Align Economic Development Plans with the Climate Action Plan, preserving existing agricultural land and natural areas and promoting development in already-developed areas near high-capacity transit. Perform an economic development and climate adaptation analysis of existing agricultural land and natural areas that are crucial to climate resilience on a subwatershed basis. Identify areas of open space for preservation and optimum use for climate resilience.	25	86%
Q67 Demonstrate County commitment to climate action through publicly transparent tracking, monitoring, evaluation, and reporting. Require M-NCPPC to create and establish a public Smart Growth Dashboard that tracks approved preliminary plans of subdivisions, approved site plans and development proposals.	25	86%
Q64 Require County Stormwater Management (SWM) Standards to Incorporate Projected Climate Change Impacts by using approved downscaled and up-to-date climate impact information to reevaluate peak rainfall estimates and future design storm profiles. Evaluate SWM standards using this criterion at least every three (3) years. Require all upgrades of County storm drain systems and CIP roadway, bridge, culvert and stormwater management repair or renovation projects to meet these updated climate-resilient design criteria.	25	86%
Q46 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	28	88%
Q65 Avoid Future Development in Flood Inundation Areas Below Existing High-hazard Dams. Require that plan sets for subdivision proposals and permit applications to show the danger reach and inundation area and prohibit new construction in these areas.	29	90%
Q59 The County shall prohibit all waivers to allow development in floodplains.	29	90%
Q31 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	29	90%
Q52 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	32	92%
Q49 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)	32	92%

Q1 Select all that apply:

Answered: 10 Skipped: 0

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QUIZ STATISTICS			
Percent Correct 0%	Average Score 1.6/3.0 (54%)	Standard Deviation 0.74	Difficulty 1/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ I work for Prince George's County.	2/3	60.00%	6
I work for the City of Laurel.	0/3	10.00%	1
✓ I live in Prince George's County.	1/3	10.00%	1
I live in the City of Laurel.	0/3	10.00%	1
Other (please specify)	--	20.00%	2
Total Respondents: 10			

#	OTHER (PLEASE SPECIFY)	DATE
1	I work for the City of Bowie	1/3/2023 10:16 AM
2	University of Maryland Environmental Finance Center	12/20/2022 2:07 PM

Q2 Name:

Answered: 10 Skipped: 0

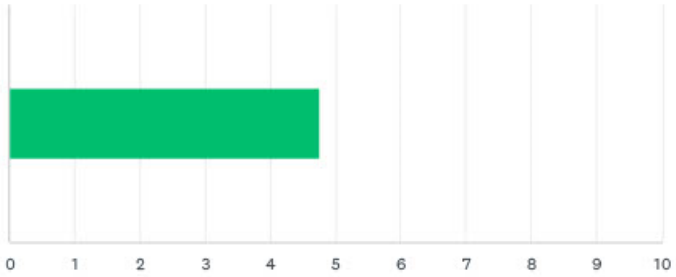
#	RESPONSES	DATE
1	Daniel L. Dornan	1/4/2023 8:13 AM
2	Stephanie Robinson	1/3/2023 10:16 AM
3	Brian K Lee	12/27/2022 11:57 AM
4	Ehsan Bahador	12/23/2022 12:58 PM

Prince George's County: Mitigation Actions Feedback

5	Frank Galosi	12/22/2022 12:13 PM
6	Lilantha Tennekoon	12/21/2022 9:33 AM
7	Major Anthony Cline (PGPD)	12/20/2022 2:33 PM
8	Brandy Espinola	12/20/2022 2:07 PM
9	Patrick Callahan	12/20/2022 7:37 AM
10	Dr. Toye Y. Latimore	12/19/2022 9:12 PM

Q3 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



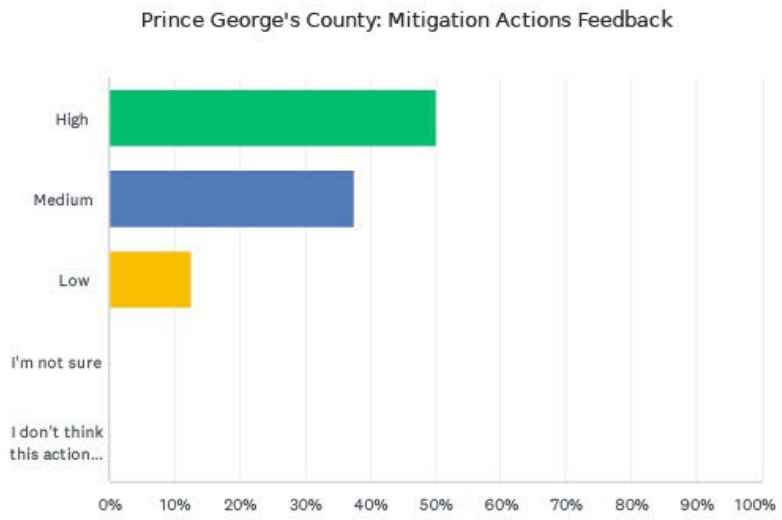
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	38	8
Total Respondents: 8			

#		DATE
1	4	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	5	12/30/2022 9:51 AM
4	6	12/27/2022 12:15 PM
5	4	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q4 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

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QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.4/3.0 (79%)	Standard Deviation 0.74	Difficulty 18/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	50.00%	4
Medium	2/3	37.50%	3
Low	1/3	12.50%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q5 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 6 Skipped: 4

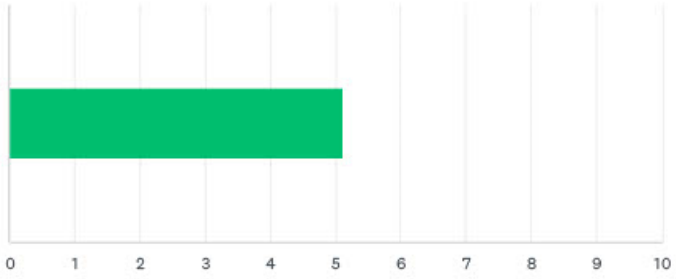
#	RESPONSES	DATE
1	Include other electricity providers serving portions of Prince George's County, such as SMECO and BGE if applicable.	1/4/2023 9:26 AM
2	May Baltimore Gas and Electric be included as well, as they serve a large percentage of the county	1/3/2023 10:16 AM
3	Suggest possibly changing the word "prevent". We will not outright eliminate power outages due to downed trees but will be lowering the risk through this measure	12/30/2022 9:51 AM
4	Develop mutual aid with the City of Laurel to provide limited resources and personnel to assist in trimming ang tree control as needed.	12/27/2022 12:15 PM

Prince George's County: Mitigation Actions Feedback

5	Department of Public Work and Transportation (DPW&T) is responsible for the debris removal after any incidents such as micro bursts. DPW&T should be engaged in this effort and coordinate with PEPCO.	12/23/2022 2:25 PM
6	Maybe a bit more explicit language to emphasize the need to conduct mainteance in such a way as to retain a healthy tree canopy and ensure the longevity of trees as opposed to a slash and dash approach.	12/20/2022 2:19 PM

Q6 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



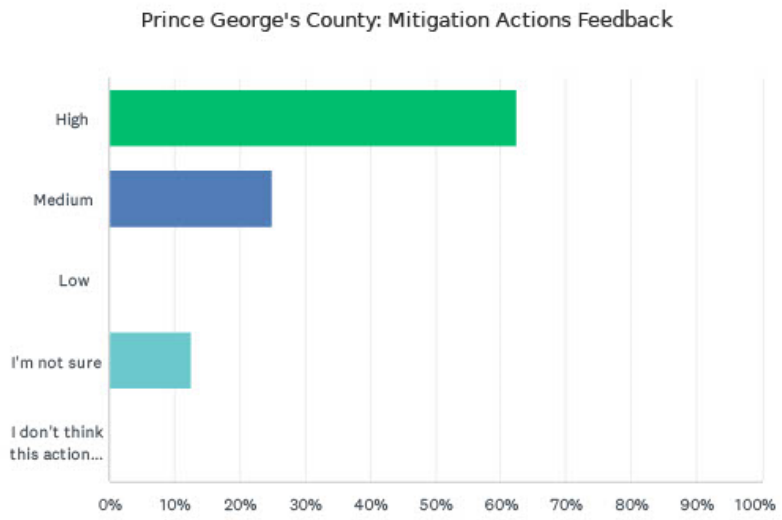
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	41	8
Total Respondents: 8			

#		DATE
1	5	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	6	12/30/2022 9:51 AM
4	6	12/27/2022 12:15 PM
5	4	12/23/2022 2:25 PM
6	4	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q7 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

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QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.4/3.0 (79%)	Standard Deviation 1.06	Difficulty 18/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	62.50%	5
Medium	2/3	25.00%	2
Low	1/3	0.00%	0
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q8 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

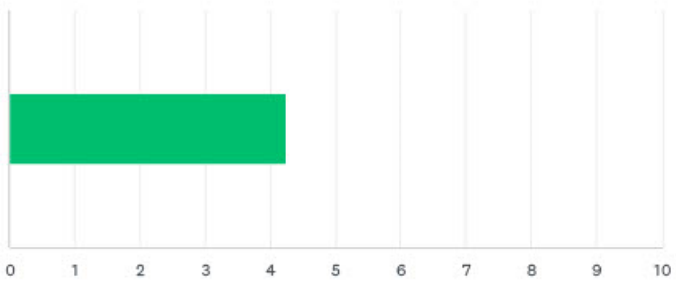
Answered: 4 Skipped: 6

#	RESPONSES	DATE
1	Implementing projects is what will directly help flood-impacted areas. Currently, a watershed study is being conducted (in 2023) in Collington Branch. An outcome of the study will be the proposal of specific flood mitigation projects	12/30/2022 9:51 AM
2	Develop MOA for the City of Laurel to inspect and clean the portion that runs through their jurisdiction.	12/27/2022 12:15 PM
3	It could be useful if the County wants to apply for a project scoping grant under BRIC/FMA.	12/23/2022 2:25 PM
4	USACE issued a report: FLood Risk Mgmt Study for Upper Marlboro, in 2021. this included FP modelling at the confl of Collington and Western Branch and Hydrology for Collington watershed.	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

Q9 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



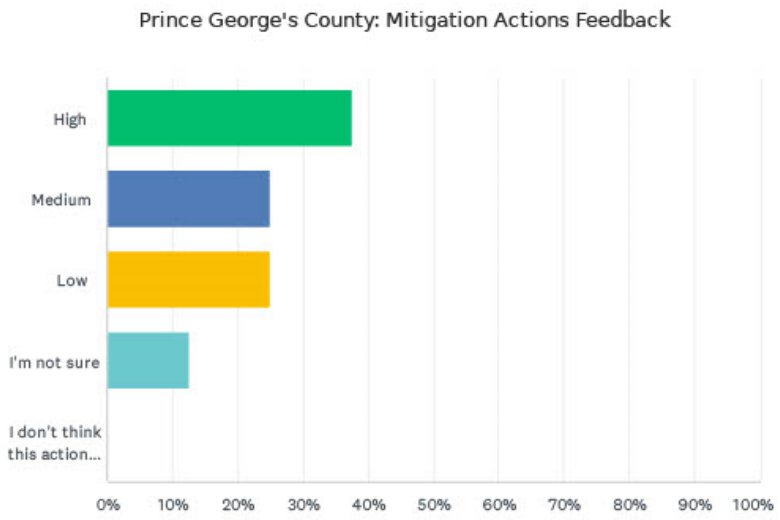
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	34	8
Total Respondents: 8			

#		DATE
1	4	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	3	12/30/2022 9:51 AM
4	3	12/27/2022 12:15 PM
5	5	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q10 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

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QUIZ STATISTICS			
Percent Correct 30%	Average Score 1.9/3.0 (63%)	Standard Deviation 1.13	Difficulty 8/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	25.00%	2
Low	1/3	25.00%	2
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q11 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

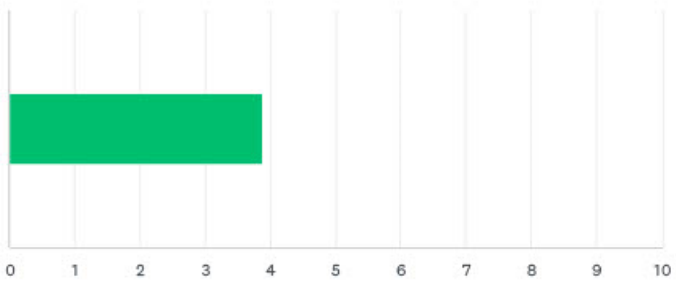
Answered: 4 Skipped: 6

#	RESPONSES	DATE
1	Any outreach should include funding options or other sources for completing recommended work, if available, including outreach on flood insurance.	1/3/2023 10:16 AM
2	County/consultant experts will ultimately decide on the best mitigation approach based on BCA, especially on large-scale projects that benefit neighborhoods.	12/30/2022 9:51 AM
3	I think it would be great to have it in the plan to display we consider a wide range of mitigation strategies such as public education.	12/23/2022 2:25 PM
4	This specific location could be part of a broader scope for the County to evaluate communities impacted by riverine flooding verses localized drainage.	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

Q12 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2

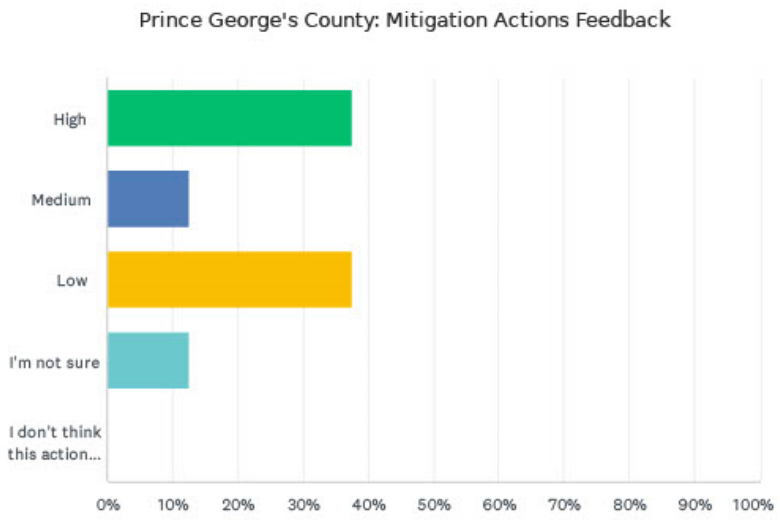


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	31	8
Total Respondents: 8			

#		DATE
1	1	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	4	12/30/2022 9:51 AM
4	6	12/27/2022 12:15 PM
5	3	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	3	12/19/2022 9:30 PM

Q13 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2



QUIZ STATISTICS			
Percent Correct 30%	Average Score 1.8/3.0 (58%)	Standard Deviation 1.16	Difficulty 2/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	12.50%	1
Low	1/3	37.50%	3
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q14 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 5 Skipped: 5

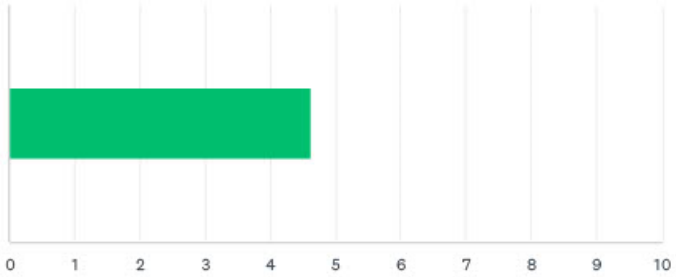
#	RESPONSES	DATE
1	Does the wording on this action include microgrids for government facilities such as shelters, EOCs and Fire/PD stations? What does it mean by 'solar potential'?	1/3/2023 10:16 AM
2	System outages occur in-frequently in a given area. If there are known locations that suffer multiple outages during a year, then that might be reasonable to target those areas.	12/30/2022 9:51 AM
3	Include City employees in any training offered; and have the City of Laurel as a partner in any grant applications.	12/27/2022 12:15 PM
4	since the socially vulnerable areas would not be able to fund these types of projects and the private sector owns the County energy grid, adding this action will not reduce the vulnerability of the energy grid in those areas.	12/23/2022 2:25 PM

Prince George's County: Mitigation Actions Feedback

5	I am confused as to why socially vulnerable grid modernazation and government operations transition to renewable are the same action. These seem like two distinct actions.	12/20/2022 2:19 PM

Q15 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2

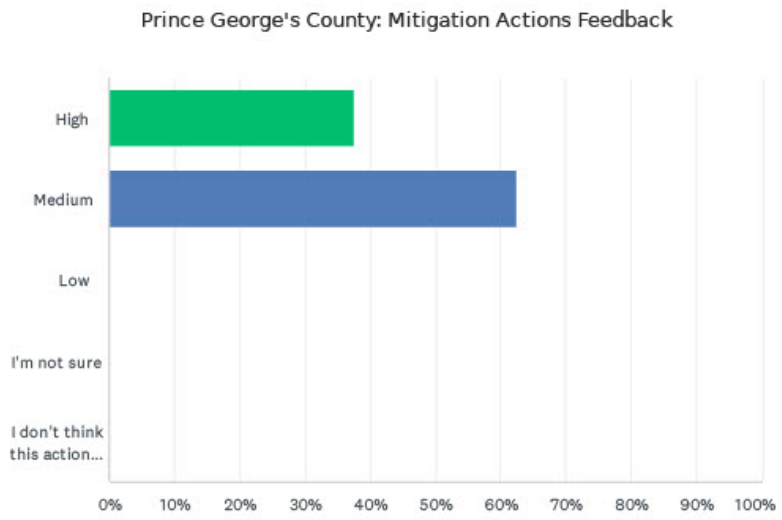


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	37	8
Total Respondents: 8			

#		DATE
1	4	1/4/2023 9:26 AM
2	4	1/3/2023 10:16 AM
3	5	12/30/2022 9:51 AM
4	6	12/27/2022 12:15 PM
5	5	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	4	12/19/2022 9:30 PM

Q16 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2



QUIZ STATISTICS			
Percent Correct 30%	Average Score 2.4/3.0 (79%)	Standard Deviation 0.52	Difficulty 18/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	62.50%	5
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q17 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 5 Skipped: 5

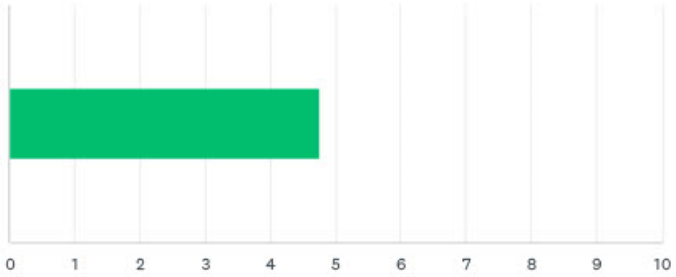
#	RESPONSES	DATE
1	Integrating plans across the different areas is an important item to look into.	12/30/2022 9:51 AM
2	Provide link in the website for citizens to click on the companion City plan.	12/27/2022 12:15 PM
3	It is a good suggestion and it needs collaboration among various county agencies such as Department of Environment (DoE), Office of Homeland Security (OHS), and Office of Information Technology (OIT).	12/23/2022 2:25 PM
4	this is not my area of influence, but for planning this seems to be an important topic to plan for - longer term.	12/22/2022 12:50 PM
5	The county should have a one stop shop for hazard mitigation and climate action, NOT two	12/20/2022 2:19 PM

Prince George's County: Mitigation Actions Feedback

seperate websites. streamline and coordinate so as to maximize reach and impact.

Q18 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



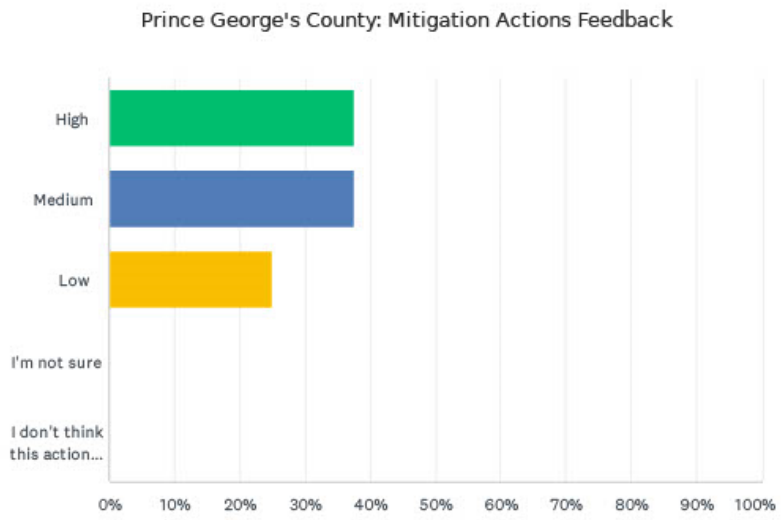
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	38	8
Total Respondents: 8			

#		DATE
1	4	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	6	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	4	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	3	12/19/2022 9:30 PM

Q19 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

15 / 58



QUIZ STATISTICS			
Percent Correct 30%	Average Score 2.1/3.0 (71%)	Standard Deviation 0.83	Difficulty 12/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	37.50%	3
Low	1/3	25.00%	2
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q20 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

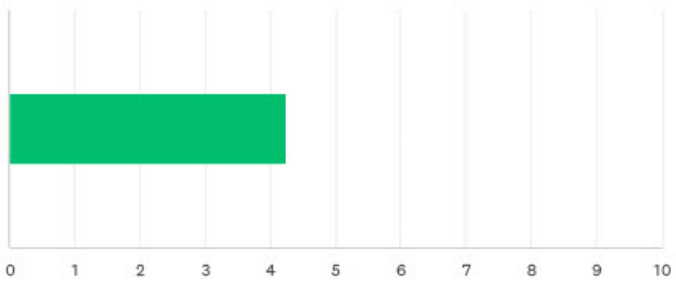
Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	Such studies will show the County intends to take concrete action to mitigate flooding issues.	12/30/2022 9:51 AM
2	It would be useful for the grant applications and indicating the County approach towards the Nature-Based Solutions (NBS).	12/23/2022 2:25 PM
3	this is a significant balance btwn preserving natural features verses improved conveyance (infrastructure) verses property rights, liabilities and use (ie MNCPPC) . it is a valid topic for planning purposes, but will be extremely challenging to develop a strategy that can be implemented.	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

Q21 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



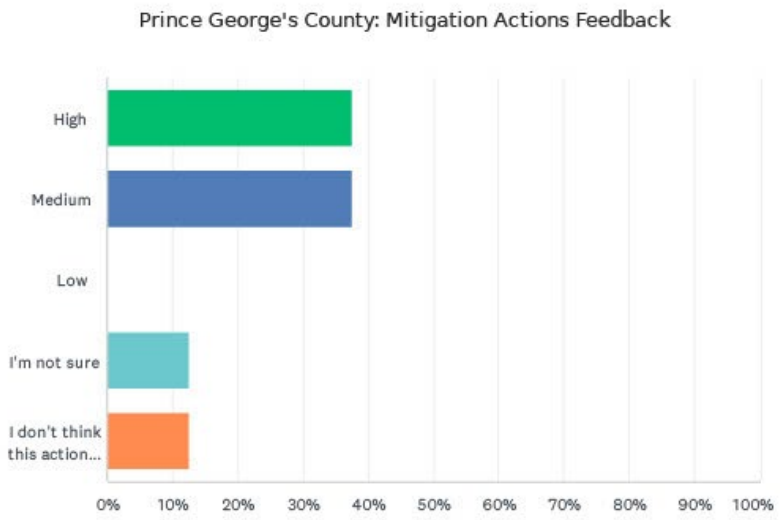
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	34	8
Total Respondents: 8			

#		DATE
1	5	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	3	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	4	12/23/2022 2:25 PM
6	2	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q22 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

17 / 58



QUIZ STATISTICS			
Percent Correct 30%	Average Score 1.9/3.0 (63%)	Standard Deviation 1.25	Difficulty 8/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	37.50%	3
Low	1/3	0.00%	0
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	12.50%	1
TOTAL			8

Q23 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

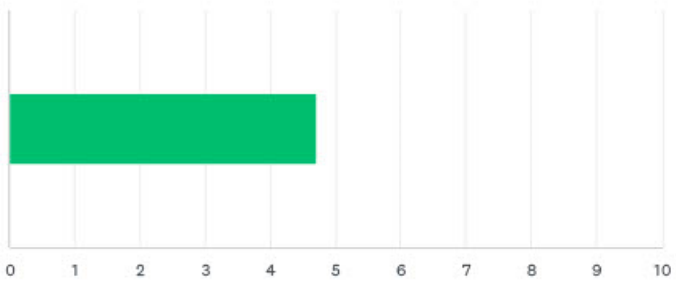
Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	Not sure if such metrics can be created.	12/30/2022 9:51 AM
2	How will affected jurisdictions be able to add and manipulate the data as needed for their portion?	12/27/2022 12:15 PM
3	This is already being accomplished thru DPWT AND DOE programs, under requirements of MS4 PERMIT. Inspections of private facilities also being done.	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

Q24 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 7 Skipped: 3

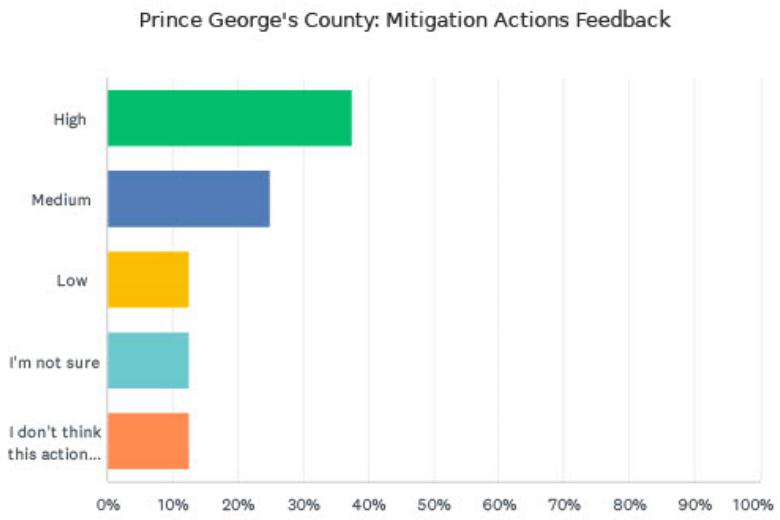


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	33	7
Total Respondents: 7			

#		DATE
1	3	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	5	12/30/2022 9:51 AM
4	5	12/27/2022 12:15 PM
5	3	12/22/2022 12:50 PM
6	6	12/20/2022 2:19 PM
7	6	12/19/2022 9:30 PM

Q25 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2



QUIZ STATISTICS			
Percent Correct 30%	Average Score 1.8/3.0 (58%)	Standard Deviation 1.28	Difficulty 2/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	25.00%	2
Low	1/3	12.50%	1
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	12.50%	1
TOTAL			8

Q26 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 1 Skipped: 9

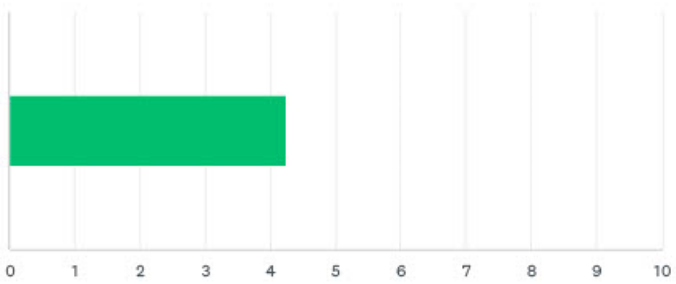
#	RESPONSES	DATE
1	The concept of resiliency hubs is not clearly defined for the County agencies. There are challenges regarding the resiliency hubs management and on going discussions to use these hubs for the food resiliency or emergency activation. The Department of Social Services has established a new food resiliency office working with the County Executive food resiliency task force to distribute food among vulnerable population. I think it could be an action to be added in the next plan update and not now.	12/23/2022 2:25 PM

Q27 What is your overall opinion of including this action in the plan (pending any minor text edits)?

20 / 58

Prince George's County: Mitigation Actions Feedback

Answered: 8 Skipped: 2



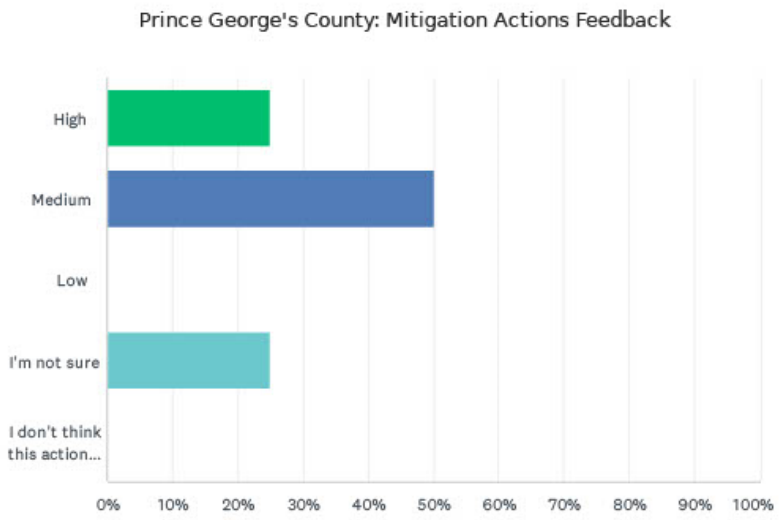
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	34	8
Total Respondents: 8			

#		DATE
1	5	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	6	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	3	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	4	12/20/2022 2:19 PM
8	4	12/19/2022 9:30 PM

Q28 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

21 / 58



QUIZ STATISTICS			
Percent Correct 20%	Average Score 1.8/3.0 (58%)	Standard Deviation 1.16	Difficulty 2/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	25.00%	2
Medium	2/3	50.00%	4
Low	1/3	0.00%	0
I'm not sure	0/3	25.00%	2
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q29 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 8

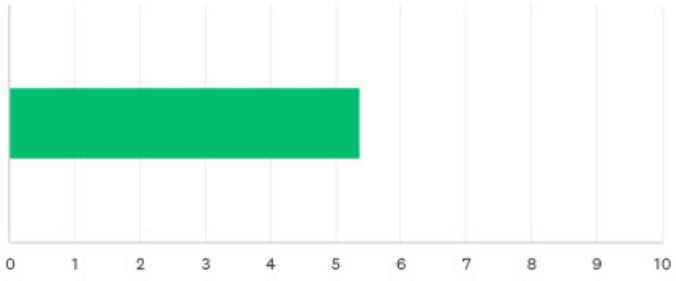
#	RESPONSES	DATE
1	I think that this is already covered in MNCPPC ORDINANCES and NRI evaluations.	12/22/2022 12:50 PM
2	Doesn't the county already have robust tree policies? The issue is enforcement of exisiting land use policies and plans. Investing in another plan/ study will not have an impact without stronger enforcement and accountability of exisiting regulations.	12/20/2022 2:19 PM

Q30 What is your overall opinion of including this action in the plan (pending any minor text edits)?

22 / 58

Prince George's County: Mitigation Actions Feedback

Answered: 8 Skipped: 2

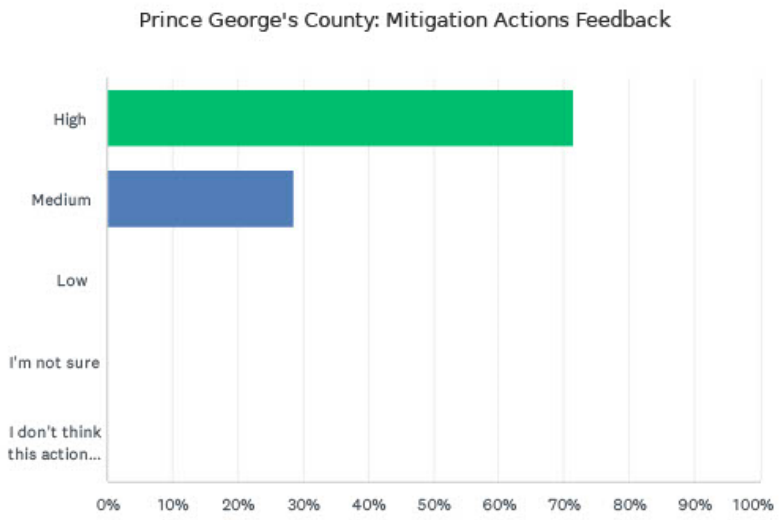


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	43	8
Total Respondents: 8			

#		DATE
1	6	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	4	12/30/2022 9:51 AM
4	6	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	6	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	5	12/19/2022 9:30 PM

Q31 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.7/3.0 (90%)	Standard Deviation 0.49	Difficulty 29/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	71.43%	5
Medium	2/3	28.57%	2
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			7

Q32 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

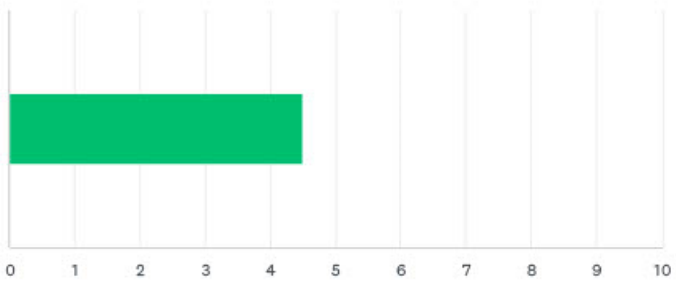
Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	I don't understand "potential" in High Hazard Potential Dams. How is this defined? Suggest dropping it or defining the term.	12/30/2022 9:51 AM
2	must include P.G. County's vision for providing support to affected "down river/down flow communities that are directly in the path of/and would be affected by a dam mishap...	12/27/2022 12:15 PM
3	It should be added to the plan for the High Hazard Potential Dam (HHPD) and grant application.	12/23/2022 2:25 PM

Prince George's County: Mitigation Actions Feedback

Q33 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



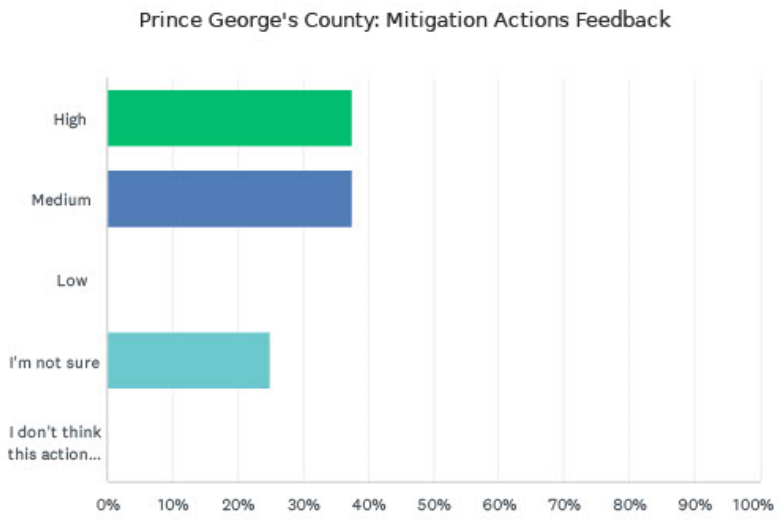
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	36	8
Total Respondents: 8			

#		DATE
1	3	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	3	12/30/2022 9:51 AM
4	5	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	5	12/19/2022 9:30 PM

Q34 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

25 / 58



QUIZ STATISTICS			
Percent Correct 30%	Average Score 1.9/3.0 (63%)	Standard Deviation 1.25	Difficulty 8/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	37.50%	3
Medium	2/3	37.50%	3
Low	1/3	0.00%	0
I'm not sure	0/3	25.00%	2
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q35 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

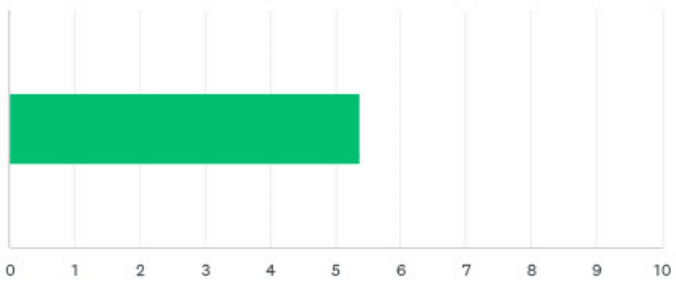
Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	Should this include annual hazard mitigation outreach townhalls with residents?	1/3/2023 10:16 AM
2	It could be helpful to show that under served communities can apply for the HMA grants if they could have a joint application with the private sector or the County agencies.	12/23/2022 2:25 PM
3	suggest rewording .... action guide to identify County resources at OEM. OEM could decide how to release information on grant opportunities and requirements	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

Q36 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2

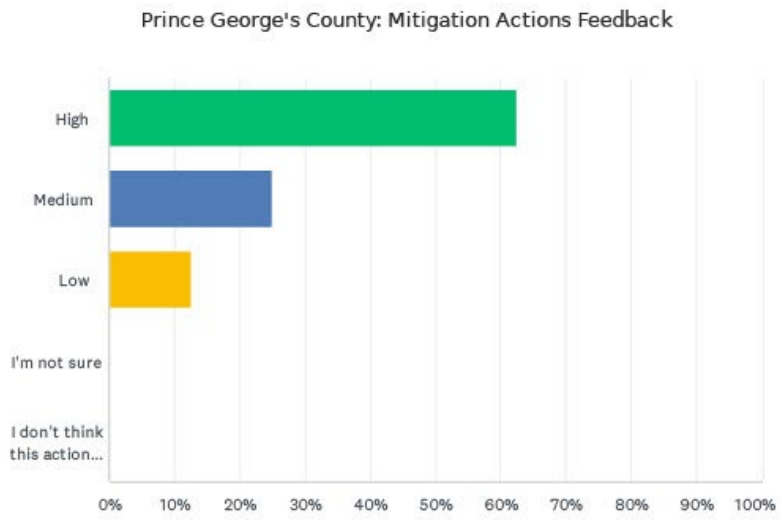


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	43	8
Total Respondents: 8			

#		DATE
1	6	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	5	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	4	12/23/2022 2:25 PM
6	6	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q37 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2



QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.5/3.0 (83%)	Standard Deviation 0.76	Difficulty 24/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	62.50%	5
Medium	2/3	25.00%	2
Low	1/3	12.50%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q38 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 6 Skipped: 4

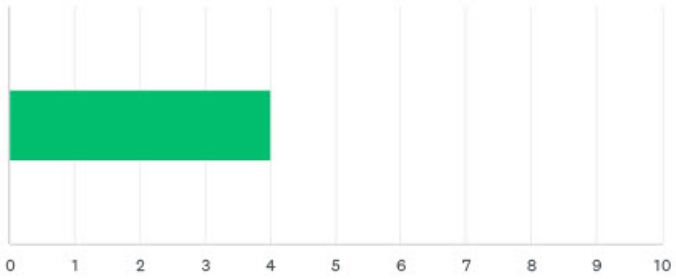
#	RESPONSES	DATE
1	Also send digital copies of the 2023 Hazard Mitigation Plan to all Homeowner Associations (HOAs) in the County.	1/4/2023 9:26 AM
2	Should be a requirement	1/3/2023 10:16 AM
3	Or provide the link to the document	12/30/2022 9:51 AM
4	since the plan will be in the Hazard Mitigation webpage, everyone will have access to it. I think sending a digital copy to the directors will be helpful.	12/23/2022 2:25 PM
5	send to County agencies, not staff. Agency should determine the logistics of engaging appropriate staff, divisions. operations, etc.	12/22/2022 12:50 PM

Prince George's County: Mitigation Actions Feedback

6	No one will read the entire plan. It also needs to include a well designed executive summary, infographic, summary, etc. that ties back to various county departments roles and responsibilities.	12/20/2022 2:19 PM

Q39 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



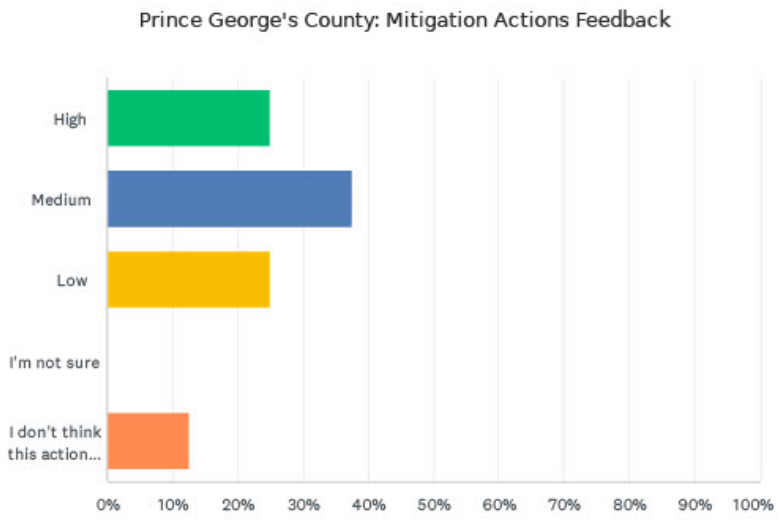
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	32	8
Total Respondents: 8			

#		DATE
1	5	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	4	12/30/2022 9:51 AM
4	3	12/27/2022 12:15 PM
5	5	12/23/2022 2:25 PM
6	0	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	3	12/19/2022 9:30 PM

Q40 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

29 / 58



QUIZ STATISTICS			
Percent Correct 20%	Average Score 1.8/3.0 (58%)	Standard Deviation 1.04	Difficulty 2/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	25.00%	2
Medium	2/3	37.50%	3
Low	1/3	25.00%	2
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	12.50%	1
TOTAL			8

Q41 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 8

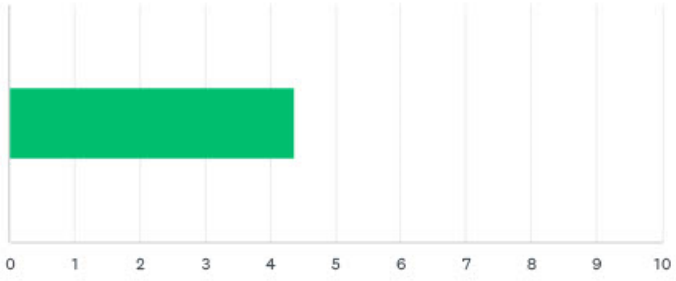
#	RESPONSES	DATE
1	Is it possible to consider an annual meeting/ workshop to discuss county-wide priorities and projects for grants with local municipalities, specifically those looking to submit grants?	1/3/2023 10:16 AM
2	It will improve the funding mechanism of mitigation projects through various funding options such as different grants.	12/23/2022 2:25 PM

Q42 What is your overall opinion of including this action in the plan (pending any minor text edits)?

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Prince George's County: Mitigation Actions Feedback

Answered: 8 Skipped: 2

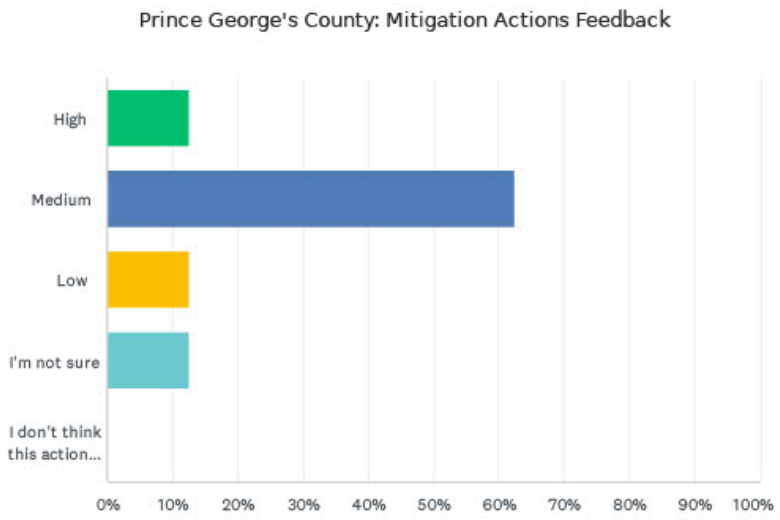


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	35	8
Total Respondents: 8			

#		DATE
1	4	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	5	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	4	12/23/2022 2:25 PM
6	3	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	4	12/19/2022 9:30 PM

Q43 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2



QUIZ STATISTICS			
Percent Correct 10%	Average Score 1.8/3.0 (58%)	Standard Deviation 0.89	Difficulty 2/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	12.50%	1
Medium	2/3	62.50%	5
Low	1/3	12.50%	1
I'm not sure	0/3	12.50%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			**8**

Q44 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

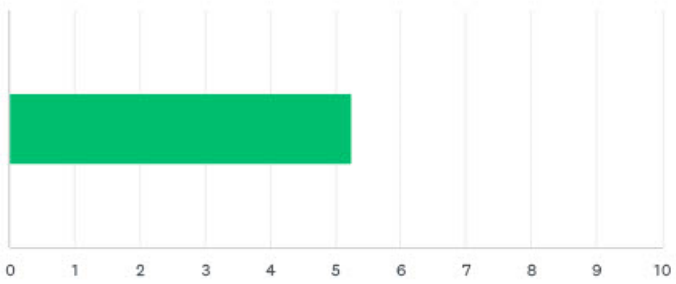
Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	Make the same information available to City of Laurel counterparts.	12/27/2022 12:15 PM
2	Conducting a study of using climate-smart building materials would be a better wording. It will be useful if we could have an evidence based solution for promoting these type of materials.	12/23/2022 2:25 PM
3	What does it mean to promote? This should provide more details on what this action would entail and who will be taking it on.	12/20/2022 2:19 PM

Prince George's County: Mitigation Actions Feedback

Q45 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



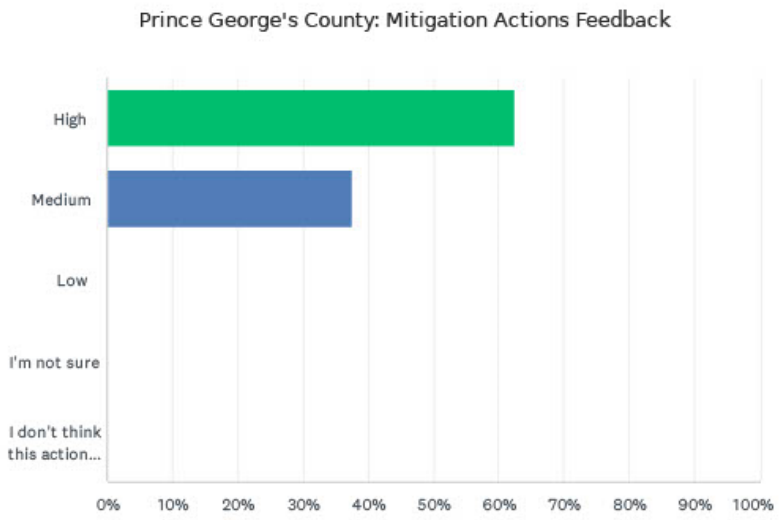
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	42	8
Total Respondents: 8			

#		DATE
1	6	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	4	12/30/2022 9:51 AM
4	4	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	5	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	5	12/19/2022 9:30 PM

Q46 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

33 / 58



QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.6/3.0 (88%)	Standard Deviation 0.52	Difficulty 28/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	62.50%	5
Medium	2/3	37.50%	3
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q47 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

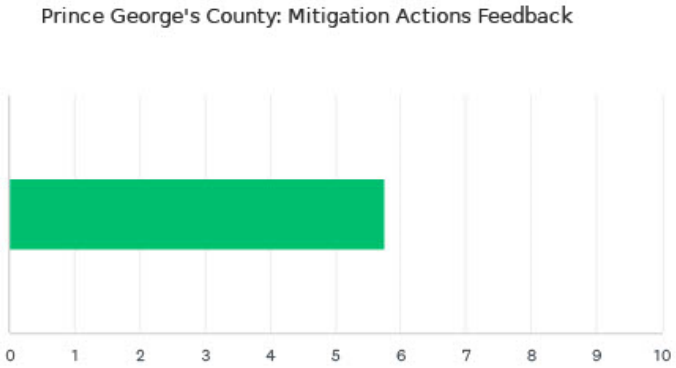
Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	Must thoroughly vet the most recent additions first before adopting, and if necessary only adopt certain chapters, if the rest don't meet the County's long term vision.	12/27/2022 12:15 PM
2	Department of Permitting, Inspections and Enforcement (DEPIE) should be the lead agency.	12/23/2022 2:25 PM

Q48 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2

34 / 58



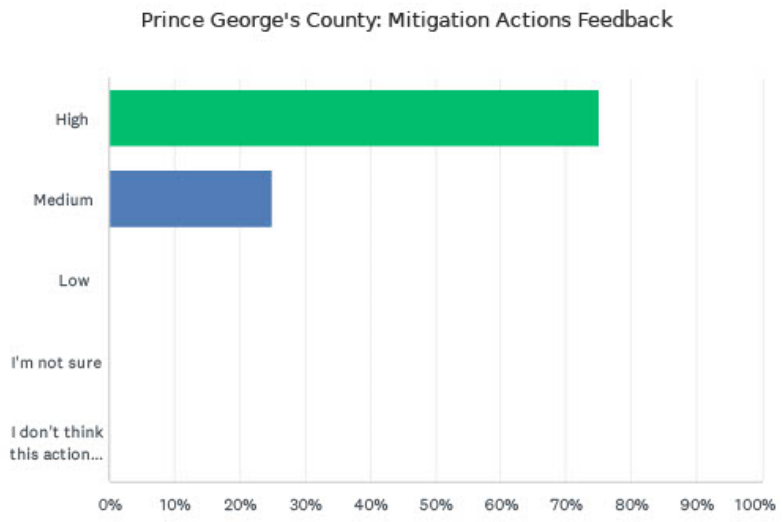
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	6	46	8
Total Respondents: 8			

#		DATE
1	6	1/4/2023 9:26 AM
2	5	1/3/2023 10:16 AM
3	6	12/30/2022 9:51 AM
4	5	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	6	12/22/2022 12:50 PM
7	6	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q49 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

35 / 58



QUIZ STATISTICS			
Percent Correct 60%	Average Score 2.8/3.0 (92%)	Standard Deviation 0.46	Difficulty 32/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	75.00%	6
Medium	2/3	25.00%	2
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

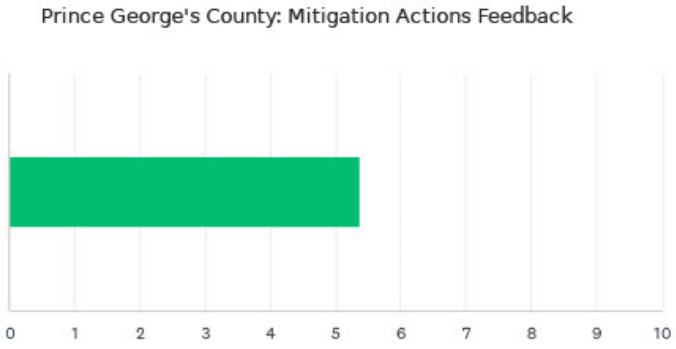
Q50 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	Implement or scope? Is there an established list of current stormwater management projects?	1/3/2023 10:16 AM
2	this is already being performed thru various programs - DOE AND DPWT.	12/22/2022 12:50 PM

Q51 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 8 Skipped: 2



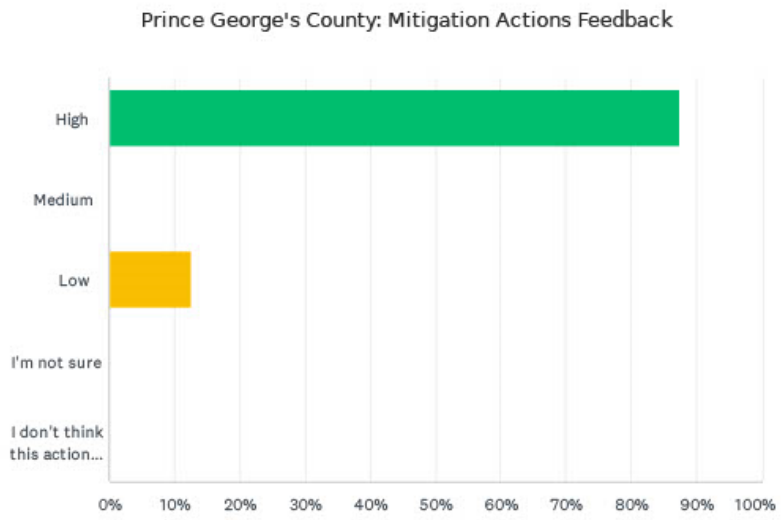
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	43	8
Total Respondents: 8			

#		DATE
1	6	1/4/2023 9:26 AM
2	6	1/3/2023 10:16 AM
3	4	12/30/2022 9:51 AM
4	5	12/27/2022 12:15 PM
5	6	12/23/2022 2:25 PM
6	5	12/22/2022 12:50 PM
7	5	12/20/2022 2:19 PM
8	6	12/19/2022 9:30 PM

Q52 What priority ranking should this action be given in the plan? (Priority refers to how important it is for the County to accomplish/implement)

Answered: 8 Skipped: 2

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QUIZ STATISTICS			
Percent Correct 70%	Average Score 2.8/3.0 (92%)	Standard Deviation 0.71	Difficulty 32/33

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	87.50%	7
Medium	2/3	0.00%	0
Low	1/3	12.50%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			8

Q53 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 8

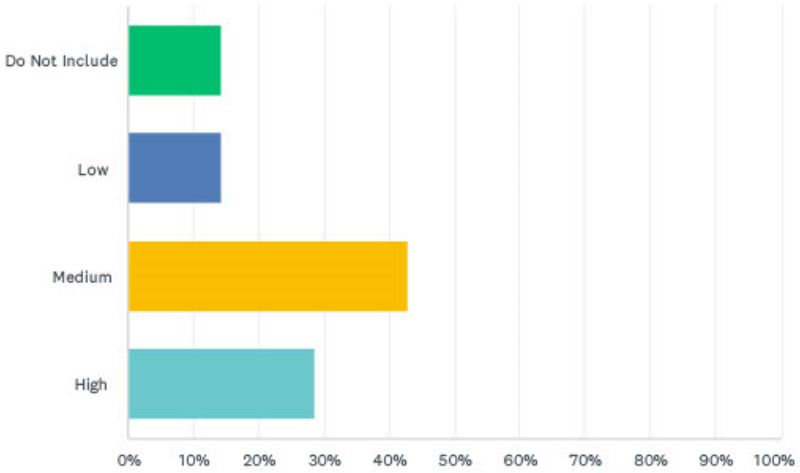
#	RESPONSES	DATE
1	Currently, several watershed scale studies are being conducted. In following years, other watersheds should be included	12/30/2022 9:51 AM
2	NEED TO BE IN SWM CODE.	12/22/2022 12:50 PM

Q54 Develop a program to utilize vacant land (both publicly and privately owned) for stormwater management. Acquire land to serve the dual

Prince George's County: Mitigation Actions Feedback

purpose of green infrastructure/stormwater infiltration and recreational/open space.

Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 20%	Average Score 1.9/3.0 (62%)	Standard Deviation 1.07	Difficulty 7/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	14.29%	1
Medium	2/3	42.86%	3
✓ High	3/3	28.57%	2
TOTAL			7

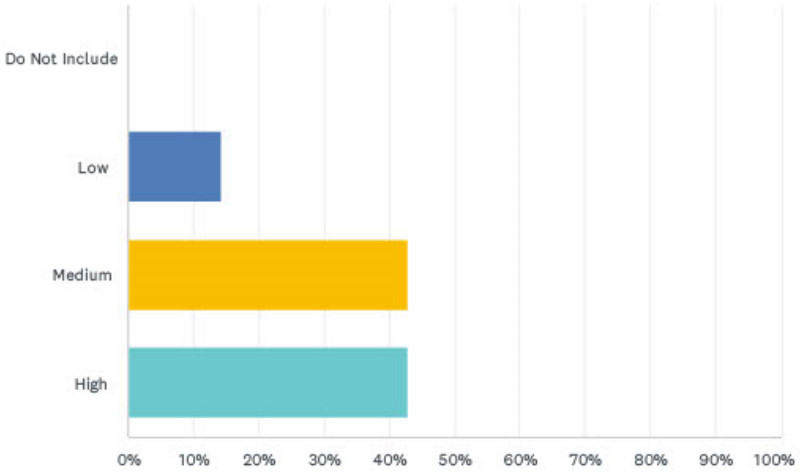
#	COMMENTS (IF ANY)	DATE
1	It is useful for the HMA grant applications.	12/23/2022 2:28 PM
2	Very DIFFICULT TO IMPLEMENT, LIMITED LAND OPPORTUINITIES, AND MANY OTHER OBSTACLES.	12/22/2022 12:56 PM

Q55 Use conservation subdivisions in areas adjacent to Rural and Agricultural Areas to transition density and to encourage preservation of green infrastructure corridors as defined by the County's Green Infrastructure Plan.

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Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 30%	Average Score 2.3/3.0 (76%)	Standard Deviation 0.76	Difficulty 15/33

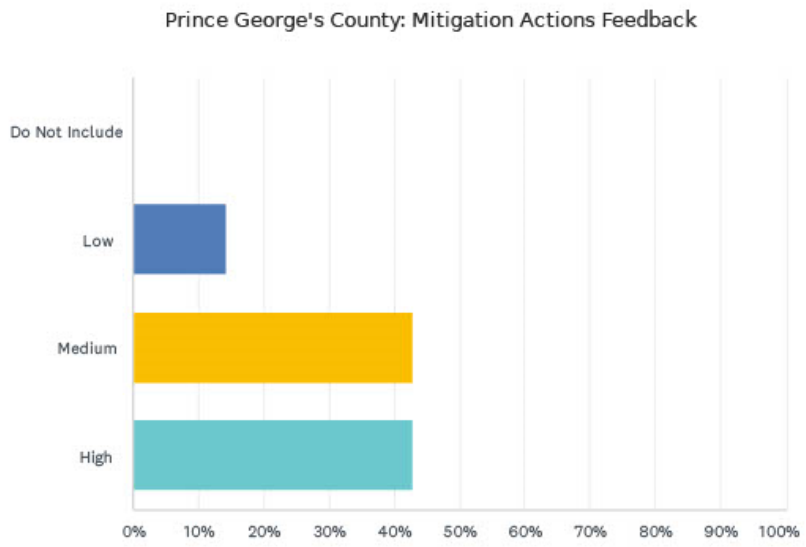
ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	14.29%	1
Medium	2/3	42.86%	3
✓ High	3/3	42.86%	3
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q56 Use conservation subdivisions or other site planning and landscape conservation tools when developing in Established Communities near Rural and Agricultural Areas to cluster development and preserve land for resource protection or open space.

Answered: 7 Skipped: 3

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QUIZ STATISTICS			
Percent Correct 30%	Average Score 2.3/3.0 (76%)	Standard Deviation 0.76	Difficulty 15/33

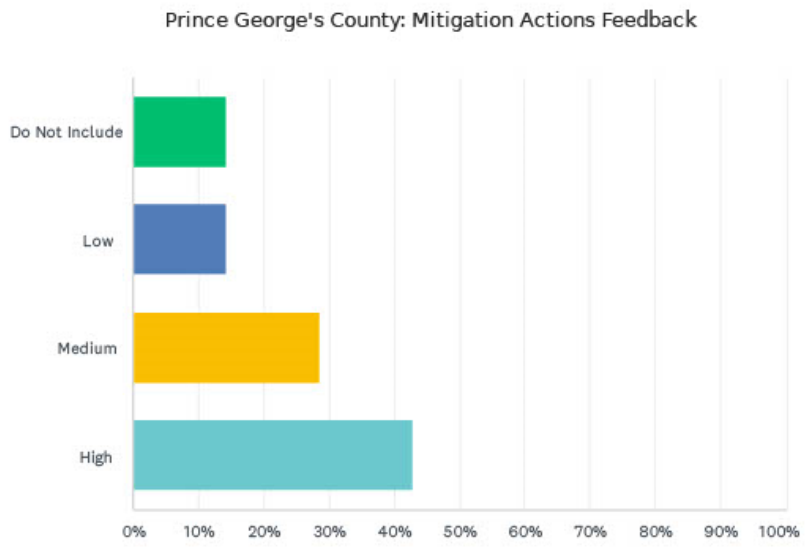
ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	14.29%	1
Medium	2/3	42.86%	3
✓ High	3/3	42.86%	3
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q57 To preserve environmentally sensitive land and to encourage development in the Regional Transit Districts, evaluate a transfer of development rights program, density exchanges, or purchase of development rights program for the Rural and Agricultural Areas. Explore opportunities to transfer development rights within areas and to coordinate with the Watershed Implementation Plan and Maryland Accounting for Growth Policy.

Answered: 7 Skipped: 3

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QUIZ STATISTICS			
Percent Correct 30%	Average Score 2.0/3.0 (67%)	Standard Deviation 1.15	Difficulty 11/33

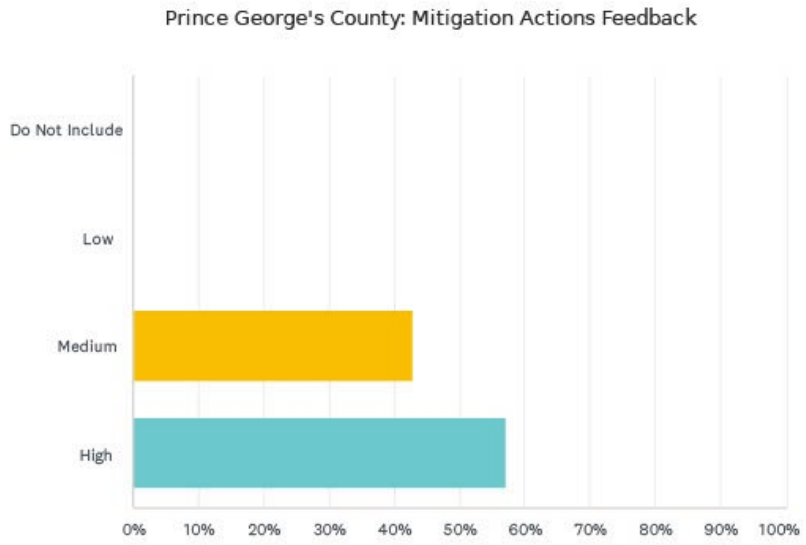
ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	14.29%	1
Medium	2/3	28.57%	2
✓ High	3/3	42.86%	3
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q58 Align Economic Development Plans with the Climate Action Plan, preserving existing agricultural land and natural areas and promoting development in already-developed areas near high-capacity transit. Perform an economic development and climate adaptation analysis of existing agricultural land and natural areas that are crucial to climate resilience on a subwatershed basis. Identify areas of open space for preservation and optimum use for climate resilience.

Answered: 7 Skipped: 3

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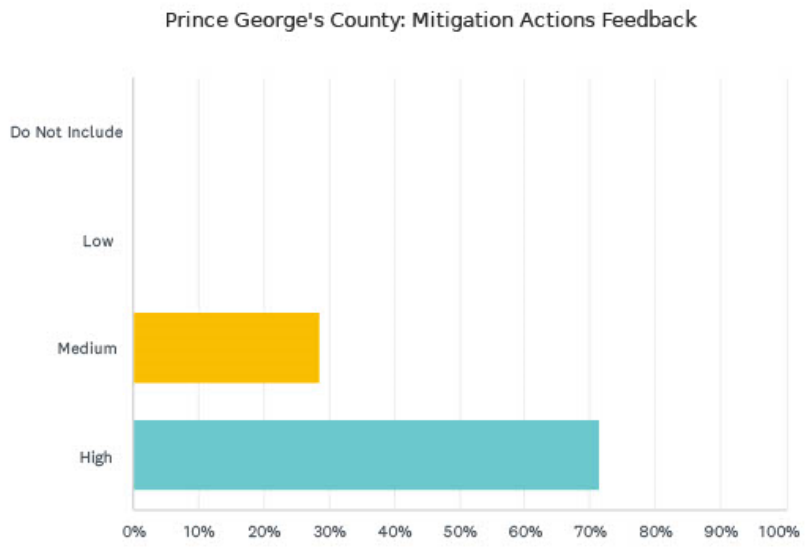
QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.6/3.0 (86%)	Standard Deviation 0.53	Difficulty 25/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	0.00%	0
Medium	2/3	42.86%	3
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q59 The County shall prohibit all waivers to allow development in floodplains.

Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.7/3.0 (90%)	Standard Deviation 0.49	Difficulty 29/33

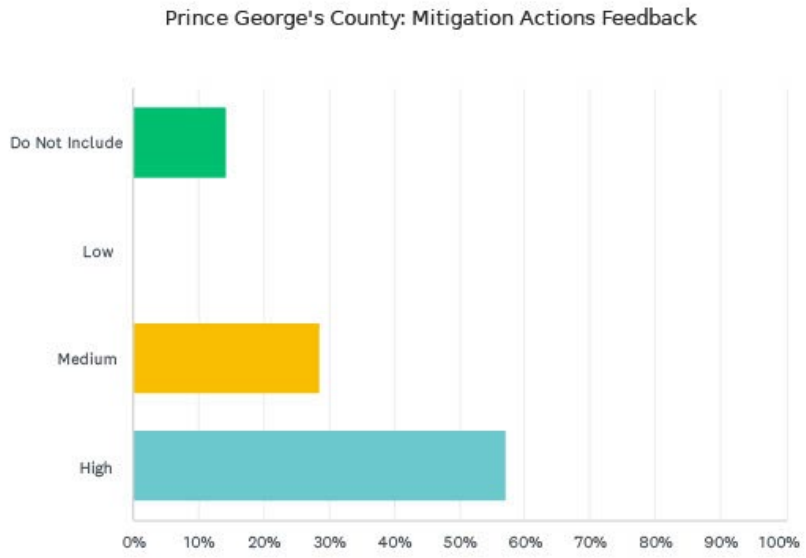
ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	0.00%	0
Medium	2/3	28.57%	2
✓ High	3/3	71.43%	5
TOTAL			7

#	COMMENTS (IF ANY)	DATE
1	Absolutely, and work with local municipalities to ensure the same compliance	1/3/2023 10:16 AM
2	We should limit these waivers for all but those that have a community benefit such as roads.	12/30/2022 9:57 AM
3	Re: my earlier statement on enforcing exisiting regulations - eliminating waivers will be necessary to see improvements. Strongly support this.	12/20/2022 2:24 PM

Q60 Adopt and Enforce Policies to Require Green Infrastructure Practices for New and Existing Properties, especially native plantings, rain gardens, green corridors, runoff retention, and other nature-based ways to reduce and naturally filter runoff on private and public properties. Insert specific enforceable language in guiding County documents related to proposed and existing development.

Answered: 7 Skipped: 3

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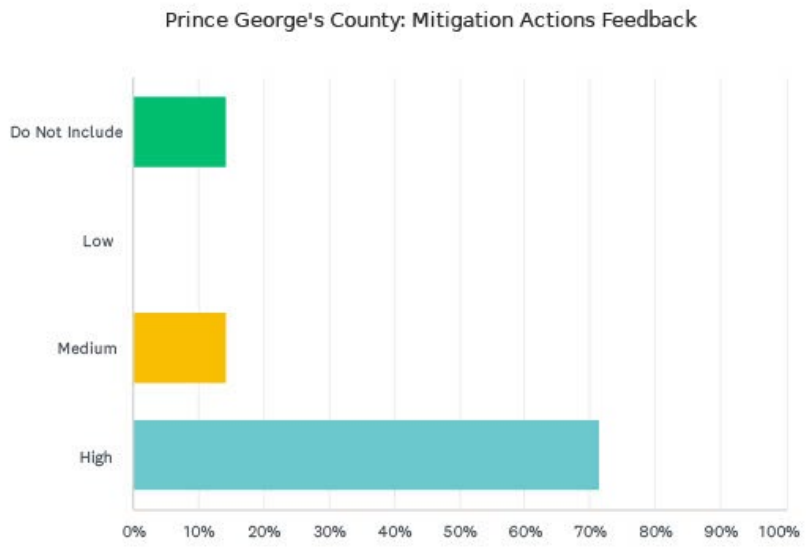
QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.3/3.0 (76%)	Standard Deviation 1.11	Difficulty 15/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	0.00%	0
Medium	2/3	28.57%	2
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
1	Overreach by County regarding private development.	1/4/2023 9:37 AM
2	fees and fines need to be set high enough to disincentivize noncompliance.	12/20/2022 2:24 PM

Q61 Revise Prince George's County Code of Ordinance to Incorporate and Require Climate-resilient Practices.

Answered: 7 Skipped: 3



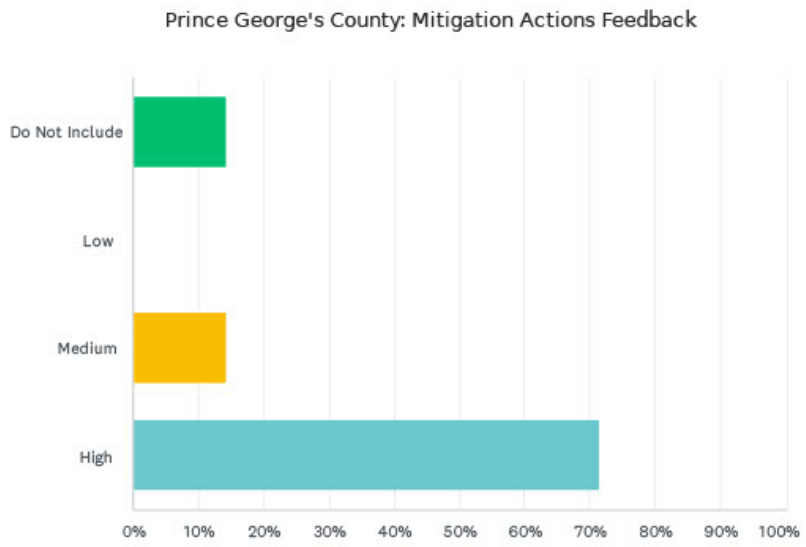
QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.4/3.0 (81%)	Standard Deviation 1.13	Difficulty 21/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	0.00%	0
Medium	2/3	14.29%	1
✓ High	3/3	71.43%	5
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q62 Update County's Stormwater Regulations to require climate resilient design and criteria.

Answered: 7 Skipped: 3



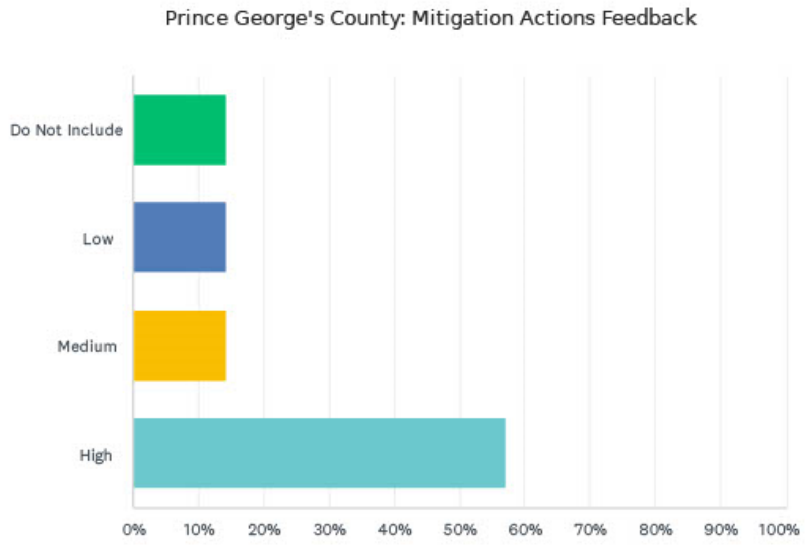
QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.4/3.0 (81%)	Standard Deviation 1.13	Difficulty 21/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	0.00%	0
Medium	2/3	14.29%	1
✓ High	3/3	71.43%	5
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q63 Office of the County Executive must introduce and support a County Council resolution requiring the County to integrate extreme weather and energy-efficiency criteria into building codes.

Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.1/3.0 (71%)	Standard Deviation 1.21	Difficulty 13/33

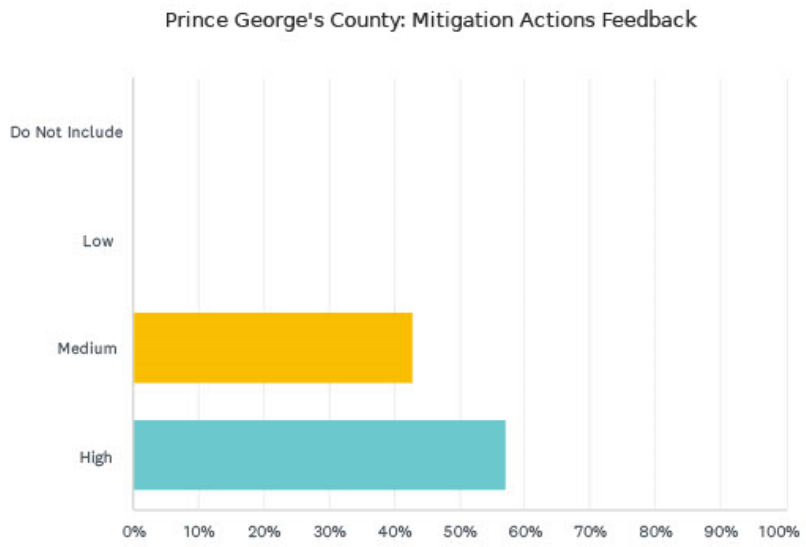
ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	14.29%	1
Medium	2/3	14.29%	1
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q64 Require County Stormwater Management (SWM) Standards to Incorporate Projected Climate Change Impacts by using approved downscaled and up-to-date climate impact information to reevaluate peak rainfall estimates and future design storm profiles. Evaluate SWM standards using this criterion at least every three (3) years. Require all upgrades of County storm drain systems and CIP roadway, bridge, culvert and stormwater management repair or renovation projects to meet these updated climate-resilient design criteria.

Answered: 7 Skipped: 3

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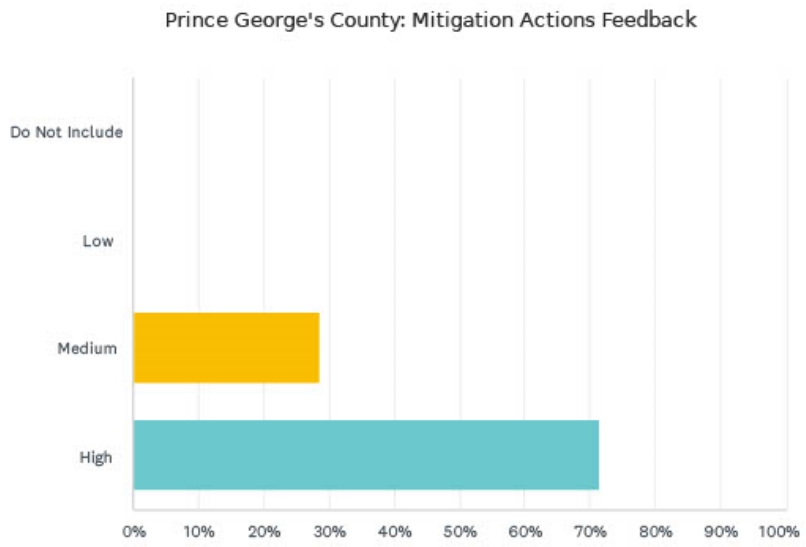
QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.6/3.0 (86%)	Standard Deviation 0.53	Difficulty 25/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	0.00%	0
Medium	2/3	42.86%	3
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q65 Avoid Future Development in Flood Inundation Areas Below Existing High-hazard Dams. Require that plan sets for subdivision proposals and permit applications to show the danger reach and inundation area and prohibit new construction in these areas.

Answered: 7 Skipped: 3



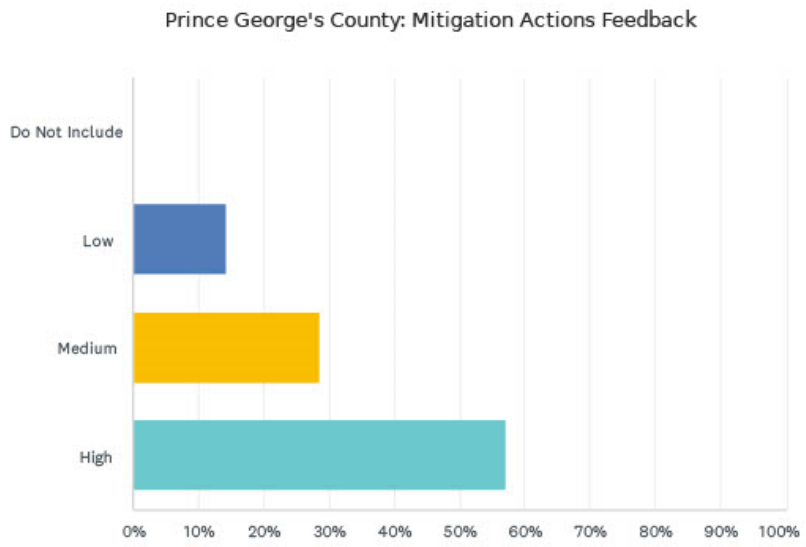
QUIZ STATISTICS			
Percent Correct 50%	Average Score 2.7/3.0 (90%)	Standard Deviation 0.49	Difficulty 29/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	0.00%	0
Medium	2/3	28.57%	2
✓ High	3/3	71.43%	5
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q66 Assess Climate Projections and Consequences of Dam and Levee Failure. Analyze baseline conditions against local/regional climate projections to highlight future vulnerabilities and risk. Model hydrological loads to the consequences of failure under present and future conditions and jointly evaluate dams, levees, and interdependent components. Incorporate Findings in Emergency Action Plans.

Answered: 7 Skipped: 3



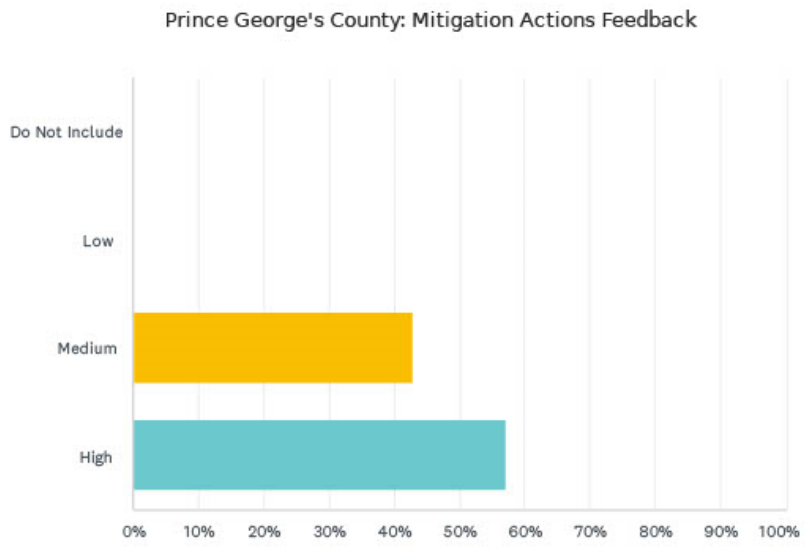
QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.4/3.0 (81%)	Standard Deviation 0.79	Difficulty 21/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	14.29%	1
Medium	2/3	28.57%	2
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q67 Demonstrate County commitment to climate action through publicly transparent tracking, monitoring, evaluation, and reporting. Require M-NCPPC to create and establish a public Smart Growth Dashboard that tracks approved preliminary plans of subdivisions, approved site plans and development proposals.

Answered: 7 Skipped: 3



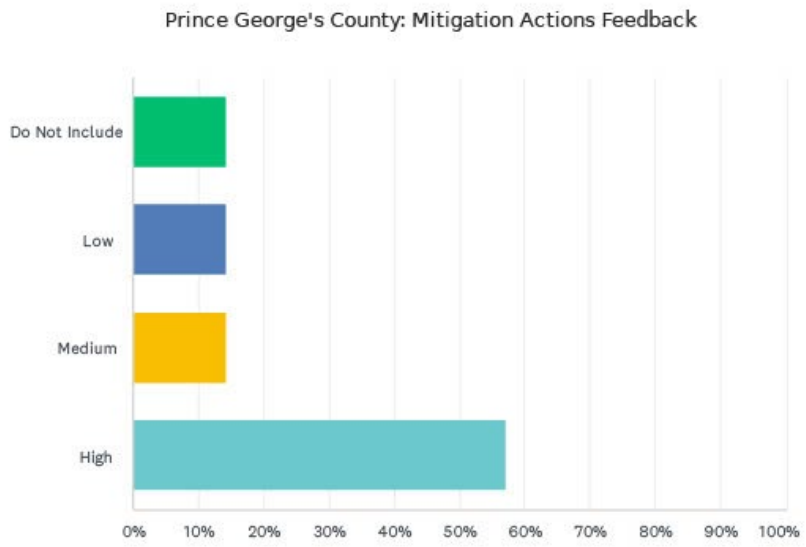
QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.6/3.0 (86%)	Standard Deviation 0.53	Difficulty 25/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	0.00%	0
Low	1/3	0.00%	0
Medium	2/3	42.86%	3
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
1	make sure that the one stop shop mitigation/climate action website connects with this dashboard.	12/20/2022 2:24 PM

Q68 Conduct Countywide Thermal Mapping of Tree Canopy Cover with Shade Study, and Aerial Utility Mapping exercises. Then conduct a neighborhood-level Heat Vulnerability Assessment.

Answered: 7 Skipped: 3



QUIZ STATISTICS			
Percent Correct 40%	Average Score 2.1/3.0 (71%)	Standard Deviation 1.21	Difficulty 13/33

ANSWER CHOICES	SCORE	RESPONSES	
Do Not Include	0/3	14.29%	1
Low	1/3	14.29%	1
Medium	2/3	14.29%	1
✓ High	3/3	57.14%	4
TOTAL			7

#	COMMENTS (IF ANY)	DATE
	There are no responses.	

Q69 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q70 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

Prince George's County: Mitigation Actions Feedback

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q71 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q72 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q73 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q74 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q75 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

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Prince George's County: Mitigation Actions Feedback

#	RESPONSES	DATE
1	Change priority to High	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q76 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q77 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q78 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q79 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q80 Do you have any final modifications to any of the above?

Answered: 3 Skipped: 7

Prince George's County: Mitigation Actions Feedback

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM
3	reword- "watershed implementation plans"	12/22/2022 1:03 PM

Q81 Do you have any final modifications to any of the above?

Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM
3	project is substantially complete. County is engaged in accreditation work activities now, and target completion in FY24.	12/22/2022 1:03 PM

Q82 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q83 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q84 Do you have any final modifications to any of the above?

Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	Make high priority	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM
3	https://www.princegeorgescountymd.gov/3182/Stay-Cool---Tips-to-Stay-Safe-in-the-Hea https://www.princegeorgescountymd.gov/1723/Nutrition-Services Please see the above links for the current status.	12/23/2022 2:37 PM

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Prince George's County: Mitigation Actions Feedback

Q85 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q86 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q87 Do you have any final modifications to any of the above?

Answered: 2 Skipped: 8

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM

Q88 Do you have any final modifications to any of the above?

Answered: 3 Skipped: 7

#	RESPONSES	DATE
1	no	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM
3	storm preparedness and extreme heat events? Also, not sure where to put this or if it is covered elsewhere, but does the Emergency Notification System cover extreme heat events? If not, should there be an action to expand it?	12/21/2022 1:28 PM

Q89 Do you have any final modifications to any of the above?

Answered: 3 Skipped: 7

#	RESPONSES	DATE

Prince George's County: Mitigation Actions Feedback

1	Make high priority	1/4/2023 9:49 AM
2	No	1/3/2023 10:16 AM
3	The Office of Homeland Security/Emergency Management Division distributes preparedness guide regularly in various community events.	12/23/2022 2:37 PM

Q90 Describe any final thoughts on mitigation actions in the updated Hazard Mitigation Plan:

Answered: 1 Skipped: 9

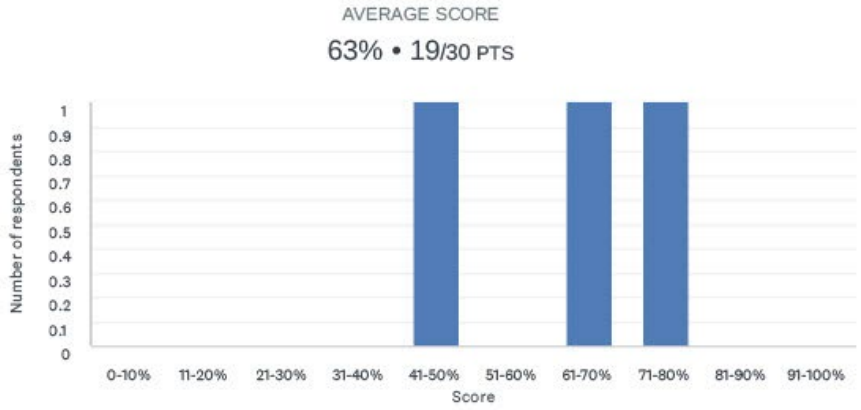
#	RESPONSES	DATE
1	Keep up the good work in updating the Hazard Mitigation Plan.	1/4/2023 9:50 AM

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D.2. City of Laurel Survey

City of Laurel: Mitigation Actions Feedback

Quiz Summary



STATISTICS		
Lowest Score	Median	Highest Score
50%	63%	77%
Mean: 63%		
Standard Deviation: 13%		

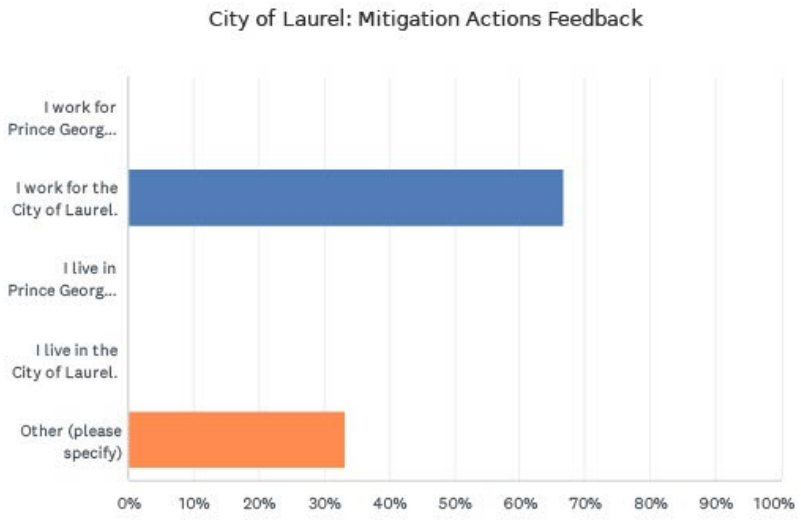
Question Ranking

QUESTIONS (10)	DIFFICULTY	AVERAGE SCORE
Q30 What priority ranking should this action be given in the plan?	1	44%
Q15 What priority ranking should this action be given in the plan?	1	44%
Q21 What priority ranking should this action be given in the plan?	1	44%
Q24 What priority ranking should this action be given in the plan?	4	67%
Q33 What priority ranking should this action be given in the plan?	4	67%
Q18 What priority ranking should this action be given in the plan?	4	67%
Q1 Select all that apply:	4	67%
Q27 What priority ranking should this action be given in the plan?	8	78%
Q36 What priority ranking should this action be given in the plan?	9	89%
Q39 What priority ranking should this action be given in the plan?	9	89%

Q1 Select all that apply:

Answered: 3 Skipped: 0

1 / 20



QUIZ STATISTICS			
Percent Correct 0%	Average Score 2.0/3.0 (67%)	Standard Deviation 0.00	Difficulty 4/10

ANSWER CHOICES	SCORE	RESPONSES	
I work for Prince George's County.	0/3	0.00%	0
✓ I work for the City of Laurel.	2/3	66.67%	2
I live in Prince George's County.	0/3	0.00%	0
✓ I live in the City of Laurel.	1/3	0.00%	0
Other (please specify)	--	33.33%	1
Total Respondents: 3			

#	OTHER (PLEASE SPECIFY)	DATE
1	University of Maryland Environmental Finance Center	12/21/2022 1:29 PM

Q2 Name:

Answered: 3 Skipped: 0

#	RESPONSES	DATE
1	Bill Bailey Bill Bailey	12/24/2022 3:59 PM
2	Chrissy Cornwell Chrissy Cornwell	12/24/2022 2:35 PM
3	Brandy Espinola Brandy Espinola	12/21/2022 1:29 PM

Q3 Do you have suggested modifications to any of the above?

2 / 20

City of Laurel: Mitigation Actions Feedback

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	This action was impacted by COVID-19 and has not started.	12/24/2022 2:48 PM

Q4 Do you have suggested modifications to any of the above?

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	The City has partnered with State, Federal, and local partners on various mitigation projects to include a study of the Patuxent River Watershed and flood gages. These projects are still on-going and were impacted by COVID-19.	12/24/2022 2:48 PM

Q5 Do you have suggested modifications to any of the above?

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	The City is in the process of reviewing floodproofing recommendations from the Patuxent River Watershed study and installing flood gages. These projects were put on hold due to COVID-19.	12/24/2022 2:48 PM

Q6 Do you have suggested modifications to any of the above?

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	I think we asked for this one to come out of the plan.	12/24/2022 2:48 PM

Q7 Do you have suggested modifications to any of the above?

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	No action has been taken on this.	12/24/2022 2:48 PM

Q8 Do you have suggested modifications to any of the above?

Answered: 0 Skipped: 3

#	RESPONSES	DATE

3 / 20

City of Laurel: Mitigation Actions Feedback

	There are no responses.	

Q9 Do you have suggested modifications to any of the above?

Answered: 0 Skipped: 3

#	RESPONSES	DATE
	There are no responses.	

Q10 Do you have suggested modifications to any of the above?

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	This can be removed.	12/24/2022 2:48 PM

Q11 Do you have suggested modifications to any of the above?

Answered: 0 Skipped: 3

#	RESPONSES	DATE
	There are no responses.	

Q12 Do you have suggested modifications to any of the above?

Answered: 0 Skipped: 3

#	RESPONSES	DATE
	There are no responses.	

Q13 Do you have suggested modifications to any of the above?

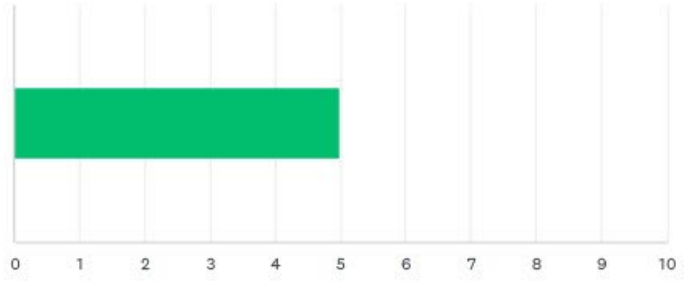
Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	The City is working on seasonal messaging for flood preparedness and expect to have information ready for Spring 2024.	12/24/2022 2:48 PM

Q14 What is your overall opinion of including this action in the plan (pending any minor text edits)?

City of Laurel: Mitigation Actions Feedback

Answered: 2 Skipped: 1

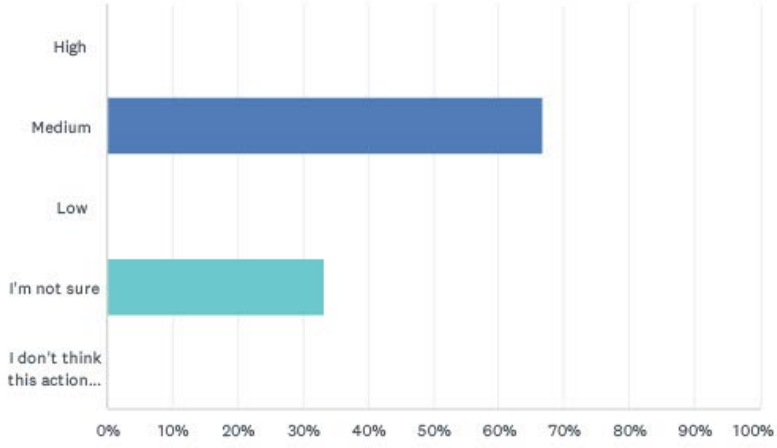


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	10	2
Total Respondents: 2			

#		DATE
1	5	12/24/2022 4:07 PM
2	5	12/24/2022 2:54 PM

Q15 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 0%	Average Score 1.3/3.0 (44%)	Standard Deviation 1.15	Difficulty 1/10

City of Laurel: Mitigation Actions Feedback

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	0.00%	0
Medium	2/3	66.67%	2
Low	1/3	0.00%	0
I'm not sure	0/3	33.33%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

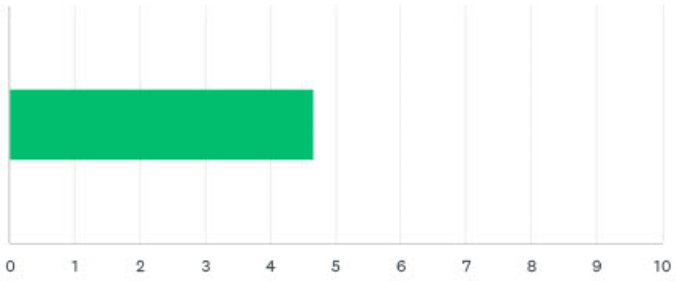
Q16 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 1

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM
2	I don't know enough about this proposed project. Is it being proposed for already disturbed land, in a floodplain, will it be used as a resilience hub? What is the explicit tie to hazard mitigation/ climate change? Depending on how this is planned - it could be definetly not or sure. Would need more context.	12/21/2022 1:39 PM

Q17 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	14	3
Total Respondents: 3			

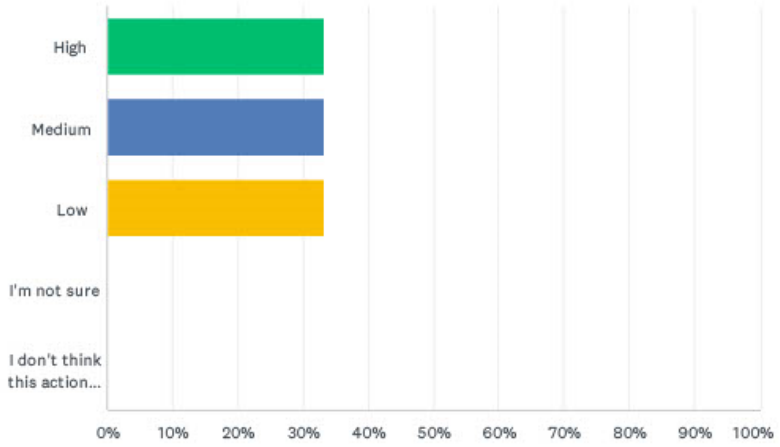
#		DATE
1	4	12/24/2022 4:07 PM

City of Laurel: Mitigation Actions Feedback

2	5	12/24/2022 2:54 PM
3	5	12/21/2022 1:39 PM

Q18 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 33%	Average Score 2.0/3.0 (67%)	Standard Deviation 1.00	Difficulty 4/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	33.33%	1
Low	1/3	33.33%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

Q19 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

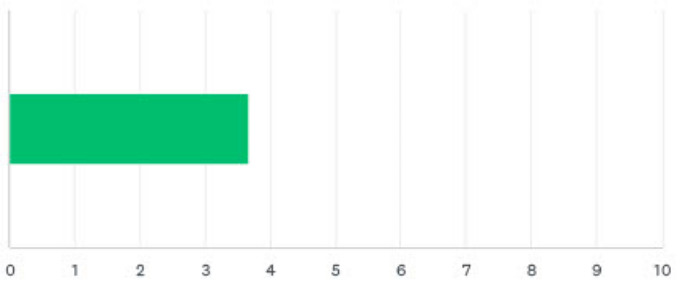
Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM

City of Laurel: Mitigation Actions Feedback

Q20 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0

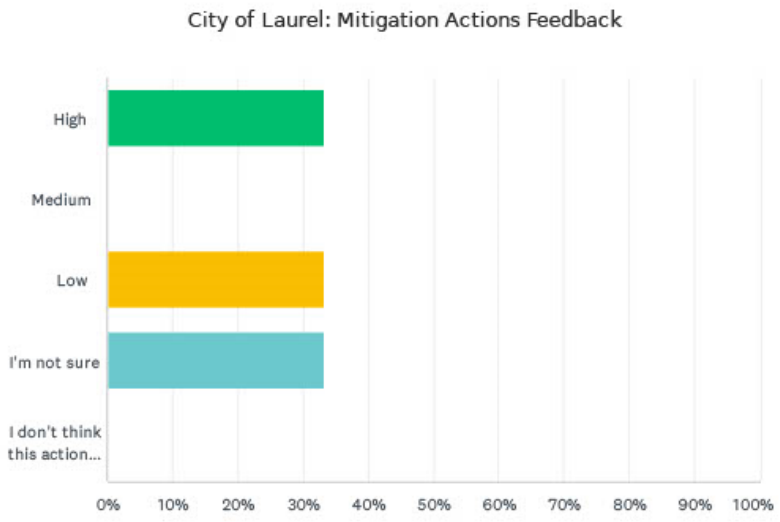


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	11	3
Total Respondents: 3			

#		DATE
1	3	12/24/2022 4:07 PM
2	3	12/24/2022 2:54 PM
3	5	12/21/2022 1:39 PM

Q21 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 33%	Average Score 1.3/3.0 (44%)	Standard Deviation 1.53	Difficulty 1/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	0.00%	0
Low	1/3	33.33%	1
I'm not sure	0/3	33.33%	1
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

Q22 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

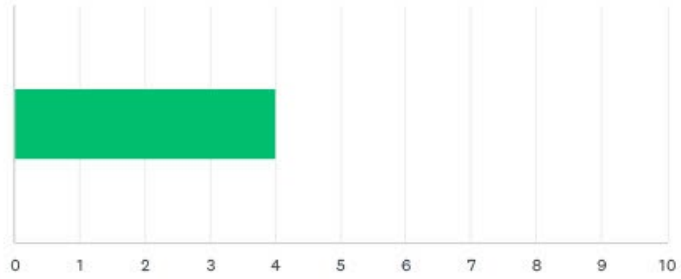
Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	It is a bit strange to combine the residential social grid modernization action with the government operations action. I support both.	12/21/2022 1:39 PM

Q23 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0

City of Laurel: Mitigation Actions Feedback

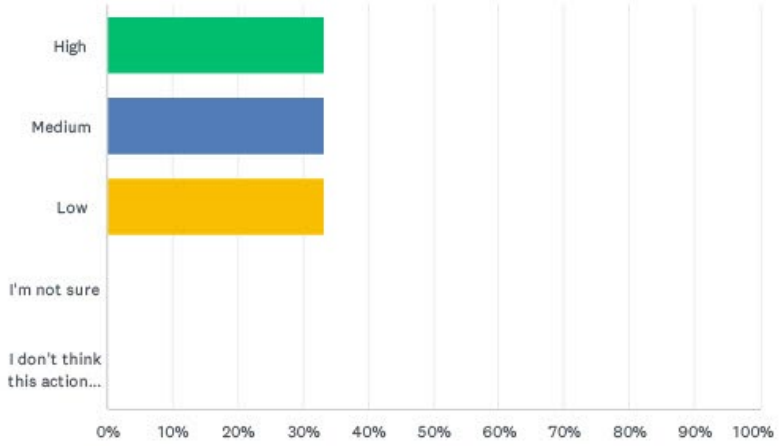


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	4	12	3
Total Respondents: 3			

#		DATE
1	4	12/24/2022 4:07 PM
2	3	12/24/2022 2:54 PM
3	5	12/21/2022 1:39 PM

Q24 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 33%	Average Score 2.0/3.0 (67%)	Standard Deviation 1.00	Difficulty 4/10

City of Laurel: Mitigation Actions Feedback

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	33.33%	1
Low	1/3	33.33%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

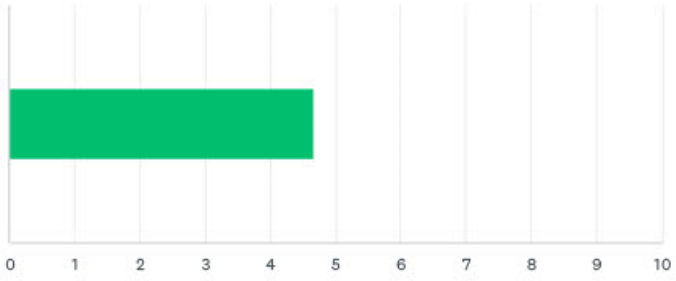
Q25 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM

Q26 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0



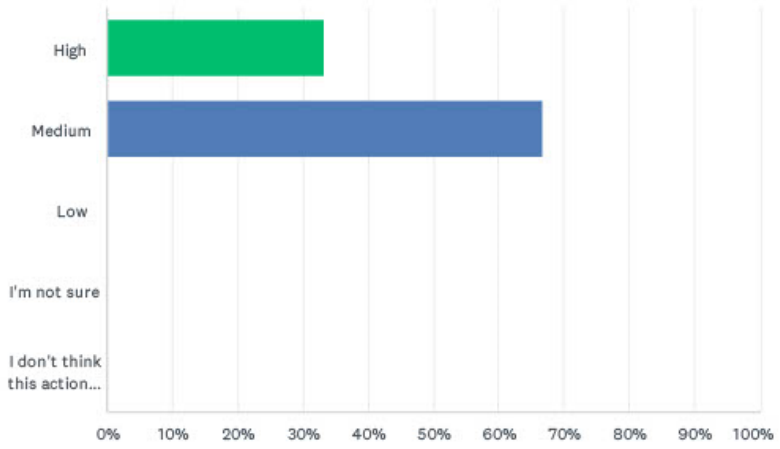
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	14	3
Total Respondents: 3			

#		DATE
1	4	12/24/2022 4:07 PM
2	5	12/24/2022 2:54 PM
3	5	12/21/2022 1:39 PM

City of Laurel: Mitigation Actions Feedback

Q27 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 33%	Average Score 2.3/3.0 (78%)	Standard Deviation 0.58	Difficulty 8/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	66.67%	2
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

Q28 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 2 Skipped: 1

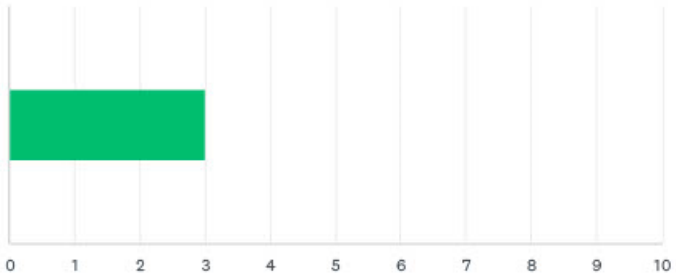
#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM
2	needs an easy to navigate executive summary and or sepearte infographic/ memo so that city staff will actually be able to digest the pertinent information. this could piggy back off of the	12/21/2022 1:39 PM

City of Laurel: Mitigation Actions Feedback

County's effort so that they use the same template to reduce cost of development and increase alignment.

Q29 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0



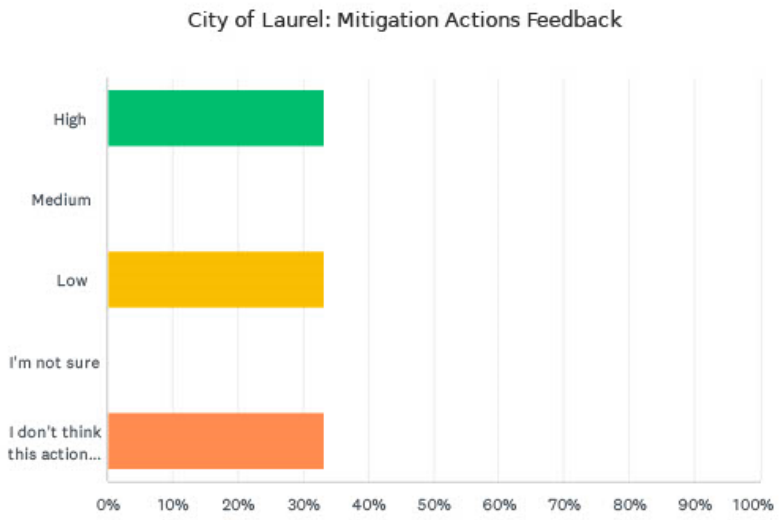
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	3	9	3
Total Respondents: 3			

#		DATE
1	3	12/24/2022 4:07 PM
2	1	12/24/2022 2:54 PM
3	5	12/21/2022 1:39 PM

Q30 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0

13 / 20



QUIZ STATISTICS			
Percent Correct 33%	Average Score 1.3/3.0 (44%)	Standard Deviation 1.53	Difficulty 1/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	0.00%	0
Low	1/3	33.33%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	33.33%	1
TOTAL			3

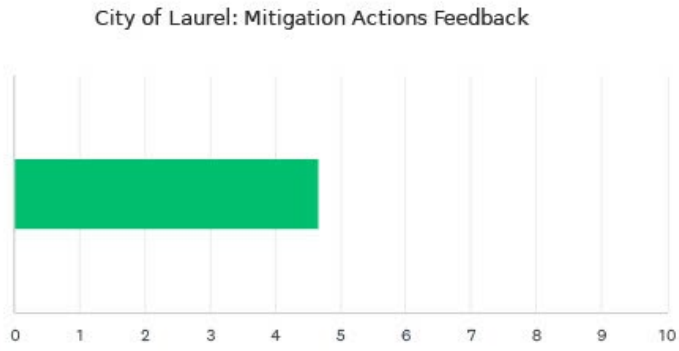
Q31 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	I don't recall this being an action item.	12/24/2022 2:54 PM

Q32 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0

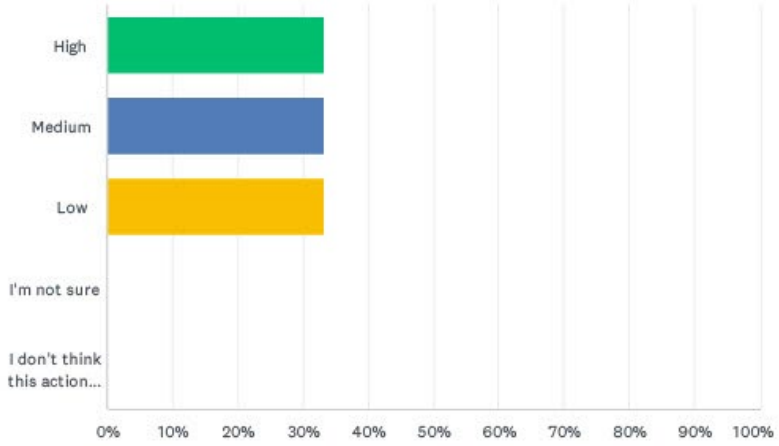


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	14	3
Total Respondents: 3			

#		DATE
1	3	12/24/2022 4:07 PM
2	5	12/24/2022 2:54 PM
3	6	12/21/2022 1:39 PM

Q33 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 33%	Average Score 2.0/3.0 (67%)	Standard Deviation 1.00	Difficulty 4/10

City of Laurel: Mitigation Actions Feedback

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	33.33%	1
Medium	2/3	33.33%	1
Low	1/3	33.33%	1
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

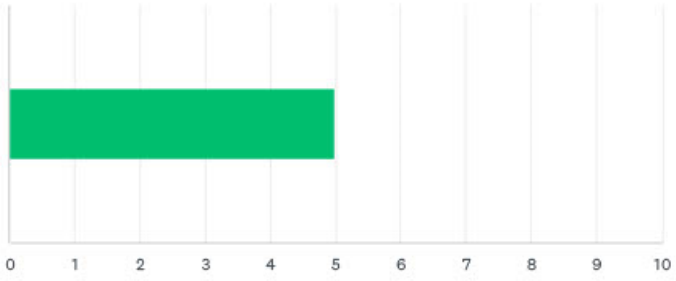
Q34 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM

Q35 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0



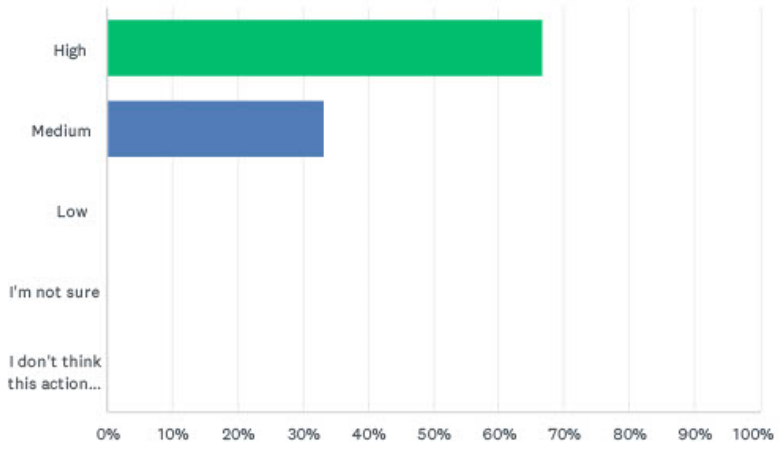
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	15	3
Total Respondents: 3			

#		DATE
1	4	12/24/2022 4:07 PM
2	5	12/24/2022 2:54 PM
3	6	12/21/2022 1:39 PM

City of Laurel: Mitigation Actions Feedback

Q36 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 67%	Average Score 2.7/3.0 (89%)	Standard Deviation 0.58	Difficulty 9/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	66.67%	2
Medium	2/3	33.33%	1
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

Q37 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

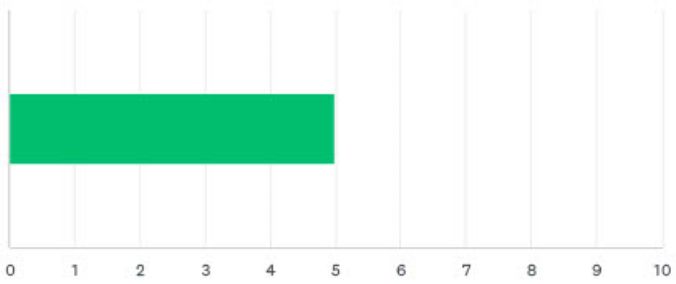
Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM

City of Laurel: Mitigation Actions Feedback

Q38 What is your overall opinion of including this action in the plan (pending any minor text edits)?

Answered: 3 Skipped: 0

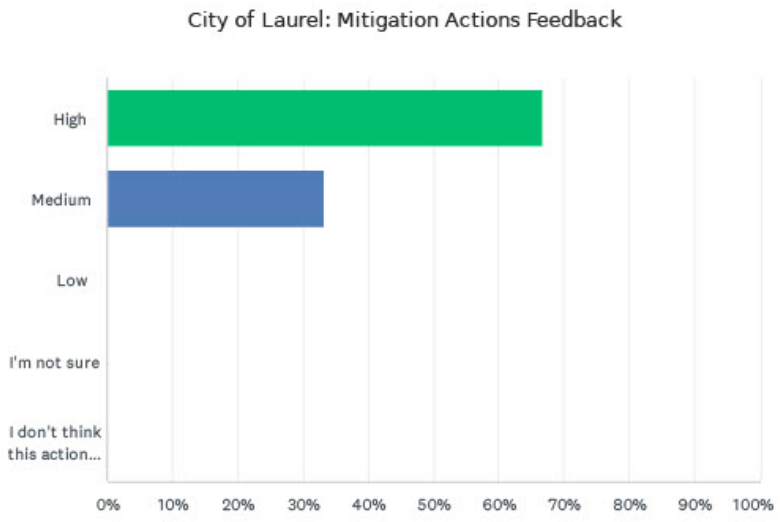


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	5	15	3
Total Respondents: 3			

#		DATE
1	4	12/24/2022 4:07 PM
2	5	12/24/2022 2:54 PM
3	6	12/21/2022 1:39 PM

Q39 What priority ranking should this action be given in the plan?

Answered: 3 Skipped: 0



QUIZ STATISTICS			
Percent Correct 67%	Average Score 2.7/3.0 (89%)	Standard Deviation 0.58	Difficulty 9/10

ANSWER CHOICES	SCORE	RESPONSES	
✓ High	3/3	66.67%	2
Medium	2/3	33.33%	1
Low	1/3	0.00%	0
I'm not sure	0/3	0.00%	0
I don't think this action should be in the plan	0/3	0.00%	0
TOTAL			3

Q40 Provide any recommendations for edits to the wording of the action, or any other thoughts or feedback on this mitigation action.

Answered: 1 Skipped: 2

#	RESPONSES	DATE
1	N/A	12/24/2022 2:54 PM

Q41 Do you have any other mitigation actions the City should include in the updated Hazard Mitigation Plan?

Answered: 1 Skipped: 2

City of Laurel: Mitigation Actions Feedback

#	RESPONSES	DATE
1	N/A	12/24/2022 2:55 PM

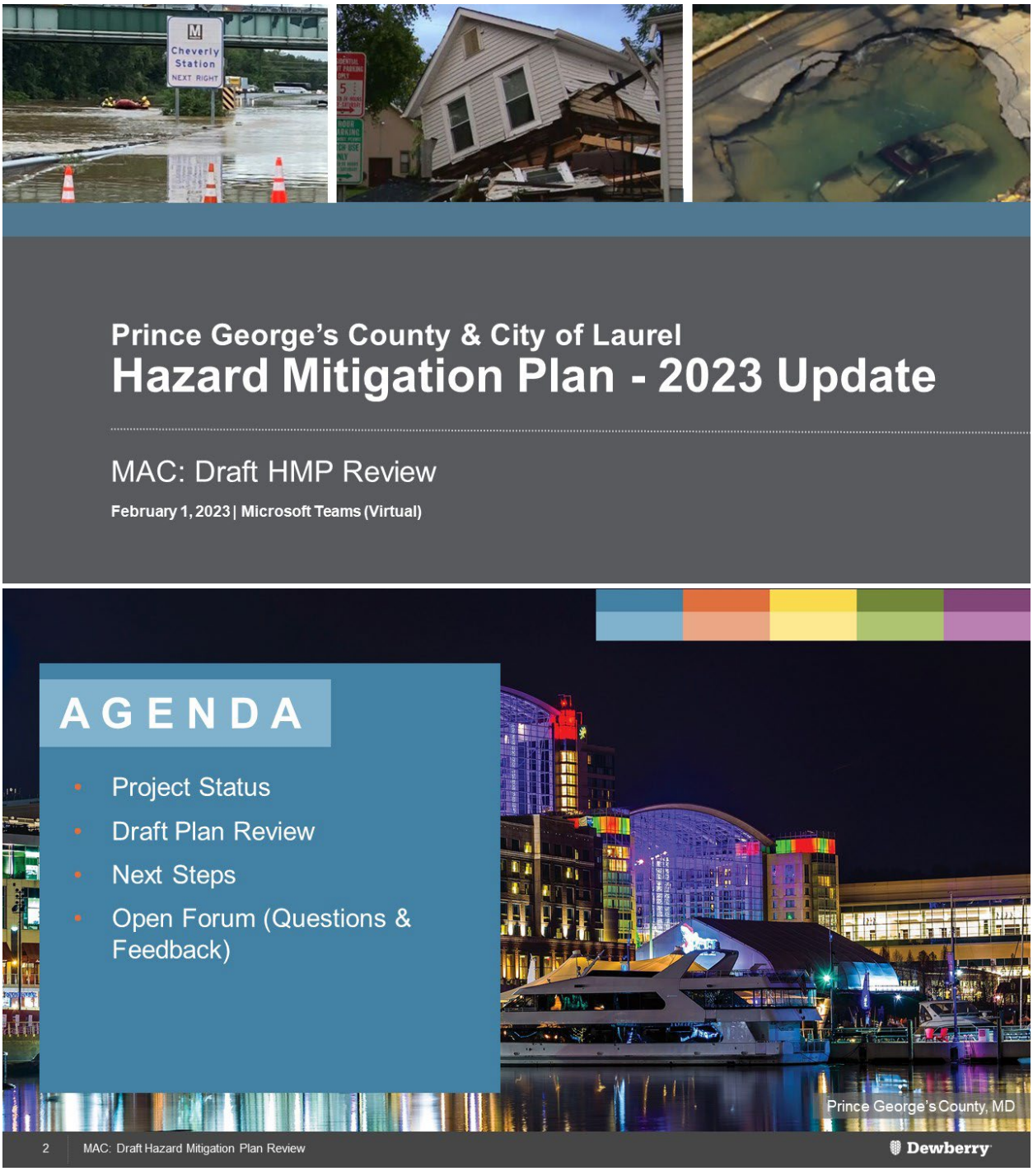
Q42 Describe any final thoughts on mitigation actions in the updated Hazard Mitigation Plan:

Answered: 2 Skipped: 1

#	RESPONSES	DATE
1	N/A	12/24/2022 2:55 PM
2	enforcement of exisiting and future land use planning and development restrictions will be necessary to prevent maladaptive construction.	12/21/2022 1:39 PM

E. Plan Review Meeting

E.1. Presentation



Project Status

Planning Process Update & Draft Plan Feedback

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Planning Process

We Are Here!



Coordinate & Collect Data	Assess Risks	Analyze Capabilities	Develop Mitigation Strategy	Decide Implementation Procedures	Review & Adopt Plan
Regional Climate Projections CDC SVI Data Comprehensive Plan Data	Climate Projections Social Vulnerability Analysis Future Development Analysis	Future Conditions Plan Integration	Mitigation Actions Plan Integration Social Vulnerability & Future Development Considerations	Public Involvement Plan Integration Priority Actions	Public Involvement Plan Integration Priority Actions

Public & Stakeholder Outreach

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	Sep	Oct	Nov	Dec	Jan '23	Feb	March
HM Plan Milestone:	Kick-Off	Outreach Begins	Risk Assessment Workshop	Strategy Workshop	Draft Plan & MAC/Public Review	MDEM/FEMA Review	Adoption
Review 2017 HMP							
Data Collection							
HIRA							
Capability Assessment							
Revise Goals + Objectives							
Mitigation Strategy Development							
Public Engagement							
HMP Writing / Revising							
MDEM Review / Approval							
FEMA Review / Approval							
Plan Adoption, Approval Letters, Plan Distribution							

Project Schedule

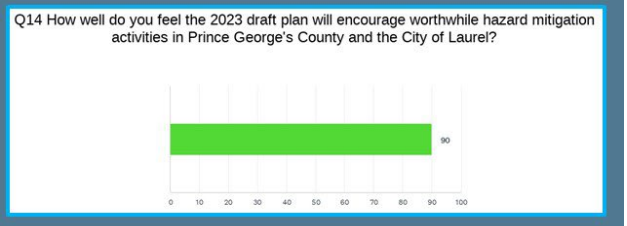
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Draft Plan Feedback Survey Results

- Responses from MAC Members & Prince George's County Residents
- Feedback included:
  - Suggestions for edits to abbreviations
  - Capability assessment information clarifications
  - Providing additional data from jurisdictional draft plans to be incorporated into the Plan
- Feedback survey will close on Sunday, 2/5

"Excellent plan, I really appreciate the work and inclusion of Bowie data. Thank you!"

"I'm especially glad to see the robust risk assessment section supporting the revised hazard prioritization. This level of documentation is essential to conducting a comprehensive HIRA for our community"



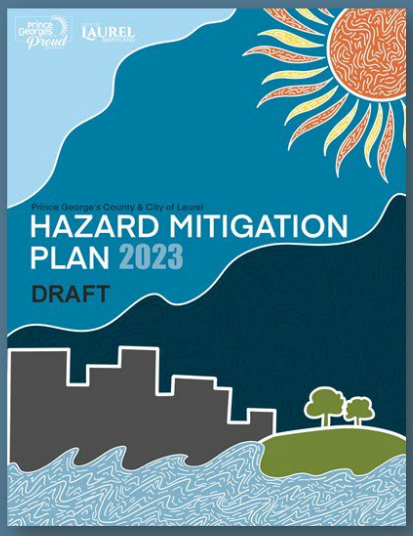
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Draft Plan Highlights

Updated Requirements & New Additions

New Plan Components

- One of the first plans to comply with the new FEMA Mitigation Planning Policy Guide (2022 release, effective April 2023)
- Compliant with FEMA's High Hazard Potential Dam Grant Program
- Creditable under CRS Activity 510 (Floodplain Management Planning)



Hazard Risk Assessment Update

Future Conditions - Population

- Used the Maryland Department of Planning, Projects, and State Data Center projects (pre-2020 Census)
- Adjusted projections based on 2020 Census counts using annualized growth rates

A.3.h. Future Conditions Analysis: Population

The United States Census Bureau's Population Estimates Program states Prince George's County, Maryland's population as 955,306 as of July 1, 2021. This is a -1.2% change from the April 1, 2020 U.S. Census count. Population clusters are located around the Town of Bowie, the City of Laurel, and the combined metro area of Hyattsville, College Park, and Greenbelt. Compared to the 2010 U.S. Census, the County has seen a population change of +12.0%. As of December 2020, the Maryland Department of Planning, Projections and State Data Center projects the population of Prince George's County to be about 983,870 by 2045, which would only be a 3.0% increase from the most recent 2021 estimate from the Census Bureau. This projection was created without 2020 Census data, so if the State's 2020 projection of 911,140 is adjusted to reflect the 2020 Census population (967,201) and the same annualized growth rates are then used on the new baseline, a new projection for the County's population in 2045 is 1,043,973.[44]

Based on this cumulative information, the population of Prince George's County by 2045 is estimated to be about 7.9% higher than the most current (2021) estimate. It is assumed that most of this change will occur in and around the development areas highlighted in A.3.g.1 Proposed Future Development. The City of Laurel has seen a similar population trend, as shown in Table 35.

Table 35. Population Changes in Prince George's County and the City of Laurel since 2010

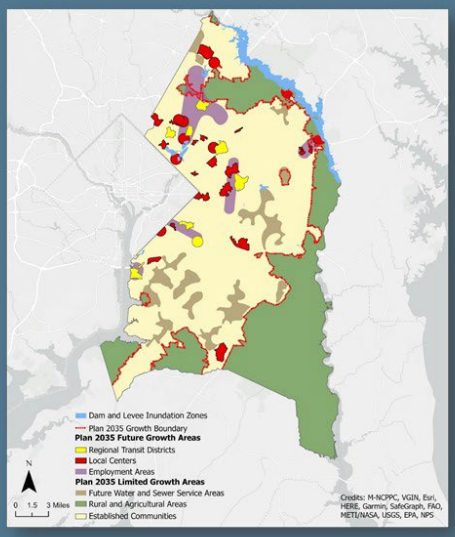
	City of Laurel	Prince George's County
Population, Census (April 1, 2010)	25,115	863,420
Population, Census (April 1, 2020)	30,060 (+19.7%)	967,201 (+12.0%)
Population Estimate (July 1, 2021)[45]	29,490 (-1.8%)	955,306 (-1.2%)
Projected Population (2045)[46]	**N/A**	**983,870 (+3.0%)**

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Hazard Risk Assessment Update

Future Conditions - Development

- Prince George's County Plan 2035 Future Growth Areas Data
- Example: Future Growth Areas & Dam and Levee Inundation Zones (see image)
- Riverine Flood, Extreme Heat, Dam & Levee Failure, Wildfire,

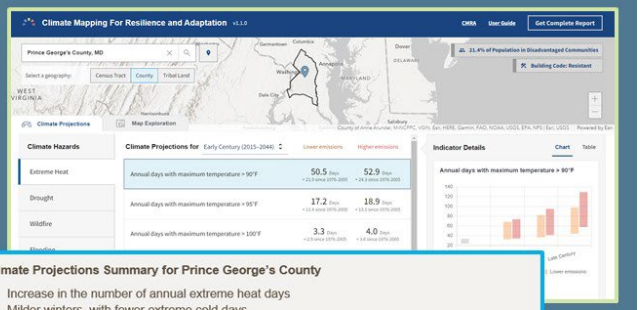


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Hazard Risk Assessment Update

Future Conditions - Climate

- FEMA now requires that states evaluate changes to climate conditions that may affect and influence their long-term vulnerability
- FEMA Climate Mapping for Resilience and Adaptation Tool



Climate Projections Summary for Prince George's County

- Increase in the number of annual extreme heat days
- Milder winters, with fewer extreme cold days
- Increased risk of extreme heat and dry conditions overlapping, leading to an increased risk of droughts and wildfires
- Increased average total annual precipitation
- More extreme precipitation events, with more rain falling in shorter amounts of time, which can lead to more flash floods, riverine flooding, and pluvial flooding
- 0.2% of the County's land is expected to be impacted by sea level rise within the next 20 years
- Intensified winter storm events
- Stronger hurricanes that bring more rain, stronger winds, intensify quickly, and move slower over land

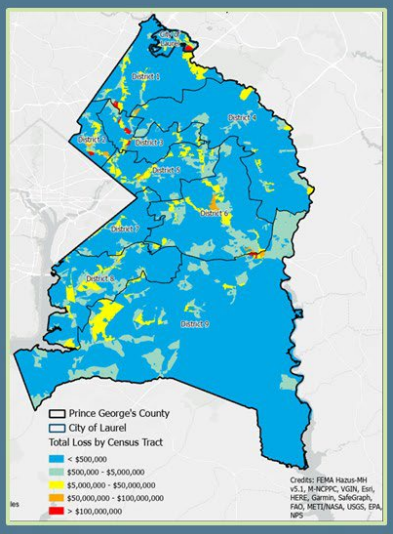
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Hazard Risk Assessment Update

Hazus-MH v5.1 Loss Estimation

- Riverine & Coastal Flooding, Hurricane, Earthquake hazards
- Example: Total Flood Loss

Prince George's County	100-Year Riverine Flood Losses				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	*$130,144,361,000*	*$26,242,415,000*	*$5,564,076,000*	*$7,454,437,000*	*$169,405,289,000*
Direct Losses					
Building	$834,296,000	$323,906,000	$73,819,000	$72,724,000	$1,304,745,000
Contents	$392,305,000	$408,446,000	$125,548,000	$93,673,000	$1,019,972,000
Inventory	$0	$10,790,000	$19,217,000	$298,000	$30,305,000
Subtotal	$1,226,601,000	$743,142,000	$218,584,000	$166,695,000	$2,355,022,000
Business Interruption					
Income	$2,398,000	$232,281,000	$2,882,000	$28,440,000	$266,001,000
Relocation	$111,416,000	$76,858,000	$2,826,000	$17,990,000	$209,090,000
Rental Income	$57,472,000	$57,232,000	$543,000	$3,069,000	$118,316,000
Wage	$5,694,000	$260,289,000	$4,002,000	$269,408,000	$539,393,000
Subtotal	$176,980,000	$626,660,000	$10,253,000	$318,907,000	$1,132,800,000
TOTAL	$1,403,581,000	$1,369,802,000	$228,837,000	$485,602,000	$3,487,822,000



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Hazard Risk Assessment Update

Hazard Risk Index Score

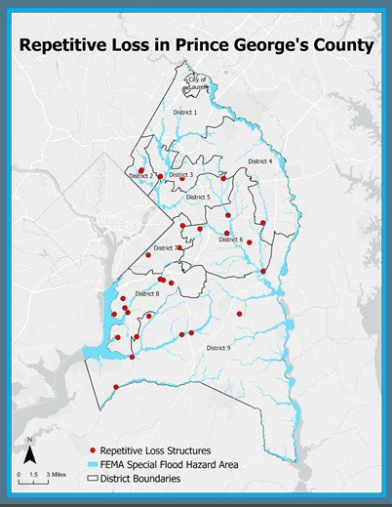
HRI Score = (***probability value*** x 0.20) + (***impact value*** x 0.35) + (***geographic extent value*** x 0.20) + (***warning time value*** x 0.10) + (***community concern value*** x 0.15)

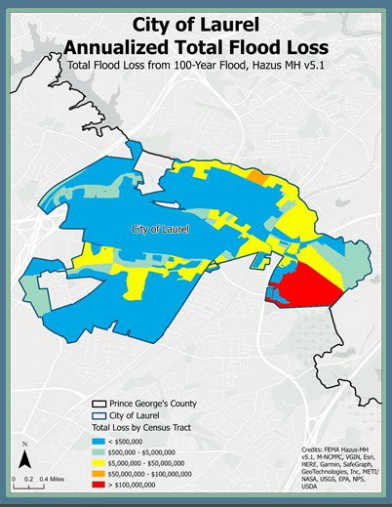
Hazard	Occurrence Probability	Impact	Geographic Extent	Warning Time	Community Concern	Hazard Risk Index Score & Overall Rank	State Ranking (5 = highest)	FEMA Ranking (5 = highest)
Riverine Flood	Highly Likely	Critical	Moderate	Limited	High	3.25 (High)	5	2
Severe Storm (Flood-Related)	Highly Likely	Critical	Moderate	Limited	High	3.25 (High)	5	N/A
Severe Storm (Wind-Related)	Highly Likely	Limited	Large	Limited	High	3.1 (High)	5	3
High Winds	Likely	Limited	Large	Limited	High	2.95 (High)	5	3
Tornado	Likely	Critical	Minor	No Notice	Moderate	2.9 (Moderate)	5	4
Extreme Heat	Highly Likely	Limited	Large	Extended	Moderate	2.8 (Moderate)	4	4
Winter Storm	Highly Likely	Minor	Large	Limited	Moderate	2.55 (Moderate)	5	4
Hurricane/Tropical Storm	Somewhat Likely	Limited	Large	Limited	Low	2.4 (Moderate)	4	2
Dam and Levee Failure	Unlikely	Limited	Negligible	No Notice	Low	1.85 (Moderate)	4	N/A
Earthquake	Likely	Minor	Minor	No Notice	Negligible	1.8 (Moderate)	N/A	2
Extreme Cold	Somewhat Likely	Minor	Large	Extended	Negligible	1.75 (Moderate)	4	3
Sinkhole	Highly Likely	Minor	Negligible	Minimal	Negligible	1.65 (Low)	2	N/A
Wildfire	Highly Likely	Minor	Negligible	Limited	Negligible	1.55 (Low)	4	1
Landslide	Somewhat Likely	Minor	Negligible	No Notice	Negligible	1.45 (Low)	2	2
Drought	Somewhat Likely	Minor	Minor	Extended	Negligible	1.35 (Low)	4	2
Coastal Flood	Unlikely	Minor	Minor	Limited	Negligible	1.3 (Low)	5	2

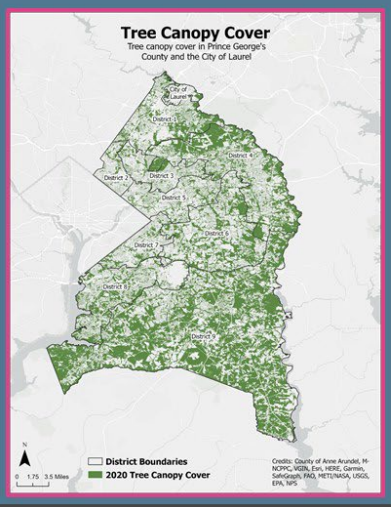
13 | MAC: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

New Maps, Analyses & Data Integration







14 | MAC: Draft Hazard Mitigation Plan Review | Dewberry

Mitigation Strategy Update

Updated Hazard Mitigation Goals & Actions

D. 2023-2028 Mitigation Actions

All 2023-2028 mitigation actions are outlined in Table 131 and Table 132, along with key details to add relevant context and objectives to implementation and accountability. The descriptions and/or definitions for the elements that accompany each action are described in Tab actions plans of the "high priority" actions, refer to **Appendix F**.

Table 130. Action Description Inputs

Action Detail	Input Description
Category of mitigation action	Prevention, property protection, natural resource protection, structural projects, emergency services, or e
Action number	Jurisdiction abbreviation - # (e.g., PG-1)
Applicable goal(s)	• Goal 1: Implement structural projects that mitigate the risks of natural hazards to people, infrastructu assets while equitably distributing project benefits. • Goal 2: Integrate hazard mitigation into regular staff training and responsibilities to improve capabili adaptation is adequately considered and addressed in county/city actions. • Goal 3: Increase public education and awareness of natural hazard risks to people and private prop current and new opportunities to participate in mitigation planning. • Goal 4: Prevent future climate-related damages and losses to communities, critical facilities, and na ordinances, policies, and plans aligned with regional and state resilience and equity goals.
Action lead	The department or office responsible for ensuring the action is implemented
Timeframe for implementation	• Short-term: less than three years • Long-term: more than three years • Ongoing: continuous with no designated end date • Funding contingent: timeline is dependent on funding from a source outside of the jurisdiction
Priority level for implementation	High, medium, or low

Action Number	Action	Goal 1	Goal 2	Goal 3	Goal 4	Action Lead	Timeframe	Priority
	Prevention							
PG-1	Partner with federal agencies, the state, and Non-governmental Organizations to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the County and municipalities.	X			X	Office of Emergency Management	Ongoing	Medium
PG-2	Using the best available data, check the locations of HazMat sites, National Pollutant Discharge Elimination System sites, and other land uses; if found to be in flood hazard areas, communicate with the owner/handler of hazardous materials and known pollutants regarding risk and appropriate			X	X	Department of Environment	Short-term	Medium
PG-3	Integrate mitigat other appropriat comprehensive p							
PG-4	Collect flood dep provide elevation Special Flood Hu							

Increase public education and awareness of natural hazard risks to people and private property, and promote current and new opportunities to participate in mitigation planning.

Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans aligned with regional and state resilience and equity goals.

Implement structural projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.

Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.

Implementation Plan Update

Technical Assistance

Table 135. Sources of Technical Assistance

Name	Overview	Contact
FEMA Mitigation Planning Technical Assistance	FEMA's Risk Mitigation Action Planning (MAP) Program identifies flood risk to promote informed planning and development practices. Risk information is primarily conducted on a county or tribal basis and includes both regulatory flood risk maps and nonregulatory risk information. Under FEMA Risk MAP program, agency staff or their contractors can provide technical assistance tailored to a community's need, such as increasing understanding of risk and mitigation or helping prepare for project funding or implementation. This may include a project alternatives analysis or exploring project costs and benefits. For more information refer to the Incorporating Mitigation Planning Technical Assistance into Risk MAP Projects Guidance and the FEMA Region 3 Hazard Mitigation Planning webpage.	Primary point of contact at Maryland Department of Emergency Management or FEMA Region 3
FEMA Building Resilient Infrastructure and Communities (BRIC) Direct Technical Assistance	Building Resilient Infrastructure and Communities (BRIC) Direct Technical Assistance (DTA) gives full support to communities that may not have the resources to begin climate resilience planning and project solution design on their own. Through process-oriented, hands-on support, BRIC DTA will work to enhance a community's capacity to design holistic, equitable climate adaptation solutions that advance numerous community-driven objectives. For more information, refer to the BRIC Direct Technical Assistance webpage.	Communities can send a request through an online submission form found here.

Risk and Priority Assessment & Funding Opportunities and Best Practices

- Assistance need: In 2016, Hurricane Matthew - a major flooding in eastern North Carolina - dumped a large amount of rainfall shortly on top of a large rainfall event that occurred the week before. The most severe flooding experienced took place in Fayetteville (Cumberland County) and Lumberton (Robeson County). The State (North Carolina) and the affected communities sought assistance to organize post-Matthew resilient redevelopment planning and grant identification in the area.
- About the assistance: Assistance included multiple engagements with key officials and the general public as well as identification and basic scoping of mitigation project ideas that could be funded with post-disaster funding. In each county, the planning team led a series of six meetings (three with local officials and three with the public) to determine major impacts from the storm, identify any unmet needs that still existed several months after the event, and develop a set of mitigation projects. During these meetings, planners used an online ArcGIS portal to identify specific locations where impacts had occurred and to discuss details of what occurred during the storm. These high impact areas became the basis to propose potential projects.
- Results: The resulting plans mobilized the communities to prioritize their greatest mitigation needs and provided the needed elements to begin preparation of mitigation grant applications, several of which were submitted to FEMA and later Department of Housing and Urban Development.

Risk and Priority Assessment & Funding Opportunities and Best Practices

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Implementation Plan Update

Funding Opportunities

Table 136. Sources of Potential Funding

Name	Source	Funding Type	Maximum Funding	Local Cost Share	URL
Hazard Mitigation Grant Program (HMGP)	FEMA	Grant	---	25%	Webpage
Building Resilient Infrastructure and Communities (BRIC)	FEMA	Grant	$2 million (state set-aside) or [illegible] million (national competiti	25%	Webpage
Flood Mitigation Assistance (FMA) Program	FEMA	Grant	$25,000 (planning $50,000 technical assistanc $900,000 project scoping;		

Prince George's County and the City of Laurel Hazard Mitigation Plan
Annual Progress Report

Reporting Period

The reporting period for this progress report is _____(date) through _____(date).

Background

This is an annual update of the Prince George's County and the City of Laurel Hazard Mitigation Plan. This update also meets annual certification requirements for Prince George's County floodplain management and Community Rating System (CRS) program.

Prince George's County and the City of Laurel developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a [illegible]e. To prepare the plan, the County, City, and participating [illegible]ces, assessed risks from natural hazards within the County [illegible]ectives, reviewed mitigation alternatives, and developed an [illegible]n natural hazards. By completing this process, the County [illegible]aster Mitigation Act, achieving eligibility for mitigation grant [illegible]bert T. Stafford Act.

Review of Mitigation Actions

Table 2 and **Table 3** review the mitigation actions from the Hazard Mitigation Plan for Prince George's County and the City of Laurel, reporting the status of each action. Reviewers of this report should refer to the Hazard Mitigation Plan for more detailed descriptions of each action and the prioritization process.

- Plan 2035 Prince George's Elements integrated policies are shown in orange.
- Climate Action Plan Priority Recommendations are shown in green.

Address the following in the "Comments" column of the following table:

- Was any element of the action carried out during the reporting period?
- If no action was completed, why?
- Is the timeline for implementation for the action still appropriate?
- If the action was completed, does it need to be changed or removed from the action plan?

Table 2: Prince George's County 2023-2028 Mitigation Actions Status Report

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	Prevention					
PG-1	Partner with federal agencies, the state, and NGOs to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the County and municipalities.	Office of Emergency Management	Ongoing	Medium		
PG-2	Using the best available data, check the locations of HazMat sites, National Pollutant Discharge Elimination System sites, and other land uses; if found to be in flood hazard areas, communicate with the owner/handler of	Department of Environment	Short-term	Medium		

Progress

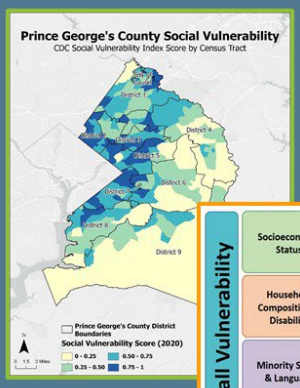
[illegible]d Mitigation Plan became effective on _____, 2023. [illegible]. The initial performance period for this plan will be 5 years, [illegible]ur before _____, 2028. As of this reporting period, the [illegible]ed to be ____% complete. The Hazard Mitigation Plan has [illegible]nce George's County and 14 hazard mitigation actions for the [illegible]ar performance period. As of the reporting period, the

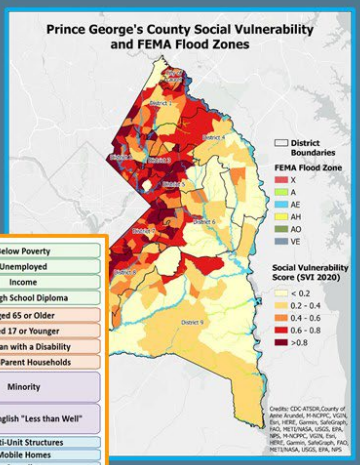
[illegible]rted ongoing action toward completion.
[illegible] reported as being complete.
[illegible]rted no action taken.

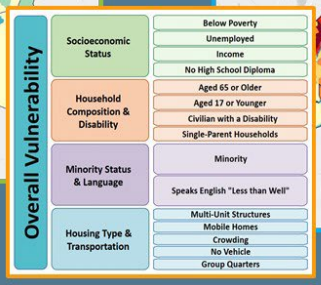
FEMA HMA Program Tailoring

Social Vulnerability, Plan Integration & Community Lifelines

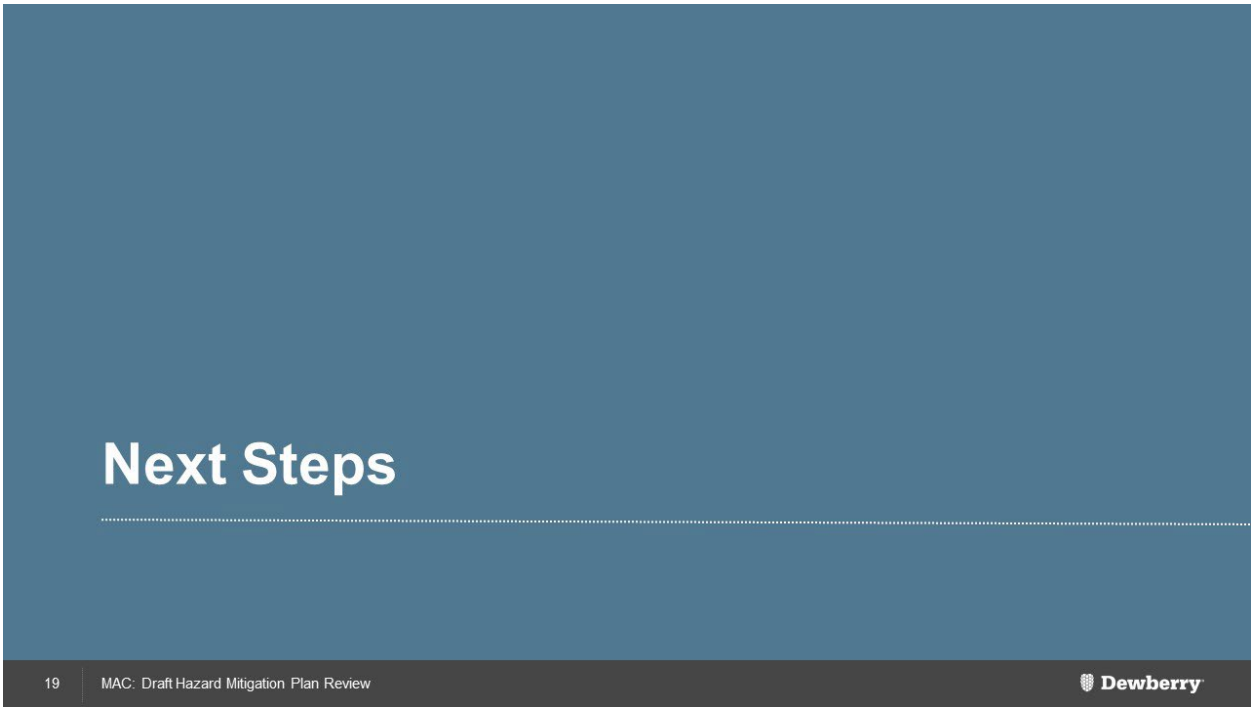
- Social vulnerability (BRIC/FMA)
  - CDC Social Vulnerability Index (SVI) 2020 data
  - Each census tract is ranked by 15 social factors that are grouped into four related themes to show overall vulnerability
- Plan integration (HMGP, BRIC, FMA)
- Community lifelines (BRIC)

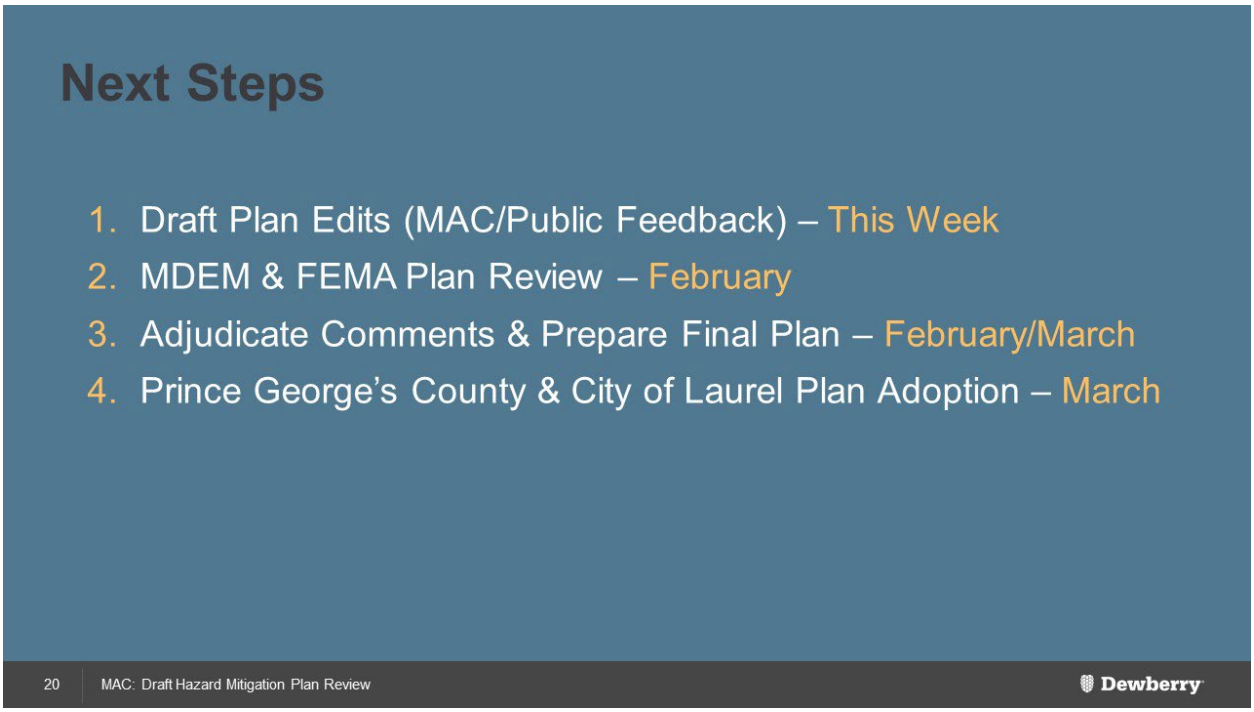









Next Steps
19
MAC: Draft Hazard Mitigation Plan Review
Dewberry


Next Steps
1. Draft Plan Edits (MAC/Public Feedback) – This Week
2. MDEM & FEMA Plan Review – February
3. Adjudicate Comments & Prepare Final Plan – February/March
4. Prince George's County & City of Laurel Plan Adoption – March
20
MAC: Draft Hazard Mitigation Plan Review
Dewberry

Upcoming Engagement Opportunities

1. Last chance to review the Draft Plan: https://www.surveymonkey.com/r/NBHDW9K
2. Spread the word about the public meeting tomorrow: https://bit.ly/PublicHMP2

21 | MAC: Draft Hazard Mitigation Plan Review | Dewberry

Open Forum: Questions & Feedback



22 | MAC: Draft Hazard Mitigation Plan Review | Dewberry

E.2. Agenda

Dewberry

Mitigation Advisory Committee Meeting Agenda

Title:	Mitigation Advisory Committee Meeting: Draft Plan Review	Location:	Microsoft Teams (Virtual) Meeting ID: 226 267 219 73 Passcode: rXJDfH
Date:	Wednesday, February 1st, 2023	Time:	2:00 – 3:00 pm ET
Purpose:	Dewberry will provide an overview of the 2023 Draft Prince George's County and City of Laurel Hazard Mitigation Plan. There will be a discussion to answer questions and gather feedback on the Draft Plan. We will close with next steps.		

Agenda Items

Topic	Presenter	Time
Project Status - Schedule overview - Draft plan feedback received	Scott Choquette, Dewberry	2:00 – 2:10 pm
Draft Plan Review - New Plan highlights - Draft Plan Review Survey Results	Jade Payne, Dewberry	2:10 – 2:30 pm
Next Steps - MDEM Review - FEMA Review - Adoption by County & City	Scott Choquette, Dewberry	2:30 – 2:35 pm
Questions & Comments	Open Forum	2:35 – 3:00 pm

Action Items

1. Review the draft plan and appendices, then provide feedback via the brief online survey.
2. Spread the word about the upcoming public meeting on Thursday, February 2nd, to review the draft plan. The public can review the draft plan and provide feedback via the online survey as well.

E.3. Notes

Dewberry

Prince Georges Proud

Mitigation Advisory Committee Meeting Notes

Title:	Prince George's County Mitigation Advisory Committee: Prince George's County and City of Laurel Draft 2023 HMP Review	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, February 1st, 2023	Time:	2:00 – 3:00 pm ET
Purpose:	Dewberry will provide an overview of the 2023 Draft Hazard Mitigation Plan. There will be a discussion to gather feedback on the Draft Plan. The meeting will close with next steps and questions.		

Attendees:

1. Brian Lee
2. Stephanie Robinson
3. Bahador, Ehsan
4. Henderson, Joey L.
5. Finch, Kim
6. Perez Irizarry, Angel
7. Payne, Jade
8. Choquette, Scott
9. Carreen Koubek
10. Callahan, Patrick T.
11. Mishra, Sudhanshu
12. Mariette, Courtney E.
13. Erin Meyer, UMD
14. Hawkins-Nixon, Dawn
15. Rush, Hanna R.
16. Stephanie Pendergrass Dalke
17. DeHan, Jeffrey M.
18. Batten-Mickens, Meloyde R.
19. Sherrill, Mary C.
20. Kelly Flint
21. Robert Love
22. Tennekoon, Lilantha
23. Christina Cornwell
24. Joanne Hall Barr
25. Galosi, Frank L.
26. Block, Michael (Contractor)

Meeting Summary

Scott Choquette (Project Manager, Dewberry) and Jade Payne (Deputy Project Manager, Dewberry) met with the Prince George's County Mitigation Advisory Committee (MAC) on February 1, 2023, to review the 2023 Draft Hazard Mitigation Plan. A PowerPoint presentation was used to review the project status, review the Draft plan, and next steps for the project. Discussions were held throughout the presentation so Dewberry could gather feedback from the MAC. Discussion and presentation topics are grouped below with input and questions from the MAC.

Meeting Notes

Introduction

- Scott introduced the meeting agenda

Project Status

Prince George's County Hazard Mitigation Plan – 2023 Update 1

Dewberry

- Scott introduced the current step in the planning process and the project schedule
- Scott explained that the HIRA section is already under review by MDEM

Draft Plan Review

- Results from the Draft Plan Survey were shown to meeting attendees
- Jade presented the Draft Plan highlights, including compliance with new FEMA Mitigation Policy Planning Guide and FEMA High Hazard Dam potential
- Jade presented the updates to the HIRA section, including new future conditions section and population estimates for the future
- Brian Lee mentioned that some of the local jurisdictions may have different population counts than what is in the Plan currently (ex: City of Laurel should be over 31,000 people), and asked if we can incorporate these updated numbers into the Future Conditions Analysis section if he emails the data over
- Jade responded that we will incorporate these updated numbers once we receive that data from the City of Laurel
- Jade presented the addition of Hazus-MH v5.1 analysis in the HIRA section, as well as the new Hazard Risk Index Score
- Ehsan asked to clarify what "Severe storm (Flood-Related)" hazard section referred to. Jade clarified that it is flash flooding and pluvial flooding in this hazard section.
- Jade presented the updated Hazard Mitigation Goals and Actions, that were created with input from the MAC and the public
- Jade presented the new additions to the Plan Implementation chapter, including the new technical assistance and funding opportunities section, as well as the Annual Progress Report template
- Jade explained how the Plan is tailored to the FEMA HMP Program, with the incorporation of Social Vulnerability, Plan Integration, and FEMA Community Lifelines

Next Steps

- Scott explained the next steps for the Plan, with a timeline for the next steps
- Scott mentioned the public meeting that will be held on February 2,2023 to review the Draft Plan

Questions/Comments

- Meloyde Batten-Mickens asked about the number of feedback forms that have been submitted on the Draft Plan Survey. Jade responded that we currently have less than 10 responses to the survey.
- Dawn said she would send out a request for responses to the Draft Plan Survey the afternoon of February 1, 2023 to try to get more responses.

E.4. Attendance

1. Summary

	Mitigation Advisory Committee: Prince George's County and City of Laurel
Meeting title	Draft 2023 HMP Review
Attended	27
Start time	2/1/23, 1:55:27 PM
End time	2/1/23, 2:31:55 PM
Meeting duration	36m 28s
Average attendance time	29m 41s

2. Participants

Name	First join	In-meeting duration	Email
Brian Lee	2/1/23, 1:56:13 PM	35m 22s	[redacted]
Stephanie Robinson	2/1/23, 1:56:42 PM	34m 49s	
Bahador, Ehsan	2/1/23, 1:57:08 PM	34m 23s	
Henderson, Joey L.	2/1/23, 1:57:14 PM	34m 17s	
Finch, Kim	2/1/23, 1:57:19 PM	34m 8s	
Perez Irizarry, Angel	2/1/23, 1:57:22 PM	34m 13s	
Payne, Jade	2/1/23, 1:58:00 PM	33m 32s	
Choquette, Scott	2/1/23, 1:58:37 PM	32m 51s	
Carreen Koubek	2/1/23, 1:58:55 PM	32m 30s	
Callahan, Patrick T.	2/1/23, 1:59:02 PM	32m 32s	
Mishra, Sudhanshu	2/1/23, 1:59:20 PM	32m 9s	
Mariette, Courtney E.	2/1/23, 1:59:51 PM	32m 3s	
Erin Meyer, UMD (Guest)	2/1/23, 2:00:00 PM	29m 40s	
Hawkins-Nixon, Dawn	2/1/23, 2:00:28 PM	31m 6s	[redacted]
Rush, Hanna R.	2/1/23, 2:00:33 PM	30m 56s	
Stephanie Pendergrass Dalke	2/1/23, 2:01:12 PM	30m 11s	
DeHan, Jeffrey M.	2/1/23, 2:01:19 PM	30m 10s	
Batten-Mickens, Meloyde R.	2/1/23, 2:02:25 PM	29m 5s	
Sherrill, Mary C.	2/1/23, 2:02:28 PM	27m 14s	
Kelly Flint	2/1/23, 2:02:33 PM	28m 53s	
Robert Love	2/1/23, 2:03:25 PM	27m 58s	[redacted]
Tennekoon, Lilantha	2/1/23, 2:03:34 PM	28m 15s	
Christina Cornwell	2/1/23, 2:04:25 PM	27m 3s	
Joanne Hall Barr	2/1/23, 2:04:59 PM	26m 29s	
Galosi, Frank L.	2/1/23, 2:09:07 PM	22m 35s	
Block, Michael (Contractor)	2/1/23, 2:11:22 PM	20m 9s	
[redacted]	2/1/23, 2:22:33 PM	8m 51s	

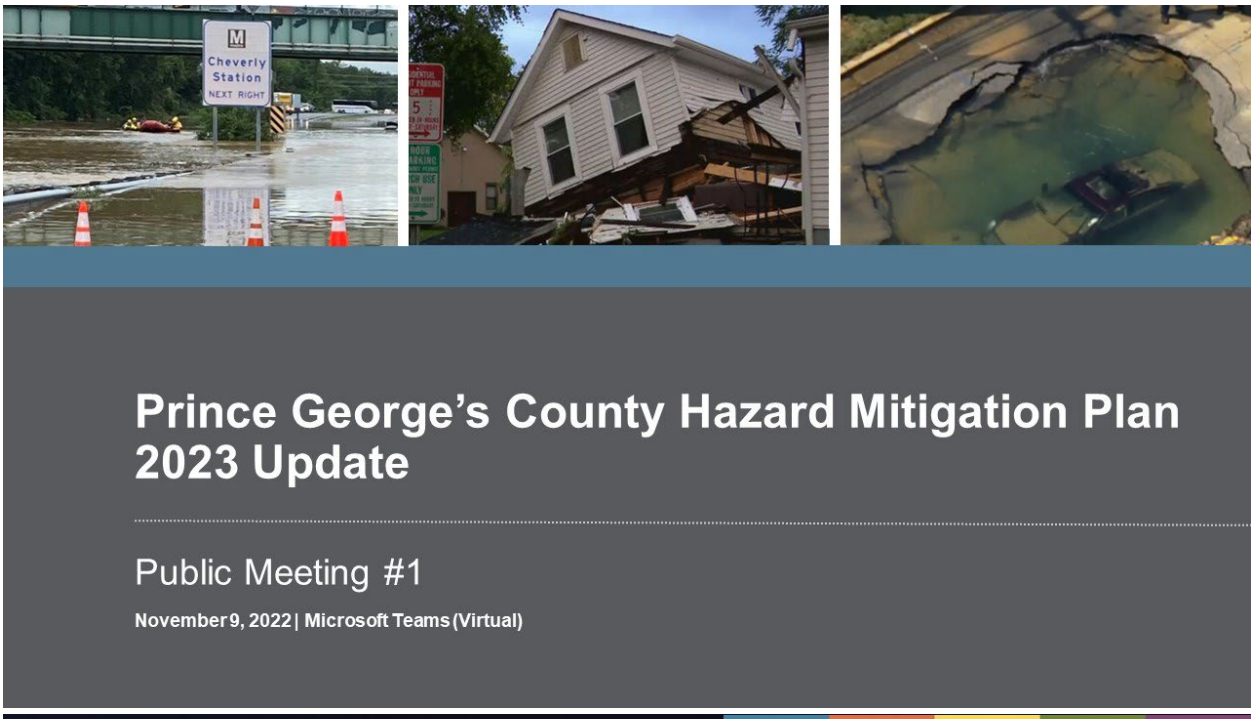
Appendix B. Outreach and Engagement

Contents:

1. Public Meeting – Risk Assessment Results
    a. Presentation
    b. Agenda
    c. Advertisements
    d. Notes
    e. Attendance
2. Public Hazard Mitigation Survey
3. Public Meeting – Draft Plan Review
    a. Presentation
    b. Agenda
    c. Advertisements
    d. Notes
    e. Attendance
4. Public Draft Plan Review Survey
5. Online Outreach Materials
    a. Video Meeting Statistics
    b. StoryMap
    c. Prince George's County Website
6. FEMA Region III- Local Hazard Mitigation Plan Engagement Strategy Worksheet

A. Public Meeting – Risk Assessment Results

A.1. Presentation





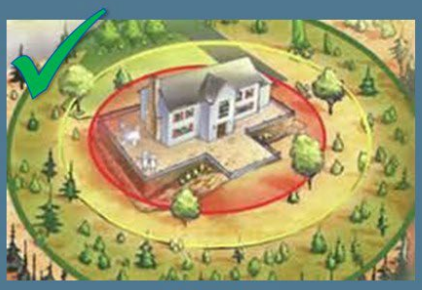
Hazard Mitigation Planning

Overview

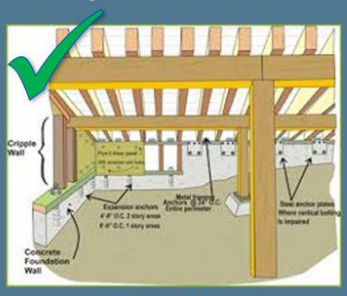
3 | Public Meeting #1 November 9, 2022 | Dewberry

What is hazard mitigation?

Any sustainable action that will **reduce or eliminate injury** to citizens, damages to structures and allow continuity of critical society functions



Mitigation
Defensible Space for Wildfire Mitigation



Mitigation
Earthquake Retrofit



Preparedness & Response
purchase of a police command vehicle

4 | Public Meeting #1 November 9, 2022 | Dewberry



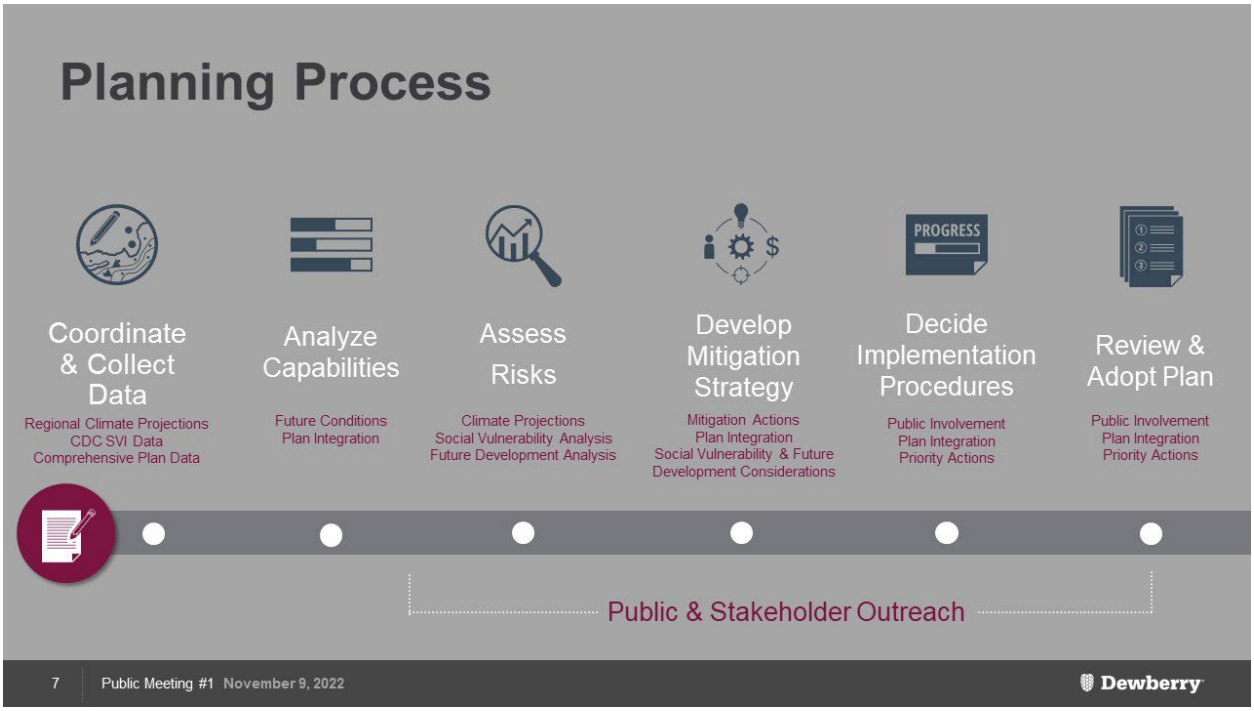
- Reduces or eliminates the need to respond (lessens resource burden)
- Increases resilience and promotes climate adaptation
- Promotes Data sharing between different levels of government and academia
- Supports decision-making
- Disaster Mitigation Act of 2000
  - Certain FEMA Public Assistance (State Plans)
  - FEMA's Hazard Mitigation Assistance Programs

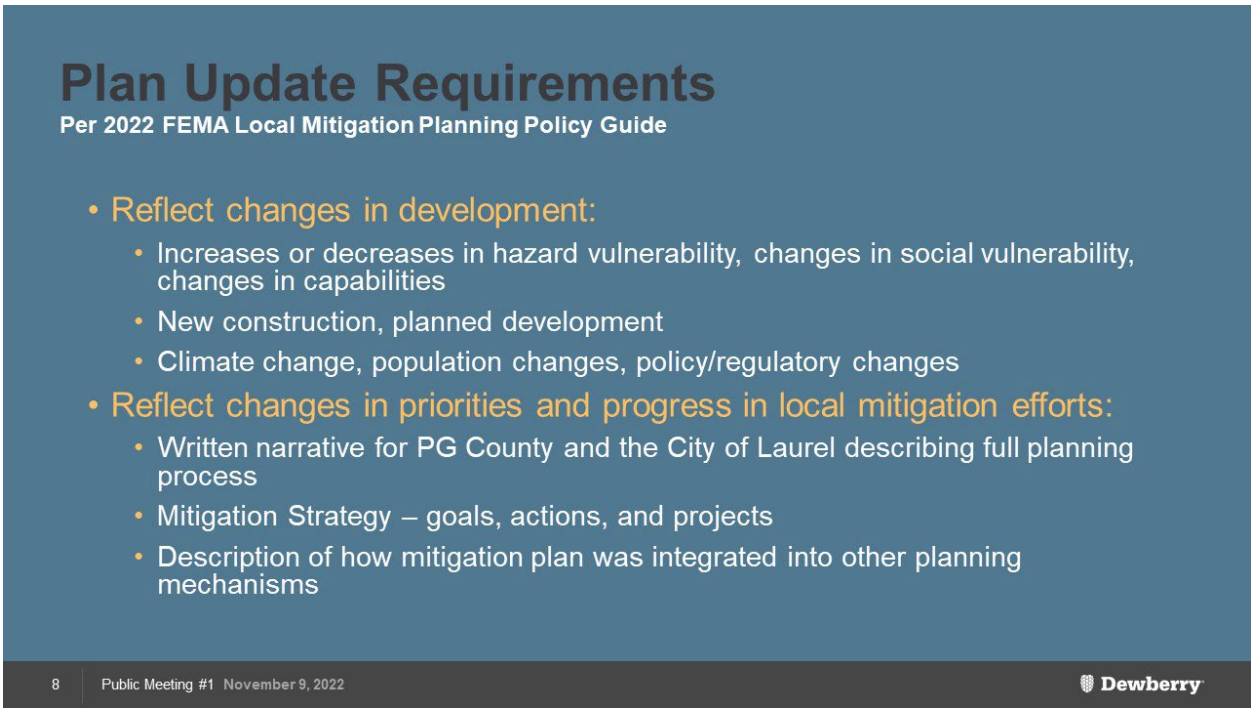
5 | Public Meeting #1 November 9, 2022 | Dewberry

Hazard Mitigation Grants

- Local communities must have a FEMA-approved Hazard Mitigation Plan in place to receive Federal grant funds for hazard mitigation projects, such as:
  - BRIC (Building Resilient Infrastructure and Communities)
  - HMGP (Hazard Mitigation Grant Program)
  - HMGP Post Fire
  - FMA (Flood Mitigation Assistance)
- Other (non-FEMA) funding sources

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Planning Process
Coordinate & Collect Data
Regional Climate Projections
CDC SVI Data
Comprehensive Plan Data
Analyze Capabilities
Future Conditions
Plan Integration
Assess Risks
Climate Projections
Social Vulnerability Analysis
Future Development Analysis
Develop Mitigation Strategy
Mitigation Actions
Plan Integration
Social Vulnerability & Future Development Considerations
Decide Implementation Procedures
Public Involvement
Plan Integration
Priority Actions
Review & Adopt Plan
Public Involvement
Plan Integration
Priority Actions
PROGRESS
Public & Stakeholder Outreach
7
Public Meeting #1 November 9, 2022
Dewberry


Plan Update Requirements
Per 2022 FEMA Local Mitigation Planning Policy Guide
• Reflect changes in development:
• Increases or decreases in hazard vulnerability, changes in social vulnerability, changes in capabilities
• New construction, planned development
• Climate change, population changes, policy/regulatory changes
• Reflect changes in priorities and progress in local mitigation efforts:
• Written narrative for PG County and the City of Laurel describing full planning process
• Mitigation Strategy – goals, actions, and projects
• Description of how mitigation plan was integrated into other planning mechanisms
8
Public Meeting #1 November 9, 2022
Dewberry

Who is involved?

Core Planning Groups

- Mitigation Advisory Committee (MAC)
- Maryland Department of Emergency Management (MDEM)
- FEMA Region III

Critical Stakeholders

- Prince George's County public
- Community groups and organizations
- Critical infrastructure owners

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Planning Process

Updates & Current Status

10 | Public Meeting #1 November 9, 2022 | Dewberry

	Sep	Oct	Nov	Dec	Jan '23	Feb	March
HM Plan Milestone:	Kick-Off	Outreach Begins	Risk Assessment & Strategy Workshops		Draft Plan & MDEM Review	FEMA Review	Adoption
Review 2017 HMP							
Data Collection							
HIRA							
Capability Assessment							
Revise Goals + Objectives							
Mitigation Strategy Development							
Public Engagement							
HMP Writing / Revising							
MDEM Review / Approval							
FEMA Review / Approval							
Plan Adoption, Approval Letters, Plan Distribution							

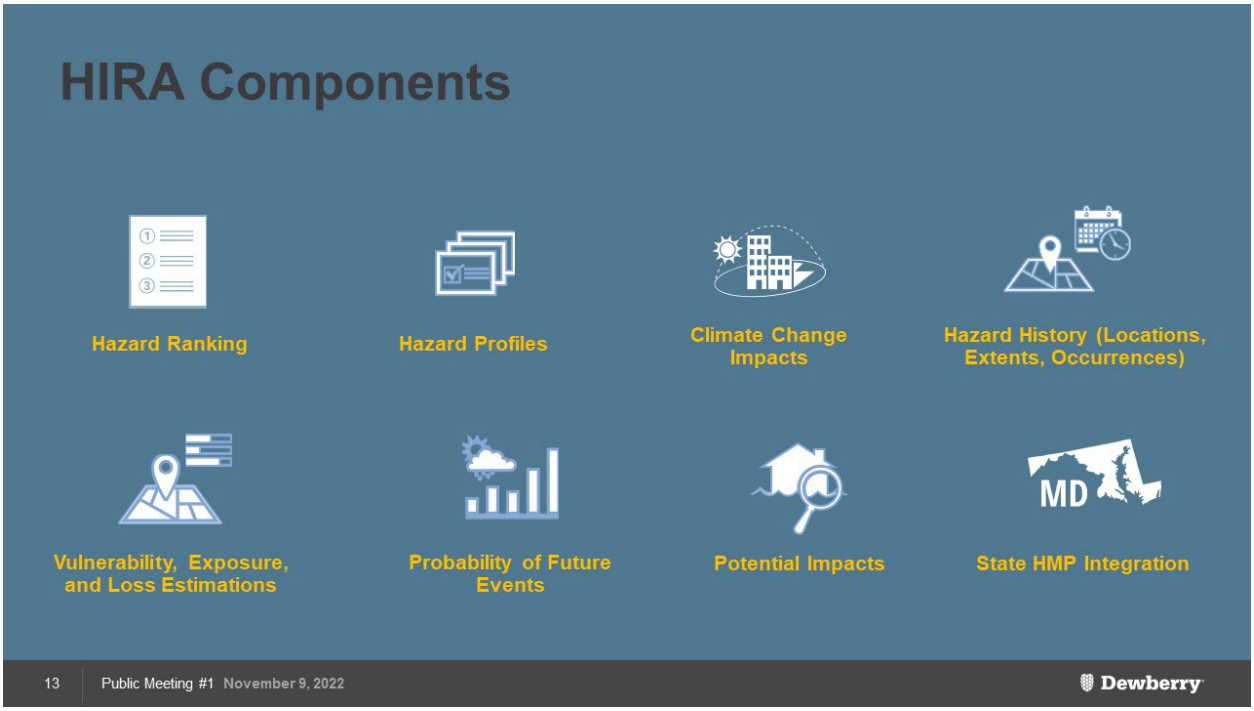
Project Schedule

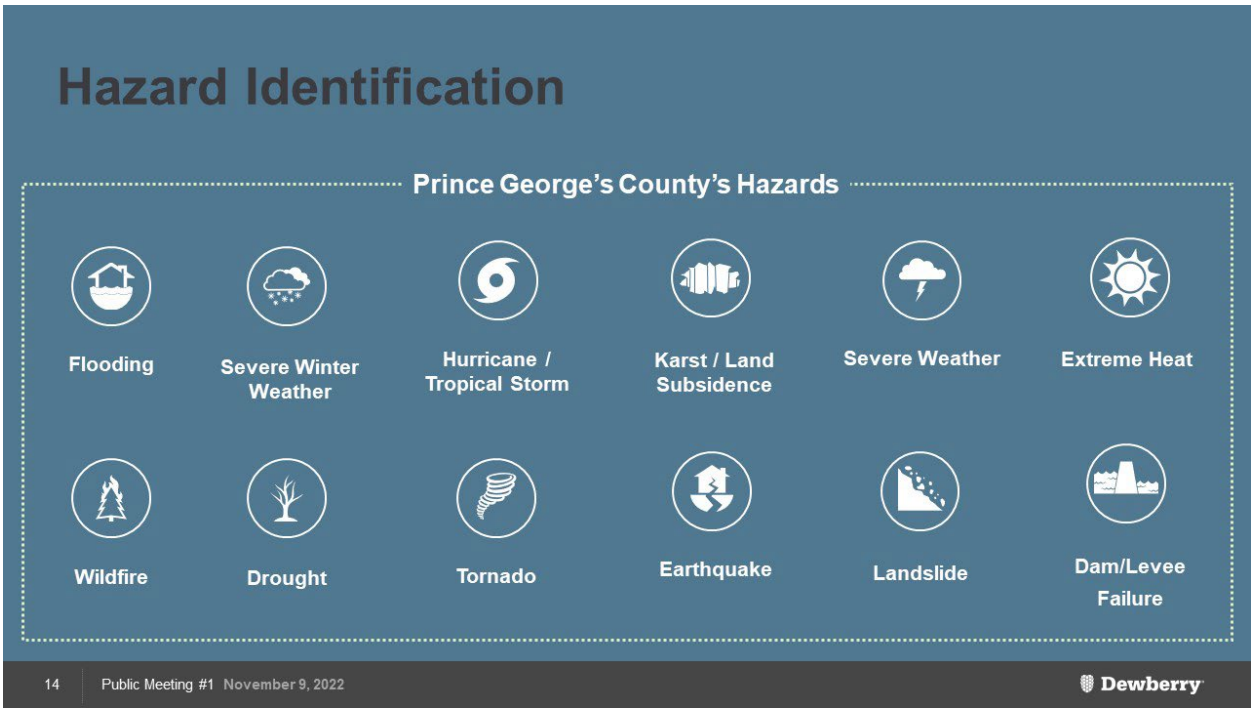
Dewberry

Hazard Identification & Risk Assessment

Results Highlights

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HIRA Components
Hazard Ranking
Hazard Profiles
Climate Change Impacts
Hazard History (Locations, Extents, Occurrences)
Vulnerability, Exposure, and Loss Estimations
Probability of Future Events
Potential Impacts
MD
State HMP Integration
13
Public Meeting #1 November 9, 2022
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Hazard Identification
Prince George's County's Hazards
Flooding
Severe Winter Weather
Hurricane / Tropical Storm
Karst / Land Subsidence
Severe Weather
Extreme Heat
Wildfire
Drought
Tornado
Earthquake
Landslide
Dam/Levee Failure
14
Public Meeting #1 November 9, 2022
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Hazard Type	2017 Ranking	2022 Ranking
Riverine Flooding	High	High
Severe Storm (Flood Related)	High	High
Tornado	High	High
Tropical Storm / Hurricane	Medium-High	Medium-High
Severe Winter Weather	Medium-High	Medium-High
High Winds	Medium-High	Medium-High
Extreme Heat	Medium	Medium-High
Earthquake	Medium	Medium
Dam and Levee Failure	Medium	Medium
Extreme Cold	Medium-Low	Medium-Low
Drought	Medium-Low	Medium-Low
Coastal Flooding	Medium-Low	Medium-Low
Land Movement	Medium-Low	Medium-Low
Wildfire	Low	Low
Sinkholes	Low	Low

Hazard Ranking Priority

Dewberry

Federal Declarations

- 12 major disaster declarations for Prince George's County
  - 6 for flooding/severe storm
  - 5 for winter weather

New Disaster Declarations Since Last Risk Assessment

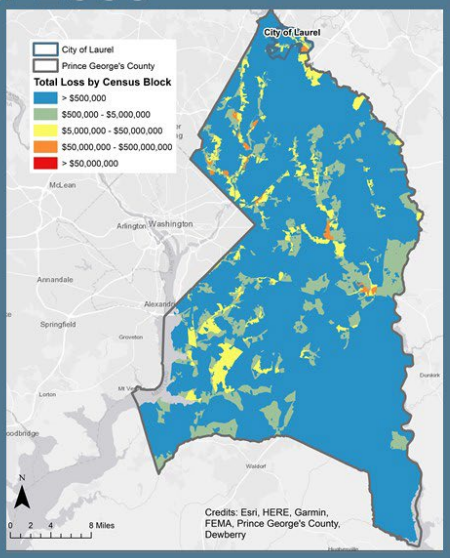
Disaster Number	Incident Type	Incident Date	Program Declared			
			Individual Housing	Individual Assistance	Public Assistance	Hazard Mitigation Assistance
DR-4261	Severe winter storms and snowstorms	1/22/2016			X	X
EM-3430	Covid-19	1/20/2020		X	X	
DR-4491	Covid-19 Pandemic	1/20/2020		X	X	X

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Annualized Total Flood Loss

Hazus-MH v5.1

- Total Flood Loss
  - Combined Riverine and Coastal Flood Module
- 1-percent-annual-chance flood (100-year flood)



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Riverine Flooding Losses

Hazus-MH v5.1

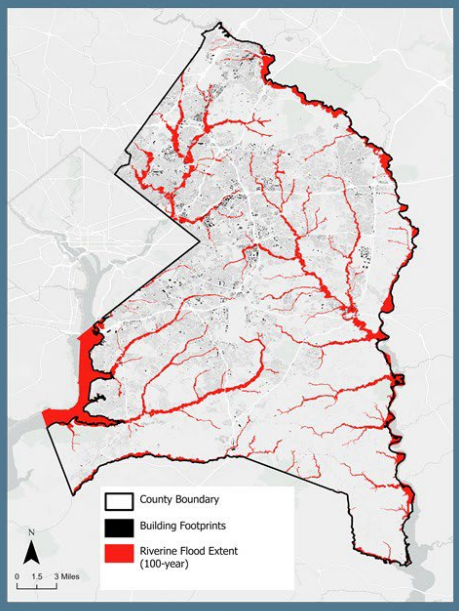
Prince George's County	100-Year Riverine Flood Losses (in whole dollars)				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	$130,144,361,000	$26,242,415,000	$5,564,076,000	$7,454,437,000	$169,405,289,000
Direct Losses					
Building	$834,296,000	$323,906,000	$73,819,000	$72,724,000	$1,304,745,000
Contents	$392,305,000	$408,446,000	$125,548,000	$93,673,000	$1,019,972,000
Inventory	$0	$10,790,000	$19,217,000	$298,000	$30,305,000
Subtotal	$1,226,601,000	$743,142,000	$218,584,000	$166,695,000	$2,355,022,000
Business Interruption					
Income	$2,398,000	$232,281,000	$2,882,000	$28,440,000	$266,001,000
Relocation	$111,416,000	$76,858,000	$2,826,000	$17,990,000	$209,090,000
Rental Income	$57,472,000	$57,232,000	$543,000	$3,069,000	$118,316,000
Wage	$5,694,000	$260,289,000	$4,002,000	$269,408,000	$539,393,000
Subtotal	$176,980,000	$626,660,000	$10,253,000	$318,907,000	$1,132,800,000
TOTAL	**$1,403,581,000**	**$1,369,802,000**	**$228,837,000**	**$485,602,000**	**$3,487,822,000**

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Riverine Flooding Extent and Exposure

Hazus-MH v5.1

- Hazus estimates:
  - 2,358 buildings will be at least moderately damaged
  - 2,183 buildings will be completely destroyed



19 Public Meeting #1 November 9, 2022 Dewberry

Coastal Flooding Losses

Hazus-MH v5.1

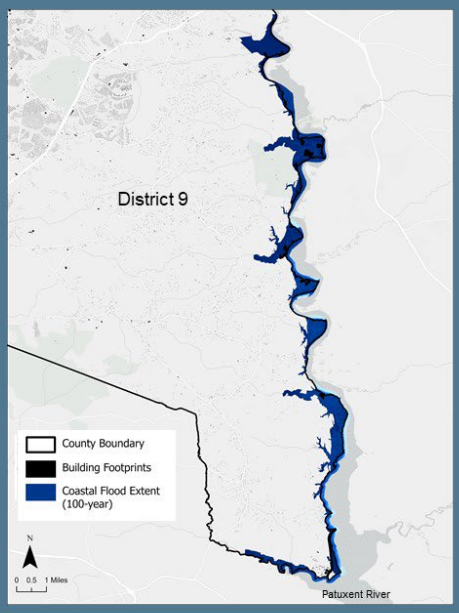
Prince George's County	100-Year Coastal Flood Losses (in whole dollars)				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	$130,144,361,000	$26,242,415,000	$5,564,076,000	$7,454,437,000	$169,405,289,000
Direct Losses					
Building	$840,000	$4,000	$1,000	$2,000	$847,000
Contents	$505,000	$9,000	$1,000	$12,000	$527,000
Inventory	$0	$0	$0	$0	$0
Subtotal	$1,345,000	$13,000	$2,000	$14,000	$1,374,000
Business Interruption					
Income	$20,000	$9,000	$0	$1,000	$30,000
Relocation	$136,000	$0	$0	$0	$136,000
Rental Income	$53,000	$0	$0	$0	$53,000
Wage	$47,000	$2,000	$0	$5,000	$54,000
Subtotal	$256,000	$11,000	$0	$6,000	$273,000
TOTAL	**$1,601,000**	**$24,000**	**$2,000**	**$20,000**	**$1,647,000**

20 Public Meeting #1 November 9, 2022 Dewberry

Coastal Flooding Extent and Exposure

Hazus-MH v5.1

- Southeast portion of the County affected (District 9)
- Along the Patuxent River



21 Public Meeting #1 November 9, 2022 Dewberry

Tornado

Annualized Losses, NCEI (1950-2022)

Fujita Scale	Date	Community Affected	Deaths	Injuries	Total Property Damages
EF	05 Jul 2022	Collington	0	0	$250,000
EF0	29 Sep 2015	Laurel	0	0	$0
EF0	01 Jul 2013	Crestview Manor	0	0	$500
EF0	19 Apr 2013	Westphalia	0	0	$25,000
EF0	01 Jun 2012	Buena Vista	0	0	$2,000

- Total tornadoes (2012-2022): 5
- Annualized events: 0.5
- Total Annual Damages: $38,200

22 Public Meeting #1 November 9, 2022 Dewberry

Annualized Loss/Exposure

Hazus-MH v5.1

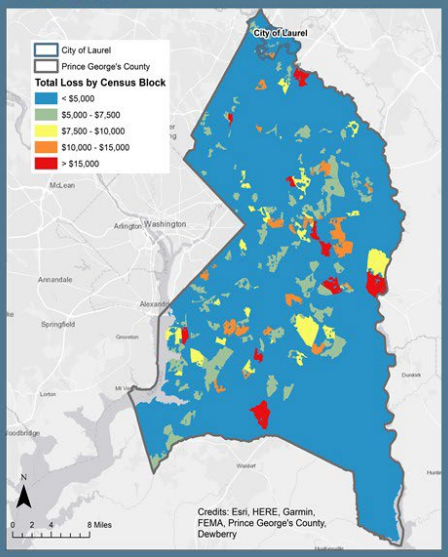
Building Related Economic Loss						
Municipality	Return Period	Building Loss	Content Loss	Inventory Loss	Other Loss	Total Loss
City of Laurel	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,141	$50,404	$0	$142	$55,687
	100-year	$1,432,367	$206,920	$0	$1,231	$1,640,517
	200-year	$6,458,414	$770,401	$0	$83,391	$7,312,206
	500-year	$16,437,818	$1,841,697	$226	$929,092	$19,208,833
	1,000-year	$20,310,087	$2,337,410	$781	$1,302,886	$23,951,165
Joint Base Andrews	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$32,442	$4,621	$0	$40	$37,103
	100-year	$226,181	$18,175	$0	$160	$244,516
	200-year	$746,942	$56,061	$0	$9,623	$812,628
	500-year	$2,350,838	$196,799	$728	$161,273	$2,709,637
	1,000-year	$3,798,750	$385,439	$3,082	$325,410	$4,512,681
Prince George's County	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,462,149	$3,335,161	$0	$1,181	$8,798,491
	100-year	$69,406,206	$13,043,695	$8	$48,202	$82,498,111
	200-year	$216,153,155	$36,505,346	$0	$735,491	$253,393,992
	500-year	$629,343,871	$100,034,917	$71,658	$31,125,278	$760,575,723
	1,000-year	$1,050,214,593	$169,899,270	$453,233	$57,533,511	$1,278,100,608
Total	10-year	$0	$0	$0	$0	$0
	20-year	$0	$0	$0	$0	$0
	50-year	$5,462,149	$3,335,161	$0	$1,181	$8,798,491
	100-year	$69,406,206	$13,043,695	$8	$48,202	$82,498,111
	200-year	$216,153,155	$36,505,346	$0	$735,491	$253,393,992
	500-year	$629,343,871	$100,034,917	$71,658	$31,125,278	$760,575,723
	1,000-year	$1,050,214,593	$169,899,270	$453,233	$57,533,511	$1,278,100,608

23 Public Meeting #1 November 9, 2022 Dewberry

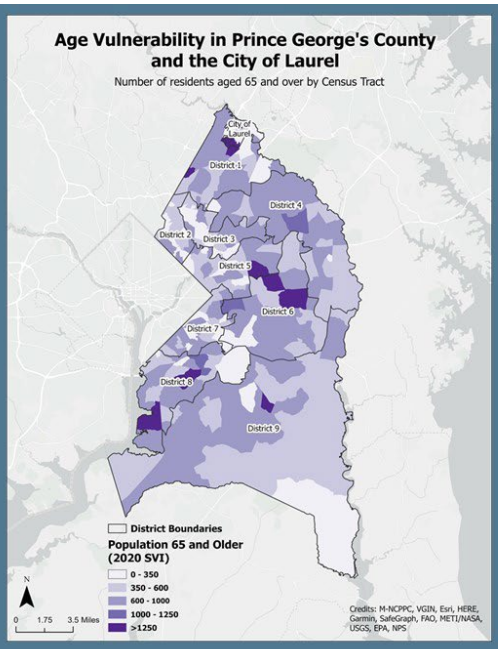
Annualized Hurricane Loss

Hazus-MH v5.1

- Total Annualized Loss for Hurricane Model
- Probabilistic scenario run to produce annualized loss



24 Public Meeting #1 November 9, 2022 Dewberry



Vulnerability: 65+, children, single-parent household, disability

- The most at-risk districts which contain the largest population of senior citizens are Districts 1, 5, 6, and 8

25 Public Meeting #1 November 9, 2022 Dewberry

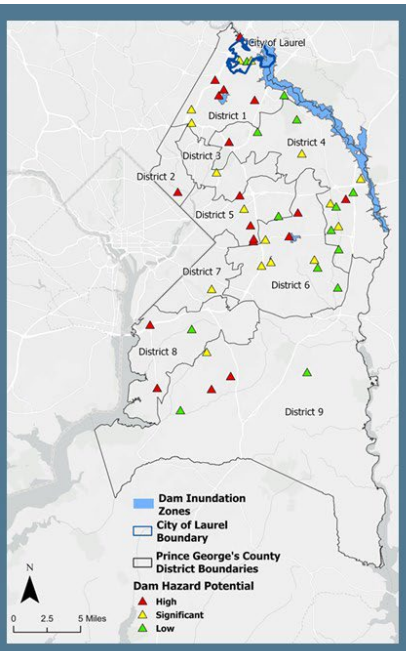
Dam Exposure

- Dam inundation zones mapped for 7 dams

Dam	Hazard Potential	Buildings in Inundation Zone	Property Exposure
Duckett Dam	High	964	$692,272,613
Tinkers Creek Dam	Significant	10	$669,767
Heritage Glen Dam	Significant	17	$6,005,665
Indian Creek 2 & 3	High	182	$151,537,770
Lake Arbor Dam	High	126	$50,393,250
Largo Town Center Dam	Significant	3	$44,463,996
Laurel Lakes No 1 Dam	Significant	103	$327,589,022
Total	**--**	**1405**	**$1,272,932,083**

26 Public Meeting #1 November 9, 2022 Dewberry

Dam Inundation Map



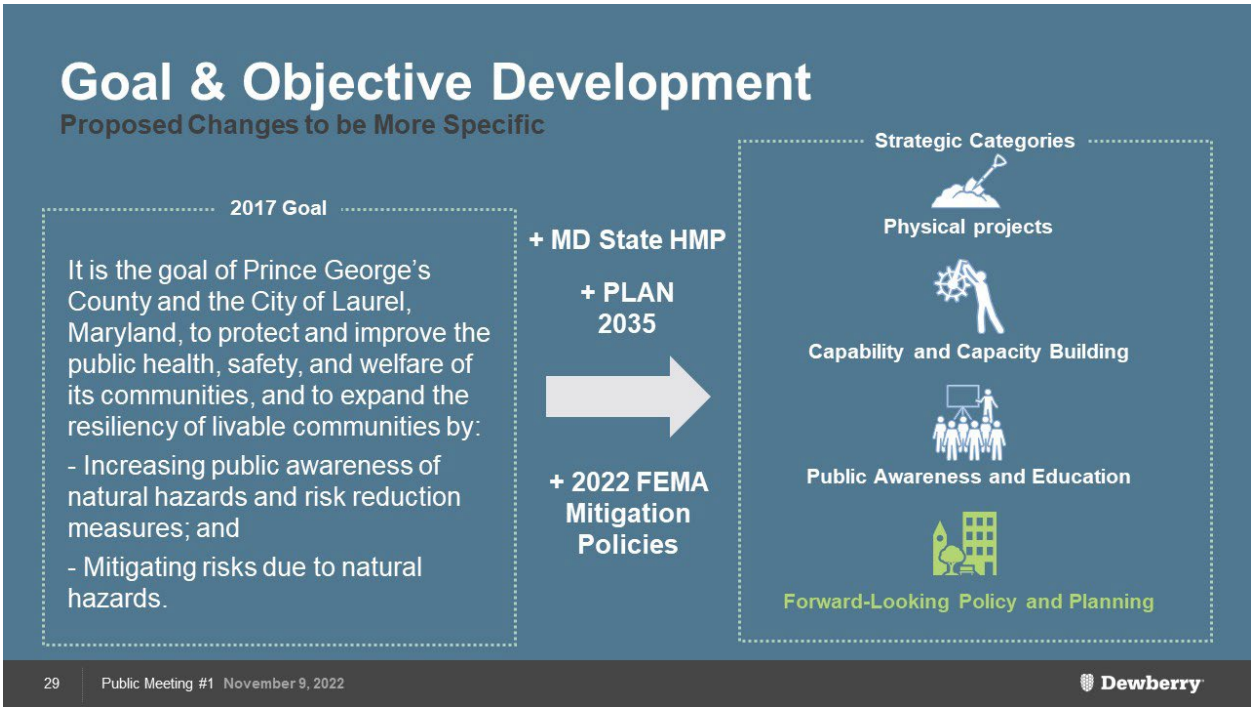
- Inundation zones located in City of Laurel, Districts 1,4,6,9

27 | Public Meeting #1 November 9, 2022 | Dewberry

Mitigation Goals & Objectives

Review & Revise

28 | Public Meeting #1 November 9, 2022 | Dewberry


Goal & Objective Development
Proposed Changes to be More Specific
2017 Goal
It is the goal of Prince George's County and the City of Laurel, Maryland, to protect and improve the public health, safety, and welfare of its communities, and to expand the resiliency of livable communities by:
- Increasing public awareness of natural hazards and risk reduction measures; and
- Mitigating risks due to natural hazards.
+ MD State HMP
+ PLAN 2035
+ 2022 FEMA Mitigation Policies
Strategic Categories
Physical projects
Capability and Capacity Building
Public Awareness and Education
Forward-Looking Policy and Planning
29
Public Meeting #1 November 9, 2022
Dewberry


Potential Mitigation Goal Revisions
Implement projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.
Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.
Increase public awareness of natural hazard risks to people and property and promote current and new opportunities to participate in mitigation planning.
Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans that are aligned with regional and state resilience and equity goals.
30
Public Meeting #1 November 9, 2022
Dewberry

Public Questions & Comments

Are there **mitigation projects or actions** you want to be included?

What **objectives** should be included in the plan?

How can this process/plan be **more useful** to you?



Do you know a **hazard problem area** you'd like addressed?

Is there something specific you want to see in the **risk assessment**?

31 | Public Meeting #1 November 9, 2022 | Dewberry

Next Steps

Opportunities for Public Involvement

32 | Public Meeting #1 November 9, 2022 | Dewberry

How You Can Stay Involved:

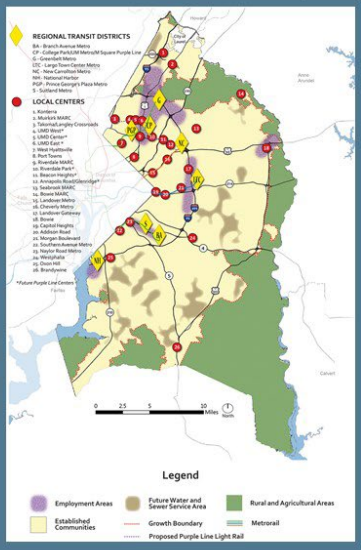
1. Take the Hazard Mitigation Survey: https://www.surveymonkey.com/r/Prince-Georges-HM-Survey-Social
2. Tell us about hazard problem areas you know about: https://bit.ly/HazardProblemAreas
3. Check our webpage for future public meetings: https://bit.ly/PGCountyHMP

33 | Public Meeting #1 November 9, 2022 | Dewberry

Comprehensive Planning Integration

- Comprehensive planning data was incorporated
  - Environmental Features
  - Existing and Planned Transportation Investments
  - Existing Development Patterns
  - Projected Growth
- Overlaid with hazard areas to help identify areas of future risk due to increased exposure from future development

PG Plan 2035: Growth Policy Map



34 | Public Meeting #1 November 9, 2022 | Dewberry

A.2. Agenda

Dewberry

Prince Georges Proud

Public Meeting Agenda

Title:	Prince George's County Hazard Mitigation Plan Update – **Public Meeting #1**	Location:	Microsoft Teams (Virtual) Register Here: https://bit.ly/PublicHMP
Date:	Wednesday, November 9th, 2022	Time:	6:00 – 7:00 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the planning process, share current progress, provide preliminary results from the risk assessment, discuss potential changes to planning goals, hold an open forum for public questions and input, and share opportunities for further involvement.		

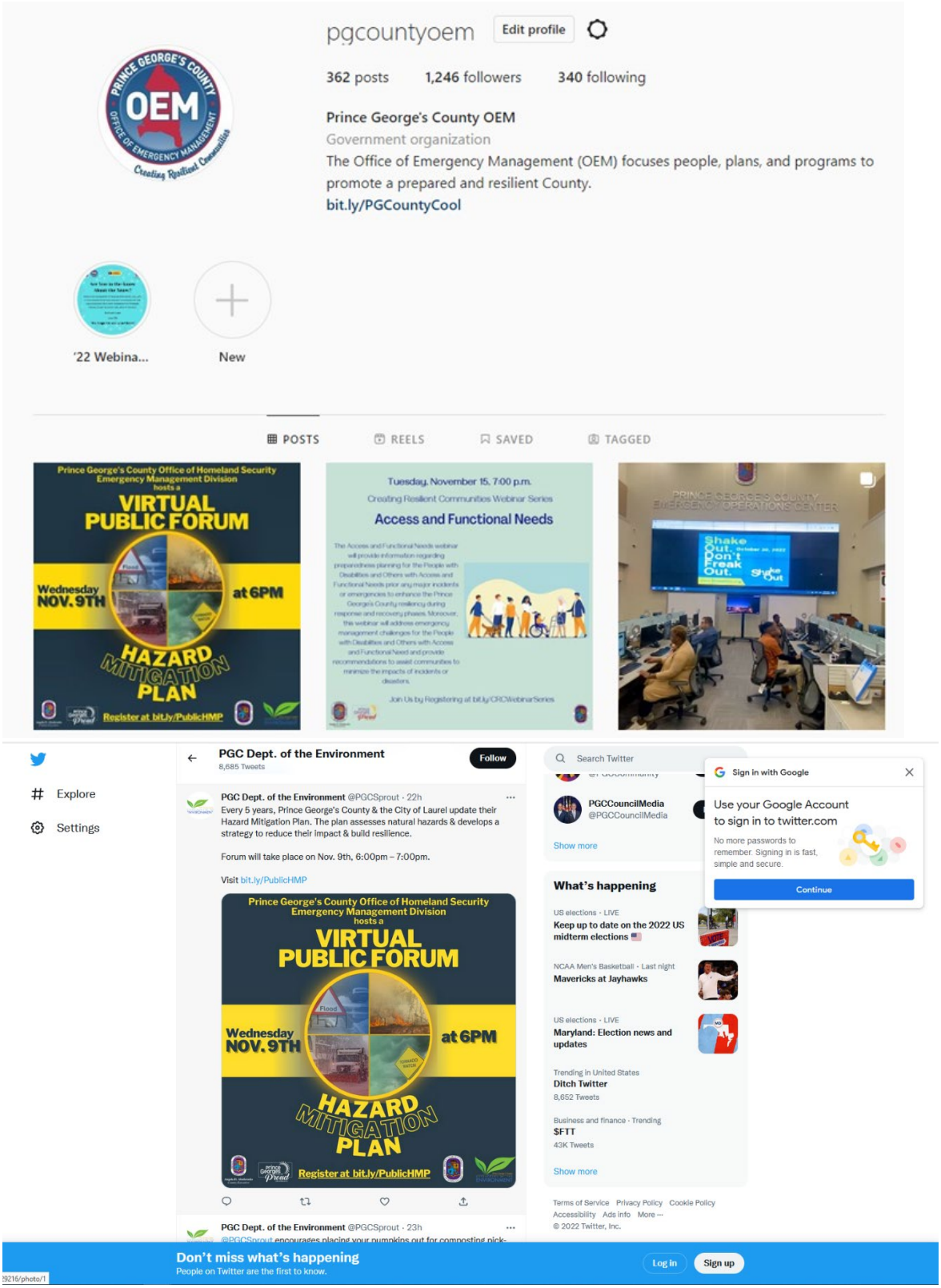
Agenda Items

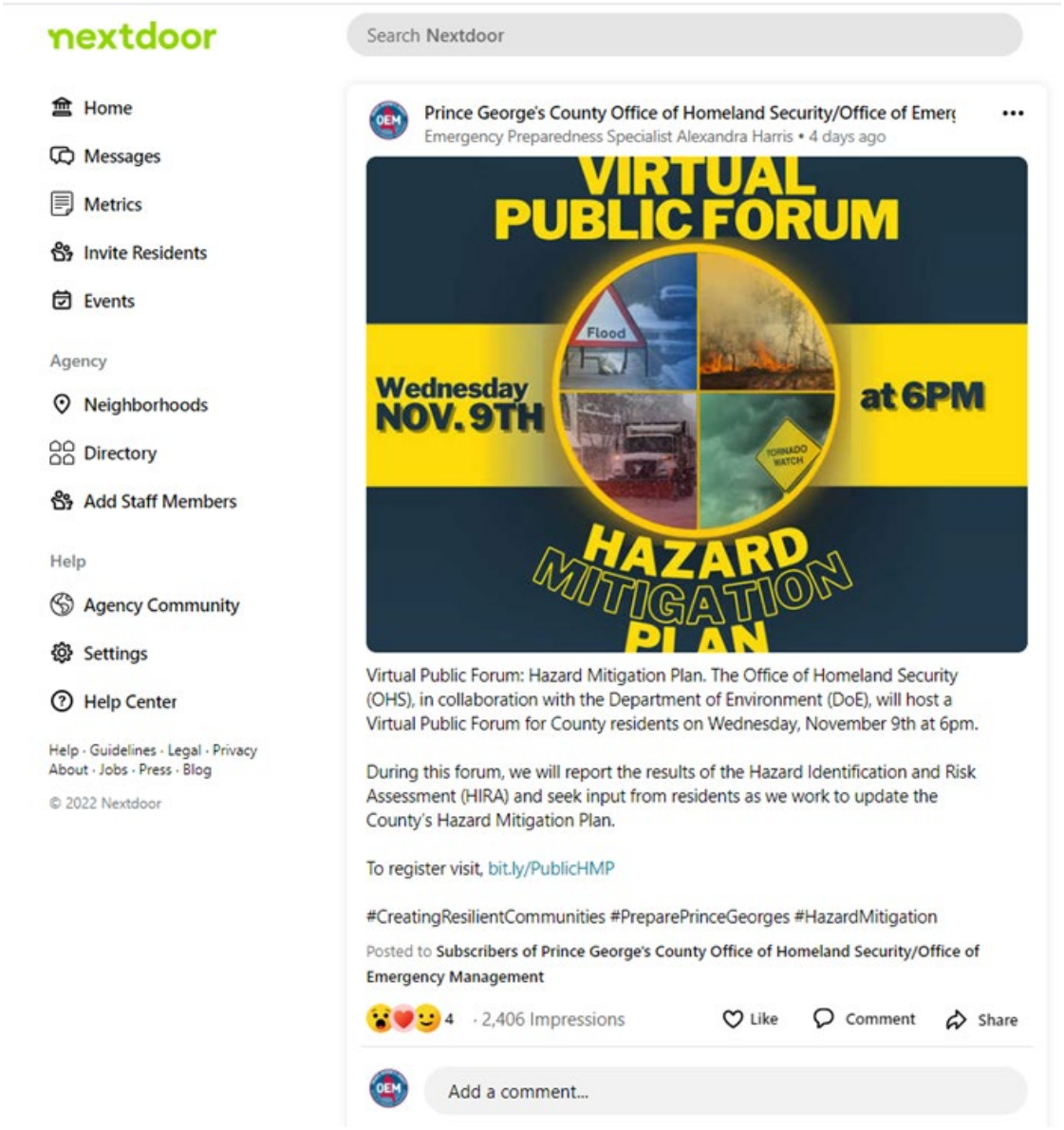
Topic	Presenter	Time
Welcome and Opening Remarks	Joey L. Henderson, Prince George's County Office of Homeland Security, Emergency Management Division	6:00 – 6:05 pm
Local Hazard Mitigation Plan Overview and Update: - What is hazard mitigation? - What is the plan's purpose? - FEMA hazard mitigation grants	Scott Choquette, Dewberry	6:05 – 6:10 pm
Project status update - Milestones - New plan components - Public outreach opportunities	Jade Payne, Dewberry	6:10 – 6:15 pm
Hazard identification and risk assessment - Overview - Preliminary results	Scott Choquette, Dewberry	6:15 – 6:30 pm
Mitigation goal development discussion	Jade Payne, Dewberry	6:30 – 6:35 pm
Open Discussion - Questions, comments, and input from members of the public	Scott Choquette, Dewberry	6:35 – 6:55 pm
Next Steps: - Next Meeting - How to get involved	Jade Payne, Dewberry	6:55 – 7:00 pm

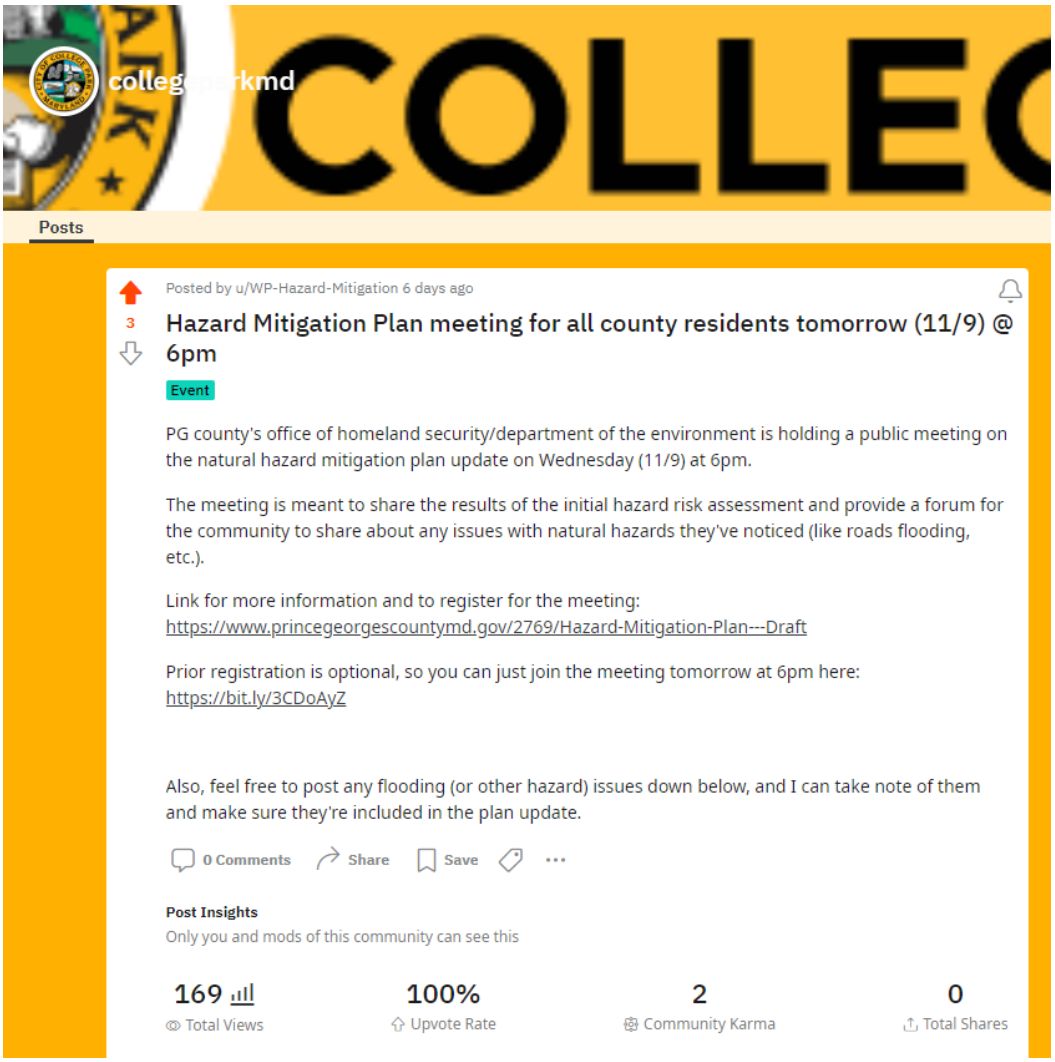
Prince George's County Hazard Mitigation Plan – 2023 Update 1

A.3. Advertisements

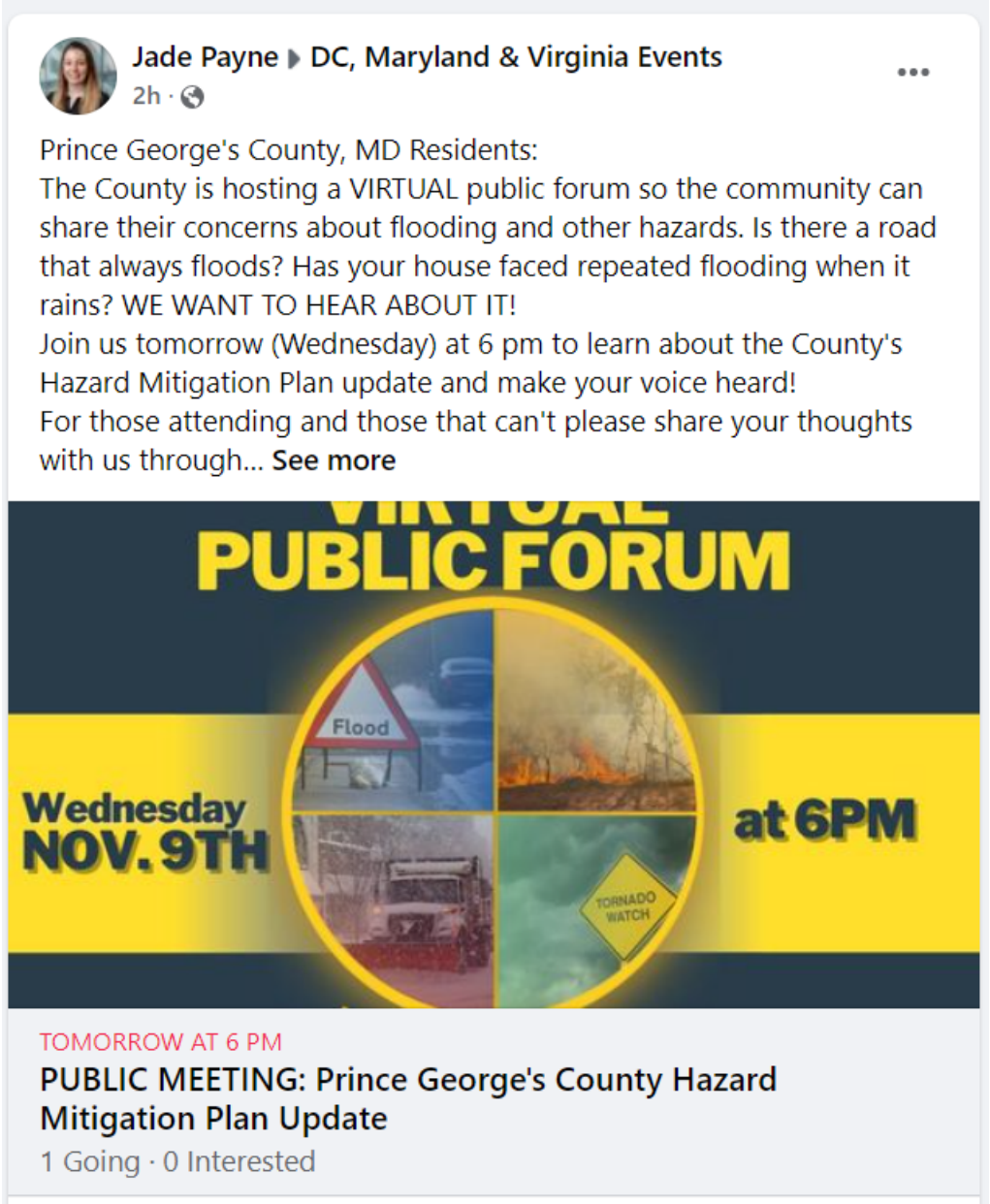


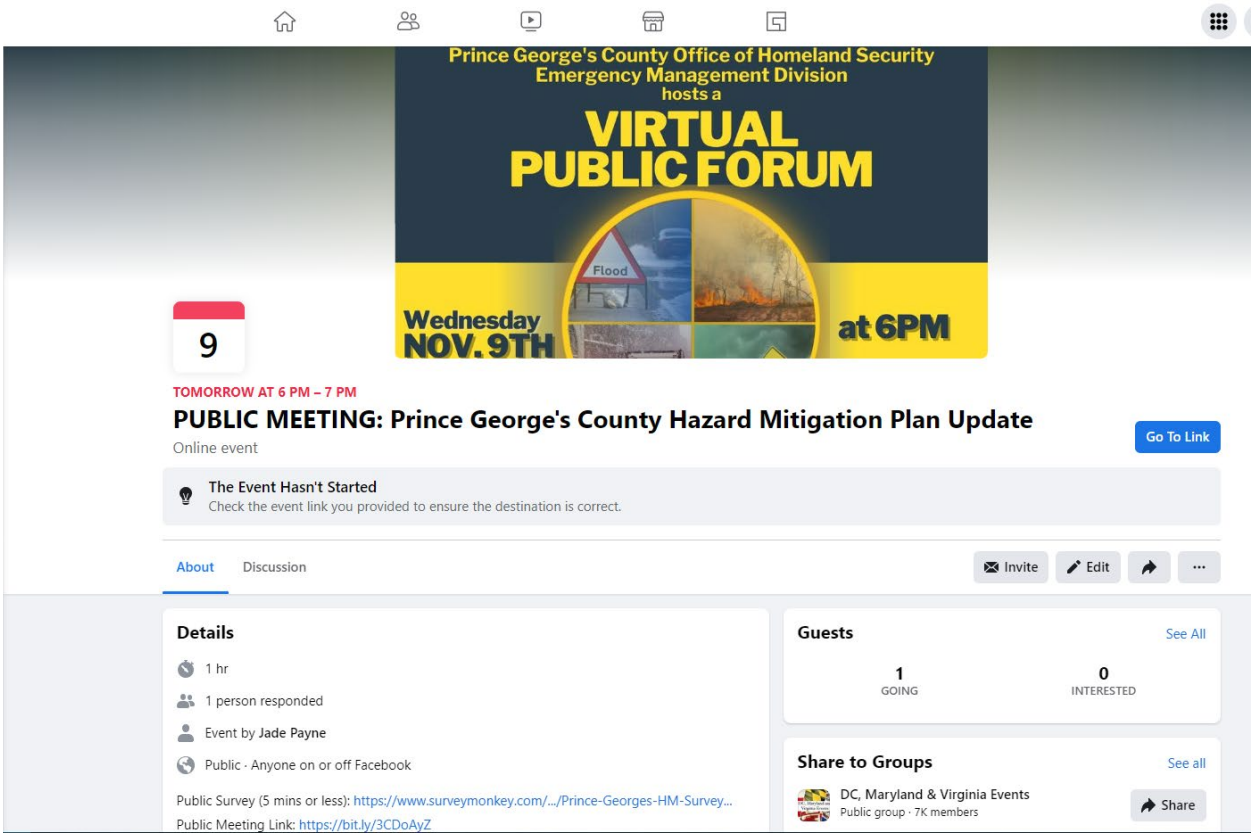

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362 posts
1,246 followers
340 following
Prince George's County OEM
Government organization
The Office of Emergency Management (OEM) focuses people, plans, and programs to promote a prepared and resilient County.
bit.ly/PGCountyCool
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New
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REELS
SAVED
TAGGED
Prince George's County Office of Homeland Security Emergency Management Division hosts a
VIRTUAL PUBLIC FORUM
Wednesday NOV. 9TH
at 6PM
HAZARD MITIGATION PLAN
Register at bit.ly/PublicHMP
Tuesday, November 15, 7:00 p.m.
Creating Resilient Communities Webinar Series
Access and Functional Needs
Join Us by Registering at bit.ly/CRCWebinarSeries
PRINCE GEORGE'S COUNTY EMERGENCY OPERATIONS CENTER
Shake Out. Don't Freak Out.
Explore
Settings
PGC Dept. of the Environment
8,685 Tweets
Follow
PGC Dept. of the Environment @PGCSprout · 22h
Every 5 years, Prince George's County & the City of Laurel update their Hazard Mitigation Plan. The plan assesses natural hazards & develops a strategy to reduce their impact & build resilience.
Forum will take place on Nov. 9th, 6:00pm – 7:00pm.
Visit bit.ly/PublicHMP
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Use your Google Account to sign in to twitter.com
No more passwords to remember. Signing in is fast, simple and secure.
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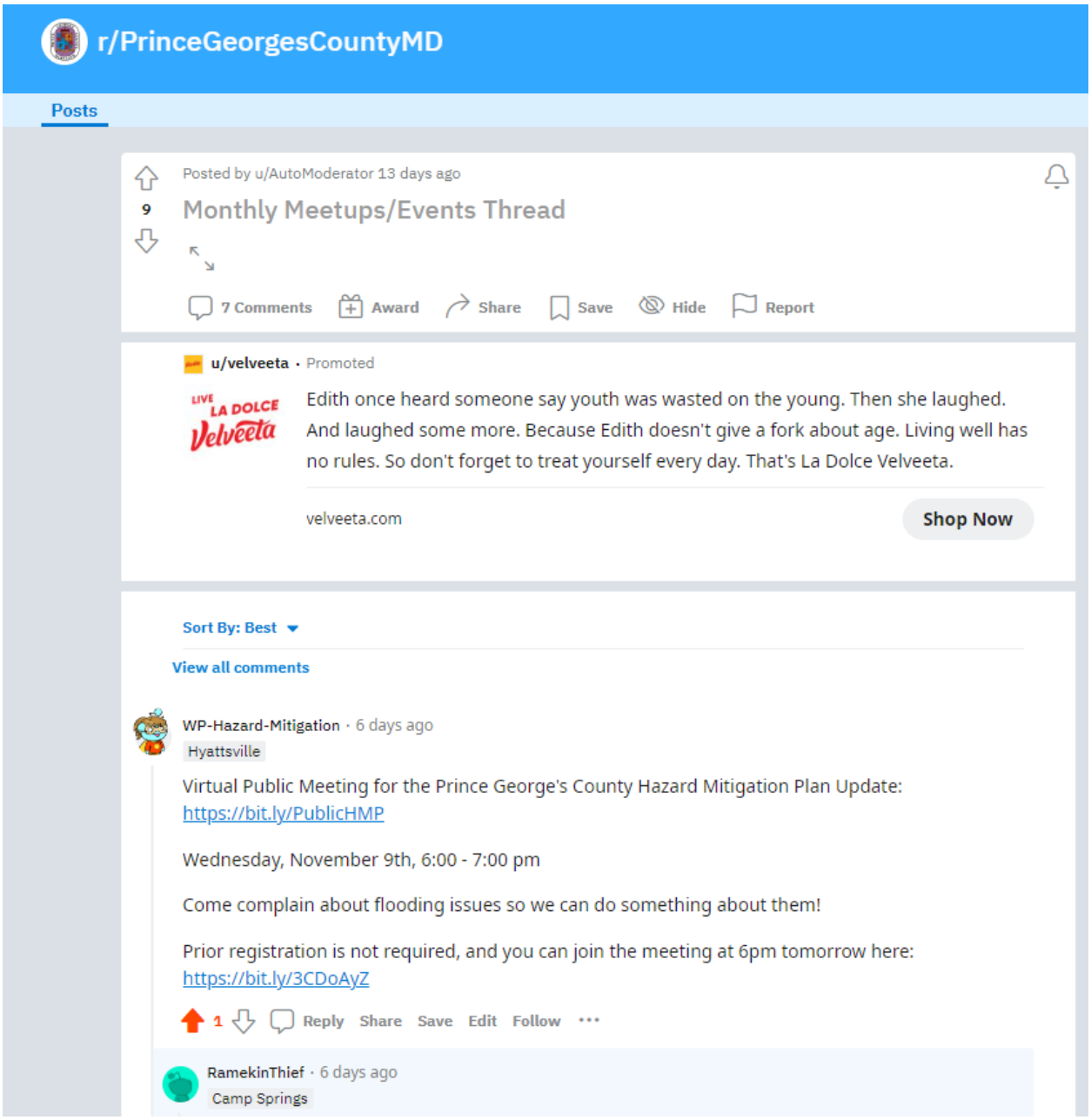

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Agency
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Directory
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Help
Agency Community
Settings
Help Center
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About · Jobs · Press · Blog
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Prince George's County Office of Homeland Security/Office of Emerg
Emergency Preparedness Specialist Alexandra Harris • 4 days ago
VIRTUAL PUBLIC FORUM
Flood
Wednesday NOV. 9TH
at 6PM
TORNADO WATCH
HAZARD MITIGATION PLAN
Virtual Public Forum: Hazard Mitigation Plan. The Office of Homeland Security (OHS), in collaboration with the Department of Environment (DoE), will host a Virtual Public Forum for County residents on Wednesday, November 9th at 6pm.
During this forum, we will report the results of the Hazard Identification and Risk Assessment (HIRA) and seek input from residents as we work to update the County's Hazard Mitigation Plan.
To register visit, bit.ly/PublicHMP
#CreatingResilientCommunities #PreparePrinceGeorges #HazardMitigation
Posted to Subscribers of Prince George's County Office of Homeland Security/Office of Emergency Management
4 · 2,406 Impressions
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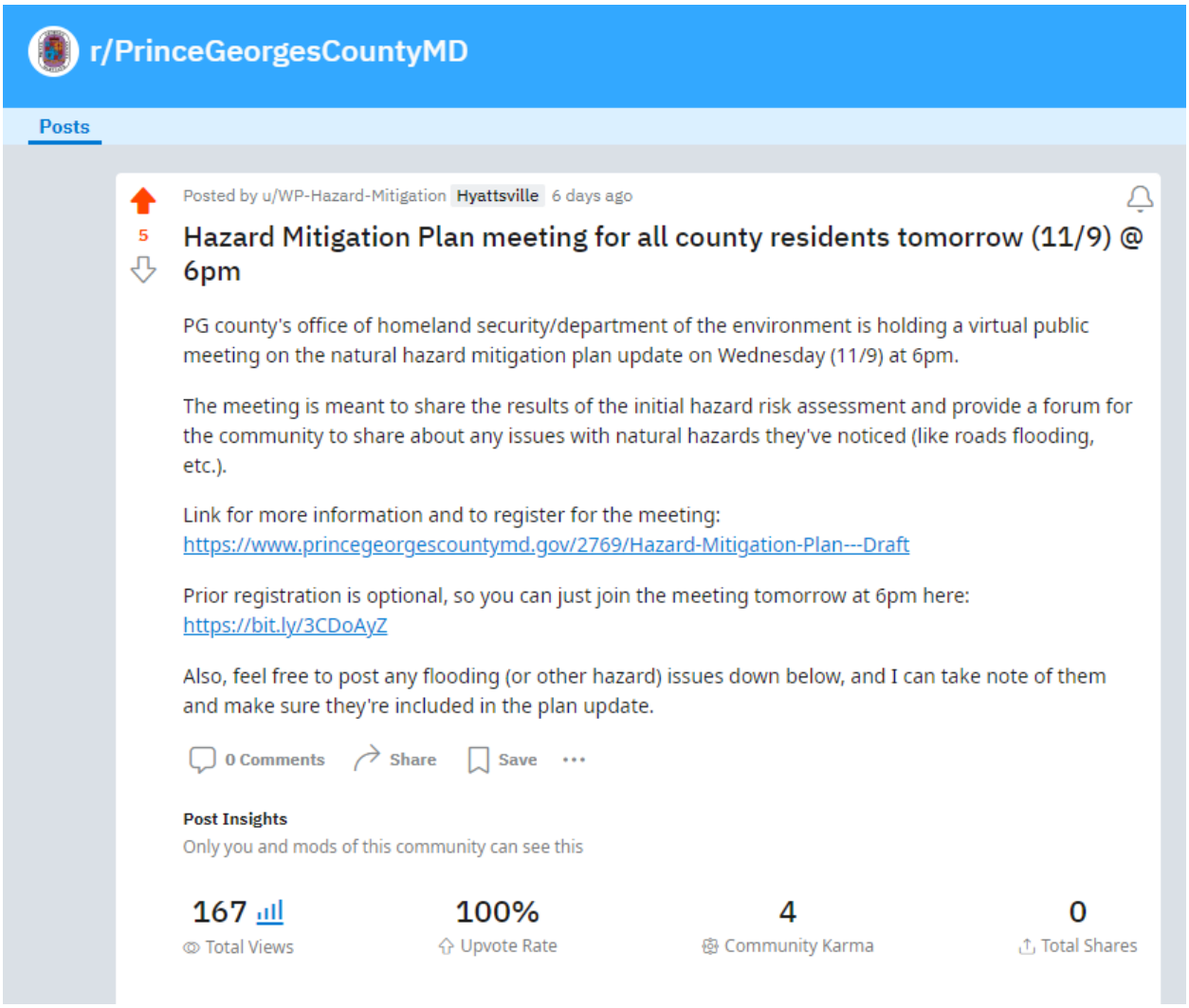

collegeparkmd
COLLEG
Posts
Posted by u/WP-Hazard-Mitigation 6 days ago
3
Hazard Mitigation Plan meeting for all county residents tomorrow (11/9) @ 6pm
Event
PG county's office of homeland security/department of the environment is holding a public meeting on the natural hazard mitigation plan update on Wednesday (11/9) at 6pm.
The meeting is meant to share the results of the initial hazard risk assessment and provide a forum for the community to share about any issues with natural hazards they've noticed (like roads flooding, etc.).
Link for more information and to register for the meeting:
https://www.princegeorgescountymd.gov/2769/Hazard-Mitigation-Plan---Draft
Prior registration is optional, so you can just join the meeting tomorrow at 6pm here:
https://bit.ly/3CDoAyZ
Also, feel free to post any flooding (or other hazard) issues down below, and I can take note of them and make sure they're included in the plan update.
0 Comments
Share
Save
Post Insights
Only you and mods of this community can see this
169
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Community Karma
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Total Shares


Jade Payne ▸ County Connect Prince George's
Just now ·
Hey everyone, PG County is holding a virtual public meeting tomorrow @ 6 pm on natural hazards. If you know of any local problem areas (like streets/neighborhoods that flood) feel free to attend and share them!
You can register to attend here: https://bit.ly/PublicHMP
PUBLIC FORUM
Flood
Wednesday
NOV. 9TH
at 6PM
TORNADO WATCH
TOMORROW AT 6 PM
PUBLIC MEETING: Prince George's County Hazard Mitigation Plan Update
1 Going · 0 Interested


Jade Payne ▸ DC, Maryland & Virginia Events
2h ·
Prince George's County, MD Residents:
The County is hosting a VIRTUAL public forum so the community can share their concerns about flooding and other hazards. Is there a road that always floods? Has your house faced repeated flooding when it rains? WE WANT TO HEAR ABOUT IT!
Join us tomorrow (Wednesday) at 6 pm to learn about the County's Hazard Mitigation Plan update and make your voice heard!
For those attending and those that can't please share your thoughts with us through... See more
PUBLIC FORUM
Flood
TORNADO WATCH
Wednesday
NOV. 9TH
at 6PM
TOMORROW AT 6 PM
PUBLIC MEETING: Prince George's County Hazard Mitigation Plan Update
1 Going · 0 Interested


Prince George's County Office of Homeland Security
Emergency Management Division
hosts a
VIRTUAL
PUBLIC FORUM
Flood
Wednesday
NOV. 9TH
at 6PM
9
TOMORROW AT 6 PM – 7 PM
PUBLIC MEETING: Prince George's County Hazard Mitigation Plan Update
Online event
Go To Link
The Event Hasn't Started
Check the event link you provided to ensure the destination is correct.
About
Discussion
Invite
Edit
Details
1 hr
1 person responded
Event by Jade Payne
Public · Anyone on or off Facebook
Public Survey (5 mins or less): https://www.surveymonkey.com/.../Prince-Georges-HM-Survey...
Public Meeting Link: https://bit.ly/3CDoAyZ
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Share


r/PrinceGeorgesCountyMD
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WP-Hazard-Mitigation · 6 days ago
Hyattsville
Virtual Public Meeting for the Prince George's County Hazard Mitigation Plan Update:
https://bit.ly/PublicHMP
Wednesday, November 9th, 6:00 - 7:00 pm
Come complain about flooding issues so we can do something about them!
Prior registration is not required, and you can join the meeting at 6pm tomorrow here:
https://bit.ly/3CDoAyZ
1
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RamekinThief · 6 days ago
Camp Springs



r/PrinceGeorgesCountyMD

Posts

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Posted by u/WP-Hazard-Mitigation Hyattsville 6 days ago

Hazard Mitigation Plan meeting for all county residents tomorrow (11/9) @ 6pm

PG county's office of homeland security/department of the environment is holding a virtual public meeting on the natural hazard mitigation plan update on Wednesday (11/9) at 6pm.

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Hazard Mitigation Plan meeting for all county residents tomorrow (11/9) @ 6pm

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Post Insights

Only you and mods of this community can see this

88	100%	2	0
Total Views	Upvote Rate	Community Karma	Total Shares


PG County Office of Emergency Management
@PGCountyOEM
On Wed, Nov 9th at 6pm, @PGCountyOEM and @PGCSprout will be hosting a Virtual Public Forum for County residents! During the forum we will report the results of the Hazard Identification and Risk Assessment (HIRA) and seek input from residents.
To Register: bit.ly/PublicHMP
Prince George's County Office of Homeland Security
Emergency Management Division
hosts a
VIRTUAL
PUBLIC FORUM
Flood
Wednesday
NOV. 9TH
at 6PM
TORNADO WATCH
HAZARD
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PRINCE GEORGE'S COUNTY
OFFICE OF HOMELAND SECURITY

PRESS RELEASE

For Immediate Release:
November 3, 2022

For More Information:
Alexandra D. Harris
Emergency Management Specialist
Prince George's County Office of Homeland Security
301.324.4435
ADHarris@co.pg.md.us

PRINCE GEORGE'S COUNTY SEEKING PUBLIC INPUT IN UPDATE TO HAZARD MITIGATION PLAN

County to Host Virtual Public Forum to Hear Resident Input

HYATTSVILLE, MD – The Prince George's County Office of Homeland Security (OHS), in collaboration with the Department of Environment (DoE), has begun the process of updating the County's Hazard Mitigation Plan (HMP). The OHS will host a virtual public forum on Wednesday, November 9, 2022, at 6:00 PM to report the results of the Hazard Identification and Risk Assessment (HIRA) to County residents.

"Knowing and understanding the threats, risks, and hazards that effect Prince George's County allows for us to better plan for, respond to, and recover from emergencies and natural disasters," said Office of Homeland Security Director Ronald E. Gill, Jr. "The County's Hazard Mitigation Plan is a key piece in our efforts to safely and effectively assist our residents during any emergency, and it is important for us to engage with the community throughout this process to ensure that our residents are informed."

The Local Hazard Mitigation Policy 2022 guides the County's actions to reduce the risk from disasters over the next five years and beyond; and is meant to utilize new and existing plans, regulations, and environmental projects. The plan allows the County to be better prepared, resilient, and sustainable by identifying projects that will reduce the impacts of natural hazards. If the impacts from hazards can be prevented or reduced, lives can be saved, and recovery costs reduced.

The HMP also allows the County to apply for the Hazard Mitigation Grant Awards and receive funds from the Federal Emergency Management Agency (FEMA) to reduce the community's vulnerability to disasters. The funding is essential in helping the County become resilient and develop sustainability.

County residents are also encouraged to complete a survey on hazard mitigation project needs and plan priorities regarding the County's natural hazards. The survey takes no more than 10 minutes and can be completed here.

Residents can join the public forum here. For more information on Prince George's County Hazard Mitigation Plan update, visit the OHS website at oem.mypgc.us.

###

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A.4. Notes

Dewberry

Public Meeting #1 Notes

Title:	Prince George's County Hazard Mitigation Plan - **Public Meeting #1**	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, November 9th, 2022	Time:	6:00 – 7:00 pm ET
Purpose:	The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the planning process, share current progress, provide preliminary results from the risk assessment, discuss potential changes to planning goals, hold an open forum for public questions and input, and share opportunities for further involvement.		

Attendees:

Scott Choquette, Dewberry
Mikaela Strech, Dewberry
Ehsan Bahador, OHS/OEM
Joey Henderson, OHS/OEM
Mark Weissman, OHS/OEM
Mark Grisar, Mt. Rainier CERT
Anthony (Tony) Grimes, OHS
Shelly Gooding, OHS/OEM
Darrell Small, OHS/OEM
David Lewis, OHS/OEM
Ryan Chelton, Development Services, Town of Riverdale Park
Stephanie Robinson, City of Bowie OEM
Melvin Mason, Upper Marlboro CERT
Jaden N. Burnett, Landover OHS/OEM
Noelle Burnett, Landover OHS/OEM
Teresa Garcia, County Resident
Alice Oshogbele, Sanitation Commissioner, Town of Eagle Harbor
Joyce Prince, Public Safety Commissioner, Town of Eagle Harbor
Mirna Lopez- Laurel resident and homeowner
Alice E Teffian, Vice President, Eagle Harbor Citizens Association
Eric L. Coates, REM Director of Health & Safety/Sr. Project Manager at McKissack
Alonzo Joy, Upper Marlboro CERT

Meeting Summary

Scott Choquette (Project Manager, Dewberry) held a public meeting as a representative of the Prince George's County Office of Homeland Security/Office of Emergency Management on September 9, 2022. A PowerPoint presentation was used to provide an overview of the mitigation plan update process, review the project status, and highlight key risk assessment results. Discussions were held to solicit public feedback on draft mitigation goals and potential mitigation projects. Opportunities to continue involvement in the planning process were provided at the end. Discussion and presentation topics are grouped below with input and questions from the attendees.

Meeting Notes

Welcome and Opening Remarks

Prince George's County Hazard Mitigation Plan – 2023 Update 1

Dewberry

Prince Georges Proud

Public Meeting #1 Notes

Title:	Prince George's County Hazard Mitigation Plan - **Public Meeting #1**	Location:	Microsoft Teams (Virtual)
Date:	Wednesday, November 9th, 2022	Time:	6:00 – 7:00 pm ET

Purpose: The 2023 update of the Prince George's County, MD Hazard Mitigation Plan is underway. Dewberry will provide an overview of the planning process, share current progress, provide preliminary results from the risk assessment, discuss potential changes to planning goals, hold an open forum for public questions and input, and share opportunities for further involvement.

Attendees:

Scott Choquette, Dewberry
Mikaela Strech, Dewberry
Ehsan Bahador, OHS/OEM
Joey Henderson, OHS/OEM
Mark Weissman, OHS/OEM
Mark Grisar, Mt. Rainier CERT
Anthony (Tony) Grimes, OHS
Shelly Gooding, OHS/OEM
Darrell Small, OHS/OEM
David Lewis, OHS/OEM
Ryan Chelton, Development Services, Town of Riverdale Park
Stephanie Robinson, City of Bowie OEM
Melvin Mason, Upper Marlboro CERT
Jaden N. Burnett, Landover OHS/OEM
Noelle Burnett, Landover OHS/OEM
Teresa Garcia, County Resident
Alice Oshogbele, Sanitation Commissioner, Town of Eagle Harbor
Joyce Prince, Public Safety Commissioner, Town of Eagle Harbor
Mirna Lopez- Laurel resident and homeowner
Alice E Teffian, Vice President, Eagle Harbor Citizens Association
Eric L. Coates, REM Director of Health & Safety/Sr. Project Manager at McKissack
Alonzo Joy, Upper Marlboro CERT

Meeting Summary

Scott Choquette (Project Manager, Dewberry) held a public meeting as a representative of the Prince George's County Office of Homeland Security/Office of Emergency Management on September 9, 2022. A PowerPoint presentation was used to provide an overview of the mitigation plan update process, review the project status, and highlight key risk assessment results. Discussions were held to solicit public feedback on draft mitigation goals and potential mitigation projects. Opportunities to continue involvement in the planning process were provided at the end. Discussion and presentation topics are grouped below with input and questions from the attendees.

Meeting Notes

Welcome and Opening Remarks

Dewberry

Prince Georges Proud

No Comments

Project Status

- Not about the plan getting funding, but about creating meaningful projects
- Keeping to schedule because we want to make sure to maximize opportunities to receive grant funding, which has strict timelines

Risk Assessment Results

- Mark Grisar: Extreme heat might be in the high category - anecdotally
- Scott: When you identify a vulnerability, you have to come up with strategies to address, so the higher the more strategies, but the difference between medium-high and high is more about the appetite of the county to address; federally, a lot of urgency to address it

Draft Mitigation Goals Discussion

No Comments

Potential Project Brainstorm

- Mark Grisar: conversation going on about when there's a great disaster, how do things get rebuilt - the way they were? The same place? Does that play into the planning? For example, coastal flooding.
  - Scott response: There's recovery of how to get things running. Then there's long-term recovery about rebuilding - most of the US we aren't good at this. We are starting to think about it. In terms of this plan, this is a conversation we should have
- Joey: a case-by-case basis, we've not had those issues in terms of flooding. In the past we've had ground movement - it wasn't feasible for the property owner to rebuild in the same areas
- Melvin Mason: has there been thought about boosting the involvement of organizations - like Community Emergency Response Team or [blank] - to provide more training?
- (Chat) Teresa Garcia: In 2018 the Little Patuxent River rose and the flood washed away parts of 198. I'm glad that these types of issues can be addressed so that they don't occur in the future

Next Steps

No Comments

Questions & Comments (Open Forum)

No Comments

Prince George's County Hazard Mitigation Plan – 2023 Update 2

A.5. Attendance

1. Summary

Meeting title	Prince George's County Hazard Mitigation Plan - Public Meeting #1
Attended participants	23
Start time	11/9/22, 5:45:40 PM
End time	11/9/22, 7:00:50 PM
Meeting duration	1h 15m 10s
Average attendance time	48m 32s

2. Participants

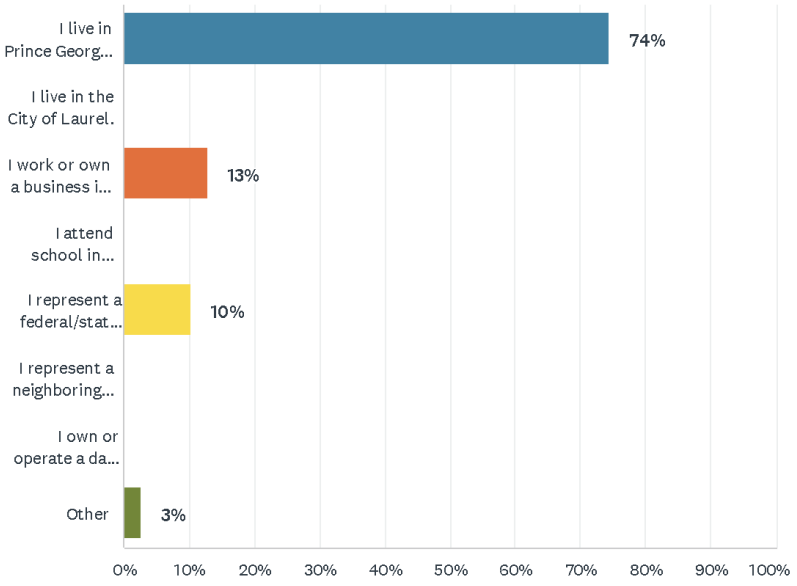
Name	First join	In-meeting duration	Email
Choquette, Scott	11/9/22, 5:55:24 PM	1h 5m 25s	[redacted]
Henderson, Joey L.	11/9/22, 5:55:26 PM	1h 3m 14s	
Bahador, Ehsan	11/9/22, 5:55:26 PM	1h 4m 3s	
Weissman, Mark J.	11/9/22, 5:55:26 PM	1h 3m 13s	
mark grisar	11/9/22, 5:55:27 PM	1h 3m 26s	
Grimes, Anthony V.	11/9/22, 5:57:22 PM	1h 1m 31s	[redacted]
Gooding, Shelly S.	11/9/22, 5:57:23 PM	1h 1m	
Small, Darrell	11/9/22, 5:57:36 PM	1h 1m 23s	
Lewis, David A.	11/9/22, 5:58:10 PM	1h 45s	
Ryan Chelton	11/9/22, 5:59:05 PM	1h 19s	
Strech, Mikaela	11/9/22, 5:59:09 PM	59m 50s	
Stephanie Robinson	11/9/22, 6:00:07 PM	58m 55s	
Mason, Melvin (NIH/CIT) [I	11/9/22, 6:00:49 PM	58m 35s	
Burnett, Jaden N.	11/9/22, 6:01:47 PM	57m 2s	
Noelle Burnett			
Teresa Garcia	11/9/22, 6:03:02 PM	56m 13s	
Alice Oshogbele	11/9/22, 6:03:38 PM	6m 47s	
Alice Oshogbele	11/9/22, 6:07:53 PM	41m 43s	
Mirna Lopez	11/9/22, 6:08:43 PM	50m 13s	
Alice E Teffian	11/9/22, 6:09:36 PM	37m 7s	
Eric L. Coates	11/9/22, 6:12:29 PM	4m 15s	[redacted]
Alonzo Joy	11/9/22, 6:26:20 PM	32m 9s	
Joyce Prince (call in for auc	11/9/22, 6:29:36 PM	9m 47s	
Joyce Prince	11/9/22, 6:39:43 PM	19m 10s	[redacted]

B. Public Hazard Mitigation Survey

Prince George's County Hazard Mitigation Survey

Q1 Which best describes you? (Note: Your answer will affect the questions you receive. Please take the survey more than once if you want to answer in different roles/capacities.)

Answered: 39 Skipped: 0



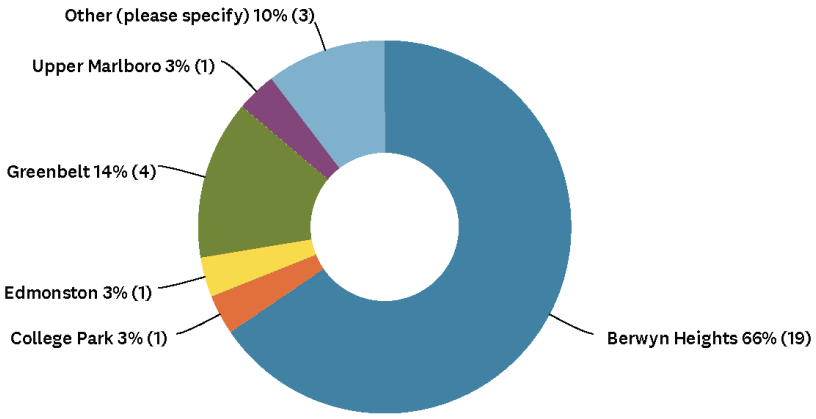
ANSWER CHOICES	RESPONSES	
I live in Prince George's County.	74%	29
I live in the City of Laurel.	0%	0
I work or own a business in Prince George's County, but I do not live in Prince George's County.	13%	5
I attend school in Prince George's County, but I do not live in Prince George's County.	0%	0
I represent a federal/state/private agency or organization with a vested interest in Prince George's County.	10%	4
I represent a neighboring jurisdiction to Prince George's County.	0%	0
I own or operate a dam or levee in or around Prince George's County.	0%	0
Other	3%	1
TOTAL		39

#	OTHER	DATE
1	I work in Prince George's County	11/18/2022 8:41 AM

Prince George's County Hazard Mitigation Survey

Q2 Which community do you live in?

Answered: 29 Skipped: 10



Prince George's County Hazard Mitigation Survey

ANSWER CHOICES	RESPONSES	
Berwyn Heights	66%	19
Bladensburg	0%	0
Bowie	0%	0
Brentwood	0%	0
Capitol Heights	0%	0
Cheverly	0%	0
College Park	3%	1
Colmar Manor	0%	0
Cottage City	0%	0
District Heights	0%	0
Eagle Harbor	0%	0
Edmonston	3%	1
Fairmount Heights	0%	0
Forest Heights	0%	0
Glenarden	0%	0
Greenbelt	14%	4
Hyattsville	0%	0
Landover Hills	0%	0
Laurel	0%	0
Morningside	0%	0
Mount Rainier	0%	0
New Carrollton	0%	0
North Brentwood	0%	0
Riverdale Park	0%	0
Seat Pleasant	0%	0
University Park	0%	0
Upper Marlboro	3%	1
Unincorporated Prince George's County	0%	0
I do not live in Prince George's County	0%	0
Other (please specify)	10%	3
TOTAL		29

#	OTHER (PLEASE SPECIFY)	DATE

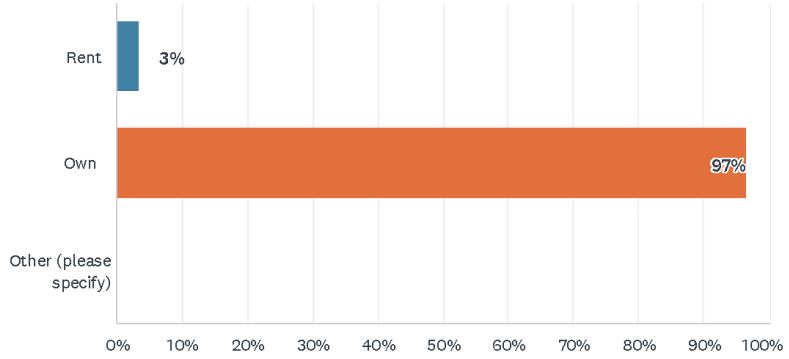
Prince George's County Hazard Mitigation Survey

1	Fort Washington	11/15/2022 10:35 AM
2	Fort Washington	11/14/2022 7:39 PM
3	Chapel Oaks	11/9/2022 7:34 PM

Prince George's County Hazard Mitigation Survey

Q3 Do you rent or own your residence?

Answered: 29 Skipped: 10



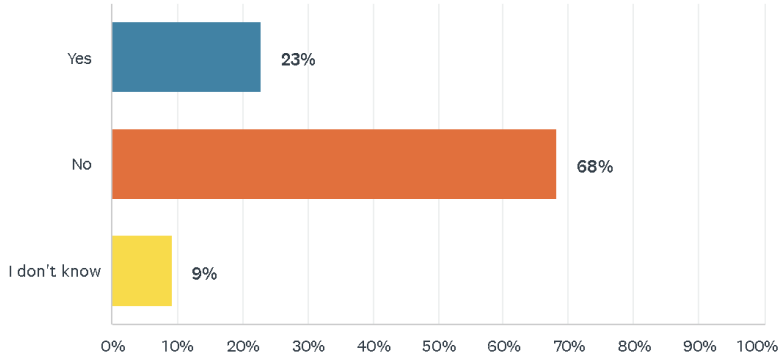
ANSWER CHOICES	RESPONSES	
Rent	3%	1
Own	97%	28
Other (please specify)	0%	0
TOTAL		29

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q4 Do you have flood insurance (e.g., a National Flood Insurance Program policy)?

Answered: 22 Skipped: 17

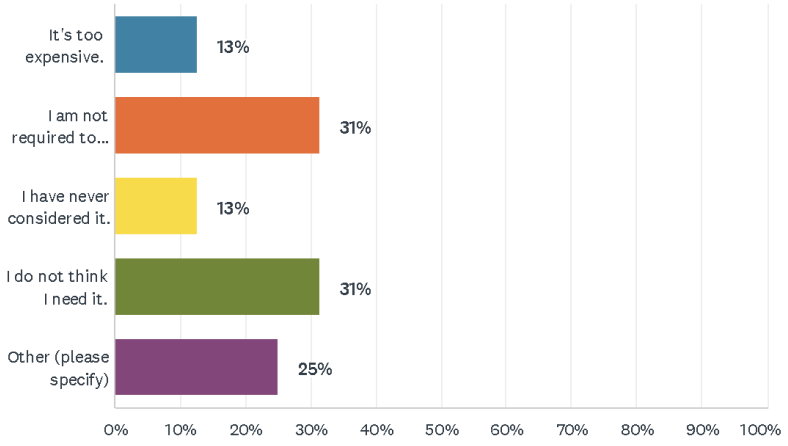


ANSWER CHOICES	RESPONSES	
Yes	23%	5
No	68%	15
I don't know	9%	2
TOTAL		22

Prince George's County Hazard Mitigation Survey

Q5 If you do not have flood insurance, please select the reasons that may apply:

Answered: 16 Skipped: 23



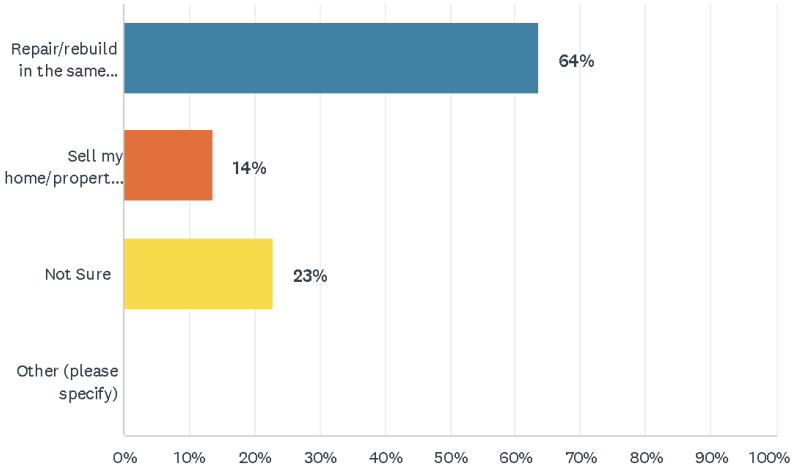
ANSWER CHOICES	RESPONSES	
It's too expensive.	13%	2
I am not required to have it, so I choose not to.	31%	5
I have never considered it.	13%	2
I do not think I need it.	31%	5
Other (please specify)	25%	4
Total Respondents: 16		

#	OTHER (PLEASE SPECIFY)	DATE
1	It is not available from my home insurer!	11/25/2022 6:20 PM
2	Coverage covers the walls but not contents or AC unit, heat, water heater, etc.	11/22/2022 5:02 PM
3	House is located on the upper level	11/8/2022 6:13 PM
4	My insurance says it is not available for my home.	11/8/2022 4:35 PM

Prince George's County Hazard Mitigation Survey

Q6 If disaster substantially damaged your home, which of the following wouldbe the most likely option you would pursue?

Answered: 22 Skipped: 17



ANSWER CHOICES	RESPONSES	
Repair/rebuild in the same location to at least current building code standards	64%	14
Sell my home/property and relocate	14%	3
Not Sure	23%	5
Other (please specify)	0%	0
TOTAL		22

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q7 Please describe any past flood damage to your home. Feel free to include details such as damage estimates, date, frequency, duration, location (e.g., yard, road, building), and how deep the flooding was.

Answered: 20 Skipped: 19

#	RESPONSES	DATE
1	Water in the basement numerous times. Then $13k of repair and water again when we had 4" of rain in an hour.	11/25/2022 6:20 PM
2	Water in basement up to 2 inches	11/24/2022 6:22 PM
3	None at this house, twice at last residence	11/24/2022 10:40 AM
4	Basement flooded several times. Also had hydrostatic pressure from oversaturation of the ground. A few years ago I had a sump pump installed.	11/23/2022 5:46 PM
5	Basement floor cracked open and flooded during heavy rains a couple of years ago. Water was less than a foot high. We did extensive work to basement to add sump pumps, etc. and all is ok know. We have replaced 3 sections of basement walls over time.	11/23/2022 7:24 AM
6	Flash flood in 2014 causing about $30,000 in damage which was partially covered by insurance. Flooding during Hurricane Sandy as a result of loss of electricity. Flash flood again in July, 2022. Homes in my block are often flooded because of inadequate storm drainage.	11/22/2022 10:11 PM
7	Three flood incidents. 1. Around 2005 had water in basement from heavy snow followed by heavy rain. Yard also flooded. Had to replace carpet. 2. 2014 had 4 feet of water in basement from rain water and sewer backup. Yard was flooded. Sustained over $40,000 worth of damage. Streets were flooded. Water comes up from the ground. Spent $17,000 to get it back to where it was and this was with insurance. Town has a history of flooding and does nothing to solve the problem. There is a storm drain behind my yard that has not been checked in at least a decade. It is filled with debris and a recycling bucket. Town says it is the responsibility of the county. 3. Flooding on August 10, 2022. Heavy rain flooded streets, back yard and finished basement again. Had four inches of water, again a combination of rain water and sewer backup. Sustained $28,000 worth of damage. Water flooded my car that was parked on the street. Had water in my wheel well and cup holder. Had to get a new car because of it. So far, we are out $2500 and counting. Town has done nothing since 2014 to help mitigate flooding. Town says it is the counties fault.	11/22/2022 5:02 PM
8	2014 -basement flooded-2+ft. Approx. $19,000.00, including remediation. Back yard flooded 2015- basement flooded 1.5 ft. Approx. $15,000.00 including remediation.	11/22/2022 3:03 PM
9	Storm sewer backup flooded our basement in mid-1990. Ever since, we've experienced foundation seepage along the edges whenever we get more than 2 inches of rain at once or multiple days if rain that fill the water table. Now our basement floor has cracked and we get seepage from the middle of the floor too.	11/22/2022 2:18 PM
10	Before we waterproofed the basement, we would take on water during heavy rains. The worst occasion was during a heavy rain in January, when our sump pump failed and the drain backed up. The floor was under a couple of inches then. Before waterproofing, anything stored in the basement was either off the floor or in plastic bins, to minimize damage.	11/22/2022 1:36 PM
11	None	11/22/2022 1:29 PM
12	Basement flooded several times upon moving here because of the way my property is structured. Had to install piping around my entire exterior home to keep basement from flooding again.	11/14/2022 7:41 PM
13	None	11/9/2022 7:35 PM
14	Our house has flooded several times since 2017 due to storms. The house has a sump pump outside of the home that gets clogged and causes the house to flood	11/9/2022 6:36 AM

Prince George's County Hazard Mitigation Survey

15	Minor flooding of a shed that was built by a previous owner in a swale. Shed has since been demolished and swale replaced.	11/8/2022 8:17 PM
16	My neighbors at the bottom of the hill suffered major damages and flooding. 59th St, and Cunnigham St were severely damaged.	11/8/2022 6:13 PM
17	None	11/8/2022 4:35 PM
18	None	11/8/2022 4:17 PM
19	None to my knowledge.	11/8/2022 3:55 PM
20	Yard damage. Loss of tools and lawn furniture	11/8/2022 3:44 PM

Prince George's County Hazard Mitigation Survey

Q8 Are you interested in being contacted by Prince George's County or the City of Laurel staff to discuss potential hazard mitigation options for your home? If so, please provide your name and contact information below.

Answered: 10 Skipped: 29

ANSWER CHOICES	RESPONSES	
Name	100%	10
Email Address	100%	10
Phone Number	80%	8

#	NAME	DATE
1	Michael Bloom	11/25/2022 6:20 PM
2	Daniel "Buddy" Robson Jr.	11/22/2022 10:11 PM
3	Merrill and Helen Weinrich	11/22/2022 5:02 PM
4	Carmalita U Howard	11/22/2022 3:03 PM
5	Dr. Toye Latimore	11/14/2022 7:41 PM
6	Amanda Townsend	11/9/2022 6:36 AM
7	Gregoor Passchier	11/8/2022 8:17 PM
8	Shinita Hemby	11/8/2022 6:13 PM
9	Kathy Bartolomeo	11/8/2022 4:35 PM
10	James McCormack	11/8/2022 3:55 PM

#	EMAIL ADDRESS	DATE
1	[redacted]	11/25/2022 6:20 PM
2	[redacted]	11/22/2022 10:11 PM
3	[redacted]	11/22/2022 5:02 PM
4	[redacted]	11/22/2022 3:03 PM
5	[redacted]	11/14/2022 7:41 PM
6	[redacted]	11/9/2022 6:36 AM
7	[redacted]	11/8/2022 8:17 PM
8	[redacted]	11/8/2022 6:13 PM
9	[redacted]	11/8/2022 4:35 PM
10	[redacted]	11/8/2022 3:55 PM

#	PHONE NUMBER	DATE
1	[redacted]	11/25/2022 6:20 PM
2	[redacted]	11/22/2022 10:11 PM
3	[redacted]	11/22/2022 5:02 PM

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Prince George's County Hazard Mitigation Survey

4	[redacted]	11/14/2022 7:41 PM
5	[redacted]	11/9/2022 6:36 AM
6	[redacted]	11/8/2022 8:17 PM
7	[redacted]	11/8/2022 6:13 PM
8	[redacted]	11/8/2022 4:35 PM

Prince George's County Hazard Mitigation Survey

Q9 What organization, agency, or entity do you represent?

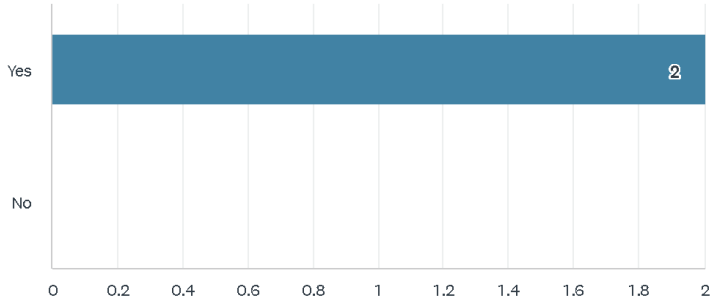
Answered: 2 Skipped: 37

#	RESPONSES	DATE
1	Prince George's County DPW&T	11/22/2022 8:00 PM
2	Maryland Department of the Environment Dam Safety	11/16/2022 11:09 AM

Prince George's County Hazard Mitigation Survey

Q10 Do you have a hazard-related expertise that you would be willing to use to review sections of the plan (or the entire plan)?

Answered: 2 Skipped: 37



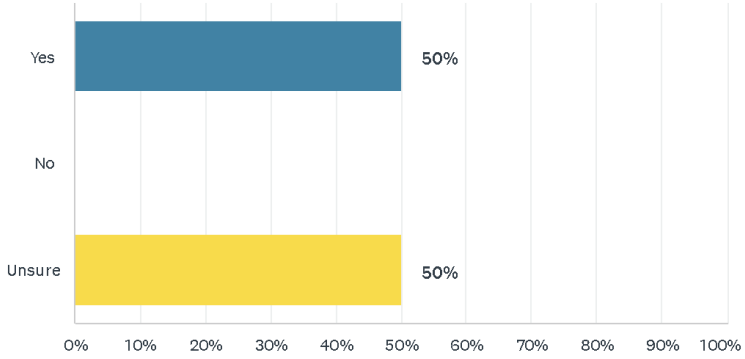
ANSWER CHOICES	RESPONSES	
Yes	100%	2
No	0%	0
TOTAL		2

#	IF YES, PLEASE DESCRIBE.	DATE
1	Civil engineer design and management experience of road and bridge infrastructure.	11/22/2022 8:00 PM
2	Dam Breach Inundation Mapping/Dam Hazard Classification/Participation in Tabletop Exercises of Emergency Action Plans	11/16/2022 11:09 AM

Prince George's County Hazard Mitigation Survey

Q11 Are you interested in joining the Mitigation Advisory Committee?

Answered: 2 Skipped: 37



ANSWER CHOICES	RESPONSES	
Yes	50%	1
No	0%	0
Unsure	50%	1
TOTAL		2

Prince George's County Hazard Mitigation Survey

Q12 If you would like to be contacted by Prince George's County staff to discuss potential ways you can further participate in the hazard mitigation planning process as a stakeholder, please provide contact information.

Answered: 2 Skipped: 37

ANSWER CHOICES	RESPONSES	
Name	100%	2
Title/Position	100%	2
Email Address	100%	2

#	NAME	DATE
1	Erv Beckert	11/22/2022 8:00 PM
2	Kelly Flint	11/16/2022 11:09 AM
#	TITLE/POSITION	DATE
1	Chief, Highway and Bridge Design Division	11/22/2022 8:00 PM
2	Senior Engineer/Dam Safety Permits Division	11/16/2022 11:09 AM
#	EMAIL ADDRESS	DATE
1	[redacted]	11/22/2022 8:00 PM
2	[redacted]	11/16/2022 11:09 AM

Prince George's County Hazard Mitigation Survey

Q13 Use this space to provide any other comments or questions you want to share.

Answered: 1 Skipped: 38

#	RESPONSES	DATE
1	-Spreading awareness of hazard creep with local government planners -Spreading an awareness of maintaining stream/floodplain buffers	11/16/2022 11:09 AM

Prince George's County Hazard Mitigation Survey

Q14 Which jurisdiction do you represent?

Answered: 0 Skipped: 39

#	RESPONSES	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q15 Would your jurisdiction be open to collaborating on a hazard mitigation project or action?

Answered: 0 Skipped: 39

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0%	0
No	0%	0
Maybe	0%	0
I do not know	0%	0
TOTAL		0

Prince George's County Hazard Mitigation Survey

Q16 Is there a specific project or type of project you would be interested in collaborating on? If so, please describe it below.

Answered: 0 Skipped: 39

#	RESPONSES	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q17 Please select all hazards that your jurisdiction would be most interested in collaborating on a project to address.

Answered: 0 Skipped: 39

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
Flooding (riverine or stormwater)	0%	0
Flooding (coastal)	0%	0
Hurricane/Tropical Storm	0%	0
Earthquake	0%	0
Drought	0%	0
Extreme Cold	0%	0
Extreme Heat	0%	0
High Winds	0%	0
Land Movement (e.g., landslide)	0%	0
Severe Storm Flood-Related)	0%	0
Severe Storm (Wind-Related)	0%	0
Sinkhole	0%	0
Tornado	0%	0
Wildfire	0%	0
Winter Storm/Blizzard	0%	0
Other (please specify)	0%	0
Total Respondents: 0		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q18 If you would like Prince George's County staff to reach out to you regarding opportunities for collaboration, please provide contact information.

Answered: 0 Skipped: 39

ANSWER CHOICES	RESPONSES	
Name	0%	0
Company	0%	0
Address	0%	0
Address 2	0%	0
City/Town	0%	0
State/Province	0%	0
ZIP/Postal Code	0%	0
Country	0%	0
Email Address	0%	0
Phone Number	0%	0

#	NAME	DATE
	There are no responses.	

#	COMPANY	DATE
	There are no responses.	

#	ADDRESS	DATE
	There are no responses.	

#	ADDRESS 2	DATE
	There are no responses.	

#	CITY/TOWN	DATE
	There are no responses.	

#	STATE/PROVINCE	DATE
	There are no responses.	

#	ZIP/POSTAL CODE	DATE
	There are no responses.	

#	COUNTRY	DATE
	There are no responses.	

#	EMAIL ADDRESS	DATE
	There are no responses.	

#	PHONE NUMBER	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Prince George's County Hazard Mitigation Survey

Q19 Please provide any additional comments or questions to be addressed as Prince George's County and the City of Laurel update the hazard mitigation plan.

Answered: 0 Skipped: 39

#	RESPONSES	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q20 Which dam or levee do you own/operate?

Answered: 0 Skipped: 39

⚠ No matching responses.

Prince George's County Hazard Mitigation Survey

ANSWER CHOICES	RESPONSES	
Allen Pond	0%	0
Allison Street Levee System	0%	0
Aragona Village	0%	0
Ashcroft Drive- Woodbridge Pond	0%	0
Beechtree Dam	0%	0
Bladensburg Levee	0%	0
Bowie Gateway SWM Pond Dam	0%	0
Bowie Town Center Lake	0%	0
Brentwood Levee	0%	0
Cash Lake Dam	0%	0
Cherry Hill Park Dam	0%	0
Collington Facility 14 SWM Dam	0%	0
Collington Facility 9 Dam	0%	0
Collington Life Care Center Lake	0%	0
Colmar Manor Levee	0%	0
Contee Main Settling Pond	0%	0
Cosca Regional Park Dam	0%	0
Fedex Field Pond No. 1	0%	0
Forest Heights Levee	0%	0
Frost Pond	0%	0
Greenbelt Dam	0%	0
Hanson Oaks SWM	0%	0
Hensen Creek Flood Control Dam #17	0%	0
Heritage Glen Dam	0%	0
Indian Creek Site 2	0%	0
Indian Creek Site 3	0%	0
Karington SWM Dam	0%	0
Lake Arbor (Lake Arbor Way)	0%	0
Lake Largo Town Center Dam (Kings Way)	0%	0
Laurel Lakes No 2	0%	0
Laurel Lakes No. 1 (Lower)	0%	0
Madison Hill SWM Pond 1 (Silk Tree Drive)	0%	0

Prince George's County Hazard Mitigation Survey

Marlton South SWM Dam	0%	0
New Bald Eagle Road SWM	0%	0
Northridge SWM Pond	0%	0
Parker Farms Dam	0%	0
Perrywood	0%	0
Perrywood (Water Fowl Way)	0%	0
Prince George Country Club Dam	0%	0
Redington Lake Dam	0%	0
Ritchie Hill SWM Pond	0%	0
Riverdale-Hyattsville Levee	0%	0
Snowden Pond	0%	0
Soil Conservation Service Lake	0%	0
Stonegate SWM Dam	0%	0
Summerfield SWM Pond No. 1 (Chatsfield Way)	0%	0
Summerfield SWM Pond No. 2	0%	0
Summit Creek- Mount Auburn Dr.	0%	0
T. Howard Duckett Dam	0%	0
Tall Oaks Crossing	0%	0
Tinkers Creek Regional SWM Pond No. 8	0%	0
UMSTC Lower Dam	0%	0
Upper Marlboro Levees (Collington Branch and Western Branch)	0%	0
Van Dusen Road	0%	0
Other (please specify)	0%	0
TOTAL		0

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q21 How worried are you about each of the following hazards impacting your dam/levee?

Answered: 0 Skipped: 39

⚠ No matching responses.

	NOT WORRIED	SOMEWHAT WORRIED	VERY WORRIED	EXTREMELY WORRIED	TOTAL	WEIGHTED AVERAGE
Flooding (riverine or stormwater)	0% 0	0% 0	0% 0	0% 0	0	0.00
Flooding (coastal)	0% 0	0% 0	0% 0	0% 0	0	0.00
Hurricane/Tropical Storm	0% 0	0% 0	0% 0	0% 0	0	0.00
Earthquake	0% 0	0% 0	0% 0	0% 0	0	0.00
Drought	0% 0	0% 0	0% 0	0% 0	0	0.00
Extreme Cold	0% 0	0% 0	0% 0	0% 0	0	0.00
Extreme Heat	0% 0	0% 0	0% 0	0% 0	0	0.00
High Winds	0% 0	0% 0	0% 0	0% 0	0	0.00
Land Movement (e.g., landslides)	0% 0	0% 0	0% 0	0% 0	0	0.00
Severe Storm (Flood-related)	0% 0	0% 0	0% 0	0% 0	0	0.00
Severe Storm (Wind-related)	0% 0	0% 0	0% 0	0% 0	0	0.00
Sinkhole	0% 0	0% 0	0% 0	0% 0	0	0.00
Tornado	0% 0	0% 0	0% 0	0% 0	0	0.00
Wildfire	0% 0	0% 0	0% 0	0% 0	0	0.00
Winter Storm/Blizzard	0% 0	0% 0	0% 0	0% 0	0	0.00

Prince George's County Hazard Mitigation Survey

Q22 Please select all hazards that have affected the operation of your dam/levee

Answered: 0 Skipped: 39

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
Flooding (riverine or stormwater)	0%	0
Flooding (coastal)	0%	0
Hurricane/Tropical Storm	0%	0
Earthquake	0%	0
Drought	0%	0
Extreme Cold	0%	0
Extreme Heat	0%	0
High Winds	0%	0
Land Movement (e.g., landslide)	0%	0
Severe Storm Flood-Related)	0%	0
Severe Storm (Wind-Related)	0%	0
Sinkhole	0%	0
Tornado	0%	0
Wildfire	0%	0
Winter Storm/Blizzard	0%	0
Total Respondents: 0		

Prince George's County Hazard Mitigation Survey

Q23 How vulnerable do you believe your dam/levee currently is to a breach due to the above hazards?

Answered: 0 Skipped: 39

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
High Vulnerability	0%	0
Moderately Vulnerablility	0%	0
Low Vulnerability	0%	0
TOTAL		0

Prince George's County Hazard Mitigation Survey

Q24 Select the projects or activities relating to your dam or levee that you are potentially interested in:

Answered: 0 Skipped: 39

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
Creating/updating an Emergency Action Plan (EAP)	0%	0
Adding redundant or improved operational systems (for complex dams)	0%	0
Adding interim risk reduction measures to reduce risk until permanent solutions can be funded	0%	0
Decommissioning and removing the dam/levee to eliminate dam- and levee-related hazards if the structure is no longer needed or outlives its benefit	0%	0
Conducting training	0%	0
Conducting dam/levee inspections	0%	0
Conducting a dam/levee evaluation	0%	0
Perform operations and maintenance	0%	0
Establish an instrumentation program (i.e., computer-based data-processing systems that evaluate collected data and issue warnings or alarms if certain threshold values are exceeded)	0%	0
Other (please specify)	0%	0
Total Respondents: 0		

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q25 Are you interested in working with Prince George's County and/or the City of Laurel to potentially complete a hazard mitigation project related to your dam or levee to help reduce risk associated with it? (Outside funding may be available)

Answered: 0 Skipped: 39

⚠ No matching responses.

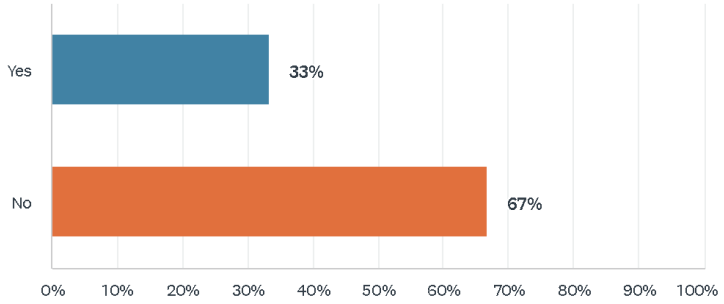
ANSWER CHOICES	RESPONSES	
Yes	0%	0
No	0%	0
Maybe	0%	0
Unsure	0%	0
TOTAL		0

#	COMMENTS	DATE
	There are no responses.	

Prince George's County Hazard Mitigation Survey

Q26 Before this survey, were you aware that Prince George's County maintains a hazard mitigation plan?

Answered: 27 Skipped: 12

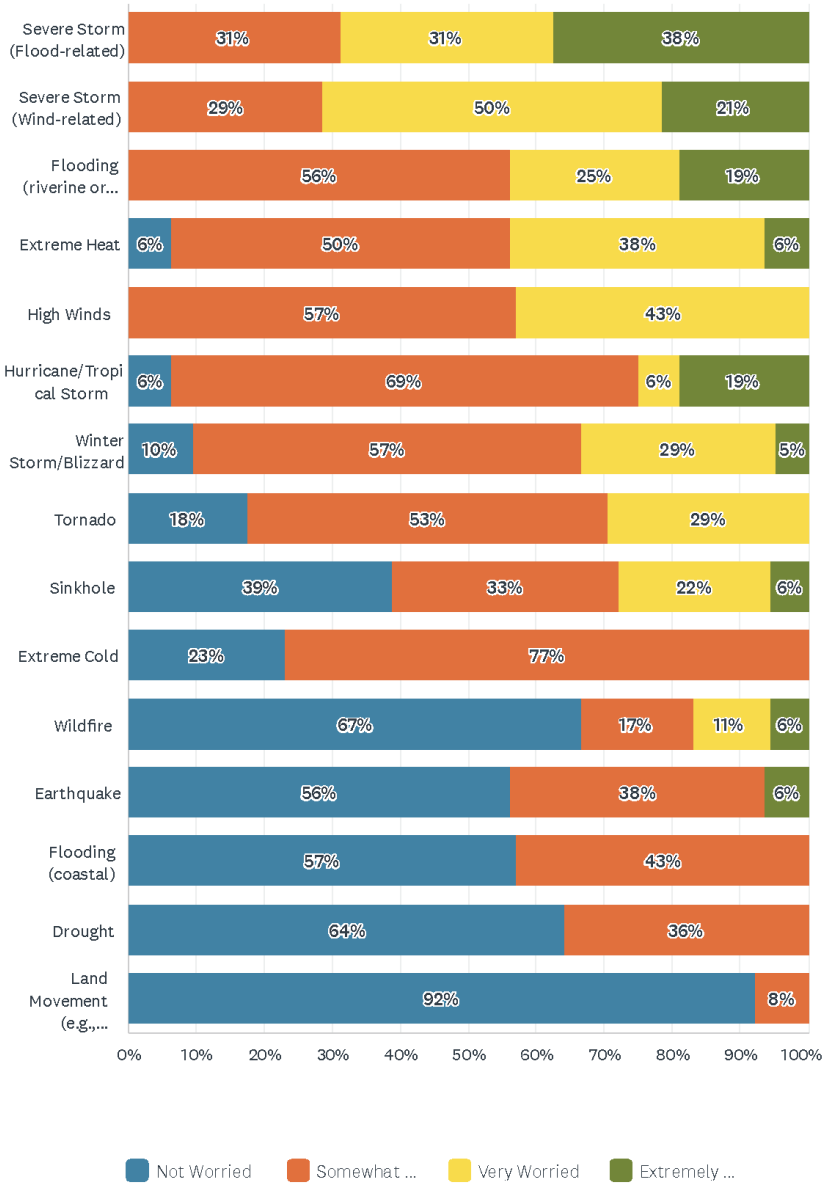


ANSWER CHOICES	RESPONSES	
Yes	33%	9
No	67%	18
TOTAL		27

Prince George's County Hazard Mitigation Survey

Q27 How worried are you about each of the following hazards impacting Prince George's County?

Answered: 27 Skipped: 12



34 / 46

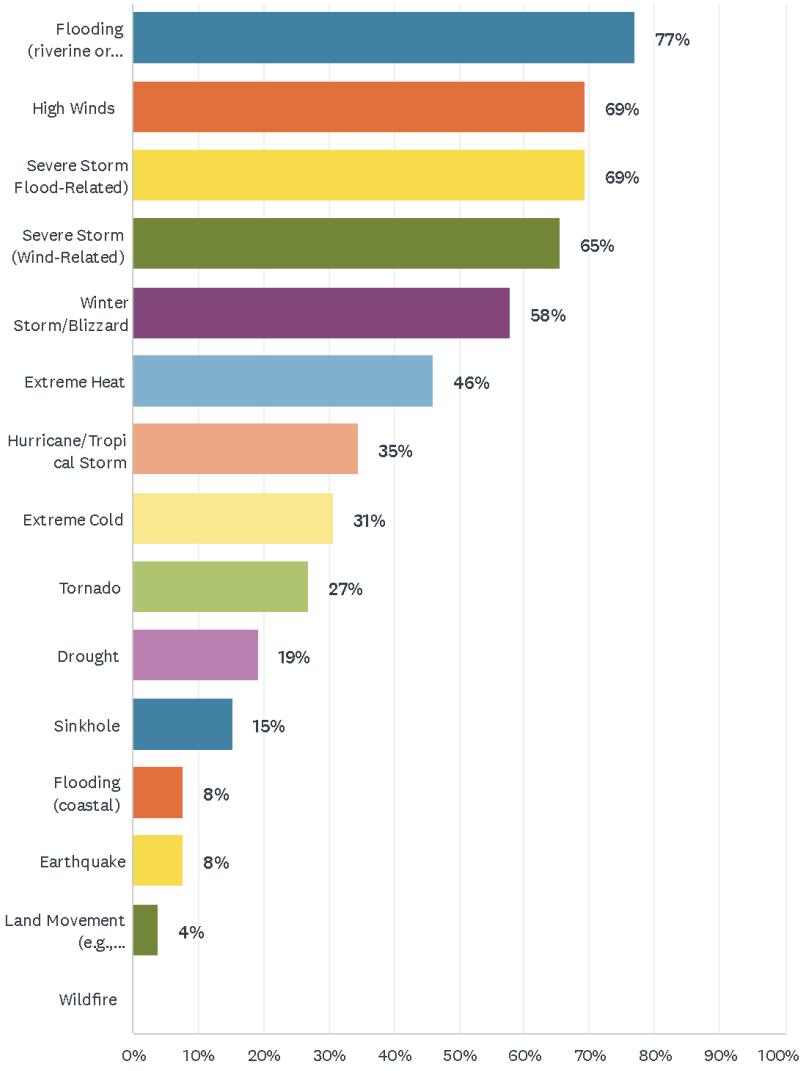
Prince George's County Hazard Mitigation Survey

	NOT WORRIED	SOMEWHAT WORRIED	VERY WORRIED	EXTREMELY WORRIED	TOTAL	WEIGHTED AVERAGE
Severe Storm (Flood-related)	0% 0	31% 5	31% 5	38% 6	16	2.06
Severe Storm (Wind-related)	0% 0	29% 4	50% 7	21% 3	14	1.93
Flooding (riverine or stormwater)	0% 0	56% 9	25% 4	19% 3	16	1.63
Extreme Heat	6% 1	50% 8	38% 6	6% 1	16	1.44
High Winds	0% 0	57% 8	43% 6	0% 0	14	1.43
Hurricane/Tropical Storm	6% 1	69% 11	6% 1	19% 3	16	1.38
Winter Storm/Blizzard	10% 2	57% 12	29% 6	5% 1	21	1.29
Tornado	18% 3	53% 9	29% 5	0% 0	17	1.12
Sinkhole	39% 7	33% 6	22% 4	6% 1	18	0.94
Extreme Cold	23% 3	77% 10	0% 0	0% 0	13	0.77
Wildfire	67% 12	17% 3	11% 2	6% 1	18	0.56
Earthquake	56% 9	38% 6	0% 0	6% 1	16	0.56
Flooding (coastal)	57% 8	43% 6	0% 0	0% 0	14	0.43
Drought	64% 9	36% 5	0% 0	0% 0	14	0.36
Land Movement (e.g., landslides)	92% 12	8% 1	0% 0	0% 0	13	0.08

Prince George's County Hazard Mitigation Survey

Q28 Please select all hazards that have had the biggest impact on Prince George's County (i.e., your home, business, or neighborhood).

Answered: 26 Skipped: 13



Prince George's County Hazard Mitigation Survey

ANSWER CHOICES	RESPONSES	
Flooding (riverine or stormwater)	77%	20
High Winds	69%	18
Severe Storm Flood-Related)	69%	18
Severe Storm (Wind-Related)	65%	17
Winter Storm/Blizzard	58%	15
Extreme Heat	46%	12
Hurricane/Tropical Storm	35%	9
Extreme Cold	31%	8
Tornado	27%	7
Drought	19%	5
Sinkhole	15%	4
Flooding (coastal)	8%	2
Earthquake	8%	2
Land Movement (e.g., landslide)	4%	1
Wildfire	0%	0
Total Respondents: 26		

Prince George's County Hazard Mitigation Survey

Q29 What recent hazard events/disasters (if any) made you more aware of the danger of hazards?

Answered: 24 Skipped: 15

#	RESPONSES	DATE
1	Witnessing a sinkhole, witnessing a large amount of snowfall and seeing that the county was underprepared.	12/18/2022 6:03 PM
2	Flooding in August 2022 from serve downpours Wind damage from storm on July 2022 that had 100+ mile per hour winds	11/27/2022 3:04 PM
3	The 'tornado' level storm and the enormous rainstorm in this area.	11/25/2022 6:22 PM
4	Recent wind storm in July	11/24/2022 6:25 PM
5	2 events this year, wind storm followed by heavy rains causing local flooding	11/24/2022 10:43 AM
6	Bow echo storm in July 2022. We lost many trees in the neighborhood. Tree care is major concern. It's very expensive to manage the canopy of old growth trees.	11/23/2022 5:49 PM
7	This past summer when low grade tornado came through our town and did destruction. Very scary.	11/23/2022 7:27 AM
8	Flash flooding in 2014 & 2022	11/22/2022 10:14 PM
9	Increase in flooding episodes and wind storms.	11/22/2022 5:05 PM
10	High winds in July 2022 knocked down many trees in our neighborhood.	11/22/2022 2:21 PM
11	July windstorm that toppled many trees. We weren't personally affected (all but one big tree had been removed previously and replaced with smaller ones), but the damage nearby was extensive. Last month we took out the last of our large maples, which could fall on our daughter's bedroom, and plan to put in another river birch in its place.	11/22/2022 1:40 PM
12	Storm this summer that knocked out our power for multiple days and toppled trees making it impossible to leave our neighborhood for half a day.	11/22/2022 1:30 PM
13	Flooding	11/21/2022 12:36 PM
14	Flooding in Upper Marlboro which caused access issues to the Town.	11/18/2022 9:45 AM
15	Micro burst	11/18/2022 8:51 AM
16	July and August 2022 flash floods in Riverdale and Lanham areas September 2020 flash floods in Cheverly and Riverdale areas	11/17/2022 6:43 PM
17	Partial failure of a significant hazard dam, recent tornadoes and storm related high winds in AA and PG Counties. Severe storm flood related in Salisbury resulting in condemned residences.	11/16/2022 11:16 AM
18	Earthquake, Hurricane in 2014, Derecho	11/15/2022 10:37 AM
19	The last hurricane that came through Prince George's County and the last big snow storm.	11/14/2022 7:42 PM
20	Summer storms	11/9/2022 6:37 AM
21	Power outages in Greenbelt in summer of 2022 related to a sudden wind storm was somewhat disruptive. Also, last winter a storm that caused power outages throughout the region, fortunately did not impact us, but if it had it would have been very disruptive since our home relies on electricity for heat.	11/8/2022 8:21 PM
22	Recent wind storm and flooding in Berwyn Heights.	11/8/2022 6:16 PM
23	Driving through heavy rains which has flooded the roads I was driving. Also, the rise in humidity with heat making it difficult to breath when outside or not being in air conditioned places.	11/8/2022 4:38 PM

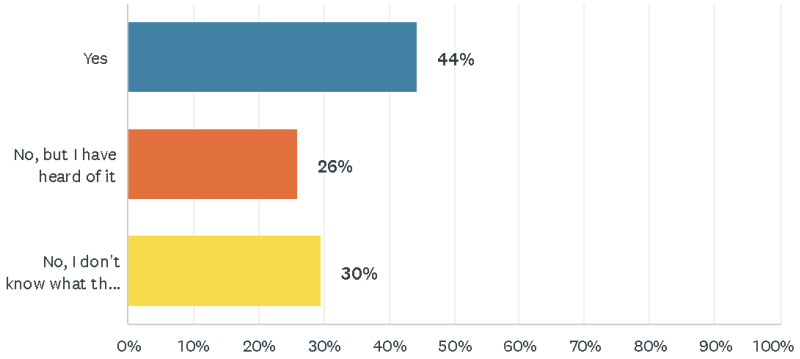
Prince George's County Hazard Mitigation Survey

24	The storm on July 13th that downed numerous trees and lead to a multiday power outage. The August 10th flooding event that blocked my way home from work.	11/8/2022 3:59 PM

Prince George's County Hazard Mitigation Survey

Q30 Have you signed up for the Alert Prince George's emergency notification system (formerly known as Notify Me Prince George's)?

Answered: 27 Skipped: 12

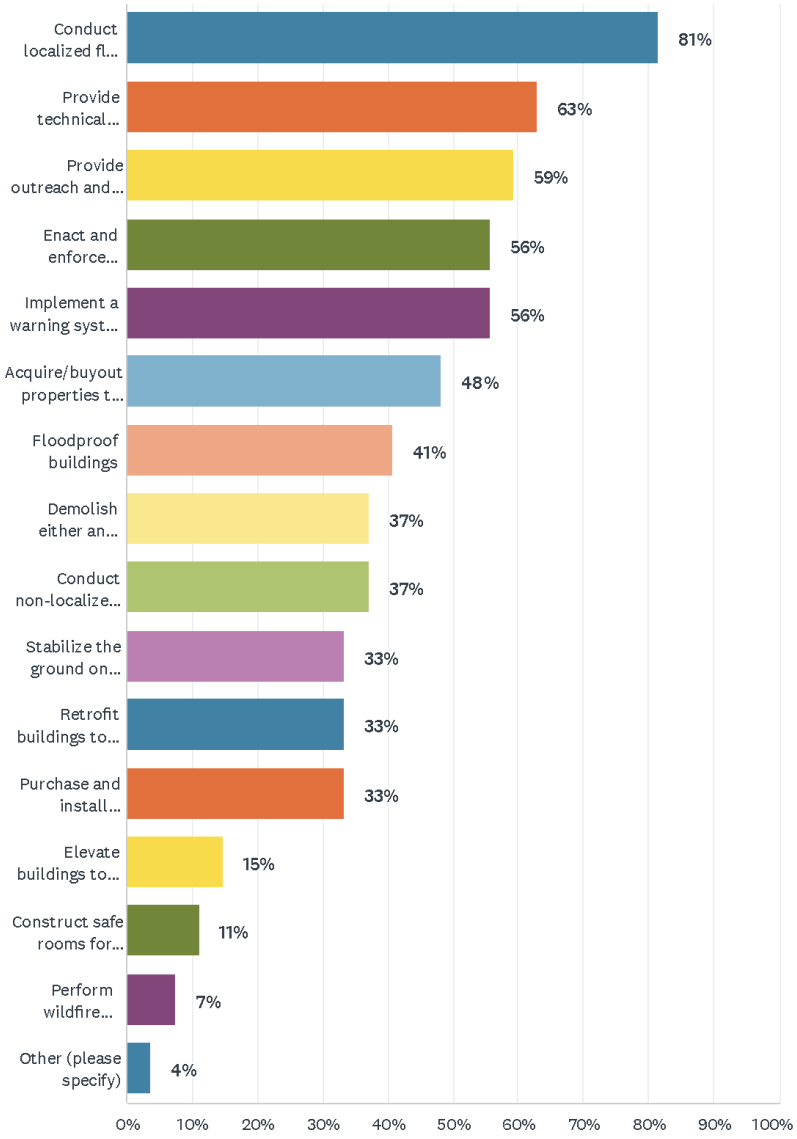


ANSWER CHOICES	RESPONSES	
Yes	44%	12
No, but I have heard of it	26%	7
No, I don't know what that is	30%	8
TOTAL		27

Prince George's County Hazard Mitigation Survey

Q31 What are the most important things that your community can do to help mitigate hazards and become more resilient over time?

Answered: 27 Skipped: 12



Prince George's County Hazard Mitigation Survey

ANSWER CHOICES	RESPONSES	
Conduct localized flood risk reduction projects, such as stormwater management projects or stabilizing roads/bridges	81%	22
Provide technical assistance to residents, businesses, jurisdictions, and organizations to help them preform hazard mitigation projects	63%	17
Provide outreach and education to residents, business, jurisdictions, and organizations to help them understand risks and mitigate hazards	59%	16
Enact and enforce regulations, codes and ordinances, such as zoning regulations and building codes	56%	15
Implement a warning system to alert the public of impending hazards	56%	15
Acquire/buyout properties to create open space and reduce flooding	48%	13
Floodproof buildings	41%	11
Demolish either an entire building or part of a building in order to rebuild it in a way that mitigates it from flooding	37%	10
Conduct non-localized flood risk reduction projects, such as rehabilitating dams and levees	37%	10
Stabilize the ground on slopes to prevent slope failures/landslides	33%	9
Retrofit buildings to reduce future damages from erosion, high winds, earthquakes, or snow.	33%	9
Purchase and install generators	33%	9
Elevate buildings to avoid potential floodwaters	15%	4
Construct safe rooms for hurricanes, tornadoes, etc.	11%	3
Perform wildfire mitigation projects, such as creating defensible space, retrofitting buildings with ignition-resistant building materials, or vegetation management	7%	2
Other (please specify)	4%	1
Total Respondents: 27		

#	OTHER (PLEASE SPECIFY)	DATE
1	Provide adequate stormwater runoff.	11/22/2022 10:17 PM

Prince George's County Hazard Mitigation Survey

Q32 In your opinion, what are some steps your local government could take or projects they could complete to reduce or eliminate the risk of future hazard damages in your neighborhood or community?

Answered: 15 Skipped: 24

#	RESPONSES	DATE
1	Encorporate the individual municipalities into planning to ensure that each community's needs are met.	12/18/2022 6:04 PM
2	Offer flood insurance to those who don't have it.	11/25/2022 6:24 PM
3	N/a	11/24/2022 6:27 PM
4	Review and update storm water systems to meet current conditions	11/24/2022 10:50 AM
5	Take care of some of the floor areas that continue to recur. Someone needs to take responsibility and fix issues between PEPCO and town.	11/23/2022 7:29 AM
6	Build adequate stormwater runoff drains and/or piping to reduce/eliminate flood damage.	11/22/2022 10:17 PM
7	Respond to residents needs and develop a simple plan to help residents that are vulnerable.	11/22/2022 5:07 PM
8	Flood mitigation projects along the Collington Branch that flows through the Town of Upper Marlboro.	11/18/2022 9:47 AM
9	Executing long-term flood mitigation projects.	11/18/2022 8:51 AM
10	Routine maintenance of infrastructure Education and outreach to stakeholders and the public Enacting and enforcing regulations	11/16/2022 11:20 AM
11	Conduct Risk Assessments on every community in PG County	11/14/2022 7:43 PM
12	Continue to trim trees around power lines to avoid power outages. Reduce development in floodplains and make significant strides on reducing the amount of impervious surfaces/protect more open space within the county to avoid sudden riverine flooding in the county. Consider an open space ordinance, similar to Montgomery County's farm preserve, to protect open space from development and encourage smarter, denser development.	11/8/2022 8:25 PM
13	Use taxpayers money to direct waters to lakes and other waterways.	11/8/2022 6:18 PM
14	Speed limits should be followed reducing emissions, provide better public transit, electrify buses and provide incentives for electric car purchasing, more charging stations (Level 2 is best), community solar farms esp. available for low and moderate income people, solar panels above parking lots, and on all government buildings. Incentives for solar panels on homes and apartment buildings. Developers need to build homes that fit the need of the population… older citizens, not large homes, affordable, energy efficient with solar, keeping trees that many older as their canopy is much larger than new tree plantings can provide. Good grocery stores near people's homes so reducing travel.	11/8/2022 4:58 PM
15	Improve stormwater management to better prevent flooding, and harden the power system to tree damage.	11/8/2022 4:01 PM

Prince George's County Hazard Mitigation Survey

Q33 If you wish to be notified of hazard mitigation plan updates and meetings, please provide your name and email address.

Answered: 14 Skipped: 25

ANSWER CHOICES	RESPONSES	
First Name	100%	14
Last Name	100%	14
Email Address	100%	14

#	FIRST NAME	DATE
1	Noelle	11/29/2022 3:52 PM
2	Courtney	11/27/2022 3:08 PM
3	David	11/24/2022 10:51 AM
4	Daniel	11/22/2022 10:18 PM
5	Helen	11/22/2022 5:07 PM
6	dawn	11/17/2022 6:45 PM
7	Kelly	11/16/2022 11:20 AM
8	Dr. Toye	11/14/2022 7:44 PM
9	Amanda	11/9/2022 6:38 AM
10	Adriaan	11/8/2022 8:27 PM
11	Shinita	11/8/2022 6:19 PM
12	Kathy	11/8/2022 4:59 PM
13	James	11/8/2022 4:01 PM
14	Chris	11/8/2022 3:47 PM
#	LAST NAME	DATE
1	Burnett	11/29/2022 3:52 PM
2	Cavanaugh	11/27/2022 3:08 PM
3	Wolfinger	11/24/2022 10:51 AM
4	Robson	11/22/2022 10:18 PM
5	Weinrich	11/22/2022 5:07 PM
6	nixon	11/17/2022 6:45 PM
7	Flint	11/16/2022 11:20 AM
8	Latimore	11/14/2022 7:44 PM
9	Townsend	11/9/2022 6:38 AM
10	Passchier	11/8/2022 8:27 PM
11	Hemby	11/8/2022 6:19 PM
12	Bartolomeo	11/8/2022 4:59 PM

Prince George's County Hazard Mitigation Survey

13	McCormack	11/8/2022 4:01 PM
14	Brittan-Powell	11/8/2022 3:47 PM
#	EMAIL ADDRESS	DATE
1	[redacted]	11/29/2022 3:52 PM
2	[redacted]	11/27/2022 3:08 PM
3	[redacted]	11/24/2022 10:51 AM
4	[redacted]	11/22/2022 10:18 PM
5	[redacted]	11/22/2022 5:07 PM
6	[redacted]	11/17/2022 6:45 PM
7	[redacted]	11/16/2022 11:20 AM
8	[redacted]	11/14/2022 7:44 PM
9	[redacted]	11/9/2022 6:38 AM
10	[redacted]	11/8/2022 8:27 PM
11	[redacted]	11/8/2022 6:19 PM
12	[redacted]	11/8/2022 4:59 PM
13	[redacted]	11/8/2022 4:01 PM
14	[redacted]	11/8/2022 3:47 PM

Prince George's County Hazard Mitigation Survey

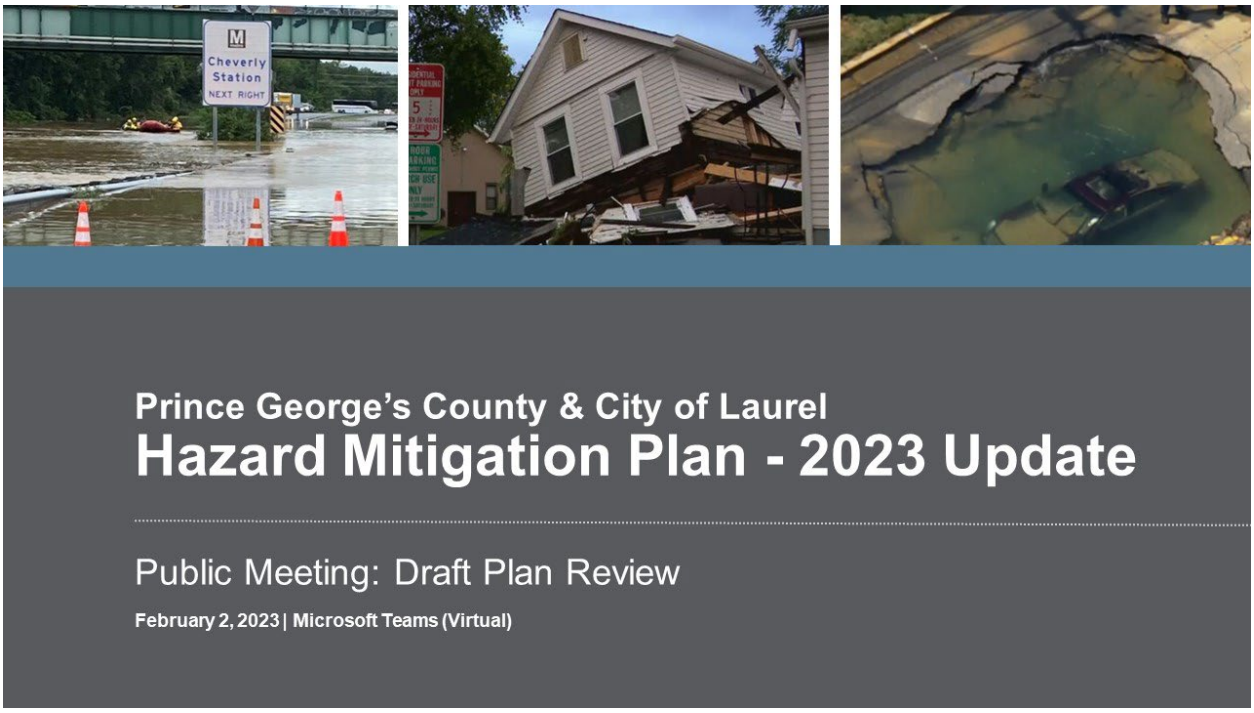
Q34 Please provide any additional comments or questions to be addressed as Prince George's County and the City of Laurel update our hazard mitigation plan.

Answered: 4 Skipped: 35

#	RESPONSES	DATE
1	None.	11/23/2022 7:29 AM
2	Flooding is now a more occurring dilemma. Something must be done to protect life and property.	11/22/2022 10:18 PM
3	One question in the survey (level of worry of hazards) would only allow selection of four options so should be fixed (i.e., I could only select one hazard for each option (not worried at all, somewhat worried, etc).	11/8/2022 8:27 PM
4	The county council must push to implement the Prince George's County Climate Action Plan that so many researched and studied.	11/8/2022 4:59 PM

C. Public Meeting – Draft Plan Review

C.1. Presentation

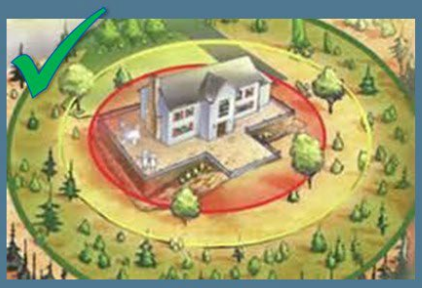




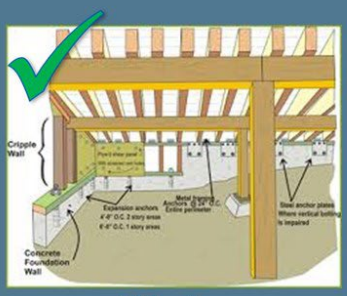
Hazard Mitigation Overview

What is hazard mitigation?

Any sustainable action that will **reduce or eliminate injury** to citizens, damages to structures and allow continuity of critical society functions



Mitigation
Defensible Space for Wildfire Mitigation



Mitigation
Earthquake Retrofit



Preparedness & Response
purchase of a police command vehicle


Why have a hazard mitigation plan?
Prince George's County, MD
• Reduces or eliminates the need to respond (lessens resource burden)
• Increases resilience and promotes climate adaptation
• Promotes Data sharing between different levels of government and academia
• Supports decision-making
• Disaster Mitigation Act of 2000
• Certain FEMA Public Assistance (State Plans)
• FEMA's Hazard Mitigation Assistance Programs
5
Public Meeting: Draft Hazard Mitigation Plan Review
Dewberry


Draft Hazard Mitigation Plan
Highlights & New Additions
6
Public Meeting: Draft Hazard Mitigation Plan Review
Dewberry

Hazard Risk Assessment Update

Future Conditions - Population

- Used the Maryland Department of Planning, Projects, and State Data Center projects (pre-2020 Census)
- Adjusted projections based on 2020 Census counts using annualized growth rates

A.3.h. Future Conditions Analysis: Population

The United States Census Bureau's Population Estimates Program states Prince George's County, Maryland's population as 955,306 as of July 1, 2021. This is a -1.2% change from the April 1, 2020 U.S. Census count. Population clusters are located around the Town of Bowie, the City of Laurel, and the combined metro area of Hyattsville, College Park, and Greenbelt. Compared to the 2010 U.S. Census, the County has seen a population change of +12.0%. As of December 2020, the Maryland Department of Planning, Projections and State Data Center projects the population of Prince George's County to be about 983,870 by 2045, which would only be a 3.0% increase from the most recent 2021 estimate from the Census Bureau. This projection was created without 2020 Census data, so if the State's 2020 projection of 911,140 is adjusted to reflect the 2020 Census population (967,201) and the same annualized growth rates are then used on the new baseline, a new projection for the County's population in 2045 is 1,043,973.[44]

Based on this cumulative information, the population of Prince George's County by 2045 is estimated to be about 7.9% higher than the most current (2021) estimate. It is assumed that most of this change will occur in and around the development areas highlighted in A.3.g.1 Proposed Future Development. The City of Laurel has seen a similar population trend, as shown in Table 35.

Table 35. Population Changes in Prince George's County and the City of Laurel since 2010

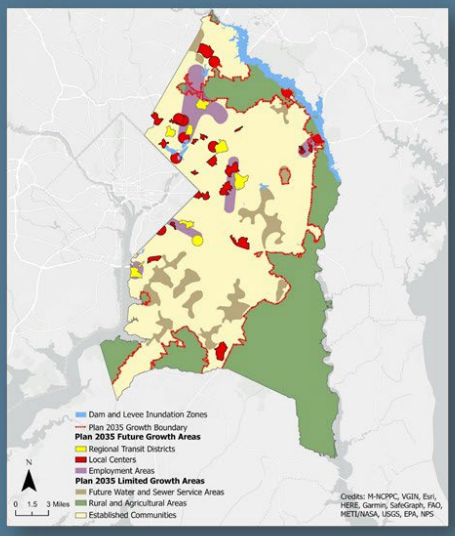
	City of Laurel	Prince George's County
Population, Census (April 1, 2010)	25,115	863,420
Population, Census (April 1, 2020)	30,060 (+19.7%)	967,201 (+12.0%)
Population Estimate (July 1, 2021)[45]	29,490 (-1.8%)	955,306 (-1.2%)
Projected Population (2045)[46]	**N/A**	**983,870 (+3.0%)**

7 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

Future Conditions - Development

- Prince George's County Plan 2035 Future Growth Areas Data
- Example: Future Growth Areas & Dam and Levee Inundation Zones (see image)
- Riverine Flood, Extreme Heat, Dam & Levee Failure, Wildfire

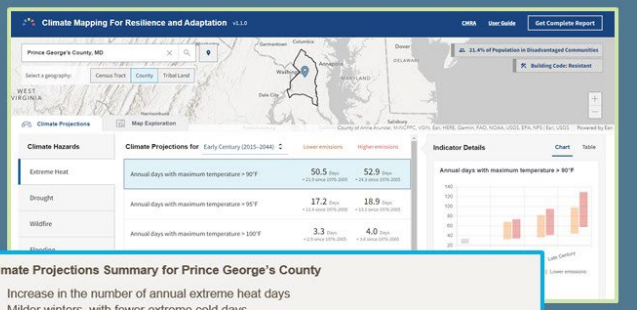


8 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

Future Conditions - Climate

- FEMA now requires that states evaluate changes to climate conditions that may affect and influence their long-term vulnerability
- Climate Mapping for Resilience and Adaptation Tool



Climate Projections Summary for Prince George's County

- Increase in the number of annual extreme heat days
- Milder winters, with fewer extreme cold days
- Increased risk of extreme heat and dry conditions overlapping, leading to an increased risk of droughts and wildfires
- Increased average total annual precipitation
- More extreme precipitation events, with more rain falling in shorter amounts of time, which can lead to more flash floods, riverine flooding, and pluvial flooding
- 0.2% of the County's land is expected to be impacted by sea level rise within the next 20 years
- Intensified winter storm events
- Stronger hurricanes that bring more rain, stronger winds, intensify quickly, and move slower over land

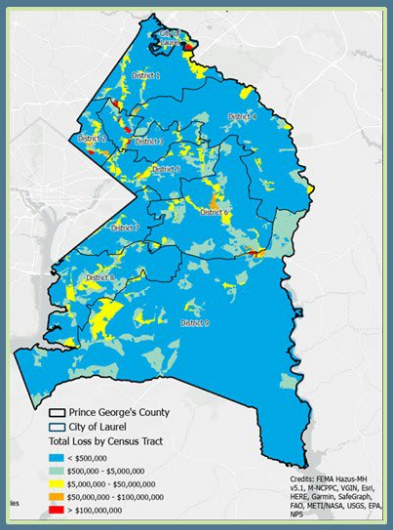
9 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

Hazus-MH v5.1 Loss Estimation

- Riverine & Coastal Flooding, Hurricane, Earthquake hazards
- Example: Total Flood Loss

Prince George's County	100-Year Riverine Flood Losses				
	Residential	Commercial	Industrial	Other	Total
Total Exposure					
Prince George's County	*$130,144,361,000*	*$26,242,415,000*	*$5,564,076,000*	*$7,454,437,000*	*$169,405,289,000*
Direct Losses					
Building	$834,296,000	$323,906,000	$73,819,000	$72,724,000	$1,304,745,000
Contents	$392,305,000	$408,446,000	$125,548,000	$93,673,000	$1,019,972,000
Inventory	$0	$10,790,000	$19,217,000	$298,000	$30,305,000
Subtotal	$1,226,601,000	$743,142,000	$218,584,000	$166,695,000	$2,355,022,000
Business Interruption					
Income	$2,398,000	$232,281,000	$2,882,000	$28,440,000	$266,001,000
Relocation	$111,416,000	$76,858,000	$2,826,000	$17,990,000	$209,090,000
Rental Income	$57,472,000	$57,232,000	$543,000	$3,069,000	$118,316,000
Wage	$5,694,000	$260,289,000	$4,002,000	$269,408,000	$539,393,000
Subtotal	$176,980,000	$626,660,000	$10,253,000	$318,907,000	$1,132,800,000
TOTAL	$1,403,581,000	$1,369,802,000	$228,837,000	$485,602,000	$3,487,822,000



10 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

Hazard Risk Index Score

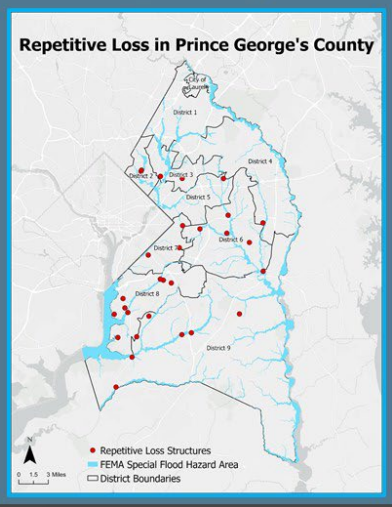
HRI Score = (***probability value*** x 0.20) + (***impact value*** x 0.35) + (***geographic extent value*** x 0.20) + (***warning time value*** x 0.10) + (***community concern value*** x 0.15)

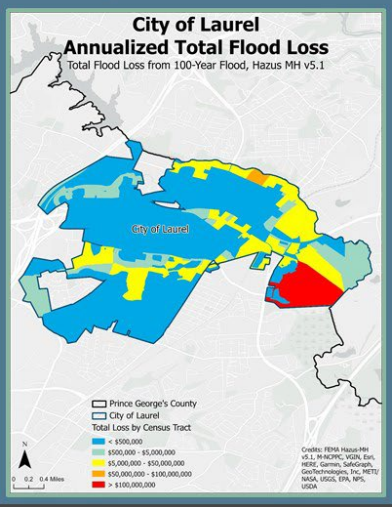
Hazard	Occurrence Probability	Impact	Geographic Extent	Warning Time	Community Concern	Hazard Risk Index Score & Overall Rank	State Ranking (5 = highest)	FEMA Ranking (5 = highest)
Riverine Flood	Highly Likely	Critical	Moderate	Limited	High	3.25 (High)	5	2
Severe Storm (Flood-Related)	Highly Likely	Critical	Moderate	Limited	High	3.25 (High)	5	N/A
Severe Storm (Wind-Related)	Highly Likely	Limited	Large	Limited	High	3.1 (High)	5	3
High Winds	Likely	Limited	Large	Limited	High	2.95 (High)	5	3
Tornado	Likely	Critical	Minor	No Notice	Moderate	2.9 (Moderate)	5	4
Extreme Heat	Highly Likely	Limited	Large	Extended	Moderate	2.8 (Moderate)	4	4
Winter Storm	Highly Likely	Minor	Large	Limited	Moderate	2.55 (Moderate)	5	4
Hurricane/Tropical Storm	Somewhat Likely	Limited	Large	Limited	Low	2.4 (Moderate)	4	2
Dam and Levee Failure	Unlikely	Limited	Negligible	No Notice	Low	1.85 (Moderate)	4	N/A
Earthquake	Likely	Minor	Minor	No Notice	Negligible	1.8 (Moderate)	N/A	2
Extreme Cold	Somewhat Likely	Minor	Large	Extended	Negligible	1.75 (Moderate)	4	3
Sinkhole	Highly Likely	Minor	Negligible	Minimal	Negligible	1.65 (Low)	2	N/A
Wildfire	Highly Likely	Minor	Negligible	Limited	Negligible	1.55 (Low)	4	1
Landslide	Somewhat Likely	Minor	Negligible	No Notice	Negligible	1.45 (Low)	2	2
Drought	Somewhat Likely	Minor	Minor	Extended	Negligible	1.35 (Low)	4	2
Coastal Flood	Unlikely	Minor	Minor	Limited	Negligible	1.3 (Low)	5	2

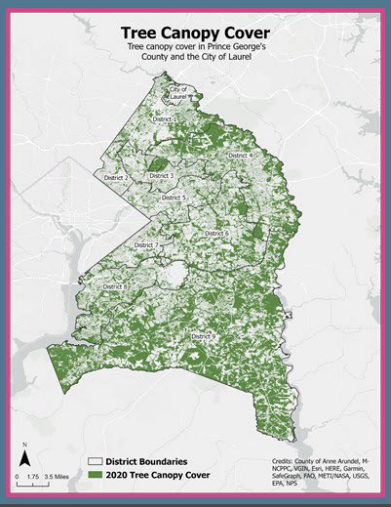
11 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Hazard Risk Assessment Update

New Maps, Analyses & Data Integration







12 | Public Meeting: Draft Hazard Mitigation Plan Review | Dewberry

Mitigation Strategy Update

Updated Hazard Mitigation Goals & Actions

D. 2023-2028 Mitigation Actions

All 2023-2028 mitigation actions are outlined in Table 131 and Table 132, along with key details to add relevant context and objectives to implementation and accountability. The descriptions and/or definitions for the elements that accompany each action are described in Tab actions plans of the "high priority" actions, refer to **Appendix F**.

Table 130. Action Description Inputs

Action Detail	Input Description
Category of mitigation action	Prevention, property protection, natural resource protection, structural projects, emergency services, or e
Action number	Jurisdiction abbreviation - # (e.g., PG-1)
Applicable goal(s)	• Goal 1: Implement structural projects that mitigate the risks of natural hazards to people, infrastructu assets while equitably distributing project benefits. • Goal 2: Integrate hazard mitigation into regular staff training and responsibilities to improve capabili adaptation is adequately considered and addressed in county/city actions. • Goal 3: Increase public education and awareness of natural hazard risks to people and private prop current and new opportunities to participate in mitigation planning. • Goal 4: Prevent future climate-related damages and losses to communities, critical facilities, and na ordinances, policies, and plans aligned with regional and state resilience and equity goals.
Action lead	The department or office responsible for ensuring the action is implemented
Timeframe for implementation	• Short-term: less than three years • Long-term: more than three years • Ongoing: continuous with no designated end date • Funding contingent: timeline is dependent on funding from a source outside of the jurisdiction
Priority level for implementation	High, medium, or low

Action Number	Action	Goal 1	Goal 2	Goal 3	Goal 4	Action Lead	Timeframe	Priority
	Prevention							
PG-1	Partner with federal agencies, the state, and Non-governmental Organizations to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the County and municipalities.	X			X	Office of Emergency Management	Ongoing	Medium
PG-2	Using the best available data, check the locations of HazMat sites, National Pollutant Discharge Elimination System sites, and other land uses; if found to be in flood hazard areas, communicate with the owner/handler of hazardous materials and known pollutants regarding risk and appropriate			X	X	Department of Environment	Short-term	Medium
PG-3	Integrate mitigat other appropriate comprehensive p							
PG-4	Collect flood dep provide elevation Special Flood Ha							

Increase public education and awareness of natural hazard risks to people and private property, and promote current and new opportunities to participate in mitigation planning.

Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans aligned with regional and state resilience and equity goals.

Implement structural projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits.

Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions.

Implementation Plan Update

Technical Assistance

Table 135. Sources of Technical Assistance

Name	Overview	Contact
FEMA Mitigation Planning Technical Assistance	FEMA's Risk Mitigation Action Planning (MAP) Program identifies flood risk to promote informed planning and development practices. Risk information is primarily conducted on a county or tribal basis and includes both regulatory flood risk maps and nonregulatory risk information. Under FEMA Risk MAP program, agency staff or their contractors can provide technical assistance tailored to a community's need, such as increasing understanding of risk and mitigation or helping prepare for project funding or implementation. This may include a project alternatives analysis or exploring project costs and benefits. For more information refer to the Incorporating Mitigation Planning Technical Assistance into Risk MAP Projects Guidance and the FEMA Region 3 Hazard Mitigation Planning webpage.	Primary point of contact at Maryland Department of Emergency Management or FEMA Region 3
FEMA Building Resilient Infrastructure and Communities (BRIC) Direct Technical Assistance	Building Resilient Infrastructure and Communities (BRIC) Direct Technical Assistance (DTA) gives full support to communities that may not have the resources to begin climate resilience planning and project solution design on their own. Through process-oriented, hands-on support, BRIC DTA will work to enhance a community's capacity to design holistic, equitable climate adaptation solutions that advance numerous community-driven objectives. For more information, refer to the BRIC Direct Technical Assistance webpage.	Communities can send a request through an online submission form found here.

Risk and Priority Assessment & Funding Opportunities and Best Practices

- Assistance need: In 2016, Hurricane Matthew - a major flooding in eastern North Carolina - dumped a large amount of rainfall shortly on top of a large rainfall event that occurred the week before. The most severe flooding experienced took place in Fayetteville (Cumberland County) and Lumberton (Robeson County). The State (North Carolina) and the affected communities sought assistance to organize post-Matthew resilient redevelopment planning and grant identification in the area.
- About the assistance: Assistance included multiple engagements with key officials and the general public as well as identification and basic scoping of mitigation project ideas that could be funded with post-disaster funding. In each county, the planning team led a series of six meetings (three with local c identify any unme mitigation project specific locations storm. These high
- Results: The resu needs and provid several of which Development.

Risk and Priority Assessment & Funding Opportunities and Best Practices

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- About the assistance: Assistance included multiple engagements with key officials and the general public as well as identification and basic scoping of mitigation project ideas that could be funded with post-disaster funding. In each county, the planning team led a series of six meetings (three with local officials and three with the public) to determine major impacts from the storm, identify any unmet needs that still existed several months after the event, and develop a set of mitigation projects. During these meetings, planners used an online ArcGIS portal to identify specific locations where impacts had occurred and to discuss details of what occurred during the storm. These high impact areas became the basis to propose potential projects.
- Results: The resulting plans mobilized the communities to prioritize their greatest mitigation needs and provided the needed elements to begin preparation of mitigation grant applications, several of which were submitted to FEMA and later Department of Housing and Urban Development.

Implementation Plan Update

Funding Opportunities

Table 136. Sources of Potential Funding

Name	Source	Funding Type	Maximum Funding	Local Cost Share	URL
Hazard Mitigation Grant Program (HMGP)	FEMA	Grant	---	25%	Webpage
Building Resilient Infrastructure and Communities (BRIC)	FEMA	Grant	$2 million (state set-aside) or … million (national competiti…	25%	Webpage
Flood Mitigation Assistance (FMA) Program	FEMA	Grant	$25,000 (planning… $50,000 technical assistanc… $900,000 project scoping; …		

Prince George's County and the City of Laurel Hazard Mitigation Plan
Annual Progress Report

Reporting Period

The reporting period for this progress report is _____(date) through _____(date).

Background

This is an annual update of the Prince George's County and the City of Laurel Hazard Mitigation Plan. This update also meets annual certification requirements for Prince George's County floodplain management and Community Rating System (CRS) program.

Prince George's County and the City of Laurel developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a …e. To prepare the plan, the County, City, and participating …ces, assessed risks from natural hazards within the County …ctives, reviewed mitigation alternatives, and developed an …n natural hazards. By completing this process, the County …aster Mitigation Act, achieving eligibility for mitigation grant …bert T. Stafford Act.

…Progress

…d Mitigation Plan became effective on _____, 2023. …The initial performance period for this plan will be 5 years, …ur before _____, 2028. As of this reporting period, the …ed to be ____% complete. The Hazard Mitigation Plan has …nce George's County and 14 hazard mitigation actions for the …ar performance period. As of the reporting period, the

…rted ongoing action toward completion.
… reported as being complete.
…rted no action taken.

Review of Mitigation Actions

Table 2 and **Table 3** review the mitigation actions from the Hazard Mitigation Plan for Prince George's County and the City of Laurel, reporting the status of each action. Reviewers of this report should refer to the Hazard Mitigation Plan for more detailed descriptions of each action and the prioritization process.

- Plan 2035 Prince George's Elements integrated policies are shown in orange.
- Climate Action Plan Priority Recommendations are shown in green.

Address the following in the "Comments" column of the following table:

- Was any element of the action carried out during the reporting period?
- If no action was completed, why?
- Is the timeline for implementation for the action still appropriate?
- If the action was completed, does it need to be changed or removed from the action plan?

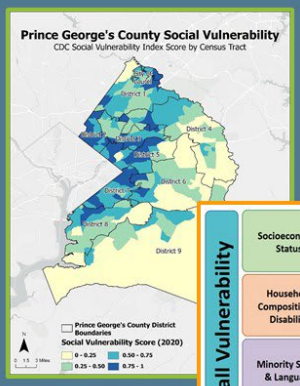
Table 2: Prince George's County 2023-2028 Mitigation Actions Status Report

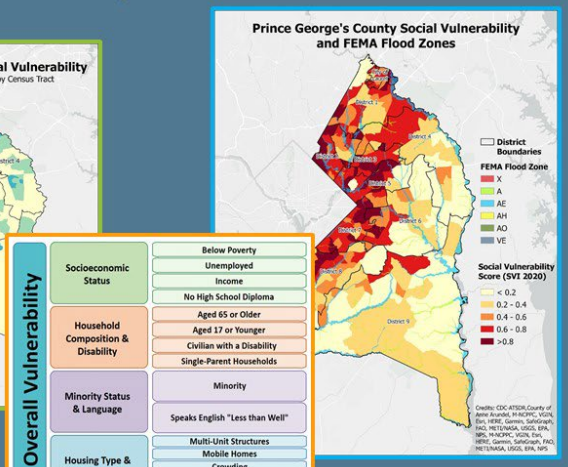
Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	Prevention					
PG-1	Partner with federal agencies, the state, and NGOs to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the County and municipalities.	Office of Emergency Management	Ongoing	Medium		
PG-2	Using the best available data, check the locations of HazMat sites, National Pollutant Discharge Elimination System sites, and other land uses; if found to be in flood hazard areas, communicate with the owner/handler of	Department of Environment	Short-term	Medium		

FEMA HMA Program Tailoring

Social Vulnerability, Plan Integration & Community Lifelines

- Social vulnerability (BRIC/FMA)
  - CDC Social Vulnerability Index (SVI) 2020 data
  - Each census tract is ranked by 15 social factors that are grouped into four related themes to show overall vulnerability
- Plan integration (HMGP, BRIC, FMA)
- Community lifelines (BRIC)



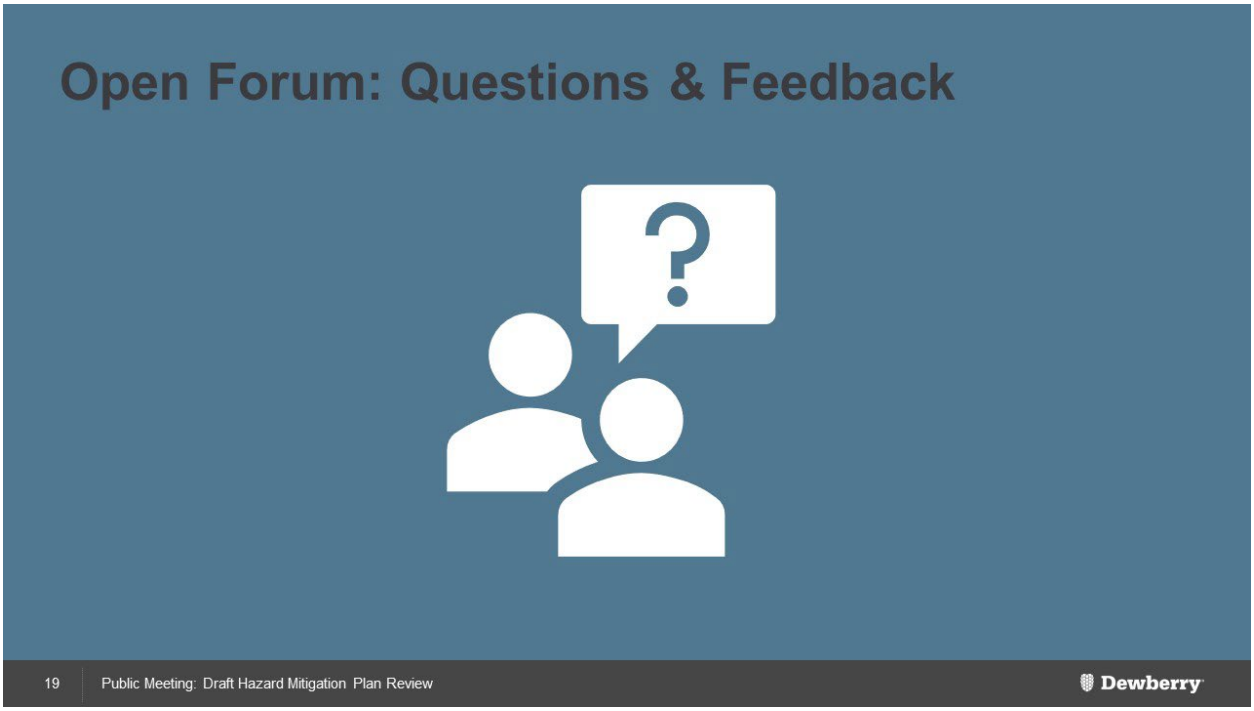


Final Public Input Opportunity

Draft Plan Review Survey

Last chance to take the draft plan review survey:
https://www.surveymonkey.com/r/NBHDW9K

Please submit survey by
Sunday, 2/5 at 11:59 pm


Open Forum: Questions & Feedback
19
Public Meeting: Draft Hazard Mitigation Plan Review
Dewberry

C.2. Agenda

Dewberry

Prince Georges Proud

Public Meeting Agenda

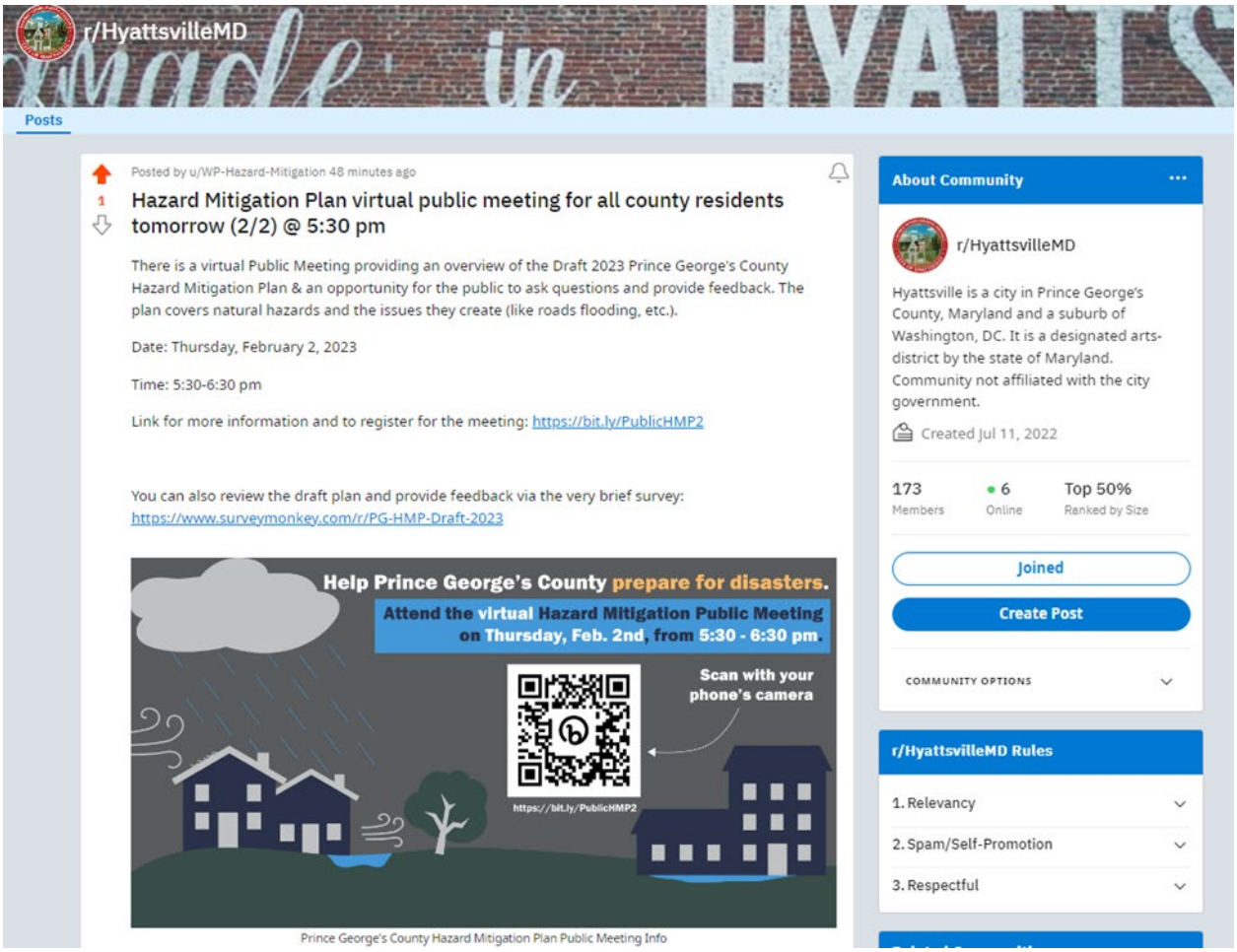
Title:	Prince George's County Hazard Mitigation Plan Update – **Public Meeting #2**	Location:	Microsoft Teams (Virtual) Register Here: https://bit.ly/PublicHMP2
Date:	Thursday, February 2nd, 2023	Time:	5:30 – 6:30 pm ET
Purpose:	Dewberry will provide an overview of the 2023 Draft Hazard Mitigation Plan, highlighting the new sections added to the 2023 Plan. There will be a discussion to gather feedback from the public on the Draft Plan. The meeting will close with next steps and questions.		

Agenda Items

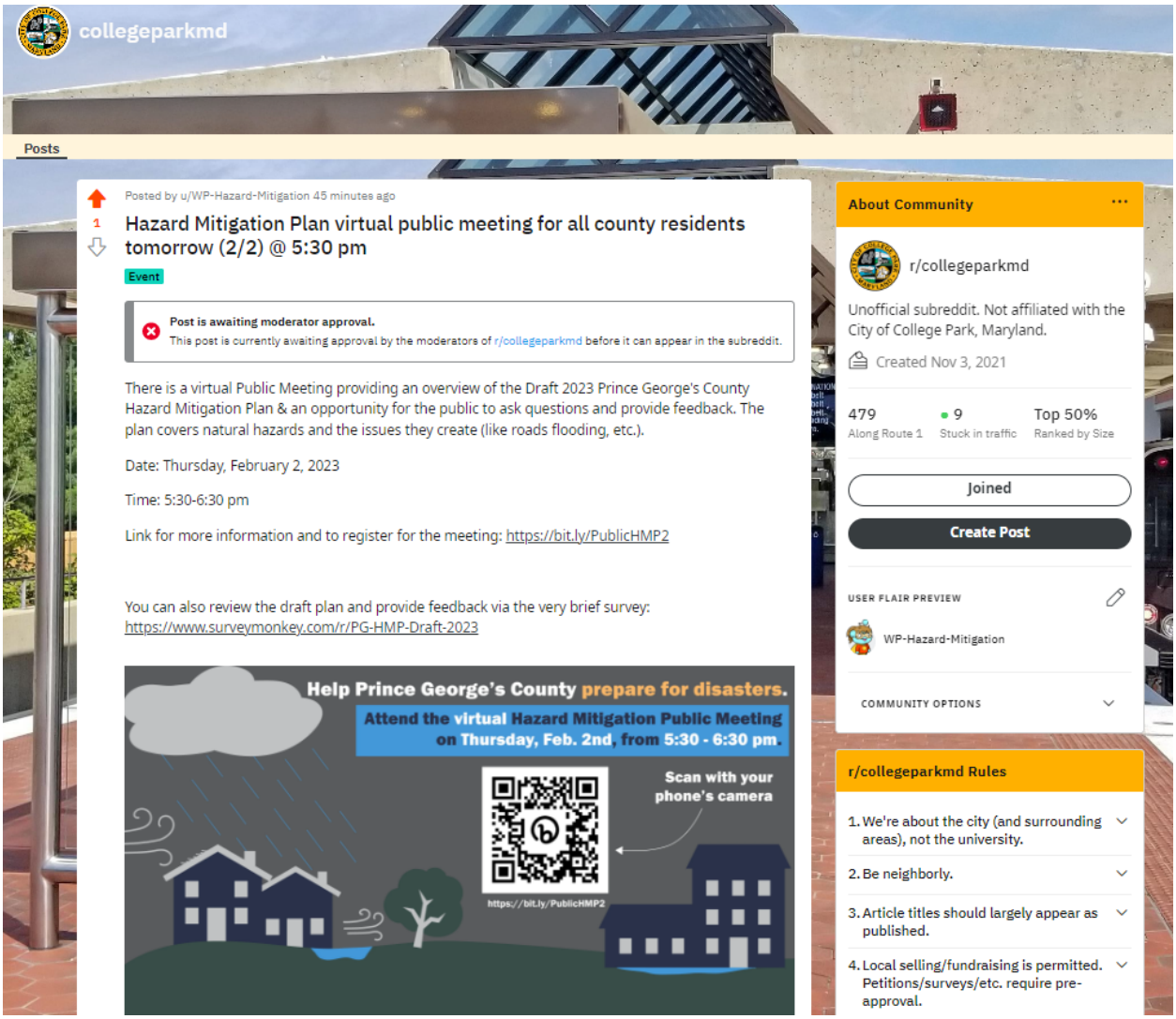
Topic	Presenter	Time
Welcome and Opening Remarks	Prince George's County Representative	5:30 – 5:35 pm
Hazard Mitigation Plan Overview - What is hazard mitigation? - What is the plan's purpose?	Scott Choquette, Dewberry	5:35 – 5:40 pm
Draft Plan Review - New Plan Highlights - Draft Plan Review Survey Results	Jade Payne, Dewberry	5:40 – 5:55 pm
Next Steps - MDEM & FEMA Review - Adoption by City and County	Scott Choquette, Dewberry	5:55 – 6:00 pm
Open Forum - Questions, comments, and input from members of the public	Jade Payne, Dewberry	6:00 – 6:30 pm

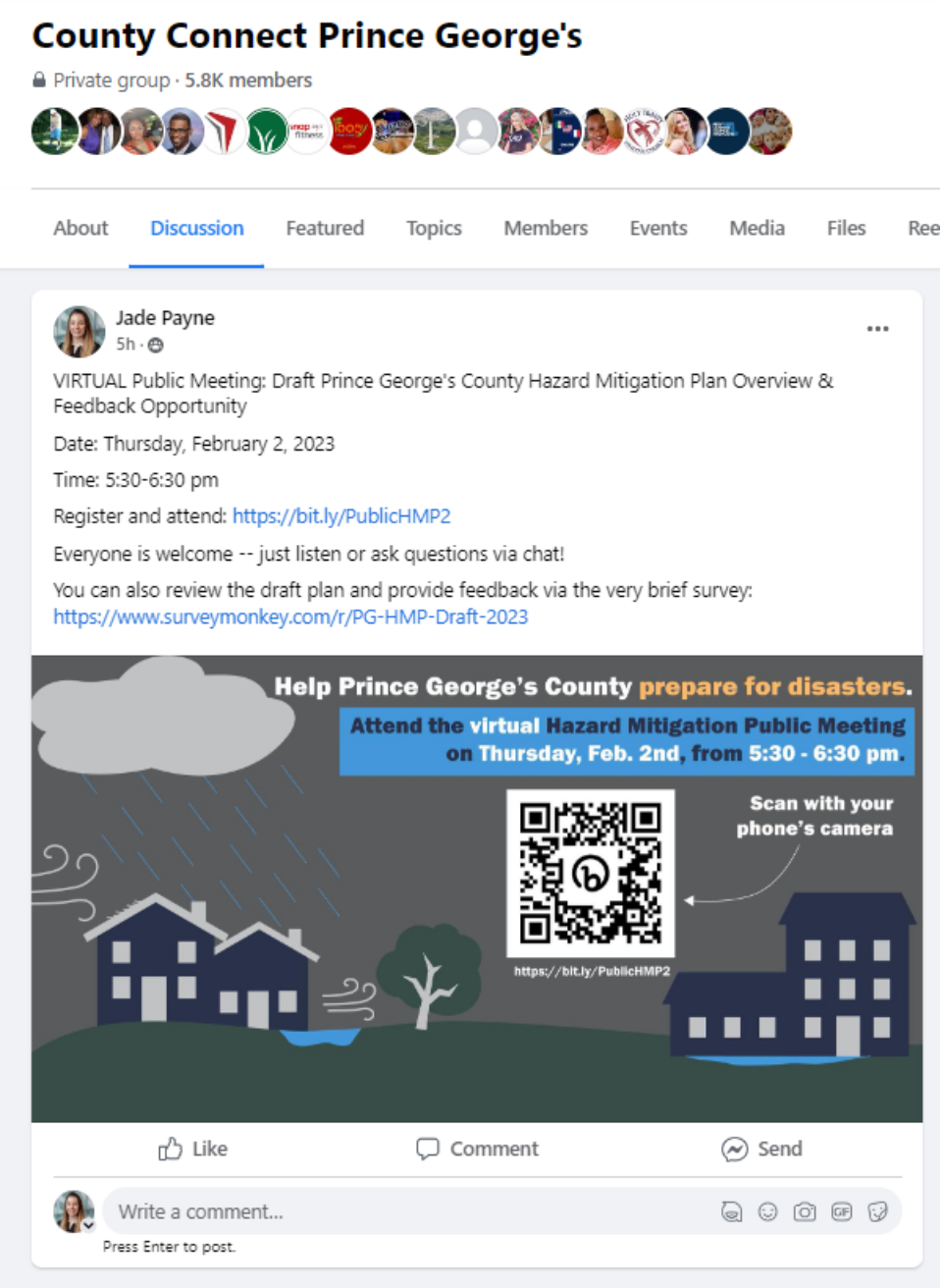
Prince George's County Hazard Mitigation Plan – 2023 Update 1

C.3. Advertisements



Prince George's County Hazard Mitigation Plan Public Meeting Info


collegeparkmd
Posts
Posted by u/WP-Hazard-Mitigation 45 minutes ago
Hazard Mitigation Plan virtual public meeting for all county residents tomorrow (2/2) @ 5:30 pm
Event
Post is awaiting moderator approval.
This post is currently awaiting approval by the moderators of r/collegeparkmd before it can appear in the subreddit.
There is a virtual Public Meeting providing an overview of the Draft 2023 Prince George's County Hazard Mitigation Plan & an opportunity for the public to ask questions and provide feedback. The plan covers natural hazards and the issues they create (like roads flooding, etc.).
Date: Thursday, February 2, 2023
Time: 5:30-6:30 pm
Link for more information and to register for the meeting: https://bit.ly/PublicHMP2
You can also review the draft plan and provide feedback via the very brief survey: https://www.surveymonkey.com/r/PG-HMP-Draft-2023
Help Prince George's County prepare for disasters.
Attend the virtual Hazard Mitigation Public Meeting on Thursday, Feb. 2nd, from 5:30 - 6:30 pm.
Scan with your phone's camera
https://bit.ly/PublicHMP2
About Community
r/collegeparkmd
Unofficial subreddit. Not affiliated with the City of College Park, Maryland.
Created Nov 3, 2021
479
Along Route 1
9
Stuck in traffic
Top 50%
Ranked by Size
Joined
Create Post
USER FLAIR PREVIEW
WP-Hazard-Mitigation
COMMUNITY OPTIONS
r/collegeparkmd Rules
1. We're about the city (and surrounding areas), not the university.
2. Be neighborly.
3. Article titles should largely appear as published.
4. Local selling/fundraising is permitted. Petitions/surveys/etc. require pre-approval.


County Connect Prince George's
Private group · 5.8K members
About
Discussion
Featured
Topics
Members
Events
Media
Files
Ree
Jade Payne
5h ·
VIRTUAL Public Meeting: Draft Prince George's County Hazard Mitigation Plan Overview & Feedback Opportunity
Date: Thursday, February 2, 2023
Time: 5:30-6:30 pm
Register and attend: https://bit.ly/PublicHMP2
Everyone is welcome -- just listen or ask questions via chat!
You can also review the draft plan and provide feedback via the very brief survey: https://www.surveymonkey.com/r/PG-HMP-Draft-2023
Help Prince George's County prepare for disasters.
Attend the virtual Hazard Mitigation Public Meeting on Thursday, Feb. 2nd, from 5:30 - 6:30 pm.
Scan with your phone's camera
https://bit.ly/PublicHMP2
Like
Comment
Send
Write a comment...
Press Enter to post.

r/PrinceGeorgesCountyMD

Posts

Posted by u/WP-Hazard-Mitigation Hyattsville 47 minutes ago

1

Hazard Mitigation Plan virtual public meeting for all county residents tomorrow (2/2) @ 5:30 pm

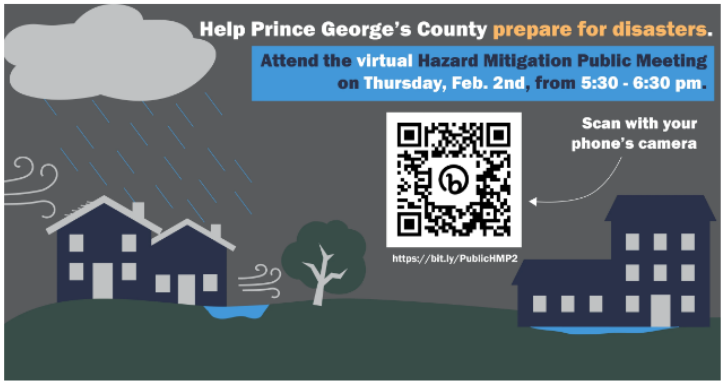
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Prince George's County Hazard Mitigation Plan Public Meeting Info

About Community

r/PrinceGeorgesCountyMD

Welcome to PrinceGeorgesCountyMD

Created May 17, 2012

2.6k Members

6 Online

Joined

Create Post

USER FLAIR PREVIEW

WP-Hazard-Mitigation Hyattsville

COMMUNITY OPTIONS

r/PrinceGeorgesCountyMD Rules

1. Relevant to the region
2. No advertising/buying/selling/job/solicitation/surveys
3. Be civil

From: [redacted]
To: Undisclosed Recipient; [redacted]
Bcc: [redacted]
Subject: Virtual Prince George's County Public Meeting Today!
Date: Thursday, February 2, 2023 12:50:00 PM
Attachments: image012.png

Good afternoon,

My name is Jade Payne, and I am working with Prince George's County and the City of Laurel during the update of their Hazard Mitigation Plan. You are receiving this email because you are listed as the main point-of-contact for a homeowner, civic association, or community group on the Prince George's County website. As a member of one of these groups, you are in a wonderful position to share important information with your fellow community members. I am sharing the below information with you in the hopes that you can participate yourself, as well as share the information with others.

There are two opportunities to participate in the Hazard Mitigation Plan update process before the plan is finalized:

1. Register and attend (https://bit.ly/PublicHMP2) the Virtual Draft Hazard Mitigation Plan Review Public Meeting **today, Thursday, February 2nd, 2023, from 5:30-6:30 pm**. The meeting will include an overview of the draft plan and an opportunity to ask questions and provide feedback.
2. Review the draft plan and provide feedback via a brief draft plan survey (https://www.surveymonkey.com/r/PG-HMP-Draft-2023).

Participating in both is encouraged! For more information, visit the Prince George's County Hazard Mitigation Plan website.



Please reach out to me if you have any questions in the meantime.

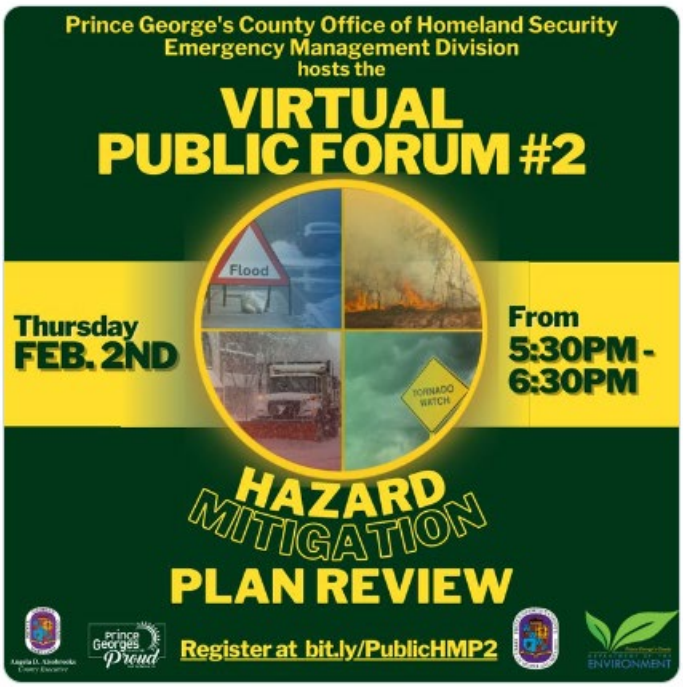
Thank you,

Jade Payne
Working on behalf of Prince George's County

← **Tweet**

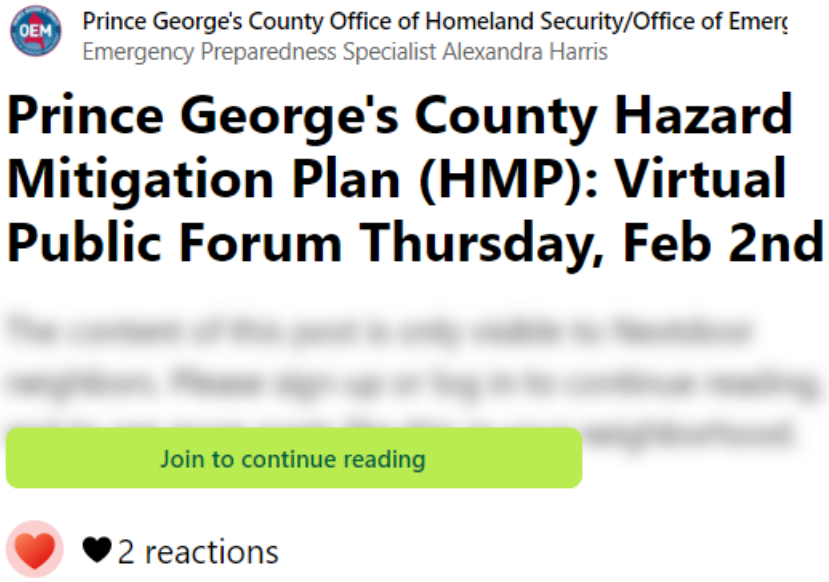
PG County Office of Emergency Management
@PGCountyOEM

On Thurs, Feb 2nd at 5:30pm, @PGCountyOEM and @PGCSprout will be hosting the 2nd Virtual Public Forum for County residents! During this forum we will review the updated 2023 Draft Hazard Mitigation Plan and seek input from residents.
To Register: bit.ly/PublicHMP2



9:10 AM · Jan 27, 2023 · **266** Views

3 Retweets **1** Like



Prince George's County Office of Homeland Security/Office of Emerg
Emergency Preparedness Specialist Alexandra Harris

Prince George's County Hazard Mitigation Plan (HMP): Virtual Public Forum Thursday, Feb 2nd

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Join to continue reading

2 reactions

RPS Planners_Prince George's County Hazard Mitigation Plan Update_Public Meeting_ Neighboring Jurisdictions



Gooding, Shelly S. <SSGooding@co.pg.md.us> Today at 10:23 AM

Cc: Bahador, Ehsan; Henderson, Joey L.

Bcc: Adams, Elizabeth (VDEM); Alex Horne; Alex Weston; Amelia Gagnon; Andrew Irvine; christopher.wise1@maryland.gov; Daniel Ruiz; Eli Russ; Elizabeth Moore; English, Walter; Erin De Luca; Gill, Ronald E.; Harrison Brown -MDEM-; [redacted] Kevin Coleman; Marquis, Matthew C.; Matthew Smith -MDEM-; Patrick Fleming; Worrell, Andrew (HSEMA); Myers, Kelly; Coutroulis, Alec (HSEMA); Barbara Hunsberger; Jess Sadick; Holly Fuller; Lee, Michelle (HSEMA)

Good morning,

Please find the email below from Ehsan Bahador. Kindly direct any responses to Mr. Bahador (cc'd on this email).

Kindly,

Shelly Gooding

We are finalizing our HMP and will have our last public meeting. We need to show that our neighboring jurisdictions (i.e., neighboring counties' emergency management/environment offices) have been engaged via email – *Some state/FEMA reviewers will require this!*

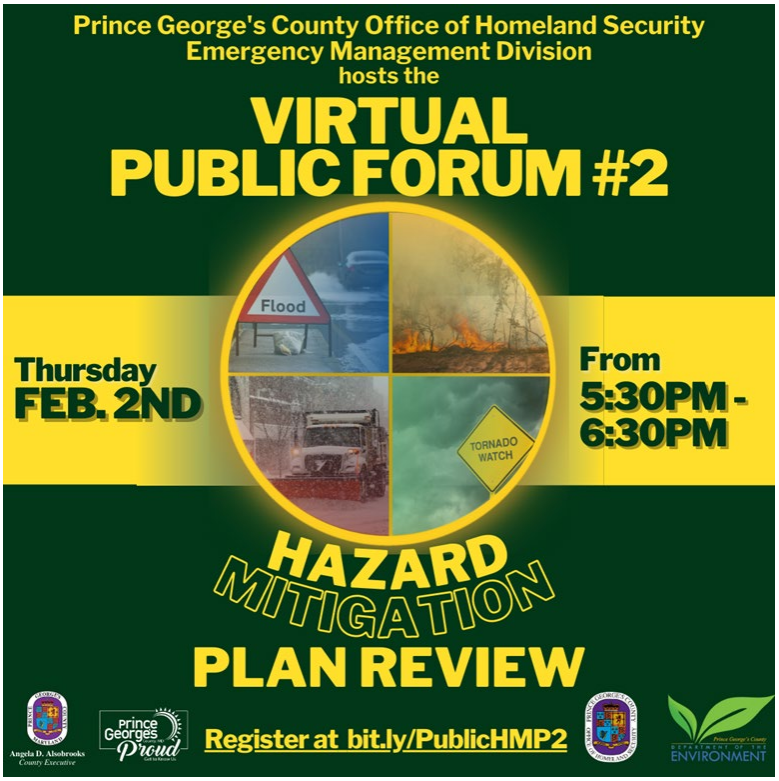
Event Title: Public Meeting: Prince George's County and the City of Laurel Draft Hazard Mitigation Plan Review
Subheading: An opportunity for the Prince George's County and City of Laurel public to ask questions or provide feedback on the Draft 2023 Hazard Mitigation Plan update
Date: Thursday, February 2nd, 2023
Time: 5:30 – 6:30 pm
About this Event:
This meeting will provide an overview of the updated 2023 Draft Hazard Mitigation Plan and allow members of the public to ask questions and give feedback on the Draft Plan. The Draft Plan is available for review before the meeting on the County's Hazard Mitigation Plan webpage. A feedback survey is also available for those that would like to submit their comments and questions in advance or cannot attend the meeting.

About the Hazard Mitigation Plan Update:
Every five years, Prince George's County and the City of Laurel update their Hazard Mitigation Plan. The County is currently leading a plan update for 2023.
The Hazard Mitigation Plan update is meant to guide the actions that Prince George's County, the City of Laurel, and other incorporated municipalities will take to reduce risk from disasters over the next five years and beyond. This plan assesses natural hazards that can impact the County and develops a strategy to reduce hazard impacts and build resilience. It integrates with new and existing plans, building and zoning regulations, and environmental projects.
During this update, the plan took a much closer look at how future climate conditions will impact the hazards and how equity could be further elevated and integrated into the mitigation strategy. These additional focus areas will make sure that Prince George's County and the City of Laurel responsibly and equitably plan actions and projects that will effectively mitigate risk from natural hazards for many years to come, especially for those most vulnerable to their impacts.

Meeting Link: https://bit.ly/PublicMeetingHMP2023
Meeting ID: 234 450 078 526
Meeting Passcode: pp5T8K
Call in Information (Audio Only): +1 571-360-4685,,703631473# (Phone Conference ID: 703 631 473#)

Thank you,
Ehsan

==========
Ehsan Bahador, MPS
Emergency Management Specialist


Prince George's County Office of Homeland Security
Emergency Management Division
hosts the
VIRTUAL
PUBLIC FORUM #2
Flood
TORNADO WATCH
Thursday
FEB. 2ND
From
5:30PM -
6:30PM
HAZARD
MITIGATION
PLAN REVIEW
Register at bit.ly/PublicHMP2
Angela D. Alsobrooks
County Executive
Prince Georges Proud
ENVIRONMENT


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PLAN REVIEW
Register at bit.ly/PublicHMP2
pgcountyoem • Follow
Prince George's County, Maryland
pgcountyoem The Office of Homeland Security (OHS), in collaboration with the Department of Environment (DoE), will host the second Virtual Public Forum for County residents on Thursday, February 2nd from 5:30pm-6:30pm.
During this forum, we will provide an overview of the updated 2023 Draft Hazard Mitigation Plan and allow members of the public to ask questions and give feedback on the Draft Hazard Mitigation Plan.
To register visit, bit.ly/PublicHMP2
#CreatingResilientCommunities
#PreparePrinceGeorges
#HazardMitigation
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Thursday
FEB. 2ND
From
5:30PM -
6:30PM
HAZARD
MITIGATION
PLAN REVIEW
Register at bit.ly/PublicHMP2
Prince George's County Office of Emergency Management
January 27 at 9:13 AM
The Office of Homeland Security (OHS), in collaboration with the Department of Environment (DoE), will host the second Virtual Public Forum for County residents on Thursday, February 2nd from 5:30pm-6:30pm.
During this forum, we will provide an overview of the updated 2023 Draft Hazard Mitigation Plan and allow members of the public to ask questions and give feedback on the Draft Hazard Mitigation Plan.
To register visit, bit.ly/PublicHMP2
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Subject: Prince George"s County Hazard Mitigation Plan (HMP): Virtual Public Forum Thursday, Feb 2nd
Attachments: image001.png
image002.png
HMP Forum Flyer (2).png

Good Morning Municipal Partners,

As you all are aware, the Prince George's County Office of Homeland Security/Emergency Management Division (OHS/EMD) is in the process of updating the County Hazard Mitigation Plan (HMP). We are continuing to make our way through the process of updating the HMP, we are hosting a second Virtual Public Forum **Thursday, February 2nd at 5:30pm** for County Residents. During this forum, our office, in collaboration with the Department of Environment, will provide an overview of the updated 2023 Draft Hazard Mitigation Plan and allow members of the public to ask questions and give feedback on the Draft Plan. The Draft Plan will be available for review before the meeting on the County's Hazard Mitigation Plan webpage, along with the feedback survey, for those that would like to submit their comments and questions in advance or cannot attend the meeting.

Residents can register for the public forum at bit.ly/PublicHMP2. For more information on Prince George's County's Hazard Mitigation Plan update, visit the OHS website.

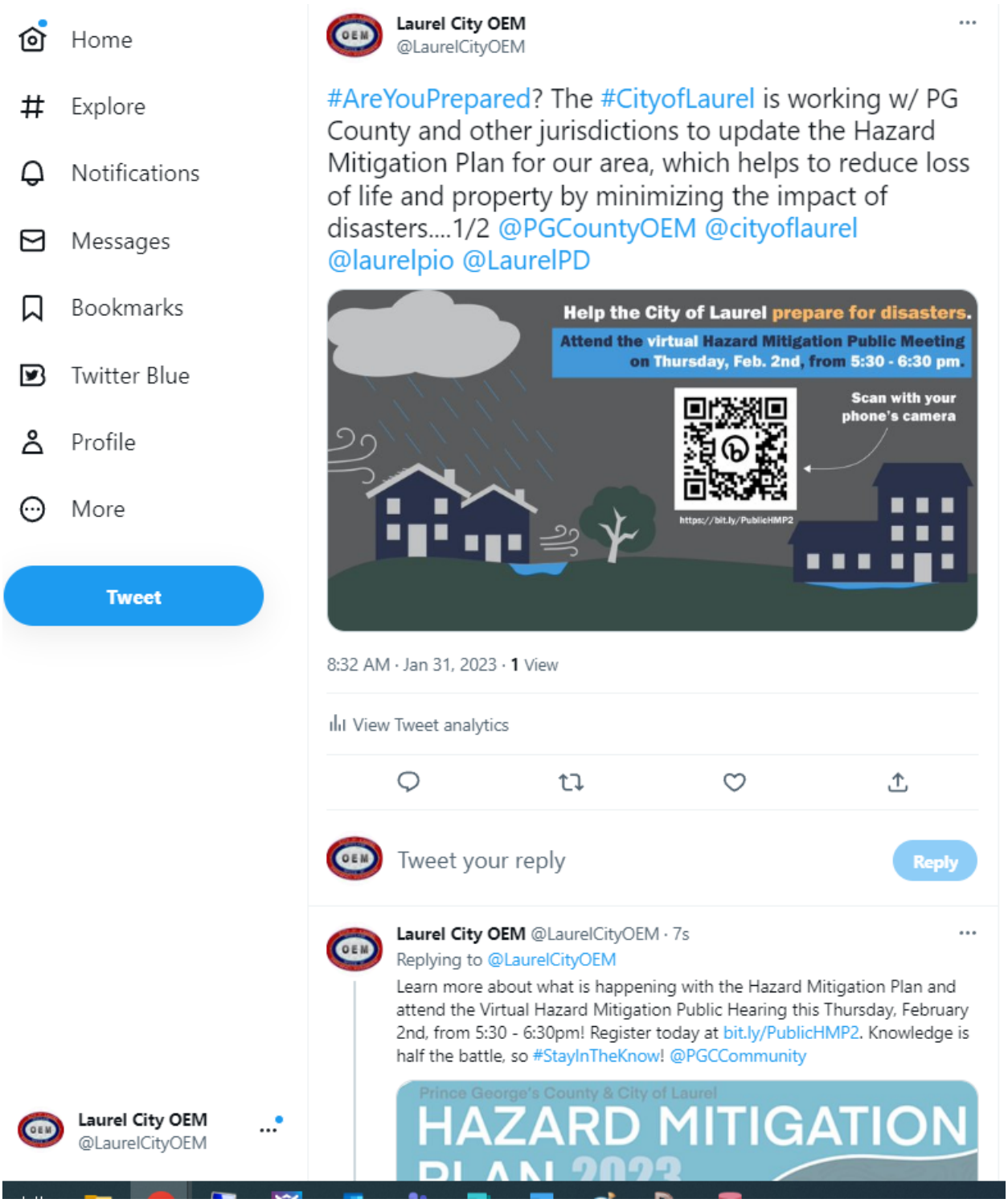
Please consider sharing this information with your constituents and residents. I have included the flyer in this email, for your convenience.

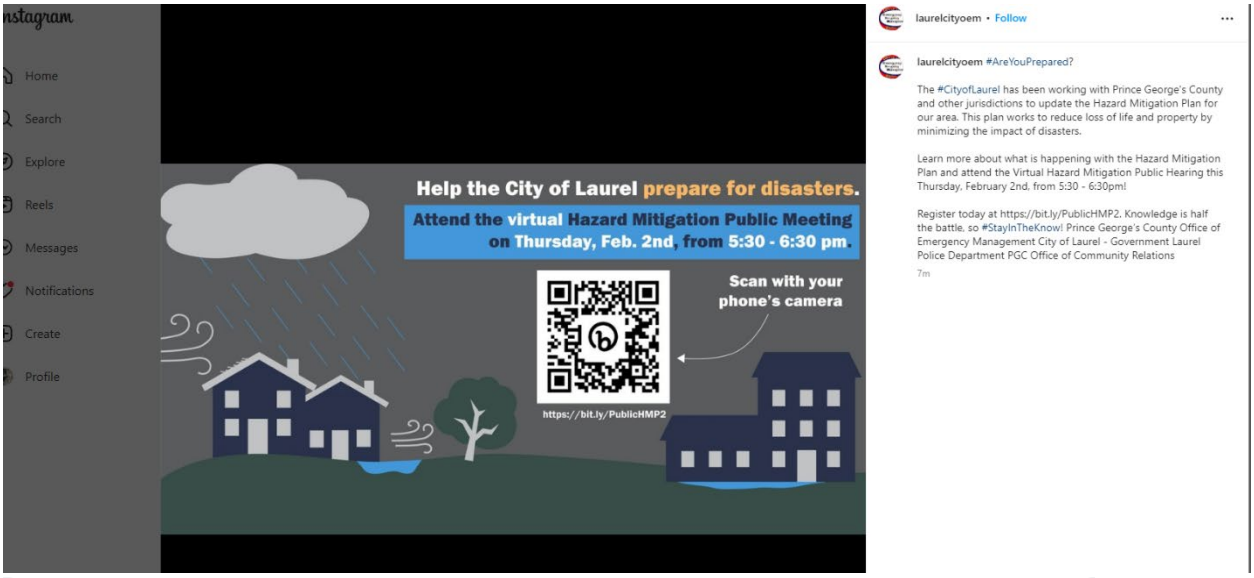
Thank you all in advance for your continued support and collaboration!

***Call-in information, in case any of the links have problems**
Join on your computer, mobile app or room device
Meeting Link: https://bit.ly/PublicMeetingHMP2023
Meeting ID: **234 450 078 526**
Meeting Passcode: **pp5T8K**
Call in Information (Audio Only): +1 571-360-4685,,703631473# (Phone Conference ID: 703 631 473#)

Kindest Regards,

Alexandra D. Harris, MS, MPH, CEM
Emergency Management Specialist
Emergency Management Division
Prince George's County Office of Homeland Security


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@LaurelCityOEM
#AreYouPrepared? The #CityofLaurel is working w/ PG County and other jurisdictions to update the Hazard Mitigation Plan for our area, which helps to reduce loss of life and property by minimizing the impact of disasters....1/2 @PGCountyOEM @cityoflaurel @laurelpio @LaurelPD
Help the City of Laurel prepare for disasters.
Attend the virtual Hazard Mitigation Public Meeting on Thursday, Feb. 2nd, from 5:30 - 6:30 pm.
Scan with your phone's camera
https://bit.ly/PublicHMP2
8:32 AM · Jan 31, 2023 · 1 View
View Tweet analytics
Tweet your reply
Reply
Laurel City OEM @LaurelCityOEM · 7s
Replying to @LaurelCityOEM
Learn more about what is happening with the Hazard Mitigation Plan and attend the Virtual Hazard Mitigation Public Hearing this Thursday, February 2nd, from 5:30 - 6:30pm! Register today at bit.ly/PublicHMP2. Knowledge is half the battle, so #StayInTheKnow! @PGCCommunity
Prince George's County & City of Laurel
HAZARD MITIGATION



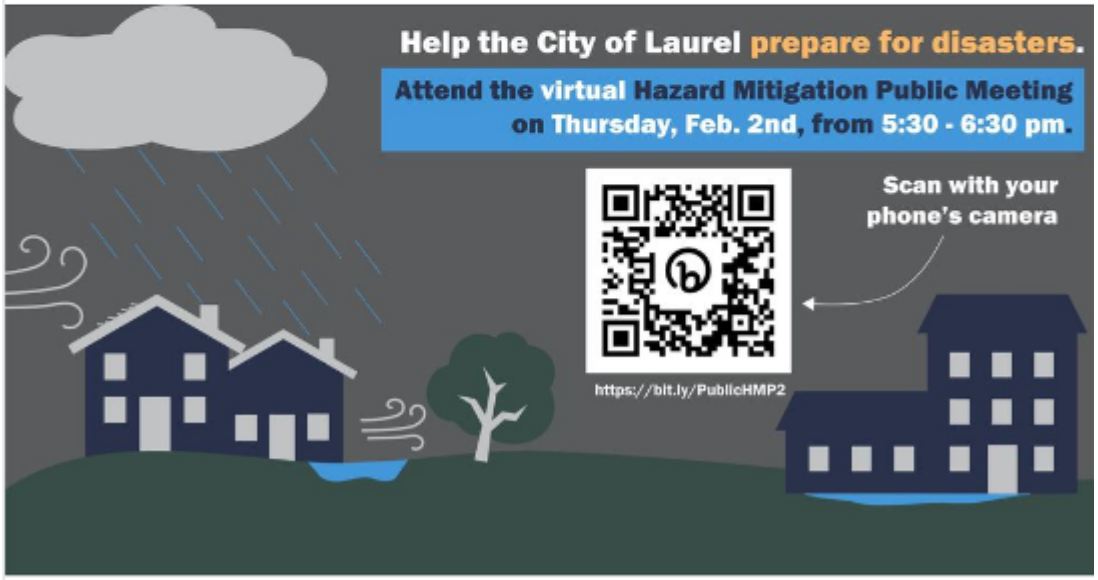
Laurel City OEM
4m ·

#AreYouPrepared?

The #CityofLaurel has been working with Prince George's County and other jurisdictions to update the Hazard Mitigation Plan for our area. This plan works to reduce loss of life and property by minimizing the impact of disasters.

Learn more about what is happening with the Hazard Mitigation Plan and attend the Virtual Hazard Mitigation Public Hearing this Thursday, February 2nd, from 5:30 - 6:30pm!

Register today at https://bit.ly/PublicHMP2. Knowledge is half the battle, so #StayInTheKnow! Prince George's County Office of Emergency Management City of Laurel - Government Laurel Police Department PGC Office of Community Relations



eventbrite Menu



Feb 02

Public Meeting #2: Prince George's County and the City of Laurel Draft HMP

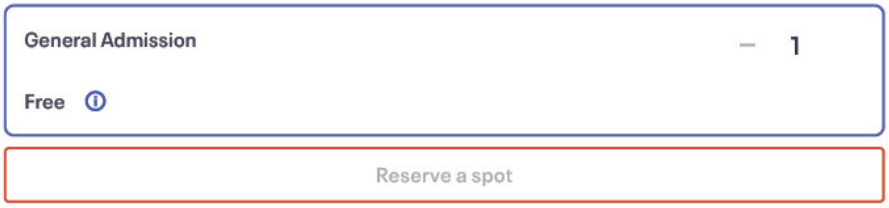
An opportunity for the Prince George's County and City of Laurel public to ask questions or provide feedback on the Draft 2023 HMP update.

By Prince George's County Office of Homeland Security 122 followers Follow

When and where

Date and time
Thu, February 2, 2023, 5:30 PM – 6:30 PM EST

Location
Online



allow members of the public to ask questions and give feedback on the Draft Plan. The Draft Plan will be available for review before the meeting on the County's Hazard Mitigation Plan webpage. A feedback survey will also be available for those that would like to submit their comments and questions in advance or cannot attend the meeting.

Tags

Online Events Online Other Online Government Other #planning

#prince_georges_county #hazard_mitigation #public_meeeting #city_of_laurel

#second_public_meeting

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Prince George's County Office of Homeland Security

Organizer of Public Meeting #2: Prince George's County and the City of Laurel Draft HMP

Follow Contact

General Admission – 1

Free

Reserve a spot



Draft Development Servicing Plans

Tue, Feb 7, 2023 1:00 AM EST

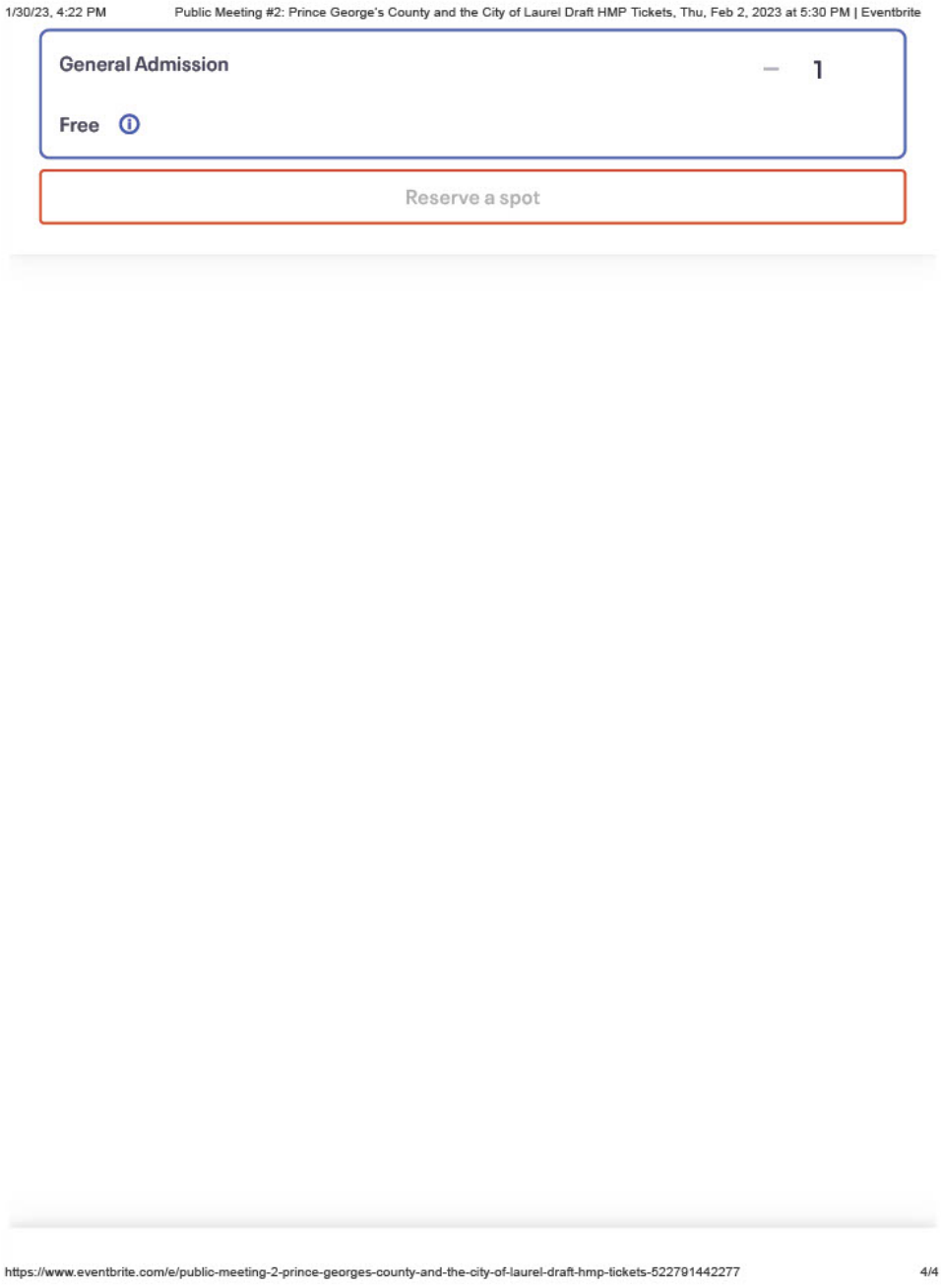
Free

Snowy Monaro Regional Council

53 followers

eventbrite + ticketfly

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1/30/23, 4:22 PM Public Meeting #2: Prince George's County and the City of Laurel Draft HMP Tickets, Thu, Feb 2, 2023 at 5:30 PM | Eventbrite
General Admission
1
Free
Reserve a spot
https://www.eventbrite.com/e/public-meeting-2-prince-georges-county-and-the-city-of-laurel-draft-hmp-tickets-522791442277 4/4

C.4. Notes

Dewberry

Prince Georges Proud

Public Meeting Notes

Title:	Prince George's County Hazard Mitigation Plan Update – **Public Meeting #2**	Location:	Microsoft Teams (Virtual) Register Here: https://bit.ly/PublicHMP2
Date:	Thursday, February 2nd, 2023	Time:	5:30 – 6:30 pm ET
Purpose:	Dewberry will provide an overview of the 2023 Draft Hazard Mitigation Plan, highlighting the new sections added to the 2023 Plan. There will be a discussion to gather feedback from the public on the Draft Plan. The meeting will close with next steps and questions.		

Attendees:

1. Christina Cornwell
2. Batten-Mickens, Meloyde R.
3. Danielle
4. Tommy Owens LARC (Guest)
5. Dr. Toye Y. Latimore (Guest)
6. Head, Cynthia
7. Bahador, Ehsan
8. Bannerman, Erica S.
9. Wells, Tyrone N.
10. Payne, Jade
11. Albert (Guest)
12. Laboy, Kristina
13. Choquette, Scott
14. Henderson, Joey L.
15. Rush, Hanna R.
16. Gosse, Courtney
17. Betty Colonomos
18. Michael Weekley (Guest)
19. Hawkins-Nixon, Dawn
20. Jodie Kulpa-Eddy

Meeting Summary

Scott Choquette (Project Manager, Dewberry) and Jade Payne (Deputy Project Manager, Dewberry) met with the public on February 2, 2023, to review the 2023 Draft Hazard Mitigation Plan. A PowerPoint presentation was used to review the project status, review the Draft plan, and next steps for the project. Discussions were held throughout the presentation so Dewberry could gather feedback from the public. Discussion and presentation topics are grouped below with input and questions from the public.

Meeting Notes

Introduction

- Scott introduced the Dewberry team and gave an overview of the agenda

Hazard Mitigation Plan Overview

- Scott explained hazard mitigation and Hazard Mitigation Plans
- Scott gave examples of hazard mitigation actions that can be informed by hazard mitigation plans (ex: retrofitting a building, land use policies)

Dewberry

- Scott explained the purposes of having a hazard mitigation plan: including informing budgeting, promoting data sharing between levels of government, increases resilience, decreases damage to people & structures, allows for access to grant funding

Draft Plan Review

- Jade explained the new addition of future planning regarding population, which incorporates population estimates for the future in the County
- Jade explained the new addition of future planning regarding future development, which uses the Prince George's County Plan 2035 future growth areas and overlays with hazard areas to determine hot spot areas
- Jade explained the new addition of future planning regarding climate, which is a new requirement of FEMA
- Jade discussed the new additions to the HIRA section of the Plan, including Hazus-MH analyses, which were not used in previous plans
- Other new additions to the HIRA section included a new Hazard Risk Index Score, new maps & analyses
- Jade explained the updates to the Mitigation Strategies for this Plan update, as well as the update of creating four new goals for the Mitigation Strategies
- Jade discussed the additions to the Implementation Plan, highlighting a Technical Assistance section with common Technical Assistance programs and contact information for applying for Assistance
- An additional addition to the Implementation Plan includes a Funding Opportunities section, which shows the funding organization, and funding type, and other relevant details
- Jade explained how the elements of the Plan align with FEMA grant programs to allow for the County and City to more easily apply for grant funding (ex: social vulnerability data, plan integration, FEMA Community Lifelines)

Next Steps

- Scott explained the timeline for the project going forward, from MDEM/FEMA review to Plan adoption by the County & City
- Scott explained that the Draft Plan is available for review from the public now, and the Draft Review Survey is available until Sunday 2/5/23

Open Forum

- Betty Colonomos mentioned that she lives in an older neighborhood (in College Park), and they have an inordinate amount of flooding during storms due to an old sewer/drainage system, as well as a lot of wind damage due to downed trees. She asked if there's anything that each City could do to improve stormwater management?
- Scott replied that lately, due to climate change, there have been more frequent high intensity rainfall events causing stormwater flooding, so this is a common problem. There is a Mitigation Strategy within the Plan to use funding to identify the problem areas for stormwater flooding within the County, and the County could use this research to apply for grant funding to complete stormwater system improvements to reduce flooding. Wind damage may be more difficult for the County to address, as tree trimming is typically completed by utility companies.
- Jodie Kulpa-Eddy asked if the presentation will be available after the meeting.
- Jade replied that the presentation will be posted on the Hazard Mitigation Youtube page, and the slides may be accessed from the County's Office of Homeland Security website.

C.5. Attendance

1. Summary

Meeting title	Public Meeting: Prince George's County & City of Laurel 2023 Hazard Mitigation Plan Draft Review
Attended	20
Start time	2/2/23, 5:11:29 PM
End time	2/2/23, 6:25:22 PM
Meeting duration	1h 13m 53s
Average attendance time	32m 7s

2. Participants

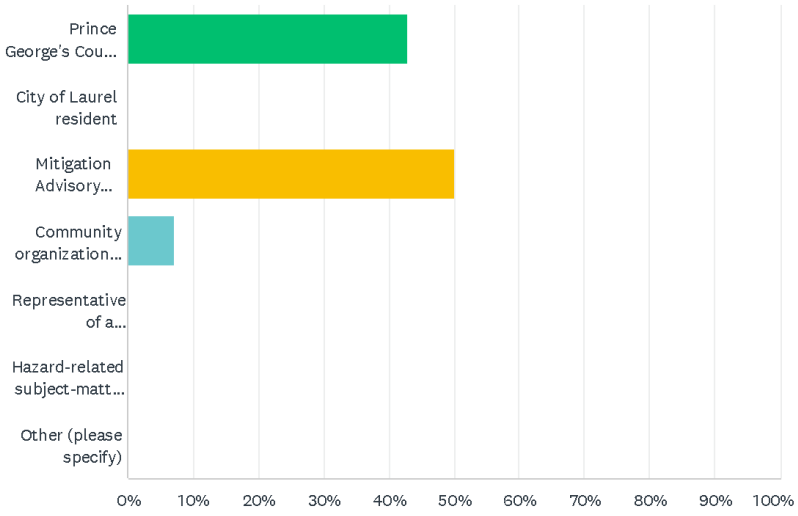
Name	First join	In-meeting d	Email
Christina Cornwell	2/2/23, 5:27:48 PM	34m 6s	[redacted]
Batten-Mickens, Meloyde R.	2/2/23, 5:27:49 PM	34m 12s	
Danielle	2/2/23, 5:27:49 PM	57m 32s	
Tommy Owens LARC (Guest)	2/2/23, 5:27:50 PM	34m 1s	
Dr. Toye Y. Latimore (Guest)	2/2/23, 5:27:50 PM	34m 51s	
Head, Cynthia	2/2/23, 5:27:50 PM	29m 36s	[redacted]
Bahador, Ehsan	2/2/23, 5:27:50 PM	34m 13s	
Bannerman, Erica S.	2/2/23, 5:27:51 PM	34m 5s	
Wells, Tyrone N.	2/2/23, 5:29:03 PM	20m 24s	
Payne, Jade	2/2/23, 5:29:04 PM	33m 10s	
albert (Guest)	2/2/23, 5:29:26 PM	32m 56s	
Laboy, Kristina	2/2/23, 5:29:55 PM	32m 8s	[redacted]
Choquette, Scott	2/2/23, 5:29:58 PM	32m	
Henderson, Joey L.	2/2/23, 5:30:03 PM	31m 53s	
Rush, Hanna R.	2/2/23, 5:30:34 PM	31m 22s	
Gosse, Courtney	2/2/23, 5:30:49 PM	31m 3s	
Betty Colonomos	2/2/23, 5:32:07 PM	29m 59s	
Michael Weekley (Guest)	2/2/23, 5:33:33 PM	28m 28s	
Hawkins-Nixon, Dawn	2/2/23, 5:35:00 PM	26m 57s	[redacted]
Jodie Kulpa-Eddy	2/2/23, 5:42:36 PM	19m 21s	[redacted]

D. Public Draft Plan Review Survey

2023 DRAFT Hazard Mitigation Plan Review

Q1 Which most specifically describes you?

Answered: 14 Skipped: 0



ANSWER CHOICES	RESPONSES	
Prince George's County resident	42.86%	6
City of Laurel resident	0.00%	0
Mitigation Advisory Committee member	50.00%	7
Community organization representative	7.14%	1
Representative of a neighboring jurisdiction	0.00%	0
Hazard-related subject-matter expert	0.00%	0
Other (please specify)	0.00%	0
TOTAL		14

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

2023 DRAFT Hazard Mitigation Plan Review

Q2 What is your name?

Answered: 11 Skipped: 3

#	RESPONSES	DATE
1	Courtney Gosse	2/5/2023 11:40 PM
2	Dawn Hawkins-Nixon	2/5/2023 11:40 PM
3	Michael Weekley	2/4/2023 9:14 PM
4	Amanda Townsend	2/2/2023 9:36 AM
5	Dr. Toye Y Latimore	2/1/2023 8:28 PM
6	Dawn Hawkins-Nixon	2/1/2023 4:02 PM
7	Stephanie Robinson	1/24/2023 8:31 AM
8	Meloyde R. Batten-Mickens (Prince George's County OHS/EM)	1/20/2023 5:57 PM
9	Mel Batten-Mickens (Prince George's County OHS/EM)	1/18/2023 5:17 PM
10	Erin Meyer	1/13/2023 2:40 PM
11	Dr. Toye Latimore	1/13/2023 10:49 AM

2023 DRAFT Hazard Mitigation Plan Review

Q3 What is the name of your organization (if applicable)?

Answered: 1 Skipped: 13

#	RESPONSES	DATE
1	American Red Cross	2/5/2023 11:43 PM

2023 DRAFT Hazard Mitigation Plan Review

Q4 If you have information/a tool in a document you'd like to share with the County and/or City to help their hazard mitigation efforts, please upload it here. (Note: there will be an opportunity to upload a document with draft plan feedback later in the survey, if needed)

Answered: 0 Skipped: 14

#	FILE NAME	FILE SIZE	DATE
	There are no responses.		

2023 DRAFT Hazard Mitigation Plan Review

Q5 What is your title/role (if applicable)?

Answered: 1 Skipped: 13

#	RESPONSES	DATE
1	Disaster Program Manager	2/5/2023 11:43 PM

2023 DRAFT Hazard Mitigation Plan Review

Q6 What is your area (or areas) of subject matter expertise (if applicable)?

Answered: 1 Skipped: 13

#	RESPONSES	DATE
1	Disaster Preparedness and Response in Southern Maryland	2/5/2023 11:43 PM

2023 DRAFT Hazard Mitigation Plan Review

Q7 Do you have any best practices that you believe Prince George's County would benefit from implementing?

Answered: 0 Skipped: 14

#	RESPONSES	DATE
	There are no responses.	

2023 DRAFT Hazard Mitigation Plan Review

Q8 What jurisdiction do you represent?

Answered: 0 Skipped: 14

#	RESPONSES	DATE
	There are no responses.	

2023 DRAFT Hazard Mitigation Plan Review

Q9 Would your jurisdiction be interested in collaborating with Prince George's County or City of Laurel on any hazard mitigation actions/projects?

Answered: 0 Skipped: 14

⚠ No matching responses.

ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
Potentially	0.00%	0
No	0.00%	0
Unsure/Do not know	0.00%	0
TOTAL		0

2023 DRAFT Hazard Mitigation Plan Review

Q10 What would your jurisdiction be interested in collaborating on?

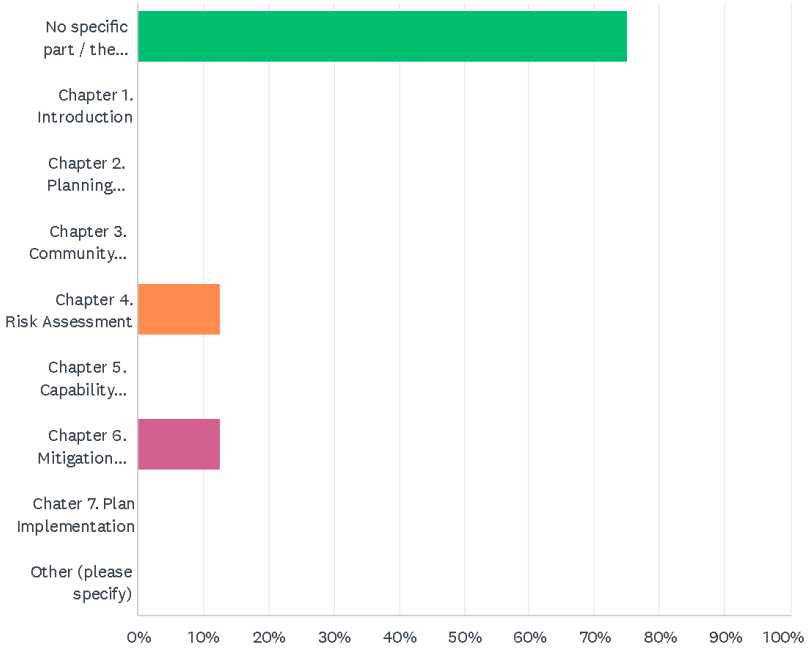
Answered: 0 Skipped: 14

#	RESPONSES	DATE
	There are no responses.	

2023 DRAFT Hazard Mitigation Plan Review

Q11 Which part of the plan are you commenting on?

Answered: 8 Skipped: 6



ANSWER CHOICES	RESPONSES	
No specific part / the entire plan	75.00%	6
Chapter 1. Introduction	0.00%	0
Chapter 2. Planning Process	0.00%	0
Chapter 3. Community Profile	0.00%	0
Chapter 4. Risk Assessment	12.50%	1
Chapter 5. Capability Assessment	0.00%	0
Chapter 6. Mitigation Strategy	12.50%	1
Chater 7. Plan Implementation	0.00%	0
Other (please specify)	0.00%	0
TOTAL		8

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

2023 DRAFT Hazard Mitigation Plan Review

Q12 What feedback/input would you like to provide?

Answered: 8 Skipped: 6

#	RESPONSES	DATE
1	Could you please change the name of the Red Cross region that is stated in the text "The National Capitol Region" (NCR) to to "The National Capitol and Greater Chesapeake Region"(NC&GCR). Also, could you change the representative/member of the Red Cross from Joseph Lenz to Courtney Gosse.	2/5/2023 11:50 PM
2	Chapter 4 provides an in-depth assessment of flood and severe weather related risks. However, I'm concerned that risk associated with heat waves might be under-estimated.	2/5/2023 11:50 PM
3	I think it is well written and thought out. Getting citizens and businesses to go along with it, especially to pay for it, will take educating them in what they may be looking at in the next twenty years, what can be done to mitigate the effects of global warming and that it will be worth the cost. One almost has to read the whole document, I did, to understand what is at stake to want to agree with it.	2/4/2023 9:18 PM
4	This was a very extensive well written plan. It provided me with knowledge in an area that I had not had an opportunity to provide input.	2/1/2023 8:30 PM
5	Happy to see flooding addressed, my street floods every time there is a big storm. Hopefully this plan will help flood mitigation in the County	2/1/2023 2:46 PM
6	See attached document, thank you!	1/24/2023 10:17 AM
7	Very organized and detailed plan. Kudos the team to present this valuable content in an informative and thorough manner. - While MDEM is noted in the abbreviations, please check the content for a few instances to replace Maryland Emergency Management Agency with Maryland Department of Emergency Management - Consideration to add Hazus-MH to the abbreviations section - the survey qstn #6 denotes 2022 draft plan, should be 2023 draft plan - page 28 is missing the stakeholder groups. I suspect since this was highlighted the content will be inserted. - Determine the appropriate Prince George's County and City of Laurel seals are to be used -	1/20/2023 6:13 PM
8	This is an impressive update that is clearly the culmination of an enormous amount of hard work. I appreciate being part of the planning process. I'm especially glad to see the robust risk assessment section supporting the revised hazard prioritization. This level of documentation is essential to conducting a comprehensive HIRA for our community.	1/13/2023 2:52 PM

2023 DRAFT Hazard Mitigation Plan Review

Q13 If you have feedback in a separate document, please upload it here.

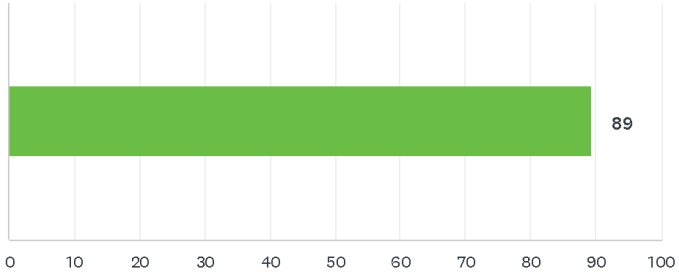
Answered: 1 Skipped: 13

#	FILE NAME	FILE SIZE	DATE
1	Bowie_FinalPlanComments.docx	14.7KB	1/24/2023 10:16 AM

2023 DRAFT Hazard Mitigation Plan Review

Q14 How well do you feel the 2023 draft plan will encourage worthwhile hazard mitigation activities in Prince George's County and the City of Laurel?

Answered: 7 Skipped: 7



#		DATE
1	90	2/5/2023 11:50 PM
2	90	2/5/2023 11:50 PM
3	90	2/4/2023 9:18 PM
4	85	2/1/2023 8:30 PM
5	91	1/24/2023 10:17 AM
6	100	1/20/2023 6:13 PM
7	79	1/13/2023 2:52 PM

2023 DRAFT Hazard Mitigation Plan Review

Q15 Please provide any additional comments or questions to be addressed as Prince George's County and the City of Laurel update their Hazard Mitigation Plan.

Answered: 4 Skipped: 10

#	RESPONSES	DATE
1	1- Regarding Table 7: Existing Land Use for Prince George's County (2014), the table headings do not agree with the populated. 2- Confirm the home agency of each MAC member	2/5/2023 11:54 PM
2	I think you should come up with a much shorter version for the average citizen to read with access to the whole plan. That may make it easier of them to grasp. It took me three days to read this and my eyes were not happy.	2/4/2023 9:21 PM
3	Excellent plan, I really appreciate the work and inclusion of Bowie data. Thank you!	1/24/2023 10:17 AM
4	None	1/13/2023 2:53 PM

2023 DRAFT Hazard Mitigation Plan Review

Q16 If you'd like to collaborate further or be kept up to date on County/City hazard mitigation efforts, please provide contact information below.

Answered: 5 Skipped: 9

ANSWER CHOICES	RESPONSES	
Name	0.00%	0
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	100.00%	5
Phone Number	0.00%	0

#	NAME	DATE
	There are no responses.	

#	COMPANY	DATE
	There are no responses.	

#	ADDRESS	DATE
	There are no responses.	

#	ADDRESS 2	DATE
	There are no responses.	

#	CITY/TOWN	DATE
	There are no responses.	

#	STATE/PROVINCE	DATE
	There are no responses.	

#	ZIP/POSTAL CODE	DATE
	There are no responses.	

#	COUNTRY	DATE
	There are no responses.	

#	EMAIL ADDRESS	DATE
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2	[redacted]	2/4/2023 9:21 PM
3	[redacted]	2/1/2023 8:30 PM
4	[redacted]	1/24/2023 10:17 AM

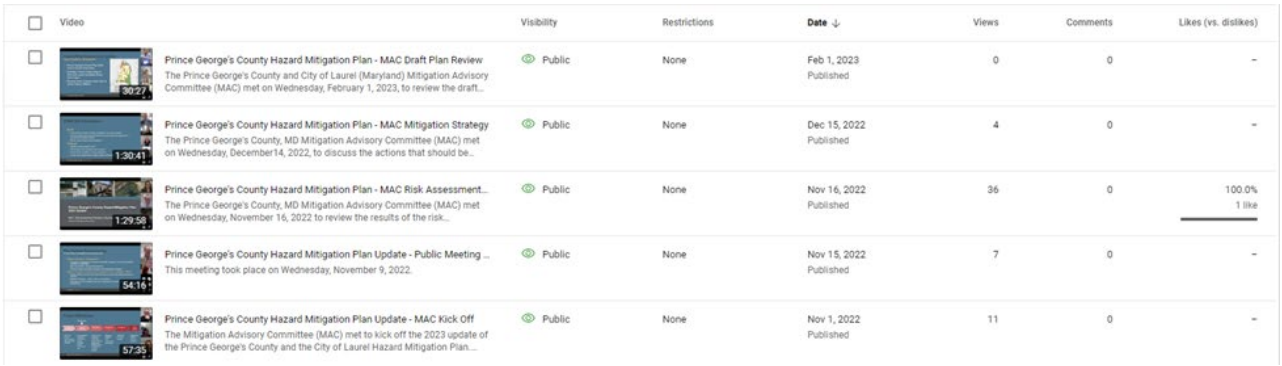
16 / 17

2023 DRAFT Hazard Mitigation Plan Review

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#	PHONE NUMBER	DATE
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E. Online Outreach Materials

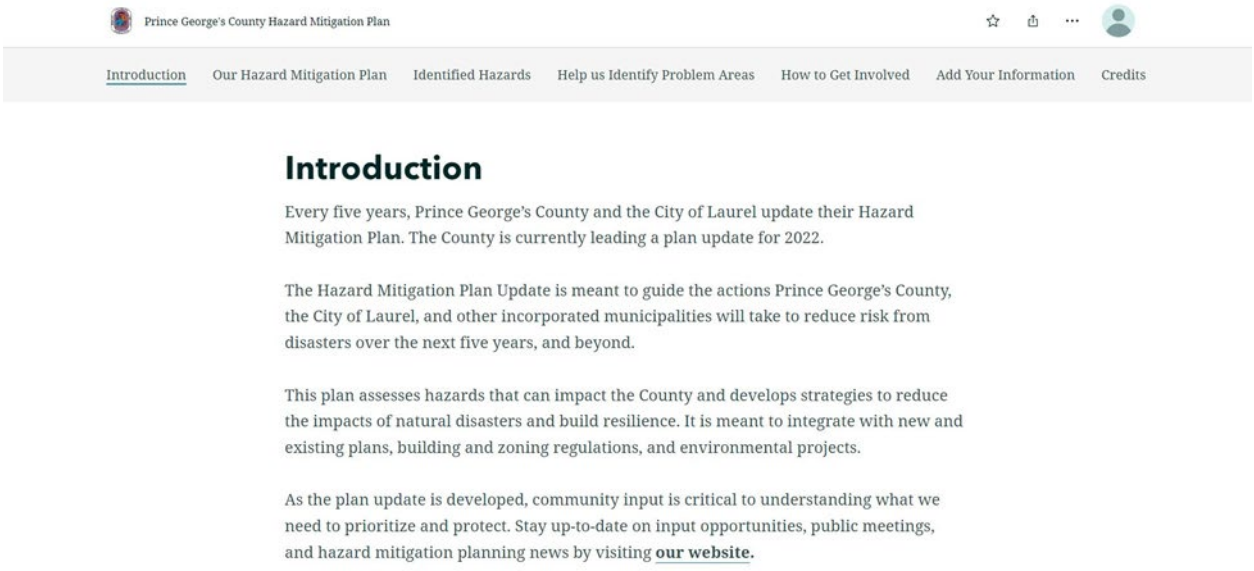
E.1. Video Meeting Statistics

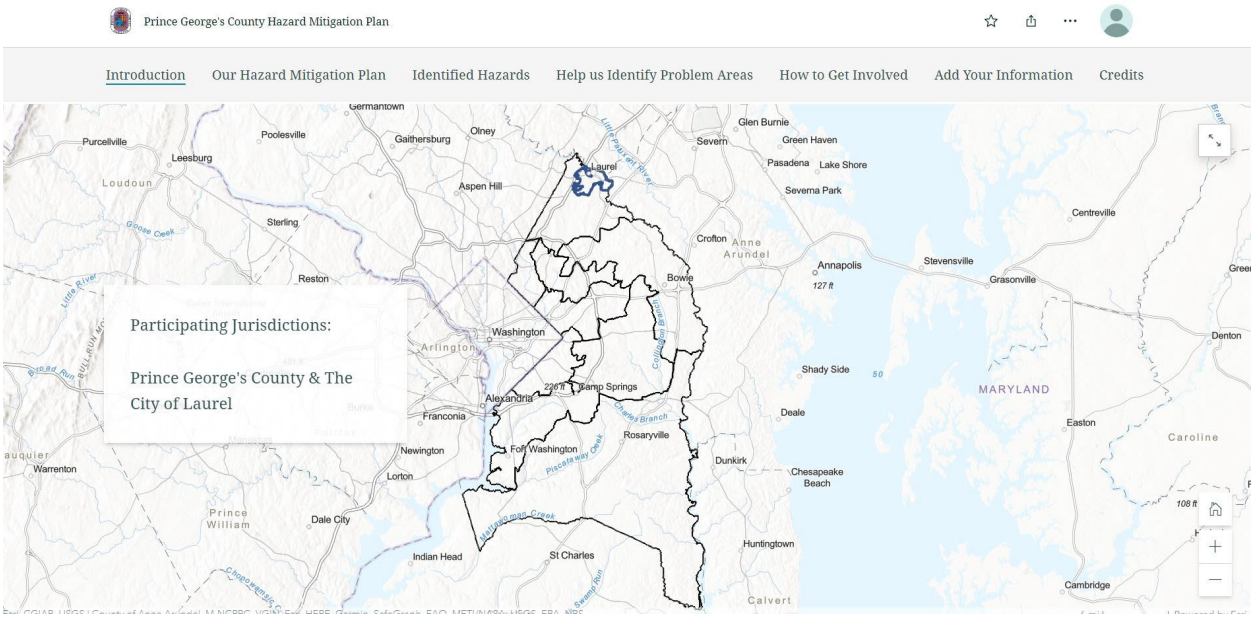


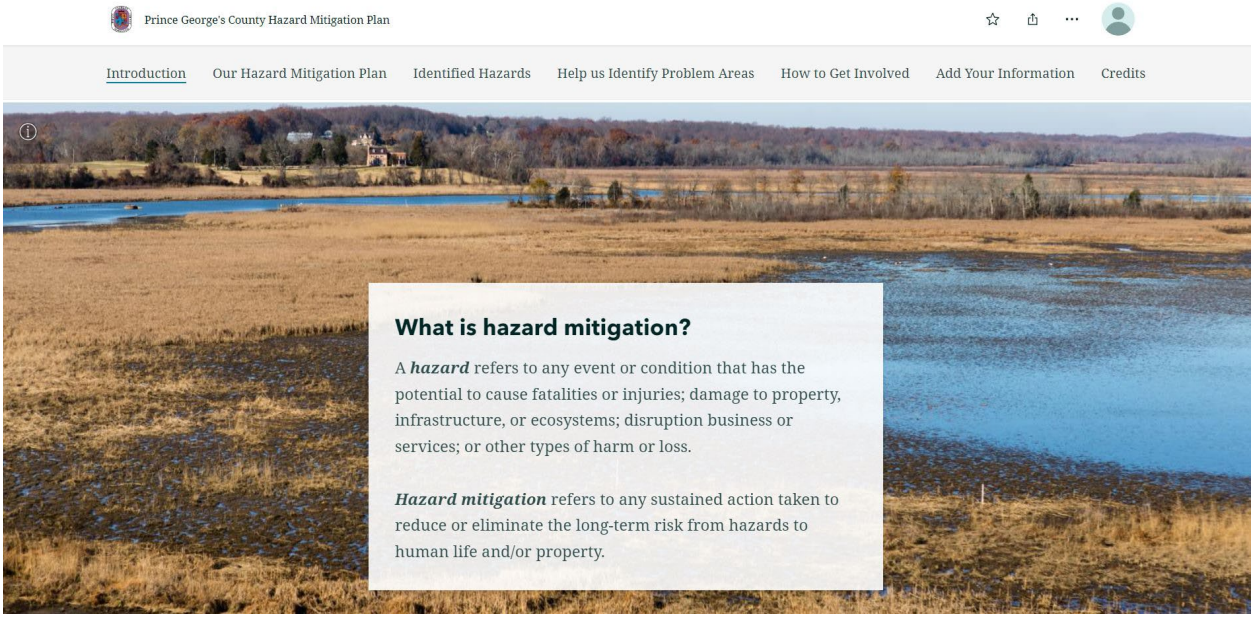
Video	Visibility	Restrictions	Date ↓	Views	Comments	Likes (vs. dislikes)
Prince George's County Hazard Mitigation Plan - MAC Draft Plan Review The Prince George's County and City of Laurel (Maryland) Mitigation Advisory Committee (MAC) met on Wednesday, February 1, 2023, to review the draft...	Public	None	Feb 1, 2023 Published	0	0	-
Prince George's County Hazard Mitigation Plan - MAC Mitigation Strategy The Prince George's County, MD Mitigation Advisory Committee (MAC) met on Wednesday, December14, 2022, to discuss the actions that should be...	Public	None	Dec 15, 2022 Published	4	0	-
Prince George's County Hazard Mitigation Plan - MAC Risk Assessment... The Prince George's County, MD Mitigation Advisory Committee (MAC) met on Wednesday, November 16, 2022 to review the results of the risk...	Public	None	Nov 16, 2022 Published	36	0	100.0% 1 like
Prince George's County Hazard Mitigation Plan Update - Public Meeting ... This meeting took place on Wednesday, November 9, 2022.	Public	None	Nov 15, 2022 Published	7	0	-
Prince George's County Hazard Mitigation Plan Update - MAC Kick Off The Mitigation Advisory Committee (MAC) met to kick off the 2023 update of the Prince George's County and the City of Laurel Hazard Mitigation Plan....	Public	None	Nov 1, 2022 Published	11	0	-

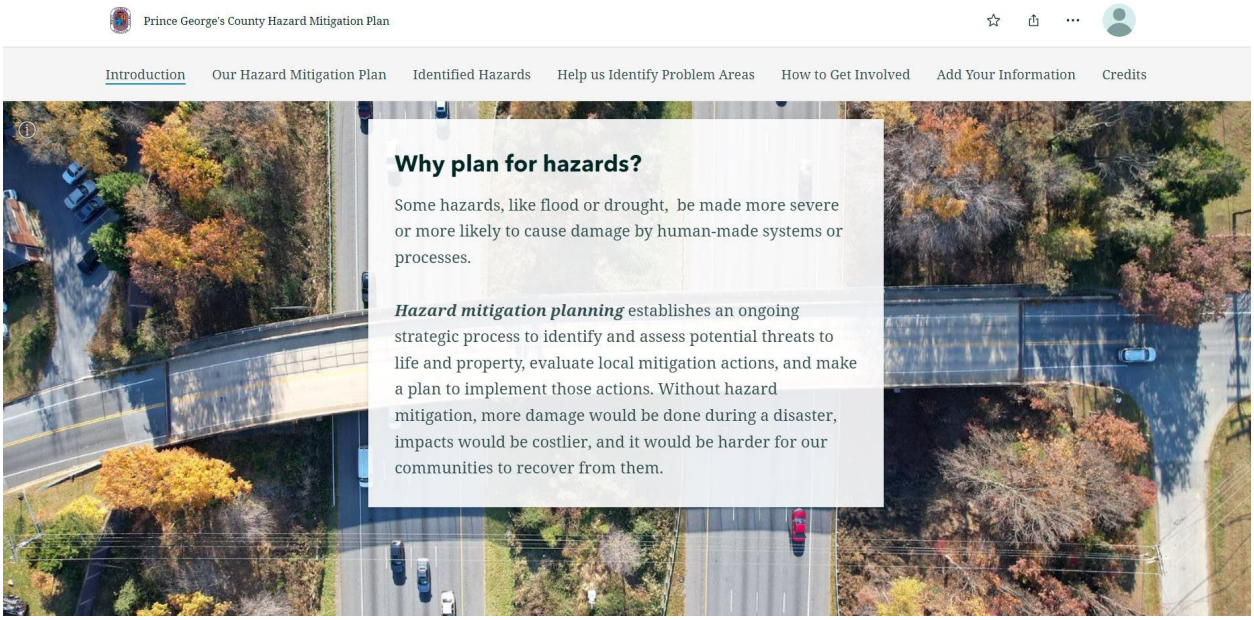
E.2. StoryMap

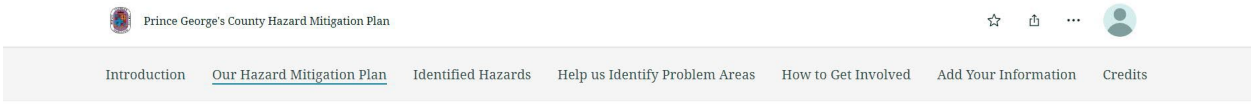

Prince George's County Hazard Mitigation Plan
Prince George's County Hazard Mitigation Plan
2022 Hazard Mitigation Plan Update
Prince George's County and the City of Laurel


Prince George's County Hazard Mitigation Plan
Introduction
Our Hazard Mitigation Plan
Identified Hazards
Help us Identify Problem Areas
How to Get Involved
Add Your Information
Credits
Introduction
Every five years, Prince George's County and the City of Laurel update their Hazard Mitigation Plan. The County is currently leading a plan update for 2022.
The Hazard Mitigation Plan Update is meant to guide the actions Prince George's County, the City of Laurel, and other incorporated municipalities will take to reduce risk from disasters over the next five years, and beyond.
This plan assesses hazards that can impact the County and develops strategies to reduce the impacts of natural disasters and build resilience. It is meant to integrate with new and existing plans, building and zoning regulations, and environmental projects.
As the plan update is developed, community input is critical to understanding what we need to prioritize and protect. Stay up-to-date on input opportunities, public meetings, and hazard mitigation planning news by visiting our website.


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Participating Jurisdictions:
Prince George's County & The City of Laurel
Laurel
Bowie
Washington
Alexandria
Annapolis
MARYLAND


Prince George's County Hazard Mitigation Plan
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What is hazard mitigation?
A hazard refers to any event or condition that has the potential to cause fatalities or injuries; damage to property, infrastructure, or ecosystems; disruption business or services; or other types of harm or loss.
Hazard mitigation refers to any sustained action taken to reduce or eliminate the long-term risk from hazards to human life and/or property.

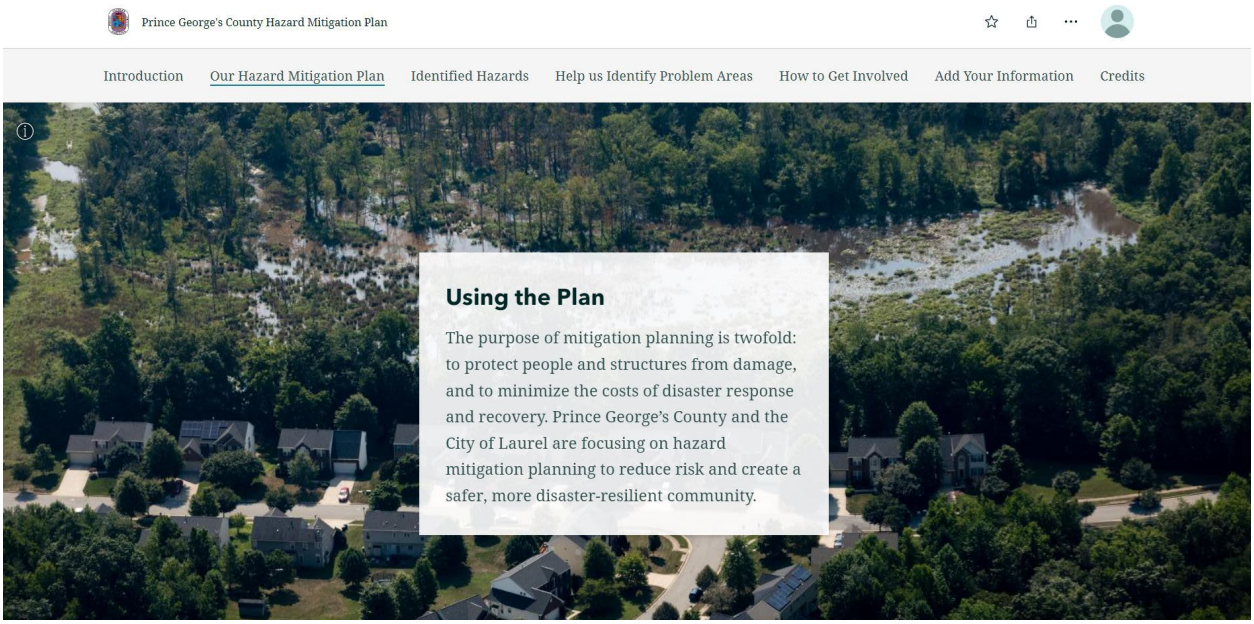




Our Hazard Mitigation Plan

The Prince George's County Hazard Mitigation Plan was last updated five years ago. Since then, **the intersection of climate change and hazards has never been clearer.** This year, the plan will also take a much closer look at how our future climate will impact the hazards across the county. Adapting to these potential changes can help make sure Prince George's County and the City of Laurel responsibly plan actions and projects that will protect the county now and for many years to come.





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Update of the Plan

The plan will include the following components:

Planning Process

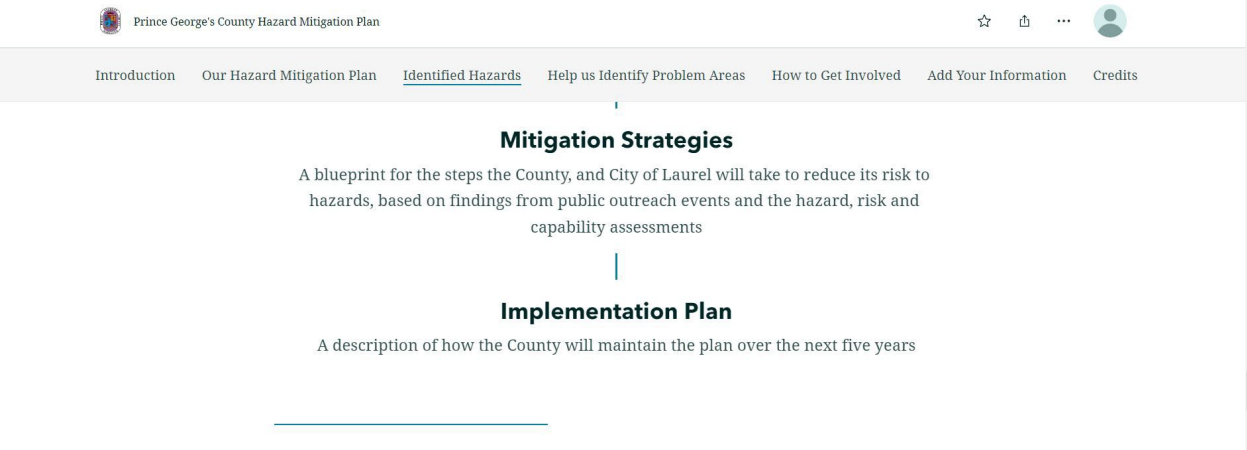
An overview of the county agencies and local representatives involved in the plan development, the process they will follow, and the public outreach strategy

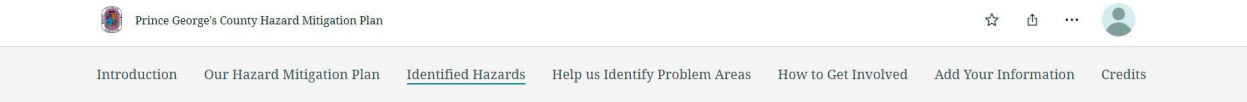
Hazard Identification & Risk Assessment

Profiles of relevant hazards and their associated risks, including vulnerability analyses and loss estimations for high-risk hazards

Capability Assessment

An assessment of existing ordinances, policies, plans, and programs that relate to hazard risk reduction





Identified Hazards

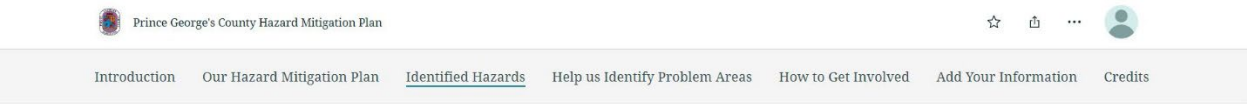
The plan will analyze the following hazard types: extreme temperature, geologic, flood-related, wind-related, and fire-related. Climate change interacts with the majority of these hazard types in uniquely complex processes, potentially affecting how severe or frequently they occur.

Extreme Temperature

- Extreme Heat
- Extreme Cold

Geologic

- Earthquake
- Landslide
- Sinkhole



Flood-Related

- Riverine & Coastal Flooding
- Dam & Levee Failure
- Severe Storm

Wind-Related

- Tornado
- Hurricane
- Winter Storm
- Severe Storm
- High Winds

Fire-Related

- Drought
- Wildfire

Prince George's County Hazard Mitigation Plan

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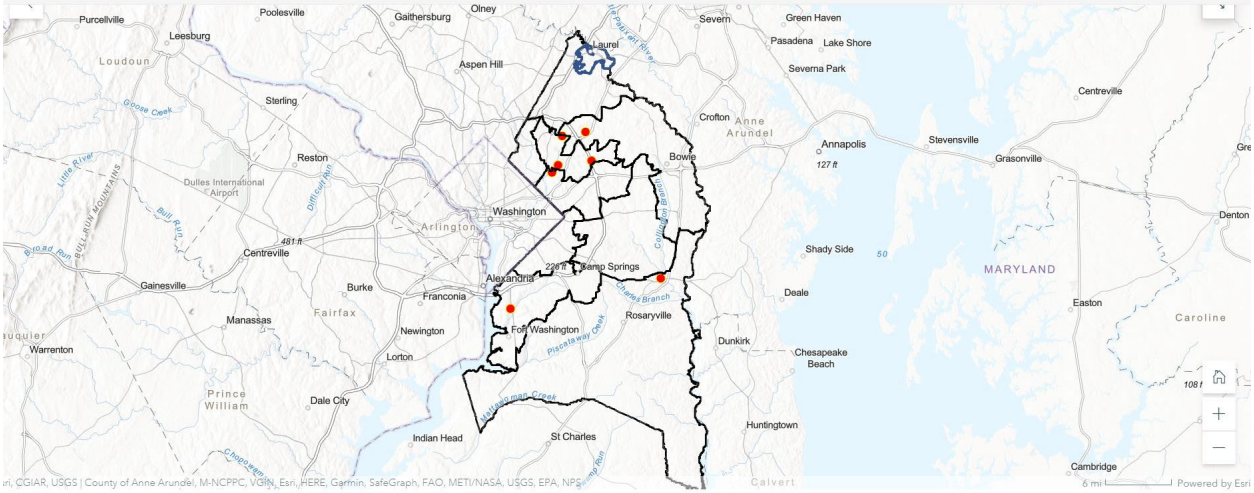
Help us Identify Problem Areas

Do you know about any areas that frequently flood, appear at risk for landslides or wildfires, or pose threats to the community? Fill out this survey using the link below!

Identify Community Problem Areas

Prince George's County Hazard Mitigation Plan

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Community Problem Areas

Prince George's County Hazard Mitigation Plan

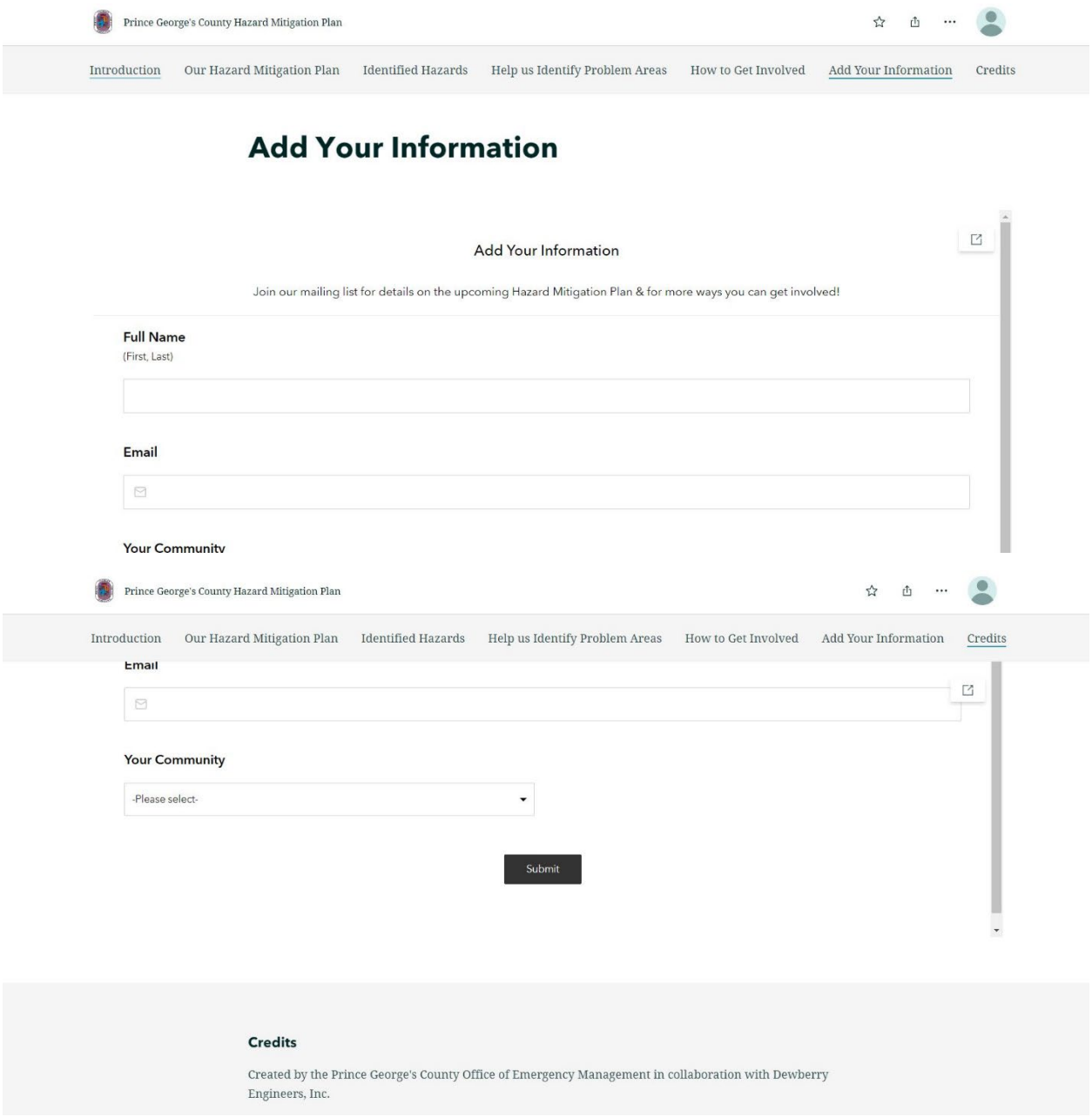
Introduction | Our Hazard Mitigation Plan | Identified Hazards | Help us Identify Problem Areas | How to Get Involved | Add Your Information | Credits

How to Get Involved

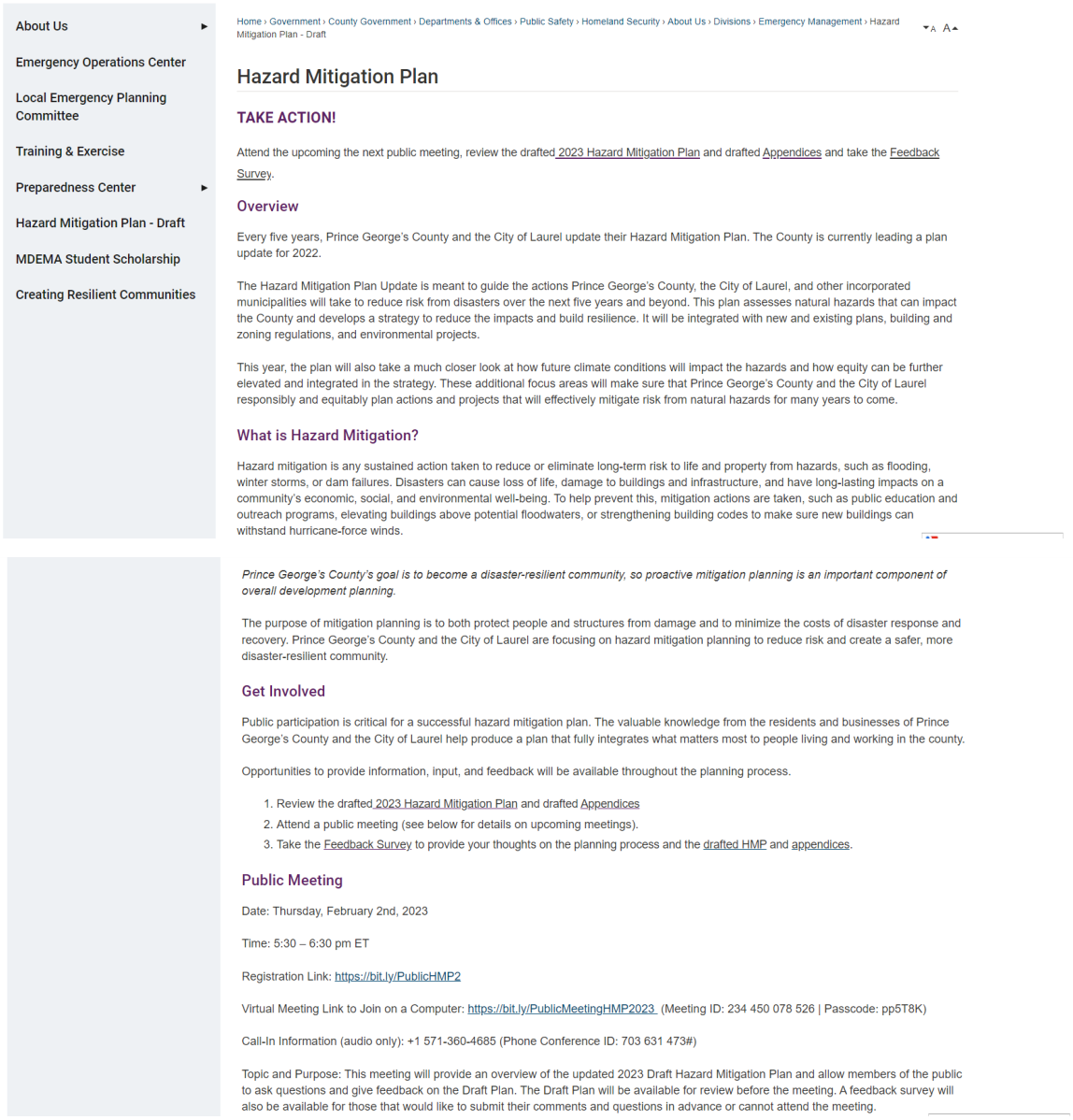
Public participation is very important for a successful hazard mitigation plan. The valuable knowledge from the residents and businesses of Prince George's County and the City of Laurel help produce a plan that fully understands what matters most to people living in the county.

Here are some ways you can get involved:

1. *Take the **County Mitigation Planning Survey** and make sure your voice is heard!*
2. *Attend a **public meeting** (the first meeting will be held on November 9th, 2022)*
3. *Identify **community hazard problem areas** above*


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Join our mailing list for details on the upcoming Hazard Mitigation Plan & for more ways you can get involved!
Full Name
(First, Last)
Email
Your Community
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Credits
Email
Your Community
-Please select-
Submit
Credits
Created by the Prince George's County Office of Emergency Management in collaboration with Dewberry Engineers, Inc.

E.3. Prince George's County Website



About Us ▸
Emergency Operations Center
Local Emergency Planning Committee
Training & Exercise
Preparedness Center ▸
Hazard Mitigation Plan - Draft
MDEMA Student Scholarship
Creating Resilient Communities

Home › Government › County Government › Departments & Offices › Public Safety › Homeland Security › About Us › Divisions › Emergency Management › Hazard Mitigation Plan - Draft

Hazard Mitigation Plan

TAKE ACTION!

Attend the upcoming the next public meeting, review the drafted 2023 Hazard Mitigation Plan and drafted Appendices and take the Feedback Survey.

Overview

Every five years, Prince George's County and the City of Laurel update their Hazard Mitigation Plan. The County is currently leading a plan update for 2022.

The Hazard Mitigation Plan Update is meant to guide the actions Prince George's County, the City of Laurel, and other incorporated municipalities will take to reduce risk from disasters over the next five years and beyond. This plan assesses natural hazards that can impact the County and develops a strategy to reduce the impacts and build resilience. It will be integrated with new and existing plans, building and zoning regulations, and environmental projects.

This year, the plan will also take a much closer look at how future climate conditions will impact the hazards and how equity can be further elevated and integrated in the strategy. These additional focus areas will make sure that Prince George's County and the City of Laurel responsibly and equitably plan actions and projects that will effectively mitigate risk from natural hazards for many years to come.

What is Hazard Mitigation?

Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property from hazards, such as flooding, winter storms, or dam failures. Disasters can cause loss of life, damage to buildings and infrastructure, and have long-lasting impacts on a community's economic, social, and environmental well-being. To help prevent this, mitigation actions are taken, such as public education and outreach programs, elevating buildings above potential floodwaters, or strengthening building codes to make sure new buildings can withstand hurricane-force winds.

Prince George's County's goal is to become a disaster-resilient community, so proactive mitigation planning is an important component of overall development planning.

The purpose of mitigation planning is to both protect people and structures from damage and to minimize the costs of disaster response and recovery. Prince George's County and the City of Laurel are focusing on hazard mitigation planning to reduce risk and create a safer, more disaster-resilient community.

Get Involved

Public participation is critical for a successful hazard mitigation plan. The valuable knowledge from the residents and businesses of Prince George's County and the City of Laurel help produce a plan that fully integrates what matters most to people living and working in the county.

Opportunities to provide information, input, and feedback will be available throughout the planning process.

1. Review the drafted 2023 Hazard Mitigation Plan and drafted Appendices
2. Attend a public meeting (see below for details on upcoming meetings).
3. Take the Feedback Survey to provide your thoughts on the planning process and the drafted HMP and appendices.

Public Meeting

Date: Thursday, February 2nd, 2023

Time: 5:30 – 6:30 pm ET

Registration Link: https://bit.ly/PublicHMP2

Virtual Meeting Link to Join on a Computer: https://bit.ly/PublicMeetingHMP2023 (Meeting ID: 234 450 078 526 | Passcode: pp5T8K)

Call-In Information (audio only): +1 571-360-4685 (Phone Conference ID: 703 631 473#)

Topic and Purpose: This meeting will provide an overview of the updated 2023 Draft Hazard Mitigation Plan and allow members of the public to ask questions and give feedback on the Draft Plan. The Draft Plan will be available for review before the meeting. A feedback survey will also be available for those that would like to submit their comments and questions in advance or cannot attend the meeting.

Meeting Recordings

- Mitigation Advisory Committee Kick-Off (9/16/2022)
- Public Meeting #1 (11/9/2022)
- Mitigation Advisory Committee: Risk Assessment Results (11/16/2022)
- Mitigation Advisory Committee Meeting #2: Strategy Meeting (12/14/2022)
- Final Mitigation Advisory Committee Meeting: Draft Plan Review (2/1/2023)

Meeting Materials

- Mitigation Advisory Committee Kick-Off Notes
- Mitigation Advisory Committee Kick-Off Presentation
- Public Meeting #1 Notes
- Public Meeting #1 Presentation
- Mitigation Advisory Committee Risk Assessment Review Notes
- Mitigation Advisory Committee Risk Assessment Review Presentation
- Mitigation Advisory Committee Meeting #2 Notes
- Mitigation Advisory Committee Meeting #2 Presentation
- Final Mitigation Advisory Committee Meeting Notes
- Final Mitigation Advisory Committee Meeting Presentation

F. FEMA Region III- Local Hazard Mitigation Plan Engagement Strategy Worksheet

FEMA Region 3: Local Hazard Mitigation Plan Engagement Strategy

FEMA Region 3 recommends that you develop an engagement strategy before you start your local hazard mitigation plan (HMP) update. This strategy will guide your planning process. It outlines when and how information is exchanged with all plan participants. This worksheet walks through key considerations for developing this strategy.

Getting Started: Identifying Plan Participants

Developing an engagement strategy before kicking off your HMP update will help you make sure the right partners share the right information at the right time. This helps communities work together to better identify risk and mitigation solutions. It will also help you better understand the level of effort needed for the HMP update. This starts with identifying who should be involved.

Who Should Be Involved?

Plan participants include the following:

- **Plan Owner**: community, county or regional planning authorities.
- **Participating Jurisdictions**: local jurisdictions within the planning area.
  Representatives from these jurisdictions should include emergency management and public works staff; floodplain administrators; engineering, planning and zoning staff; administrative staff; Geographic Information Systems specialists; and elected officials.
- **Plan Stakeholders**: neighboring communities, nonprofit organizations, academia, businesses and private organizations.
  The plan must document the opportunity for the following stakeholders to be involved: agencies involved in hazard mitigation activities; agencies that regulate development; neighboring communities; representatives of businesses, academia and other private organizations; and representatives of nonprofits supporting ***underserved communities and vulnerable populations****.*
- **Plan Developer:** entity responsible for pulling together all information and analyses to prepare the plan.
- **Public**: individuals who live and work in the community.
  The plan must document the opportunity for the public to be involved.

FEMA

September 2022 1

Recommendation: Work with community representatives to choose the best **public outreach approach** for their community. Your public outreach strategy may align with or can be different from your plan participant engagement strategy. This depends on the unique character and needs of each community.

When identifying plan participants for your HMP update, remember the benefits of bringing together diverse, community-based stakeholders representing the interests of the whole community:

1. Direct input from the community.
2. A shared understanding of risk.
3. Opportunities to integrate related plans, policies and projects.
4. Identification of champions for community resilience and hazard mitigation.
5. Support for implementing mitigation actions that reflect risk priorities.

Once you know who should be involved in the HMP update, you should decide how and when to engage the plan participants. This will be the foundation of your engagement strategy.

Recommendations: Explore FEMA's Guides to Expanding Mitigation for more ideas about who should be involved. Also, think about including partners who support Community Lifelines. Going beyond traditional planning partners can expand the conversation on risk, mitigation actions and local capabilities.

Consider asking for **letters of commitment** to the planning process from plan participants, especially from participating jurisdictions. This can help make sure that community representatives have the support of their local officials throughout the process – from data sharing to plan adoption.

Considerations: Developing an Engagement Strategy

A plan based on an equitable engagement strategy and inclusive risk communication helps guide investments to reduce risk. A wide range of public and private resources can be used effectively when there is an understanding of whole-community needs and capabilities. The following questions and considerations will help you create a robust and interactive engagement strategy for four key components of an HMP update: Planning Process, Risk Assessment, Capability Assessment and Mitigation Strategy.

Planning Process

1. What are your expectations for plan participant involvement for each phase of the plan update?
Participants will be involved through virtual meetings, surveys, and email correspondences throughout the planning process. Participants will also have the opportunity to share their thoughts on priorities for the plan update, and give feedback on the draft plan.

2. How do you think plan participants see their role in the update process?
Plan participants see their role as providing their expertise to the update process. They are able to determine priority areas for the plan update and have multiple opportunities to give feedback throughout the plan update.
3. How can plan participants support the planning process?
Plan participants can support the planning process by attending virtual meetings, providing feedback through surveys, and reaching out with any questions or comments they may have throughout the planning process.
4. List how many meetings you will hold during the planning process, how they will be delivered, and who will be invited.
There will be four meetings involving the Mitigation Advisory Committee throughout the process. Each member of the Mitigation Advisory Committee will be invited to these meetings, and they will be delivered virtually. The four meetings include: 1. Kick-Off meeting 2. Hazard Identification and Risk Assessment meeting 3. Mitigation Strategy meeting 4. Draft Plan Review meeting There will be two public meetings throughout the process. Meeting invitations will be advertised on social media to reach as many community members as possible. These meetings will also be held virtually. The two meetings include: 1. Meeting 1: Hazard Mitigation Planning overview, project updates, Hazard Identification and Risk Assessment, mitigation goal development, public questions and discussion, next steps 2. Meeting 2: Review of draft Plan update, public questions and discussion, next steps
5. Are there upcoming meetings or events you can use to engage plan participants?
Plan participants can begin to engage in the planning process starting with the Kick-Off meeting, and then with every following virtual meeting.
6. How will data requests be made to plan participants (e.g., electronically, in-person hard copy at meetings, etc.)? What is the desired timeframe for response?
Plan participants will be provided with virtual surveys to provide data for the plan update. The desired time frame for response will be announced when the surveys are sent out to participants, and will vary based on the length of the survey.

7. When and how do you expect plan participants to give input?

Reminder: *Jurisdictions that want to adopt the HMP should have at least two documented instances of participation that include attending one meeting and completing one data request form.*

Plan participants can give input at any of the virtual meetings that will be hosted, and through any of the surveys that will be sent out to collect data.

8. Are there any potential challenges to plan participation? How will they be overcome?

Example: *Several smaller communities within a planning area did not join the kickoff meeting. The Planning Steering Committee included county representatives who had frequent contact with these communities. They volunteered to individually reach out to the communities to share information on the HMP update and document the conversations. The communities were then able to complete forms and provide input for plan development and meet plan participation requirements.*

It may be more difficult to get participation from the City of Laurel, as it is a smaller community within the planning area. This can be overcome by asking one representative from the City of Laurel to reach out to their community to share information on the HMP update and ask them to join a virtual meeting and respond to a survey so their data can be included in the plan update.

9. What data, plans, reports and projects should plan participants expect to review or provide?

Plan participants should expect to provide data on hazard locations within the County, as well as other feedback for the Hazard Identification and Risk Assessment section, including ranking the natural hazards that impact the County. Additionally, plan participants should expect to provide feedback on the Mitigation Actions to be included in the plan update, as well as feedback on the draft plan update.

10. Have you identified a plan developer? If so, what is their role within your engagement strategy?

Consultants from Dewberry Engineers, LLC will serve as the plan developers. Dewberry consultants will schedule and host each virtual meeting, and create the surveys that are sent out to plan participants to acquire data for the plan update.

Recommendation: Use the kickoff meeting for the HMP update to bring all partners to the table. There, you can use your engagement strategy to set expectations for participation and information sharing. The kickoff meeting should lay out the planning process for all participants. It should clearly explain their important role in completing the plan update.

Risk Assessment

1. How will risk data (e.g., Flood Risk Products) be shared with plan participants prior to completing the risk assessment?
Risk data will be shared with plan participants through a StoryMap created in ArcGIS Online, that includes risk data and asks for feedback from plan participants about risk within the County. Risk data will also be shared with plan participants through virtual meeting prior to completing the risk assessment.
2. Will information be shared through a group meeting? Will there be one-on-one sessions with communities?
Information will be shared through virtual meetings with both the public and the Mitigation Advisory Committee.
3. How will you ask plan participants for new or local risk information?
New and local risk information will be acquired from plan participants through an online survey and through the StoryMap that will be shared with participants. The StoryMap will have a map feature within a survey so participants can place a point on the map to represent specific locations for local risk issues.
4. What types of forms will be used to collect data? Are they hard copies or electronic?
Surveys will be used to collect data, and they will be electronic.
5. Will you ask plan participants for information on specific types of community assets (e.g., structures, infrastructure, vulnerable populations, etc.)? How will this information be used in the plan?
Plan participants will be asked about any structures, infrastructure, critical facilities, and vulnerable populations that they would like to be included in the plan update. Plan participants' specific feedback will be included in the section of the plan that it pertains to.

6. Will you include Community Lifelines in your risk assessment? *This is recommended.* How will plan participants help identify these lifelines?
Community lifelines will be included in the risk assessment. Plan participants will help identify lifelines during the virtual meetings.
7. How will risk assessment results be shared with plan participants? How will their feedback be used in the plan?
Risk assessment results will be shared with plan participants through a virtual meeting following the completion of the risk assessment. Feedback at the virtual meeting to review the risk assessment will be incorporated into the plan through edits.
8. Will the plan prioritize at-risk community assets? If so, how will plan participants be involved in prioritization?
The plan will prioritize at-risk community assets. Plan participants will be asked to prioritize assets for inclusion in the plan.
9. Based on the vulnerability analysis and prioritization of at-risk assets, will plan participants be asked to develop problem statements?
Definition: *Problem statements are concise statements that identify key issues or problems with vulnerable community assets. The more specific the problem statement, the easier it is to find solutions.* ***Example Problem Statement***: *The nursing home is in a low-lying area and is flooded frequently. This causes disruption of services for residents and occasional evacuations.*
Based on the vulnerability analysis and prioritization of at-risk assets, plan participants will contribute to creating problem statements. Plan developers will work with plan participants to develop problem statements.

Capabilities Assessment

1. How will plan participants work together to review of all mitigation capabilities?
Plan participants will work together to review mitigation capabilities at a virtual meeting and through comments on the draft Capabilities Assessment section from the plan update document.

2. What criteria will plan participants use to evaluate their mitigation capabilities? What specific questions should they ask themselves?
Plan participants will use existing County plans and departments to evaluate their mitigation capabilities. They should ask themselves what systems are currently in place for mitigation, and what is needed to carry out the mitigation efforts outlined in the HMP plan update.
3. How will plan participants consider actions and opportunities to address identified needs and improvements?
Plan participants will have the opportunity to speak about actions and opportunities to address identified needs and improvements by giving feedback during virtual meetings.

Mitigation Strategy

1. How will you provide plan participants who are new to mitigation information on types of actions that should be included in the plan?
Definition: *Mitigation is action taken to reduce or eliminate long-term risk to hazards.*
Plan participants who are new to mitigation will be introduced to the mitigation strategies from the previous plan updates as an example of successful mitigation actions within the County. Dewberry consultants will also be available to answer any questions plan participants may have on mitigation throughout the plan update process.
2. How will plan participants be asked to share the status of previously identified mitigation projects? If projects were recently completed, how will you collect best practices or opportunities for improvement?
Dewberry consultants will work with the Mitigation Advisory Committee to determine the status of previously identified mitigation projects within the County. Members of the Mitigation Advisory Committee will share best practices and opportunities for improvement.
3. How will plan participants be asked to use risk assessment findings to develop mitigation actions? How will their input be used in the plan?
At a virtual meeting, plan participants will be asked to use risk assessment findings to develop new mitigation actions or update previous mitigation actions to address risks within the County. Feedback from the virtual meeting will be used to inform the Mitigation Strategy section of the HMP update.

4. Will plan participants be asked to solve for specific problem statements and focused areas of concern? If so, how? Or will there be a general request for actions?
There will be a general request for actions.
5. How will plan participants help prioritize actions that mitigate risks?
Plan participants will help prioritize actions that mitigate risks through ranking actions in an electronic survey.
6. Will engagement during mitigation strategy development be on a one-on-one basis with each plan participant? Or will general forms be given out?
Engagement during mitigation strategy development will be through virtual meeting with Mitigation Advisory Committee members as well as an electronic survey for prioritizing mitigation actions.

Recommendation: Host a mitigation action strategy workshop. Show participants problem statements before and during the workshop. At the workshop, talk about various ways to resolve each problem statement. Emphasize the importance of including the four types of mitigation actions: (1) Local Planning and Regulations; (2) Structure and Infrastructure Projects; (3) Natural Systems Protection; and (4) Education and Awareness Programs. This will help identify a wide range of actions and project types to address specific risks and vulnerabilities.

For more information and resources to help you with your HMP update, visit the FEMA Region 3 Hazard Mitigation Planning page. You can also contact your FEMA Region 3 planner or State Hazard Mitigation Officer.

Appendix C. Hazard History

Historical hazard events are included in this appendix. Notable historical hazard events may be found in the respective hazard sections in the Hazard Mitigation Plan. Event information has been compiled from disaster declarations, event databases, hazard mitigation grant data, online research, staff and resident anecdotes, and news articles.

Contents:

7. Riverine Flood
8. Severe Storm (Flood-Related)
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19. Coastal Flood
20. Landslide
21. Wildfire
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A. Riverine Flood

- 09/29/2010: Remnants of Tropical Storm Nicole produced massive amounts of rain throughout Maryland.
- 08/26/2011: Hurricane Irene did not make direct landfall, but due to the large size, hurricane conditions were felt inland. FEMA issued an Emergency declaration (FEMA-EM-3335-MD) for the incident beginning August 26, 2011.
- 09/207/011: The remnants of Tropical Storm Lee moved across Maryland, causing widespread flooding.7 Prince Georges County experienced around 24 inches of rainfall from this storm. FEMA issued a Major Disaster declaration (FEMA-DR-4038-MD) for the incident beginning September 6, 2011. Additionally, the NOAA NCEI Storm Events Database reported two flood events – one in Upper Marlboro and one in Brown.
- 10/29/2012: Hurricane Sandy makes landfall north of the state. However, due to the tremendous size of the storm, its effects were felt all over Maryland. Over a foot of rain fell in some spots along with very gusty winds. FEMA issued Emergency (FEMA-EM-3349-MD) and Major Disaster (FEMA-DR-4091-MD) declarations for Sandy beginning October 26, 2012. Additionally, the NOAA NCEI Storm Events Database indicates one flood event was reported in Wells Corner.
- 04/30/2014 – 06/01/2014: There were at least eleven flash floods reported in the region during this time due to heavy rainfall.
- 08/12/2014: There were several flash floods and riverine flooding occurred due to heavy rainfall. The NOAA NCEI Storm Events Database indicates three flood events were reported –two in Piscataway and one in Upper Marlboro.
- 09/29/2015: A couple of flash floods and riverine flooding occurred due to heavy rainfall
- 10/10/2016: While Hurricane Matthew did not make landfall in the state, the storm still brought rain and gusty winds to Prince George's County and the City of Laurel due to its large size.
- 09/07/2018: The remnants of Hurricane Florence slowly tracked through the area with thunderstorms and rain showers, leading to instances of flooding.
- 10/11/2018: As Hurricane Michael passed south of the County, heavy rain caused flooding.
- 08/04/2020: Tropical Storm Isaias passed through Prince George's County, bringing flooding rain. Heavy rain also led to incidents of flash flooding.
- 09/10/2020: Flash flooding due to heavy rainfall flooded U.S. Route 50 in Prince George's County with up to five feet of water.
- 08/09/2021: Thunderstorms produced isolated instances of flash flooding in Prince George's County.
- 07/16/2022: A cold front dropped down from the north, causing showers and thunderstorms to develop. This led to instances of flooding and flash flooding.
- 08/10/2022: Thunderstorms caused heavy rainfall, and with a slow storm motion this led to instances of flooding and flash flooding. Multiple 911 calls were received for water rescues.

B. Severe Storm (Flood-Related)

- 08/17/1971: FEMA Major Disaster declaration (FEMA-DR-309-MD) issued for flooding and severe storms.

- 10/4/1975: FEMA Major Disaster declaration (FEMA-DR-489-MD) issued for flooding and severe storms.
- 07/19/1996: Torrential rains estimated at 2 inches per hour caused the rapid onset of flash flooding along the Capital Beltway near Camp Springs. Two lanes were closed due to high standing water which was up to guardrail height in some spots.
- 01/28/1998: A fairly intense and slow-moving nor'easter produced a large area of moderate to heavy rains across central and lower southern Maryland beginning late on the 27th and continuing through late afternoon on the 28th. The heaviest rain fell while the storm was tracking along the South and North Carolina coastline. Storm totals ranged from 1 1/2 to 2 1/2 inches over the area, except between 3 and 4 inches across lower southern Maryland.
- 08/25/1999: Showers producing very heavy rain moved very slowly very slowly across South Central Maryland during the afternoon. The deluge caused several streets and creeks to become rapidly flowing rivers.
- 06/15/2000: A line of thunderstorms which produced winds in excess of 55 MPH, large hail, heavy rain, and frequent lighting moved across the area during the afternoon and evening of the 15th. In Prince George's County, rainfall totals included 1.93 inches in Landover, 1.90 inches on Lottsford Road, and 1.59 inches on Harry Truman Drive.
- 05/16/2003: A large area of showers and thunderstorms containing heavy downpours moved through the region between the afternoon of the 15th and the morning of the 16th. In Prince George's County, high water forced sewage to pour out of a manhole onto Indian Head Highway.
- 12/2009: Remnants of Hurricane Ida (or the November 2009 Mid Atlantic nor'easter) contributed to gusty winds and heavy rain. The NOAA NCEI Storm Events Database indicates one flood event was reported in Temple Hills.
- 09/07/2011: Abnormally moist atmosphere across the mid-Atlantic allowed showers and thunderstorms to produce exceptional rainfall rates across portions of Maryland as the remnants of Tropical Depression Lee interacted with a nearly stationary boundary near the Mason-Dixon line. Major flooding and flash flooding occurred in numerous areas.
- 06/10/2014: A frontal boundary was located across the region. Warm and humid conditions returned to the Mid Atlantic slow-moving showers and thunderstorms produced heavy rainfall in localized areas.
- 07/29/2017: A strong upper level low interacted with a frontal boundary near the Mid-Atlantic region and low pressure formed along the boundary. High moisture content and thunderstorms led to widespread flooding across the Mid-Atlantic region.
- 05/17/2018: Heavy rain fell in southern Maryland during the night of May 17th into the morning hours of the 18th. 1-4 inches of rain caused flooding, including of streams.
- 09/04/2020: Flash flooding due to heavy rainfall flooded U.S. Route 50 in Prince George's County with up to five feet of water.
- 08/09/2021: Thunderstorms produced isolated instances of flash flooding in Prince George's County.

C. Tornado

- 06/01/2012: A short narrow damage path was encountered between Meadowhill Road and Forbes Boulevard, consisting of spotty tree damage. The debris field exhibited evidence of

cyclonic curvature consistent with a weak EF-0 tornado. This began and ended in the Buena Vista area.

- 04/19/2013: At 7:26 PM, a brief EF-0 tornado with peak winds of 85 mph touched down in Prince Georges county in the Marlboro Ridge subdivision off Ritchie Marlboro Rd. The tornado uprooted and snapped several trees. It also damaged three homes, blowing out windows and garage doors. One home had a side wall of the garage blown out when wind entered the garage through the damaged door. Several other homes on both sides of Ritchie Marlboro Road had minor siding and shingle damage. The tornado traveled a half mile before lifting and lasted less than a minute. This began in the Westphalia area and ended in the Brown area.
- 07/01/2013: After a review of radar observations, eyewitness reports and video and a ground survey, The National Weather Service Baltimore/Washington DC has confirmed a EF-0 tornado touched down in the area south of Clinton and west of Brandywine Maryland in Prince Georges County Maryland on the evening of Monday, July 1 2013. Peak winds are estimated to have been 65 mph with much of the two-mile track falling between 40 to 65 mph. Those winds were enough to snap large limbs between 6- and 12-inch diameter and top several trees. Topping means a tree was twisted and snapped high up. The only noted minor structural damage was some flashing peeled from one home in the Crestview Manor development of Eilerson Street and some minor vinyl fence damage off Whitaker Park Drive. The rotating cloud that eventually produced this tornado was seen and documented by several spotters and members of the public from Northern Charles County to where it touched down in Southern Prince Georges County. This began and ended in the Crestview Manor area.
- 09/29/2015: The National Weather Service in Baltimore MD/Washington DC has confirmed a tornado near Laurel and Scaggsville in Prince Georges and Howard counties in Maryland on September 29 2015. The National Weather Service in Baltimore MD/Washington DC has confirmed a tornado rated EF0 produced scattered damage along a path extending from Laurel, MD in northern Prince Georges County to just east of Scaggsville in southern Howard County. Based on information obtained from a ground survey conducted by a member of the National Weather Service of storm damage in southern Howard County and a detailed damage report from the Director of Public Works for the City of Laurel, it was determined that an EF0 tornado produced intermittent damage along a 4 mile path extending from just southeast of Laurel, MD to a point about 1 mile east of Scaggsville, MD. The tornado first produced damage shortly after 10pm Tuesday evening in Laurel, MD. It damaged the facade of a commercial building near the intersection of Fort Meade Rd and Maryland Route 197. It then moved northwest and into downtown Laurel causing multiple tree damage, along with damage to several roofs. A portion of one home had a small part of its roof peeled back and several commercial buildings lost roof material. Damage in Laurel was limited to a several block areas bounded by North Second Street, Fetty Alley, Avondale St and the Little Patuxent River. The tornado then crossed the Little Patuxent River into Howard County. Based upon this ground survey along with analysis of available NWS and FAA radar data and interviews with persons along the path, the NWS in Sterling confirms an EF0 tornado occurred. This began and ended in the Laurel area.
- 07/05/2018: A supercell thunderstorm spawned a brief EF1 tornado just north of Bowie, MD in Prince Georges County late on Tuesday afternoon July 5th, 2022, between 5:31 and 5:34 PM EDT. This supercell spawned along the Howard/Montgomery County line as a result of a remnant mesoscale convective vortex moving through the region which had moved through the Ohio Valley earlier in the day. It evolved into a cluster of cells initially before splitting off into an

individual supercell that would develop rotation as it moved out of southeastern Montgomery County into northwestern Prince Georges County. The tornado caused extensive tree damage in the Somerset subdivision just north of Bowie, MD. There was also one instance where a tree had fallen on top of a residence near the intersection of Stafford Lane near Saber Lane. However, there were several other trees down in the area outside of the more concentrated tornadic damage, particularly along Buckingham Drive perpendicular to White Marsh Branch. At this location along Buckingham Drive, trees fell upon power lines, snapping several supporting utility poles. The tornado initially touched down around Tarragon Lane and tracked eastward over the Bowie High School Annex before tracking into the Somerset subdivision, where the majority of the damage was observed. The tornado would then lift just before reaching southern portions of Whitemarsh Park.

Table 1. NCEI Historical tornado events in Prince George's County

Fujita Scale	Date	Community Affected	Deaths	Injuries	Property Damages	Total Damages
EF1	05 July 2018	Bowie	0	0	n/a	n/a
EF0	29 Sep 2015	Laurel	0	0	$0	$0
EF0	01 July 2013	Crestview Manor	0	0	$500	$500
EF0	19 April 2013	Westphalia	0	0	$25,000	$5,000
EF0	01 June 2012	Buena Vista	0	0	$2,000	$2,000
EF0	08 May 2008	Clinton Hyde Fld Arp	0	0	$100,000	$100,000
EF0	08 May 2008	Woods Corner	0	0	$50,000	$50,000
EF1	20 Apr 2008	University Park	0	0	$40,000	$40,000
F3	24 Sep 2001	Hyattsville	2	55	$100,000,000	$100,000,000
F1	25 May 2001	Brandywine	0	0	$25,000	$25,000
F1	21 Jun 2000	Laurel	0	0	$150.000	$150,000
F1	13 May 2000	Brandywine	0	0	$100,000	$100,000
F0	24 Jun 1996	Andrews AFB	0	0	$200,000	$200,000
F1	24 Jun 1996	Upper Marlboro	0	0	$500,000	$500,000

Fujita Scale	Date	Community Affected	Deaths	Injuries	Property Damages	Total Damages
F2	05 Oct 1995	Temple Hills	0	3	$5,000,000	$5,000,000
F1	18 May 1995	Cheverly	0	2	$2,000,000	$2,000,000

D. Severe Storm (Wind-Related)

- 5/4/2012: A large tree about one foot in diameter was blown down by thunderstorm winds. A stationary boundary combined with warm and humid air ahead of it to trigger showers and thunderstorms. An isolated thunderstorm produced damaging winds.
- 6/1/2012: Trees were heavily damaged with limbs of 8 to 12 inches ripped off from strong thunderstorm winds. Low pressure tracked through the Ohio Valley and into the Great Lakes. The warm front associated with this system passed through our region during the first. Plenty of moisture from the Gulf of Mexico and the Atlantic Ocean combined with strong forcing associated with the warm front, causing thunderstorms to develop. Moderate instability along with strong forcing caused some thunderstorms to become severe. Wind speed and direction changed rapidly with height near the warm front. This caused rotating thunderstorms, and some of them were able to produce tornadoes.
- 6/1/2012: Multiple trees were blown down across train tracks near the town of Cheverly. Low pressure tracked through the Ohio Valley and into the Great Lakes. The warm front associated with this system passed through our region during the first. Plenty of moisture from the Gulf of Mexico and the Atlantic Ocean combined with strong forcing associated with the warm front, causing thunderstorms to develop. Moderate instability along with strong forcing caused some thunderstorms to become severe. Wind speed and direction changed rapidly with height near the warm front. This caused rotating thunderstorms, and some of them were able to produce tornadoes.
- 6/22/2012: About 20 trees, with the largest 15-20 inches in diameter, were ripped out of the ground. Two walls of a concrete building near the intersection of University Blvd. and West Park Dr. were damaged. An upper-level trough and associated cold front moved across Maryland, northern Virginia and eastern West Virginia during the afternoon and evening of the 22nd. High humidity and instability values provided the ingredients for severe storms to develop early in the afternoon and linger into the late evening hours.
- 6/22/2012: Several large branches about eight inches in diameter were blown down by strong thunderstorm winds. An upper-level trough and associated cold front moved across Maryland, northern Virginia and eastern West Virginia during the afternoon and evening of the 22nd. High humidity and instability values provided the ingredients for severe storms to develop early in the afternoon and linger into the late evening hours.
- 6/22/2012: Extensive damage occurred to buildings and trees along Newton Street. Roof damage was sustained at an apartment building with several hundred people displaced. An upper-level trough and associated cold front moved across Maryland, northern Virginia and eastern West Virginia during the afternoon and evening of the 22nd. High humidity and instability values

provided the ingredients for severe storms to develop early in the afternoon and linger into the late evening hours.

- 6/22/2012: A wind gust of 58 mph was measured in Springdale. An upper-level trough and associated cold front moved across Maryland, northern Virginia and eastern West Virginia during the afternoon and evening of the 22nd. High humidity and instability values provided the ingredients for severe storms to develop early in the afternoon and linger into the late evening hours.
- 6/29/2012: A roof was partially torn off a seven-story building. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage.
- 6/29/2012: A wind gust around 51 knots was measured near Suitland. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage.
- 6/29/2012: Several trees were down. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 68 mph was measured near Calverton. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 76 mph was measured near Seat Pleasant. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 68 mph was measured near Morningside. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 68 mph was measured. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 61 mph was measured. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A wind gust of 61 mph was measured. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. Trees were down along Green Street

and Woodyard Road and at Green Street and Perth Drive. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. Several power poles were snapped. Homes lost shingles and blown out upper windows. Widespread tree damage was also reported. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage. A large tree was down and a road sign was snapped by the wind. A strong upper-level disturbance passed through the region in a northwest flow aloft. Extremely hot and humid conditions caused high amounts of instability. The upper-level disturbance triggered a line of thunderstorms that moved through the area. Due to the high instability, thunderstorms caused widespread wind damage.

- 7/28/2012: A wind gust of 60 mph was measured. A cold front along with an upper-level trough moved into the area on the 28th. Showers and thunderstorms developed near the cold front. There was enough instability from cooler air aloft associated with the upper-level trough for thunderstorms to produce damaging wind gusts.
- 9/8/2012: A cold front crossed WV in the morning and made it to the I-95 corridor by the evening. Increased instability led to prefrontal showers and thunderstorms that were capable of damaging winds. There were power flashes observed from OPCS in new building. This corresponds with where the tornado warning was issued. A cold front crossed WV in the morning and made it to the I-95 corridor by the evening. Increased instability led to prefrontal showers and thunderstorms that were capable of damaging winds. There were multiple large trees with branches up to a foot in diameter downed in Fox Run Estates. Trees consisted of pine trees, bradford pears and oak trees. There was a tree down in the roadway at US 301 North at Collington Road. A cold front crossed WV in the morning and made it to the I-95 corridor by the evening. Increased instability led to prefrontal showers and thunderstorms that were capable of damaging winds. There was a tree down near US 50 and the US 301 North interchange.
- 9/18/2012: There was a tree down blocking eastbound lane on Suitland Parkway near Silver Hill Road. A cold front moved through the region and showers and severe thunderstorms occurred across the Mid Atlantic. A strong low-level jet drove activity through the Interstate 95 corridor and abundant amounts of moisture produced heavy rain. There was a tree down covering a vehicle on Maryland State Route 295 near route. There was a tree down near Suitland Parkway and Silver Hill Road. There were downed trees covering right lane of Maryland State Route 295 near 197.
- 4/19/2013: There were two treetops sheared off at residence on Woodyard Road. A cold front moved across the Mid-Atlantic and was accompanied by showers and thunderstorms that produced gusty winds. A strong jet of 50 knot winds was located at 850 mb or about a mile off the surface.
- 5/28/2013: There was a tree down near 13200 block of Brandywine Road. A shortwave trough moved north of the region. Organized convection developed near the I-95 corridor where instability was the greatest. Scattered showers and thunderstorms produced large hail, heavy rainfall and damaging winds. There were two large trees down near 6700 Block of Floral Park Road. There was a tree down on the 8500 block of Timothy Road. There were multiple tree branches about four inches in diameter broken off and on the ground. There was a tree down on

Molly Berry Road near North Keys. There was a tree down near the intersection of Cross Road trail and North Keys Road.

- 6/13/2013: A cold front stalled across the Mid-Atlantic and low pressure formed and moved along it. Southerly flow advected gulf moisture into the region and showers and thunderstorms easily formed. Heavy rain, hail, damaging winds and tornadoes occurred throughout the day. There was one tree uprooted into a house at 5900 Parkway Drive. There was a tree down on Park Hall Drive near Sandy Spring Road.
- 5/22/2014: There was a tree reported down at the entrance to Bowie State University. A warm front lifted northward across the Mid-Atlantic and showers and thunderstorms formed across the Central Foothills where breaks in the clouds led to increased instability. Thunderstorms spread east and north as the boundary moved northward. There was a tree down near the intersection of Maddox Lane and Laurel Bowie Road. There was a tree down in the driveway on Oxhill Court in Bowie.
- 6/18/2014: There was a tree down on a home near the intersection of Oxon Hill Road and Fort Foote Road. A weak cold front moved across the Mid-Atlantic region while hot and humid conditions led to an unstable environment. Showers and thunderstorms formed in vicinity of the front in the afternoon and some thunderstorms led to damaging winds. There were a couple of large trees uprooted. There were large branches broken with one into the back window of a vehicle. There were multiple trees onto power lines along Bella Vista Terrace extending from Bella Vista Court to Cagle Road to Riverview Road. There were trees down on Andrews Air Force Base. There were trees down near the intersection of Ritchie Marlboro Road and Pennsylvania Avenue. There were trees down in the Croom area. There was a tree down on US 301 South at Old Crain Highway.
- 6/25/2014: There was a tree down on wires at the intersection of Baltimore Avenue and Contee Place. A cold front moved across the region and showers and thunderstorms formed in a warm moist environment. Some thunderstorms produced damaging winds and heavy rain that led to flash flooding. There was a tree down on wires on Central Avenue at the beltway.
- 7/3/2014: The Mid-Atlantic was in between a cold front approaching form the Appalachian Mountains and Hurricane Arthur off the Delaware Coast. Warm and humid conditions were across the region and showers and thunderstorms led to heavy rain. Unstable conditions led to severe thunderstorms that produced damaging winds and large hail. There was structural damage to a building along Route 1.
- 6/18/2015: A tree was reported down on Phoebe Lane. The Mid-Atlantic remained in the warm sector as a nearly stalled warm front lingered just north of the Mason-Dixon line and the associated cold front swung in from the west by the evening. The unstable air mass led to SBCAPE values between 2000-3500 J/kg while effective shear values were between 30-40 knots.
- 6/30/2015: A tree was reported down at the intersection of Crane Highway and Trade Zone Ave. A warm front passed through the area while an upper-level trough approached from the west. A southerly flow behind the front caused an unstable atmosphere, and moderate amounts of instability developed due to colder air aloft ahead of the approaching trough. There was enough instability for some thunderstorms to become severe as a cold front approached from the west.
- 7/1/2015: A tree was reported down on Upshur St at 46th St. A line of showers and thunderstorms with embedded severe thunderstorms moved through the region ahead of an

approaching cold front. Southerly flow ahead of the front resulted in modest instability and shear. Multiple branches between 3 and 4 inches thick were reported down along Beaver Dam Rd. A gas station canopy was toppled over. Reported by WUSA 9 CBS. A tree was reported down at the intersection of Springfield Rd and Good Luck Rd. Several branches 8 inches to 1 foot thick were reported down at the intersection of 5th St and Maple Ave. Several large trees were uprooted along NW Branch. Trained spotter PGN152.

- 8/11/2015: A 10 inch in diameter tree limb was snapped near the intersection of Crain Hwy and Route 4. Reported by spotter PGE38. Scattered showers and isolated thunderstorms formed as an upper level trough swung through the northeast overnight. An abundance of moisture from persistent southerly flow led to enough instability to result in scattered convection and embedded stronger to severe thunderstorms.
- 2/24/2016: Multiple trees and power lines were reported down. Strong low pressure moved from the deep south to the Great Lakes, dragging a cold front through the Mid-Atlantic. Strong veering winds as a warm front lifted north ahead of the cold front led to increased sheer across the area. This combined with marginal instability led to multiple rounds of thunderstorms, with embedded severe with strong winds and small hail and multiple tornadic cells.
- 5/2/2016: Numerous trees reported down with power outages across College Park. A cold front moved through the Mid-Atlantic region and showers and thunderstorms developed ahead and along the frontal boundary. Many thunderstorms became severe with large hail and damaging winds. Five trees were reported down, that hit 2 homes and 3 sheds. Reported by Capital Weather Gang. Estimated 50 to 60 mph wind gusts in Hyattsville. Numerous trees were reported down around Hyattsville. House damage due to fallen tree. House damage due to fallen tree along Princess Garden Pwky. A fallen tree damaged a house.
- 6/21/2016: A tree fell onto a house at the 12300 block Lisborough Rd. Reported by Washington Post. Scattered showers and thunderstorms formed ahead of an approaching cold front. Plenty of warm air and moisture advection on unilateral southerly flow provided the instability and shear to be conducive for thunderstorm development. Multiple trees down near NWR visitors center. A tree fell on a car in Bowie Town Center. Reported by Washington Post.
- 6/28/2016: A roof of a parking garage was damaged. Reported by former NWS student intern. A cold front swung through the region. With increased instability and shear ahead of the system, scattered thunderstorms with embedded severe developed.
- 7/18/2016: Large tree limbs were snapped near the intersection of Candy Hill road and Croom Road. A cold front passed through the area. Ahead of the front, hot and humid conditions led to an unstable atmosphere. The forcing from the cold front combined with the instability to trigger thunderstorms. Stronger shear from an upper-level trough caused some thunderstorms to become severe.
- 7/19/2016: A tree was down on Woodyard Road at Sherwood Drive. A boundary stalled over the area. Warm and humid conditions led to an unstable atmosphere while an upper-level trough passed through the area. The forcing from the boundary front combined with the instability to trigger thunderstorms. Stronger shear from the upper-level trough caused some thunderstorms to become severe.
- 8/15/2016: Multiple trees were down on wires. A southwest flow caused hot and humid conditions over the area. A pressure trough triggered showers and thunderstorms, and some became severe due to the unstable atmosphere. Large tree limb down and blocking southbound side of

soil Conservation Road between Powder Mill Road and Beaver Dam Road. Multiple trees were down. Several large trees two to two and one-half feet in diameter were knocked over or uprooted near Pine Lane, Livingston Road and Route 210. Several trees were down along Livingston Road.

- 8/17/2016: Damage was done to a metro transit warehouse roof and bay door. A southwest flow caused hot and humid conditions over the area. A pressure trough triggered showers and thunderstorms, and some became severe due to the unstable atmosphere. A wind gust of 66 mph was recorded. Trees were down at the intersection of Locust Glen Drive and Enterprise Road.
- 2/12/2017: A wind gust of 72 mph was reported at Andrews Air Force Base. A strong cold front passed through during the evening hours of the 13th. A line of showers developed along the front and they were able to mix down strong winds from aloft.
- 3/1/2017: There were multiple reports of wires down in Hyattsville. A potent cold front passed through on the 1st. A southwest flow ushered in warm and moist air ahead of the boundary. Showers and a few thunderstorms developed, and they were able to mix down strong winds from aloft. A wind gust of 58 mph was reported. There were multiple reports of wires down in the Marlboro area. A wind gust of 60 mph was reported. A wind gust of 58 mph was reported in Bowie. A wind gust of 58 mph was reported.
- 4/6/2017: A wind gust of 66 mph was reported. Cutoff low pressure was over the Ohio Valley. Another area of low pressure strengthened overhead on the occluded boundary. Warm and moist air from the south lead to an unstable atmosphere. Strong shear profiles were in place due to the cutoff low to the west. Strong lift associated with the developing low combined with strong shear and enough instability to produce severe thunderstorms. A wind gust of 68 mph was reported. Trees were down near Bowie. Five large trees were down in the neighborhood off of Moylan Drive. Trees were down on power lines as well as houses and cars in the area of Milan Way. Wind gusts of 59 mph were reported near Bowie.
- 4/20/2017: A large tree fell onto a couple townhomes along Greenspire Terrace. High pressure was centered to the south and this allowed warm and moist air to move into the area. A few thunderstorms became severe due to the unstable atmosphere. Structural damage was reported to an Apartment building on Metzerott Road.
- 4/21/2017: Large trees were down on power lines near the intersection of Route 4 and Old Crain Highway. A cold front moved through the area. Ahead of the boundary, a southwest flow led to warm and humid conditions. The unstable atmosphere from warm and humid conditions along with stronger winds aloft caused some storms to become severe.
- 5/5/2017: A tree was down in the 3800 Block of 37th place. Low pressure was located across the Tennessee Valley while a strong low level jet transported moisture into the Mid-Atlantic. Showers and thunderstorms developed across Maryland and the unstable atmosphere caused a few thunderstorms to become severe.
- 5/19/2017: Several large branches were down at the Cross Creek Golf Club. A warm and humid air mass led to the development of thunderstorms. A few thunderstorms became severe due to stronger winds aloft.
- 6/19/2017 Numerous large trees were down around Lake Artemesia. A potent cold front passed through the area. Warm and humid conditions along with forcing from the boundary caused showers and thunderstorms to develop. Stronger winds aloft caused some storms to

become severe. A part of a tree was snapped off onto a portin of the road near the intersection of Adelphi Road and University Boulevard. A 12 to 14 inch in diameter tree fell onto the fence on Ridge Road. A large tree limb fell in the road near MD 202 and Kettering Drive. Two large trees were down along the intersection of Silvergate lane and Silverbrook Way in Bowie. A few trees were down on Goddard Space Flight Center's campus.

- 7/1/2017: A tree limb six inches in diameter fell onto a house. A cold front moved into the area triggering showers and thunderstorms. Hot and humid air ahead of the boundary caused an unstable air mass, which led to some thunderstorms becoming severe. A tree was down blocking Croom Road near Whites Landing Road.
- 7/14/2017: A tree was down along the 8600 Block of Temple Hill Road. A cold front passed through the area. At the same time, an upper-level trough passed through increasing the winds aloft. There was enough shear to combine with an unstable atmosphere for severe thunderstorms to develop. A wind gust of 58 mph was reported. A tree was down along 7909 Pinewood Drive.
- 7/22/2017: A tree was down blocking Golden Pass Lane. A weak boundary moved into the area, but hot and humid conditions led to moderate to high amounts of instability. An upper-level trough increased winds aloft which caused storms associated with the boundary to become severe.
- 7/23/2017: A tree was down along the intersection of Lanham Severn Road and Louise Street. A boundary remained over Maryland near and east of Interstate 95. The boundary triggered showers and thunderstorms. Moderate to high amounts of instability along with stronger winds aloft led to some storms becoming severe.
- 8/3/2017: A tree was down near Church Road and Mount Oak Road. A weak boundary along with hot and humid air caused thunderstorms to develop. A few thunderstorms became severe due to high amounts of instability. Several large trees were down and uprooted.
- 8/12/2017: Several large six inch in diameter tree limbs were down along Nottingham Road and Molly Berry Road. A cold front and an unstable atmosphere led to some severe thunderstorms.
- 5/14/2018: Trees were down along Route 4 at Dower House Road. Low pressure passed through the area on the 14th. The low tracked along a boundary that separated warm and humid air to the south and west from cooler marine air to the north and east. The warm and humid air led to an unstable atmosphere, and there was enough instability for storms to become severe. Trees were down along Route 193 at Lisborough Road.
- 7/17/2018: A tree six inches in diameter was down blocking a lane of traffic on Brinkley Road. A cold front passed through on the 17th, and southwest winds ahead of the boundary led to an unstable atmosphere. The instability combined with the lift from the cold front to produce severe thunderstorms.
- 7/22/2018: A tree fell on power lines blocking the westbound ramp from MD-214 to US-301 Crain Highway. A cutoff low from the jet stream developed just to our west on the 22nd. A couple thunderstorms became severe due to an unstable atmosphere and stronger winds that were able to mix down from aloft.
- 8/7/2018: A tree was blown down at the intersection of Brandywine Road and Ashbox Road. A tree was also blown down at the intersection of Cederville Road and Brandywine Road. An upper level low near the region combined with high instability and increasing winds aloft to produce thunderstorms, some of which became severe.
- 8/13/2018: A tree was blown down in the 5300 block of Eastern Avenue Northeast. An upper level low pressure system combined with high amounts of moisture and instability to

produce thunderstorms. A few storms became severe. Numerous trees were blown down in the College Park area.

- 3/22/2019; A wind gust of 50 knots (58 mph) was measured at Templeton Elementary School. A potent upper level trough as well as a surface cold front crossed the region during the afternoon of March 22nd. Out ahead of the trough, surface heating and cold upper levels were able to generate marginal amounts of surface instability. This was enough to generate scattered showers and a few thunderstorms as the front and trough passed across the area. Steep low level lapse rates and low freezing levels allowed for some of these thunderstorms to become locally severe. A tree was blown down near the intersection of MD Route 193 and MD Route 214.
- 4/15/2019: A wind gust of 60 mph (52 knots) was measured at KMDRIVER3 near Hyattsville. A warm front crossed the state of Maryland from south to north during the morning hours of April 14th, allowing for increasing warm and moist air to move overhead. During the afternoon and evening, low pressure moved through the Ohio Valley and into the eastern Great Lakes, leading to an increase in the wind field across all levels and therefore an increase in deep layer shear. Instability remained somewhat limited, but was enough to produce showers and scattered thunderstorms during the afternoon and evening hours, a couple of which became severe. A second round of showers and thunderstorms then moved across the state as a strong cold front crossed the region during the late evening and overnight hours. These thunderstorms took the form of a quasi-linear convective system which became severe and produced locally damaging winds. A wind gust of 62 mph (54 knots) was measured at LNDSH near Seat Pleasant. A tree was blown down across Maryland Route 197 at Old Laurel-Bowie Road. A tree was blown down across a portion of Maryland Route 373 near Newasa Lane. A tree was blown down near the intersection of Croom Road and Mount Calvert Road. All southbound lanes of Maryland Route 202 Largo Road were blocked by a fallen tree at Watkins Lane Drive.
- 4/26/2019: Numerous trees were blown down in the Lanham area, including a few onto houses and power lines. An upper level trough east of the Mississippi River on the morning of April 26th deepened and closed off over the eastern Great Lakes by the morning of April 27th. A forced convective line was ongoing in the morning hours of April 26th over West Virginia and progressed eastward into Maryland during the afternoon hours. A few individual cells also formed ahead of this convective line. Modest instability developed during the late morning and early afternoon hours which helped to support showers and thunderstorms across the region, and this combined with moderate levels of wind speed shear, led to strong to severe thunderstorms which produced locally damaging winds. There was also enough low level directional shear to produce a tornado in central Maryland. A tree was blown down near the intersection of Maryland Route 564 and 98th Avenue. Two trees were blown down alongside the ramp from I-495 Capital Beltway Inner Loop to I-95 northbound.
- 5/2/2019: A tree was reported blown down on the outbound lane of Pennsylvania Avenue near Suitland Parkway. A warm front lifted across the region during the morning hours of May 2nd, with warm and humid conditions developing by the afternoon. This led to ample amounts of instability over the region, and as an upper level disturbance moved into the area providing wind shear and lift, scattered showers and thunderstorms developed, a few of which became severe.
- 5/23/2019: A tree was blown down onto a house. A warm front crossed the region during the morning hours of May 23rd, placing the area in the warm sector by the afternoon hours. At the same time, surface low pressure tracked across the northern Great Lakes, with an attendant cold front moving into the Ohio Valley by the evening. A mesoscale convective system (MCS) was

ongoing during the morning hours and moved eastward and into the region during the afternoon hours. Out ahead of the MCS, moisture and warmth increased with moderate instability developing. Aloft, wind shear increased throughout the day and became quite substantial by the late afternoon. The MCS entered Maryland by the mid afternoon hours and intensified into a linear feature that produced damaging winds and one tornado before exiting during the evening. Multiple trees and utility poles were blown down throughout Prince Georges County.

- 5/30/2019: A tree was blown down on a house in the 3200 block of Maygreen Avenue. On the morning of May 30th a surface front was positioned across Pennsylvania, with a surface low positioned west of Chicago, Illinois. Through the day the surface |low moved eastward along the frontal boundary, reaching western Pennsylvania by late in the afternoon. The low then quickly pushed eastward off the NJ coastline by late in the evening, with a cold front crossing the region. In addition, two disturbances aloft moved across the area, one during the mid to late afternoon hours, and another in the evening. Out ahead of the front, warmth and humidity allowed for the development of moderate instability and that coupled with moderate wind shear aloft set the stage for two rounds of scattered showers and thunderstorms, some of which became severe. Two tornadoes occurred across central Maryland.
- 6/17/2019: Multiple trees were blown down in Kettering along MD-193. While large scale forcing was weak across the region on June 17th, a zone of differential heating and a weak lee trough near the Blue Ridge, when combined with local terrain and sea-breeze circulations, were enough to generate scattered thunderstorms across the region during the afternoon and evening hours. Marginal instability and sufficient wind shear promoted the growth of some of these thunderstorms to severe levels. Several trees and telephone poles and wires were blown down.
- 6/28/2019: Numerous trees were blown down in the Capitol Heights and Suitland area, including several onto houses. While large scale forcing was weak, moderate amounts of instability combined with local terrain circulations and remnant mesoscale boundaries to generate scattered showers and thunderstorms in the afternoon. With steep low level lapse rates, a few of these storms became strong to locally severe.
- 6/29/2019: Tree limbs were blown down onto power lines in the Laurel area. Heat and humidity through the day on June 29th led to a moderately unstable air mass by the afternoon. A weak pressure trough developed and heights began to fall by the evening as an upper level ridge broke down. Also late in the evening, a cold front began to approach, increasing forcing across the region. Several rounds of scattered showers and thunderstorms developed from the mid afternoon hours through well past sunset. Some thunderstorms became strong to severe. Tree limbs were blown down onto power lines in the Riverdale area. Heat and humidity through the day on June 29th led to a moderately unstable air mass by the afternoon.
- 7/2/2019: A tree was blown down at the intersection of Old Annapolis Road and Collington Road. Wires were also blown down in the 9800 block of Franklin Avenue and in the 12400 block of Canfield Lane. Increasing temperatures and low level moisture led to developing instability across the region during the day of July 2nd. The strongest mid-level forcing remained to the north across northern PA/OH where a stationary boundary lingered. However, a weak upper level shortwave trough moving through did help showers and scattered thunderstorms to develop across the state, and given the instability a few became severe. A tree was blown down in the 3900 block of Winchester Lane. A tree was blown down onto wires in the 8600 block of Old Brown's Lane.

- 7/4/2019: Large tree limbs were blown down onto power lines in the 3500 block of Madonna Lane. Heat and plentiful low level moisture led to the development of instability and therefore scattered showers and thunderstorms during the afternoon of July 4th. While forcing was limited, some of the thunderstorms did briefly become pulse severe.
- 7/6/2019: Multiple trees and wires were blown down in the Hyattsville area. An approaching cold front coupled with upper level shortwave energy and instability across the region led to the development of afternoon scattered showers and thunderstorms. Several of these thunderstorms became severe. Trees and wires were blown down in the Upper Marlboro area.
- 7/11/2019: A couple of trees and several large branches were blown down in the Berwyn Heights area. A cold front approached from the west during the day of July 11th, with warm and moist air advection occurring on southerly flow. This promoted the development of significant amounts of instability, and that coupled with an approaching shortwave trough and modest shear values, led to the generation of scattered showers and thunderstorms, some of which became severe.
- 7/17/2019: A tree was blown down on Steed Road. On July 17th, the remnant circulation of Barry moved into Pennsylvania with a surface pressure trough out ahead of it over the Mid-Atlantic. Out ahead of the circulation, a hot, humid, and unstable air mass was in place, and this helped to initiate scattered to numerous showers and thunderstorms in the afternoon. Some of these thunderstorms became strong to locally severe.
- 7/22/2019: Trees and wires were reported down across Fort Washington Road. Falling heights, an increasing southwest flow aloft, an approaching cold front, and strengthening pressure trough overhead combined with instability from a hot and humid air mass in place to trigger showers and thunderstorms during the afternoon hours of July 22nd. With high levels of CAPE and increased shear profiles, thunderstorms became strong to severe as they organized into linear structures.
- 8/5/2019: A couple of large tree limbs were blown down. An upper-level trough moved overhead during the afternoon and evening hours of August 5th while a weak surface trough remained positioned near the area as well. A southwest flow aloft ahead of the trough helped to usher in warmth and humidity, which led to the development of marginal instability across the region. This led to the formation of scattered showers and thunderstorms, a couple of which became locally severe.
- 8/20/2019: A 50-knot (58 mph) wind gust was measured at Andrews Air Force Base. A mesoscale convective system (MCS) and its associated energy was moving across central West Virginia on the morning of August 20th. As this moved eastward into the region during the afternoon and evening hours, it served as the focus for additional shower and thunderstorm development. Significant amounts of instability and steepening low level lapse rates led some of these thunderstorms to become severe.
- 8/21/2019: A 55-knot (63 mph) wind gust was measured at College Park Airport. A single engine, 4000-pound airplane flipped and began leaking fuel. A tree was blown down on wires along Dartmouth Avenue. Another tree was blown down onto a house on Girard Avenue. A tree was blown down on Pony Trail Lane. Several other trees were blown down along Calvert Road. An upper level trough crossed the Appalachian Mountains during the morning of August 21st and moved through the region during the mid to late afternoon hours, followed by a second weaker trough in the evening. At the surface, a weak pressure trough gradually pushed eastward through the day as well. Modest amounts of instability and deep layer shear were present during the afternoon and evening when these features moved across and a few isolated strong to locally

severe thunderstorms were able to develop in central Maryland near Washington DC. A tree was blown down on wires on Newton Street.

- 2/7/2020: Large tree branch down onto power lines near the intersection of Largo Road and Hancock Drive. An area of low pressure formed over the area in response to an impressive longwave trough approaching from the west. A line of low-topped showers and thunderstorms formed along the system's cold front, leading to the formation of multiple tornadoes within the high shear-low CAPE environment. These tornadoes, along with straight-line winds from other storms, produced widespread damage across much of central and northern Maryland.
- 4/13/2020: Wires were blown down in the 5800 block of Burgundy Street. A very strong cold front passed through the area while a potent upper-level trough was positioned just to our west. Strong winds aloft were able to mix down in heavier showers and thunderstorms due to an unstable atmosphere. Low-level winds changing speed and direction with height combined with a thunderstorm to trigger an isolated tornado. A tree was blown down onto Rhode Island Avenue near Edgewood Road.
- 6/25/2020: Trees were blown down on Largo Road in Upper Marlboro. An unseasonably strong upper-level trough interacted with a modestly unstable environment over the Middle Atlantic to produce several supercell thunderstorms which transitioned into small bowing line segments across far eastern West Virginia, central Maryland and northern Virginia. The storms produce substantial and relatively widespread wind damage and some hail along their path, though the storms themselves were isolated to widely scattered in nature.
- 7/4/2020: Tree damage was reported near Bowie, including a tree down on eastbound MD-214 Central Avenue at US-301 Crain Highway. An isolated severe thunderstorm developed over central Maryland on the afternoon of Saturday, July 4th, 2020, causing some wind damage.
- 7/6/2020: A tree was blown down near the I-95/I-495 Capital Beltway Interchange. A second tree was blown down on I-95/I-495 Capital Beltway near MD-295 Baltimore-Washington Parkway. A third tree was blown down onto MD-295 Baltimore-Washington Parkway near Powder Mill Road. An upper-level disturbance triggered scattered to numerous showers and thunderstorms. The very unstable lower-level air mass resulted in an environment conducive to downburst winds, some of which were significant. Trees were blown down in the area of MD-197 Collington Road and US-50 John Hanson Highway. Trees down in the area of Branch Avenue and Silver Hill Road. Trees were blown down in Upper Marlboro, including one onto a house. A tree blew down near the intersection of MD-381 Brandywine Road and Kathleen Lane. A tree blew down near the intersection of MD-373 Accokeek Road and MD-5 Branch Avenue.
- 7/20/2020: Numerous trees and power lines were blown down near Friendly, particularly in the vicinity of Livingston Road. Some power poles were snapped by falling trees and large snapped branches. Isolated severe thunderstorms developed near and southwest of the DC metro during the late afternoon and early evening hours of Monday, July 20th, 2020.
- 7/22/2020: Trees were blown down near Upper Marlboro, including on US-301 Crain Highway near Sasscer Lane, and on MD-382 Croom Road near Mattaponi Road. An upper-level trough interacted with a stalled surface front draped over the Mid-Atlantic resulting in scattered to numerous showers and thunderstorms developing in the lee of the Appalachians Mountains as early as midday. The storms coalesced into a bow echo moved eastward across central Maryland and northern Virginia (including the DC metro) during the mid afternoon. Thunderstorms exited the area by nightfall.

- 7/23/2020: Several trees were blown down in the Oxon Hill area. A few severe thunderstorms developed along a weak, stalled front. Several trees were blown down in the Bladensburg area.
- 7/31/2020: Trees were reported down in Largo, including on westbound MD-202 Largo Road at MD-214 Central Avenue. A stalled front ignited scattered strong to severe thunderstorms across east-central Virginia into central/southern Maryland.
- 8/3/2020: Trees and large branches were blown down in the area of MD-382 Croom Road and Molly Berry Road. A band of showers and thunderstorms developed well ahead of Tropical Cycolne Isaias. Some of the thunderstorms in the band produced damaging wind gusts. A few isolated cells just ahead of the band also produced severe weather.
- 8/25/2020: A tree blew down onto a house on Pritchard Lane. An outflow boundary from a decaying convective system triggered an isolated severe thunderstorm over northern Virginia around midday. A cold front then triggered an organized line of thunderstorms which produced scattered to numerous damaging wind gusts over eastern West Virginia, western Maryland, and northern into central Virginia as well as the DC metro area.
- 9/3/2020: A tree blew down onto MD-193 University Boulevard East at Metzerott Road. A disturbance (the remnant of convection from the day before over the Tennessee River Valley) triggered a few supercells and line segments from eastern West Virginia into the Washington/Baltimore metro areas. A tree was blown down blocking Belle Chasse Boulevard. A tree was blown down onto MD-197 near Muirkirk Road. Dozens of trees and wires were blown down in the Lanham and Springdale area. A 50-knot (58 MPH) wind gust was measured by a mesonet at Hyattsville Middle School. A tree blew down onto wires along MD-193 Enterprise Road at Locust Dale Court. Trees were blown down on MD-201 Kenilworth Avenue near MD-295 Baltimore-Washington Parkway.
- 11/15/2020: Trees were blown down between Beltsville and Bladensburg, including one on MD-295 Baltimore-Washington Parkway near MD-410. A strong cold front spawned a line of low-topped showers and thunderstorms that produced wind gusts of up to 70 MPH and numerous instances of downed trees.
- 5/26/2021: Several trees were reported down near Friendly, including a tree that blew down on MD-210 Indian Head Highway at Old Fort Road. A pre-frontal trough and approaching cold front ignited multiple rounds of severe thunderstorms during the afternoon and evening hours. Some thunderstorms produced significant microbursts. Widespread wind damage was reported near Tantallon and Fort Washington. Half a dozen trees blew down onto houses, with several more falling on cars. Numerous other trees, branches and wires were reported down. One person was injured when a tree fell on a house in the 13300 block of Pendleton Street in Fort Washington. A tree blew down onto an occupied car in the 10900 block of Sweetgum Way; the occupant was uninjured. Another tree blew down in the 9000 block of MD-223 Piscataway Road. Trees were reported down in the Upper Marlboro area. A building under construction collapsed in the 3700 block of US-301 Crain Highway. A tree blew down on MD-4 Pennsylvania Avenue near MD-717 Water Street.
- 6/8/2021: A tree blew down in a yard in Capitol Heights. Several other trees and large branches were blown down in the area. An isolated thunderstorm caused tree damage just east of DC.
- 6/14/2021: A tree blew down onto northbound MD-295 Baltimore-Washington Parkway north of MD-450 Annapolis Road. A cold front spawned several clusters of supercells that produced hail and wind during the evening hours.

- 7/1/2021: A tree blew down on southbound MD-295 Baltimore-Washington Parkway past NASA Goddard. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area. A tree blew down on MD-704 Martin Luther King Junior Highway near Sheriff Road. A couple dozen trees and large tree limbs were blown down in Mitchellville, including along MD-193 Enterprise Road between MD-214 Central Avenue and Woodmore Road. A large tree and multiple tree limbs were blown down in the 7700 block of Hanover Parkway. A tree blew down near the intersection of MD-223 Woodyard Road and Welshire Drive. A few dozen trees and large limbs were blown down in the vicinity of the US-301 Crain Highway/MD-214 Central Avenue interchange. A couple dozen trees and large limbs were blown down near Bowie. Trees blew down near the intersection of MD-197 Collington Road near Lyle Lane, Gallant Fox Lane, and Tulip Grove Drive. Numerous trees blew down just southeast of Bowie, including at residence where about a dozen 100 foot tall trees snapped near the top. A couple dozen trees and large branches blew down in Capitol Heights. A tree blew down onto a house on Highview Place near Hillview Court. Several large branches blew down nearby. Dozens of large tree limbs were snapped in the 5700 block of Falkland Place and on adjacent Rollins Avenue north of Walker Road as well as along Brooke Road.
- 7/21/2021: A tree blew down on northbound I-295 Anacostia Freeway at I-95/I-495 Capital Beltway. Several thunderstorms ahead of a cold front produced widely scattered instances of wind damage. A tree blew down onto a residence in the 4800 block of Indian Head Highway. Several wires blew down in the area.
- 7/29/2021: A few trees blew down in the Hyattsville area. Supercell thunderstorms produced large hail, damaging wind and a tornado during the afternoon hours. The hardest hit areas were near Columbia, Maryland, and near Falmouth, Virginia. Numerous trees, branches and wires blew down in the Landover area. Trees blew down along MD-214 Central Avenue near Hill Road/Shady Glen Drive.
- 8/9/2021: Several trees blew down in the Greenbelt area. A tree blew down near the I-95/I-495 Capital Beltway/MD-450 Annapolis Road interchange. A tree blew down onto northbound I-95/I-495 Capital Beltway Outer Loop at Exit 22A/MD-295 Baltimore-Washington Parkway. A tree blew down on northbound MD-295 Baltimore-Washington Parkway near I-95/I-495 Capital Beltway. A tree blew down on northbound MD-295 Baltimore-Washington Parkway at Good Luck Road. A tree blew down on northbound MD-295 Baltimore-Washington Parkway near MD-410 Riverdale Road. A cluster of thunderstorms produced a few downbursts from Northeast DC into nearby adjacent metro Maryland and over southeastern Anne Arundel County.
- 8/13/2021: Trees blew down on southbound MD-197 near Race Track Road. A cold front intersected an extremely unstable airmass. The result was numerous strong to severe thunderstorms containing damaging wind gusts and some hail. Trees blew down near the intersection of MD-193 Watkins Park Drive and Keverton Drive. Trees blew down on MD-193 Watkins Park Drive near Oak Grove Road. Trees blew down on MD-4 Southern Maryland Boulevard near MD-408 Mount Zion Marlboro Road. Trees blew down near the intersection of MD-725 Main Street and MD-202 Largo Road.
- 8/14/2021: Trees blew down near the intersection of MD-381 Aquasco Road and Aquasco Farm Road. Thunderstorms ignited along a stalled front and produced several instances of wind damage.

- 8/26/2021: A tree was reported down on northbound MD-382 Croom Road at River Airport Road. Isolated severe thunderstorms produced a few instances of wind damage over central and western Maryland.
- 9/1/2021: A tree blew down onto a house off of Harkins Road. The remnants of Ida produced two tornadoes and sporadic straight line wind damage.
- 5/16/2022: Trees blew down between Fort Washington and Piscataway. A large tree blew down blocking the right lanes of southbound MD-210 Indian Head Highway near Piscataway Creek. An intense supercell thunderstorm spawned by a strong cold front and negatively-tilted upper-level trough resulted in a swatch of considerable wind damage and significant hail from parts of northern Virginia, across the southern suburbs of Washington DC, to southern Maryland. A tree blew down in the 7000 block of Livingston Road. A tree blew down in the 14000 block of Brandywine Road.
- 5/22/2022: Wires blew down in the 2200 block of Cool Spring Road. A strong cold front produced multiple rounds of strong to severe thunderstorms resulting in isolated large hail and scattered wind damage. Wires blew down in the 4500 block of Dallas Place. Wires blew down in the 1100 block of Baltimore Lane.
- 5/27/2022: Trees blew down along MD-210 Indian Head Highway near the intersection of Palmer Road/Livingston Road. Multiple rounds of severe thunderstorms spawned by a strong cold front produced hail, scattered damaging wind gusts, and a couple of tornadoes. Tree damage was reported in Marlow Heights, including a tree that blew down onto wires near the intersection of Fisher Road and Brinkley Road.
- 6/2/2022: Tree damage was reported near the DC/Prince Georges County line, including a tree that blew down blocking all lanes of Michigan Avenue Northeast at Eastern Avenue Northeast. Scattered to numerous showers and thunderstorms produced isolated instances of large hail and wind damage. Tree damage was reported near the University of Maryland, including trees that blew down onto westbound MD-431 Campus Drive prior to Diamondback Drive. Tree damage was reported near New Carollton, including trees that blew down MD-564 Lanham Severn Road between Santa Cruz Street and Woodstream Drive.

E. Hurricane/Tropical Storm

- 06/23/1972: FEMA Major Disaster declaration (FEMA-DR-351-MD) issued for flooding from remnants of Hurricane Agnes.
- 09/16/1999: Hurricane Floyd made landfall just east of Cape Fear, North Carolina in the early morning hours of the 16th and moved north-northeast across extreme southeast Virginia to near Ocean City, Maryland by evening on the 16th. A total of 5 to 8 inches fell across Baltimore, Prince George's, and Charles Counties. In Prince George's County, road crews cleared 500 trees from roadways. More than 60,000 customers lost power. Two people were injured and one person was killed by carbon monoxide fumes after losing power and running a generator inside their home
- 09/18/2003: FEMA Major Disaster declaration (FEMA-DR-1492-MD) issued for flooding from remnants of Hurricane Isabel.
- 12/2009: Remnants of Hurricane Ida (or the November 2009 Mid Atlantic nor'easter) contributed to gusty winds and heavy rain. Prince Georges County had high water on the Patuxent, Potomac and Anacostia River fronts. Much of the shoreline has a good rise protecting it from flooding, but three roads were closed from flooding and some property may also have been impacted.
- 08/27/2011: Hurricane Irene tracked up the Mid-Atlantic Coast during the evening hours of the 27th through the early morning hours of the 28th. Irene passed by just to the east of Ocean City, Maryland during the early morning hours of the 28th. The minimum central pressure was 958 millibars and maximum sustained winds were 80 mph, making Irene a category one hurricane. Irene produced tropical storm conditions across portions Maryland near and east of the Interstate 95 Corridor. Hundreds of trees were down across the county. At least one tree fell onto a house and another fell onto a car. Power outages were in the tens of thousands.
- 08/04/2020: Tropical Storm Isaias moved up the east coast, passing through southern Maryland on the morning of Tuesday, August 4th, 2020, spawning several tornadoes as well as flooding rain and tropical storm force winds. Sustained winds of 31 mph reported at the Andrews Air Force Base ASOS (KADW) at 8:03 AM EST, with a peak wind gust of 44 mph at 8:19 AM EST. Isolated reports of trees down across the county, but no significant damage reported.

F. Winter Storm

- 01/7/1996: Prince George's experienced a blizzard between 01/06/1996 and 1/12/1996 that resulted in 1 death. The total damage caused by this event was approximately $56,290. This event was considered a Declared Disaster by FEMA.
- 03/13/1993: A severe snowfall and winter storm occurred from 3/13/1993 to 3/17/1993 and was declared as an Emergency Declaration by FEMA.
- 02/08/1994: Prince George's County experienced severe winter weather and ice storms between 02/08/1994 and 02/18/1994 and was declared as a disaster by FEMA.
- 01/25/2000: Between 01/25/2000 and 01/30/2000, the county experienced a severe winter storm and was declared as a disaster by FEMA.
- 02/14/2003: There was an Emergency Declaration by FEMA for the county due to a severe snowstorm that occurred between 02/14/2003 and 02/23/2003.
- 02/05/2010: Between 02/05/2010 and 02/11/2010 there was a severe winter storm and snowstorm that FEMA declared as a disaster.

- 6/22/2012: Estimated quarter size hail fell along Bladensburg Road. An upper-level trough and associated cold front moved across Maryland, northern Virginia and eastern West Virginia during the afternoon and evening of the 22nd. High humidity and instability values provided the ingredients for severe storms to develop early in the afternoon and linger into the late evening hours.
- 5/28/2013: A shortwave trough moved north of the region. Organized convection developed near the I-95 corridor where instability was the greatest. Scattered showers and thunderstorms produced large hail, heavy rainfall and damaging winds.
- 01/22/2016: On 01/22/2016 and 01/23/2016 an incident of a severe winter storm and snowstorm occurred that was declared a disaster by FEMA.
- 7/1/2016: Quarter sized hail was reported near Bowie. A cold front passed through the area on July 1st. A southerly flow ahead of the boundary caused warm and humid air in place, which led to an unstable atmosphere. The instability combined with lift from the cold front caused thunderstorms to develop. Some thunderstorms were severe due to stronger sheer profiles from an upper-level trough overhead along with the unstable atmosphere.
- 4/21/2017: Quarter sized hail was reported. A cold front moved through the area. Ahead of the boundary, a southwest flow led to warm and humid conditions. The unstable atmosphere from warm and humid conditions along with stronger winds aloft caused some storms to become severe.
- 4/21/2017: Quarter sized hail was reported. A cold front moved through the area. Ahead of the boundary, a southwest flow led to warm and humid conditions. The unstable atmosphere from warm and humid conditions along with stronger winds aloft caused some storms to become severe.
- 4/21/2017: Half dollar sized hail was reported. A cold front moved through the area. Ahead of the boundary, a southwest flow led to warm and humid conditions. The unstable atmosphere from warm and humid conditions along with stronger winds aloft caused some storms to become severe.
- 8/13/2018: Hail up to the size of quarters fell at this location. An upper level low pressure system combined with high amounts of moisture and instability to produce thunderstorms. A few storms became severe.
- 6/17/2019: Hail up to the size of golf balls (1.75 in diameter) was reported. While large scale forcing was weak across the region on June 17th, a zone of differential heating and a weak lee trough near the Blue Ridge, when combined with local terrain and sea-breeze circulations, were enough to generate scattered thunderstorms across the region during the afternoon and evening hours. Marginal instability and sufficient wind shear promoted the growth of some of these thunderstorms to severe levels.
- 8/20/2019: Up to half-dollar sized hail (1.25 in diameter) reported near Andrews Air Force Base. A mesoscale convective system (MCS) and its associated energy was moving across central West Virginia on the morning of August 20th. As this moved eastward into the region during the afternoon and evening hours, it served as the focus for additional shower and thunderstorm development. Significant amounts of instability and steepening low level lapse rates led some of these thunderstorms to become severe.

- 8/28/2020: Golf ball size hail was reported on Brinkley Road near Camp Springs. A broken line of strong to severe thunderstorms developed southward into the area from Pennsylvania during the mid to late afternoon and early evening hours.
- 7/1/2021: Quarter size hail was reported near Glenn Dale. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area.
- 7/1/2021: Quarter size hail was reported southeast of Glenn Dale. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area.
- 7/1/2021: Hail up to golf ball size was reported northwest of Bowie. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area.
- 7/1/2021: Quarter size hail was reported just north of Bowie. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area.
- 7/1/2021: Quarter size hail was reported just south of Crofton. Two rounds of severe thunderstorms produced two tornadoes, hail, and widespread wind damage (some significant) across the DC metro and central Maryland, with spottier wind damage extending into the Baltimore area.
- 7/26/2021: Half dollar size hail was reported near Andrews Air Force Base. A pair of fronts spawned two clusters of severe thunderstorms that produced localized considerable wind damage near Staunton, Virginia, Silver Spring, Maryland, and Washington, DC.
- 5/16/2022: Ping pong ball size hail was reported near Baden. An intense supercell thunderstorm spawned by a strong cold front and negatively tilted upper-level trough resulted in a swatch of considerable wind damage and significant hail from parts of northern Virginia, across the southern suburbs of Washington DC, to southern Maryland.
- 6/2/2022: Quarter size hail was reported northwest of Lower Marlboro. Scattered to numerous showers and thunderstorms produced isolated instances of large hail and wind damage.

G. High Wind

- 10/29/2012: Hurricane Sandy moved up the Atlantic coast and then turned Northwest and made landfall northeast of MD. Heavy rain and high winds over spread coastal regions and most of Maryland, eastern panhandle of West Virginia and Northern Virginia. Heavy rain caused flooding and river flooding. Estimated wind gusts of 60 mph caused damage to seventeen residences.
- 03/12/2014: A cold front moved through the Mid Atlantic while sharp pressure rises occurred behind the frontal passage. Gusty Northwest winds occurred across the region with widespread gusts up to 55 mph with localized higher amounts. Estimated gusts of 50 knots blew down trees across the county.
- 02/14/2015 – 02/15/2015; Strong gradient winds formed as a resulting of a tight pressure gradient between low pressure near New England and high pressure building in from the Midwest. Multiple sources in surrounding areas measured gusts up to 60 mph and sustained winds up to 40 mph.

- 04/02/2016: A strong cold front swung through the Mid-Atlantic. Surge of cold air advection immediately and then again after the frontal passage resulted in two rounds of strong winds, one with a squall line that formed along the front and another more pro-longed with the synoptic flow. Several trees were reported down across College Park with one tree falling on a car, injuring the two occupants.
- 04/03/2016: A strong cold front swung through the Mid-Atlantic. Surge of cold air advection immediately and then again after the frontal passage resulted in two rounds of strong winds, one with a squall line that formed along the front and another more pro-longed with the synoptic flow. Reported by site near Seat Pleasant. Gusts between 48 and 60 mph reported across the county.
- 04/03/2016: A strong cold front swung through the Mid-Atlantic. Surge of cold air advection immediately and then again after the frontal passage resulted in two rounds of strong winds, one with a squall line that formed along the front and another more pro-longed with the synoptic flow. A tree was reported down on a car at 49th St and Lakawanna Dr in College Park, with 2 injuries.
- 02/12/2017: Low pressure rapidly intensified as it moved up the New England coast. A strong pressure gradient between the low and high pressure over the Midwest caused high winds. A wind gust of 72 mph was reported at Andrews Air Force Base. A wind gust of 58 mph was also reported at 11:32 pm.
- 03/02/2018 – 03/03/2018: A low pressure system moving eastward from the central United States on Thursday March 1st, intensified rapidly as it moved offshore Thursday night and early Friday, deepening to 974 mb by the evening of Friday March 2nd. Strong winds were present in the low levels of the atmosphere due to the strengthening pressure gradient and were able to mix down to the surface in strong wind gusts under northwest flow cold air advection. A wind gust of 58 mph was reported in Upper Marlboro. A wind gust of 61 mph was reported at Andrews Air Force Base. Numerous trees were down across the county from high winds. The Prince Georges County 911 center reported approximately 1000 wind-related calls, mainly for trees and wires down.
- 02/25/2019: An area of low pressure rapidly intensified as it moved from the Mid-Mississippi Valley northward into the Great Lakes from late in the evening of February 24th and into the morning hours of February 25th. The low then tracked northeastward into Canada during the remainder of the 25th. A secondary area of low pressure also developed along the Mid-Atlantic coastline and moved into New England. Strong winds associated with the system led to high wind gusts across the majority of Maryland north and west of Interstate 95. Wind gusts of up to 58 mph were estimated. There were also several reports of downed trees and wires.
- 04/13/2020: Strong low pressure to the northwest along with high pressure over the Atlantic resulted in a strong pressure gradient over southern Maryland. This led to high winds with gusts in excess of 58 mph. Wind gusts were estimated to be around 50 knots based on observations nearby.
- 10/11/2018: After Hurricane Michael made landfall near Mexico Beach, Florida with maximum sustained winds of 155 mph and minimum central pressure of 919 mb on Wednesday October 10th, it weakened to a tropical storm as it tracked northeastward through Georgia and South Carolina. The tropical storm then tracked across North Carolina and southeast Virginia Thursday and Thursday night, October 11th, emerging back into the Atlantic Ocean early Friday morning, October 12th. As the system passed south of the region, heavy rain then caused instances of flooding, and strong winds brought down trees. Across Maryland, maximum sustained winds

reached 38 mph, peak wind gusts reached 62 mph, and some rainfall totals were observed in excess of 6 inches. A tree was blown down on Maryland Route 381 in Eagle Harbor.

- 02/25/2019: An area of low pressure rapidly intensified as it moved from the Mid-Mississippi Valley northward into the Great Lakes from late in the evening of February 24th and into the morning hours of February 25th. Wind gusts of up to 58 mph were estimated. There were also several reports of downed trees and wires.
- 04/13/2020: Strong low pressure to the northwest along with high pressure over the Atlantic resulted in a strong pressure gradient over southern Maryland. This led to high winds with gusts in excess of 58 mph. Wind gusts were estimated to be around 50 knots based on observations nearby.

H. Extreme Heat

- 07/04/1999: Record high temperatures were recorded in the area. State police reported 20 vehicles were disabled by the heat, and AAA responded to 600 heat related service calls across the state. Power companies reported record high energy consumption during the late afternoon of the 5th and 6th. High demand for electrical power blew transformers. 5 people in Prince George's County were treated for heat-related illnesses.
- 07/28/2002 - 07/29/2002: During a heat wave in 2002, heat index values reached 100 to 110 degrees over a two-day period. One heat-related fatality was reported in Prince George's County.
- 08/01/2002 - 08/05/2002: Another heat wave in summer of 2002 led to heat indices of up to 110 degrees in Prince George's County. Two heat-related fatalities were reported in the county throughout this five-day heat wave period.
- 06/09/2008: A strong ridge of high pressure set up across the eastern United States for several days in early- to mid-June in 2008. High temperatures combined with dew points in the lower 70s allowed heat index values to reach near 105 degrees in lower southern Maryland. The County opened cooling stations, and one heat-related death was reported.
- 07/04/2010: In July 2010, a ridge of high pressure aloft along with a southwest flow around surface high pressure resulted in hot and humid conditions during the Fourth of July through the 8th. Temperatures on the 6th and 7th of July soared past 100 degrees. Prince Georges County authorities reported that twenty-eight people were taken to the hospital due to heat-related illnesses from July 4th through July 8th.
- 07/22/2011: In July 2011, a strong upper-level high pressure build up over Prince George's County led to heat indices as high as 120 degrees. Hot and humid conditions led to numerous reports of heat-related illnesses in the region. Heat indices up to 118 degrees were reported at Andrews Air Force Base. Unfortunately, one fatality was reported due to the high heat in the County.
- 08/13/2016: A southerly flow around high pressure ushered in unseasonably hot and humid conditions. Heat indices around 110 degrees were reported at observations nearby.
- 07/03/2018: An upper-level high along with surface high over the western Atlantic led to hot and humid conditions. Heat indices around 110 degrees were reported.
- 07/19/2019- 07/21/2019: Temperatures from the mid 90s to around 100 degrees combined with dew points in the 70s to create dangerously high heat index values. Heat index values exceeded 110 degrees. A 65+ year old female died due to heat-related conditions.

I. Dam and Levee Failure

No recorded events

J. Earthquake

- August 23, 2011: A 5.8 magnitude (V-VI intensity) earthquake had an epicenter near Louisa, VA outside of Richmond, VA. Damage was widespread in Prince George's County, but there were no serious injuries or deaths reported. However, there were reports of falling objects, foundation cracks, and other structural damage. Over 200 public schools were closed pending safety inspections after the earthquake. Two apartment buildings were condemned, displacing hundreds of people who were housed in a County shelter for a couple of nights.
- July 16, 2010: A 3.6 magnitude earthquake was reported in the Potomac-Shenandoah Region. The epicenter was located near Germantown, MD, but it was felt across the entire region. The USGS categorized the quake as "minor." However, the USGS said it was the largest recorded earthquake within 50 kilometers of D.C. since a database was created to track activity in 1974.
- February 23, 2005: A 2 magnitude earthquake occurred in the Chesapeake Bay region. The earthquake was considered "very minor" and had an epicenter in Baltimore County, about 6 miles beneath the surface.
- December 9, 2003: A 4.5 magnitude earthquake occurred 28 miles west of Richmond in rural Powhatan County, VA. This earthquake was felt in Prince George's County. Light shaking was reported by residents in the area, but no injuries or major damage.

K. Extreme Cold

- 01/21/2000: During the morning of the 21st, northwest winds were blowing at 15 to 30 MPH. Temperatures across the region were in the teens. This resulted in wind chill readings from 10 to 25 degrees below zero between midnight and 10 AM. The winds also caused snow that had fallen in the past 24 hours to drift back onto roads, resulting in a difficult morning commute.
- 01/27/2000: High pressure was centered directly over the Mid-Atlantic region on the 28th and 29th. The combination of clear skies, calm winds, and a snowpack led to unusually cold temperatures. On the morning of the 28th and 29th, the mercury dropped into the single digits above and below zero in many locations.
- 04/19/2001: High pressure over the Mid-Atlantic region created calm winds and clear skies during the early morning hours of the 19th. These conditions in combination with a chilly airmass in place allowed temperatures to plummet into the mid-20s to lower 30s between 3 and 7 AM EDT. This resulted in a hard freeze which unfortunately was preceded by unseasonably warm weather which had caused many plants to bloom early. Homeowners and nurseries with outdoor vegetation reported losses.
- 01/05/2018: Cold/Wind Chill – Arctic air and gusty winds caused low wind chills to develop.
- 01/21/2019: Cold/Wind Chill – A low-pressure system moved up the eastern seaboard of the United States on January 20th, with cold temperatures and strong northwest winds funneling behind the system from the night of the 20th into the morning of the 21st. This produced very low wind chills across much of the state.

- 01/30/2019: Cold/Wind Chill – A low-pressure system moved into southeastern Canada on January 30th, with a cold front crossing through the Mid-Atlantic states. Cold temperatures and strong northwest winds followed behind the front on the night of the 30th and into the morning of the 31st. This was able to produce very low wind chills across much of the state.

L. Drought

- 08/01/1998 – 08/1/1998: Persistent high pressure brought unusually dry weather to central and lower southern Maryland. By mid-month, the Maryland Department of Agriculture reported that 51 percent of the state's corn crop and 56 percent of the soybean crop was rated "fair" to "very poor". In addition, the tobacco crop was showing signs of water stress by the end of the month.
- 11/01/1998: This was the fifth month in a row that drought conditions were seen across Central and Northern Maryland. Persistent high pressure over the Southeast U.S. forced most rain producing low pressure systems to steer north of the region. Water levels and reserves were greatly affected by the persistent drought.
- 05/01/1999 – 09/01/1999: The county experienced a drought that lasted five months. High pressure was the dominant weather feature across Maryland during the month. This weather pattern directed rain producing low pressure systems north of the region and continued the climatological drought throughout the months.
- 08/27/2002: Recorded that 100% of the county was experiencing a drought of category D3 (Extreme Drought) and 57.31% of the county was categorized as D4 (Exceptional Drought)
- 10/01/2007: Severe Drought conditions persisted through October. Many counties and cities in Maryland posted both voluntary and mandatory water restrictions throughout the month.

M. Coastal Flood

- August 1933 - This unnamed hurricane caused flooding along the Potomac River and throughout the Chesapeake Bay; the Livingston Bridge on Piscataway Creek also flooded.
- October 1954 - Hurricane Hazel raised water levels in the Potomac River Basin; statewide, the storm caused 6 deaths and an estimated $11.5 million in damage.
- August 1955 - Hurricane Connie caused riverine flooding that inundated a large commercial section of Upper Marlboro and flooded several buildings along Piscataway Creek; surge reached 4 feet above normal at the confluence of Patuxent River with Western Branch.
- June 1972 - Tropical Storm Agnes; this storm of record brought high water levels along the Patuxent and Potomac River basins; statewide, it caused 19 deaths and $80 million in damage; in Prince George's County, the storm caused more than $10 million in damage.
- November 1985 - Hurricane Juan affected the Potomac River Basin; Prince George's County was included in the major disaster declaration.
- September 1996 - Hurricane Fran; remnants of this large storm caused flooding along the Potomac River Basin; Prince George's County was included in the major disaster declaration.
- September 2011 - Tropical Storm Lee; this storm brought heavy rain and high water levels along the Patuxent River and Western Branch; it caused severe flooding in Upper Marlboro.

N. Landslide

- 1975: A landslide occurred causing damage to 25 homes and approximately $500,000 worth of damage.
- 05/2014: Heavy rains triggered a landslide in the Piscataway Hills community of Fort Washington. The landslide impacted 28 homes, damaged local roads and water lines, and required approximately $15 million in hillside restoration and infrastructure repairs.

O. Wildfire

- 02/19/2011 - 02/20/2011: There were two counts of fires categorized as Fire Size E (300 to 999 Acres). On the 19th, the fire affected 431 acres of land while the fire that occurred on the 20th affected 344.18 acres, totaling approximately 775 acres of land.

Table 2: Number of Wildfires from 1992 to 2018 in Prince George's County

Political Area	Fire Size Code	Fire Description	Total Fires
City of Laurel	--	--	--
District 1	A	0.25 Acres or less	1
	B	0.26 to 9.9 Acres	3
	C	10.0 to 99.9 Acres	1
District 2	B	0.26 to 9.9 Acres	1
District 3	B	0.26 to 9.9 Acres	4
District 4	A	0.25 Acres or less	6
	B	0.26 to 9.9 Acres	15
District 5	B	0.26 to 9.9 Acres	1
District 6	A	0.25 Acres or less	1
	B	0.26 to 9.9 Acres	1
District 7	A	0.25 Acres or less	1
	B	0.26 to 9.9 Acres	1
District 8	B	0.26 to 9.9 Acres	2
	C	10.0 to 99.9 Acres	1
District 9	A	0.25 Acres or less	13
	B	0.26 to 9.9 Acres	29

Political Area	Fire Size Code	Fire Description	Total Fires
	C	10.0 to 99.9 Acres	3
	E	300 to 999 Acres	2
Total			**88**

P. Sinkhole

- 05/11/2008 - 5/12/2008: A significant subsidence incident occurred after 12 hours of continuous and relatively uniformly distributed rainfall (average 0.25-inch rain/hour). The area behind five homes on the south side of Yorkville Road was affected, resulting in the formation of a sinkhole approximately 500 feet long, 100 feet wide, and 10 feet deep. In 2009, the Department of Environmental Resources obtained FEMA HMGP funds to acquire the properties, demolish the homes, stabilize the site, and retain the land as open space.

Appendix D. Critical Facility Hazard Analysis

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23. Table Key for Critical Facility Hazard Analysis
24. Prince George's County Critical Facility Hazard Analysis
25. City of Laurel Critical Facility Hazard Analysis

A. Table Key for Critical Facility Hazard Analysis

The table key below provides an explanation of the codes for the hazard risk area designations. Only the hazards with applicable, defined hazard risk areas are included in this analysis.

Table Key

- **Flood Zone**:
  - X-unshaded = Facility located in an area of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2% annual chance (i.e., 500-year) flood
  - X-shaded = Facility located in an area of moderate flood hazard between the limits of the base flood (i.e., 1% annual chance or 100-year) and the 0.2% annual chance flood
  - A = Facility located in an area subject to inundation by the 1% annual chance flood event; generally determined using approximate methodologies. Detailed hydraulic analyses have not been performed, so no Base Flood Elevations or flood depths are available
  - AE = Facility located in an area subject to inundation by the 1% annual chance flood event determined by detailed methods
- **Floodway**:
  - Yes = Facility located in a mapped floodway
  - No = Facility not located in a mapped floodway
- **Wildland Urban Interface**:
  - Interface = Facility located in a developed area that abuts wildland vegetation
  - Intermix = Facility located in an area where structures and wildland vegetation intermingle
  - Other = Facility not located in wildfire interface or intermix
- **Earthquake**:
  - High = High risk of being impacted by an earthquake
  - Medium = Medium risk of being impacted by an earthquake
  - Low = Low risk of being impacted by an earthquake
- **Dam Inundation**:
  - Duckett Dam = Facility located in the Duckett Dam inundation area
  - Lake Arbor Dam = Facility located in the Lake Arbor Dam inundation area
  - Largo Town Center Dam = Facility located in the Largo Town Center Dam inundation area
  - Laurel Lake Dam = Facility located in the Laurel Lake Dam inundation area
  - None = Facility not located in a mapped dam inundation area[1]

[1] Not all dams within the planning area have inundation data/mapping available, so facilities with the "none" designation may either be outside of a dam inundation area or in a dam inundation area for a dam that does not have inundation data/mapping available. See the "Dam and Levee Failure" section of the "Risk Assessment" chapter of the Hazard Mitigation Plan for more information.

B. Prince George's County Critical Facility Hazard Analysis

Table 3. Critical facility hazard area analysis for Prince George's County

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Chemical	Air Gas East, Inc. - Bladensburg Plant	2900 52nd Avenue	X-unshaded	No	Other	Low	None
Chemical	Baxter Healthcare Corporation	12040 Indian Creek Court	X-unshaded	No	Other	Low	None
Chemical	Chem-Met Company	6419 Yochelson Place	X-unshaded	No	Other	Low	None
Chemical	Jeong H. Kim Engineering Building	University of Maryland	X-unshaded	No	Other	Low	None
Chemical	New Dawn Manufacturing Company / Daycon's Corporate Headquarters	16001 Trade Zone Avenue	X-unshaded	No	Other	Low	None
Chemical	R and D Cross Inc.	13801 Martin Road	X-unshaded	No	Intermix	Low	None
Chemical	R and D Cross of Upper Marlboro	15610 Marlboro Pike	X-unshaded	No	Other	Low	None
Chemical	Radiation Service Organization, Inc.	P.O. Box 1526 (5204 Minnick Rd)	X-unshaded	No	Other	Low	None
Chemical	Roberts Oxygen Inc.	4811 Stamp Road	X-unshaded	No	Other	Low	None
Chemical	Rockwood Pigments	7011 Muirkirk Road	X-unshaded	No	Other	Low	None
Chemical	Sherwin Williams	10406 Tucker Street	X-unshaded	No	Other	Low	None
Communications	AiNet	11700 Montgomery Rd	X-unshaded	No	Other	Low	None
Communications	OITC Data Center Cc	9201 Basil Ct. #B8	X-unshaded	No	Other	Low	None
Communications	Verizon Communications Inc.	7020 Virginia Manor Rd	X-unshaded	No	Other	Low	None
Dams	Allen Pond Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Cash Creek Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Clinton Regional Park Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Contee Main Settling Pond Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Greenbelt Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Northampton Lake Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Redington Lake Dam	N/A	X-unshaded	No	Other	Low	None
Dams	Rocky Gorge Dam	N/A	A	No	Other	Low	Duckett Dam
Dams	Soil Conservation Service Lake Dam	N/A	X-unshaded	No	Other	Low	None
Defense Industrial Base	Beretta U.S.A. Corp.	17601 Beretta Drive	X-unshaded	No	Interface	Low	None
Emergency Services	Accokeek Volunteer Fire Department Station 24	16111 Livingston Road	X-unshaded	No	Intermix	Low	None
Emergency Services	Allentown Road Volunteer Fire Department Station 32	8709 Allentown Road	X-unshaded	No	Other	Low	None
Emergency Services	Allentown Road Volunteer Fire Department Station 47	10900 Fort Washington Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Emergency Services	Beltsville Volunteer Fire Department Sta 31	4911 Prince George's Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Beltsville Volunteer Fire Department Sta 41	3939 Powder Mill Road	X-unshaded	No	Other	Low	None
Emergency Services	Berwyn Heights Police Dept.	5700 Berwyn Road	X-unshaded	No	Other	Low	None
Emergency Services	Berwyn Heights Volunteer Fire Department Sta 14	8811 60th Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Bladensburg Police Department	4910 Tilden Road	X-unshaded	No	Other	Low	None
Emergency Services	Bladensburg Volunteer Fire Department Sta. 9	4213 Edmonston Road	X-unshaded	No	Other	Low	None
Emergency Services	Boulevard Heights Volunteer Fire Department Sta 17	4101 Alton Street	X-unshaded	No	Other	Low	None
Emergency Services	Bowie Volunteer Fire Department & Rescue Squad	3262 Superior Lane Suite 270	X-unshaded	No	Interface	Low	None
Emergency Services	Bowie Volunteer Fire Department Sta 39	15454 Annapolis Road	X-unshaded	No	Interface	Low	None
Emergency Services	Bowie Volunteer Fire Department Sta 43	16408 Pointer Ridge Drive	X-unshaded	No	Interface	Low	None
Emergency Services	Branchville Volunteer Fire Company Station 11	4905 Branchville Road	X-unshaded	No	Other	Low	None
Emergency Services	Brandywine Volunteer Fire Department	14201 Brandywine Road	X-unshaded	No	Other	Low	None
Emergency Services	Brentwood Volunteer Fire Department	3712 Utah Avenue	X-shaded	No	Other	Low	None
Emergency Services	Bunker Hill Volunteer Fire Department	3716 Rhode Island Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Capitol Heights Volunteer Fire Department, Sta. 5	6061 Central Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Captiol Heights Police Department	401 Capitol Heights Blvd.	X-unshaded	No	Other	Low	None
Emergency Services	Chapel Oaks Volunteer Fire Department	5544 Sheriff Road	X-unshaded	No	Other	Low	None
Emergency Services	Chillum Fire Station Station 44	6330 Riggs Road,	X-unshaded	No	Other	Low	None
Emergency Services	Chillum-Adelphi Volunteer Fire Department	7833 Riggs Road	X-unshaded	No	Other	Low	None
Emergency Services	Clinton Volunteer Fire Department Sta 25	9025 Woodyard Road	X-unshaded	No	Other	Low	None
Emergency Services	College Park Volunteer Fire Department. Sta 12	8115 Baltimore Avenue	AE	No	Other	Low	None
Emergency Services	Cottage City Fire Department	3840 Bladensburg Road	X-unshaded	No	Other	Low	None
Emergency Services	District Heights Volunteer Fire Department Sta 26	6208 Marlboro Pike	X-unshaded	No	Other	Low	None
Emergency Services	Forestville Volunteer Fire Department Sta 23	8321 Old Marlboro Pike	X-unshaded	No	Other	Low	None
Emergency Services	Glenn Dale Fire Association, Inc.	11900 Glenn Dale Boulevard	X-unshaded	No	Other	Low	None
Emergency Services	Greenbelt Police Department	550 Crescent Rd	X-unshaded	No	Other	Low	None
Emergency Services	Greenbelt Volunteer Fire Department Sta 35	125 Crescent Road	X-unshaded	No	Other	Low	None
Emergency Services	Hyattsville Police Department	4310 Gallatin St	X-unshaded	No	Other	Low	None
Emergency Services	Hyattsville Volunteer Fire Department	6200 Belcrest Road	X-unshaded	No	Other	Low	None
Emergency Services	James J. Rowley Training Center, USSS	9200 Powder Mill Road	AE	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Emergency Services	Kentland Volunteer Fire Department Sta 33	7701 Landover Road,	X-unshaded	No	Other	Low	None
Emergency Services	Landover Hills Police Department	6904 Taylor St	X-unshaded	No	Other	Low	None
Emergency Services	Landover Hills Volunteer Fire Department 30	6801 Webster Street	X-unshaded	No	Other	Low	None
Emergency Services	Marlboro Volunteer Fire Department 845	7710 Croom Road	X-unshaded	No	Intermix	Low	None
Emergency Services	Marlboro Volunteer Fire Department Sta. 20	14815 Pratt Street	X-unshaded	No	Other	Low	None
Emergency Services	Marlboro Volunteer Fire Department Sta. 820	14815 Pratt Street	X-unshaded	No	Other	Low	None
Emergency Services	Maryland Fire/Rescue Institute (Assoc.)	University of Maryland Rt 1	X-shaded	No	Other	Low	None
Emergency Services	Maryland National Capital Park Police Department	6700 Riverdale Rd	X-unshaded	No	Other	Low	None
Emergency Services	Maryland State Police College Park Barrack	10100 Rhode Island Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Maryland State Police Forestville Barrack	3500 Forestville Road	X-unshaded	No	Other	Low	None
Emergency Services	Morningside Police Department	6901 Ames St	X-unshaded	No	Other	Low	None
Emergency Services	Morningside Volunteer Fire Department Sta 27	6200 Suitland Road	X-unshaded	No	Other	Low	None
Emergency Services	Mount Rainier Police Department	3409 Rhode Island Ave	X-unshaded	No	Other	Low	None
Emergency Services	MSP CVED I-495/I-95 Park @ Ride Insp. Facility	N & S Bound U.S. Route 301	X-unshaded	No	Other	Low	None
Emergency Services	MSP Metropolitan Area DTask Force	7500 Greenway Center Dr.	X-unshaded	No	Other	Low	None
Emergency Services	NASA Security	8800 Greenbelt Road	X-unshaded	No	Other	Low	None
Emergency Services	NEW CARROLLTON POLICE DEPARTMENT	6016 Princess Garden Pkwy	X-unshaded	No	Other	Low	None
Emergency Services	Oxon Hill Volunteer Fire & Rescue Co Sta. 21	7600 Livingston Road	X-unshaded	No	Other	Low	None
Emergency Services	Oxon Hill Volunteer Fire & Rescue Company Sta 42	1100 Marcy Avenue	X-unshaded	No	Other	Low	None
Emergency Services	P.G. County (HHS) Division of Environmental / Fire/EMS	9201 Basil Court, Suite 318	X-unshaded	No	Other	Low	None
Emergency Services	Prince George's Co. Public Safety Comm. Center 911	17321 Melford Boulevard	X-unshaded	No	Other	Low	None
Emergency Services	Prince Georges County Fire Department	1220 Caraway Court	X-unshaded	No	Other	Low	None
Emergency Services	Prince Georges County Fire Marshall	6820 Webster St Room 127	X-unshaded	No	Other	Low	None
Emergency Services	Prince Georges County Police Department Information & Tech Svcs	4923 43rd Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Prince George's County Police Headquarters	7600 Barlowe Road	X-unshaded	No	Other	Low	None
Emergency Services	Prince Georges County Sheriff's Office	5303 Chrysler Way	X-unshaded	No	Other	Low	None
Emergency Services	Prince Georges County Volunteer Underwater Rescue	16608 Brandywine Road	X-unshaded	No	Intermix	Low	None
Emergency Services	Prince George's Emergency Operations Center	7915 Anchor Street	X-unshaded	No	Other	Low	None
Emergency Services	Ritchie Volunteer Fire Department	1415 Ritchie Marlboro Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Emergency Services	Riverdale Fire Department, Inc. Sta. 7	4714 Queensbury Road	X-unshaded	No	Other	Low	None
Emergency Services	Riverdale Heights Fire & Rescue Squad Sta. 1	6101 Roanoke Avenue	X-unshaded	No	Other	Low	None
Emergency Services	Riverdale Park Police Department	6700 Riverdale Road	X-unshaded	No	Other	Low	None
Emergency Services	Riverdale Park Police Dept.	5004 Queensbury Road	X-unshaded	No	Other	Low	None
Emergency Services	Seat Pleasant Police Department	6011 Addison Rd	X-unshaded	No	Other	Low	None
Emergency Services	Seat Pleasant Volunteer Fire Company, Inc. Sta. 8	6305 Addison Road	X-unshaded	No	Other	Low	None
Emergency Services	Silver Hill Volunteer Fire Department	3900 Old Silver Hill Road	X-unshaded	No	Other	Low	None
Emergency Services	Tuxedo-Cheverly Fire Company Sta. 22	5711 Tuxedo Road	X-unshaded	No	Other	Low	None
Emergency Services	Upper Marlboro Police Department	14211 School Lane	X-unshaded	No	Other	Low	None
Emergency Services	US Park Police B/W PKWY Greenbelt	6501 Greenbelt Rd	X-unshaded	No	Other	Low	None
Emergency Services	West Lanham Hills Volunteer Fire Department Sta 28	7609 Annapolis Road	X-unshaded	No	Other	Low	None
Emergency Services	West Lanham Hills Volunteer Fire Department Sta 48	8501 Good Luck Road	X-unshaded	No	Other	Low	None
Energy	A. P. Woodson Co. Petro	8101 Parston Drive	X-unshaded	No	Other	Low	None
Energy	Burches Hill Substation	8101 Surratts Road	X-unshaded	No	Other	Low	None
Energy	Burchess Hill	Surratts Road/ Valley Rd.	X-unshaded	No	Other	Low	None
Energy	Capital Energy Systems	14612 Old Gunpowder Road	X-unshaded	No	Other	Low	None
Energy	Exelon Montpelier	8900 Muirkirk Road	X-unshaded	No	Interface	Low	None
Energy	Gott Company	13703 Cherry Tree Crossing	X-unshaded	No	Intermix	Low	None
Energy	Green Petroleum	7508 Old Alexander Ferry Rd	X-unshaded	No	Other	Low	None
Energy	Jericho Park SFC	Lemons Bridge Road - Milepost 119.5	X-unshaded	No	Intermix	Low	None
Energy	Mirant Mid-Atlantic	8301 Professional Pl	X-unshaded	No	Other	Low	None
Energy	NRG ENERGY Chalk Point Generating Station	25100 Chalk Point Road	X-unshaded	No	Intermix	Low	None
Energy	Oak Grove Substation/PEPCO	2400 Brown Station Rd	X-unshaded	No	Other	Low	None
Energy	Substation 23 Bowie	12901 Railroad Ave	X-unshaded	No	Other	Low	None
Energy	Substation 24 Landover	Rt.202 & Landover Rd. - Milepost 128.8	X-unshaded	No	Other	Low	None
Food & Agriculture	FDA/PP	8301 Muirkirk Rd.	X-unshaded	No	Other	Low	None
Food & Agriculture	GIANT FOOD LLC	8301 Professional Pl, Ste 115	X-unshaded	No	Other	Low	None
Food & Agriculture	GIANT FOOD LLC	8301 Professional Pl, Ste 115	X-unshaded	No	Other	Low	None
Food & Agriculture	Giant Foods Distribution Center	6300 Sheriff Road, Landover MD	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Food & Agriculture	Hana Food Distributor Inc	7925 Parston Drive, Forestville MD	X-unshaded	No	Other	Low	None
Food & Agriculture	Henry A. Wallace Beltsville Agricultural Research Center (BARC) (USDA)	10300 Baltimore Ave Building 307	X-unshaded	No	Other	Low	None
Food & Agriculture	Marva Maid - Landover Operations LLC	6310 Sheriff Road	X-unshaded	No	Other	Low	None
Food & Agriculture	MD & VA Milk Producers Manufacturing Plant	5 S Club Drive, Hyattsville, MD	X-unshaded	No	Other	Low	None
Food & Agriculture	MDA College Park Animal Health Laboratory	8077 Greenmead Drive	X-shaded	No	Other	Low	None
Food & Agriculture	Murry's Distributor	8300 Pennsylvania Avenue , Upper Marlboro MD	X-unshaded	No	Other	Low	None
Food & Agriculture	Prince George's County Public School Food and Nutrition Services	13300 Old Marlboro Pike	X-unshaded	No	Other	Low	None
Food & Agriculture	Safeway Distribution Center	16020 Leeland Rd	X-unshaded	No	Other	Low	None
Food & Agriculture	UM Central Maryland research and Education Center	12000 Beaver Dam Road	X-unshaded	No	Other	Low	None
Food & Agriculture	Walmart Store	3300 Nw Crain Hwy	X-unshaded	No	Other	Low	None
Food & Agriculture	Walmart Store	8745 Branch Avenue	X-unshaded	No	Other	Low	None
Food & Agriculture	Walmart Store - Landover Hills	6210 Annapolis Road	X-unshaded	No	Other	Low	None
Food & Agriculture	Whole Foods	1555 Cabin Branch Dr	X-unshaded	No	Other	Low	None
Government Facilities	Adelphi Elementary	8820 Riggs Road	X-unshaded	No	Other	Low	None
Government Facilities	Al-Huda School	5301 Edgewood Road	X-unshaded	No	Other	Low	None
Government Facilities	Allenwood Elementary	6300 Harley Lane	X-unshaded	No	Other	Low	None
Government Facilities	Andrew Jackson Middle	3500 Regency Parkway	X-unshaded	No	Other	Low	None
Government Facilities	Annapolis Road Academy (Alternative HS)	5150 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	An-Nur Academy	9150 Lanham Severn Road	X-unshaded	No	Other	Low	None
Government Facilities	Apple Grove Elementary	7400 Bellefield Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Ardmore Elementary	9301 Ardwick Ardmore Road	X-unshaded	No	Other	Low	None
Government Facilities	Army Recruiting Office - HYATTSVILLE	2970 Belcrest Center Dr Suite 110	X-unshaded	No	Other	Low	None
Government Facilities	Army Recruiting Office - LARGO	800 Shoppers Way Suite A Building P	X-unshaded	No	Other	Low	None
Government Facilities	Army Recruiting Office - OXON HILL	5432 St. Barnabas Rd, STE 4 Sunrise Shopping Center	X-unshaded	No	Other	Low	None
Government Facilities	Army Recruiting Office - RCTG CO LANDOVER	12164 Central Avenue Suite 221	X-unshaded	No	Other	Low	None
Government Facilities	Ascension Lutheran School	7415 Buchanan Street	X-unshaded	No	Other	Low	None
Government Facilities	Augsburg Academy, The	13800 Old Gunpowder Road	X-unshaded	No	Other	Low	None
Government Facilities	Baden Elementary	13601 Baden Westwood	X-unshaded	No	Other	Low	None
Government Facilities	Barnaby Manor Elementary	2411 Owens Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Beacon Heights Elementary	6929 Furman Parkway	X-unshaded	No	Other	Low	None
Government Facilities	Beddow High School, The	501 Bryan Point Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Beddow School, Inc., The	8600 Loughran Road	X-unshaded	No	Other	Low	None
Government Facilities	Belair Baptist Christian Academy	2801 Belair Drive	X-unshaded	No	Other	Low	None
Government Facilities	Beltsville Elementary	4300 Wicomico Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Beltsville Seventh Day Adventist School	4230 Ammendale Road	X-unshaded	No	Other	Low	None
Government Facilities	Benjamin D. Foulois Elementary	4601 Beauford Road	X-unshaded	No	Other	Low	None
Government Facilities	Benjamin Stoddert Middle	2501 Olson Street	X-unshaded	No	Other	Low	None
Government Facilities	Benjamin Tasker Middle	4901 Collington Road	X-unshaded	No	Other	Low	None
Government Facilities	Berkshire Elementary	6201 Surrey Square Lane	X-unshaded	No	Other	Low	None
Government Facilities	Berwyn Baptist Day School	4720 Cherokee Street	X-unshaded	No	Other	Low	None
Government Facilities	Berwyn Heights Elementary	6200 Pontiac Street	X-unshaded	No	Other	Low	None
Government Facilities	Bishop McNamara High School	6800 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Bladensburg Elementary	4915 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Bladensburg High	4200 57th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Bond Mill Elementary	16001 Sherwood Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Bowie Christian School	2518 Kenhill Drive	X-unshaded	No	Other	Low	None
Government Facilities	Bowie High	15200 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Bowie Montessori Children's House	5004 Randonstone Lane	X-unshaded	No	Interface	Low	None
Government Facilities	Bowie State University	1400 Jericho Park Road	X-unshaded	No	Other	Low	None
Government Facilities	Bradbury Heights Elementary	1401 Glacier Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Brandywine Elementary	14101 Brandywine Road	X-unshaded	No	Interface	Low	None
Government Facilities	Bread of Heaven Christian Academy	802 61st Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Buck Lodge Middle	2611 Buck Lodge	X-unshaded	No	Other	Low	None
Government Facilities	C. Elizabeth Rieg School	15542 Peach Walker Drive	X-unshaded	No	Interface	Low	None
Government Facilities	C.H.I.L.D. Center Academy	70 Watkins Park Drive	X-unshaded	No	Other	Low	None
Government Facilities	Calverton Elementary	3400 Beltsville Road	X-unshaded	No	Other	Low	None
Government Facilities	Capitol Christian Academy	610 Largo Road	X-unshaded	No	Other	Low	None
Government Facilities	Capitol Heights Elementary	601 Suffolk Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Carmody Hills Elementary	401 Jadeleaf Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Carrollton Elementary	8300 Quintana Street	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Catherine T. Reed Elementary	9501 Greenbelt Road	X-unshaded	No	Other	Low	None
Government Facilities	Central High	200 Cabin Branch Road	X-unshaded	No	Other	Low	None
Government Facilities	Cesar Chavez Elementary	6609 Riggs Road	X-unshaded	No	Other	Low	None
Government Facilities	Chapel Forge Early Childhood Center	12711 Milan Way	X-unshaded	No	Interface	Low	None
Government Facilities	Charles Carroll Middle	6130 Lamont Drive	X-unshaded	No	Other	Low	None
Government Facilities	Charles Herbert Flowers High	10001 Ardwick-Ardmore Road	X-unshaded	No	Other	Low	None
Government Facilities	Cherokee Lane Elementary	9000 25th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Cheverly Weekday Nursery	2801 Cheverly Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Children of Promise Christian Academy	7808 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Children's Guild, Inc. in Chillum, The	5700 Sargent Road	X-unshaded	No	Other	Low	None
Government Facilities	Chillum Elementary	1420 Chillum Road	X-unshaded	No	Other	Low	None
Government Facilities	Christian Family Montessori School	3628 Rhode Island Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Clinton Christian School	6707 Woodyard Road	X-unshaded	No	Other	Low	None
Government Facilities	College Park Nursery School, Inc.	4512 College Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Columbia Park Elementary	1901 Kent Village Drive	X-unshaded	No	Other	Low	None
Government Facilities	Community Based Classroom	5150 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Community-Based Classroom	9470 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Concord Elementary	2004 Concord Lane	X-unshaded	No	Other	Low	None
Government Facilities	Concordia Lutheran School	3799 East West Highway	X-unshaded	No	Other	Low	None
Government Facilities	Cool Spring Elementary	8910 Riggs Road	X-unshaded	No	Other	Low	None
Government Facilities	Cooper Lane Elementary	3817 Cooper Lane	X-unshaded	No	Other	Low	None
Government Facilities	Cora L. Rice Elementary	950 Nalley Road	X-unshaded	No	Other	Low	None
Government Facilities	Corkran Methodist Preschool	5200 Temple Hills Road	X-unshaded	No	Other	Low	None
Government Facilities	Cornerstone Christian Academy	16010 Annapolis Road	X-unshaded	No	Interface	Low	None
Government Facilities	Creative Minds Christian Academy	6108 Old Silver Hill Road #200	X-unshaded	No	Other	Low	None
Government Facilities	Cresthill Baptist Church Child Development Center	6510 Laurel-Bowie Road	X-unshaded	No	Other	Low	None
Government Facilities	Cresthill Christian Academy	6510 Laurel-Bowie Road	X-unshaded	No	Other	Low	None
Government Facilities	Croom Vocational	8520 Duvall Road	X-unshaded	No	Interface	Low	None
Government Facilities	Cross Cultures Learning Center	6711 Farmer Drive	X-unshaded	No	Other	Low	None
Government Facilities	Crossland High / Pathways School	6901 Temple Hill Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	DuVal High School	9880 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	Dwight D. Eisenhower Middle	13725 Briarwood Drive	X-unshaded	No	Other	Low	None
Government Facilities	Early Years Child Enrichment Center	9400 Old Palmer Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Faith Temple Academy	7809 Parston Drive	X-unshaded	No	Other	Low	None
Government Facilities	Flintstone Elementary	800 Comanche Drive	X-unshaded	No	Other	Low	None
Government Facilities	Forest Heights Elementary	200 Talbert Drive	X-unshaded	No	Other	Low	None
Government Facilities	Frederick Douglass High	8000 Croom Road	X-unshaded	No	Intermix	Low	None
Government Facilities	From the Heart Christian School	4207 Norcross Street	X-unshaded	No	Other	Low	None
Government Facilities	G. Gardner Shugart Middle	2000 Callaway Street	X-unshaded	No	Other	Low	None
Government Facilities	G. James Gholson Middle	900 Nalley Road	X-unshaded	No	Other	Low	None
Government Facilities	G. L. O. W. Academy	4937, 4931, and 4933 Suitland Road	X-unshaded	No	Other	Low	None
Government Facilities	Genesis Christian Day School	3409 Brightseat Road	X-unshaded	No	Other	Low	None
Government Facilities	Genesis Christian Day School	6717 Glenn Dale Road	X-unshaded	No	Other	Low	None
Government Facilities	Genesis Christian Day School - Oxen Hill	5474 St. Barnabas Road	X-unshaded	No	Other	Low	None
Government Facilities	Genesis Christian Day School - South Location	5001 St. Barnabas Road	X-unshaded	No	Other	Low	None
Government Facilities	George E. Peters Seventh Day Adventist Elementary School	6301 Riggs Road	X-unshaded	No	Other	Low	None
Government Facilities	Gethsemane Baptist Church Christian Academy	2500 Enterprise Road	X-unshaded	No	Other	Low	None
Government Facilities	Gladys Noon Spellman Elementary	3324 64th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Glassmanor Elementary	1011 Marcy Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Glenarden Woods Elementary	7801 Glenarden Parkway	X-unshaded	No	Other	Low	None
Government Facilities	Glenn Dale Elementary	6700 Glenn Dale Road	X-unshaded	No	Other	Low	None
Government Facilities	Glenridge Elementary	7200 Gallatin Street	X-unshaded	No	Other	Low	None
Government Facilities	Goddard Child Development Center	NASA/GSFC Code 200.9	X-unshaded	No	Other	Low	None
Government Facilities	Goddard Child Development Center	8800 Greenbelt Road	X-unshaded	No	Other	Low	None
Government Facilities	God's Church International Higher Learning Center	4650 Suitland Road	X-unshaded	No	Other	Low	None
Government Facilities	Grace Brethren Christian School	6501 Surratts Road	X-unshaded	No	Other	Low	None
Government Facilities	Grace Christian School	7210 Race Track Road	X-unshaded	No	Interface	Low	None
Government Facilities	Grace of God Day Care Academy	3900 48th Street	X-unshaded	No	Other	Low	None
Government Facilities	Greater International Church of Praise and Deliverance Academy	4670 Suitland Road	X-unshaded	No	Other	Low	None
Government Facilities	Greater Mt. Nebo Christian Academy	1001 Mitchellville Road	X-unshaded	No	Intermix	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Green Valley Academy (Alternative MS/HS)	2215 Chadwick Street	X-unshaded	No	Other	Low	None
Government Facilities	Greenbelt Elementary	66 Ridge Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Greenbelt Middle	8950 Edmonston Road	X-unshaded	No	Other	Low	None
Government Facilities	Greenwood School	6525 Belcrest Road	X-unshaded	No	Other	Low	None
Government Facilities	Gwynn Park High	13800 Brandywine Road	X-unshaded	No	Other	Low	None
Government Facilities	Gwynn Park Middle	8000 Dyson Road	X-unshaded	No	Interface	Low	None
Government Facilities	H. Winship Wheatley Early Childhood Center	8801 Ritchie Drive	X-unshaded	No	Other	Low	None
Government Facilities	Harambee Christian School of Excellence	8805 Temple Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Heather Hills Elementary	12605 Heming Lane	X-unshaded	No	Other	Low	None
Government Facilities	Henry G. Ferguson Elementary	14600 Berry Road	X-unshaded	No	Other	Low	None
Government Facilities	Henson Valley Middle School	13400 Edgemeade Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Henson Valley Montessori School	13400 Edgemeade Road	X-unshaded	No	Intermix	Low	None
Government Facilities	High Bridge Elementary	7011 High Bridge Road	X-unshaded	No	Intermix	Low	None
Government Facilities	High Point High	3601 Powder Mill Road	X-unshaded	No	Other	Low	None
Government Facilities	High Road Academy of Prince George's County	5100 Philadelphia Way	X-unshaded	No	Other	Low	None
Government Facilities	High Road School of Prince George's County	8723 Ashwood Drive	X-unshaded	No	Other	Low	None
Government Facilities	High Road Upper School of Prince George's County	12050 Baltimore Avenue, Suite 100	X-unshaded	No	Other	Low	None
Government Facilities	Highland Park Christian Academy	6801 Sheriff Road	X-unshaded	No	Other	Low	None
Government Facilities	Highland Park Elementary	6501 Lowland Drive	X-unshaded	No	Other	Low	None
Government Facilities	Hillcrest Baptist Preschool	2200 Iverson Street	X-unshaded	No	Other	Low	None
Government Facilities	Hillcrest Heights Elementary	4305 22nd Place	X-unshaded	No	Other	Low	None
Government Facilities	Hollywood Elementary	9811 49th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Holy Family School	2200 Callaway Street	X-unshaded	No	Other	Low	None
Government Facilities	Holy Redeemer School	4902 Berwyn Road	X-unshaded	No	Other	Low	None
Government Facilities	Holy Trinity Episcopal Day School	11902 Daisey Lane	X-unshaded	No	Other	Low	None
Government Facilities	Holy Trinity Episcopal Day School	13106 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Hope Christian Academy	11416 Cedar Lane	X-unshaded	No	Other	Low	None
Government Facilities	Hopewell Academy	8710 Old Branch Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Howard B. Owens Science Center	9601 Greenbelt Road	X-unshaded	No	Other	Low	None
Government Facilities	Hunter Memorial Christian Academy	5001 Holly Spring Street	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Hyattsville Elementary	5311 43rd Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Hyattsville Hills Child and Family Center	5701 42nd Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Hyattsville Middle	6001 42nd Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Imagine Foundations Public Charter	4605 Brown Station Road	X-unshaded	No	Other	Low	None
Government Facilities	Independent Baptist Academy	9255 Piscataway Road	X-unshaded	No	Other	Low	None
Government Facilities	Indian Queen Elementary	9551 Fort Foote Road	X-unshaded	No	Other	Low	None
Government Facilities	International Christian Academy	3000 Buck Lodge Road	X-unshaded	No	Other	Low	None
Government Facilities	Isaac J. Gourdine Middle	8700 Allentown Road	X-unshaded	No	Other	Low	None
Government Facilities	J. Frank Dent Elementary	2700 Corning Avenue	X-unshaded	No	Other	Low	None
Government Facilities	James E. Duckworth School	11201 Evans Trail	X-unshaded	No	Other	Low	None
Government Facilities	James H. Harrison Elementary	13200 Larchdale Road	X-unshaded	No	Other	Low	None
Government Facilities	James Madison Middle	7300 Woodyard Road	X-unshaded	No	Other	Low	None
Government Facilities	James McHenry Elementary	8909 McHenry Lane	X-unshaded	No	Other	Low	None
Government Facilities	James Ryder Randall Elementary	5410 Kirby Road	X-unshaded	No	Other	Low	None
Government Facilities	Jericho Christian Academy	8601 Jericho City Drive	X-unshaded	No	Other	Low	None
Government Facilities	Jericho Early Childhood Development Center	8500 Spectrum Drive	X-unshaded	No	Other	Low	None
Government Facilities	Jessie B. Mason School	2710 Iverson Street	X-unshaded	No	Other	Low	None
Government Facilities	Jesus Is Lord Schools	6417 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	John Carroll Elementary	1400 Nalley Terrace	X-unshaded	No	Other	Low	None
Government Facilities	John Eager Howard Elementary	4400 Shell Street	X-unshaded	No	Other	Low	None
Government Facilities	John H. Bayne Elementary	7010 Walker Mill Road	X-unshaded	No	Intermix	Low	None
Government Facilities	John Hanson French Immersion	6360 Oxon Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	John Hanson Montessori	6360 Oxon Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Judge Sylvania W. Woods Elementary	3000 Church Street	X-unshaded	No	Other	Low	None
Government Facilities	Judith P. Hoyer Early Childhood Center	2300 Belleview Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Kenilworth Elementary	12520 Kembridge Drive	X-unshaded	No	Other	Low	None
Government Facilities	Kenmoor Elementary	3211 82nd Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Kenmoor Middle	2500 Kenmoor Drive	X-unshaded	No	Intermix	Low	None
Government Facilities	Kettering Elementary	11000 Layton Street	X-unshaded	No	Other	Low	None
Government Facilities	Kettering Middle	65 Herrington Drive	X-unshaded	No	Other	Low	None
Government Facilities	Kiddie Academy of Oxon Hill	6031 Oxon Hill Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Kingdom Christian Academy	529 Commerce Drive	X-unshaded	No	Other	Low	None
Government Facilities	Kingdom Kids Academy	515 Kerby Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Kingsford Elementary	1401 Enterprise Road	X-unshaded	No	Other	Low	None
Government Facilities	Lake Arbor Elementary	10205 Lake Arbor Way	X-unshaded	No	Other	Low	None
Government Facilities	Lamont Elementary	7107 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	Langley Park-McCormick Elementary	8201 15th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Lanham Christian School	8400 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	Lansdowne Learning Center	1798 Brightseat Road	X-unshaded	No	Other	Low	None
Government Facilities	Largo Evening High School	505 Largo Road	X-unshaded	No	Other	Low	None
Government Facilities	Largo High	505 Largo Road	X-unshaded	No	Other	Low	None
Government Facilities	Leary School - Prince George's County	7100 Oxon Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Lewisdale Elementary	2400 Banning Place	X-unshaded	No	Other	Low	None
Government Facilities	Lighthouse Christian Academy	6310 Cipriano Road	X-unshaded	No	Other	Low	None
Government Facilities	Lincoln Public Charter School	3120 Branch Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Little Ones Kiddy College Child Development Center	6012 Wesson Drive	X-unshaded	No	Other	Low	None
Government Facilities	Living Water Christian Academy	6207 Summerhill Road	X-unshaded	No	Other	Low	None
Government Facilities	Longfields Elementary	3300 Newkirk Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Magnolia Elementary	8400 Nightengale Drive	X-unshaded	No	Other	Low	None
Government Facilities	Margaret Brent School	5816 Lamont Terrace	X-unshaded	No	Other	Low	None
Government Facilities	Marlton Elementary	8506 Old Colony Drive South	X-unshaded	No	Other	Low	None
Government Facilities	Martin Luther King, Jr. Middle	4545 Ammendale Road	X-unshaded	No	Other	Low	None
Government Facilities	Mary Harris ""Mother"" Jones Elementary	2405 Tecumseh Street	X-unshaded	No	Other	Low	None
Government Facilities	Maryland Family Christian Center Day Care Center	7748 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Maryland Fire/Rescue Institute (Assoc.)	4500 Campus Drive	X-shaded	No	Other	Low	None
Government Facilities	Maryland Gospel Assembly School	12406 Brandywine Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Maryland International Day School	6400 Livingston Road	X-unshaded	No	Other	Low	None
Government Facilities	Mattaponi Elementary	11701 Duley Station Road	X-unshaded	No	Interface	Low	None
Government Facilities	Mattaponi Elementary	11701 Duley Station Road	X-unshaded	No	Interface	Low	None
Government Facilities	Matthew Henson Elementary	7910 Scott Road	X-unshaded	No	Other	Low	None
Government Facilities	Matthew Henson Elementary	7910 Scott Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	MDNG - Laurel Armory	8601 Odell Road	X-unshaded	No	Other	Low	None
Government Facilities	Melwood Elementary	7100 Woodyard Road	X-unshaded	No	Other	Low	None
Government Facilities	Melwood Elementary	7100 Woodyard Road	X-unshaded	No	Other	Low	None
Government Facilities	Middleton Valley Elementary	4815 Dalton Street	X-unshaded	No	Other	Low	None
Government Facilities	Middleton Valley Elementary	4815 Dalton Street	X-unshaded	No	Other	Low	None
Government Facilities	Mitchellville Montessori School	12112 Central Avenue	X-unshaded	No	Other	Low	Lake Arbor Dam
Government Facilities	Mitchellville Montessori School	12112 Central Avenue	X-unshaded	No	Other	Low	Lake Arbor Dam
Government Facilities	Mitchellville School, The	3501 Moylan Drive	X-unshaded	No	Other	Low	None
Government Facilities	Montpelier Elementary	9200 Muirkirk Road	X-unshaded	No	Interface	Low	None
Government Facilities	Montpelier Elementary	9200 Muirkirk Road	X-unshaded	No	Interface	Low	None
Government Facilities	Morningside Elementary	6900 Ames Street	X-unshaded	No	Other	Low	None
Government Facilities	Morningside Elementary	6900 Ames Street	X-unshaded	No	Other	Low	None
Government Facilities	Mount Rainier Elementary	4011 32nd Street	X-unshaded	No	Other	Low	None
Government Facilities	Mt. Calvary School	6704 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Mt. Calvary School	6704 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	NASA Goddard Space Flight Center *	Code 240.1-Security Off	X-unshaded	No	Other	Low	None
Government Facilities	NASA Off of Inspector Gen	Goddard Space Flight Center	X-unshaded	No	Other	Low	None
Government Facilities	NASA Security	8800 Greenbelt Road	X-unshaded	No	Other	Low	None
Government Facilities	National Christian Academy	6700 Bock Road	X-unshaded	No	Other	Low	None
Government Facilities	National Christian Academy	6700 Bock Road	X-unshaded	No	Other	Low	None
Government Facilities	New Chapel Christian Academy	5601 Old Branch Avenue	X-unshaded	No	Other	Low	None
Government Facilities	New Chapel Christian Academy	5601 Old Branch Avenue	X-unshaded	No	Other	Low	None
Government Facilities	New Covenant Christian Academy	3805 Lawrence Street	X-unshaded	No	Other	Low	None
Government Facilities	New Covenant Christian Academy	3805 Lawrence Street	X-unshaded	No	Other	Low	None
Government Facilities	New Hope Academy	7009 Varnum Street	X-unshaded	No	Other	Low	None
Government Facilities	New Hope Academy	7009 Varnum Street	X-unshaded	No	Other	Low	None
Government Facilities	New Horizon Child Development Center	5664 Silver Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	New Horizon Child Development Center	5664 Silver Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Nicholas Orem Middle	6100 Editor's Park Drive	X-unshaded	No	Other	Low	None
Government Facilities	Nicholas Orem Middle	6100 Editor's Park Drive	X-unshaded	No	Other	Low	None
Government Facilities	North Forestville Elementary	2311 Ritchie Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	North Forestville Elementary	2311 Ritchie Road	X-unshaded	No	Other	Low	None
Government Facilities	Northview Elementary	3700 Northview Drive	X-unshaded	No	Other	Low	None
Government Facilities	Northview Elementary	3700 Northview Drive	X-unshaded	No	Other	Low	None
Government Facilities	Northwestern Evening/Saturday High	7000 Adelphi Road	X-unshaded	No	Other	Low	None
Government Facilities	Northwestern Evening/Saturday High	7000 Adelphi Road	X-unshaded	No	Other	Low	None
Government Facilities	Northwestern High School	7000 Adelphi Road	X-unshaded	No	Other	Low	None
Government Facilities	Northwestern High School	7000 Adelphi Road	X-unshaded	No	Other	Low	None
Government Facilities	NSA CASL (University of Maryland)	7005 52nd Ave	X-unshaded	No	Other	Low	None
Government Facilities	NSA LPS/LTS	8050 - 8080 Greenmeade Drive	X-shaded	No	Other	Low	None
Government Facilities	Oakcrest Elementary	929 Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Oaklands Elementary	13710 Laurel-Bowie Road	X-unshaded	No	Interface	Low	None
Government Facilities	Oaklands Elementary	13710 Laurel-Bowie Road	X-unshaded	No	Interface	Low	None
Government Facilities	Open Arms Christian Child Development Center	13611 Laurel-Bowie Road	X-unshaded	No	Interface	Low	None
Government Facilities	Our Savior's School	3111 Forestville Road	X-unshaded	No	Other	Low	None
Government Facilities	Outreach Christian Center Academy	6701 Clinton Manor Drive	X-unshaded	No	Other	Low	None
Government Facilities	Overlook Elementary	3298 Curtis Drive	X-unshaded	No	Other	Low	None
Government Facilities	Owens Road Elementary	1616 Owens Road	X-unshaded	No	Other	Low	None
Government Facilities	Oxon Hill Elementary	7701 Livingston Road	X-unshaded	No	Other	Low	None
Government Facilities	Oxon Hill High	6701 Leyte Drive	X-unshaded	No	Other	Low	None
Government Facilities	Oxon Hill Middle	9570 Fort Foote Road	X-unshaded	No	Other	Low	None
Government Facilities	P.G. County Department of Corrections	13400 Dille Drive	X-unshaded	No	Other	Low	None
Government Facilities	Paint Branch Elementary	5101 Pierce Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Paint Branch Montessori School	3215 Powder Mill Road	X-unshaded	No	Other	Low	None
Government Facilities	Paint Branch Montessori School	3215 Powder Mill Road	X-unshaded	No	Other	Low	None
Government Facilities	Panorama Elementary	2002 Callaway Street	X-unshaded	No	Other	Low	None
Government Facilities	Parkdale High	6001 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	Pathways School--DuVal Re-Entry, The	9880 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	Pathways School--Hyattsville, The	3120 Nicholson Street	X-unshaded	No	Other	Low	None
Government Facilities	Patuxent Elementary	4410 Bishopmill Drive	X-unshaded	No	Intermix	Low	None
Government Facilities	Patuxent Montessori School	14210 Old Stage Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Patuxent Research Refuge	12100 Beech Forest Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Perrywood Elementary	501 Watkins Park Drive	X-unshaded	No	Other	Low	None
Government Facilities	Phyllis E. Williams Elementary	9601 Prince Place	X-unshaded	No	Other	Low	None
Government Facilities	Pneuma Academy of Christian Character, The	6305 Allentown Road	X-unshaded	No	Other	Low	None
Government Facilities	Pointer Ridge Elementary	1110 Parkington Lane	X-unshaded	No	Interface	Low	None
Government Facilities	Port Towns Elementary	4351 58th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Potomac High	5211 Boydell Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Potomac Landing Elementary	12500 Fort Washington Road	X-unshaded	No	Interface	Low	None
Government Facilities	Power Academy	5106 Boulder Drive	X-unshaded	No	Other	Low	None
Government Facilities	Prince George's Community College	301 Largo Road	X-unshaded	No	Other	Low	None
Government Facilities	Prince Georges County Admin Building	14741 Governor Oden Bowie Drive	AE	No	Other	Low	None
Government Facilities	Prince Georges County Admin Building	14741 Governor Oden Bowie Drive	AE	No	Other	Low	None
Government Facilities	Prince Georges County Government	3500 C Brown Station Road	AE	No	Other	Low	None
Government Facilities	Prince George's Sport & Learning Complex	8001 Sheriff Road	X-unshaded	No	Other	Low	None
Government Facilities	Princeton Claremont Academy, Inc. (Jesus is Lord) Schl	6417 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Princeton Claremont Academy, Inc. (Jesus is Lord) Schl	6417 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	Princeton Day Academy	4200 Forbes Blvd	X-unshaded	No	Other	Low	None
Government Facilities	Princeton Day Academy	4200 Forbes Blvd	X-unshaded	No	Other	Low	None
Government Facilities	Princeton Elementary	6101 Baxter Drive	X-unshaded	No	Other	Low	None
Government Facilities	Progressive Christian Academy	5406 Brinkley Road	X-unshaded	No	Other	Low	None
Government Facilities	Queen Anne School	14111 Oak Grove Road	X-unshaded	No	Intermix	Low	None
Government Facilities	REDEEM Christian Academy	1901 Iverson Street	X-unshaded	No	Other	Low	None
Government Facilities	Refuge Temple Christian Academy & Christian Preschool	11201 Tippett Road	X-unshaded	No	Intermix	Low	None
Government Facilities	Reid Temple Christian Academy	11400 Glenn Dale Boulevard	X-unshaded	No	Interface	Low	None
Government Facilities	Renaissance Christian Academy	2101 Shadyside Avenue	X-unshaded	No	Other	Low	None
Government Facilities	RICA - Southern Maryland	9400 Suratts Road	X-unshaded	No	Other	Low	None
Government Facilities	Ridgecrest Elementary	6120 Riggs Road	X-unshaded	No	Other	Low	None
Government Facilities	Riverdale Baptist School	1133 Largo Road	X-unshaded	No	Other	Low	None
Government Facilities	Riverdale Elementary	5006 Riverdale Road	X-unshaded	No	Other	Low	None
Government Facilities	Robert Frost Elementary	6419 85th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Robert Goddard Montessori	9850 Good Luck Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	Robert R. Gray Elementary	4949 Addison Road	X-unshaded	No	Other	Low	None
Government Facilities	Rockledge Elementary	7701 Laurel-Bowie Road	X-unshaded	No	Interface	Low	None
Government Facilities	Rogers Heights Elementary	4301 58th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Rosa L. Parks Elementary	6111 Ager Road	X-shaded	No	Other	Low	None
Government Facilities	Rosaryville Elementary	9910 Dale Drive	X-unshaded	No	Interface	Low	None
Government Facilities	Rose Valley Elementary	9800 Jacqueline Drive	X-unshaded	No	Other	Low	None
Government Facilities	S.A.C.R.E.D. Life Academy for Boys	7230 Central Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Samuel Chase Elementary	5700 Fisher Road	X-unshaded	No	Other	Low	None
Government Facilities	Samuel Ogle Middle	4111 Chelmont Lane	X-unshaded	No	Interface	Low	None
Government Facilities	Samuel P. Massie Elementary	3301 Regency Parkway	X-unshaded	No	Other	Low	None
Government Facilities	Seabrook Elementary	6001 Seabrook Road	X-unshaded	No	Other	Low	None
Government Facilities	Seat Pleasant Elementary	6411 G Street	X-unshaded	No	Other	Low	None
Government Facilities	Seed Learning Academy (formerly: Little Folks Development Center)	6200 Riverdale Road	X-unshaded	No	Other	Low	None
Government Facilities	SHA	9300 Kenilworth Avenue	X-unshaded	No	Other	Low	None
Government Facilities	SHABACH! Christian Academy	3600 Brightseat Road	X-unshaded	No	Other	Low	None
Government Facilities	Skyline Elementary	6311 Randolph Road	X-unshaded	No	Other	Low	None
Government Facilities	Springhill Lake Elementary	6060 Springhill Drive	X-unshaded	No	Other	Low	None
Government Facilities	St. Ambrose School	6310 Jason Street	X-unshaded	No	Other	Low	None
Government Facilities	St. Ann's High School	4901 Eastern Avenue	X-unshaded	No	Other	Low	None
Government Facilities	St. Columbia School	7800 Livingston Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Hugh's School	145 Cresent Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Jerome's School	5207 42nd Place	X-unshaded	No	Other	Low	None
Government Facilities	St. John the Evangelist School	8912 Old Branch Avenue	X-unshaded	No	Other	Low	None
Government Facilities	St. Joseph's School	11011 Montgomery Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Mark's School	7501 Adelphi Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Mary of the Assumption School	4610 Largo Road	X-unshaded	No	Intermix	Low	None
Government Facilities	St. Mary's School	7207 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Mary's School of Piscataway	13407 Piscataway Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Matthew's Parish Day School	5901 36th Ave.	X-unshaded	No	Other	Low	None
Government Facilities	St. Matthew's United Methodist Early Education Center	14900 Annapolis Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	St. Matthias Apostle School	9473 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Paul's Christian Children's Center	8505 Heathermore Boulevard	X-unshaded	No	Other	Low	None
Government Facilities	St. Philip the Apostle School	5414 Henderson Way	X-unshaded	No	Other	Low	None
Government Facilities	St. Pius X Regional School	14710 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Stephen Decatur Middle	8200 Pinewood Drive	X-unshaded	No	Other	Low	None
Government Facilities	Suitland Elementary	4650 Homer Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Suitland High	5200 Silver Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	Suitland Road Baptist Church School, The	6412 Suitland Road	X-unshaded	No	Other	Low	None
Government Facilities	Surrattsville High	6101 Garden Drive	X-unshaded	No	Other	Low	None
Government Facilities	Tabernacle Learning Academy, The	11601 South Laurel Drive	X-unshaded	No	Other	Low	None
Government Facilities	Tall Oaks Vocational	2112 Church Road	X-unshaded	No	Other	Low	None
Government Facilities	Tanglewood School	8333 Woodyard Road	X-unshaded	No	Other	Low	None
Government Facilities	Tayac Elementary	8600 Allentown Road	X-unshaded	No	Other	Low	None
Government Facilities	Templeton Elementary	6001 Carters Lane	X-unshaded	No	Other	Low	None
Government Facilities	Thomas Claggett Elementary	2001 Addison Road	X-unshaded	No	Other	Low	None
Government Facilities	Thomas G. Pullen	700 Brightseat Road	X-unshaded	No	Other	Low	None
Government Facilities	Thomas Johnson Middle	5401 Barker Place	X-unshaded	No	Other	Low	None
Government Facilities	Thomas S. Stone Elementary	4500 34th Street	X-shaded	No	Other	Low	None
Government Facilities	Thurgood Marshall Middle	4909 Brinkley Road	X-unshaded	No	Other	Low	None
Government Facilities	Tulip Grove Elementary	2909 Trainor Lane	X-unshaded	No	Other	Low	None
Government Facilities	Turning Point Academy	7800 Good Luck Road	X-unshaded	No	Other	Low	None
Government Facilities	U.S. Census Bureau	4600 Silver Hill Road	X-unshaded	No	Other	Low	None
Government Facilities	U.S. Census Bureau	17101 Melford Blvd.	X-unshaded	No	Other	Low	None
Government Facilities	Univeristy System of Maryland	3300 Metzertott Road, Suite 2C	X-unshaded	No	Intermix	Low	None
Government Facilities	University of Maryland	7403 Hopkins Avenue	X-unshaded	No	Other	Low	None
Government Facilities	University of Maryland	1122 Patuxent Building	X-unshaded	No	Other	Low	None
Government Facilities	University of Maryland College Park	1101 Main Administration Building	X-unshaded	No	Other	Low	None
Government Facilities	University of Maryland University College	3501 University Boulevard East	X-unshaded	No	Other	Low	None
Government Facilities	University of Maryland, College Park	4321 Hartwick Rd	X-unshaded	No	Other	Low	None
Government Facilities	University of Mayrland, College Park	4321 Hartwick Rd	X-unshaded	No	Other	Low	None
Government Facilities	University Park Elementary	4315 Underwood Street	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Government Facilities	University System of Maryland	3300 Metzertott Road, Suite 2C	X-unshaded	No	Intermix	Low	None
Government Facilities	Upper Marlboro Courthouse	14701 Governor Oden Bowie Drive	X-unshaded	No	Other	Low	None
Government Facilities	Urban Scholars Christian School for Family Learning	9877 Good Luck Road #T1	X-unshaded	No	Other	Low	None
Government Facilities	US Dept of Labor, Wage & Hour Division (WHD)	6525 Belcrest Rd, Ste 250	X-unshaded	No	Other	Low	None
Government Facilities	Valley View Elementary	5500 Danby Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Victory Christian Academy	13701 Annapolis Road	X-unshaded	No	Other	Low	None
Government Facilities	Waldon Woods Elementary	10301 Thrift Road	X-unshaded	No	Interface	Low	None
Government Facilities	Walker Mill Middle	800 Karen Boulevard	X-unshaded	No	Intermix	Low	None
Government Facilities	Washington Bible College/Capital Bible Seminary	6511 Princess Garden Parkway	X-unshaded	No	Other	Low	None
Government Facilities	Washington Classical and Christian School	2200 Culbera Drive	X-unshaded	No	Other	Low	None
Government Facilities	Washington New Church School	11914 Chantilly Lane	X-unshaded	No	Other	Low	None
Government Facilities	Washington United Christian Academy	4610 69th Avenue	X-unshaded	No	Other	Low	None
Government Facilities	Whitehall Elementary	3901 Woodhaven Lane	X-unshaded	No	Interface	Low	None
Government Facilities	William Beanes Elementary	5108 Dianna Drive	X-unshaded	No	Other	Low	None
Government Facilities	William Paca Elementary	7801 Sherriff Road	X-unshaded	No	Other	Low	None
Government Facilities	William S. Schmidt Environmental Ed. Ctr.	18501 Aquasco Road	X-unshaded	No	Intermix	Low	None
Government Facilities	William W. Hall Elementary	5200 Marlboro Pike	X-unshaded	No	Other	Low	None
Government Facilities	William Wirt Middle	62nd Place and Tuckerman Street	X-unshaded	No	Other	Low	None
Government Facilities	Woodmore Elementary	12500 Woodmore Road	X-unshaded	No	Other	Low	None
Government Facilities	Woodridge Elementary	5001 Flintridge Drive	X-unshaded	No	Other	Low	None
Government Facilities	Woodstream Christian Academy	9800 Lottsford Road	X-unshaded	No	Other	Low	None
Government Facilities	World View Christian Center	12700 South East Crain Highway	X-unshaded	No	Interface	Low	None
Government Facilities	Yorktown Elementary	7301 Race Track Road	X-unshaded	No	Interface	Low	None
Healthcare & Public Health	American Women's Services	6005 Landover Road Suite 6	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Baxter Bioscience	12140 Indian Creek Court	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Baxter Healthcare Corporation	12040 Indian Creek Court	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Beltsville Agricultural Research Police	10300 Baltimore Ave Building 307	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Cardinal Health	7051 Muikirk Meadows Drive #L	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Cytimmune Sciences, Inc.	8075 Greenmead Road	X-shaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Healthcare & Public Health	Doctors Community Hospital	8118 Good Luck Road	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Dr. Vijayan Charles	7237 Hanover Pkwy., "B"	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Fort Washington Medical Center	11711 Livingston Road	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Innovative Technology International, Inc.	10747 Tucker Street	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Integrated OB/Gyn Services	7610 Pennsylvania Avenue, Suite 305	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Integrated OB/GYN Services	3321 Toledo Terrace, Room D102	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Laurel Regional Hospital	7300 Van Dusen Road	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Maryland Q.C. Laboratories Inc (MQC Labs)	11593 Edmonston Rd	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Metropolitan Family Planning Institute, Inc.	5625 Allentown Rd.Suite #203	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Metropolitan Family Planning Institute, Inc.	5915 Greenbelt Rd	X-unshaded	No	Other	Low	None
Healthcare & Public Health	P.G. County (HHS) Division of Environmental / Fire/EMS	9201 Basil Court, Suite 318	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Prince Georges County Health Department	1701 McCormick Drive	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Prince Georges Hospital Center	3001 Hospital Drive	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Prince George's Reproductive Health Services	7411 Riggs Road, Suite 300	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Roberts Oxygen Co.	13309 Baltimore Avenue	X-unshaded	No	Other	Low	None
Healthcare & Public Health	Southern Maryland Hospital	7503 Surratts Road	X-unshaded	No	Intermix	Low	None
Healthcare & Public Health	Spherix	12051 Indian Creek Court	X-unshaded	No	Other	Low	None
Information Technology	ERT Inc.	14401 Sweitzer Lane Suite 300	X-unshaded	No	Other	Low	None
Information Technology	National CyberWatch Center	301 Largo Rd	X-unshaded	No	Other	Low	None
Nuclear	Maryland Q.C. Laboratories Inc (MQC Labs)	11593 Edmonston Rd	X-unshaded	No	Other	Low	None
Nuclear	University of Maryland Nuclear Reactor	Building 090	X-unshaded	No	Other	Low	None
Transportation	Capital Connector	US 50 at I-95	X-unshaded	No	Other	Low	None
Transportation	Chalk Point Generating Sta Heliport (MD27)	Eagle Harbor	X-unshaded	No	Intermix	Low	None
Transportation	Citizens Bank Headquarters Heliport (MD37)	14401 Sweitzer Lane	X-unshaded	No	Other	Low	None
Transportation	College Park Airport (CGS)	1909 Corporal Frank Scott Dr	AE	No	Other	Low	None
Transportation	Fort Washington Medical Center Heliport (MD72)	11711 Livingston Road	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Transportation	Freeway Airport (W00)	3900 Church Rd	X-unshaded	No	Other	Low	None
Transportation	Greater Laurel Beltsville Hospital Heliport (0MD5)	7100 Contee Rd	X-unshaded	No	Other	Low	None
Transportation	I-95 and I-295 Exchange	Greenbelt	X-unshaded	No	Other	Low	None
Transportation	I-95 and I-495	I-95 and I-495	X-shaded	No	Other	Low	None
Transportation	Metroplex Heliport (1MD6)	8201 Corporate Drive	X-unshaded	No	Other	Low	None
Transportation	Metroplex Heliport (1MD6) New Carrollton	8201 Corporate Drive	X-unshaded	No	Other	Low	None
Transportation	MTA BOWIE STATE MARC nb/sb	13900 JERICHO PARK RD	X-unshaded	No	Other	Low	None
Transportation	MTA COLLEGE PARK MARC nb/sb	7202 BOWDOIN AVE	X-unshaded	No	Other	Low	None
Transportation	MTA GREENBELT MARC nb/sb	5600 GREENBELT METRO DRIVE	X-unshaded	No	Other	Low	None
Transportation	MTA MUIRKIRK MARC nb/sb & PARK & RIDE	7012-B MUIRKIRK ROAD	X-unshaded	No	Other	Low	None
Transportation	MTA NEW CARROLLTON MARC nb/sb	4300 GARDEN CITY DRIVE	X-unshaded	No	Other	Low	None
Transportation	MTA RIVERDALE MARC nb/sb	6200 RHODE ISLAND AVE	X-unshaded	No	Other	Low	None
Transportation	MTA SEABROOK MARC nb/sb	6221 SEABROOK RD	X-unshaded	No	Other	Low	None
Transportation	New Carrollton Rail Station	4300 Garden City Drive	X-unshaded	No	Other	Low	None
Transportation	Patuxent River Bridge	Rt. 50 at Patuxent River	X-shaded	No	Other	Low	Duckett Dam
Transportation	Potomac Airfield Airport (VKX)	10300 Glen Way	X-unshaded	No	Other	Low	None
Transportation	Prince Georges County Government	3500 C Brown Station Road	AE	No	Other	Low	None
Transportation	Prince George's Hospital Center Heliport (1MD4)	3001 Hospital Dr	X-unshaded	No	Other	Low	None
Transportation	Southern Md Hospital Center Heliport (3MD1)	7503 Surratts Rd	X-unshaded	No	Interface	Low	None
Transportation	UPS Regional Distribition Center	14841 Sweitzer Lane	X-unshaded	No	Other	Low	None
Transportation	Washington Bulk Mail Distribution Center	9201 Edgeworth Drive	X-unshaded	No	Other	Low	None
Transportation	Washington Executive/hyde Field Airport (W32)	10399 Piscataway Rd	X-unshaded	No	Intermix	Low	None
Transportation	Washington Metro Area Transit Authority	5801 Sunnyside Ave.	X-unshaded	No	Other	Low	None
Transportation	WMATA Addison Road - Seat Pleasant Station	100 Addison Road S	X-unshaded	No	Other	Low	None
Transportation	WMATA Branch Avenue Station	4704 Old Soper Road	X-unshaded	No	Other	Low	None
Transportation	WMATA Capitol heights station	133 Central Avenue	X-unshaded	No	Intermix	Low	None
Transportation	WMATA College Park Station	4391 Calvert Road	X-unshaded	No	Other	Low	None
Transportation	WMATA Greenbelt Station	5717 Greenbelt Metro Drive	AE	No	Other	Low	None
Transportation	WMATA Largo Town Center Station	9000 Lottsford Road	X-unshaded	No	Other	Low	None
Transportation	WMATA Morgan Boulevard Station	300 Garrett Morgan Blvd, Landover	X-unshaded	No	Other	Low	None
Transportation	WMATA Naylor Road Station	3101 Branch Avenue	X-unshaded	No	Other	Low	None

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Transportation	WMATA New Carrollton	4700 Garden City Drive	X-unshaded	No	Other	Low	None
Transportation	WMATA Prince George's Plaza	3575 East West Highway	X-unshaded	No	Other	Low	None
Transportation	WMATA Southern Avenue Station	1411 Southern Avenue		No	Other	Low	None
Transportation	WMATA Suitland Station	4500 Silver Hill Road	X-unshaded	No	Other	Low	None
Transportation	WMATA West Hyattsville Station	2700 Hamilton Street	X-unshaded	No	Other	Low	None
Transportation	Woodrow Wilson Memorial Bridge	I-495 / 95 over the Potomac River	AE	No	Other	Low	None
Water & Wastewater Systems	Bowie Wastewater Treatment Plant	16550 Annapolis Rd.	X-unshaded	No	Interface	Low	Duckett Dam
Water & Wastewater Systems	Bowie WWTP	16550 Annapolis Rd.	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Central Avenue Pumping Station	Brightseat Road	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Parkway WWTP	10100 Canadian Way	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Patuxent Water Filtration Plant	6101 Sandy Spring Rd.	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Piscataway WWTP	11 Farmington Road West	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Washington Suburban Sanitary Commission (WSSC)	Wssc Treatment Plant Rd	X-unshaded	No	Intermix	Low	None
Water & Wastewater Systems	Washington Suburban Sanitary Commission	11 Farmington Rd West	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Washington Suburban Sanitary Commission	6101 Sandy Spring Road	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Washington Suburban Sanitary Commission (WSSC)	14501 Sweitzer Lane	X-unshaded	No	Other	Low	None
Water & Wastewater Systems	Western Branch WWTP	6600 Crain Hwy	X-unshaded	No	Other	Low	None

C. City of Laurel Critical Facility Hazard Analysis

Table 4. Critical facility hazard area analysis for the City of Laurel

Facility Type	Facility Name	Street Address	Flood Zone	Floodway	WUI Zone	Earthquake	Dam Inundation
Communications	AiNet	312 Laurel Ave.	X-unshaded	No	Other	Low	None
Communications	TW Telecom	14405 Laurel Pl	X-unshaded	No	Other	Low	None
Emergency Services	Laurel City Police Department	350 Municipal Square	X-shaded	No	Other	Low	None
Emergency Services	Laurel Police, Community Outreach Ctr, Laurel Mall	14828 Baltimore Avenue, Suite 84	X-shaded	No	Other	Low	Laurel Lake Dam
Emergency Services	Laurel Volunteer Fire Department Sta. 10	7411 Cherry Lane	X-unshaded	No	Other	Low	None
Emergency Services	Laurel Volunteer Rescue Squad 49	14910 Bowie Road	AE	No	Other	Low	Duckett Dam & Laurel Lake Dam
Energy	Laurel Fuel Oil & Heating Co., Inc.	101 Main St.	AE	No	Other	Low	Duckett Dam
Government Facilities	Army Recruiting Office - LAUREL	805 Washington Blvd S. Laurel Shopping Center	X-unshaded	No	Other	Low	None
Government Facilities	DHMH	312 Marshall Avenue 7th Floor	X-unshaded	No	Other	Low	None
Government Facilities	Holy Trinity Christian Day School	7607 Sandy Spring Road	X-unshaded	No	Other	Low	None
Government Facilities	Laurel Elementary	516 Montgomery Street	X-unshaded	No	Other	Low	None
Government Facilities	Laurel High	8000 Cherry Lane	X-unshaded	No	Other	Low	None
Government Facilities	Pallotti Early Learning Center, Inc.	113 St. Mary's Place	X-unshaded	No	Other	Low	None
Government Facilities	Scotchtown Hills Elementary	15950 Dorset Road	X-unshaded	No	Other	Low	None
Government Facilities	St. Mary of the Mills School	106 St. Mary's Place	X-unshaded	No	Other	Low	None
Government Facilities	St. Vincent Pallotti High School	113 St. Mary's Place	X-unshaded	No	Other	Low	None
Healthcare & Public Health	BioServe Biotechnologies, Ltd.	1050 West Street	X-unshaded	No	Other	Low	None
Information Technology	Aquilent	1100 West St.	X-unshaded	No	Other	Low	None
Transportation	MTA LAUREL MARC nb/sb	22 Main Street	X-unshaded	No	Other	Low	Duckett Dam

Appendix E. 2017-2023 Mitigation Actions Status Report

During the 2023 Hazard Mitigation Plan update, the Mitigation Advisory Committee reviewed and discussed the status of the 2017-2023 mitigation actions (whether they were completed, removed, not started, or in progress) and whether to modify and/or retain actions. The results of these discussions are shown in **Table 5** and **Table 6** below. Actions that are being carried over to the 2023 Hazard Mitigation Plan will have the "2023 Action Number" column filled out. Any modifications will be highlighted in the "Notes" column.

A. Prince George's County Mitigation Action Status (2017-2023)

Table 5. Prince George's County 2017-2023 Actions Status Report

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
		Prevention				
County - 1	PG-1	Continue to partner with FEMA/MDE to promote use of Updated Flood Hazard Maps. Updated Mapping will continue to inform Risk Reduction and mitigation of at-Risk Buildings such as repetitive loss structures.	Department of Environment Support: Maryland- National Capital Park & Planning	High	In Progress	The County continued to partner with FEMA/MDE on use of updated flood hazard maps. This action item is on-going.
County - 2		Partner with FEMA/MDE to Update Flood Hazard Mapping; Use Updated Mapping for Risk Reduction. Private Nonprofit Buildings. Search the updated list of flood-prone properties to determine if any are owned by private nonprofit organizations.	Department of Environment Support: Maryland- National Capital Park & Planning	Medium	Completed	Staff review of flood hazard mapping was performed in the previous year and is ongoing. Staff coordinates with FEMA on revisions to the FIRM and FIS. Staff will prepare and maintain an additional dataset for flood-prone properties.
County - 3	PG-2	Using the revised Flood Maps, check locations of HazMat sites, NPDES sites, and other land uses; if found to be in flood hazard areas, communicate with owner/handler of hazardous materials and known pollutants regarding risk and appropriate response and protection measures.	Fire/EMS; Department of Environment; Maryland Department of the Environment	High	Not Started	Due to limited staff capacity, there is no activity to report for this action item. Mapping of HazMat sites, strategy for effective outreach and education and additional activity will be initiated following the fill of position vacancies in flood management unit.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
County - 4	PG-3	Integrate mitigation plan requirements and actions into other appropriate planning mechanisms such as comprehensive plans and capital improvement plans.	Office of Homeland Security; Department of Environment	Medium	In Progress	Flood mitigation actions have been incorporated in the Stormwater Management Capital Improvement Program (CIP). Also, these actions align with flood protection actions that are outlined in the County's general plan entitled "Plan2035."
County - 5	PG-4	Collect flood depth information to support a grant to provide elevation certificates in areas newly included in Special flood hazard areas to assist residents in obtaining elevation certificates to support LOMAs or reduced-risk NFIP premiums.	Office of Homeland Security	High	Not Started	Due to limited staff capacity, there is no activity to report for this action item. Activity will be initiated following the fill of position vacancies in flood management unit.
		Property Protection				
County - 6		Continue to coordinate the Building Code & Floodplain Ordinance whenever either is updated.	Department of Environment; Department of Public Works & Transportation	High	Completed	Inter-agency coordination between DoE and the Department of Permitting, Inspections and Enforcement is included in the County's capabilities.
County - 7	PG-14	Support mitigation projects that will result in protection of public or private property from natural hazards. Eligible projects include but are not limited to: 1. acquisition of flood-prone property 2. Elevation of flood- prone structures 3. Minor structural flood control projects 4. Relocation of structures from hazard prone areas 5. Retrofitting of existing buildings, facilities and infrastructure 6. Retrofitting of existing buildings and facilities for shelters 7. Critical infrastructure protection measures 8. Stormwater management improvements 9. Advanced warning systems and hazard gauging systems (weather radios, reverse-911, stream gauges, I-flows) 10. Targeted hazard education	Office of Homeland Security; Department of Environment, DPWT	High	In Progress	DoE's annual budget proposal for the Stormwater Management CIP includes allocations for drainage improvement and flood prevention projects. The approved FY'20 Stormwater Management CIP budget includes appropriations for a levee improvement project and multiple drainage improvement projects.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
		11. wastewater and water supply system hardening and mitigation				
County - 8	PG-15	Promote appropriate mitigation measures for hazard-vulnerable priority critical facilities	Office of Homeland Security; Dept. of Environment	High	In Progress	Consultants to the County have developed hazard vulnerability maps for critical facilities. Next step is to review the mapping and coordinate with the Local Emergency Planning Committee on priority measures and implementation strategy.
County - 9	PG-30	Update Upper Marlboro Emergency Response Plan to address flooding, including evacuation, emergency response, mitigation, etc.	Office of Homeland Security	Medium	In Progress	Staff has started the effort of reviewing emergency evacuation routes and refining messages for flood emergency alerts. These tasks are part of the larger effort to flesh out relevant templates in the County's Everbridge Mass Notification system.
County - 10	PG-35	Continue annual flood risk awareness and mitigation mailing to all owners of high-risk properties in the SFHA, including RL structures.	Office of Homeland Security	High	In Progress	Prince George's County Department of the Environment (DoE) continues to run the annual "June is Flood Awareness Month" campaign and sends letters and brochures about flood prevention and protection services and flood insurance to lenders, insurance agents and realtors. Additionally, DoE shares flood facts, recommendations for flood prevention and other relevant public outreach with residents and community partners via listserv, webpage and other media outlets.
		Natural Resource Protection				
County - 11		Continue implementation of Best Management Practices and Low Impact Development practices to meet NPDES water pollution requirements. The County has EPA-listed Total	Office of Homeland Security	High	Completed	The County continues to implement LID practices to meet NPDES water pollution requirements. Additionally, DoE awards grants to non-profits to install green infrastructure

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
		Daily Maximum Load (TMDL) stream segments due to high levels of Nitrogen, Phosphorous, Sediment and Trash which it continues to mitigate.				and to conduct outreach and education for purpose of reducing stormwater runoff and the transport of pollutants to local waterways.
County - 12		Use the Maryland-National Capital Park and Planning Commission 2016 water quality biological stream assessment studies to prioritize stabilization projects, especially if funding from outside resources is available for mitigation of environmental impacts.	Department of Environmental Resources The Maryland-National Capital Park & Planning Commission - Debbie Tyner	Medium	Completed	Capital projects for shoreline restoration are in progress for several areas in the County.
		Structural Projects				
County - 13		Anacostia Levee Improvements. Work with the Corps of Engineers to pursue funding to implement the levee improvement work. Four of five levee systems have been FEMA- accredited. Complete accreditation of Arundel Street Levee System. Maintain accreditation through O & M Plan implementation as prescribed by USACE.	Department of Environment Department of Public Works & Transportation	High	Completed	The Arundel Canal levee improvement project is in-progress.
		Emergency Services				
County - 14		Update the flood warning system notification lists used in the Everbrite system with the list of flood-prone properties based on revised flood maps. Distribute general warnings to all County citizens using traditional and social media platforms such as the ORM website, Twitter and Facebook.	Department of Environment; Office of Homeland Security	High	Completed	The Everbridge Emergency Notification System will notify the occupants of structures in the regulatory floodplain (i.e. flood prone structures) using the White Pages, 9-1-1 data and the phone numbers and email addresses for persons that have registered for Alert Prince George's.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
County - 15	PG-31	Complete disaster recovery plan, family reunification plan.	Office of Homeland Security	High	Not Started	The County will create a disaster recovery plan that includes a post-disaster strategic rebuilding decision framework that comprehensively integrates equity.
County - 16	PG-32	The Department of Family Services Agency on Aging will continue its outreach to seniors about health and safety during periods of extreme heat and extreme cold. Information will be added to the Family Service's web page and frozen meal distribution with supplement provision of hot meals during severe weather periods from January through March.	Department of Family Services	High	Not Started	The Department of Family Services Agency on Aging will continue its outreach to other vulnerable populations, in addition to seniors during periods of extreme temperatures.
County - 17		Continue to Support Regional Drought Response and Planning. Continue the County's commitment and participation with the MWCOG and WSSC when drought awareness responses are activated.	Department of Environmental Resources Washington Suburban Sanitary Commission	Medium	Removed	Included in the County's capabilities.
		Education & Outreach				
County - 18		Continue participation in community and neighborhood events to promote hazard awareness and mitigation options.	Office of Homeland Security; Dept. of Environment	High	Removed	Included in the County's capabilities.
County - 19	PG-36	Expand use of Social Media for natural hazard awareness and hazard mitigation messaging.	Office of Homeland Security	High	Not Started	The County will implement natural hazard awareness and hazard mitigation messaging with a County Hazard Mitigation hub website.
County - 20		Work with County municipalities to provide hazard awareness messaging and information on storm preparedness and mitigation for promotion using local newspapers, municipal websites, etc.	Office of Homeland Security	High	Not Started	The County will work with municipalities and/or develop public-private partnerships to provide information on storm preparedness and mitigation in secondary languages.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
County - 21	PG-37	Distribute Citizens' Preparedness Guide and Business Preparedness Guides at community events. Upon updating, incorporate new HMP Hazard information.	Office of Homeland Security	Medium	Not Started	Integrate hazard mitigation considerations in future updates of the Citizens' Preparedness Guide and Business Preparedness Guide.

B. City of Laurel Mitigation Action Status (2017-2023)

Table 6. City of Laurel 2017-2023 Actions Status Report

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
		Prevention				
Laurel -1	L-1	Continue to partner with FEMA/MDE to promote use of Updated Flood Hazard Maps. Updated Mapping will continue to inform Risk Reduction and mitigation of at-Risk Buildings such as repetitive loss structures.	Emergency Manager; Department of Economic & Community Development	Medium - High	Not Started	Utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the City.
Laurel - 2	L-2	Integrate mitigation plan requirements and actions into other appropriate planning mechanisms such as comprehensive plans and capital improvement plans.	Emergency Manager; Department of Economic & Community Development	Medium - High	Not Started	Integrate 2023 mitigation plan requirements and actions into new City plans.
		Property Protection				
Laurel - 3	L-4	Support mitigation projects that will result in protection of public or private property from natural hazards. Eligible projects include but are not limited to: 1. acquisition of flood-prone property 2. Elevation of flood- prone structures 3. Minor structural flood control projects 4. Relocation of structures from hazard prone areas 5. Retrofitting of existing buildings, facilities and infrastructure 6. Retrofitting of existing buildings and facilities for shelters 7. Critical infrastructure protection measures 8. Stormwater management improvements 9. Advanced warning systems and hazard gauging systems (weather radios, reverse-911, stream gauges, I-flows) 10.	Emergency Manager; Department of Economic & Community Development	Medium - High	In Progress	Continue to support mitigation projects that will result in protection of public or private property from natural hazards. Additional acquisitions should include hazard-prone property structures.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
		Targeted hazard education 11. wastewater and water supply system hardening and mitigation				
Laurel - 4		Seek mitigations solutions for city facilities including: the flood- prone municipal swimming pool; Department of Public Works flood-prone buildings and the City of Laurel Police Department Building. Determine pro-active preventive mitigation actions and seek grant funds for permanent solutions.	Emergency Manager; Department of Economic & Community Development; Department of Public Works; Laurel Police Department; Department of Recreation	High	Removed	Implement mitigation solutions for city facilities and conduct related studies, planning, and grant development work as necessary.
Laurel - 5	L-6	After flood events, the City of Laurel will evaluate whether to pursue funding to implement flood mitigation projects.	Prince George's County Department of Environment	Medium - High	In Progress	After the release of any Notices of Funding Opportunity or a Presidential Disaster Declaration, decide which mitigation projects will be included in upcoming grant applications.
Laurel - 6		Pursue participation in the FEMA Community Rating System to reduce the cost of National Flood Insurance Policy premiums.	Emergency Manager	High	Completed	Joined CRS program in April 2022.
		Emergency Services				
Laurel - 7		Continue to support regional drought response and Planning.	Prince George's County Department of Environment; Washington Suburban Sanitary Commission Emergency Manager	Medium	Removed	Included in City's capabilities.

2017 Action Number	2023 Action Number	Action	Action Lead	2017 Priority	2023 Action Update	Notes
Laurel - 8		Continue to support regional drought response and planning by continuing the City's commitment and participation with MWCOG and WSSC when drought awareness responses are activated. Examine appropriate water conservation measures for City office buildings.	Prince George's County Department of Environment; Washington Suburban Sanitary Commission Emergency Manager	High	Removed	Additional actions include implementing water conservation measures for City facilities.
Laurel - 9		The new notification procedures must be tested and exercised within the City of Laurel and Prince George's County to identify any shortfalls or procedures that need to be amended. Expanded floodplain areas must be addressed in relationship to areas effected by a release of water from the dams.	Emergency Manager	High	Removed	Included in City's capabilities.
		Education & Awareness				
Laurel - 10		Continue outreach efforts to promote recently completed bi-lingual Citizens Emergency Preparedness Guide	Emergency Manager; CERT volunteers	High	Completed	
Laurel - 11	L-12	Work with City closed circuit television network to produce seasonal hazard awareness and topical mitigation programming.	Emergency Manager; Department of Communications	Medium	In Progress	The City will continue to produce seasonal hazard awareness and topical mitigation programming.

Appendix F. 2023-2028 Mitigation Action Plans

Mitigation action plans were developed for each high-priority action. **Table 7** shows the action plan format, element descriptions, and possible inputs. **Appendix F.A** and **Appendix F.B** provide the action plans for Prince George's County and the City of Laurel, respectively. A list of all the 2023-2028 mitigation actions can be found in **Chapter 6** of the 2023 HMP.

Table 7. Mitigation action plan element descriptions and possible inputs

Action Number	*Action Description*
Mitigation Category	Prevention, property protection, natural resource protection, structural projects, emergency services, or education and awareness
Applicable Goal(s)	• Goal 1: Implement structural projects that mitigate the risks of natural hazards to people, infrastructure, and environmental assets while equitably distributing project benefits. • Goal 2: Integrate hazard mitigation into regular staff training and responsibilities to improve capabilities and ensure climate adaptation is adequately considered and addressed in county/city actions. • Goal 3: Increase public education and awareness of natural hazard risks to people and private property, and promote current and new opportunities to participate in mitigation planning. • Goal 4: Prevent future climate-related damages and losses to communities, critical facilities, and natural resources through ordinances, policies, and plans aligned with regional and state resilience and equity goals.
Hazard(s) Mitigated	Riverine flood, severe storm (flood-related), severe storm (wind-related), high wind, tornado, extreme heat, winter storm, hurricane/tropical storm, dam and levee failure, earthquake, extreme cold, sinkhole, wildfire, landslide, drought, coastal, flood, all hazards
Plan Integration	*Plan(s) that features the same or similar action, or a goal that the action supports*
Risk Reduction/ Benefits	• Very high: Significant losses avoided and/or significant benefits with consideration of STAPLEE factors • High: Numerous losses avoided and/or numerous benefits with consideration of STAPLEE factors • Moderate: Some losses avoided, some benefits with consideration of STAPLEE factors • Low: No losses avoided, no public benefits with consideration of STAPLEE factors
Action Lead	*The department or office responsible for ensuring the action is implemented*
Potential Funding Source(s)	County staff time

Implementation Timeframe	• Short-term: less than three years • Long-term: more than three years • Ongoing: continuous with no designated end date • Funding contingent: timeline is dependent on funding from a source outside of the jurisdiction
Priority	High, medium, low
Notes	*Additional action notes or details, if any*

A. Prince George's County Action Plans

Action PG-3	**Integrate mitigation plan requirements and actions into other appropriate planning mechanisms, such as comprehensive plans and capital improvement plans.**
Mitigation Category	Prevention
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	2023 Prince George's County Hazard Mitigation Plan; 2021 State of Maryland Hazard Mitigation Plan
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Maryland-National Capital Park and Planning Commission
Potential Funding Source(s)	County staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-6	**Prohibit all waivers to allow development in floodplains.**
Mitigation Category	Prevention; property protection; natural resource protection
Applicable Goal(s)	Goal 4

Hazard(s) Mitigated	Flooding; Severe Storm (flood-related); Coastal Flooding
Plan Integration	Plan Prince George's 2035 Approved General Plan; Climate Action Plan; Green Infrastructure Plan
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Department of Permitting, Inspections and Enforcement
Potential Funding Source(s)	County staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-7	**Revise Prince George's County Code of Ordinances to incorporate and require climate-resilient design, nature-based infrastructure, and climate-resilient practices. Adopt and enforce policies to require green infrastructure practices for new and existing properties, especially native plantings, rain gardens, green corridors, runoff retention, and other nature-based ways to reduce and naturally filter runoff on private and public properties.**
Mitigation Category	Prevention; property protection; natural resource protection
Applicable Goal(s)	Goal 1, Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	Green Infrastructure Plan; Climate Action Plan
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Planning Department
Potential Funding Source(s)	BRIC
Implementation Timeframe	Short-term
Priority	High

Notes	n/a

Action PG-8	**Office of the County Executive must introduce and support a County Council resolution requiring the County to integrate extreme weather and energy-efficiency criteria into building codes.**
Mitigation Category	Prevention; property protection
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	Climate Action Plan
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Department of Permitting, Inspections, and Enforcement
Potential Funding Source(s)	County staff time
Implementation Timeframe	Short-term
Priority	High
Notes	n/a

Action PG-10	**Avoid Future Development in Flood Inundation Areas Below Existing High-hazard Dams. Require that plan sets for subdivision proposals and permit applications to show the danger reach and inundation area and prohibit new construction in these areas.**
Mitigation Category	Prevention; property protection
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	Dam and Levee Failure
Plan Integration	2023 Prince George's County Hazard Mitigation Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits

Action Lead	Maryland-National Capital Park and Planning Commission, Planning Department
Potential Funding Source(s)	County staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-11	**Conduct Countywide Thermal Mapping of Tree Canopy Cover with Shade Study, and Aerial Utility Mapping exercises. Then conduct a neighborhood-level Heat Vulnerability Assessment. Address the identified gaps in the tree canopy through appropriate heat mitigation actions and projects.**
Mitigation Category	Prevention; emergency services
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	Extreme Heat
Plan Integration	2023 Prince George's County Hazard Mitigation Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Department of the Environment
Potential Funding Source(s)	County staff time
Implementation Timeframe	Short-term
Priority	High
Notes	n/a

Action PG-13	**Adopt the most recent published edition of the I-Codes (e.g., International Building Code, International Residential Code).**
Mitigation Category	Prevention; property protection

Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	n/a
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Department of Permitting, Inspections and Enforcement
Potential Funding Source(s)	County staff time
Implementation Timeframe	Short-term
Priority	High
Notes	n/a

Action PG-15	**Implement appropriate mitigation measures for hazard-vulnerable priority critical facilities.**
Mitigation Category	Prevention; property protection
Applicable Goal(s)	Goal 1, Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	Plan Prince George's 2035 Approved General Plan
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Department of Public Works and Transportation
Potential Funding Source(s)	BRIC, HMGP
Implementation Timeframe	Long-term
Priority	High
Notes	n/a

Action PG-18	**Implement proposed flood mitigation projects from the upcoming watershed study for the Collington Branch Stream. Develop a Memorandum of Agreement with the City of Laurel to inspect and clean the portion of the stream that runs through their jurisdiction.**
Mitigation Category	Prevention; property protection; structural projects
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	Flooding; Severe Storm (flood-related)
Plan Integration	Climate Action Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Department of the Environment
Potential Funding Source(s)	BRIC, FMA
Implementation Timeframe	Long-term
Priority	High
Notes	n/a

Action PG-23	**Align Economic Development Plans with the Climate Action Plan, preserving existing agricultural land and natural areas and promoting development in already-developed areas near high-capacity transit. Perform an economic development and climate adaptation analysis of existing agricultural land and natural areas that are crucial to climate resilience on a sub watershed basis. Identify areas of open space for preservation and optimum use for climate resilience.**
Mitigation Category	Prevention; property protection; natural resource protection
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	Climate Action Plan; Plan Prince George's 2035 Approved General Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits

Action Lead	Department of the Environment
Potential Funding Source(s)	BRIC
Implementation Timeframe	Short-term
Priority	High
Notes	n/a

Action PG-25	**Conduct a Countywide Flood Assessment (including pluvial mapping) to understand the impact of updated rainfall intensity estimates per the latest version of NOAA Atlas 14, recent elevation data, and stormwater controls. Identify priority areas for mitigation projects and update the stormwater ordinance as needed.**
Mitigation Category	Prevention
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	Flooding; Severe Storm (flood-related)
Plan Integration	n/a
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Department of the Environment
Potential Funding Source(s)	FMA; BRIC
Implementation Timeframe	Ongoing; currently, several watershed scale studies are being conducted. In following years, other watersheds should be included
Priority	High
Notes	n/a

Action PG-26	**Develop structural and action plans with inundation mapping for all High Hazard Potential Dams with poor conditions and no EAPs. Develop structural and action plans for high-risk pump stations, levees, and other flood control infrastructure. Ensure a process for supporting affected "downflow" communities that a dam failure hazard would inundate.**

Mitigation Category	Prevention; property protection; emergency services
Applicable Goal(s)	Goal 3, Goal 4
Hazard(s) Mitigated	Dam and Levee Failure
Plan Integration	n/a
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Department of Public Works and Transportation
Potential Funding Source(s)	HHPD
Implementation Timeframe	Long-term
Priority	High
Notes	n/a

Action PG-27	**Implement stormwater management projects, such as drainage retrofits, to address pluvial/stormwater flooding in community-identified areas. Prioritize restoration projects from the Watershed Implementation Plan (WIP) that will support the Plan 2035 future land use pattern. Downtowns should be given priority for stormwater retrofits, especially environmental site design practices. Land acquisition or ecological restoration activities should be targeted to stronghold watersheds.**
Mitigation Category	Prevention; property protection; natural resource protection; structural projects
Applicable Goal(s)	Goal 1, Goal 4
Hazard(s) Mitigated	Severe Storm (flood-related)
Plan Integration	Plan Prince George's 2035 Approved General Plan
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Department of Public Works and Transportation
Potential Funding Source(s)	BRIC; HMGP

Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-34	**Assess Climate Projections and Consequences of Dam and Levee Failure. Analyze baseline conditions against local/regional climate projections to highlight future vulnerabilities and risk. Model hydrological loads to the consequences of failure under present and future conditions and jointly evaluate dams, levees, and interdependent components. Incorporate Findings in Emergency Action Plans.**
Mitigation Category	Prevention; property protection
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	Dam and Levee Failure
Plan Integration	Climate Action Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Department of Public Works & Transportation
Potential Funding Source(s)	HHPD
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-35	**Continue annual flood risk awareness and mitigation mailing to all owners of high-risk properties in the SFHA, including RL/SRL structures. Provide additional outreach in response to new/upcoming grant opportunities and funding.**
Mitigation Category	Emergency services; education and awareness
Applicable Goal(s)	Goal 3, Goal 4

Hazard(s) Mitigated	Flooding
Plan Integration	2023 Prince George's County Hazard Mitigation Plan; 2021 Maryland State Hazard Mitigation Plan
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Office of Homeland Security
Potential Funding Source(s)	County staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-36	**Work with County municipalities and/or develop public-private partnerships to provide hazard awareness messaging and information on hazard preparedness and mitigation in secondary languages for promotion using local newspapers, municipal websites, social media, etc.**
Mitigation Category	Prevention; education and awareness
Applicable Goal(s)	Goal 2, Goal 3, Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	2023 Prince George's County Hazard Mitigation Plan; 2021 Maryland State Hazard Mitigation Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Department of Community Relations
Potential Funding Source(s)	BRIC
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action PG-42	**Send a digital copy of the 2023 Hazard Mitigation Plan to all County and City staff, as well as all homeowner associations within the planning area.**
Mitigation Category	Education and awareness
Applicable Goal(s)	Goal 2, Goal 3, Goal 4
Hazard(s) Mitigated	All hazards
Plan Integration	2023 Prince George's County Hazard Mitigation Plan
Risk Reduction/ Benefits	Moderate: Some losses avoided, some benefits
Action Lead	Office of Homeland Security
Potential Funding Source(s)	County staff time
Implementation Timeframe	Short-term
Priority	High
Notes	n/a

B. City of Laurel Action Plans

Action L-2	**Integrate mitigation plan requirements and actions into other appropriate planning mechanisms, such as comprehensive plans and capital improvement plans.**
Mitigation Category	Prevention
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All Hazards
Plan Integration	2023 Prince George's County Hazard Mitigation Plan; 2021 State of Maryland Hazard Mitigation Plan
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Office of Homeland Security
Potential Funding Source(s)	City staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action L-3	**Adopt the most recent published edition of the I-Codes (e.g., International Building Code, International Residential Code).**
Mitigation Category	Prevention; property protection
Applicable Goal(s)	Goal 4
Hazard(s) Mitigated	All Hazards
Plan Integration	n/a
Risk Reduction/ Benefits	Very high: Significant losses avoided and/or significant benefits
Action Lead	Department of the Fire Marshal and Permit Services
Potential Funding Source(s)	City staff time

Implementation Timeframe	Short-term
Priority	High
Notes	n/a

Action L-6	**After flood events, the City of Laurel will evaluate whether to pursue funding to implement flood mitigation projects.**
Mitigation Category	Prevention; property protection; structural projects
Applicable Goal(s)	Goal 1, Goal 4
Hazard(s) Mitigated	Flooding; Severe Storm (Flood-related)
Plan Integration	n/a
Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Office of Homeland Security
Potential Funding Source(s)	City staff time
Implementation Timeframe	Ongoing
Priority	High
Notes	n/a

Action L-10	**Implement stormwater management projects, such as drainage retrofits, to address pluvial/stormwater flooding in community-identified areas.**
Mitigation Category	Prevention; property protection; structural projects
Applicable Goal(s)	Goal 1, Goal 4
Hazard(s) Mitigated	Flooding; Severe Storm (Flood-related)
Plan Integration	2023 Prince George's County Hazard Mitigation Plan; 2021 State of Maryland Hazard Mitigation Plan; Prince George's County Green Infrastructure Plan

Risk Reduction/ Benefits	High: Numerous losses avoided and/or numerous benefits
Action Lead	Department of Public Works
Potential Funding Source(s)	City staff budget; BRIC
Implementation Timeframe	Ongoing
Priority	High
Notes	Notable stormwater flooding issues to address include the 19 Main Street drain, 1 Main Street drain, 807 Karen Court (near Police Department), 516 9th Street, and MARC Station parking lot

Appendix G. Record of Changes

General Changes:

- The reference chapter was removed and replaced with footnotes throughout all the chapters for easier and quicker references for the reader.
- The City of Laurel Plan was disbanded and incorporated into the "Planning Process and Community Profile" and "Capability Assessment" chapters as appropriate for consistency with the way the "Hazard Identification and Risk Assessment" and "Mitigation Strategy" chapters are structured.

Table 8. Record of changes made to the 2017 Hazard Mitigation Plan during the 2023 Hazard Mitigation Plan update

2023 Plan Chapter	Section	Change Description
Executive Summary	A. Planning Context	Updated
	B. Planning Committee Members	Updated with new Planning Committee Members
	C. Hazard Identification and Risk Assessment	Updated criteria for hazard ranking and included 2023 Priority Rankings.
	D. Capability Assessment	Updated summary
	E. Mitigation Strategy	Updated with four new goals
	F. Plan Implementation	Updated
	G. Conclusion	Updated
Chapter 1. Introduction	A. Purpose	Updated
	B. Planning Context	Added new State and County-level hazard mitigation and climate planning sections
	C. Plan Organization	Updated with new chapter organization
	D. Acknowledgements	Updated

2023 Plan Chapter	Section	Change Description
Chapter 2. Planning Process	A. Planning Process	Updated with description of 2023 planning process
	B. The Mitigation Advisory Committee	Updated
	C. Public Participation and Stakeholder Engagement	Updated participation description and public survey results
	D. Community Lifelines	New section. Incorporated FEMA Community Lifeline and BRIC information
Chapter 3. Community Profile	A. Physiography	Updated
	B. Hydrology	Updated
	C. Climate	Updated
	D. Land-use and Development Trends	Updated
	E. Population	Updated with current statistics
	F. Business and Labor	Updated
	G. Future Growth and Development	Updated
	H. Transportation	Updated
	I. Infrastructure	Updated
	J. City of Laurel	Updated
Hazard Identification and Risk Assessment	A. Introduction	Updated summary of each hazard section
	B. Riverine Flood	Updated hazard history, maps, and used Hazus to perform loss estimate in Vulnerability Assessment. Added Future Development and Social Vulnerability sections.
	C. Severe Storm (Flood-related)	Updated hazard history, incorporated climate change into Probability of Future Events section.

2023 Plan Chapter	Section	Change Description
	D. Severe Storm (Wind-related)	Updated hazard history, incorporated climate change into Probability of Future Events section.
	E. High Wind	Updated hazard history, incorporated climate change into Probability of Future Events section.
	F. Tornado	Updated hazard history, incorporated climate change into Probability of Future Events section. Used FEMA National Risk Index for Tornadoes map viewer to determine County-wide tornado risk.
	G. Extreme Heat	Updated hazard history, maps, incorporated climate change and social vulnerability into section. Added Future Development section.
	H. Winter Storm	Updated hazard history, incorporated climate change into Probability of Future Events section.
	I. Hurricane/Tropical Storm	Updated hazard history, maps, and used Hazus to perform loss estimate in Vulnerability Assessment section. Added Social Vulnerability section.
	J. Dam and Levee Failure	Added maps of inundation zones and levee extents. Incorporated climate change impacts and created new future development section.
	K. Earthquake	Updated hazard history and used Hazus to perform loss estimate in Vulnerability Assessment section.
	L. Extreme Cold	Updated hazard history, incorporated climate change into Probability of Future Events section.
	M. Sinkhole	Updated hazard history, created new map of sinkhole complaints from the past 5 years, incorporated climate change into Probability of Future Events section.
	N. Wildfire	Updated hazard history, maps, incorporated climate change impacts into section. Added Future Development and Social Vulnerability section.
	O. Landslide	Updated hazard history, added photos from the County, incorporated climate change into Probability of Future Events section.

2023 Plan Chapter	Section	Change Description
	P. Drought	Updated hazard history, incorporated climate change into Probability of Future Events section.
	Q. Coastal Flood	Updated hazard history, maps, and used Hazus to perform loss estimate in Vulnerability Assessment section. Incorporated climate change impacts into Probability of Future Events section.
Capability Assessment	A. Prince George's County Capability Assessment	Updated
	B. City of Laurel Capability Assessment	Updated
	C. Summary of Existing Mitigation Activities	Updated
	D. Plan Assessment	New section
Mitigation Strategy	A. Introduction	Updated
	B. Mitigation Goals	Updated with new mitigation goals
	C. Mitigation Action Selection	Updated
	D. 2023-2028 Mitigation Actions	Updated with new mitigation actions
	E. Mitigation Actions Summary	Updated
Plan Implementation and Maintenance	A. Distribution	Updated
	B. Implementation and Maintenance	Added new Technical Assistance and Funding Opportunities section
	C. Monitoring and Reporting Process	Updated
	D. Evaluation and Revisions	Updated
	E. Future Improvements	Updated

Appendix H. Adoption Resolutions

Contents:

1. Sample Adoption Resolution
2. Prince George's County Adoption Resolution
3. City of Laurel Adoption Resolution

A. Sample Adoption Resolution

Resolution #

JURISDICTION

A RESOLUTION OF THE JURISDICTION ADOPTING THE 2023 PRINCE GEORGE'S COUNTY AND THE CITY OF LAUREL HAZARD MITIGATION PLAN

WHEREAS the (GOVERNING BODY) recognizes the threat that natural hazards pose to people and property within (JURISDICTION); and

WHEREAS the (JURISDICTION) has prepared a multi-hazard mitigation plan, hereby known as Prince George's County & City of Laurel Hazard Mitigation Plan, 2023, in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS Prince George's County & City of Laurel Hazard Mitigation Plan, 2023, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (JURISDICTION) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (GOVERNING BODY) demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Prince George's County & City of Laurel Hazard Mitigation Plan, 2023.

NOW THEREFORE, BE IT RESOLVED BY THE (JURISDICTION), MARYLAND, THAT:

Section 1. In accordance with (LOCAL RULE FOR ADOPTING RESOLUTIONS), the (GOVERNING BODY) adopts the Prince George's County & City of Laurel Hazard Mitigation Plan, 2023. While content related to (JURISDICTION) may require revisions to meet the Federal Emergency Management Agency's plan approval requirements, changes occurring after adoption will not require (JURISDICTION) to re-adopt any further iterations of the plan associated with this update. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

ADOPTED by a vote of # in favor and # against, and # abstaining, this # day of MONTH, 2023.

APPROVED:	ATTEST:
_____	_____
Print jurisdiction head of the governing body name	Print jurisdiction representative name

B. Prince George's County Adoption Resolution

To be added after adoption

C. City of Laurel Adoption Resolution

To be added after public review

Appendix I. FEMA Requirements

Contents:

1. FEMA Local Plan Review Tool
2. FEMA Formal Approval Letter
3. Annual Progress Report Template

A. FEMA Local Plan Review Tool

LOCAL MITIGATION PLAN REVIEW TOOL +HHPD

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: Prince George's County, MD City of Laurel, MD	**Title of Plan:** Prince George's County & City of Laurel Hazard Mitigation Plan	**Date of Plan:** 2023
Local Point of Contact: Ehsan Bahador **Title:** MPS, Emergency Management Specialist **Agency:** Prince George's County Office of Homeland Security	**Address:** 7915 Anchor Street Landover, MD 20785	
Phone Number: Office: 301-324-4342 Cell: 240-393-1657	**E-Mail:** EBahador@co.pg.md.us	

State Reviewer:	**Title:**	**Date:**
Jesse Delph Marcia Barben Aliyah Russell	Senior Hazard Mitigation Project Officer Hazard Mitigation Project Officer Hazard Mitigation Project Officer	

FEMA Reviewer:	**Title:**	**Date:**
Lorena Reyes	Community Planner	3/21/2023
Date Received in FEMA Region *(insert #)*	3/9/2023	
Plan Not Approved		
Plan Approvable Pending Adoption	**APA status**	
Plan Approved		

SECTION 1:
REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST **Regulation** (44 CFR § 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))		X	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))		X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))		X	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))		X	
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))		X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))		X	

1. REGULATION CHECKLIST **Regulation** (44 CFR § 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT A			

Recommended revisions:

- Table 7: Mitigation Advisory Committee Meeting Summary and Attendance - According to table 7 Christina Cornwall provided input to the survey but she is not listed as a responder in the survey results (Pg. 73 - Appendices). Brian K Lee from City of Laurel is listed as a survey responder. Christina does appear to have attended the Mitigation Strategy Workshop according to meeting notes, which is not listed in Table 7.
  - *Addressed March 2023*
- Table 6: Mitigation Advisory Committee Meetings - Need to update the "summary" column for the Feb 1, 2023, Plan Draft Review Meeting. Currently says TBD with highlight. Same for Table 8: Public Meetings the Feb 2, 2023, Public Meeting #2 summary, since both meetings have taken place and meeting notes are in the appendix.
  - *Addressed March 2023*
- A2(a) states the plan must identify all stakeholders involved or given an opportunity to be involved in the planning process. At a minimum, stakeholders must include 1) Local and regional 2) Agencies that have authority to regulate 3) Neighboring communities. A2(b) further states, the plan must provide the agency or organization represented and the person's position or title within the agency. Currently, the plan states that Adjacent counties of Montgomery, Howard, Charles, Calvert, Anne Arundel participated but I couldn't find documentation with position/title etc. of representatives invited. The plan met the requirement by documenting the participation of the University which can be considered a "neighboring community" however, under the newly released guidance there will be a distinction between neighboring communities and universities, and both will be required.
  - *Addressed March 2023*

Commented [PJ1]: Christina Cornwall is listed as a responder in the City of Laurel survey results under the name "Chrissy" Cornwall (pg. 129 in Appendices). Brian Lee responded to the Prince George's County survey (pg. 72 in Appendices).

Chrissy attended the Mitigation Strategy Workshop, which is now reflected in table 7 of the main plan.

Commented [PJ2]: Done; See Chapter 2 Section B for Table 6 and Chapter 2 Section C.1 for Table 8

Commented [PJ3]: Invitations to participate in the Public Draft Plan Review meeting were sent to the neighboring jurisdictions. The email is seen on pg. 263 of the Appendices. Text was added to clarify it was sent to the emergency managers on pg. 37 of the main plan.

ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))		X	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))		X	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))		X	
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))		X	

1. REGULATION CHECKLIST **Regulation** (44 CFR § 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT B: **Recommended revisions:** • Dam Failure Hazard (Moderate risk score): Page 182 of the HMP states the county owns 6 high hazard dams. These 6 county-owned dams include: Laurel Lakes, Indian Creek #2, Indian Creek #3, Lake Arbor, Largo Town Center, and Heritage Glen dams. However, *Table 84: Dams located in in Prince George's County and City of Laurel* identifies Heritage Glen Dam and Largo Town Center Dam as Significant hazard potential, not high. o *Addressed March 2023* • Figure 34: Prince George's County Social Vulnerability and FEMA Flood Zones - The reds and yellows/beige are similar and can make it hard to differentiate in the map. Recommend using vertical lines for one of the categories and colors for the other. • High Wind Hazard (High risk score): Pg. 143 of the plan identifies non-native English speakers, low-income households and the homeless as populations at risk. The community profile chapter, specifically the Census data integrated, uses similar but different terminology – "Foreign born persons" or "Language other than English spoke…" and "Persons in poverty" with respective population percentages. I recommend aligning terminology from the vulnerability narrative to the Census data so that the narrative is backed by information in the plan. o *Addressed March 2023* • The plan includes Substantial Damage claims data but doesn't describe how each community implements the substantial damage provisions of their floodplain management regulations after an event. This is something that will be required when new guidance goes in effect April 19, 2023. This is important especially given that more than half (64%) of survey respondents said they would repair or rebuild their property in the same location if a disaster substantially damaged their home (pg. 36- HMP). o *Addressed March 2023*			
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6©(3))		X	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6©(3)(ii))		X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6©(3)(i))		X	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6©(3)(ii))		X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6©(3)(iv)); (Requirement §201.6©(3)(iii))		X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6©(4)(ii))		X	

Commented [PJ4]: Done; see Chapter 4 section J.2.a

Commented [PJ5]: done; see Chapter 4 section E.5

Commented [PJ6]: Addressed: Refer to Capability Assessment, sections A.5.a and B.3.h.2

A-4 Local Mitigation Plan Review Tool (+HHPD v. 060721)

1. REGULATION CHECKLIST **Regulation** (44 CFR § 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT C: **Recommended revisions:** • I strongly encourage that any projects submitted under BRIC/FMA or HMGP DR-4491 be included explicitly in the plan. While the plan currently does include general actions that support restoration projects (PG-27), critical infrastructure protection (L-4), warning systems (PG-14) there aren't specific mitigation actions that identify areas of focus such as Fort Washington neighborhood or 75th Avenue, and no actions explicitly identify generators to mitigate or protect critical facilities. ○ *Addressed March 2023* HMGP-4491-DR-MD-0009: Prince George's County Preparation of Flood Warning System SOP. 5% initiative project. The purpose of the proposed activity is to develop a standard operating procedure (SOP) for Prince George's County's two flood warning systems which enable the County to monitor real-time flood conditions and provide information to relevant authorities and impacted communities. HMGP-4491-DR-MD-0012: City of Laurel, Prince George's County Emergency Back-Up Generators for Critical Facilities 6. Regular project. Upsizing of 5 and obtaining 1 generator at 6 critical facilities. Buildings include: City/Municipal Hall, Laurel Police Department, Park and Recreation Maintenance Facility, Laurel Armory Facility, City Services Building, and Public Works Facility. HMGP-4491-DR-MD-0017: Prince George's County Town of Eagle Harbor Shoreline Restoration - Phased. Regular project. The living shoreline component of this Project will prevent shoreline erosion, increase resilience against storms, improve water quality, and protect properties and infrastructure along the shoreline. HMGP-4491-DR-MD-0016: Prince George's Residential Flood Mitigation 75th Ave (phased project). HMGP-4491-DR-MD-0018: Fort Washington Neighborhood Flood Risk Mitigation Project (Phased project).			

Commented [PJ7]: Added after the Mitigation Strategy table, see Chapter 6, section D.3.

ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)			
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))		X	
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))		X	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))		X	
ELEMENT D: REQUIRED REVISIONS			

ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6©(5))		Forthcoming	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6©(5))		Forthcoming	

Local Mitigation Plan Review Tool (+HHPD v. 060721) A-5

1. REGULATION CHECKLIST **Regulation** (44 CFR § 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT E: REQUIRED REVISIONS			
ALL DAM RISKS – ELIGIBLE HIGH HAZARD POTENTIAL DAMS			
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for eligible high hazard potential dams?		X	
HHPD2. Did Element B3 (risk assessment) address eligible high hazard potential dams in the risk assessment?		X	
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from eligible high hazard potential dams that pose an unacceptable risk to the public?		X	
HHPD4. Did Elements C4-C5 (mitigation actions) prioritize mitigation actions to reduce vulnerabilities from eligible high hazard potential dams?		X	
REQUIRED REVISIONS **Recommended Revisions:** • HHPD2(b): While the plan documents the limitations as a lack of data (inundation mapping) it doesn't describe why that is or what challenges exist to obtain or develop the data needed to complete a risk assessment for the other dams.			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2:
PLAN ASSESSMENT

Plan Strengths

Planning Process:

- The Hazard Mitigation Plan's (HMP) and appendices are well-organized.
- Kudos on including an executive summary.
- The specific meetings and engagements that each Mitigation Advisory Committee member supported are clearly depicted in Table 7:Mitigation Advisory Committee Meeting Summary and Attendance.

Risk Assessment:

- In addition to the FEMA flood maps, the plan integrates the information from the Riverine Climate Ready Action Boundary Inundated Zone created by Maryland Dept. of Planning in 2021 which expands the FEMA floodplain by vertically adding 3 feet of water on top of the SFHA elevations and pushing the volume of water out horizontally. The HMP could benefit from describing the methodology and reasoning for the expansion.
- The plan does a good job describing the effects of future conditions, including climate change, to their probability projections. This is something that will be required when new guidance goes in effect April 19, 2023.
- The plan does a good job analyzing data and findings from the *Fourth National Climate Assessment* (NCA4), the CDC Social Vulnerability Index 2020, FEMA's National Risk Index, and the Climate Mapping for Resilience and Adaptation Assessment Tool.
- In addition, the plan includes a risk assessment summary at the end of the chapter which is very helpful, and it includes Table 123. 2023 Hazard Risk Index Score Results & Overall Ranking.

Mitigation Strategy:

- The plan goes above and beyond current requirement and includes a good description of existing building codes, land use, development ordinances, and regulations. This is something that will be required when new guidance goes in effect April 19, 2023.

Areas of Improvement

Planning Process:

- For CRS communities seeking to use their HMP to meet elements that will also earn CRS credits, the planning committee must meet at least 5 times at key steps. Each community must have 2 staff representatives on the committee and at least half of all committee representatives must attend all meetings.
- Strongly encourage all 27 incorporated municipalities to participate in the annual planning meetings and pursue full participation in the next plan update. Although the NFIP only recognizes local governments with land use authority, the FEMA Mitigation Planning Program encourages all local governments to participate in the planning process, seek plan approval and adopt the plan. Our guidance, in accordance with 44 CFR 201.2, defines local governments as "any county, municipality, city, town, township, public authority, school district, special district,

intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity."

- *Addressed March 2023*

Risk Assessment:

- The risk assessment includes an analysis of Repetitive Loss structures within the planning area using the NFIP definition. It may be helpful, while not required, to also do an analysis of the RL properties using the Flood Mitigation Assistance definition since that can better inform the planning team on how to develop a project application and what grant funding to pursue.

Mitigation Strategy:

- The plan includes Substantial Damage claims data but doesn't describe how each community implements the substantial damage provisions of their floodplain management regulations after an event. This is something that will be required when new guidance goes in effect April 19, 2023. This is important especially given that more than half (64%) of survey respondents said they would repair or rebuild their property in the same location if a disaster substantially damaged their home (pg. 36- HMP).
  - *Addressed March 2023*

Resources for Implementing Your Approved Plan

- *FEMA: National Risk Index (NRI) for Natural Hazards*
- *FEMA: Resilience Analysis and Planning Tool (RAPT)*
- *FEMA: Mitigation Action Portfolio*
- *FEMA: Community Lifelines | FEMA.gov.*
- *FEMA: Region 3 HM Planning Resources*
- *FEMA: Region 3 Conducting Annual Hazard Mitigation Plan Reviews Resource*
- *FEMA: Region 3 High Hazard Potential Dams State and Local Mitigation Planning Tips Resource*
  - ***Note:** The latest version will be shared before or following the plan review discussion/technical assistance call.*
- *FEMA: Region 3 Checking In On The NFIP Resource*
  - ***Note:** This resource includes updated NFIP survey sheets.*
- *FEMA: Guides to Expanding Mitigation*
- *FEMA: Protect Your Home from Flooding, Low Cost Project You Can Do Yourself Resource*
  - ***Note:** This resource will be shared before or following the plan review discussion/technical assistance call.*
- *Resilient Nation Partnership Network, NOAA, & FEMA: Building Alliances for Equitable Resilience Resource (April 2021)*

Commented [PJ8]: Added that all 27 incorporated municipalities within PG County will be invited and encouraged to attend annual planning meetings (see Chapter 7, section C)

Commented [PJ9]: Addressed: Refer to Capability Assessment, sections A.5.a and B.3.h.2

- *FEMA: Protect Your Home from Flooding, Low Cost Project You Can Do Yourself Resource*

SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township / village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N) *=HHPD					
							A. Planning Process*	B. Hazard Identification & Risk Assessment*	C. Mitigation Strategy*	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	Prince George's County	County					X	X	X	X		
2	City of Laurel	City					X	X	X	X		
3												
4												
5												
6												
7												

B. FEMA Formal Approval Letter

To be added once completed

C. Annual Progress Report Template

Prince George's County and the City of Laurel Hazard Mitigation Plan
Annual Progress Report

Reporting Period

The reporting period for this progress report is _____(date) through _____(date).

Background

This is an annual update of the Prince George's County and the City of Laurel Hazard Mitigation Plan. This update also meets annual certification requirements for Prince George's County floodplain management and Community Rating System (CRS) program.

Prince George's County and the City of Laurel developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the County, City, and participating stakeholders and partners organized resources, assessed risks from natural hazards within the County and City, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, the County and City maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act.

The plan can be viewed online at: _____

Summary Overview of the Plan's Progress

The performance period for the Local Hazard Mitigation Plan became effective on _____, 2023, with the final approval of the plan by FEMA. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before _____, 2028. As of this reporting period, the performance period for this plan is considered to be ____% complete. The Hazard Mitigation Plan has targeted 43 hazard mitigation actions for Prince George's County and 14 hazard mitigation actions for the City of Laurel to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- ___ out of ___ actions (___%) reported ongoing action toward completion.
- ___ out of ___ actions (___%) were reported as being complete.
- ___ out of ___ actions (___%) reported no action taken.

Purpose

The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of the planning partners. This report discusses the following:

- Natural hazard events that have occurred within the last year
- Changes in risk exposure within the planning area

- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement

Mitigation Advisory Committee

The Mitigation Advisory Committee, comprised of County and City staff, planning partners, and stakeholders within the planning area, reviewed and approved this progress report at its annual meeting held on _____, 202__. It was determined through the plan's development process that the Mitigation Advisory Committee would remain in service to oversee maintenance of the plan. At a minimum, the Mitigation Advisory Committee will provide technical review and oversight on the development of the annual progress report. It is anticipated that there will be turnover in the membership annually, which will be documented in the progress reports. For this reporting period, the Mitigation Advisory Committee membership present at the meeting is as indicated in **Table 1**.

Table 1: Mitigation Advisory Committee Members Present

Name	Jurisdiction/ Category	Department	Title

Natural Hazard Events within the Planning Area

During the reporting period, there were __ natural hazard events in the planning area that had a measurable impact on people or property. A summary of these events is as follows:

Changes in Risk Exposure in the Planning Area

(Insert brief overview of any natural hazard event in the planning area that changed the probability of occurrence or ranking of risk for the hazards addressed in the hazard mitigation plan)

Mitigation Success Stories

(Insert brief overview of mitigation accomplishments during the reporting period)

Review of Mitigation Actions

Table 2 and **Table 3** review the mitigation actions from the Hazard Mitigation Plan for Prince George's County and the City of Laurel, reporting the status of each action. Reviewers of this report should refer to the Hazard Mitigation Plan for more detailed descriptions of each action and the prioritization process.

- Plan 2035 Prince George's Elements integrated policies are shown in **orange**.
- Climate Action Plan Priority Recommendations are shown in **green**.

Address the following in the "Comments" column of the following table:

- Was any element of the action carried out during the reporting period?
- If no action was completed, why?
- Is the timeline for implementation for the action still appropriate?
- If the action was completed, does it need to be changed or removed from the action plan?

Table 2: Prince George's County 2023-2028 Mitigation Actions Status Report

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	Prevention					
PG-1	Partner with federal agencies, the state, and Non-governmental Organizations to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit cost analyses for the County and municipalities.	Office of Homeland Security	Ongoing	Medium		
PG-2	Using the best available data, check the locations of HazMat sites, National Pollutant Discharge Elimination System sites, and other land uses; if found to be in flood hazard areas, communicate with the owner/handler of hazardous materials and known pollutants	Department of Environment	Short-term	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	regarding risk and appropriate response and protection measures.					
PG-3	Integrate mitigation plan requirements and actions into other appropriate planning mechanisms, such as comprehensive plans and capital improvement plans.	M-NCPPC	Ongoing	High		
PG-4	Collect flood depth information to support a grant to provide elevation certificates in areas newly included in the Special Flood Hazard Area or to those experiencing flooding issues to support Letter of Map Amendments (LOMA) or NFIP premium reductions.	Office of Homeland Security	Funding contingent	Medium		
PG-5	Expand codes and standards enforcement, such as for existing land use regulations and policies.	Department of Permitting, Inspections and Enforcement	Ongoing	Medium		
PG-6	Prohibit all waivers to allow development in floodplains.	Department of Permitting, Inspections and Enforcement	Ongoing	High		
PG-7	Revise Prince George's County Code of Ordinances to incorporate and require climate-resilient design, nature-based infrastructure, and climate-resilient practices. Adopt and enforce policies to require green infrastructure practices for new and existing properties, especially native plantings, rain gardens, green corridors, runoff	Maryland-National Capital Park and Planning Commission,	Short-term	High		

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Annual Hazard Mitigation Plan Progress Report

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	retention, and other nature-based ways to reduce and naturally filter runoff on private and public properties.	Planning Department				
PG-8	Office of the County Executive must introduce and support a County Council resolution requiring the County to integrate extreme weather and energy-efficiency criteria into building codes.	Department of Permitting, Inspections, and Enforcement	Short-term	High		
PG-9	Require County Stormwater Management (SWM) Standards to Incorporate Projected Climate Change Impacts by using approved downscaled and up-to-date climate impact information to reevaluate peak rainfall estimates and future design storm profiles. Evaluate SWM standards using this criterion at least every three (3) years. Require all upgrades of County storm drain systems and Capital Improvement Project roadway, bridge, culvert and stormwater management repair or renovation projects to meet these updated climate-resilient design criteria.	Department of Public Works and Transportation, Stormwater Management Division	Long-term	Medium		
PG-10	Avoid Future Development in Flood Inundation Areas Below Existing High-hazard Potential Dams. Require that plan sets for subdivision proposals and permit applications to show the danger reach and inundation area and prohibit new construction in these areas.	Maryland-National Capital Park and Planning Commission, Planning Department	Ongoing	High		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
PG-11	Conduct Countywide Thermal Mapping of Tree Canopy Cover with Shade Study, and Aerial Utility Mapping exercises. Then conduct a neighborhood-level Heat Vulnerability Assessment. Address the identified gaps in the tree canopy through appropriate heat mitigation actions and projects.	Department of the Environment	Short-term	High		
PG-12	Conduct a study on the feasibility of using climate-smart building materials in mitigation projects and normal County/City construction projects to mitigate impacts from extreme temperatures and rainfall. Examples include those listed on the Maryland Department of the Environment's "Alternative/Innovative Technology List of Approved Practices." Once complete, develop a process that promotes the use of these materials wherever feasible.	Department of the Environment	Long-term	Medium		
PG-13	Adopt the most recent published edition of the I-Codes (e.g., International Building Code, International Residential Code).	Department of Permitting, Inspections and Enforcement	Short-term	High		
	Property Protection					
PG-14	Support mitigation projects that will result in the protection of public or private property from natural hazards. Eligible projects include but are not limited to: 1. acquisition of hazard-prone property or structures 2. Elevation of flood-prone structures 3. Minor structural flood control projects 4. Relocation of structures from hazard-	Office of Homeland Security	Ongoing	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	prone areas 5. Retrofitting of existing buildings, facilities, and infrastructure 6. Retrofitting of existing buildings and facilities for shelters 7. Critical infrastructure protection measures 8. Stormwater management improvements 9. Advanced warning systems and hazard gauging systems (weather radios, reverse-911, stream gauges, I-flows) 10. Targeted hazard education 11. wastewater and water supply system hardening and mitigation					
PG-15	Implement appropriate mitigation measures for hazard-vulnerable priority critical facilities	Department of Public Works and Transportation	Long-term	High		
	Natural Resource Protection					
PG-16	Use the Watershed Implementation Plan to prioritize stabilization projects, especially if funding from outside resources is available for the mitigation of environmental impacts.	Department of the Environment	Ongoing	Medium		
PG-17	Coordinate with Pepco, Baltimore Gas and Electric, and any other utility companies (as appropriate) to schedule and perform regular tree trimming to mitigate the risk of power outages during windstorms. Maintenance should be conducted to retain a healthy tree canopy, ensure trees' longevity, and decrease the risk of power outages. Prioritize socially vulnerable neighborhoods/ populations first and maintain old-growth trees with large canopies to	Department of Public Works and Transportation	Ongoing	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	encourage tree retention for extreme heat mitigation. Develop mutual aid with the City of Laurel to provide limited resources and personnel to assist in trimming ang tree control as needed.					
PG-18	Implement proposed flood mitigation projects from the upcoming watershed study for the Collington Branch Stream. Develop a Memorandum of Agreement with the City of Laurel to inspect and clean the portion of the stream that runs through their jurisdiction.	Department of the Environment	Long-term	High		
PG-19	Conduct a study to determine the feasibility of creating a stormwater park/greenway (or another watershed- or landscape-scale flood risk reduction project) that will improve natural floodplain functions in areas of high risk.	M-NCPPC	Short-term	Medium		
PG- 20	Develop a program to utilize vacant land (both publicly and privately owned) for stormwater management. Acquire land to serve the dual purpose of green infrastructure/ stormwater infiltration and recreational/open space.	Maryland-National Capital Park and Planning Commission, Planning Department	Ongoing	Medium		
PG-21	Use conservation subdivisions (or other site planning and landscape conservation tools) when developing in Established Communities near Rural and Agricultural Areas to cluster development, transition density, and encourage the preservation of green infrastructure	Maryland-National Capital Park and Planning Commission,	Ongoing	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	corridors, as defined by the County's Green Infrastructure Plan.	Planning Department				
PG-22	To preserve environmentally sensitive land and to encourage development in the Regional Transit Districts, evaluate a transfer of development rights program, density exchanges, or purchase of development rights program for the Rural and Agricultural Areas. Explore opportunities to transfer development rights within areas and to coordinate with the Watershed Implementation Plan and Maryland Accounting for Growth Policy	Department of the Environment	Ongoing	Low		
PG-23	Align Economic Development Plans with the Climate Action Plan, preserving existing agricultural land and natural areas and promoting development in already-developed areas near high-capacity transit. Perform an economic development and climate adaptation analysis of existing agricultural land and natural areas that are crucial to climate resilience on a subwatershed basis. Identify areas of open space for preservation and optimum use for climate resilience.	Department of the Environment	Short-term	High		
	Structural Projects					
PG-24	Create metrics to track routine stormwater maintenance and monitor how the work is	Department of Public Works	Ongoing	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	increasing capacity and where additional capacity may be needed through retrofits.	and Transportation				
PG-25	Conduct a Countywide Flood Assessment (including pluvial mapping) to understand the impact of updated rainfall intensity estimates per the latest version of NOAA Atlas 14, recent elevation data, and stormwater controls. Identify priority areas for mitigation projects and update the stormwater ordinance as needed.	Department of the Environment	Ongoing	High		
PG-26	Develop structural and action plans with inundation mapping for all High Hazard Potential Dams with poor conditions and no Emergency Action Plans. Develop structural and action plans for high-risk pump stations, levees, and other flood control infrastructure. Ensure a process for supporting affected "downflow" communities that a dam failure hazard would inundate.	Department of Public Works and Transportation	Long-term	High		
PG-27	Implement stormwater management projects, such as drainage retrofits, to address pluvial/stormwater flooding in community-identified areas. Prioritize restoration projects from the Watershed Implementation Plan (WIP) that will support the Plan 2035 future land use pattern. Downtowns should be given priority for stormwater retrofits, especially environmental site design practices. Land acquisition or	Department of Public Works and Transportation	Ongoing	High		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	ecological restoration activities should be targeted to stronghold watersheds.					
PG-28	To reduce system outages from natural hazards, perform energy grid modernization in socially vulnerable areas by adding a solar microgrid. Prioritize areas that are known to suffer multiple outages during the year.	Department of Public Works and Transportation	Ongoing	Low		
PG-29	Evaluate new and existing government buildings, critical facilities, and infrastructure for solar energy generation potential and install solar panels and batteries if feasible.	Department of Public Works and Transportation	Ongoing	Low		
	Emergency Services					
PG-30	Update Upper Marlboro Emergency Response Plan to address flooding, including evacuation, emergency response, mitigation, etc.	Office of Homeland Security	Short-term	Medium		
PG-31	Update the County's disaster recovery plan to include a post-disaster strategic rebuilding decision framework that comprehensively integrates equity.	Office of Homeland Security	Short-term	Medium		
PG-32	The Department of Family Services Agency on Aging will continue its outreach to seniors and other vulnerable populations about health and safety during periods of extreme heat and extreme cold. Information will be added to the Family Service's web page and frozen meal	Department of Family Services	Ongoing	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	distribution with supplement provision of hot meals during severe weather periods from January through March.					
PG-33	Develop a plan with the Department of Social Services, Department of Health, and Office of Sustainability to create Resilience Hubs in vulnerable communities to increases community capacity to prepare for, withstand, and respond to natural hazard impacts and emergency situations. These should also function as heating/cooling centers.	Department of Social Services; Department of Health; Office of Sustainability	Long-term	Low		
PG-34	Assess Climate Projections and Consequences of Dam and Levee Failure. Analyze baseline conditions against local/regional climate projections to highlight future vulnerabilities and risk. Model hydrological loads to the consequences of failure under present and future conditions and jointly evaluate dams, levees, and interdependent components. Incorporate Findings in Emergency Action Plans.	Office of Homeland Security	Ongoing	High		
	Educations & Awareness					
PG-35	Continue annual flood risk awareness and mitigation mailing to all owners of high-risk properties in the Special Flood Hazard Area, including Repetitive Loss/Severe Repetitive Loss structures. Provide additional outreach in response to new/upcoming grant opportunities and funding.	Office of Homeland Security	Ongoing	High		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
PG-36	Work with County municipalities and/or develop public-private partnerships to provide hazard awareness messaging and information on hazard preparedness and mitigation in secondary languages for promotion using local newspapers, municipal websites, social media, etc.	Department of Community Relations	Ongoing	High		
PG-37	Integrate hazard mitigation considerations in future updates of the Citizens' Preparedness Guide and Business Preparedness Guide, including mitigation projects they can implement and how they can get their project included in an upcoming grant application.	Office of Homeland Security	Ongoing	Medium		
PG-38	Conduct outreach to homeowners located on Founders Terrace (and other high-priority streets/neighborhoods) on opportunities to get funding for potential flood mitigation projects for the streams that run behind their homes.	Department of Community Relations	Short-term	Medium		
PG-39	Develop a County Hazard Mitigation Hub website similar to the public outreach website for Vision Zero. This should be combined with the future Climate Resilience Website as described in Plan 2035 if possible. Coordinate with various county agencies, such as the Department of Environment (DoE), Office of Homeland Security, and Office of Information Technology (OIT).	Office of Homeland Security	Short-term	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
PG-40	Demonstrate County commitment to climate action through publicly transparent tracking, monitoring, evaluation, and reporting. Require the Maryland-National Capital Park and Planning Commission to create and establish a public Smart Growth Dashboard that tracks approved preliminary plans of subdivisions, approved site plans and development proposals. Integrate this into the hazard mitigation/climate action hub website (refer to Action PG-41).	M-NCPPC	Ongoing	Medium		
PG-41	Develop an action guide for socially vulnerable communities that provides step-by-step guidance on how they can get their home considered for inclusion in a mitigation project/grant application.	Office of Homeland Security	Short-term	Medium		
PG-42	Send a digital copy of the 2023 HMP to all County and City staff, as well as all homeowner associations within the planning area.	Office of Homeland Security	Short-term	High		
PG-43	Integrate conducting an annual/semi-annual comprehensive grant availability search and information dissemination into a County staff member's job description. This staff member should coordinate an annual workshop with the County and its municipalities to discuss county-wide priorities and projects that should be submitted in grant applications.	Office of Homeland Security	Ongoing	Medium		

Table 3: City of Laurel 2023-2028 Mitigation Actions Status Report

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	Prevention					
L-1	Partner with federal agencies, the state, and non-governmental organizations to utilize available technical assistance to translate identified risks into mitigation projects, especially for benefit-cost analyses.	Office of Homeland Security	Ongoing	Medium		
L-2	Integrate mitigation plan requirements and actions into other appropriate planning mechanisms, such as comprehensive plans and capital improvement plans.	Office of Homeland Security	Ongoing	High		
L-3	Adopt the most recent published edition of the I-Codes (e.g., International Building Code, International Residential Code).	Department of the Fire Marshal and Permit Services	Short-term	High		
	Property Protection					
L-4	Support mitigation projects that will result in the protection of public or private property from natural hazards. Eligible projects include but are not limited to: 1. acquisition of hazard-prone property or structures 2. Elevation of flood-prone structures 3. Minor structural flood control projects 4. Relocation of structures from hazard-prone areas 5. Retrofitting of existing buildings, facilities, and infrastructure 6. Retrofitting of existing buildings and facilities for shelters 7. Critical infrastructure protection measures 8. Stormwater management	Department of Economic & Community Development	Ongoing	Medium		

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Annual Hazard Mitigation Plan Progress Report

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	improvements 9. Advanced warning systems and hazard gauging systems (weather radios, reverse-911, stream gauges, I-flows) 10. Targeted hazard education 11. wastewater and water supply system hardening and mitigation					
L-5	Promote the use of climate-smart building materials in mitigation projects and normal City construction projects to mitigate impacts from extreme temperatures and rainfall, such as those listed on the Maryland Department of the Environment's "Alternative/Innovative Technology List of Approved Practices."	Department of Economic & Community Development	Ongoing	Medium		
	Structural Projects					
L-6	After flood events, the City will evaluate whether to pursue funding to implement flood mitigation projects.	Office of Homeland Security	Ongoing	High		
L-7	Assess Climate Projections and Consequences of Dam and Levee Failure. Analyze baseline conditions against local/regional climate projections to highlight future vulnerabilities and risk. Model hydrological loads to the consequences of failure under present and future conditions and jointly evaluate dams, levees, and interdependent components. Incorporate Findings in Emergency Action Plans.	Department of Public Works; Department of the Environment	Short-term	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
L-8	To reduce system outages from natural hazards, perform energy grid modernization in socially vulnerable areas by adding a solar microgrid. Prioritize areas that are known to suffer multiple outages during the year.	Department of Public Works	Funding contingent	Medium		
L-9	Evaluate new and existing government buildings, critical facilities, and infrastructure for solar energy generation potential and install solar panels and batteries if feasible.	Department of Public Works	Short-term	Low		
L-10	Implement stormwater management projects, such as drainage retrofits, to address pluvial/stormwater flooding in community-identified areas.	Department of Public Works	Ongoing	High		
	Emergency Services					
L-11	At the intersection of Van Dusen Road and Contee Road (Anderson's Corner), add a comprehensive recreational building, comprised of indoor recreational space, gymnasium(s), and meeting rooms. Unlike a typical community center, the City envisions more of a steel building structure with a hybrid use between drop-in programs for local residents and a larger multiuse footprint to host a wider range of recreational sports and activities. The City will conduct a feasibility study that includes considering stormwater runoff effects and the potential to use the facility as a hazard shelter and/or extreme temperature refuge.	Department of Economic & Community Development	Long-term	Medium		

Action Number	Action	Action Lead	Timeframe	Priority	Status	Comments
	Educations & Awareness					
L-12	Work with City closed circuit television network to produce seasonal hazard awareness and topical mitigation programming.	Office of Homeland Security	Short-term	Low		
L-13	Develop an action guide for socially vulnerable communities that provides step-by-step guidance on how to get their home considered for inclusion in a mitigation project/grant application.	Office of Homeland Security	Short-term	Medium		
L-14	Send a digital copy of the 2023 HMP to all County and City staff.	Office of Homeland Security	Short-term	Medium		

Changes That May Impact Implementation of the Plan

(Insert brief overview of any significant changes in the planning area that would have a profound impact on the implementation of the plan. Specify any changes in technical, regulatory and financial capabilities identified during the plan's development)

Recommendations for Revisions and Enhancements

Based on the review of this report by the Mitigation Advisory Committee, the following recommendations will be noted for future updates or revisions to the plan:

Public Review Notice

The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the governing boards of all planning partners and to local media outlets and the report is posted on the Prince George's County and City of Laurel Local Hazard Mitigation Plan websites. Any questions or comments regarding the contents of this report should be directed to:

Appendix J. Hazus Reports

Contents:

1. Riverine Flood Global Summary Report
2. Riverine Flood Quick Assessment
3. Coastal Flood Global Summary Report
4. Coastal Flood Quick Assessment
5. Combined Flood Quick Assessment
6. Earthquake Quick Assessments (multiple)
7. Hurricane Debris Summary Report (North)
8. Hurricane Direct Economic Losses Report (North)
9. Hurricane Shelter Summary Report (North)
10. Hurricane Quick Assessment Report (North)
11. Hurricane Global Summary Reports (multiple; North)
12. Hurricane Debris Summary Report (South)
13. Hurricane Direct Economic Losses Report (South)
14. Hurricane Shelter Summary Report (South)
15. Hurricane Quick Assessment Report (South)
16. Hurricane Global Summary Reports (multiple; South)

Hazus: Flood Global Risk Report

Region Name: pg_Riverine_Flood

Flood Scenario: 100 year Riverine

Print Date: Tuesday, October 11, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is approximately 488 square miles and contains 15,508 census blocks. The region contains over 304 thousand households and has a total population of 863,420 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 256,312 buildings in the region with a total building replacement value (excluding contents) of 109,482 million dollars. Approximately 90.98% of the buildings (and 81.93% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 256,312 buildings in the region which have an aggregate total replacement value of 109,482 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	89,693,464	81.9%
Commercial	13,563,591	12.4%
Industrial	2,494,235	2.3%
Agricultural	142,626	0.1%
Religion	1,896,586	1.7%
Government	610,740	0.6%
Education	1,081,098	1.0%
Total	**109,482,340**	**100%**

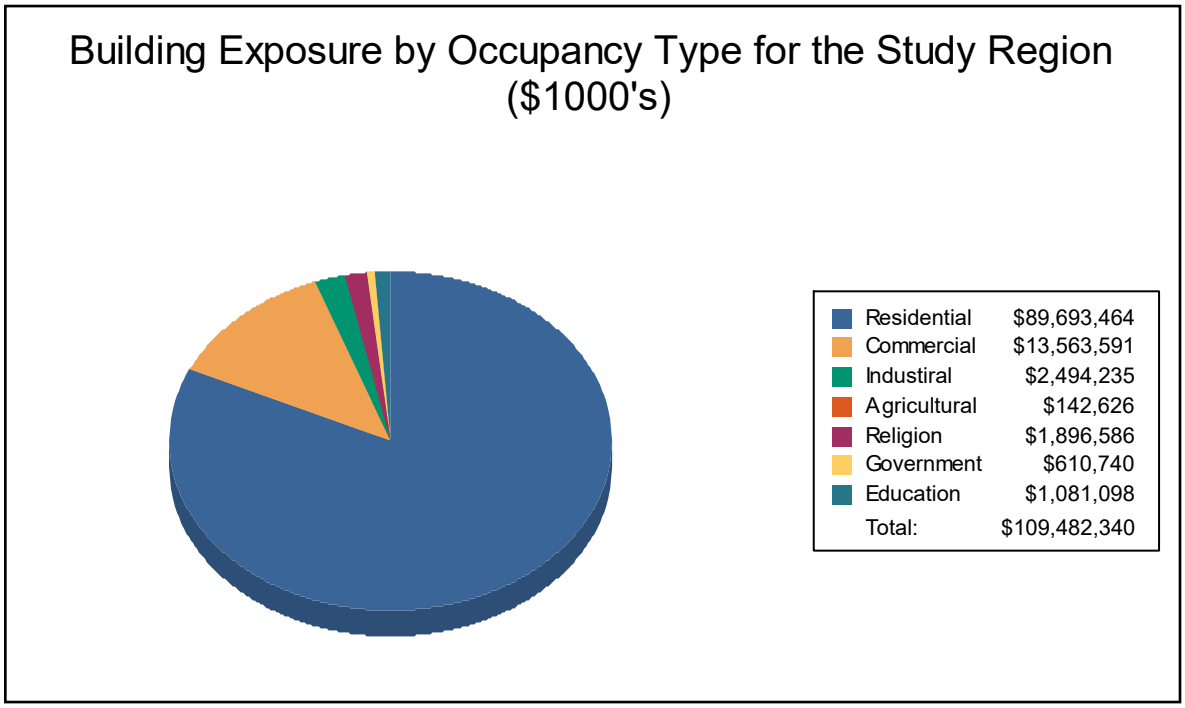
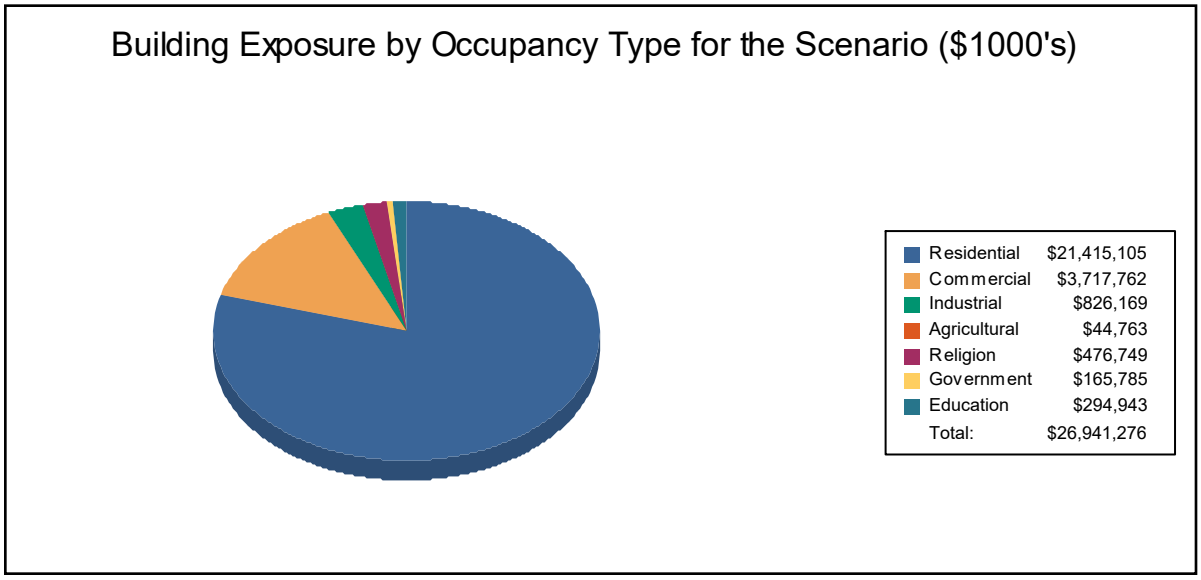


Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	21,415,105	79.5%
Commercial	3,717,762	13.8%
Industrial	826,169	3.1%
Agricultural	44,763	0.2%
Religion	476,749	1.8%
Government	165,785	0.6%
Education	294,943	1.1%
Total	**26,941,276**	**100%**



Essential Facility Inventory

For essential facilities, there are 7 hospitals in the region with a total bed capacity of 836 beds.
There are 330 schools, 48 fire stations, 39 police stations and 2 emergency operation centers.

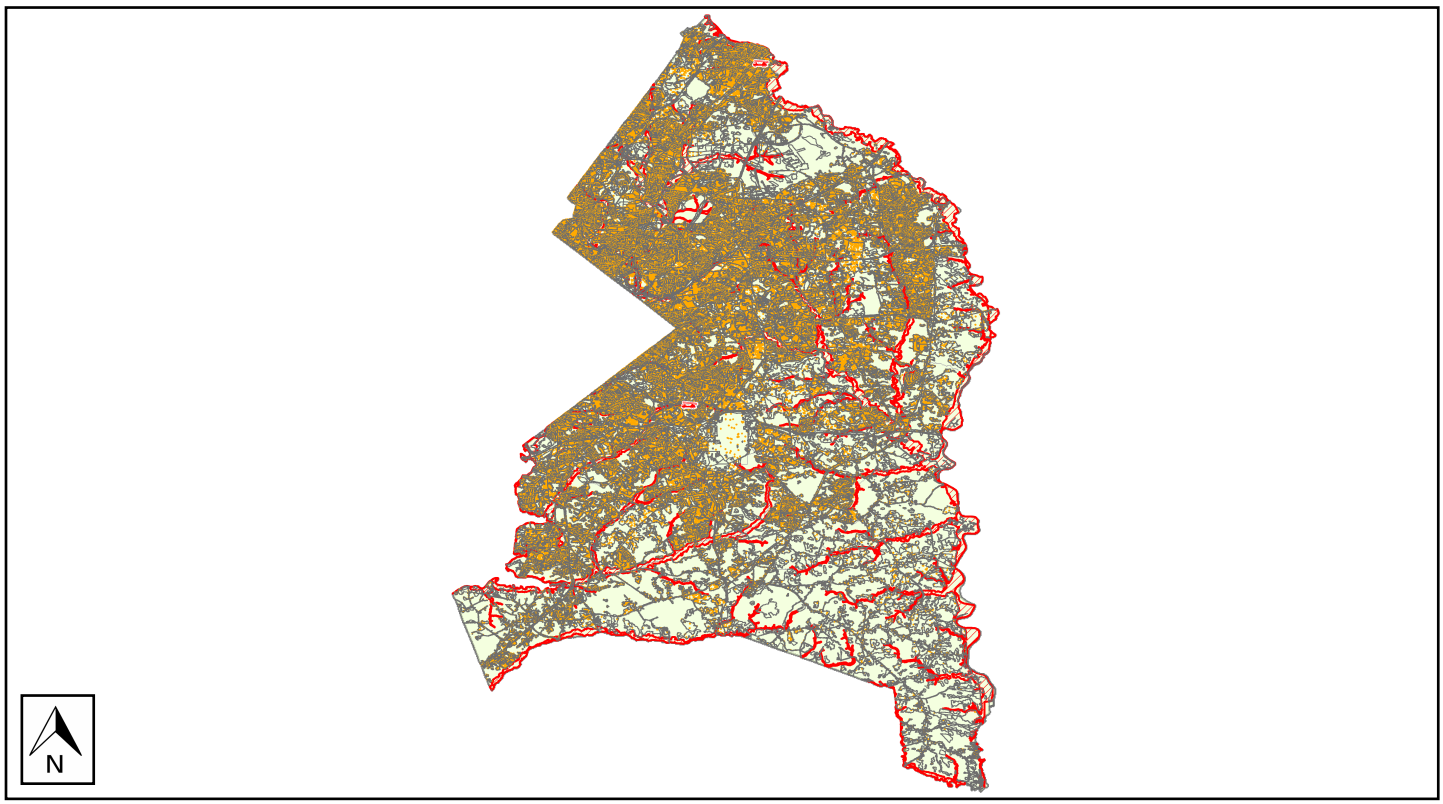
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	pg_Riverine_Flood
Scenario Name:	100 year Riverine
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



Building Damage

General Building Stock Damage

Hazus estimates that about 2,358 buildings will be at least moderately damaged. This is over 7% of the total number of buildings in the scenario. There are an estimated 2,183 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = $300K) Overview Map

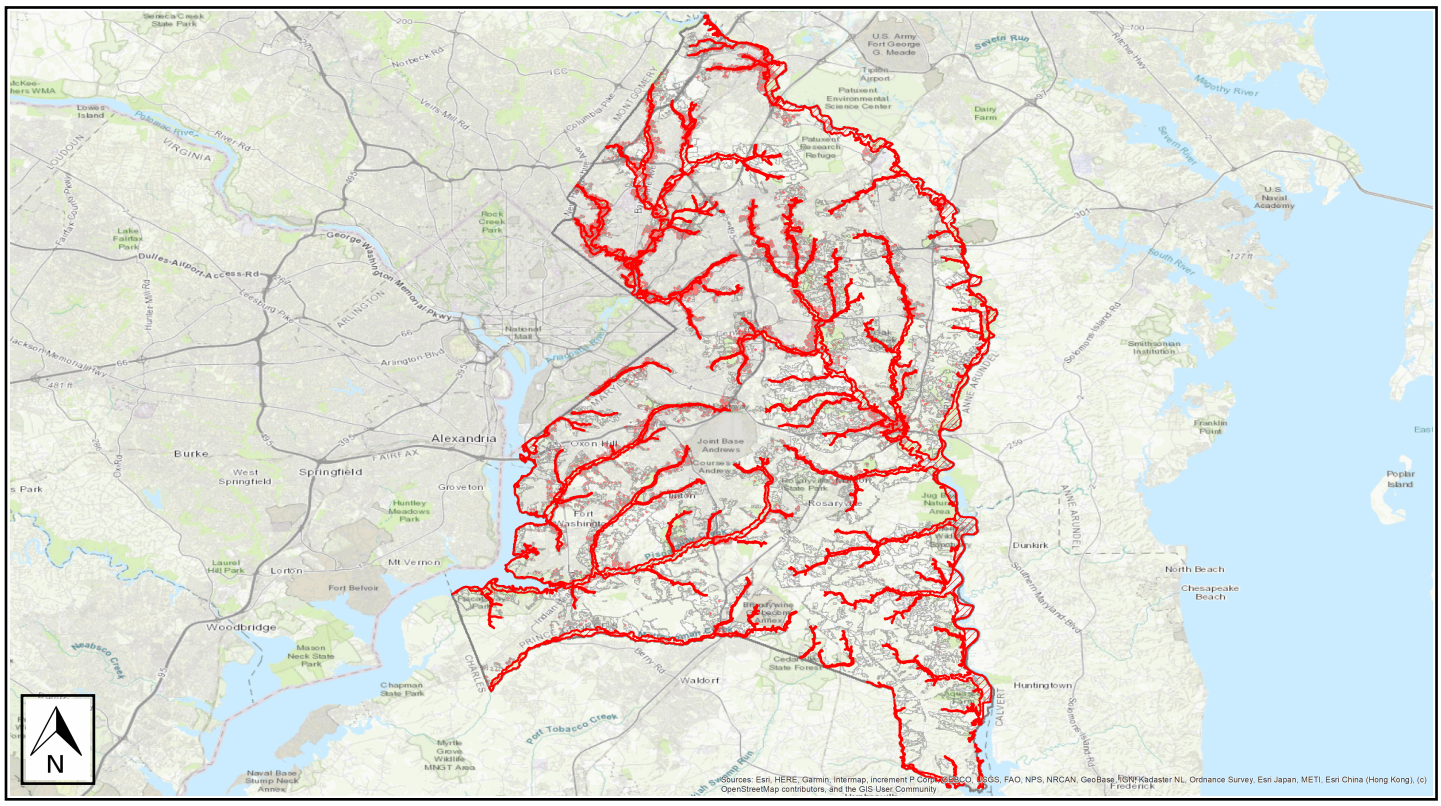


Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	6	7	2	2	0	0	0	0	0	0	83	91
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	6	100
Industrial	4	24	0	0	2	12	0	0	1	6	10	59
Religion	0	0	0	0	0	0	0	0	0	0	3	100
Residential	86	4	76	3	15	1	13	1	66	3	2,081	89
Total	**96**		**78**		**17**		**13**		**67**		**2,183**	

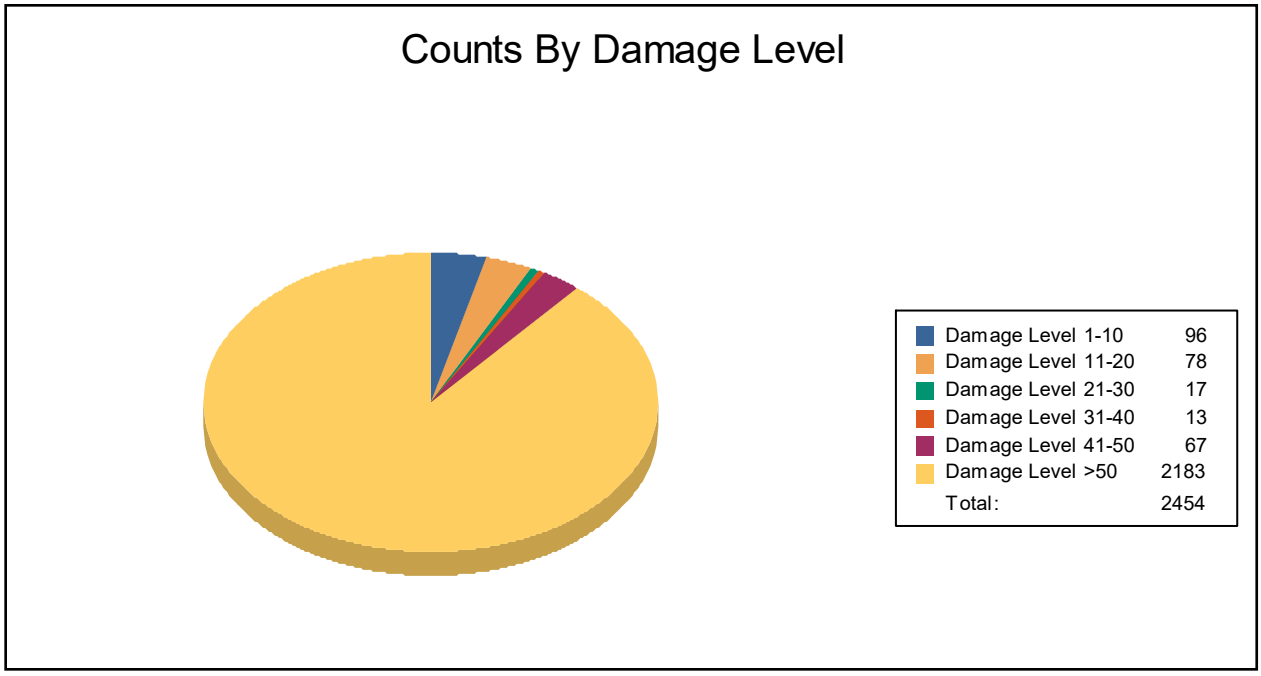




Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0	0	0	0	0	0	0	0	0	3	100
ManufHousing	0	0	0	0	0	0	0	0	0	0	2	100
Masonry	23	4	19	3	4	1	3	0	16	2	585	90
Steel	7	11	0	0	2	3	0	0	1	2	51	84
Wood	67	4	56	3	11	1	10	1	50	3	1,518	89

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 836 hospital beds available for use. On the day of the scenario flood event, the model estimates that 836 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	2	0	0	0
Fire Stations	48	0	2	2
Hospitals	7	0	0	0
Police Stations	39	0	0	0
Schools	330	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

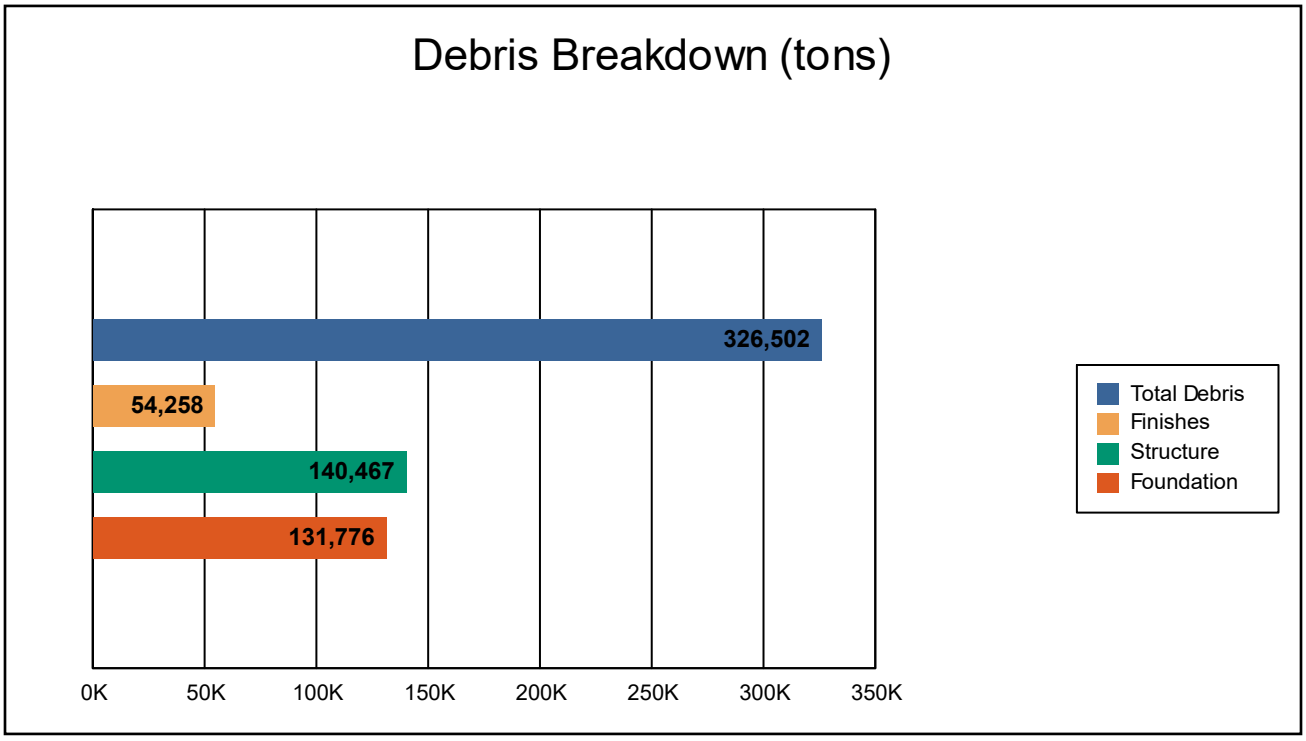
(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

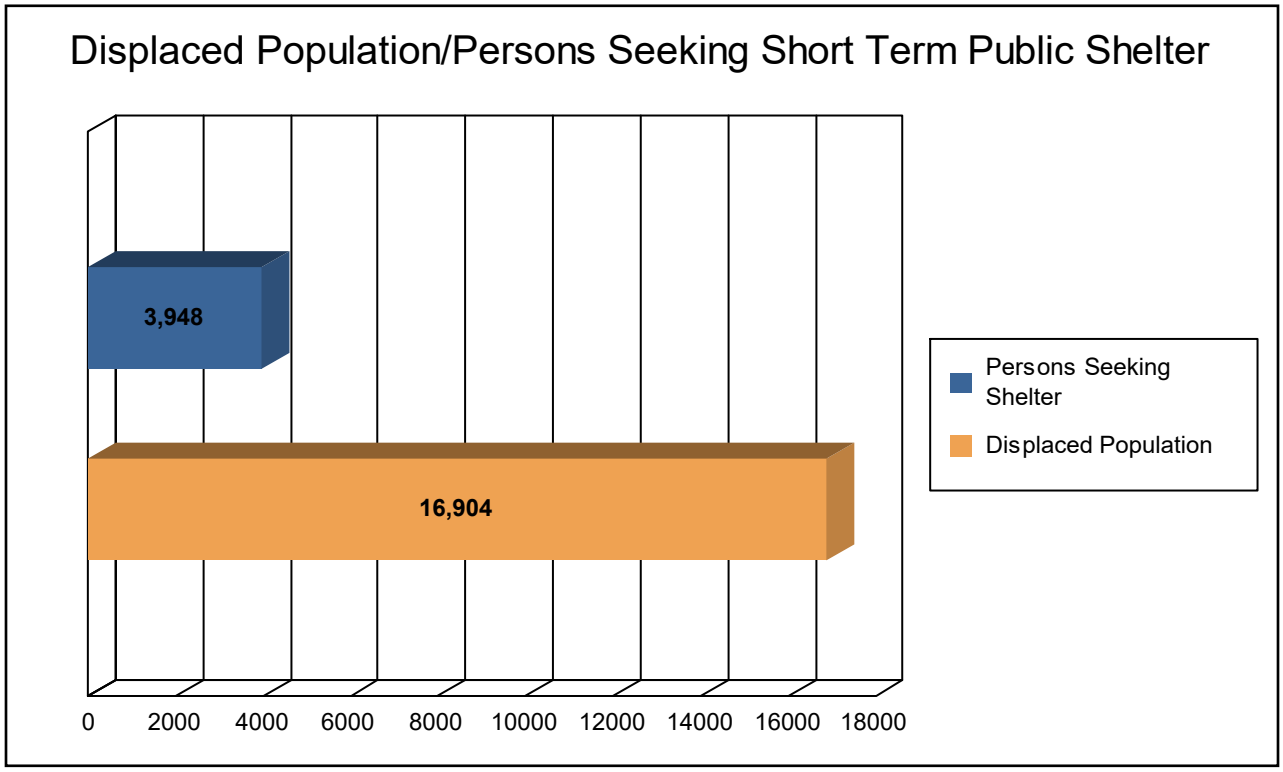


The model estimates that a total of 326,502 tons of debris will be generated. Of the total amount, Finishes comprises 17% of the total, Structure comprises 43% of the total, and Foundation comprises 40%. If the debris tonnage is converted into an estimated number of truckloads, it will require 13061 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 5,635 households (or 16,904 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 3,948 people (out of a total population of 863,420) will seek temporary shelter in public shelters.



Economic Loss

The total economic loss estimated for the flood is 3,940.87 million dollars, which represents 14.63 % of the total replacement value of the scenario buildings.

Building-Related Losses

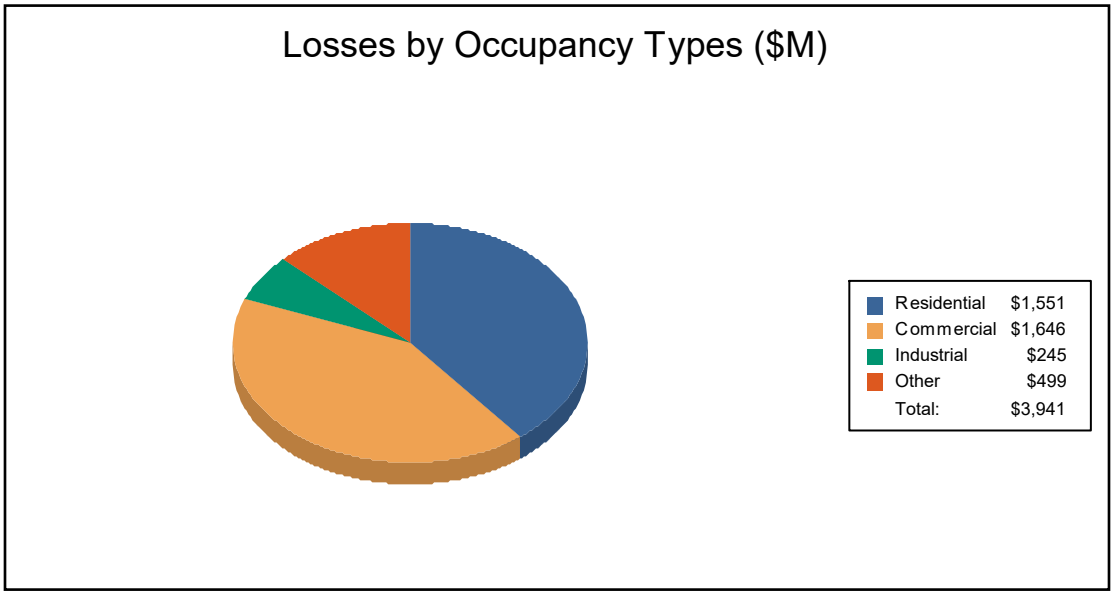
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 2,652.70 million dollars. 33% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 39.35% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	920.72	389.84	79.58	75.84	1,465.99
	Content	433.76	488.18	134.48	97.28	1,153.70
	Inventory	0.00	12.39	20.29	0.33	33.01
	Subtotal	**1,354.49**	**890.41**	**234.35**	**173.46**	**2,652.70**
Business Interruption						
	Income	3.26	283.25	3.20	29.56	319.27
	Relocation	120.45	93.43	3.05	18.59	235.53
	Rental Income	64.91	69.58	0.58	3.12	138.19
	Wage	7.72	309.06	4.29	274.11	595.19
	Subtotal	**196.35**	**755.32**	**11.12**	**325.38**	**1,288.17**
ALL	**Total**	**1,550.83**	**1,645.73**	**245.48**	**498.83**	**3,940.87**





Appendix A: County Listing for the Region

Maryland

- Prince George's

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
Maryland				
Prince George's	863,420	89,693,464	19,788,876	109,482,340
Total	**863,420**	**89,693,464**	**19,788,876**	**109,482,340**
Total Study Region	**863,420**	**89,693,464**	**19,788,876**	**109,482,340**

Quick Assessment Report

October 11, 2022

Study Region : pg_Riverine_Flood
Scenario : 100 year Riverine
Return Period: 100
Analysis Option: 0

Regional Statistics

Area (Square Miles)	488
Number of Census Blocks	15,508
Number of Buildings	
Residential	233,197
Total	256,312
Number of People in the Region (x 1000)	863
Building Exposure ($ Millions)	
Residential	89,693
Total	109,482

Scenario Results

Shelter Requirements

Displaced Population (# Households)	5,635
Short Term Shelter (# People)	3,948

Economic Loss

Residential Property (Capital Stock) Losses ($ Millions)	1,354
Total Property (Capital Stock) Losses ($ Millions)	2,653
Business Interruption (Income) Losses ($ Millions)	1,288

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific flood. These results can be improved by using enhanced inventory data and flood hazard information.

Hazus: Flood Global Risk Report

Region Name: pg_Coastal_Flood

Flood Scenario: pg_Coastal100yr

Print Date: Tuesday, October 11, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is approximately 488 square miles and contains 15,508 census blocks. The region contains over 304 thousand households and has a total population of 863,420 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 256,312 buildings in the region with a total building replacement value (excluding contents) of 109,482 million dollars. Approximately 90.98% of the buildings (and 81.93% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 256,312 buildings in the region which have an aggregate total replacement value of 109,482 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	89,693,464	81.9%
Commercial	13,563,591	12.4%
Industrial	2,494,235	2.3%
Agricultural	142,626	0.1%
Religion	1,896,586	1.7%
Government	610,740	0.6%
Education	1,081,098	1.0%
Total	**109,482,340**	**100%**

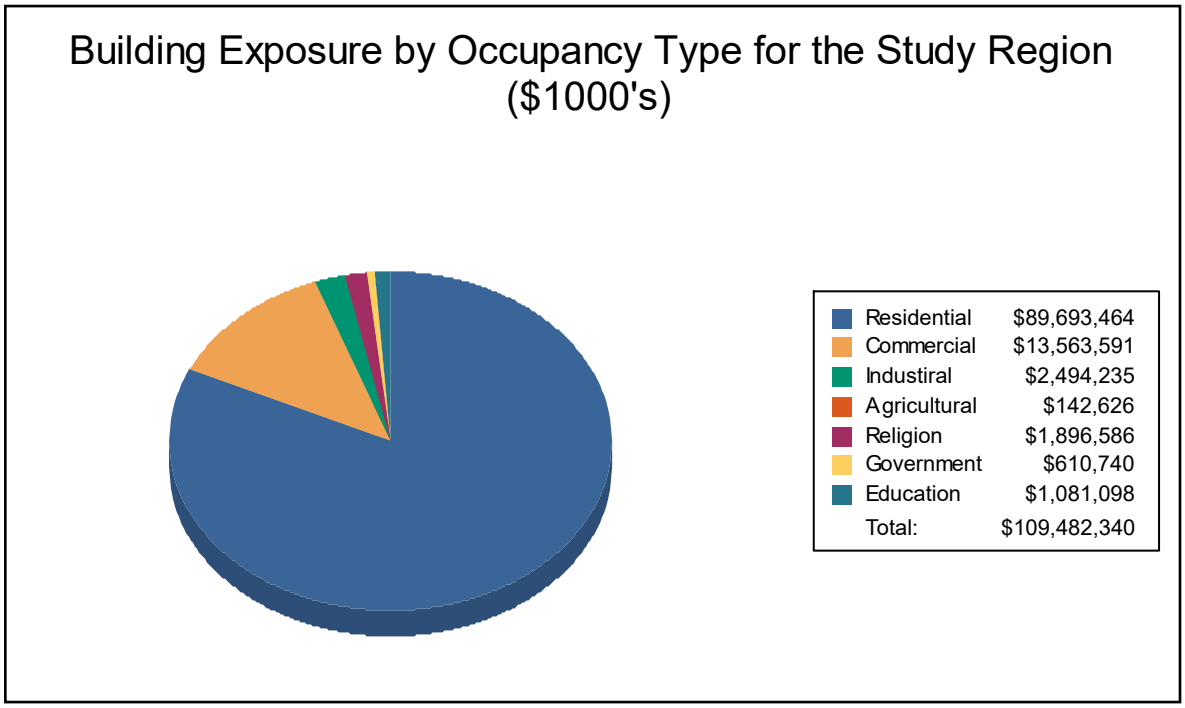
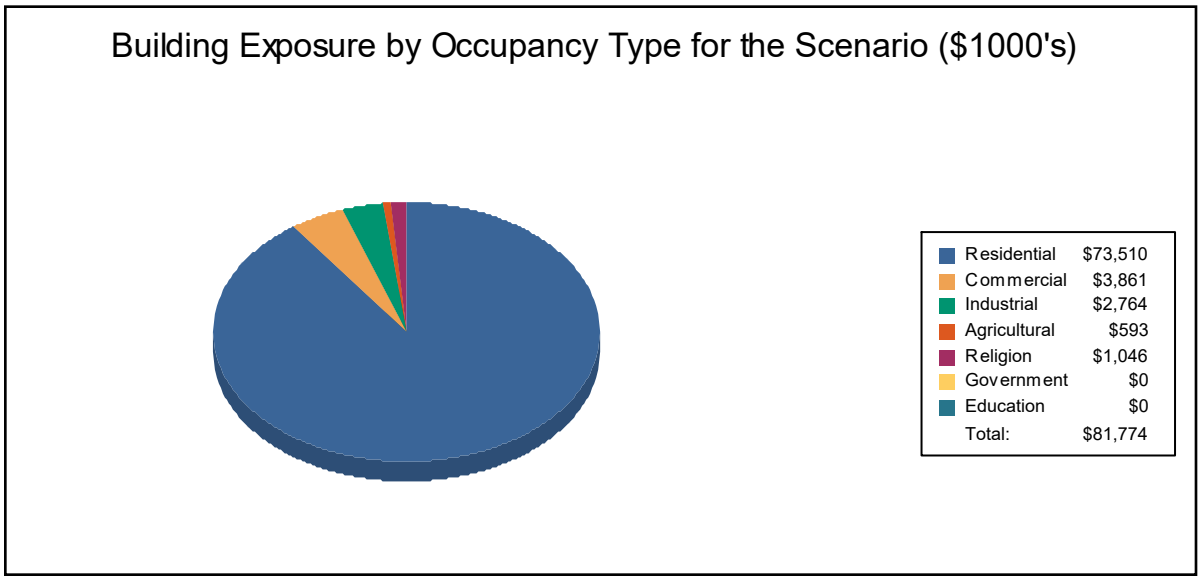


Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	73,510	89.9%
Commercial	3,861	4.7%
Industrial	2,764	3.4%
Agricultural	593	0.7%
Religion	1,046	1.3%
Government	0	0.0%
Education	0	0.0%
Total	**81,774**	**100%**



Essential Facility Inventory

For essential facilities, there are 7 hospitals in the region with a total bed capacity of 836 beds.
There are 330 schools, 48 fire stations, 39 police stations and 2 emergency operation centers.

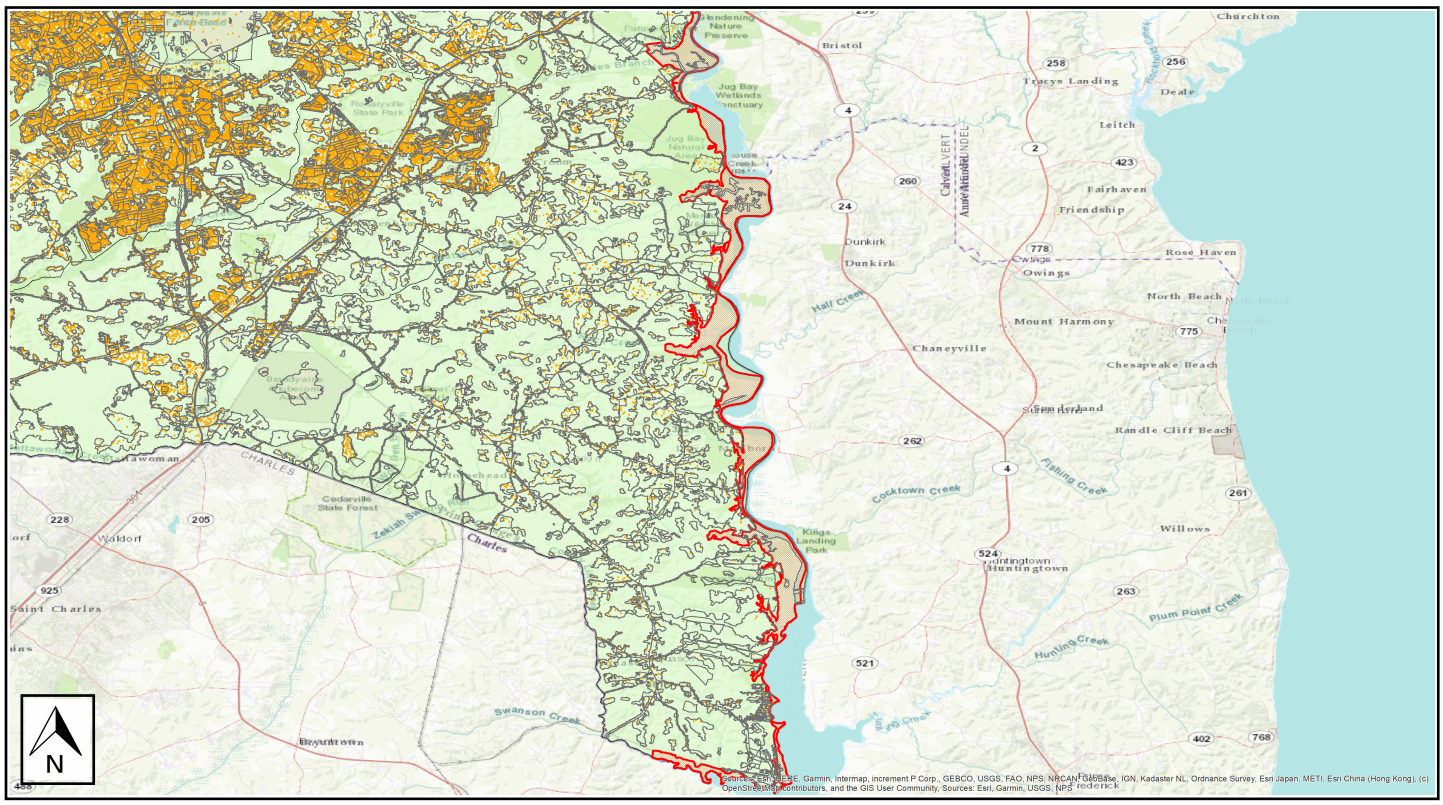
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	pg_Coastal_Flood
Scenario Name:	pg_Coastal100yr
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



Building Damage

General Building Stock Damage

Hazus estimates that about 1 building will be at least moderately damaged. This is over 0% of the total number of buildings in the scenario. There are an estimated 1 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = $300K) Overview Map

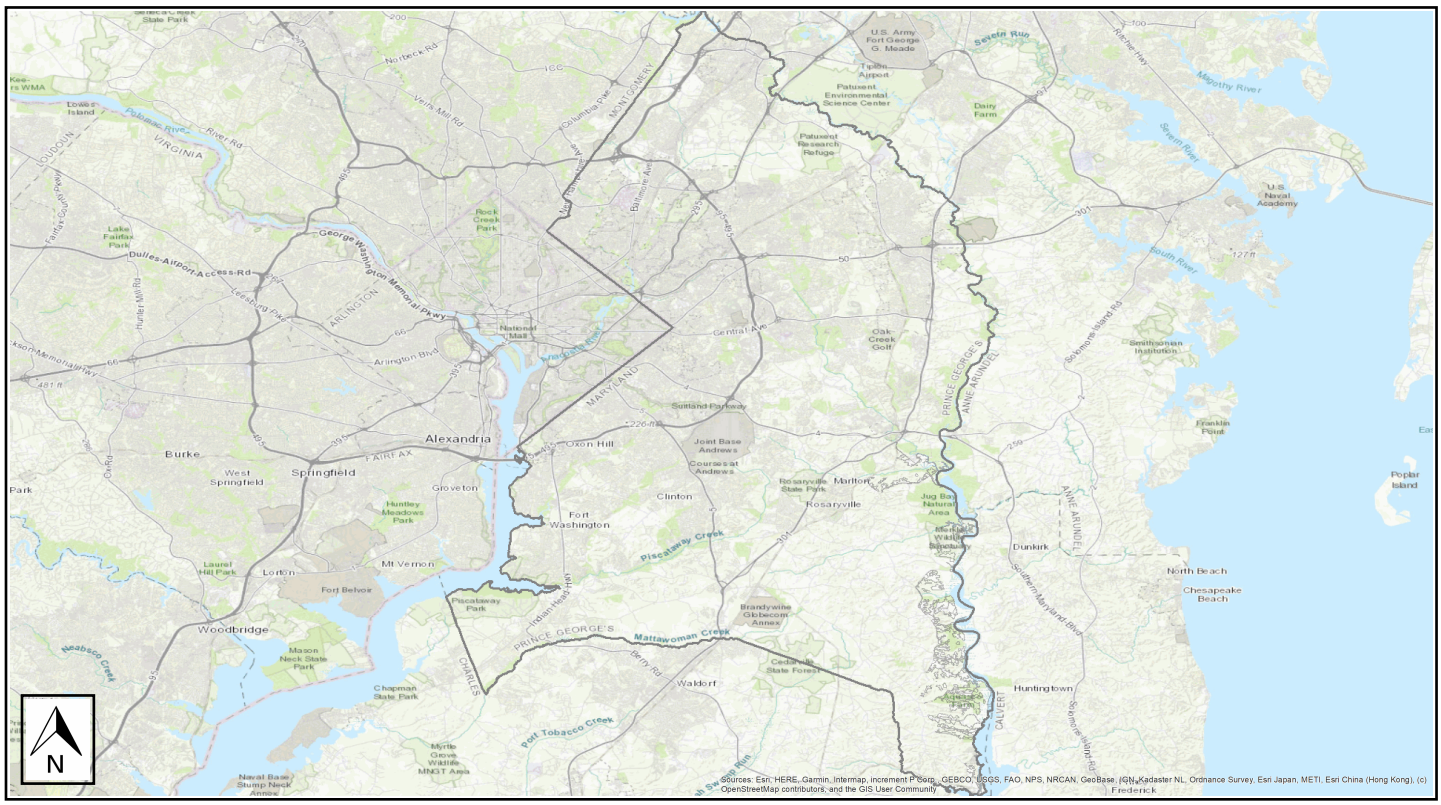


Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0
Religion	0	0	0	0	0	0	0	0	0	0	0	0
Residential	0	0	0	0	0	0	0	0	0	0	1	100
Total	**0**		**0**		**0**		**0**		**0**		**1**	

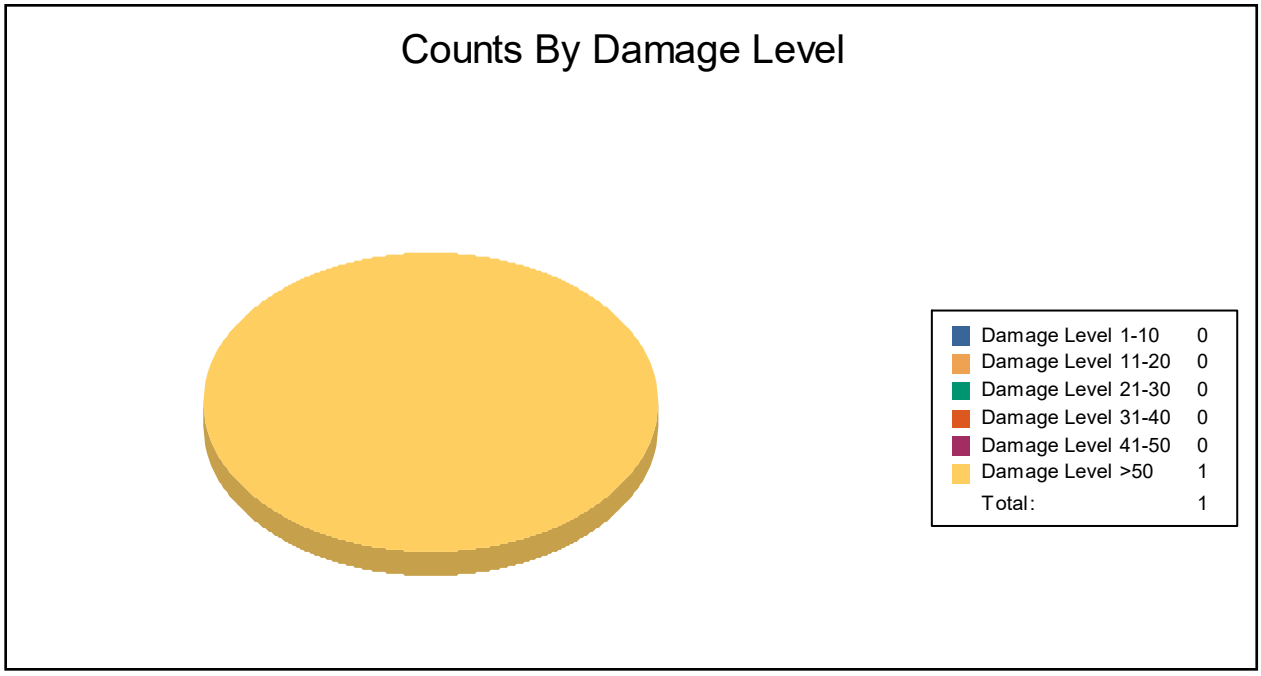




Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0	0	0	0	0	0	0	0	0	0	0
ManufHousing	0	0	0	0	0	0	0	0	0	0	0	0
Masonry	0	0	0	0	0	0	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0	0	0	0	0	0
Wood	0	0	0	0	0	0	0	0	0	0	1	100

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 836 hospital beds available for use. On the day of the scenario flood event, the model estimates that 836 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	2	0	0	0
Fire Stations	48	0	0	0
Hospitals	7	0	0	0
Police Stations	39	0	0	0
Schools	330	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

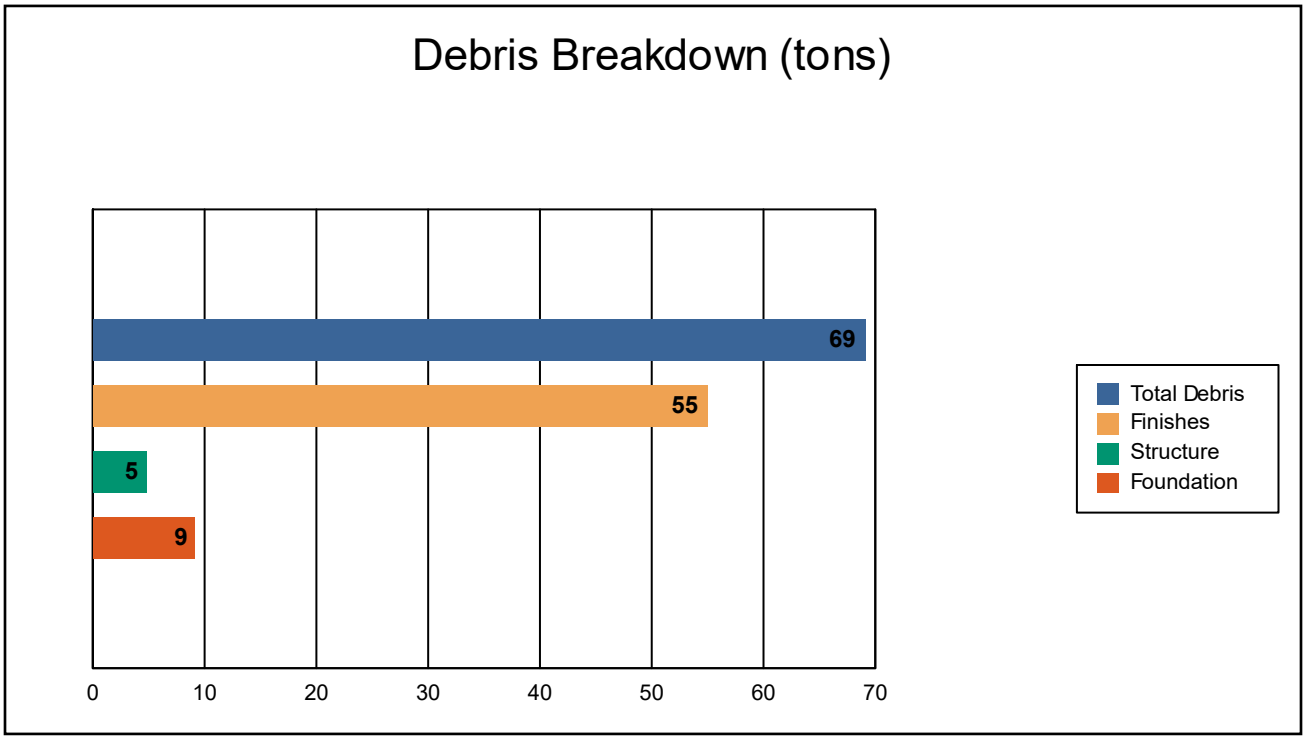
(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

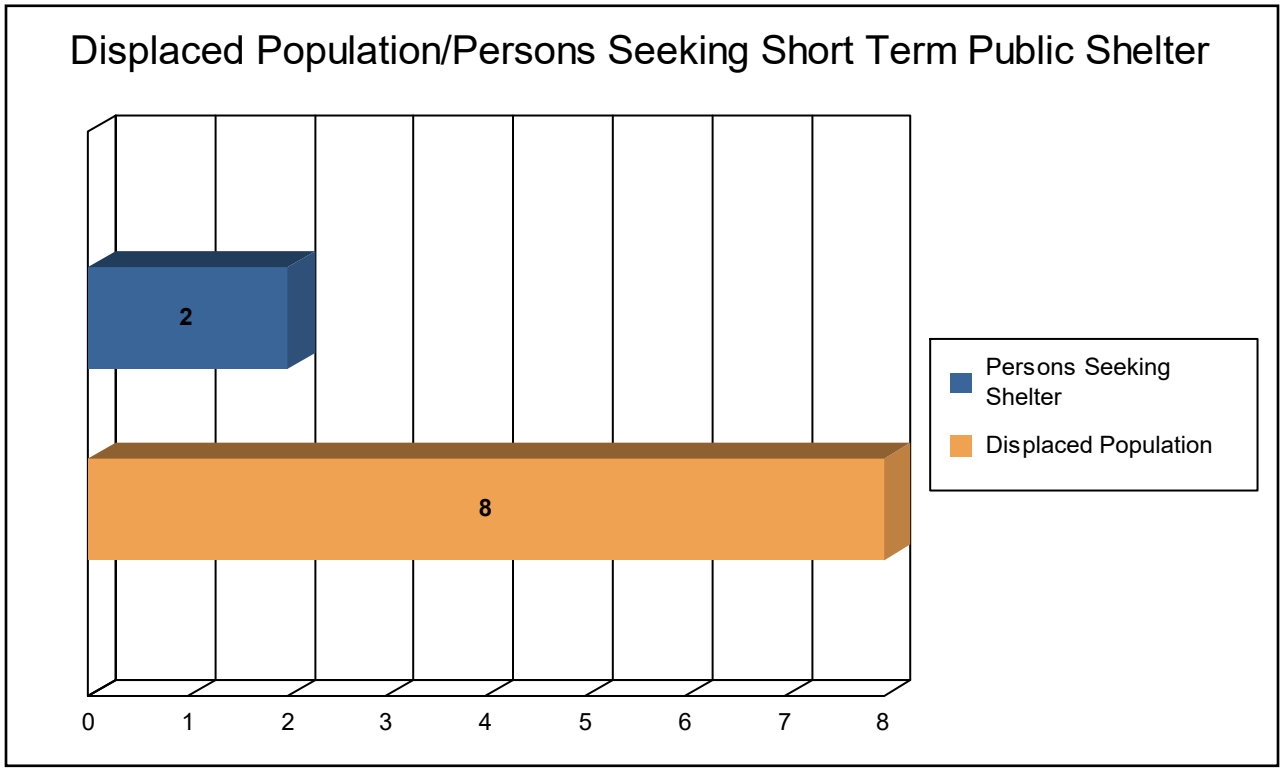


The model estimates that a total of 69 tons of debris will be generated. Of the total amount, Finishes comprises 80% of the total, Structure comprises 7% of the total, and Foundation comprises 13%. If the debris tonnage is converted into an estimated number of truckloads, it will require 3 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 3 households (or 8 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 2 people (out of a total population of 863,420) will seek temporary shelter in public shelters.



Economic Loss

The total economic loss estimated for the flood is 1.65 million dollars, which represents 2.01 % of the total replacement value of the scenario buildings.

Building-Related Losses

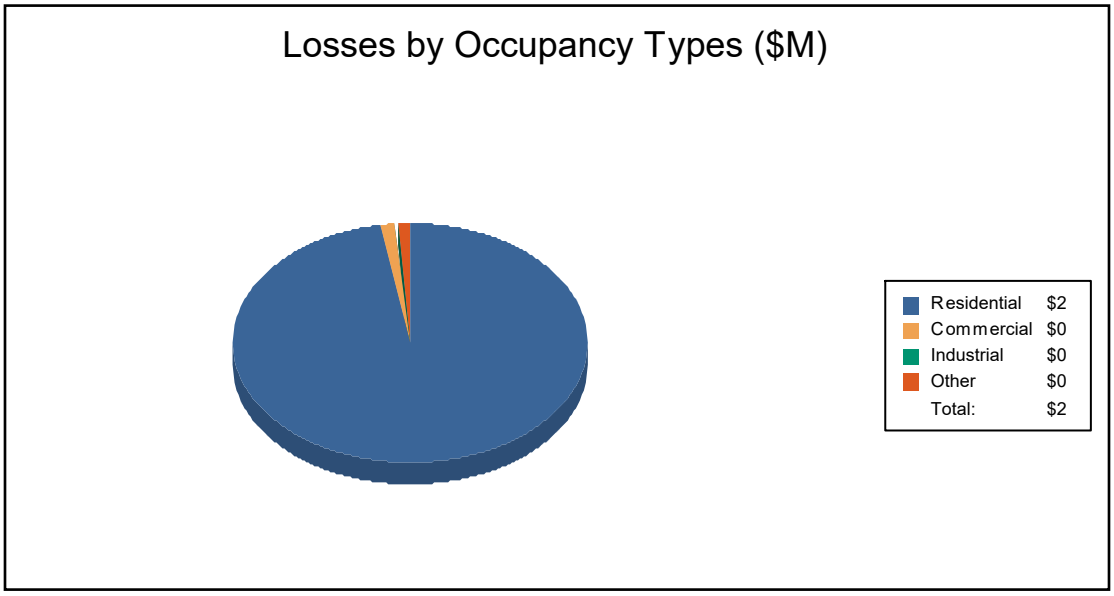
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 1.37 million dollars. 17% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 97.21% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	0.84	0.00	0.00	0.00	0.85
	Content	0.51	0.01	0.00	0.01	0.53
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**1.35**	**0.01**	**0.00**	**0.01**	**1.37**
Business Interruption						
	Income	0.02	0.01	0.00	0.00	0.03
	Relocation	0.14	0.00	0.00	0.00	0.14
	Rental Income	0.05	0.00	0.00	0.00	0.05
	Wage	0.05	0.00	0.00	0.01	0.05
	Subtotal	**0.26**	**0.01**	**0.00**	**0.01**	**0.27**
ALL	**Total**	**1.60**	**0.02**	**0.00**	**0.02**	**1.65**





Appendix A: County Listing for the Region

Maryland

- Prince George's

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
Maryland				
Prince George's	863,420	89,693,464	19,788,876	109,482,340
Total	**863,420**	**89,693,464**	**19,788,876**	**109,482,340**
Total Study Region	**863,420**	**89,693,464**	**19,788,876**	**109,482,340**

Quick Assessment Report

October 11, 2022

Study Region : pg_Coastal_Flood
Scenario : pg_Coastal100yr
Return Period: 100
Analysis Option: 0

Regional Statistics

Area (Square Miles)	488
Number of Census Blocks	15,508
Number of Buildings	
Residential	233,197
Total	256,312
Number of People in the Region (x 1000)	863
Building Exposure ($ Millions)	
Residential	89,693
Total	109,482

Scenario Results

Shelter Requirements

Displaced Population (# Households)	3
Short Term Shelter (# People)	2

Economic Loss

Residential Property (Capital Stock) Losses ($ Millions)	1
Total Property (Capital Stock) Losses ($ Millions)	1
Business Interruption (Income) Losses ($ Millions)	0

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific flood. These results can be improved by using enhanced inventory data and flood hazard information.

Quick Assessment Report

October 11, 2022

Study Region : pg_Combined_Flood
Scenario : pg_Combined100yr
Return Period: 100
Analysis Option: 0

Regional Statistics

Area (Square Miles)	488
Number of Census Blocks	15,508
Number of Buildings	
Residential	233,197
Total	256,312
Number of People in the Region (x 1000)	863
Building Exposure ($ Millions)	
Residential	89,693
Total	109,482

Scenario Results

Shelter Requirements	
Displaced Population (# Households)	5,636
Short Term Shelter (# People)	3,948
Economic Loss	
Residential Property (Capital Stock) Losses ($ Millions)	1,355
Total Property (Capital Stock) Losses ($ Millions)	2,653
Business Interruption (Income) Losses ($ Millions)	1,288

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific flood. These results can be improved by using enhanced inventory data and flood hazard information.

Hazus: Earthquake Global Risk Report

Region Name: pg_EQ_prob

Earthquake Scenario: EQ Annual Probabalistic

Print Date: October 19, 2022

Disclaimer:

This version of Hazus utilizes 2010 Census Data.

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

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General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 1 county(ies) from the following state(s):

Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 487.73 square miles and contains 218 census tracts. There are over 304 thousand households in the region which has a total population of 863,420 people (2010 Census Bureau data). The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 256 thousand buildings in the region with a total building replacement value (excluding contents) of 109,482 (millions of dollars). Approximately 91.00 % of the buildings (and 82.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 6,825 and 6,706 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 256 thousand buildings in the region which have an aggregate total replacement value of 109,482 (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 65% of the building inventory. The remaining percentage is distributed between the other general building types.

Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 7 hospitals in the region with a total bed capacity of 836 beds. There are 330 schools, 48 fire stations, 39 police stations and 2 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes 35 hazardous material sites, no military installations and no nuclear power plants.

Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 13,531.00 (millions of dollars). This inventory includes over 280.86 miles of highways, 555 bridges, 12,724.44 miles of pipes.

Table 1: Transportation System Lifeline Inventory

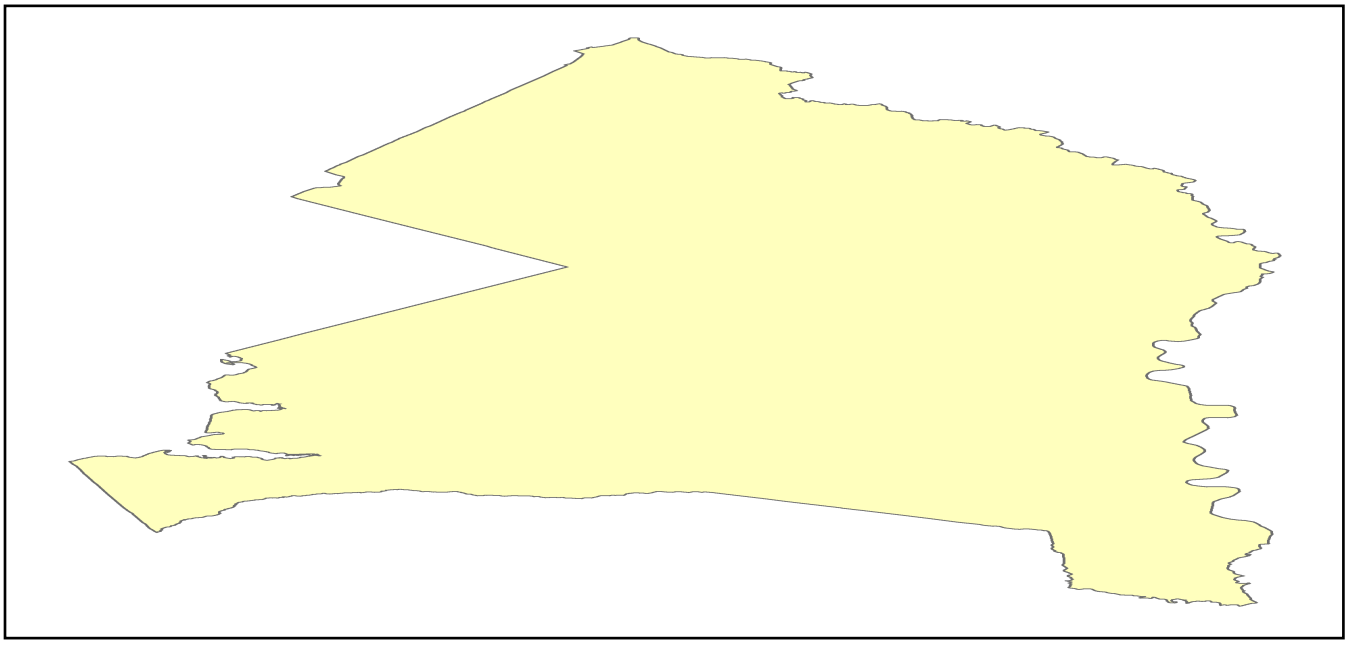
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	555	2331.8048
	Segments	277	3555.7797
	Tunnels	0	0.0000
		Subtotal	**5887.5845**
Railways	Bridges	45	205.3125
	Facilities	1	2.6630
	Segments	76	177.9848
	Tunnels	0	0.0000
		Subtotal	**385.9603**
Light Rail	Bridges	0	0.0000
	Facilities	20	58.4000
	Segments	23	93.7422
	Tunnels	0	0.0000
		Subtotal	**152.1422**
Bus	Facilities	3	4.3800
		Subtotal	**4.3800**
Ferry	Facilities	0	0.0000
		Subtotal	**0.0000**
Port	Facilities	1	2.8835
		Subtotal	**2.8835**
Airport	Facilities	2	22.9950
	Runways	6	369.8791
		Subtotal	**392.8741**
		Total	**6,825.80**

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	255.8812
	Facilities	3	98.9010
	Pipelines	0	0.0000
		Subtotal	**354.7822**
Waste Water	Distribution Lines	NA	153.5287
	Facilities	32	4175.6000
	Pipelines	0	0.0000
		Subtotal	**4329.1287**
Natural Gas	Distribution Lines	NA	102.3525
	Facilities	0	0.0000
	Pipelines	4	5.1380
		Subtotal	**107.4905**
Oil Systems	Facilities	0	0.0000
	Pipelines	0	0.0000
		Subtotal	**0.0000**
Electrical Power	Facilities	4	1914.4250
		Subtotal	**1914.4250**
Communication	Facilities	7	0.6930
		Subtotal	**0.6930**
		Total	**6,706.50**

Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.



Scenario Name	EQ Annual Probabalistic
Type of Earthquake	Probabilistic
Fault Name	NA
Historical Epicenter ID #	NA
Probabilistic Return Period	Annualized
Longitude of Epicenter	NA
Latitude of Epicenter	NA
Earthquake Magnitude	NA
Depth (km)	NA
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	NA

Direct Earthquake Damage

Building Damage

Hazus estimates that about buildings will be at least moderately damaged. This is over % of the buildings in the region. There are an estimated buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

Damage Categories by General Occupancy Type



Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Total										

Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Total										

*Note:
RM Reinforced Masonry
URM Unreinforced Masonry
MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 836 hospital beds available for use. On the day of the earthquake, the model estimates that only 0 hospital beds (0.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 0.00% of the beds will be back in service. By 30 days, 0.00% will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	7	0	0	0
Schools	330	0	0	0
EOCs	2	0	0	0
PoliceStations	39	0	0	0
FireStations	48	0	0	0

Transportation Lifeline Damage

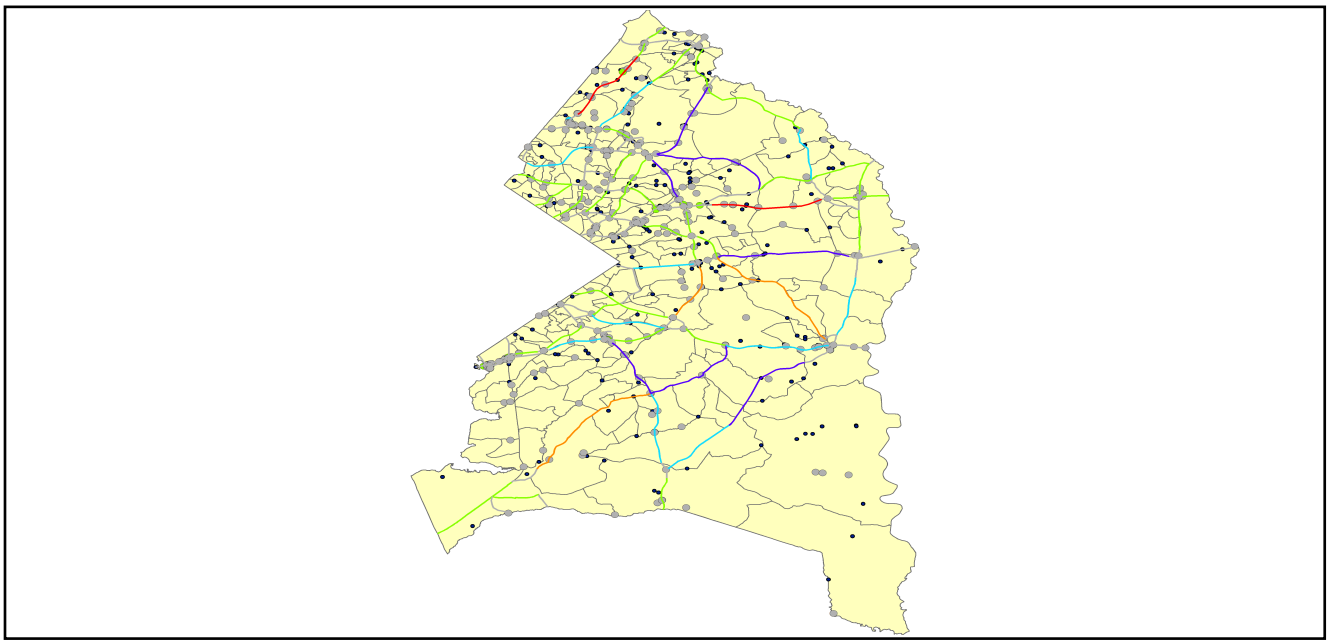


Table 6: Expected Damage to the Transportation Systems

System	Component		Number of Locations			
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 % After Day 1	With Functionality > 50 % After Day 7
Highway	Segments	277	0	0	0	0
	Bridges	555	0	0	0	0
	Tunnels	0	0	0	0	0
Railways	Segments	76	0	0	0	0
	Bridges	45	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	1	0	0	0	0
Light Rail	Segments	23	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	20	0	0	0	0
Bus	Facilities	3	0	0	0	0
Ferry	Facilities	0	0	0	0	0
Port	Facilities	1	0	0	0	0
Airport	Facilities	2	0	0	0	0
	Runways	6	0	0	0	0

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.

Table 7 : Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	3	0	0	0	0
Waste Water	32	0	0	0	0
Natural Gas	0	0	0	0	0
Oil Systems	0	0	0	0	0
Electrical Power	4	0	0	0	0
Communication	7	0	0	0	0

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	7,950	0	0
Waste Water	4,770	0	0
Natural Gas	5	0	0
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water						
Electric Power						

Induced Earthquake Damage

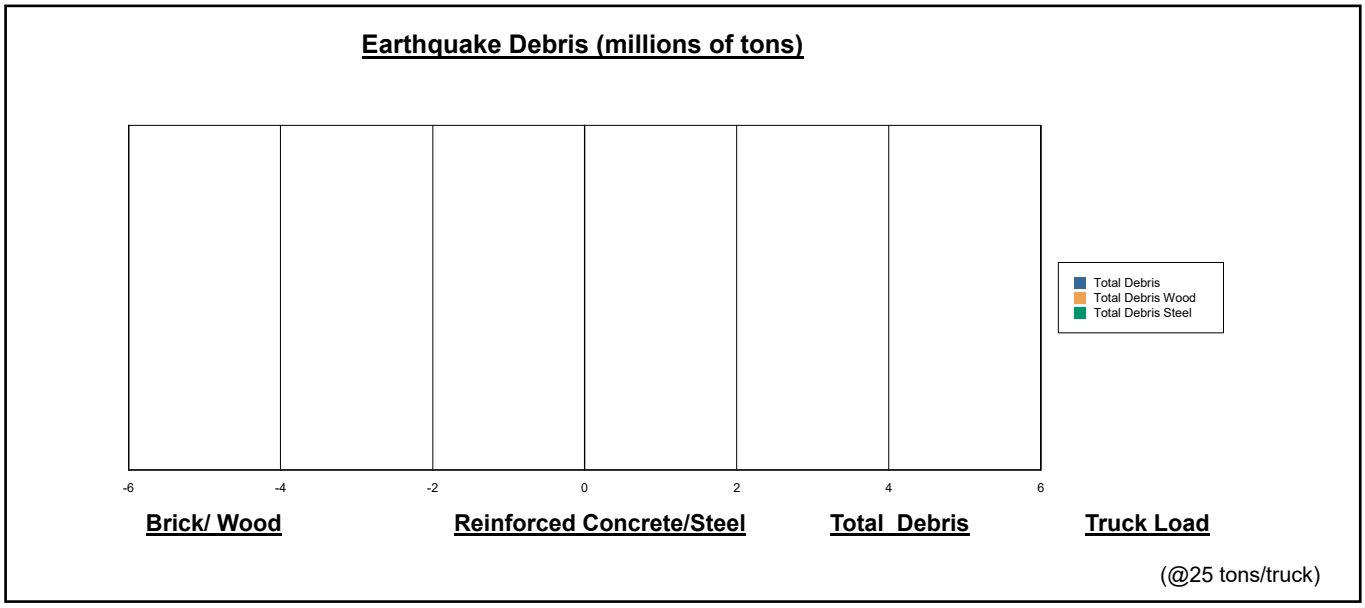
Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 0 ignitions that will burn about sq. mi % of the region's total area.) The model also estimates that the fires will displace about 0 people and burn about 0 (millions of dollars) of building value.

Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of tons of debris will be generated. Of the total amount, Brick/Wood comprises % of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



Social Impact

Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates households to be displaced due to the earthquake. Of these, people (out of a total population of 863,420) will seek temporary shelter in public shelters.

Displaced Households/ Persons Seeking Short Term Public Shelter



Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake

Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	0.00	0.00	0.00	0.00
	Commuting	0.00	0.00	0.00	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.00	0.00	0.00	0.00
	Other-Residential	0.04	0.00	0.00	0.00
	Single Family	0.15	0.02	0.00	0.00
	Total	**0**	**0**	**0**	**0**
2 PM	Commercial	0.13	0.01	0.00	0.00
	Commuting	0.00	0.00	0.00	0.00
	Educational	0.04	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.01	0.00	0.00	0.00
	Other-Residential	0.01	0.00	0.00	0.00
	Single Family	0.03	0.00	0.00	0.00
	Total	**0**	**0**	**0**	**0**
5 PM	Commercial	0.09	0.01	0.00	0.00
	Commuting	0.00	0.00	0.00	0.00
	Educational	0.01	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.01	0.00	0.00	0.00
	Other-Residential	0.02	0.00	0.00	0.00
	Single Family	0.06	0.01	0.00	0.00
	Total	**0**	**0**	**0**	**0**

Economic Loss

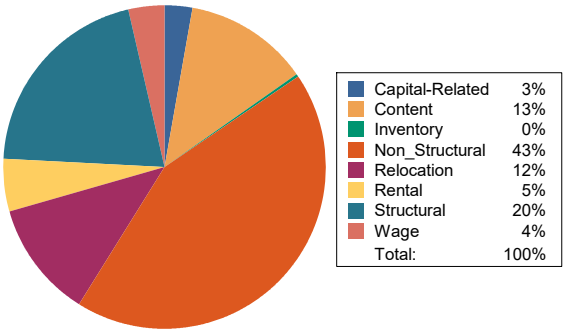
The total economic loss estimated for the earthquake is 0.81 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 0.81 (millions of dollars); 23 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 68 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.

Earthquake Losses by Loss Type ($ millions)



Earthquake Losses by Occupancy Type ($ millions)

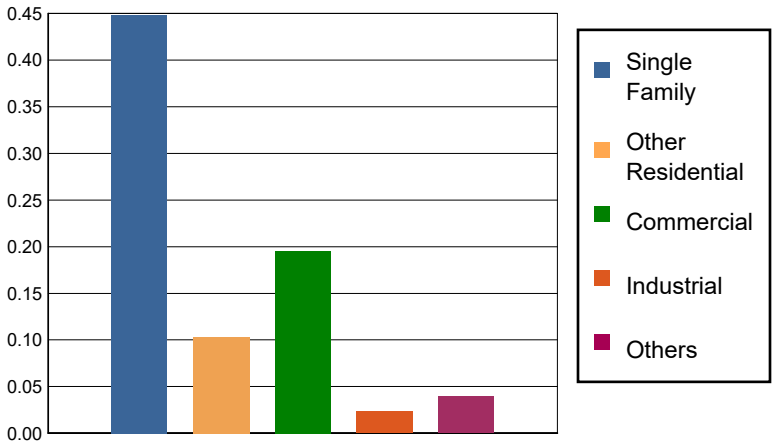


Table 11: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	0.0015	0.0246	0.0004	0.0025	0.0290
	Capital-Related	0.0000	0.0006	0.0202	0.0002	0.0004	0.0214
	Rental	0.0163	0.0088	0.0170	0.0002	0.0008	0.0431
	Relocation	0.0575	0.0063	0.0225	0.0017	0.0070	0.0950
	Subtotal	**0.0738**	**0.0172**	**0.0843**	**0.0025**	**0.0107**	**0.1885**
Capital Stock Losses							
	Structural	0.1089	0.0167	0.0289	0.0041	0.0070	0.1656
	Non_Structural	0.2142	0.0569	0.0559	0.0101	0.0151	0.3522
	Content	0.0514	0.0124	0.0256	0.0059	0.0067	0.1020
	Inventory	0.0000	0.0000	0.0006	0.0009	0.0000	0.0015
	Subtotal	**0.3745**	**0.0860**	**0.1110**	**0.0210**	**0.0288**	**0.6213**
	Total	**0.45**	**0.10**	**0.20**	**0.02**	**0.04**	**0.81**

Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

Table 12: Transportation System Economic Losses

(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	3555.7797	0.0000	0.00
	Bridges	2331.8048	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Subtotal	**5887.5845**	**0.0000**	
Railways	Segments	177.9848	0.0000	0.00
	Bridges	205.3125	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	2.6630	0.0000	0.00
	Subtotal	**385.9603**	**0.0000**	
Light Rail	Segments	93.7422	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	58.4000	0.0000	0.00
	Subtotal	**152.1422**	**0.0000**	
Bus	Facilities	4.3800	0.0000	0.00
	Subtotal	**4.3800**	**0.0000**	
Ferry	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Port	Facilities	2.8835	0.0000	0.00
	Subtotal	**2.8835**	**0.0000**	
Airport	Facilities	22.9950	0.0000	0.00
	Runways	369.8791	0.0000	0.00
	Subtotal	**392.8741**	**0.0000**	
	Total	**6,825.82**	**0.00**	

Table 13: Utility System Economic Losses

(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	98.9010	0.0000	0.00
	Distribution Lines	255.8812	0.0000	0.00
	Subtotal	**354.7822**	**0.0000**	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	4175.6000	0.0000	0.00
	Distribution Lines	153.5287	0.0000	0.00
	Subtotal	**4329.1287**	**0.0000**	
Natural Gas	Pipelines	5.1380	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	102.3525	0.0000	0.00
	Subtotal	**107.4905**	**0.0000**	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Electrical Power	Facilities	1914.4250	0.0000	0.00
	Subtotal	**1914.4250**	**0.0000**	
Communication	Facilities	0.6930	0.0000	0.00
	Subtotal	**0.6930**	**0.0000**	
	Total	**6,706.52**	**0.00**	

Appendix A: County Listing for the Region

Prince George's,MD

Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
Maryland					
	Prince George's	863,420	89,693	19,788	109,482
Total Region		**863,420**	**89,693**	**19,788**	**109,482**

Hazus Quick Assessment Report

Estimated Economic Loss ($ Billions)

Category	Description	Range
General Building Stock	Building Damage	< 0.1
	Building Contents	< 0.1
	Business Interruption	< 0.1
Infrastructure	Lifelines Damage	
	Total	< 0.1

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected				
Minor				
Major				
Destroyed				
Total				

Estimated Casualties : Night Time

Severity Level	Description	# Persons
Level 1	Medical Aid	< 10
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

Estimated Shelter Needs

Type	Households	People
Displaced Households	< 1.0	< 1.0
Public Shelter	0	0

Comments :

**Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.*

Disclaimer:

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, goetechnical, and observed ground motion data.

Earthquake Information

Location :

Origin Time:

Magnitude : 0.00

Epicenter Latitude/Longitude :

/

Depth & Type : /P

Name :
NA

Ground Motion /Attenuation :

Maximum PGA:

Information Sources:

Comments :

Population and Building Exposure (2010 D&B) (2010 Census)

Population: 863,420

Building Exposure : ($ Millions)

Residential	89,693
Commercial	13,563
Other	6,225
Total	109,481

Counties :
- Prince George's,MD

Major Metro Area :

Time of report: October 19, 2022 11:53 am

Hazus Quick Assessment Report

Estimated Economic Loss ($ Billions)

Category	Description	Range
General Building Stock	Building Damage	< 0.1
	Building Contents	< 0.1
	Business Interruption	< 0.1
Infrastructure	Lifelines Damage	
	Total	< 0.1

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected				
Minor				
Major				
Destroyed				
Total				

Estimated Casualties : Day Time

Severity Level	Description	# Persons
Level 1	Medical Aid	< 10
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

Estimated Shelter Needs

Type	Households	People
Displaced Households	< 1.0	< 1.0
Public Shelter	0	0

Comments :

**Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.*

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Earthquake Information

Location :

Origin Time:

Magnitude : 0.00

Epicenter Latitude/Longitude :

/

Depth & Type : /P

Name :
NA

Ground Motion /Attenuation :

Maximum PGA:

Information Sources:

Comments :

Population and Building Exposure (2010 D&B) (2010 Census)

Population: 863,420

Building Exposure : ($ Millions)

Residential	89,693
Commercial	13,563
Other	6,225
Total	109,481

Counties :
- Prince George's,MD

Major Metro Area :

Time of report: October 19, 2022 11:53 am

Hazus Quick Assessment Report

Estimated Economic Loss ($ Billions)

Category	Description	Range
General Building Stock	Building Damage	< 0.1
	Building Contents	< 0.1
	Business Interruption	< 0.1
Infrastructure	Lifelines Damage	
	Total	< 0.1

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected				
Minor				
Major				
Destroyed				
Total				

Estimated Casualties : Commute Time

Severity Level	Description	# Persons
Level 1	Medical Aid	< 10
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

Estimated Shelter Needs

Type	Households	People
Displaced Households	< 1.0	< 1.0
Public Shelter	0	0

Comments :

**Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.*

Disclaimer:

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, goetechnical, and observed ground motion data.

Earthquake Information

Location :

Origin Time:

Magnitude : 0.00

Epicenter Latitude/Longitude :

/

Depth & Type : /P

Name :
NA

Ground Motion /Attenuation :

Maximum PGA:

Information Sources:

Comments :

Population and Building Exposure (2010 D&B) (2010 Census)

Population: 863,420

Building Exposure : ($ Millions)

Residential	89,693
Commercial	13,563
Other	6,225
Total	109,481

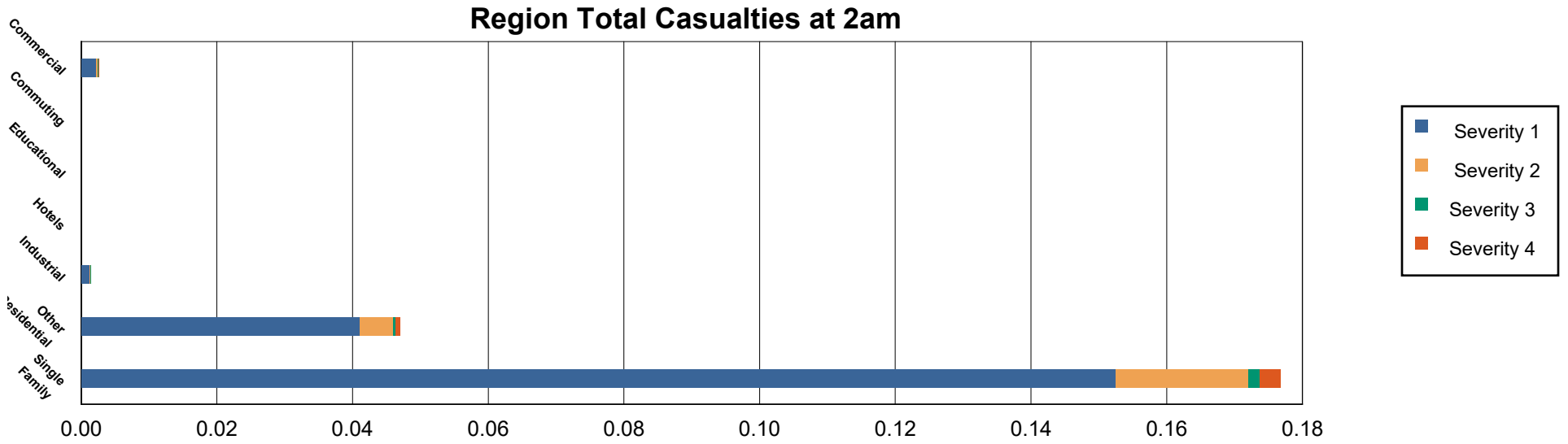
Counties :
- Prince George's,MD

Major Metro Area :

Time of report: October 19, 2022 11:53 am

Casualties Summary Report at 2 AM

October 19, 2022



	Population	Injury Severity Level				
		Severity 1	Severity 2	Severity 3	Severity 4	total
Maryland						
Prince George's						
Other-Residential		0	0	0	0	0
Industrial		0	0	0	0	0
Commuting		0	0	0	0	0
Single Family		0	0	0	0	0

Study Region : pg_EQ_prob

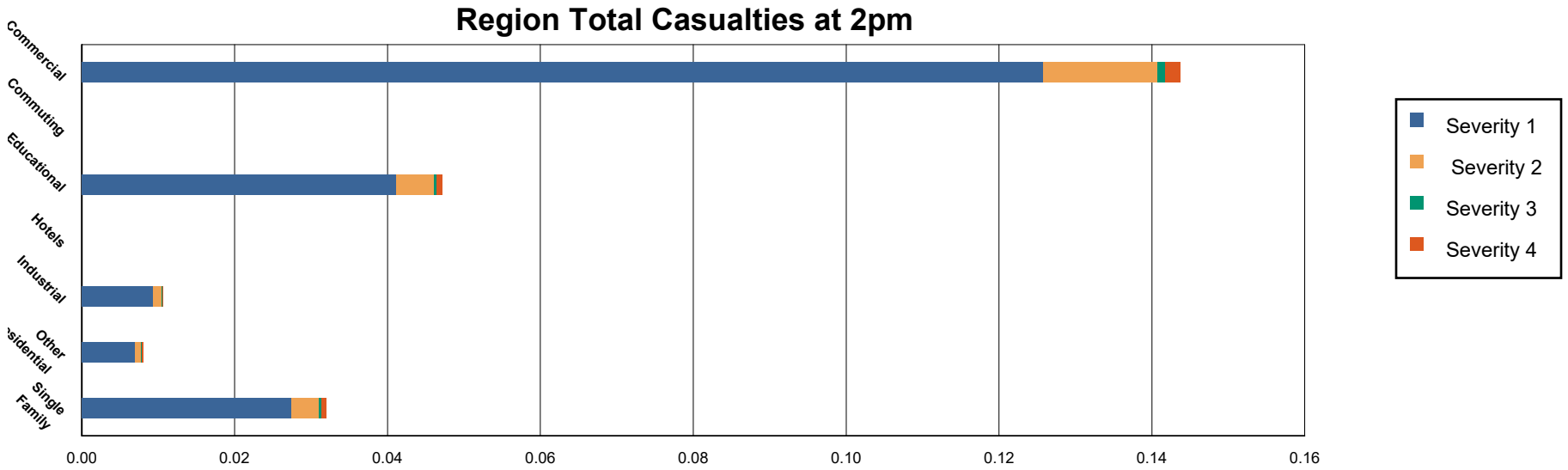
Scenario : EQ Annual Probabalistic

		Injury Severity Level				
	Population	Severity 1	Severity 2	Severity 3	Severity 4	total
Commercial		0	0	0	0	0
Hotels		0	0	0	0	0
Educational		0	0	0	0	0
Total Prince George's	863,420	**0**	**0**	**0**	**0**	**0**
Total Maryland		**0**	**0**	**0**	**0**	**0**
Region Total		**0**	**0**	**0**	**0**	**0**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Casualties Summary Report at 2 PM

October 19, 2022



	Population	Severity 1 #	Severity 2 #	Severity 3 #	Severity 4 #	Total #
Maryland						
Prince George's						
Other-Residential		0	0	0	0	0
Industrial		0	0	0	0	0

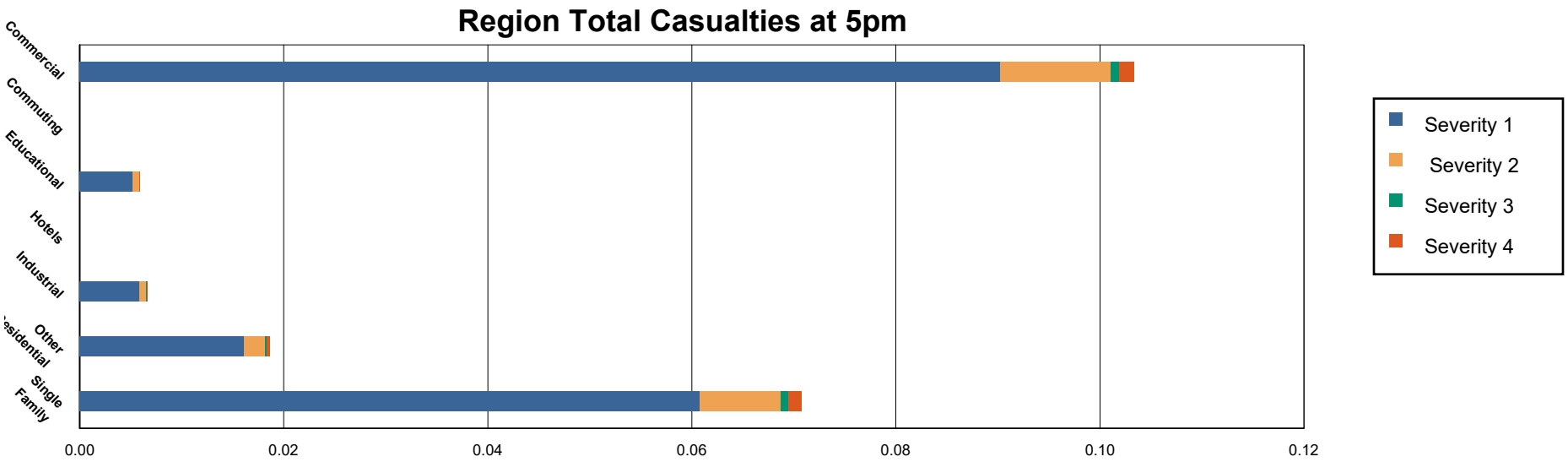
Study Region : pg_EQ_prob
Scenario : EQ Annual Probabalistic

	Population	Severity 1	Severity 2	Severity 3	Severity 4	Total
		#	#	#	#	#
Commuting		0	0	0	0	0
Single Family		0	0	0	0	0
Commercial		0	0	0	0	0
Hotels		0	0	0	0	0
Educational		0	0	0	0	0
Total Prince George's	863,420	**0**	**0**	**0**	**0**	**0**
Total Maryland		**0**	**0**	**0**	**0**	**0**
Region Total		**0**	**0**	**0**	**0**	**0**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Casualties Summary Report at 5 PM

October 19, 2022



		Injury Severity Level				
	Population	Severity 1	Severity 2	Severity 3	Severity 4	total
Maryland						
Prince George's						
Other-Residential		0	0	0	0	0
Industrial		0	0	0	0	0

Study Region : pg_EQ_prob

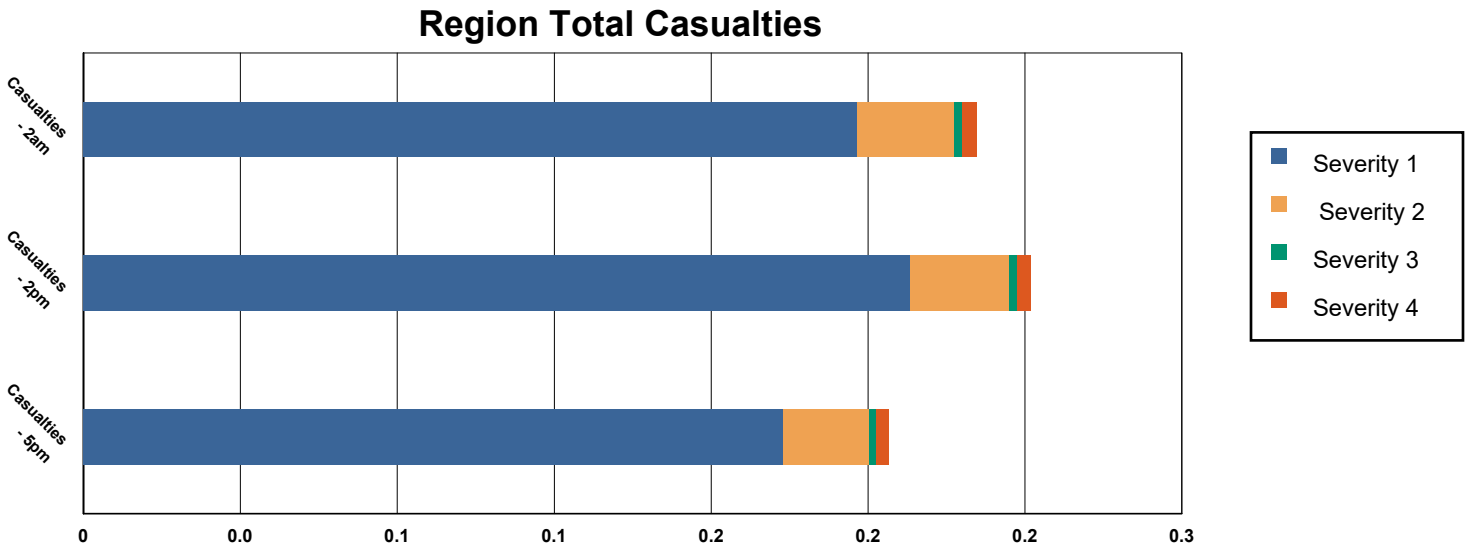
Scenario : EQ Annual Probabalistic

	Population	Injury Severity Level				
		Severity 1	Severity 2	Severity 3	Severity 4	total
Commuting		0	0	0	0	0
Single Family		0	0	0	0	0
Commercial		0	0	0	0	0
Hotels		0	0	0	0	0
Educational		0	0	0	0	0
Total Prince George's	863,420	**0**	**0**	**0**	**0**	**0**
Total Maryland		**0**	**0**	**0**	**0**	**0**
Region Total		**0**	**0**	**0**	**0**	**0**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Casualties Summary Report

October 19, 2022



	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
Maryland					
Prince George's					
Casualties - 2am					
Single Family	0	0	0	0	0
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commercial	0	0	0	0	0
Commuting	0	0	0	0	0
Single Family	0	0	0	0	0
Hotels	0	0	0	0	0
Educational	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0

Study Region : pg_EQ_prob

Scenario : EQ Annual Probabalistic

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
Maryland					
Prince George's					
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Hotels	0	0	0	0	0
Educational	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Region Total	NA	NA	NA	NA	NA

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Shelter Summary Report

October 19, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's		
Total		
Region Total		

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Study Region : pg_EQ_prob

Scenario : EQ Annual Probabalistic

Debris Summary Report: 10 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0**	**0**

Debris Summary Report: 20 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0**	**0**

Debris Summary Report: 50 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	331	267	598
Total	**0**	**0**	**331**	**267**	**598**
Study Region Total	**0**	**0**	**331**	**267**	**598**

Debris Summary Report: 100 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	327	0	2,072	1,951	4,350
Total	**327**	**0**	**2,072**	**1,951**	**4,350**
Study Region Total	**327**	**0**	**2,072**	**1,951**	**4,350**

Debris Summary Report: 200 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	3,377	0	5,692	5,024	14,093
Total	**3,377**	**0**	**5,692**	**5,024**	**14,093**
Study Region Total	**3,377**	**0**	**5,692**	**5,024**	**14,093**

Debris Summary Report: 500 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	15,120	0	18,512	15,248	48,880
Total	**15,120**	**0**	**18,512**	**15,248**	**48,880**
Study Region Total	**15,120**	**0**	**18,512**	**15,248**	**48,880**

Debris Summary Report: 1000 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	30,965	3	29,844	23,861	84,673
Total	**30,965**	**3**	**29,844**	**23,861**	**84,673**
Study Region Total	**30,965**	**3**	**29,844**	**23,861**	**84,673**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Direct Economic Losses For Buildings: Annualized Losses

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	1,590	338	1	0.00	73	5	8	31	2,047
Total	**1,590**	**338**	**1**	**0.00**	**73**	**5**	**8**	**31**	**2,047**
Study Region Total	**1,590**	**338**	**1**	**0.00**	**73**	**5**	**8**	**31**	**2,047**

Direct Economic Losses For Buildings: 10 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	0	0	0	0.00	0	0	0	0	0
Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**

Direct Economic Losses For Buildings: 20 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	0	0	0	0.00	0	0	0	0	0
Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**

Direct Economic Losses For Buildings: 50 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	1,116	922	0	0.00	0	0	0	0	2,039
Total	**1,116**	**922**	**0**	**0.00**	**0**	**0**	**0**	**0**	**2,039**
Study Region Total	**1,116**	**922**	**0**	**0.00**	**0**	**0**	**0**	**0**	**2,039**

Direct Economic Losses For Buildings: 100 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	20,562	3,786	0	0.03	9	0	0	0	24,356
Total	**20,562**	**3,786**	**0**	**0.03**	**9**	**0**	**0**	**0**	**24,356**
Study Region Total	**20,562**	**3,786**	**0**	**0.03**	**9**	**0**	**0**	**0**	**24,356**

Direct Economic Losses For Buildings: 200 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	62,036	10,529	0	0.09	152	0	0	62	72,780
Total	**62,036**	**10,529**	**0**	**0.09**	**152**	**0**	**0**	**62**	**72,780**
Study Region Total	**62,036**	**10,529**	**0**	**0.09**	**152**	**0**	**0**	**62**	**72,780**

Direct Economic Losses For Buildings: 500 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	183,949	29,690	27	0.28	6,608	0	0	3,081	223,355
Total	**183,949**	**29,690**	**27**	**0.28**	**6,608**	**0**	**0**	**3,081**	**223,355**
Study Region Total	**183,949**	**29,690**	**27**	**0.28**	**6,608**	**0**	**0**	**3,081**	**223,355**

Direct Economic Losses For Buildings: 1000 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	309,630	51,213	183	0.47	11,284	675	586	6,072	379,643
Total	**309,630**	**51,213**	**183**	**0.47**	**11,284**	**675**	**586**	**6,072**	**379,643**
Study Region Total	**309,630**	**51,213**	**183**	**0.47**	**11,284**	**675**	**586**	**6,072**	**379,643**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Study Region : pg_Hur_prob_north

Scenario : Probabilistic

Shelter Summary Report: 10 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 20 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 50 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 100 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 200 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 500 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 1000 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	2	2
Total	**2**	**2**
Study Region Total	**2**	**2**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Quick Assessment Report

November 30, 2022

Study Region : pg_Hur_prob_north

Scenario : Probabilistic

Regional Statistics

Area (Square Miles)	189
Number of Census Tracts	131
Number of People in the Region	538,419

General Building Stock

Occupancy	*Building Count*	*Dollar Exposure ($ K)*
Residential	134,304	53,046,000
Commercial	10,254	9,194,217
Other	4,674	4,149,696
Total	149,232	66,389,913

Scenario Results

Number of Residential Buildings Damaged

Return Period	*Minor*	*Moderate*	*Severe*	*Destruction*	*Total*
10	0	0	0	0	0
20	0	0	0	0	0
50	56	0	0	0	56
100	128	2	0	0	131
200	627	28	0	0	656
500	3,718	282	0	0	4,001
1000	8,357	877	2	7	9,243

Number of Buildings Damaged

Return Period	*Minor*	*Moderate*	*Severe*	*Destruction*	*Total*
10	0	0	0	0	0
20	0	0	0	0	0
50	89	0	0	0	90
100	174	2	0	0	176
200	714	30	0	0	744
500	3,977	299	1	0	4,278
1000	8,907	937	8	7	9,859

Shelter Requirements

Return Period	*Displaced Households (#Households)*	*Short Term Shelter (#People)*
10	0	0
20	0	0
50	0	0
100	0	0
200	0	0
500	0	0
1000	2	2

Economic Loss (x 1000)

	Property Damage (Capital Stock) Losses		***Business Interruption***
ReturnPeriod	***Residential***	***Total***	***(Income) Losses***
10	0	0	0
20	0	0	0
50	2,038	2,038	0
100	23,469	24,348	9
200	71,032	72,565	214
500	208,317	213,666	9,689
1000	346,433	361,026	18,617
Annualized	1,829	1,930	117

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 10-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 189.46 square miles and contains 131 census tracts. There are over 184 thousand households in the region and a total population of 538,419 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

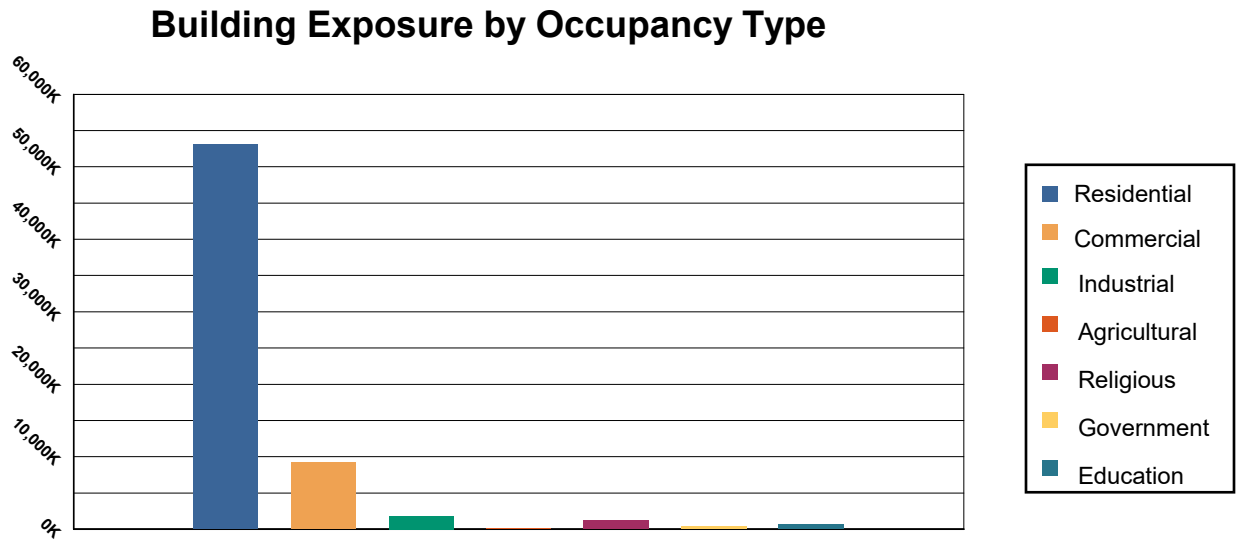


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	53,046,000	79.90%
Commercial	9,194,217	13.85%
Industrial	1,822,008	2.74%
Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 0 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

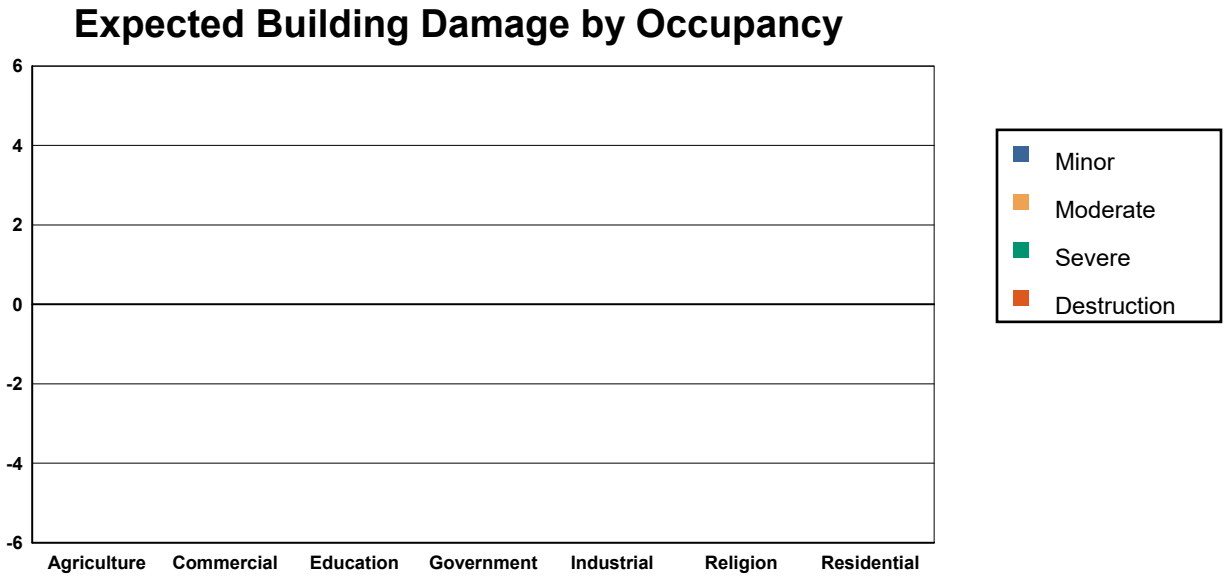


Table 2: Expected Building Damage by Occupancy : 10 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	295.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	10,254.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education	485.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government	302.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2,403.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Religion	1,189.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	134,304.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**149,232.00**		**0.00**		**0.00**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 10 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,696	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Masonry	40,665	100.00	0	0.00	0	0.00	0	0.00	0	0.00
MH	182	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	6,065	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	95,831	100.00	0	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

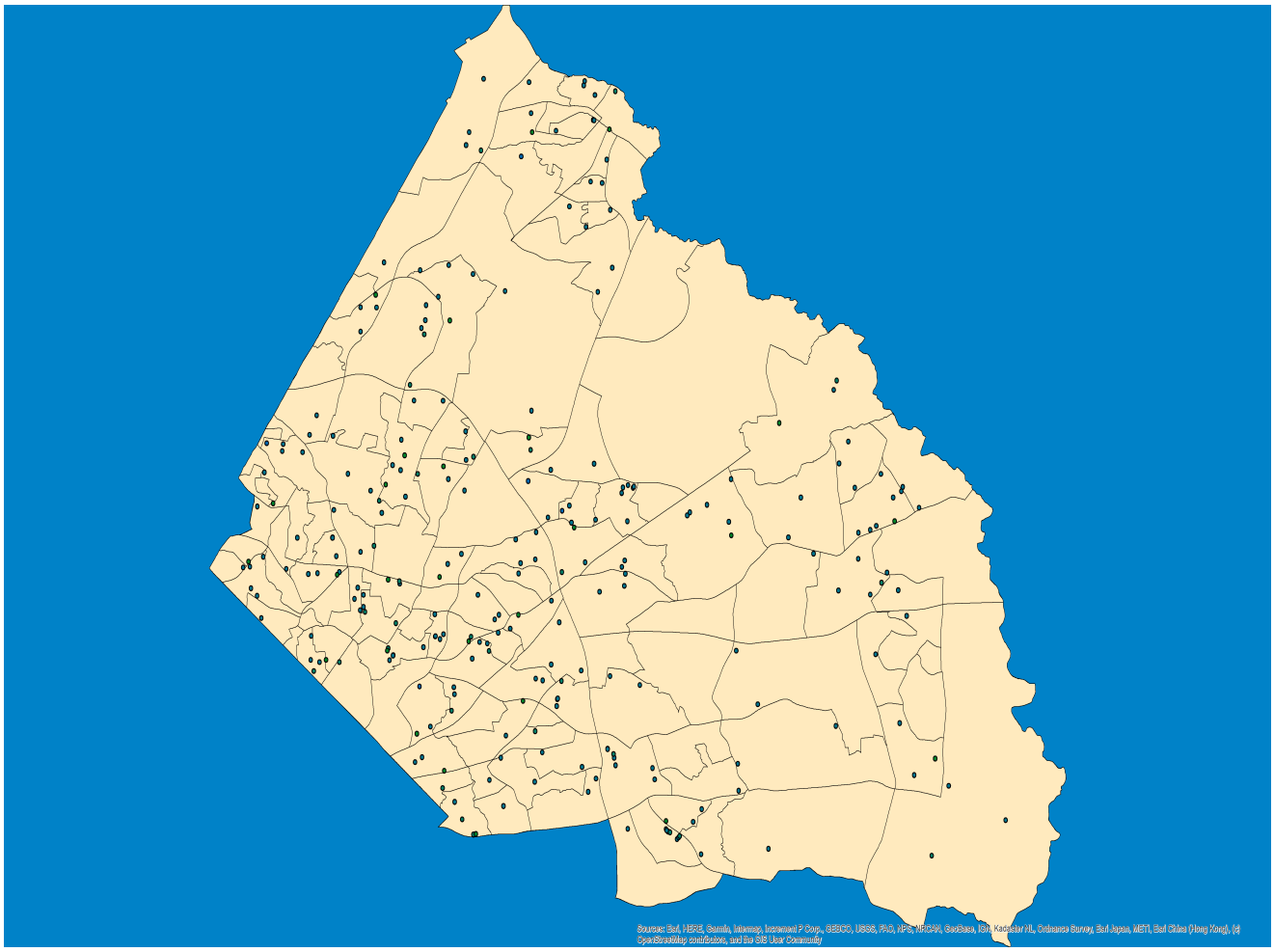
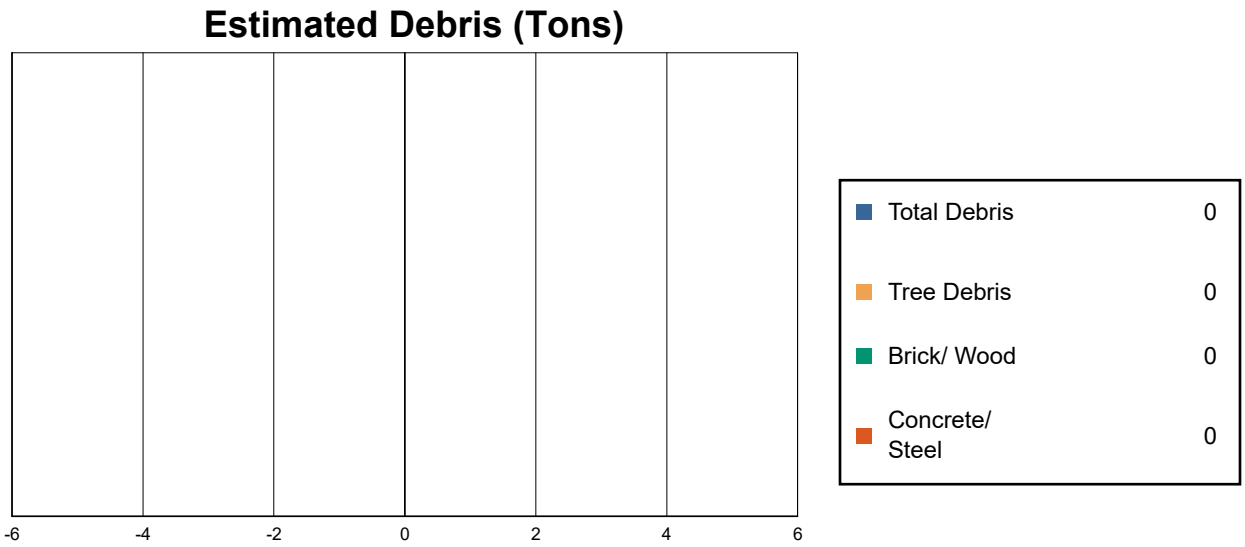


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

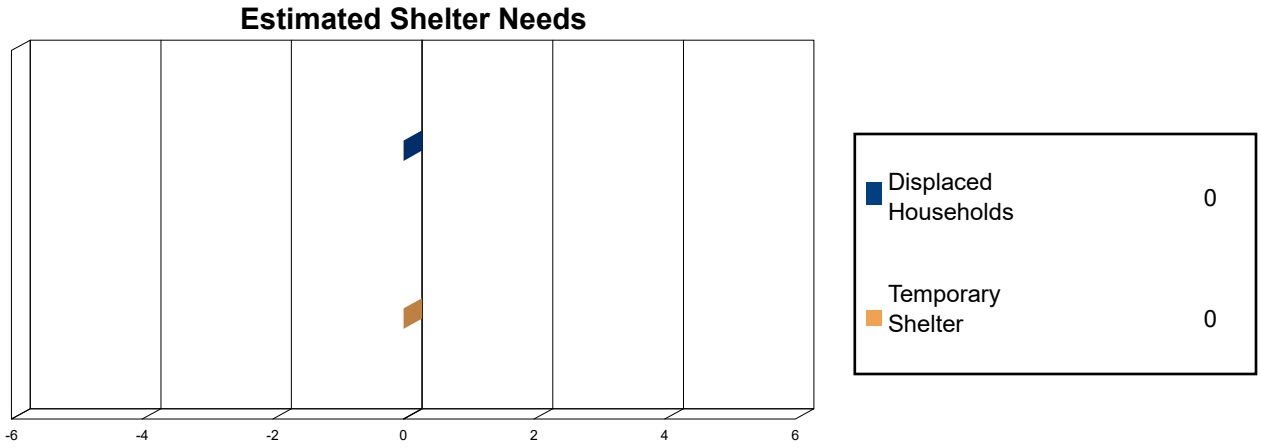


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0 tons of debris will be generated. Of the total amount, 0 tons (0%) is Other Tree Debris. Of the remaining 0 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 0 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

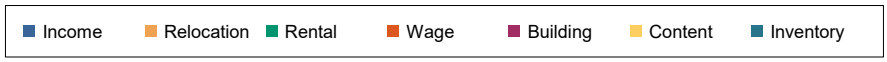
The total economic loss estimated for the hurricane is 0.0 million dollars, which represents 0.00 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 0 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 0% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

**Loss by Business Interruption Type (left)
and Building Damage Type (right)**



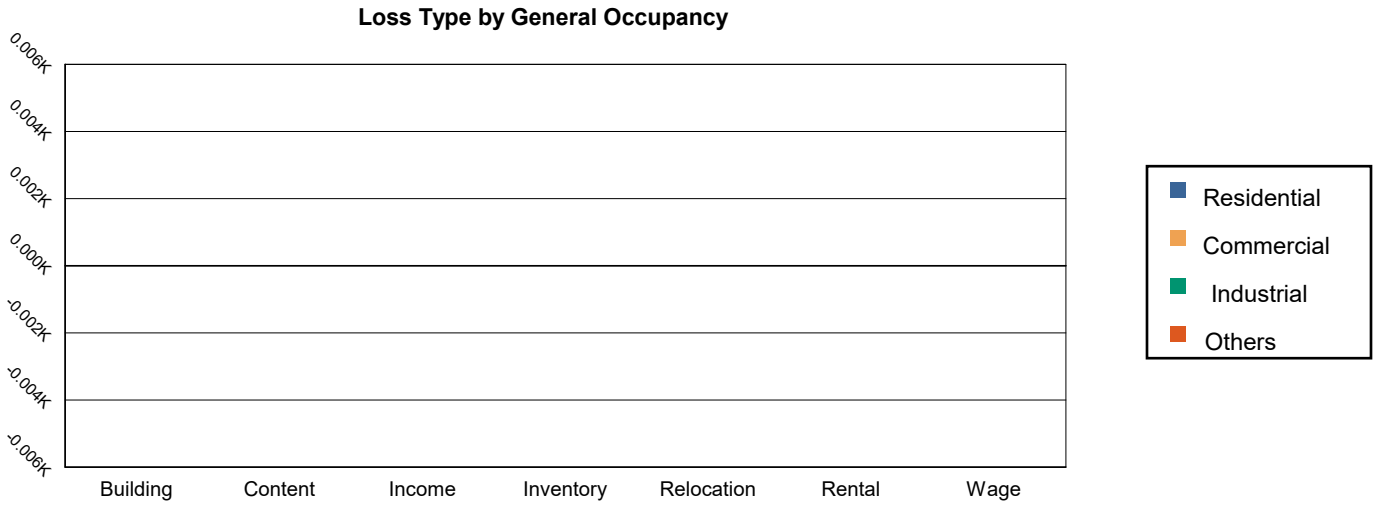


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	0.00	0.00	0.00	0.00	0.00
	Content	0.00	0.00	0.00	0.00	0.00
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.00	0.00	0.00	0.00	0.00
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Total

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 20-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 189.46 square miles and contains 131 census tracts. There are over 184 thousand households in the region and a total population of 538,419 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

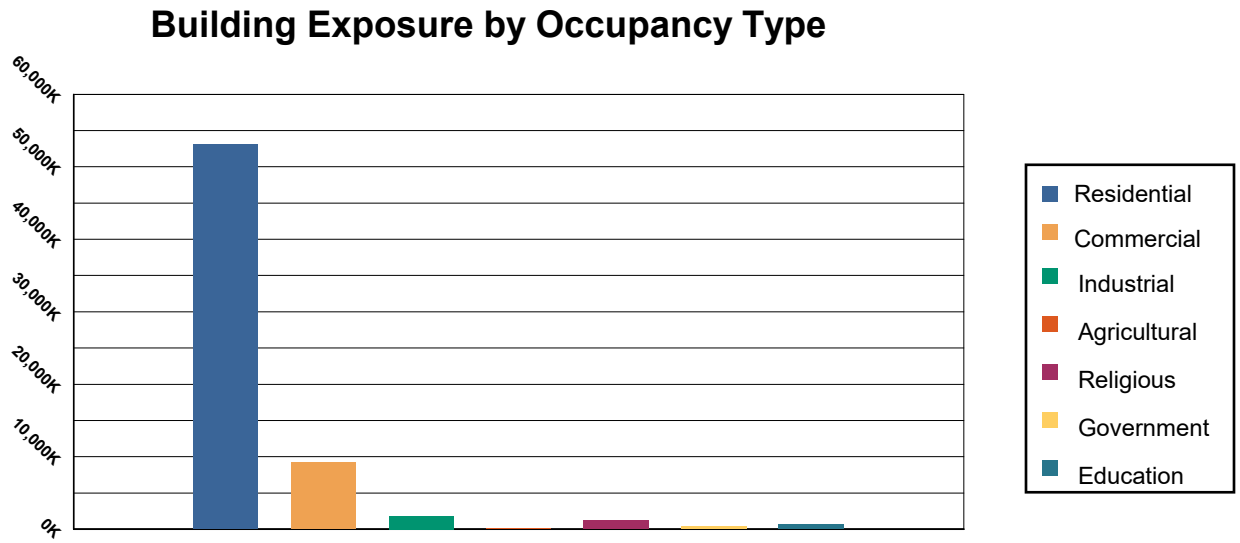


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	53,046,000	79.90%
Commercial	9,194,217	13.85%
Industrial	1,822,008	2.74%
Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 0 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

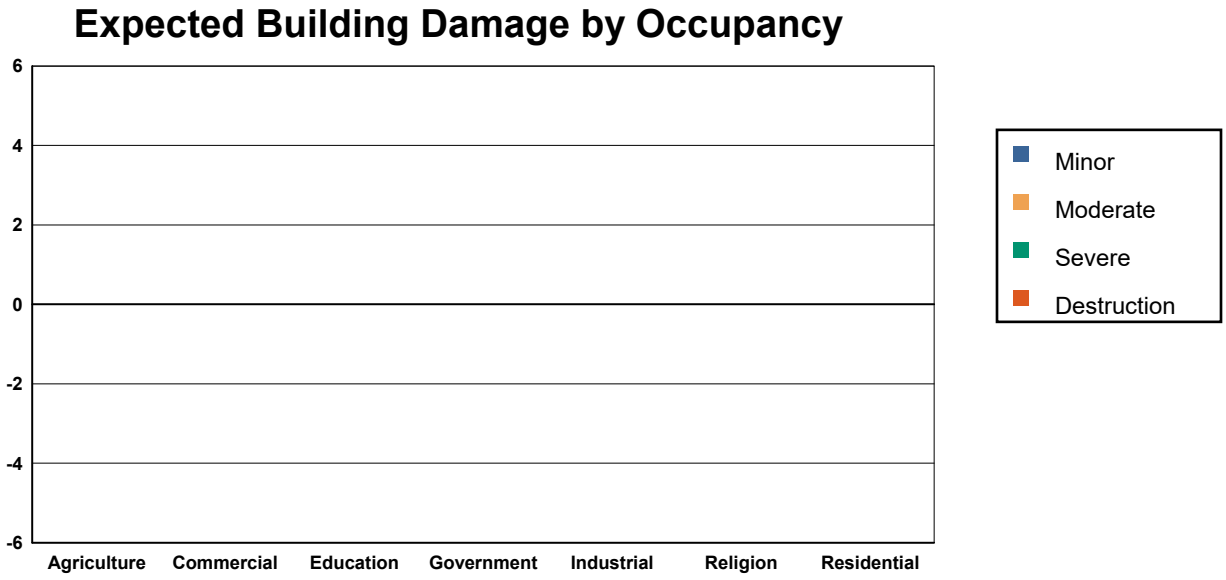


Table 2: Expected Building Damage by Occupancy : 20 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	295.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	10,254.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education	485.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government	302.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2,403.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Religion	1,189.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	134,304.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**149,232.00**		**0.00**		**0.00**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 20 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,696	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Masonry	40,665	100.00	0	0.00	0	0.00	0	0.00	0	0.00
MH	182	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	6,065	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	95,831	100.00	0	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

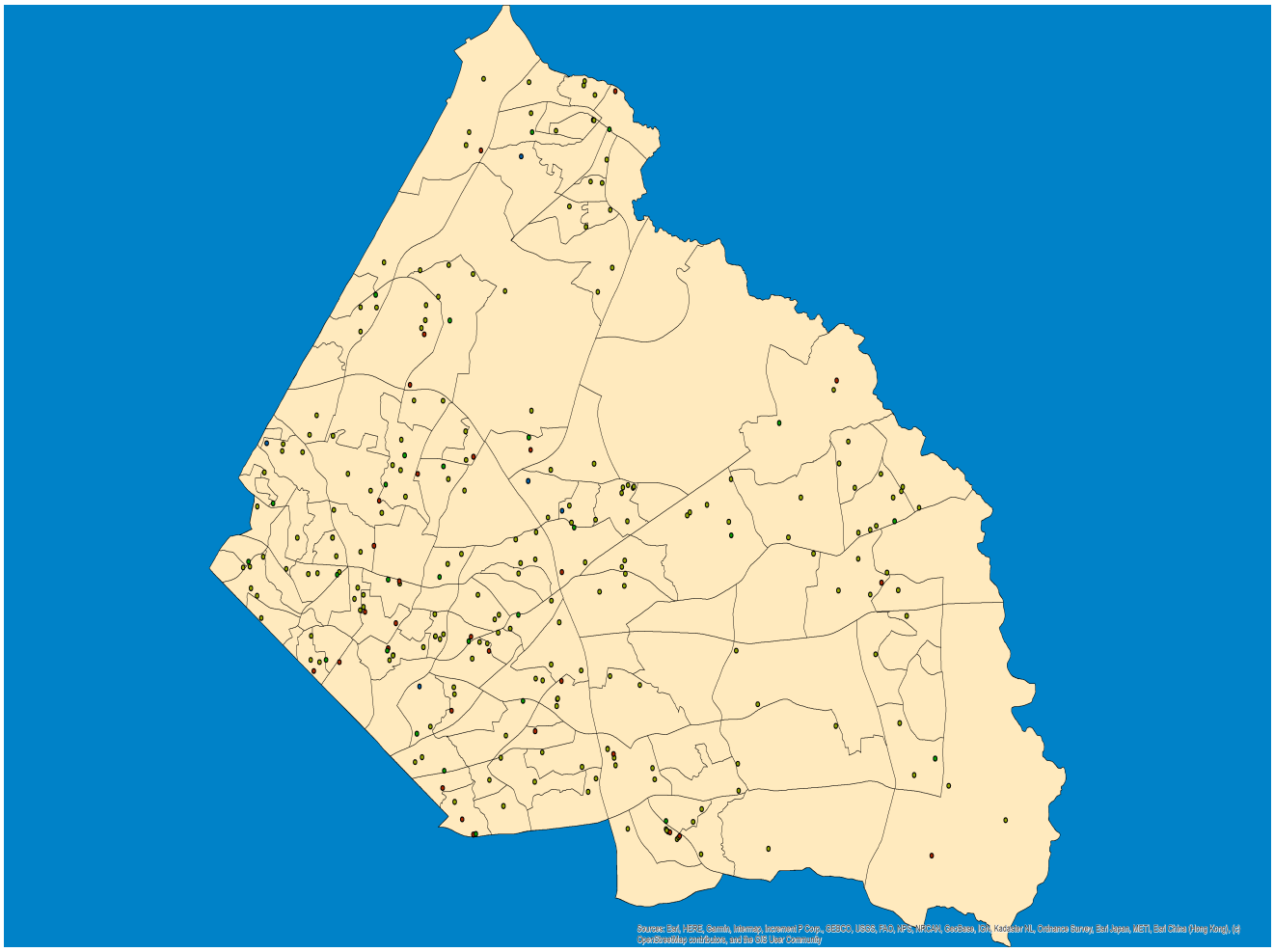
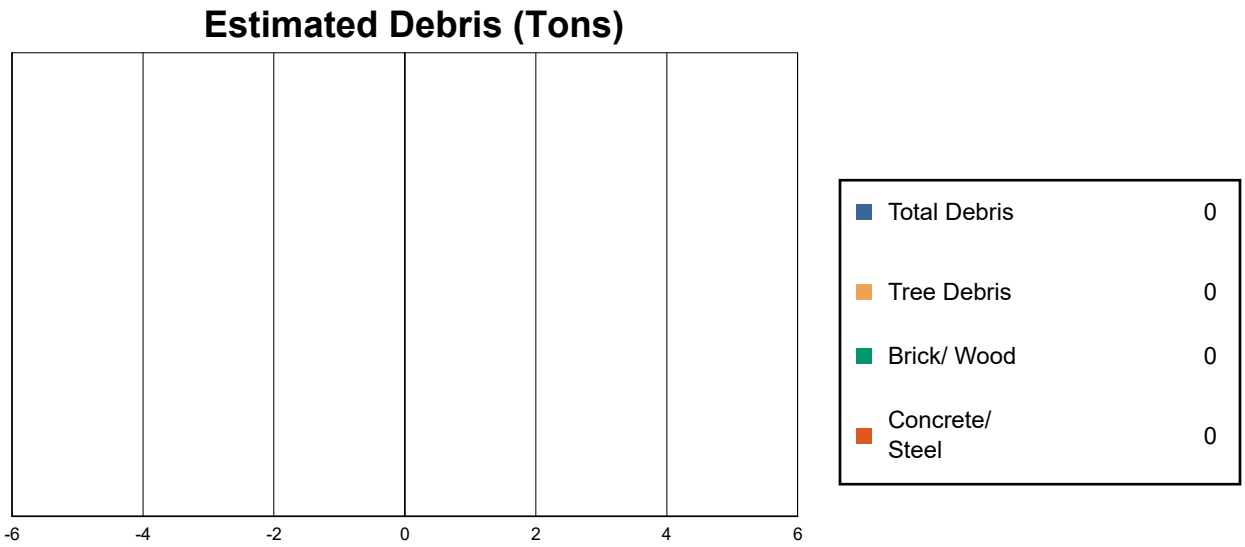


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

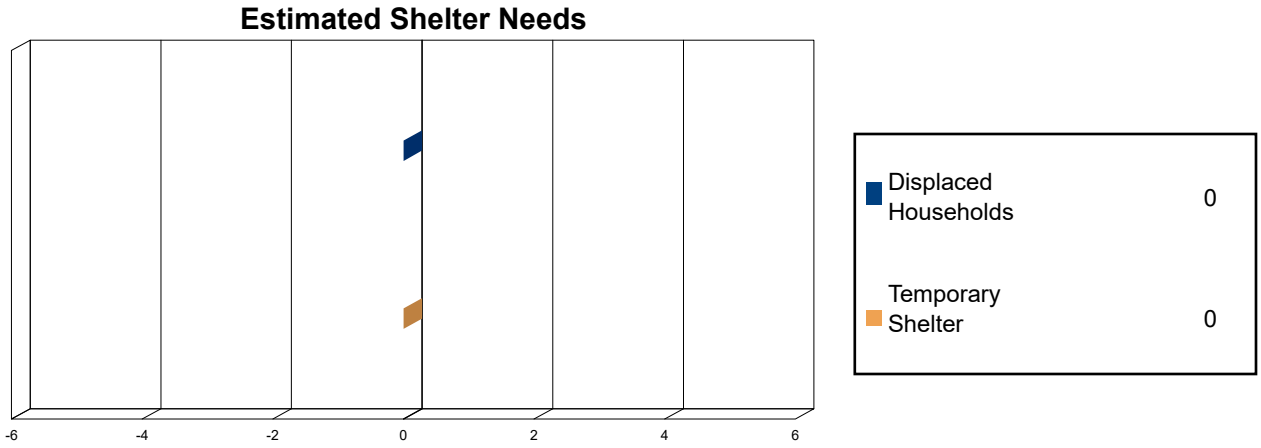


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0 tons of debris will be generated. Of the total amount, 0 tons (0%) is Other Tree Debris. Of the remaining 0 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 0 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

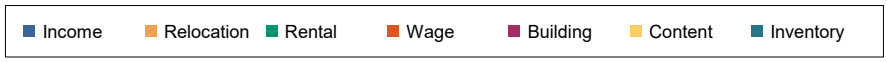
The total economic loss estimated for the hurricane is 0.0 million dollars, which represents 0.00 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 0 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 0% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

**Loss by Business Interruption Type (left)
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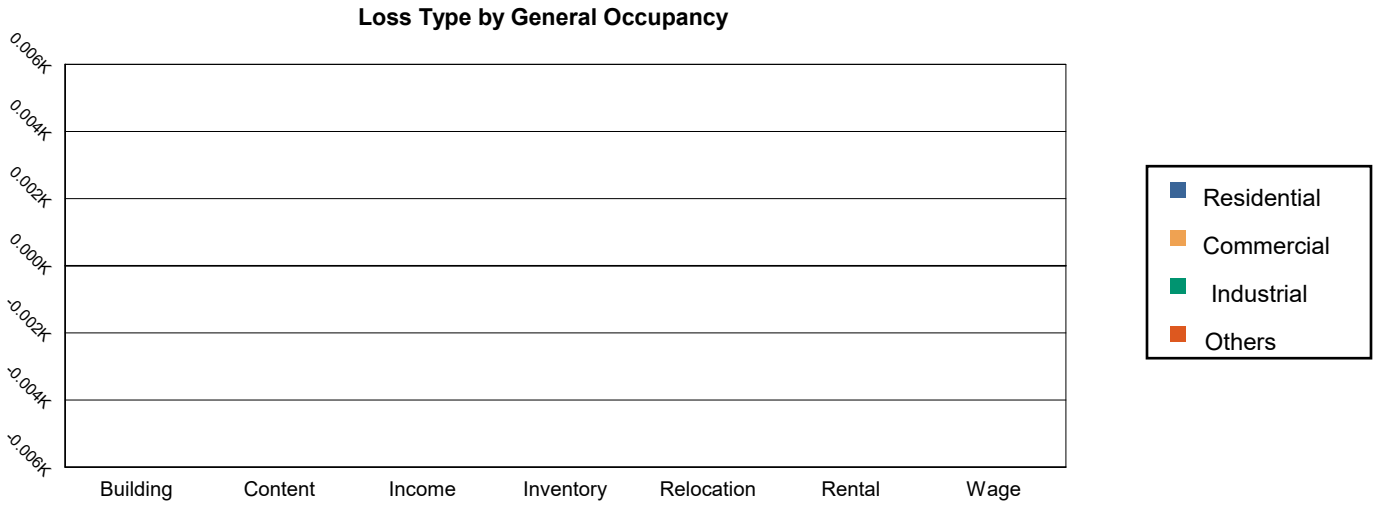


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Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	0.00	0.00	0.00	0.00	0.00
	Content	0.00	0.00	0.00	0.00	0.00
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.00	0.00	0.00	0.00	0.00
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Total

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
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Prince George's	538,419	53,046,000	13,343,913	66,389,913
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Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 50-year Return Period

Print Date: Wednesday, November 30, 2022

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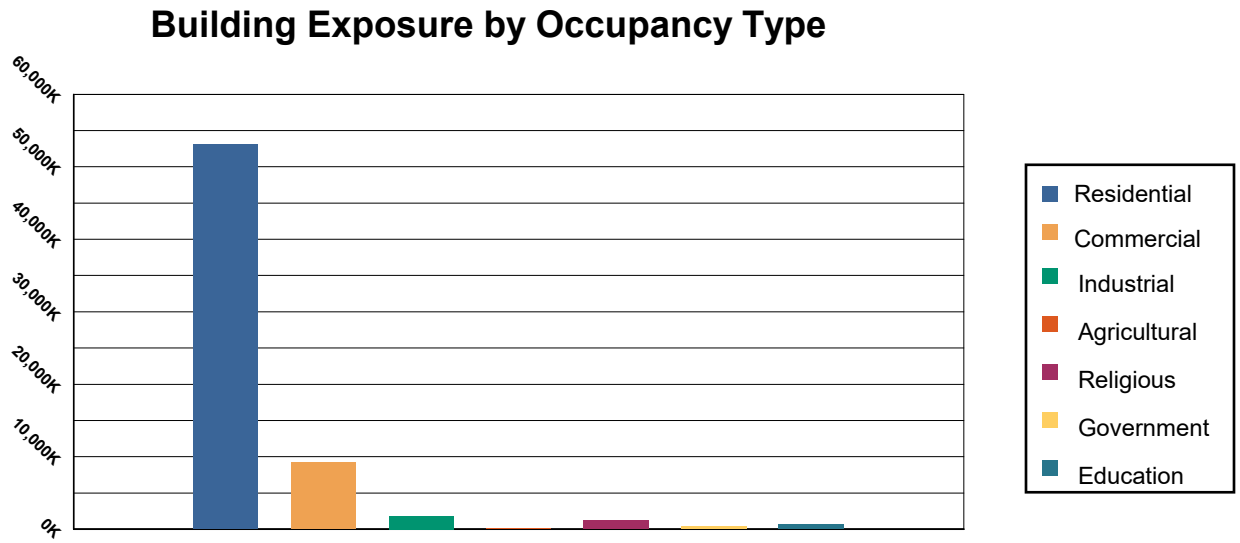


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For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

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General Building Stock Damage

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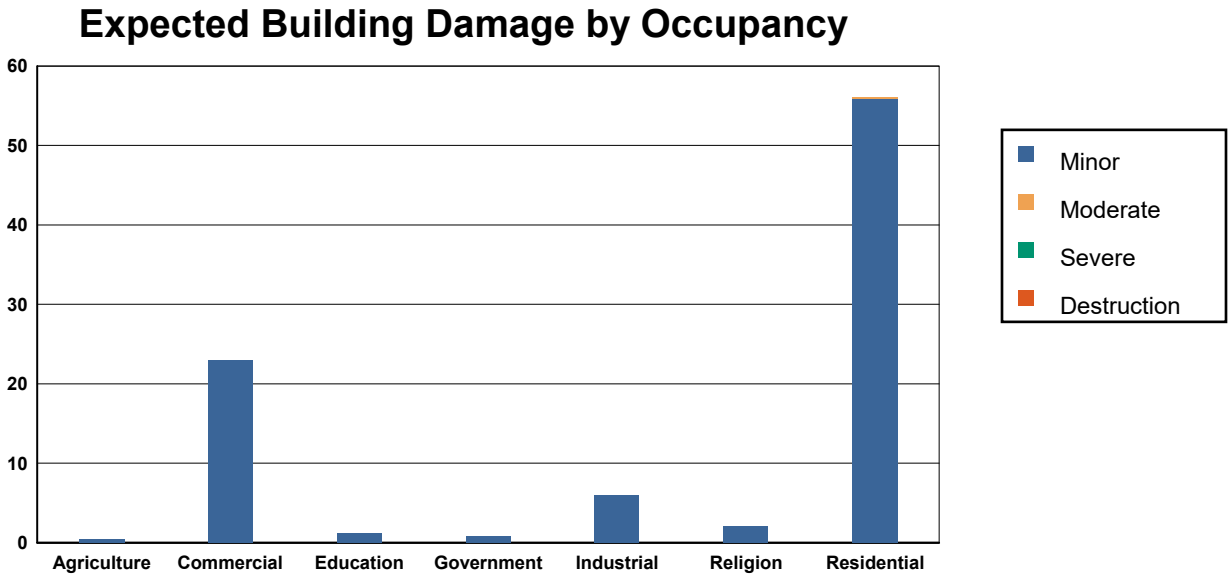


Table 2: Expected Building Damage by Occupancy : 50 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	294.55	99.85	0.45	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	10,231.00	99.78	23.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Education	483.80	99.75	1.20	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Government	301.22	99.74	0.78	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2,396.96	99.75	6.04	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Religion	1,186.94	99.83	2.06	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Residential	134,247.95	99.96	55.89	0.04	0.15	0.00	0.00	0.00	0.00	0.00
Total	**149,142.41**		**89.44**		**0.15**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 50 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,691	99.68	5	0.32	0	0.00	0	0.00	0	0.00
Masonry	40,604	99.85	61	0.15	0	0.00	0	0.00	0	0.00
MH	182	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	6,048	99.73	17	0.27	0	0.00	0	0.00	0	0.00
Wood	95,830	100.00	1	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

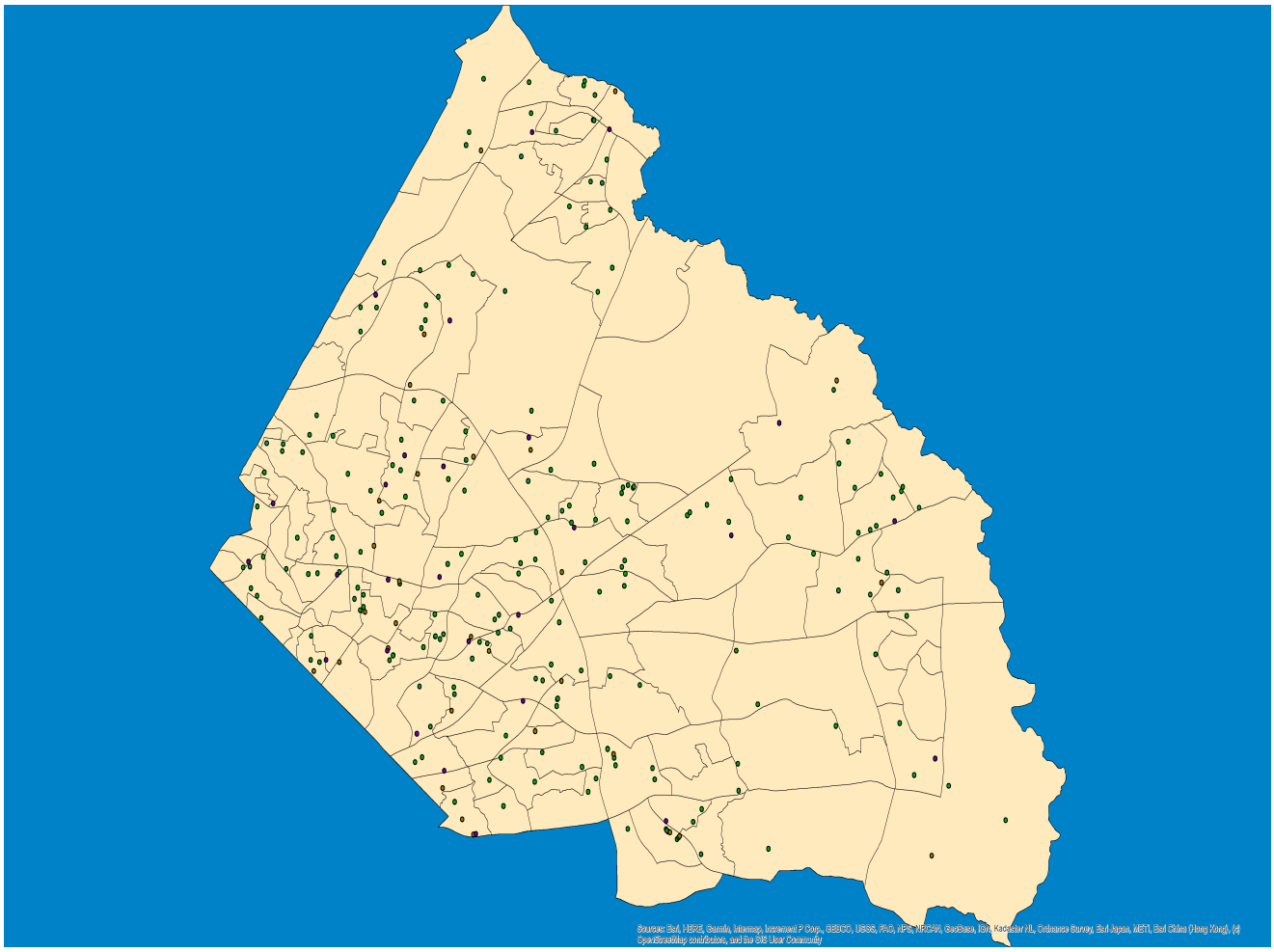
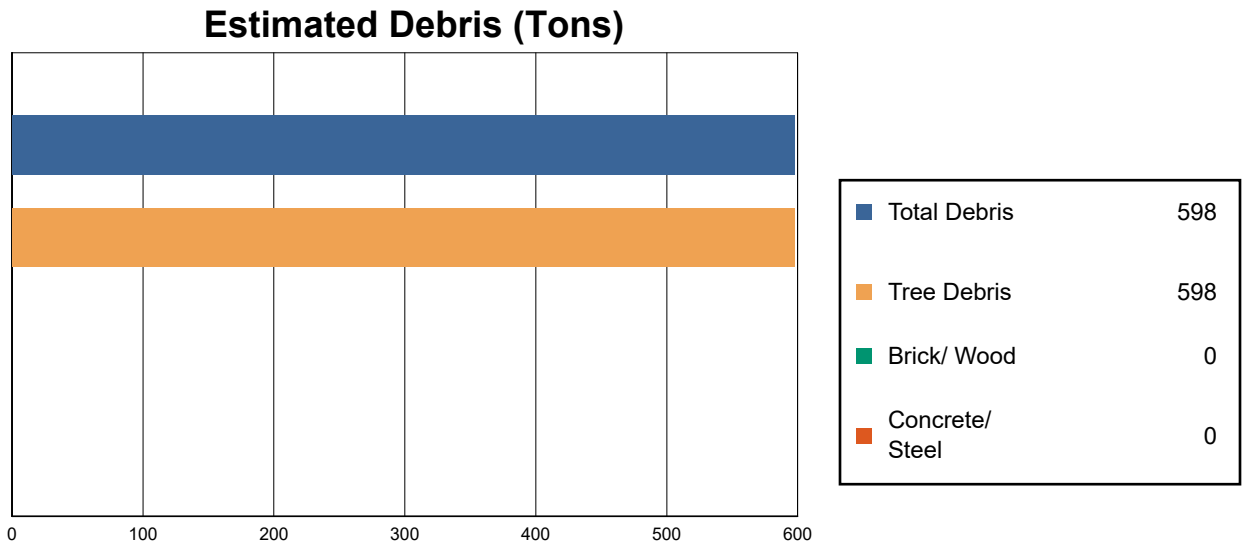


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

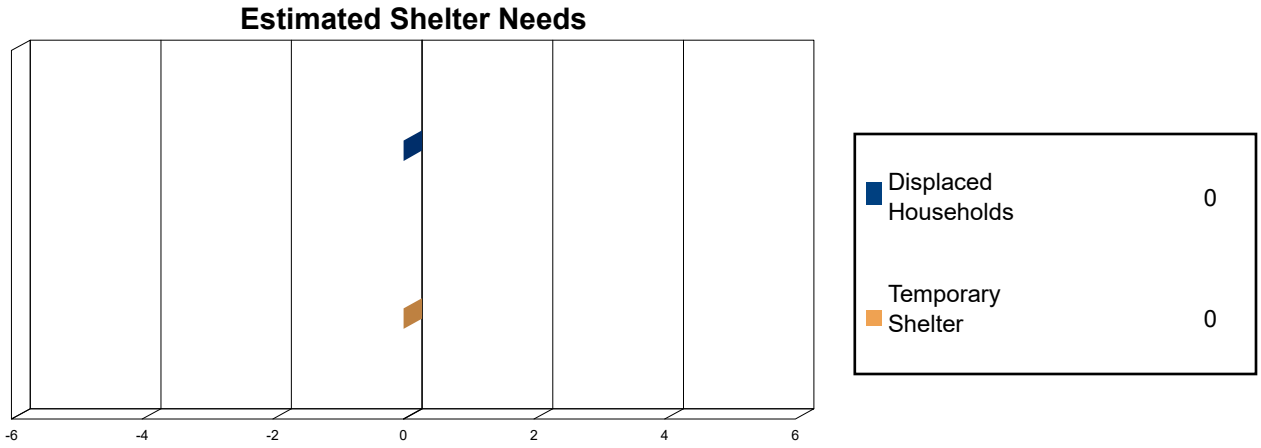


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 598 tons of debris will be generated. Of the total amount, 267 tons (45%) is Other Tree Debris. Of the remaining 331 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 331 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

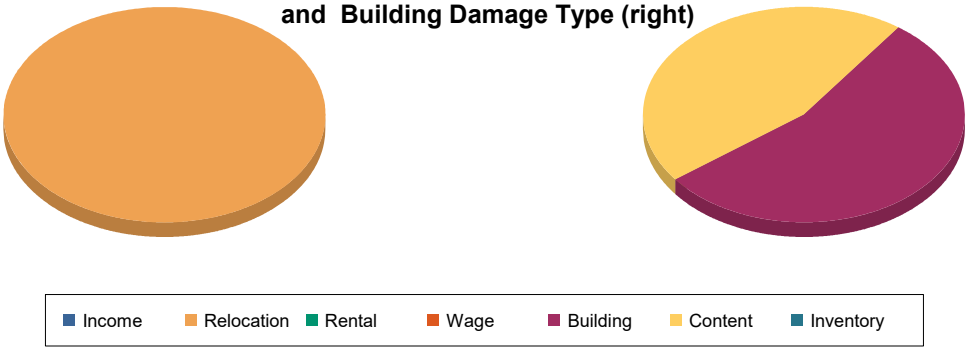
The total economic loss estimated for the hurricane is 2.0 million dollars, which represents 0.00 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 2 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 100% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy



Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	1,116.34	0.00	0.00	0.00	1,116.34
	Content	922.15	0.00	0.00	0.00	922.15
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**2,038.49**	**0.00**	**0.00**	**0.00**	**2,038.49**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.47	0.00	0.00	0.00	0.47
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.47**	**0.00**	**0.00**	**0.00**	**0.47**

Total

Total	**2,038.96**	**0.00**	**0.00**	**0.00**	**2,038.96**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 100-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 189.46 square miles and contains 131 census tracts. There are over 184 thousand households in the region and a total population of 538,419 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

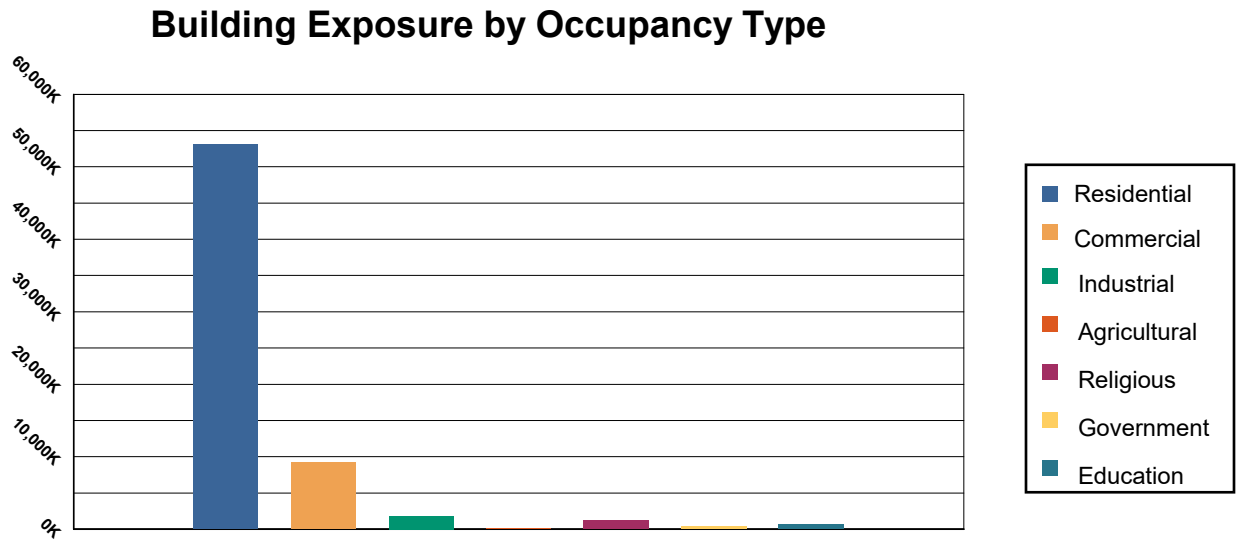


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	53,046,000	79.90%
Commercial	9,194,217	13.85%
Industrial	1,822,008	2.74%
Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 2 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

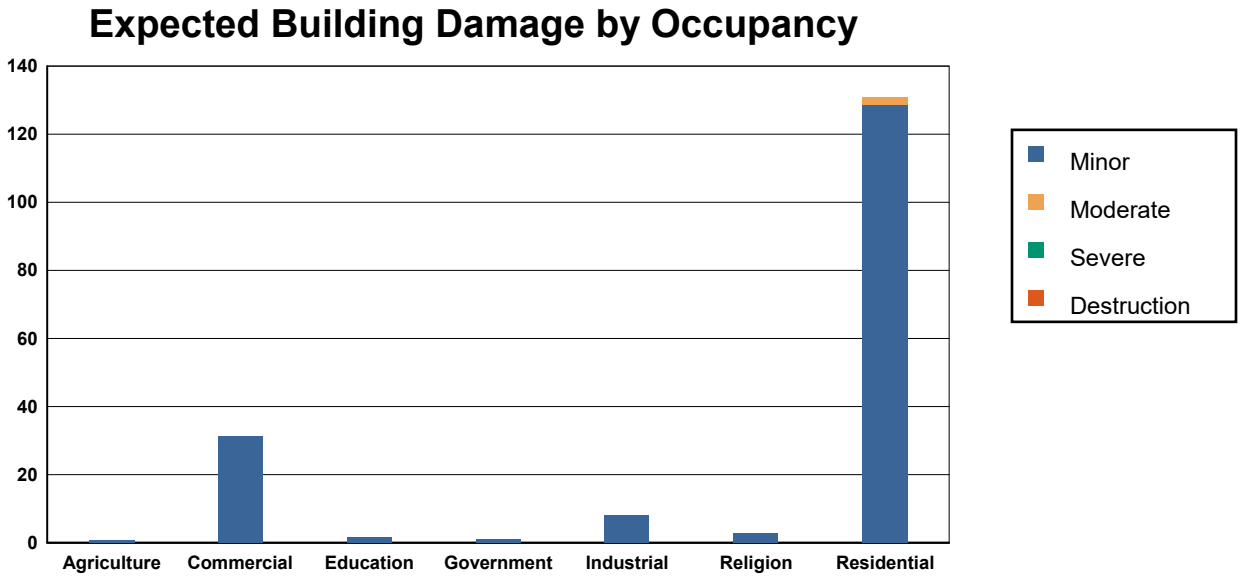


Table 2: Expected Building Damage by Occupancy : 100 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	294.30	99.76	0.70	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	10,222.85	99.70	31.13	0.30	0.02	0.00	0.00	0.00	0.00	0.00
Education	483.39	99.67	1.61	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Government	300.98	99.66	1.02	0.34	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2,394.87	99.66	8.13	0.34	0.00	0.00	0.00	0.00	0.00	0.00
Religion	1,186.16	99.76	2.84	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Residential	134,173.13	99.90	128.49	0.10	2.38	0.00	0.00	0.00	0.00	0.00
Total	**149,055.70**		**173.90**		**2.40**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 100 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,689	99.56	7	0.44	0	0.00	0	0.00	0	0.00
Masonry	40,558	99.74	104	0.26	2	0.01	0	0.00	0	0.00
MH	182	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	6,043	99.63	22	0.37	0	0.00	0	0.00	0	0.00
Wood	95,802	99.97	29	0.03	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

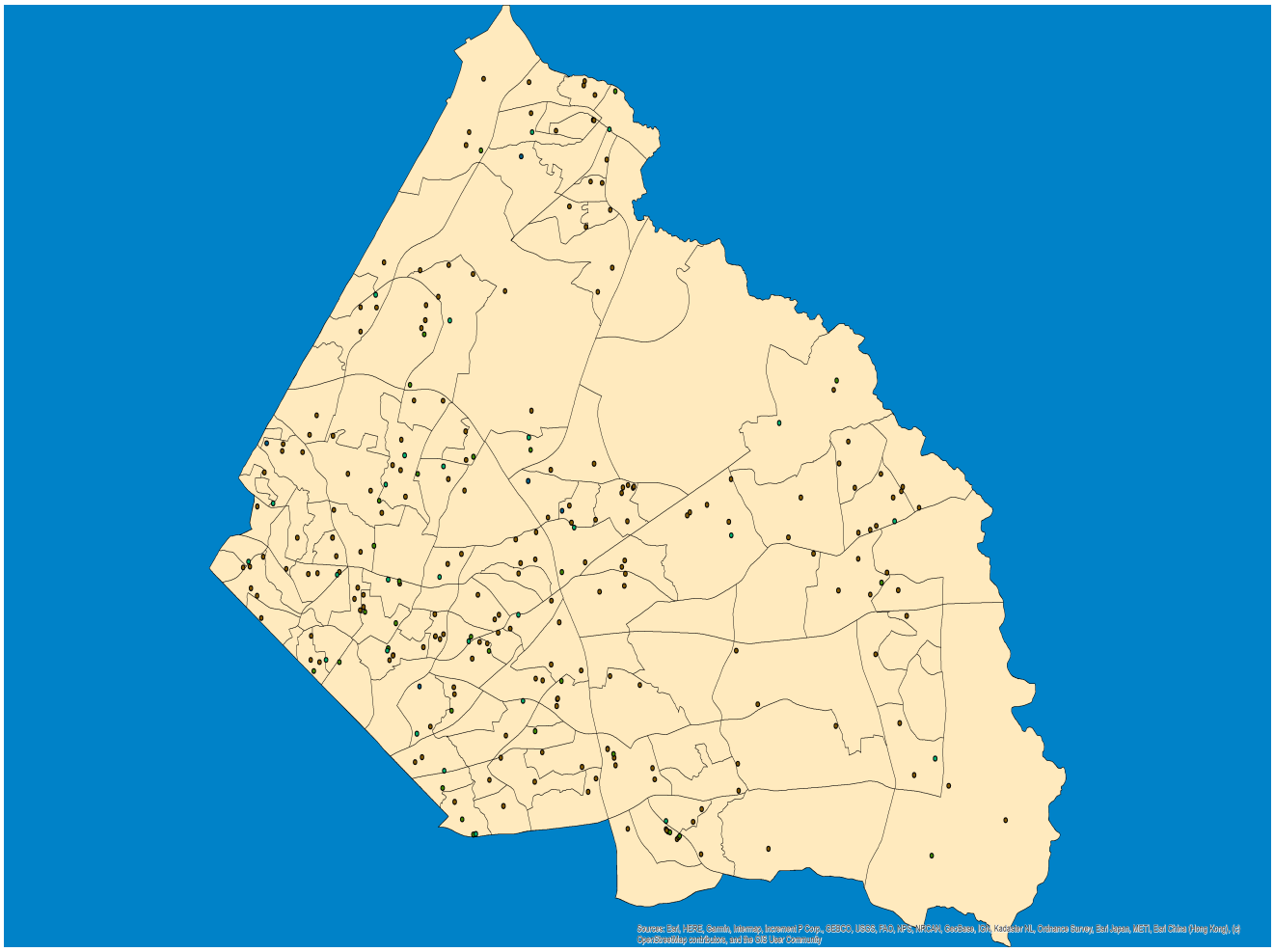
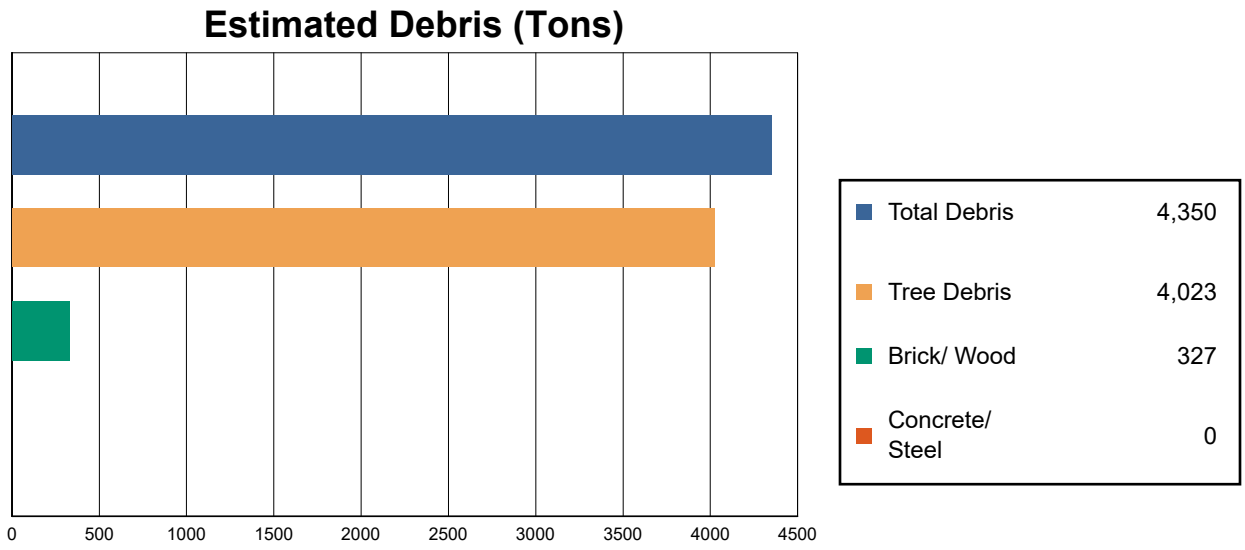


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

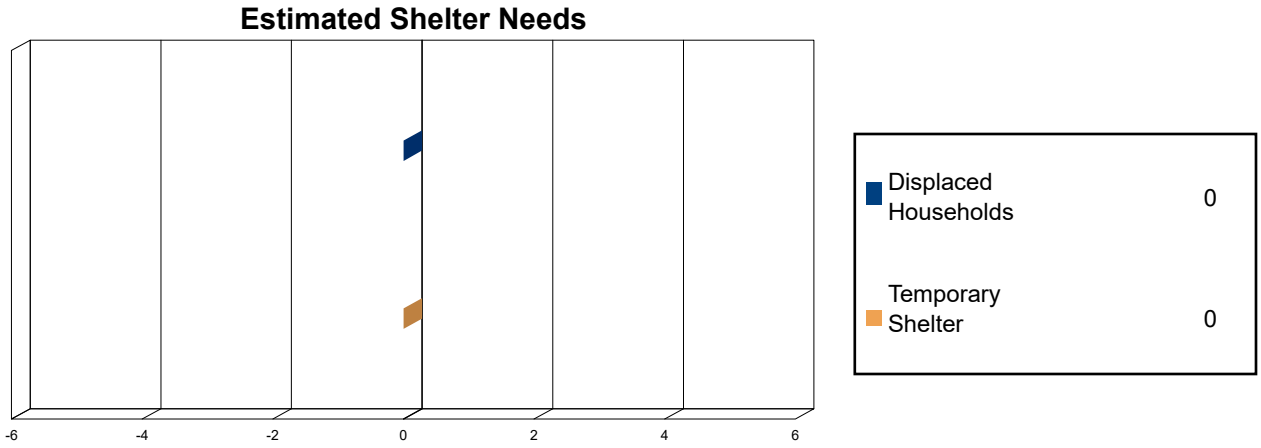


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 4,350 tons of debris will be generated. Of the total amount, 1,951 tons (45%) is Other Tree Debris. Of the remaining 2,399 tons, Brick/Wood comprises 14% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 13 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 2,072 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

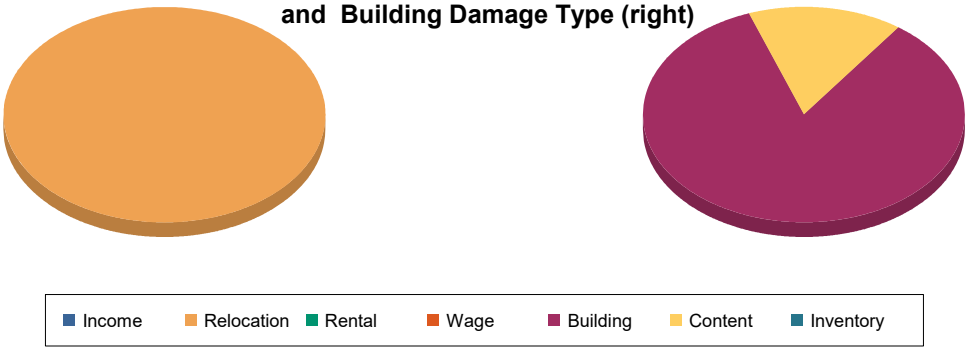
The total economic loss estimated for the hurricane is 24.4 million dollars, which represents 0.04 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 24 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 96% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

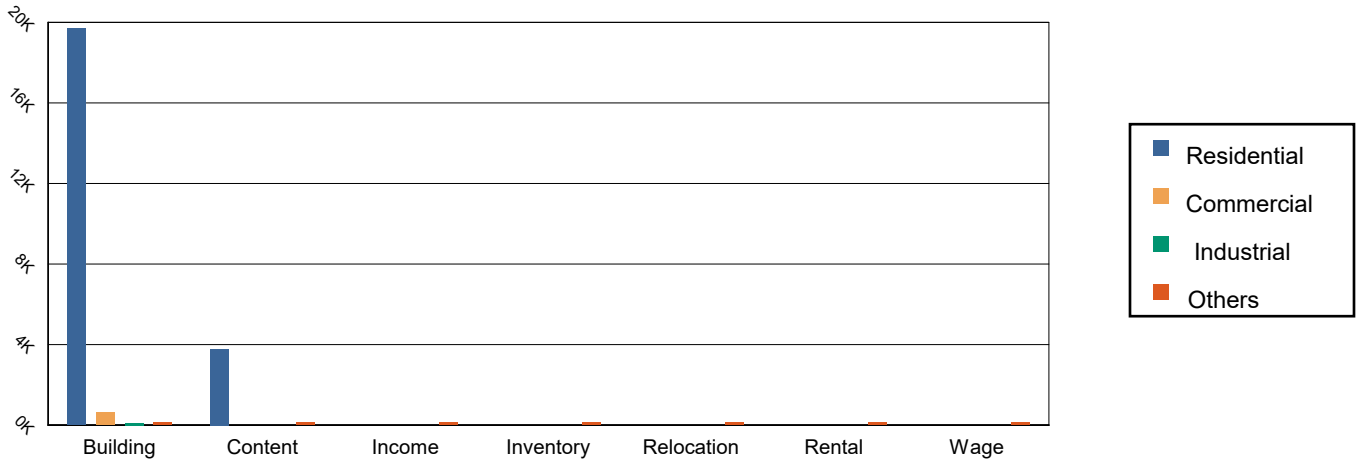


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	19,683.34	616.32	115.08	146.82	20,561.57
	Content	3,785.96	0.00	0.00	0.00	3,785.96
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**23,469.30**	**616.32**	**115.08**	**146.82**	**24,347.52**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	8.50	0.25	0.00	0.00	8.76
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**8.50**	**0.25**	**0.00**	**0.00**	**8.76**

Total

Total	**23,477.81**	**616.58**	**115.08**	**146.82**	**24,356.29**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 200-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

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The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
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There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

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Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

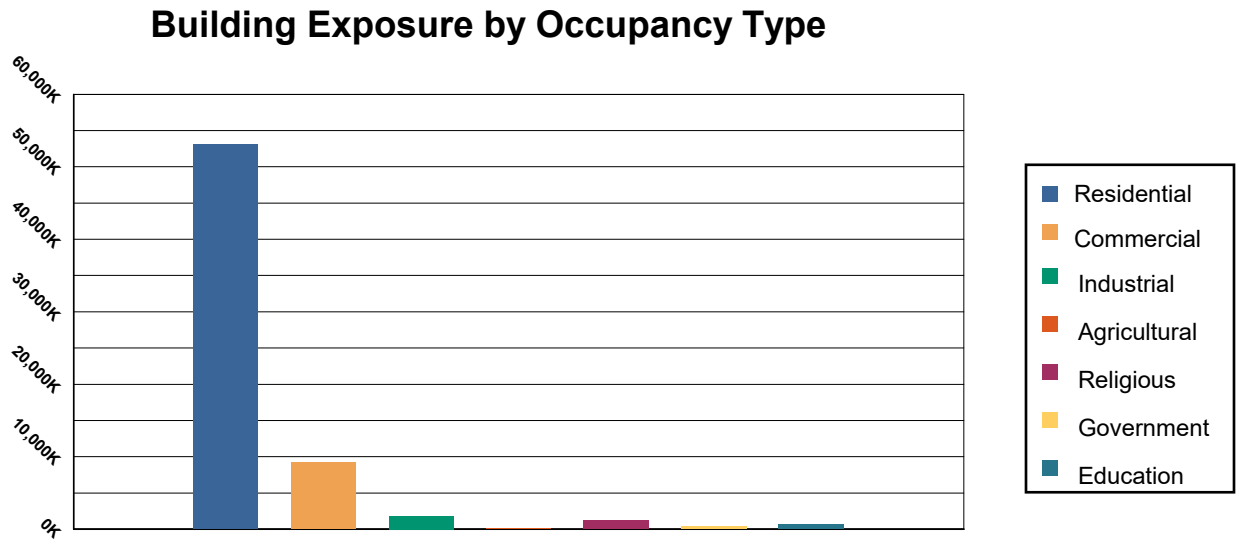


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Industrial	1,822,008	2.74%
Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 30 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

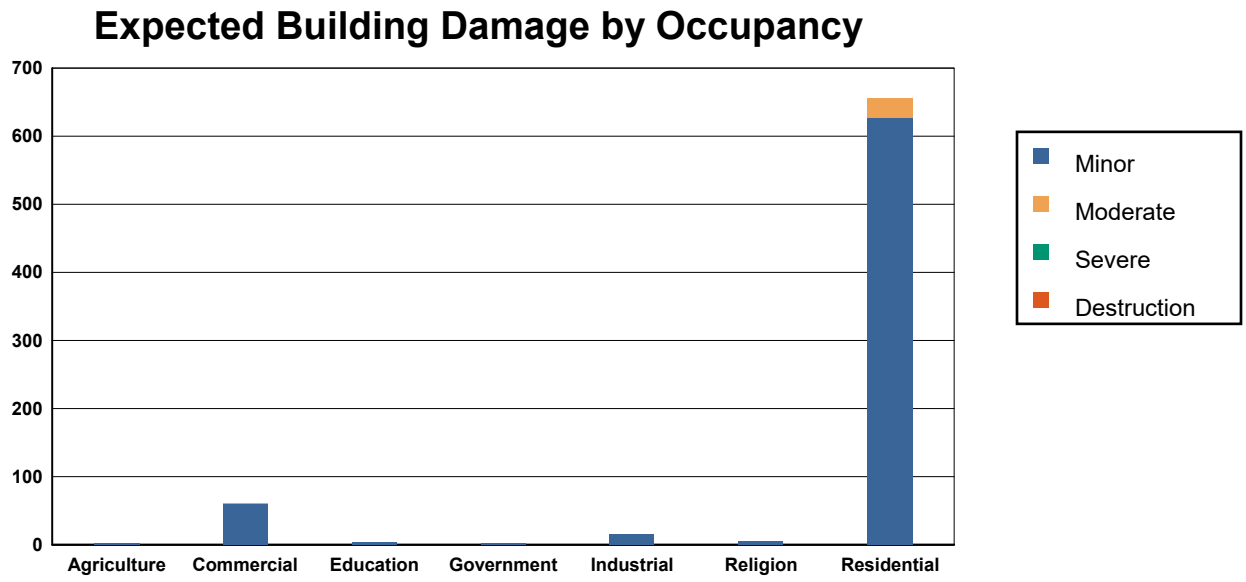


Table 2: Expected Building Damage by Occupancy : 200 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	293.44	99.47	1.51	0.51	0.05	0.02	0.01	0.00	0.00	0.00
Commercial	10,193.00	99.41	59.68	0.58	1.33	0.01	0.00	0.00	0.00	0.00
Education	482.05	99.39	2.95	0.61	0.00	0.00	0.00	0.00	0.00	0.00
Government	300.09	99.37	1.91	0.63	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2,387.78	99.37	15.17	0.63	0.05	0.00	0.00	0.00	0.00	0.00
Religion	1,183.51	99.54	5.49	0.46	0.00	0.00	0.00	0.00	0.00	0.00
Residential	133,648.27	99.51	627.27	0.47	28.43	0.02	0.04	0.00	0.00	0.00
Total	**148,488.13**		**713.98**		**29.85**		**0.05**		**0.00**	

Table 3: Expected Building Damage by Building Type : 200 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,682	99.15	14	0.84	0	0.00	0	0.00	0	0.00
Masonry	40,319	99.15	321	0.79	25	0.06	0	0.00	0	0.00
MH	182	99.99	0	0.00	0	0.01	0	0.00	0	0.00
Steel	6,023	99.30	42	0.68	1	0.01	0	0.00	0	0.00
Wood	95,535	99.69	293	0.31	2	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

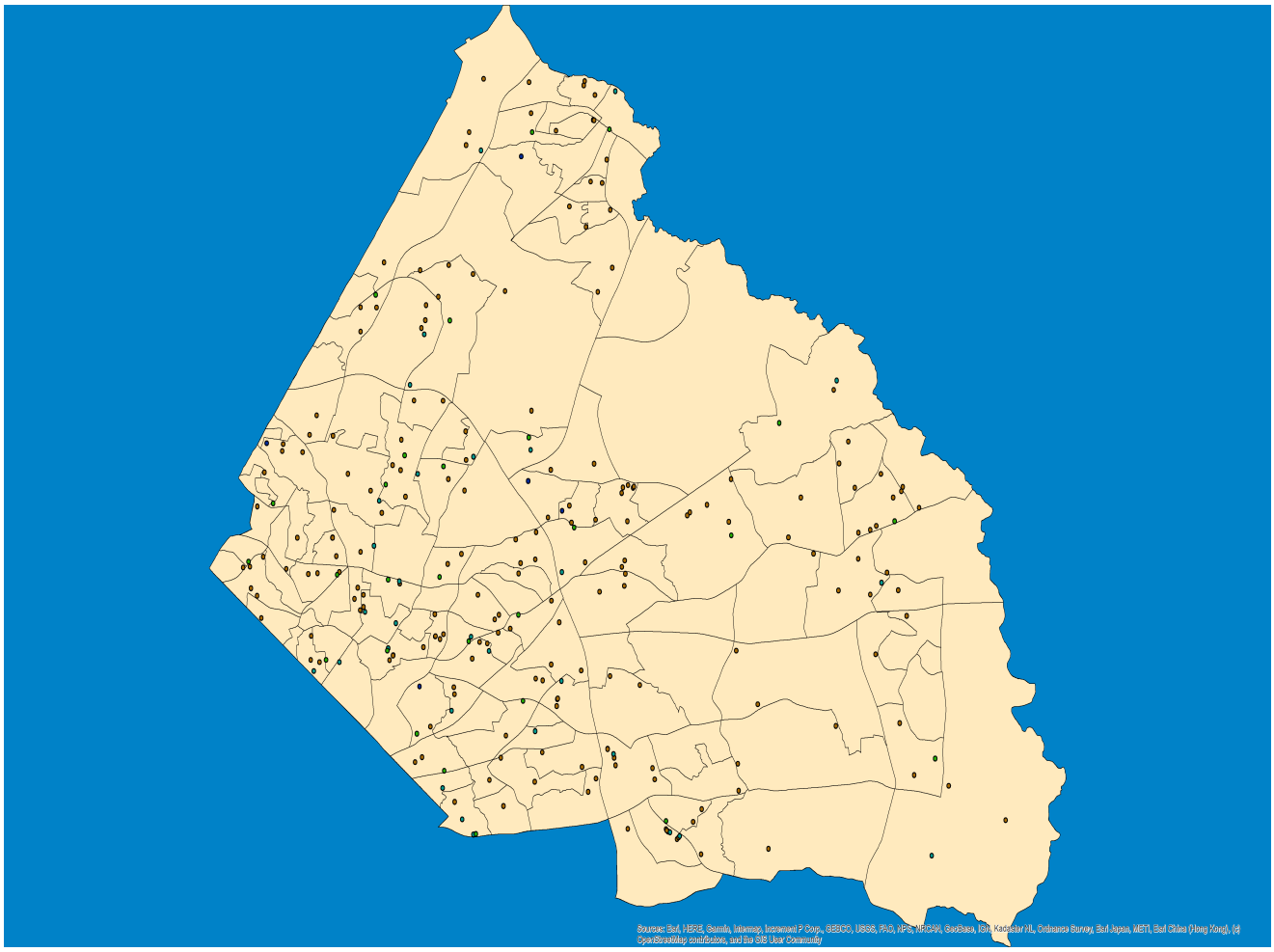
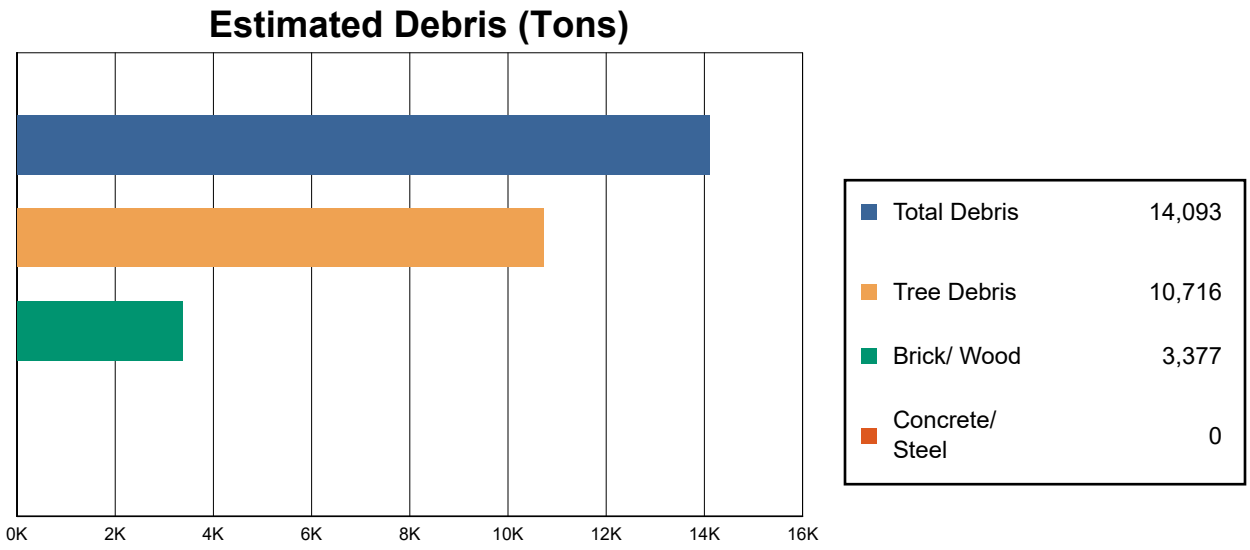


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

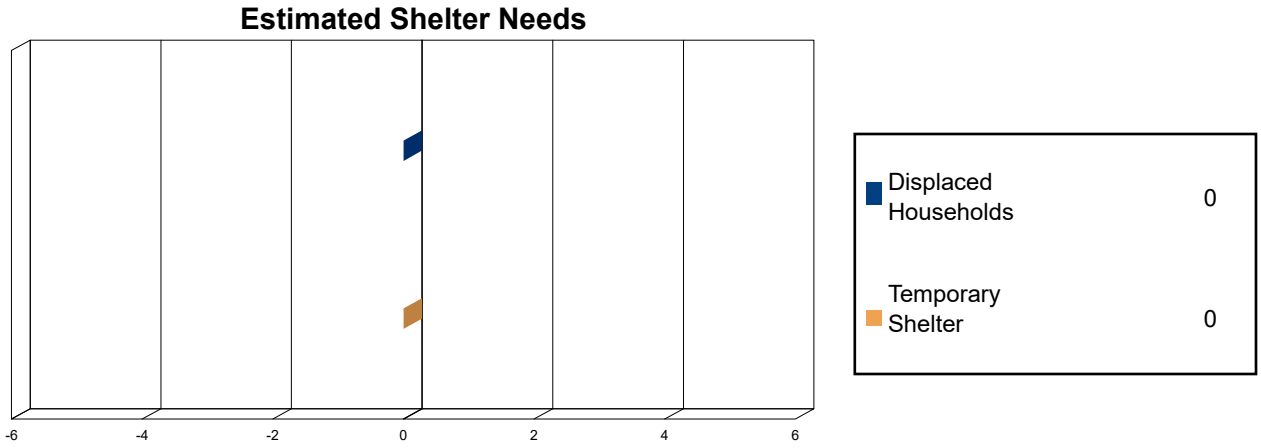


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 14,093 tons of debris will be generated. Of the total amount, 5,024 tons (36%) is Other Tree Debris. Of the remaining 9,069 tons, Brick/Wood comprises 37% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 135 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 5,692 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

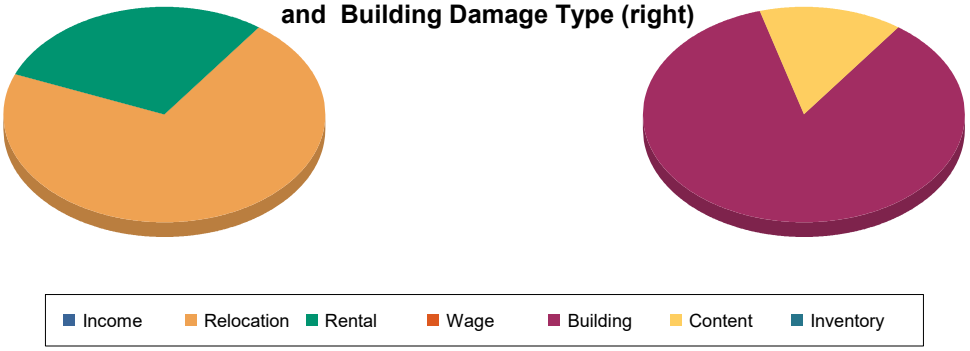
The total economic loss estimated for the hurricane is 72.8 million dollars, which represents 0.11 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 73 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

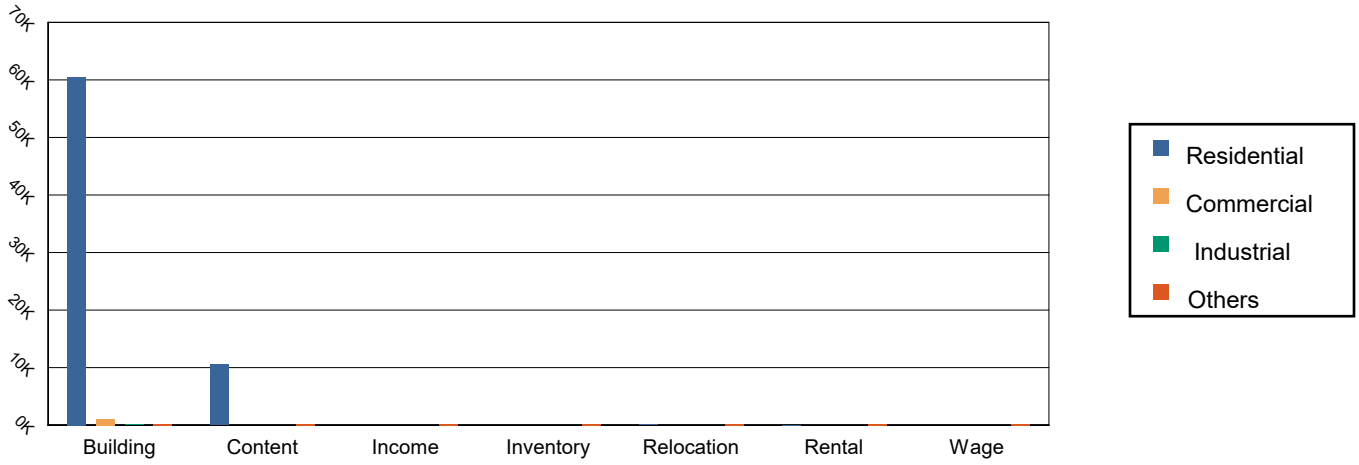


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	60,503.07	1,074.25	201.68	257.44	62,036.44
	Content	10,529.01	0.00	0.00	0.00	10,529.01
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**71,032.08**	**1,074.25**	**201.68**	**257.44**	**72,565.45**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	140.19	11.69	0.01	0.12	152.00
	Rental	62.06	0.00	0.00	0.00	62.06
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**202.25**	**11.69**	**0.01**	**0.12**	**214.06**

Total

Total	**71,234.33**	**1,085.94**	**201.68**	**257.56**	**72,779.51**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 500-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 189.46 square miles and contains 131 census tracts. There are over 184 thousand households in the region and a total population of 538,419 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

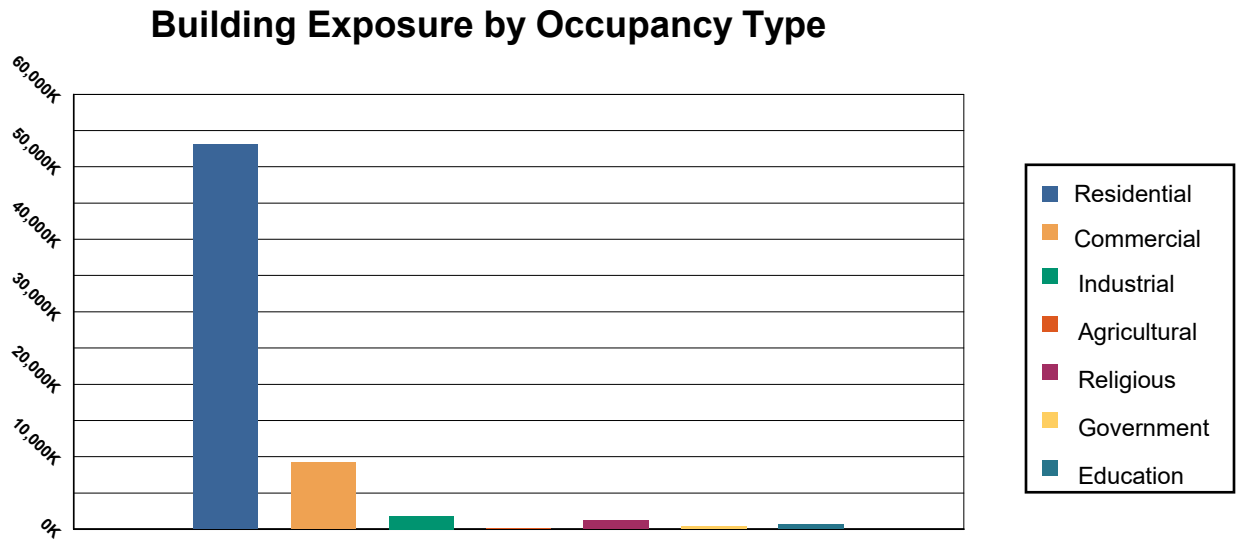


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	53,046,000	79.90%
Commercial	9,194,217	13.85%
Industrial	1,822,008	2.74%
Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 300 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

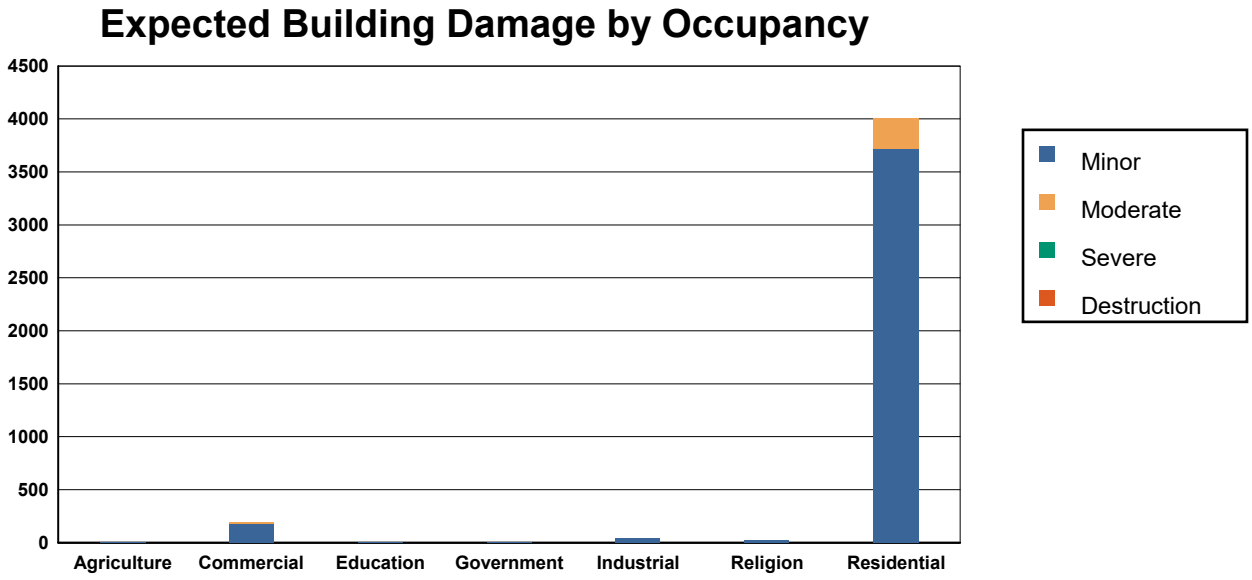


Table 2: Expected Building Damage by Occupancy : 500 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	288.65	97.85	5.60	1.90	0.57	0.19	0.17	0.06	0.01	0.00
Commercial	10,061.08	98.12	178.38	1.74	13.92	0.14	0.62	0.01	0.00	0.00
Education	476.46	98.24	8.38	1.73	0.16	0.03	0.00	0.00	0.00	0.00
Government	296.63	98.22	5.26	1.74	0.10	0.03	0.00	0.00	0.00	0.00
Industrial	2,358.71	98.16	42.53	1.77	1.52	0.06	0.22	0.01	0.02	0.00
Religion	1,169.45	98.36	19.21	1.62	0.33	0.03	0.00	0.00	0.00	0.00
Residential	130,303.16	97.02	3,718.03	2.77	282.39	0.21	0.40	0.00	0.02	0.00
Total	**144,954.15**		**3,977.40**		**298.99**		**1.41**		**0.05**	

Table 3: Expected Building Damage by Building Type : 500 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,657	97.68	38	2.26	1	0.06	0	0.00	0	0.00
Masonry	39,120	96.20	1,335	3.28	210	0.52	1	0.00	0	0.00
MH	182	99.80	0	0.16	0	0.03	0	0.00	0	0.01
Steel	5,946	98.04	110	1.82	8	0.14	1	0.01	0	0.00
Wood	93,453	97.52	2,317	2.42	62	0.06	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

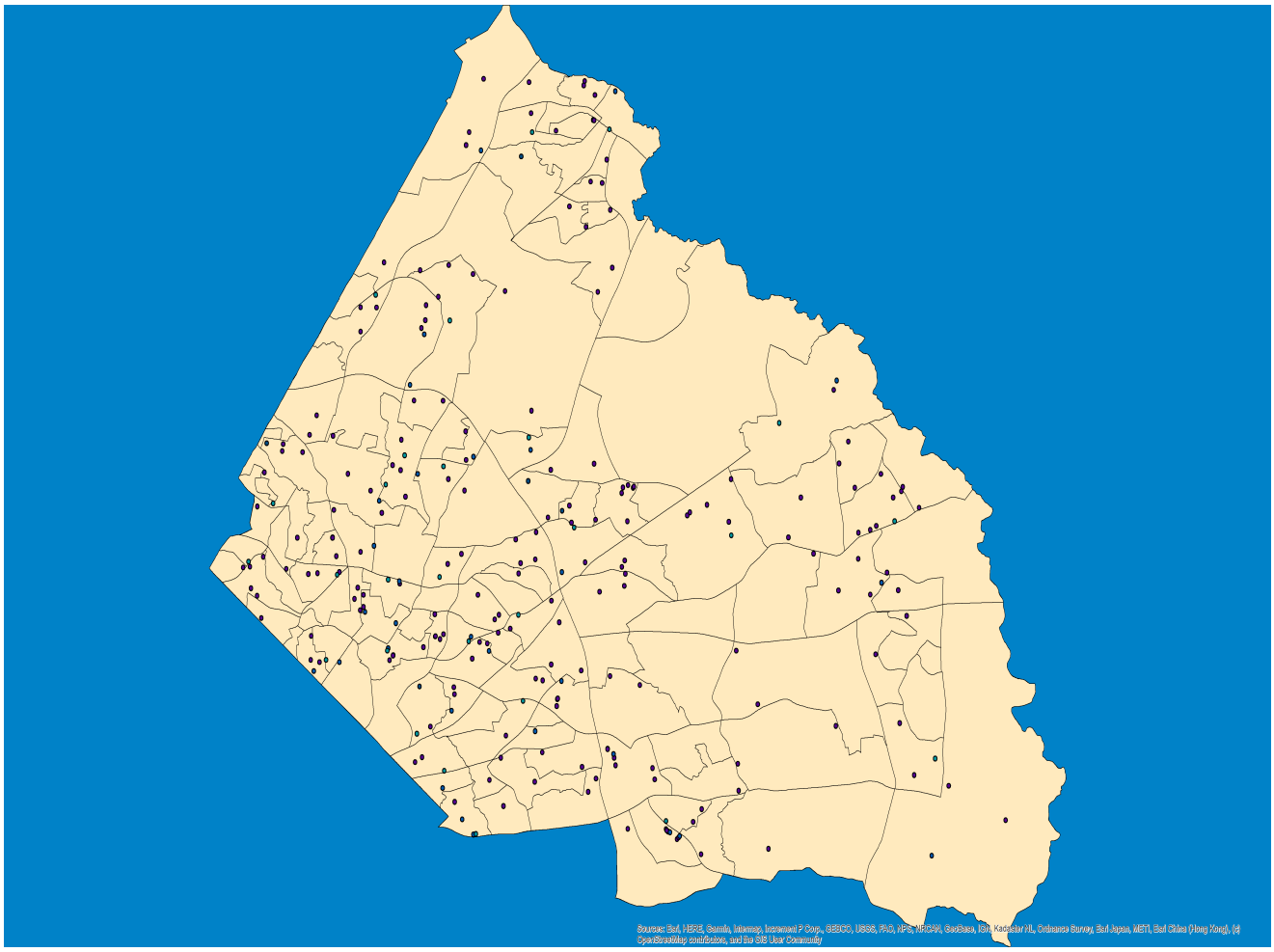
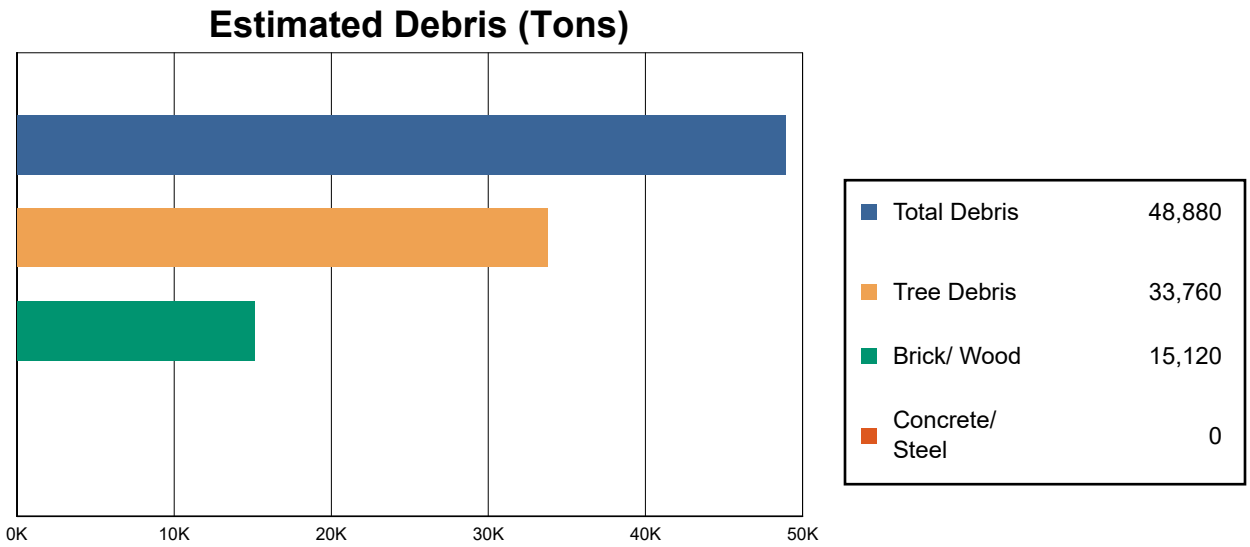


Table 4: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		Probability of at Least Moderate Damage > 50%	Probability of Complete Damage > 50%	Expected Loss of Use < 1 day
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

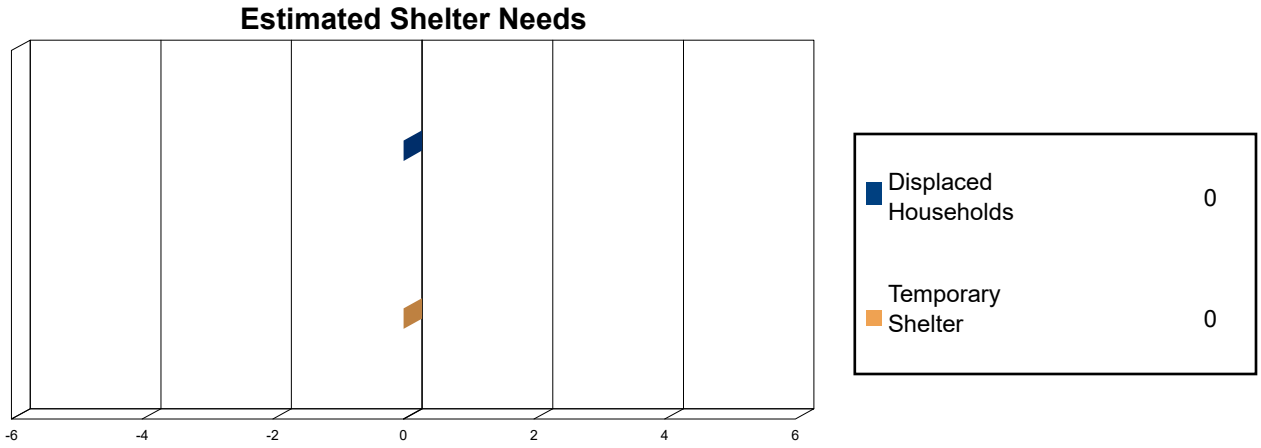


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 48,880 tons of debris will be generated. Of the total amount, 15,248 tons (31%) is Other Tree Debris. Of the remaining 33,632 tons, Brick/Wood comprises 45% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 605 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 18,512 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

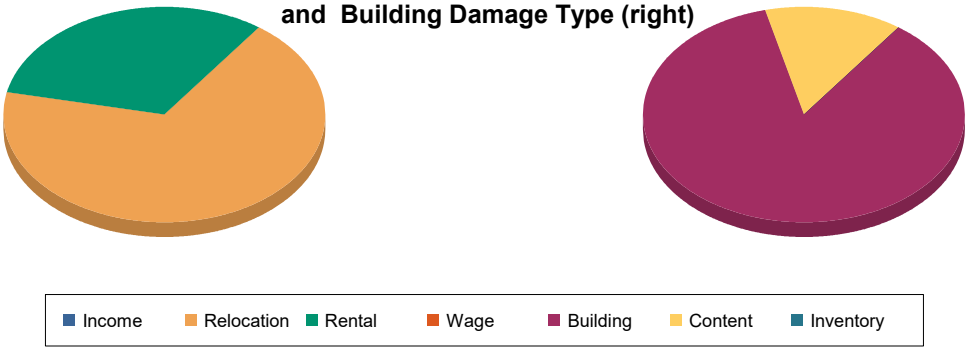
The total economic loss estimated for the hurricane is 223.4 million dollars, which represents 0.34 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 223 million dollars. 4% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

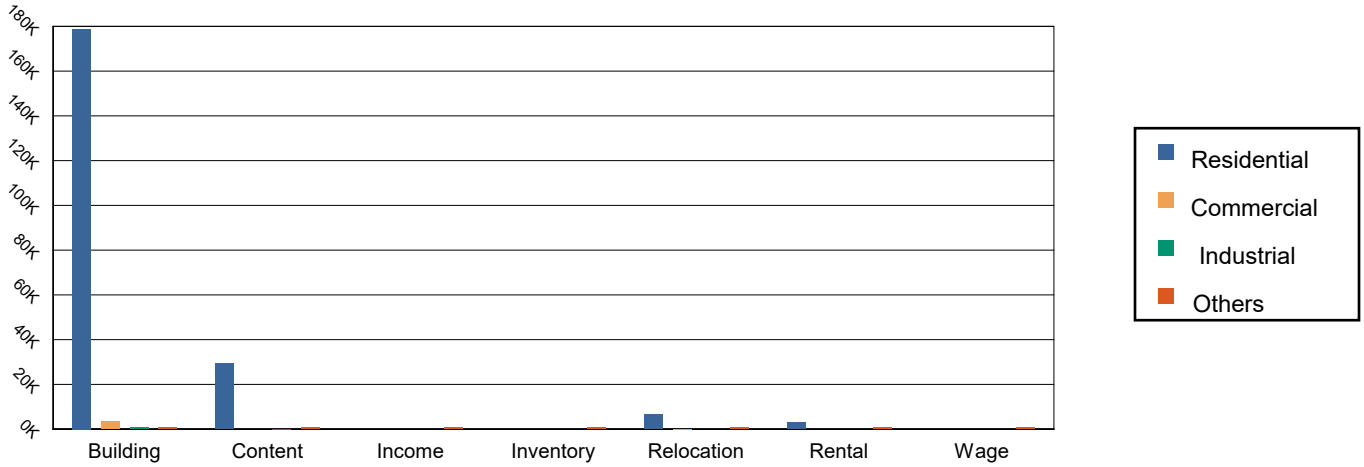


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	178,809.96	3,599.80	706.96	831.99	183,948.72
	Content	29,506.69	68.94	102.79	11.64	29,690.06
	Inventory	0.00	4.99	20.64	1.30	26.93
	Subtotal	**208,316.65**	**3,673.73**	**830.39**	**844.94**	**213,665.70**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	6,469.02	126.73	6.37	6.06	6,608.18
	Rental	3,080.87	0.00	0.00	0.00	3,080.87
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**9,549.88**	**126.73**	**6.37**	**6.06**	**9,689.05**

Total

Total	**217,866.53**	**3,800.46**	**836.76**	**851.00**	**223,354.75**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_north

Hurricane Scenario: Probabilistic 1000-year Return Period

Print Date: Wednesday, November 30, 2022

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Totals only reflect data for those census tracts/blocks included in the user's study region.

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Note:
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There are an estimated 149 thousand buildings in the region with a total building replacement value (excluding contents) of 66,390 million dollars (2014 dollars). Approximately 90% of the buildings (and 80% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 149,232 buildings in the region which have an aggregate total replacement value of 66,390 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

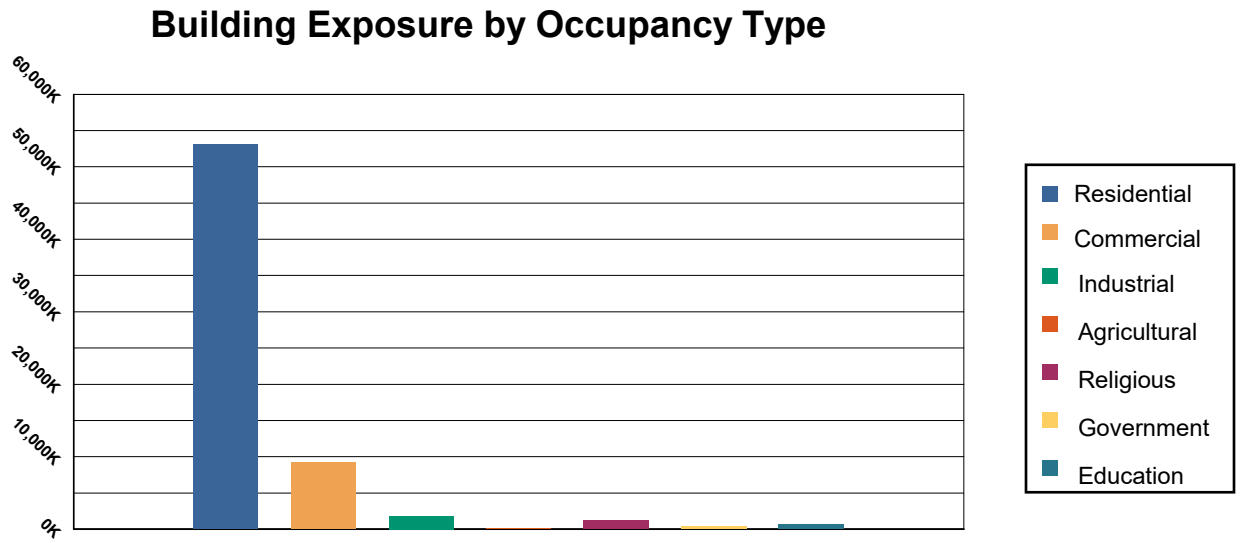


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Residential	53,046,000	79.90%
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Agricultural	86,197	0.13%
Religious	1,217,968	1.83%
Government	345,623	0.52%
Education	677,900	1.02%
Total	**66,389,913**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 5 hospitals in the region with a total bed capacity of 607 beds. There are 201 schools, 28 fire stations, 30 police stations and 2 emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 952 buildings will be at least moderately damaged. This is over 1% of the total number of buildings in the region. There are an estimated 7 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

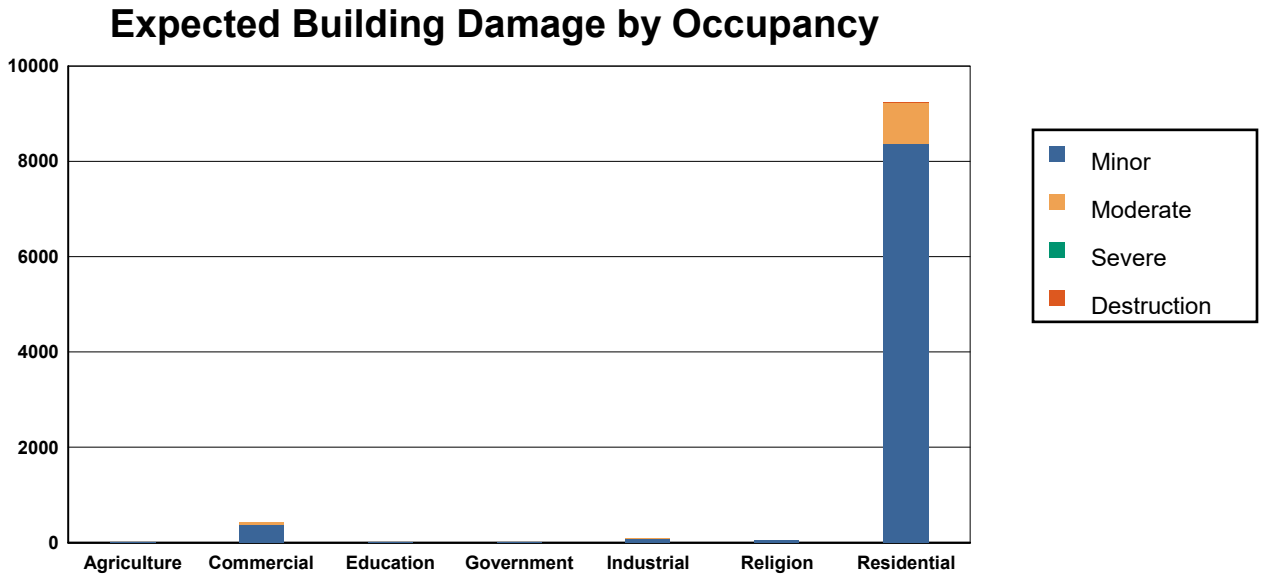


Table 2: Expected Building Damage by Occupancy : 1000 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	280.76	95.17	11.76	3.99	1.76	0.60	0.69	0.23	0.04	0.01
Commercial	9,826.20	95.83	378.01	3.69	45.95	0.45	3.83	0.04	0.00	0.00
Education	466.28	96.14	17.68	3.65	1.03	0.21	0.01	0.00	0.00	0.00
Government	290.35	96.14	10.97	3.63	0.67	0.22	0.01	0.00	0.00	0.00
Industrial	2,306.91	96.00	87.03	3.62	7.75	0.32	1.26	0.05	0.05	0.00
Religion	1,141.61	96.01	45.19	3.80	2.20	0.19	0.01	0.00	0.00	0.00
Residential	125,060.75	93.12	8,356.51	6.22	877.49	0.65	2.47	0.00	6.79	0.01
Total	**139,372.85**		**8,907.15**		**936.85**		**8.27**		**6.88**	

Table 3: Expected Building Damage by Building Type : 1000 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,615	95.21	75	4.44	6	0.36	0	0.00	0	0.00
Masonry	37,387	91.94	2,699	6.64	575	1.41	3	0.01	1	0.00
MH	181	99.20	1	0.59	0	0.16	0	0.00	0	0.06
Steel	5,814	95.86	218	3.60	30	0.49	3	0.05	0	0.00
Wood	89,996	93.91	5,565	5.81	265	0.28	1	0.00	4	0.00

Essential Facility Damage

Before the hurricane, the region had no hospital beds available for use. On the day of the hurricane, the model estimates that 607 hospital beds (0%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, none of the beds will be in service. By 30 days, none will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

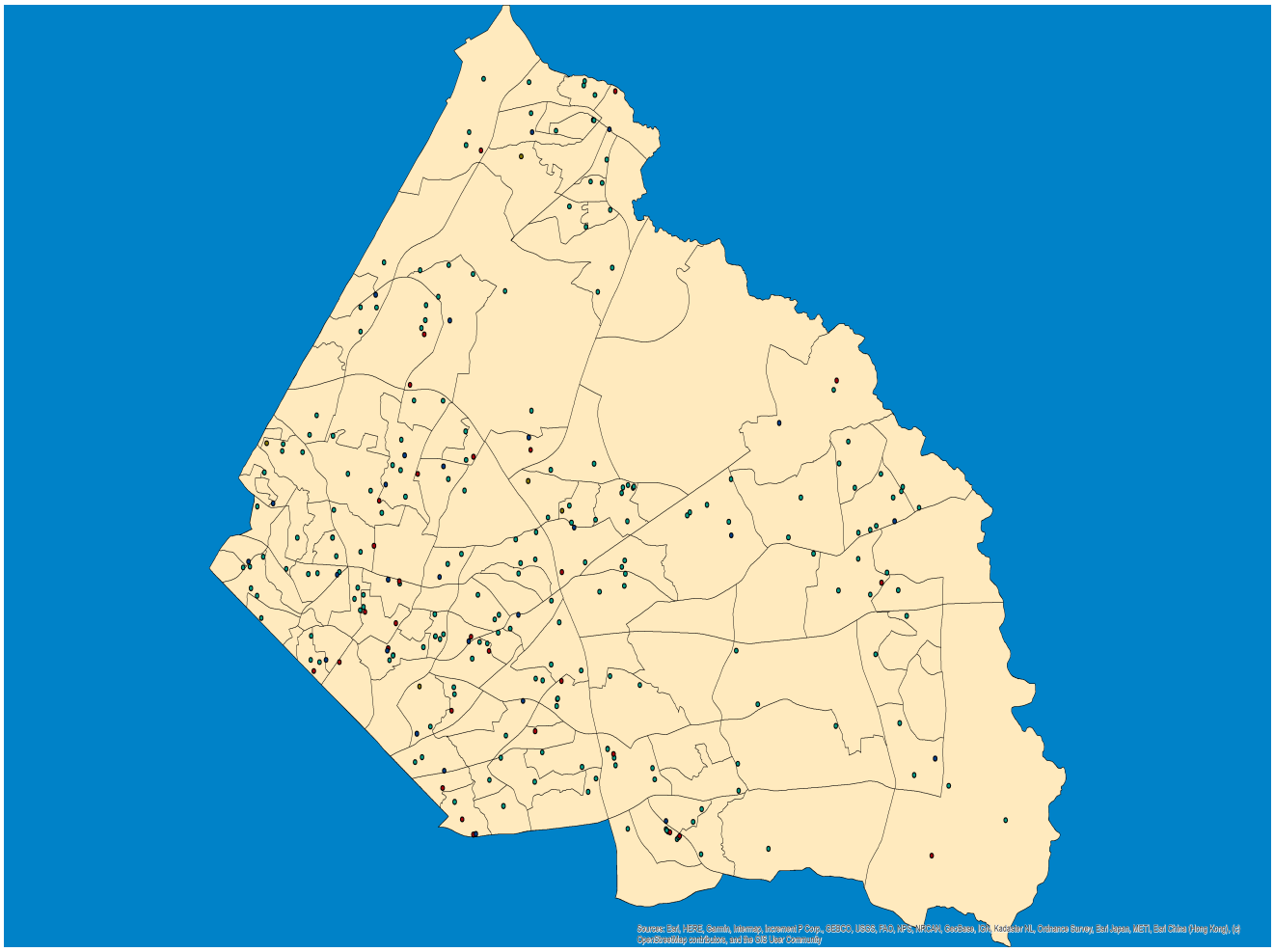
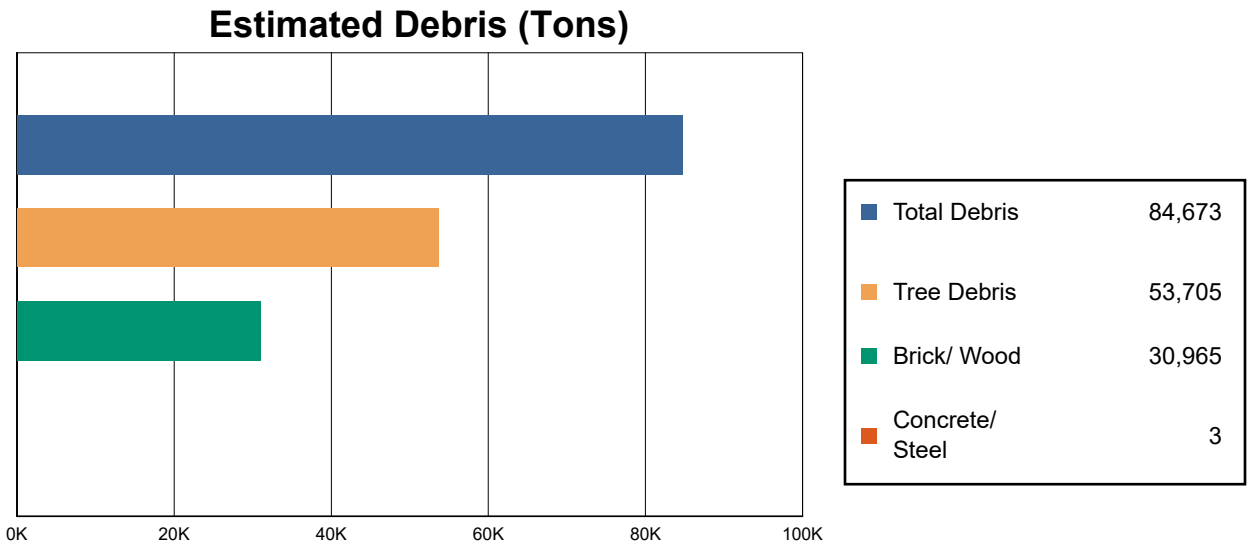


Table 4: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		Probability of at Least Moderate Damage > 50%	Probability of Complete Damage > 50%	Expected Loss of Use < 1 day
EOCs	2	0	0	2
Fire Stations	28	0	0	28
Hospitals	5	0	0	5
Police Stations	30	0	0	30
Schools	201	0	0	201

Induced Hurricane Damage

Debris Generation

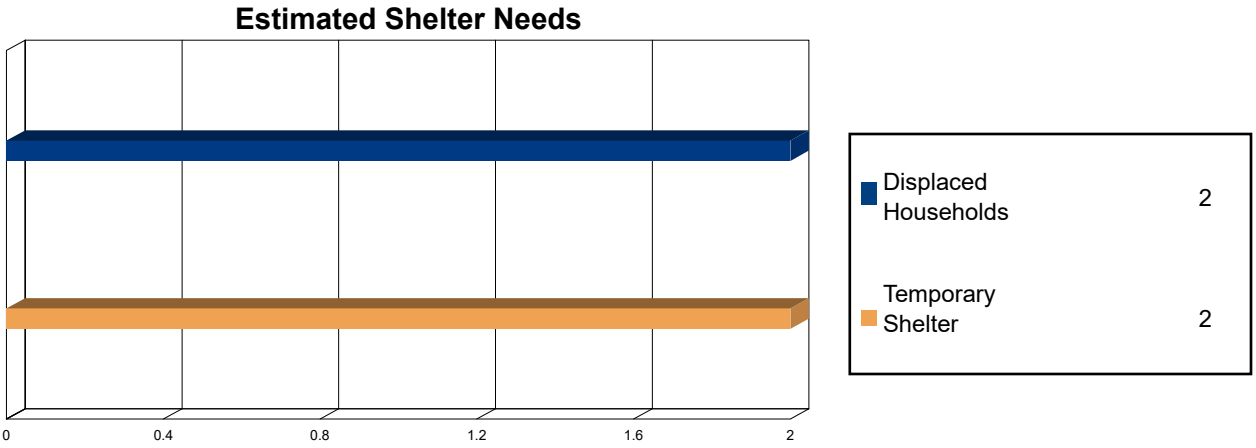


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 84,673 tons of debris will be generated. Of the total amount, 23,861 tons (28%) is Other Tree Debris. Of the remaining 60,812 tons, Brick/Wood comprises 51% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 1239 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 29,844 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 2 households to be displaced due to the hurricane. Of these, 2 people (out of a total population of 538,419) will seek temporary shelter in public shelters.

Economic Loss

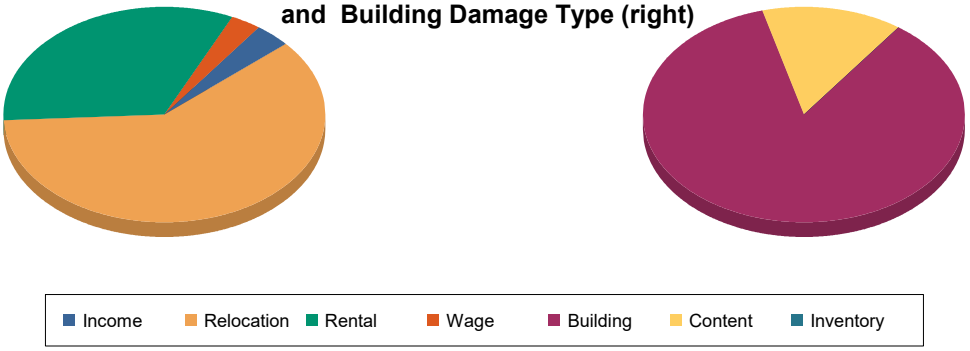
The total economic loss estimated for the hurricane is 379.6 million dollars, which represents 0.57 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 380 million dollars. 5% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 95% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

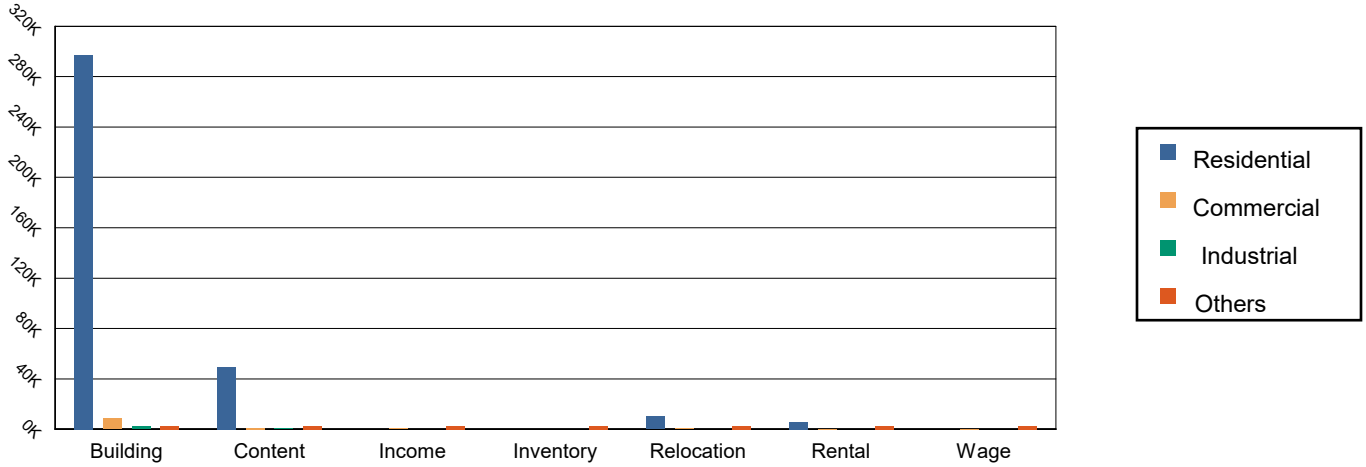


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	297,197.31	8,317.82	2,055.21	2,059.25	309,629.59
	Content	49,235.88	980.65	807.57	189.03	51,213.13
	Inventory	0.00	33.29	144.73	5.14	183.16
	Subtotal	**346,433.19**	**9,331.77**	**3,007.51**	**2,253.42**	**361,025.88**
Business Interruption Loss						
	Income	0.00	590.11	10.23	75.09	675.42
	Relocation	10,329.56	799.87	61.70	92.89	11,284.03
	Rental	5,750.67	308.32	7.27	5.74	6,072.00
	Wage	0.00	300.80	14.90	269.88	585.58
	Subtotal	**16,080.23**	**1,999.10**	**94.10**	**443.61**	**18,617.03**

Total

Total	362,513.42	11,330.87	3,101.61	2,697.02	379,642.91

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	538,419	53,046,000	13,343,913	66,389,913
Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**
Study Region Total	**538,419**	**53,046,000**	**13,343,913**	**66,389,913**

Debris Summary Report: 10 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0**	**0**

Debris Summary Report: 20 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0**	**0**

Debris Summary Report: 50 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	0	0	321	1,420	1,741
Total	**0**	**0**	**321**	**1,420**	**1,741**
Study Region Total	**0**	**0**	**321**	**1,420**	**1,741**

Debris Summary Report: 100 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	343	0	1,906	9,084	11,333
Total	**343**	**0**	**1,906**	**9,084**	**11,333**
Study Region Total	**343**	**0**	**1,906**	**9,084**	**11,333**

Debris Summary Report: 200 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	2,587	0	4,411	10,017	17,015
Total	**2,587**	**0**	**4,411**	**10,017**	**17,015**
Study Region Total	**2,587**	**0**	**4,411**	**10,017**	**17,015**

Debris Summary Report: 500 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	10,375	0	17,725	52,185	80,285
Total	**10,375**	**0**	**17,725**	**52,185**	**80,285**
Study Region Total	**10,375**	**0**	**17,725**	**52,185**	**80,285**

Debris Summary Report: 1000 - year Event

November 30, 2022 *All values are in tons.*

	Brick, Wood and Other	Reinf. Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Maryland					
Prince George's	20,579	0	27,203	65,730	113,512
Total	**20,579**	**0**	**27,203**	**65,730**	**113,512**
Study Region Total	**20,579**	**0**	**27,203**	**65,730**	**113,512**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Direct Economic Losses For Buildings: Annualized Losses

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	1,178	243	0	0.00	49	3	4	19	1,497
Total	**1,178**	**243**	**0**	**0.00**	**49**	**3**	**4**	**19**	**1,497**
Study Region Total	**1,178**	**243**	**0**	**0.00**	**49**	**3**	**4**	**19**	**1,497**

Study Region : pg_Hur_prob_south

Scenario : Probabilistic

Direct Economic Losses For Buildings: 10 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	0	0	0	0.00	0	0	0	0	0
Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**

Direct Economic Losses For Buildings: 20 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	0	0	0	0.00	0	0	0	0	0
Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**
Study Region Total	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0**

Direct Economic Losses For Buildings: 50 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	1,754	777	0	0.00	0	0	0	0	2,531
Total	**1,754**	**777**	**0**	**0.00**	**0**	**0**	**0**	**0**	**2,531**
Study Region Total	**1,754**	**777**	**0**	**0.00**	**0**	**0**	**0**	**0**	**2,531**

Direct Economic Losses For Buildings: 100 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	15,997	2,828	0	0.04	13	0	0	3	18,841
Total	**15,997**	**2,828**	**0**	**0.04**	**13**	**0**	**0**	**3**	**18,841**
Study Region Total	**15,997**	**2,828**	**0**	**0.04**	**13**	**0**	**0**	**3**	**18,841**

Direct Economic Losses For Buildings: 200 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	49,854	8,108	0	0.12	123	0	0	77	58,162
Total	**49,854**	**8,108**	**0**	**0.12**	**123**	**0**	**0**	**77**	**58,162**
Study Region Total	**49,854**	**8,108**	**0**	**0.12**	**123**	**0**	**0**	**77**	**58,162**

Direct Economic Losses For Buildings: 500 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	139,729	21,313	9	0.32	4,516	15	5	1,883	167,470
Total	**139,729**	**21,313**	**9**	**0.32**	**4,516**	**15**	**5**	**1,883**	**167,470**
Study Region Total	**139,729**	**21,313**	**9**	**0.32**	**4,516**	**15**	**5**	**1,883**	**167,470**

Direct Economic Losses For Buildings: 1000 - year Event

November 30, 2022

All values are in thousands of dollars

	Capital Stock Losses				Income Losses				
	Cost Building Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Maryland									
Prince George's	227,035	35,199	45	0.53	7,166	309	112	3,378	273,243
Total	**227,035**	**35,199**	**45**	**0.53**	**7,166**	**309**	**112**	**3,378**	**273,243**
Study Region Total	**227,035**	**35,199**	**45**	**0.53**	**7,166**	**309**	**112**	**3,378**	**273,243**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Study Region : pg_Hur_prob_south

Scenario : Probabilistic

Shelter Summary Report: 10 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 20 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 50 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 100 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 200 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 500 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Shelter Summary Report: 1000 - year Event

November 30, 2022

	# of Displaced Households	# of People Needing Short Term Shelter
Maryland		
Prince George's	0	0
Total	**0**	**0**
Study Region Total	**0**	**0**

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/state were selected at the time of study region creation.

Quick Assessment Report

November 30, 2022

Study Region : pg_Hur_prob_south

Scenario : Probabilistic

Regional Statistics

Area (Square Miles)	298
Number of Census Tracts	87
Number of People in the Region	325,001

General Building Stock

Occupancy	*Building Count*	*Dollar Exposure ($ K)*
Residential	98,893	36,647,464
Commercial	5,507	4,369,374
Other	2,680	2,075,589
Total	107,080	43,092,427

Scenario Results

Number of Residential Buildings Damaged

Return Period	*Minor*	*Moderate*	*Severe*	*Destruction*	*Total*
10	0	0	0	0	0
20	0	0	0	0	0
50	30	0	0	0	30
100	115	2	0	0	116
200	504	22	0	0	527
500	3,117	202	0	0	3,319
1000	6,617	586	1	5	7,210

Number of Buildings Damaged

Return Period	*Minor*	*Moderate*	*Severe*	*Destruction*	*Total*
10	0	0	0	0	0
20	0	0	0	0	0
50	48	0	0	0	48
100	140	2	0	0	142
200	556	23	0	0	579
500	3,274	213	1	0	3,488
1000	6,936	619	4	5	7,565

Shelter Requirements

Return Period	*Displaced Households (#Households)*	*Short Term Shelter (#People)*
10	0	0
20	0	0
50	0	0
100	0	0
200	0	0
500	0	0
1000	0	0

Economic Loss (x 1000)

	Property Damage (Capital Stock) Losses		***Business Interruption***
ReturnPeriod	***Residential***	***Total***	***(Income) Losses***
10	0	0	0
20	0	0	0
50	2,531	2,531	0
100	18,486	18,825	16
200	56,971	57,962	200
500	158,129	161,051	6,419
1000	255,184	262,280	10,964
Annualized	1,373	1,421	76

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 10-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 298.39 square miles and contains 87 census tracts. There are over 119 thousand households in the region and a total population of 325,001 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 107 thousand buildings in the region with a total building replacement value (excluding contents) of 43,092 million dollars (2014 dollars). Approximately 92% of the buildings (and 85% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 107,080 buildings in the region which have an aggregate total replacement value of 43,092 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

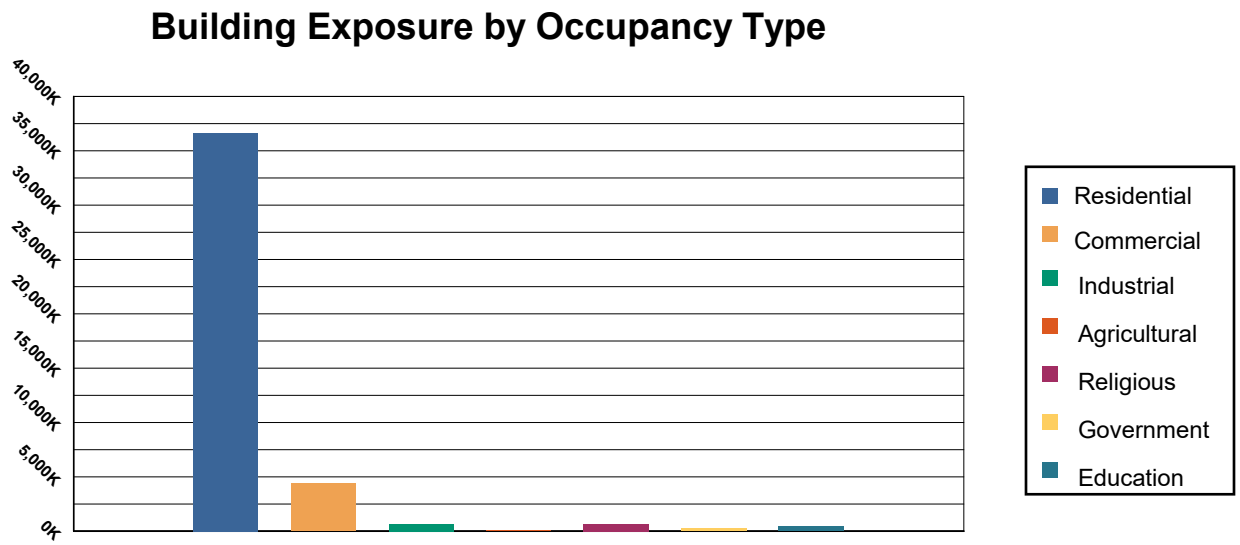


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	36,647,464	85.04%
Commercial	4,369,374	10.14%
Industrial	672,227	1.56%
Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 0 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

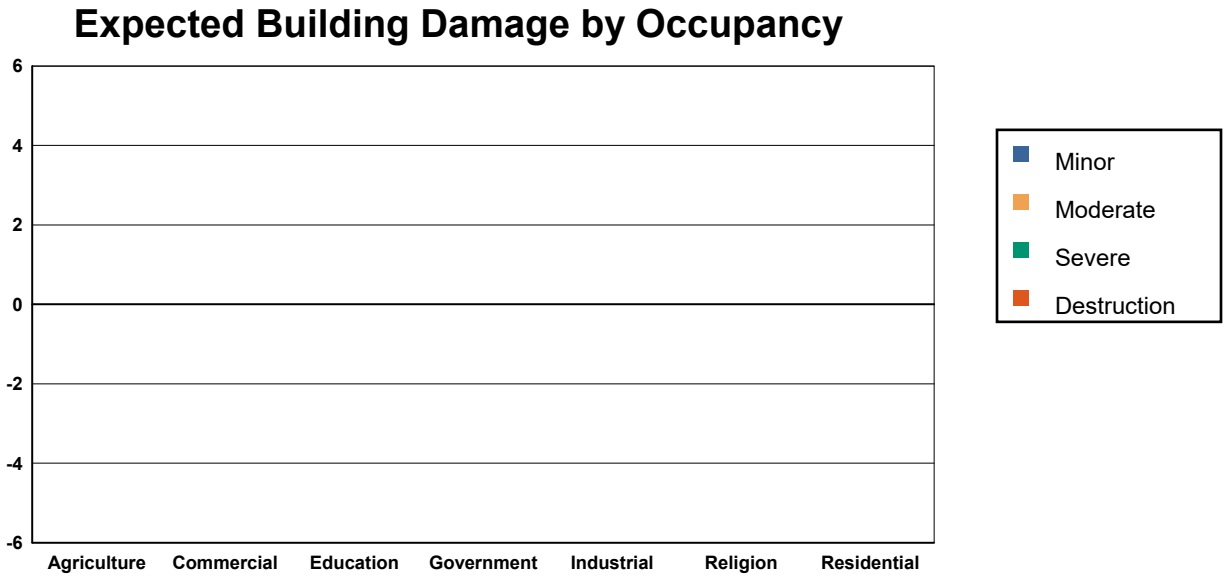


Table 2: Expected Building Damage by Occupancy : 10 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	186.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	5,507.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education	312.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government	212.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1,210.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Religion	760.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	98,893.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**107,080.00**		**0.00**		**0.00**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 10 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,101	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Masonry	28,991	100.00	0	0.00	0	0.00	0	0.00	0	0.00
MH	988	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	3,254	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	69,843	100.00	0	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

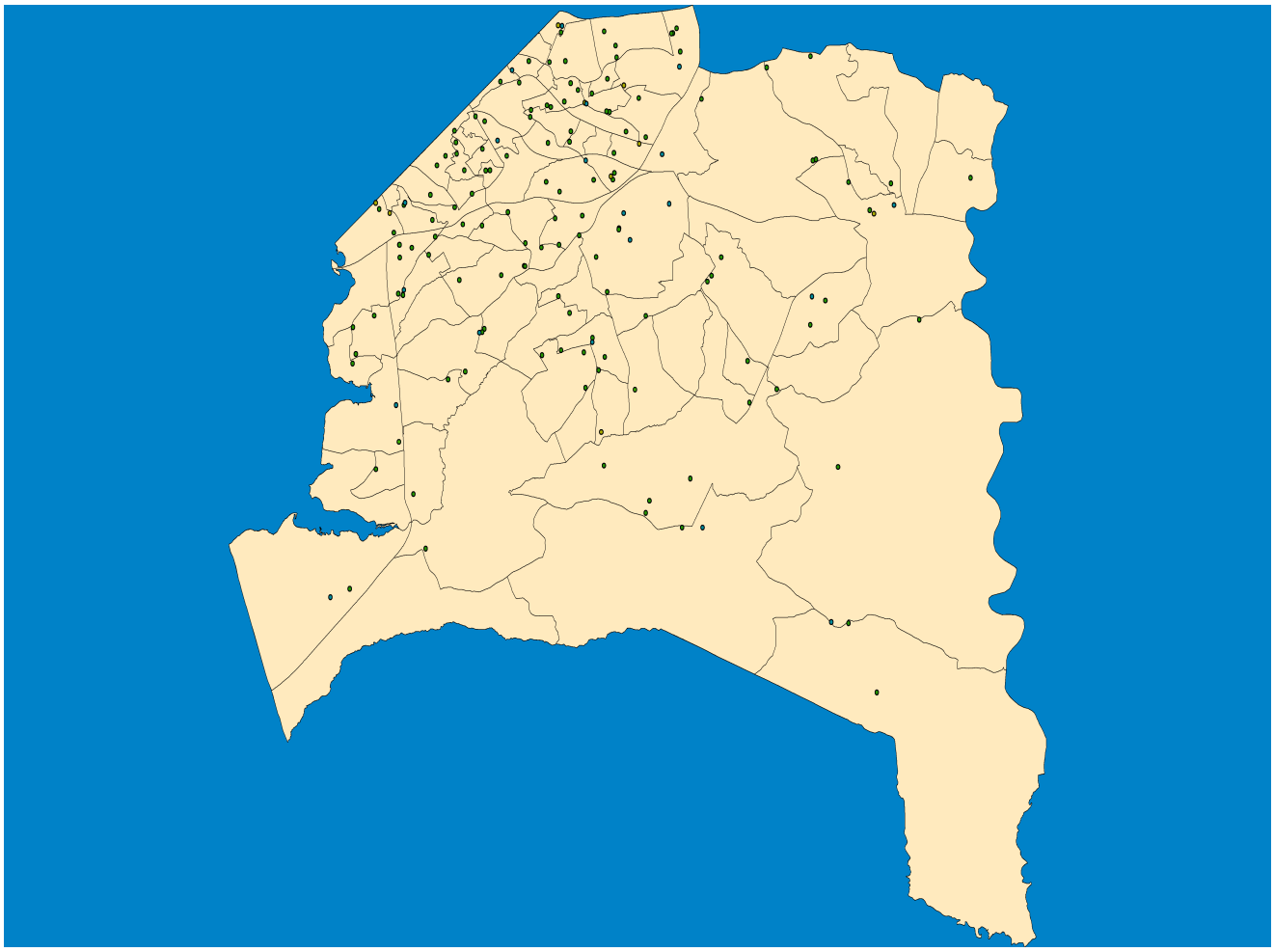
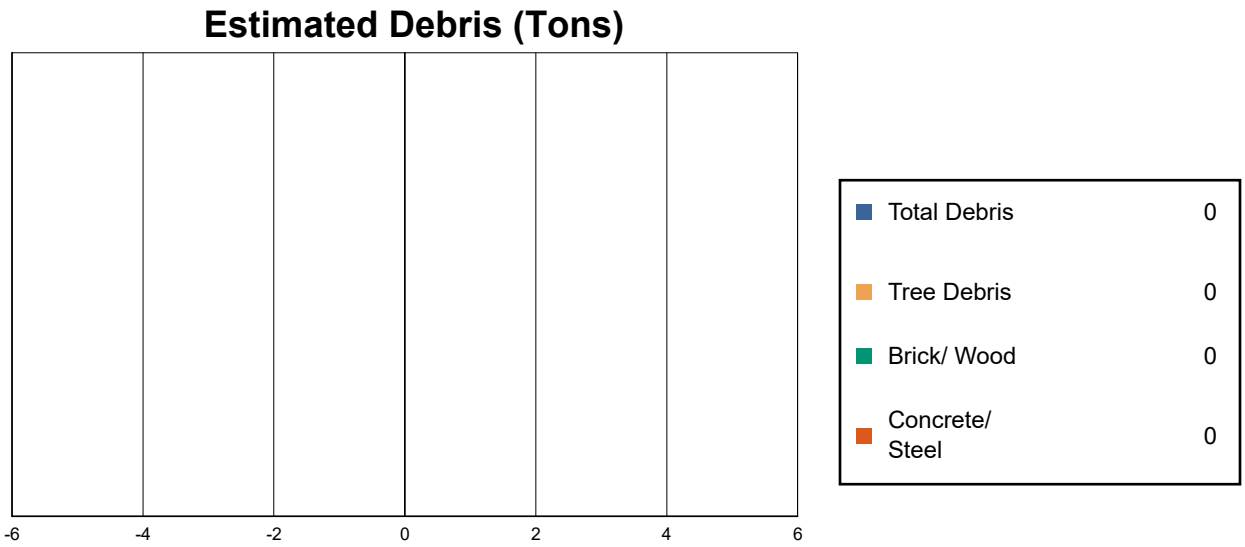


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

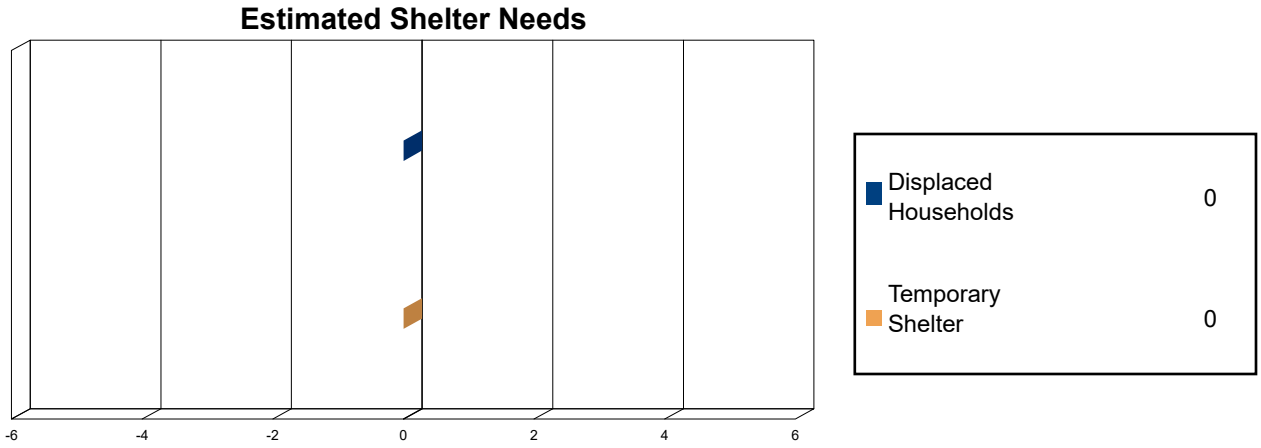


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0 tons of debris will be generated. Of the total amount, 0 tons (0%) is Other Tree Debris. Of the remaining 0 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 0 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

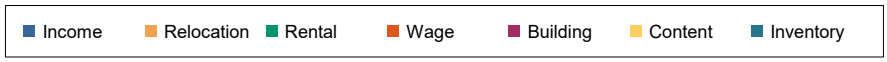
The total economic loss estimated for the hurricane is 0.0 million dollars, which represents 0.00 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 0 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 0% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

**Loss by Business Interruption Type (left)
and Building Damage Type (right)**



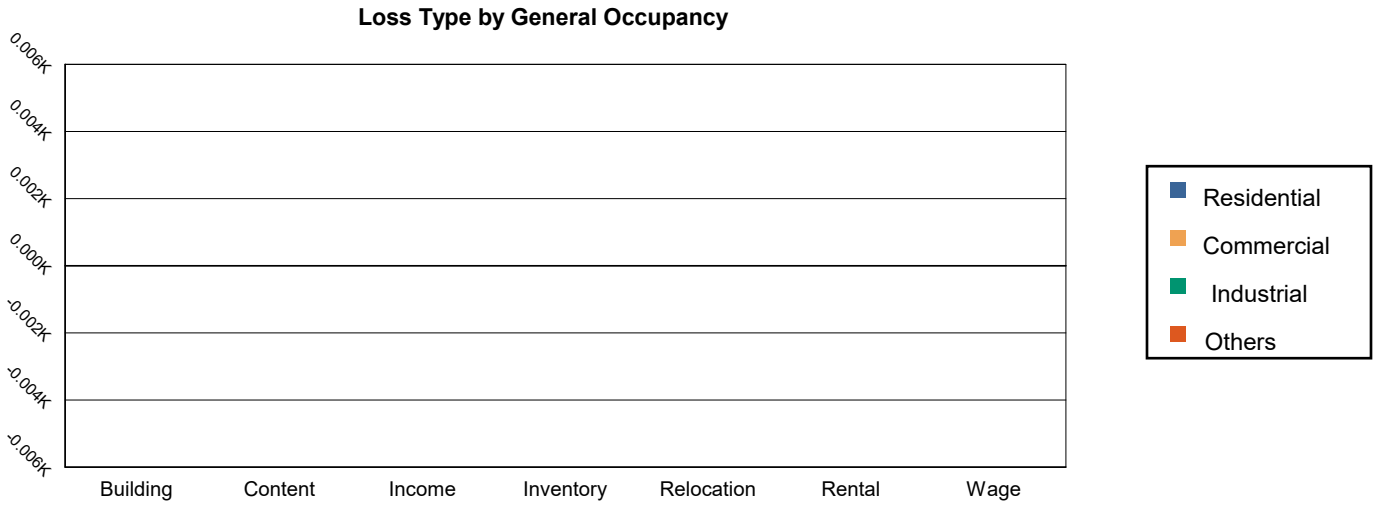


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	0.00	0.00	0.00	0.00	0.00
	Content	0.00	0.00	0.00	0.00	0.00
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.00	0.00	0.00	0.00	0.00
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Total

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 20-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 298.39 square miles and contains 87 census tracts. There are over 119 thousand households in the region and a total population of 325,001 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 107 thousand buildings in the region with a total building replacement value (excluding contents) of 43,092 million dollars (2014 dollars). Approximately 92% of the buildings (and 85% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 107,080 buildings in the region which have an aggregate total replacement value of 43,092 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

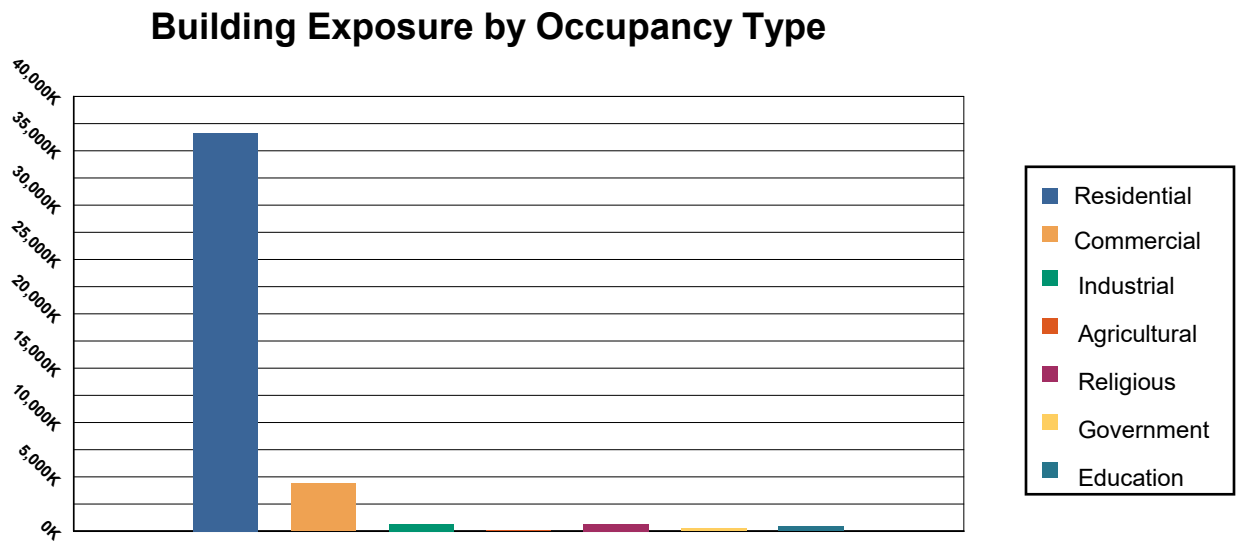


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	36,647,464	85.04%
Commercial	4,369,374	10.14%
Industrial	672,227	1.56%
Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 0 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

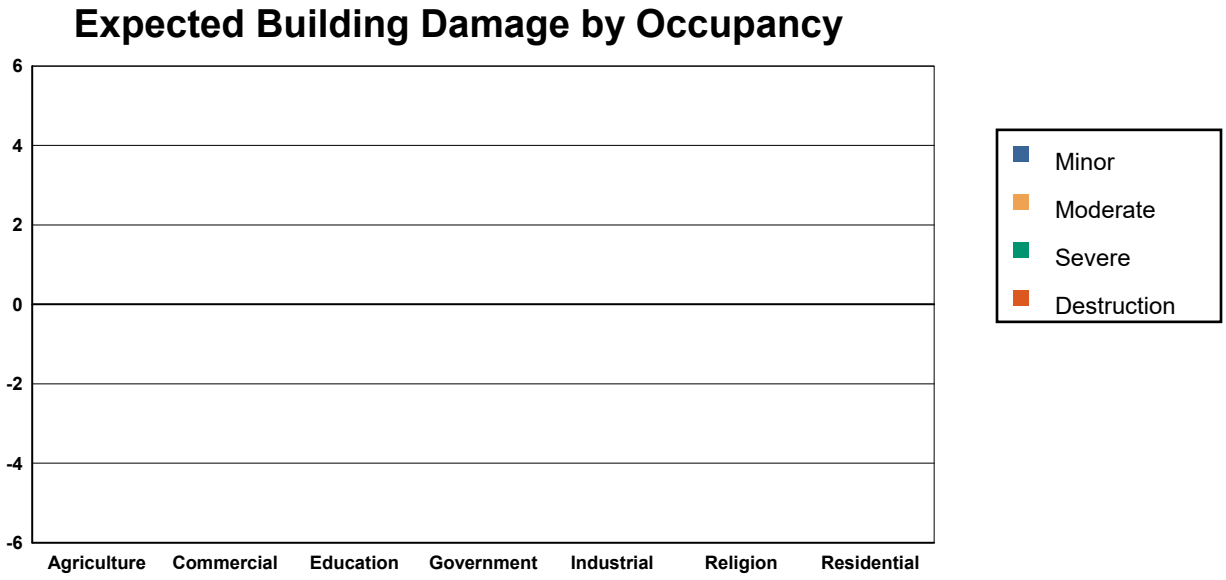


Table 2: Expected Building Damage by Occupancy : 20 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	186.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	5,507.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education	312.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government	212.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1,210.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Religion	760.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	98,893.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**107,080.00**		**0.00**		**0.00**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 20 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,101	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Masonry	28,991	100.00	0	0.00	0	0.00	0	0.00	0	0.00
MH	988	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	3,254	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	69,843	100.00	0	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

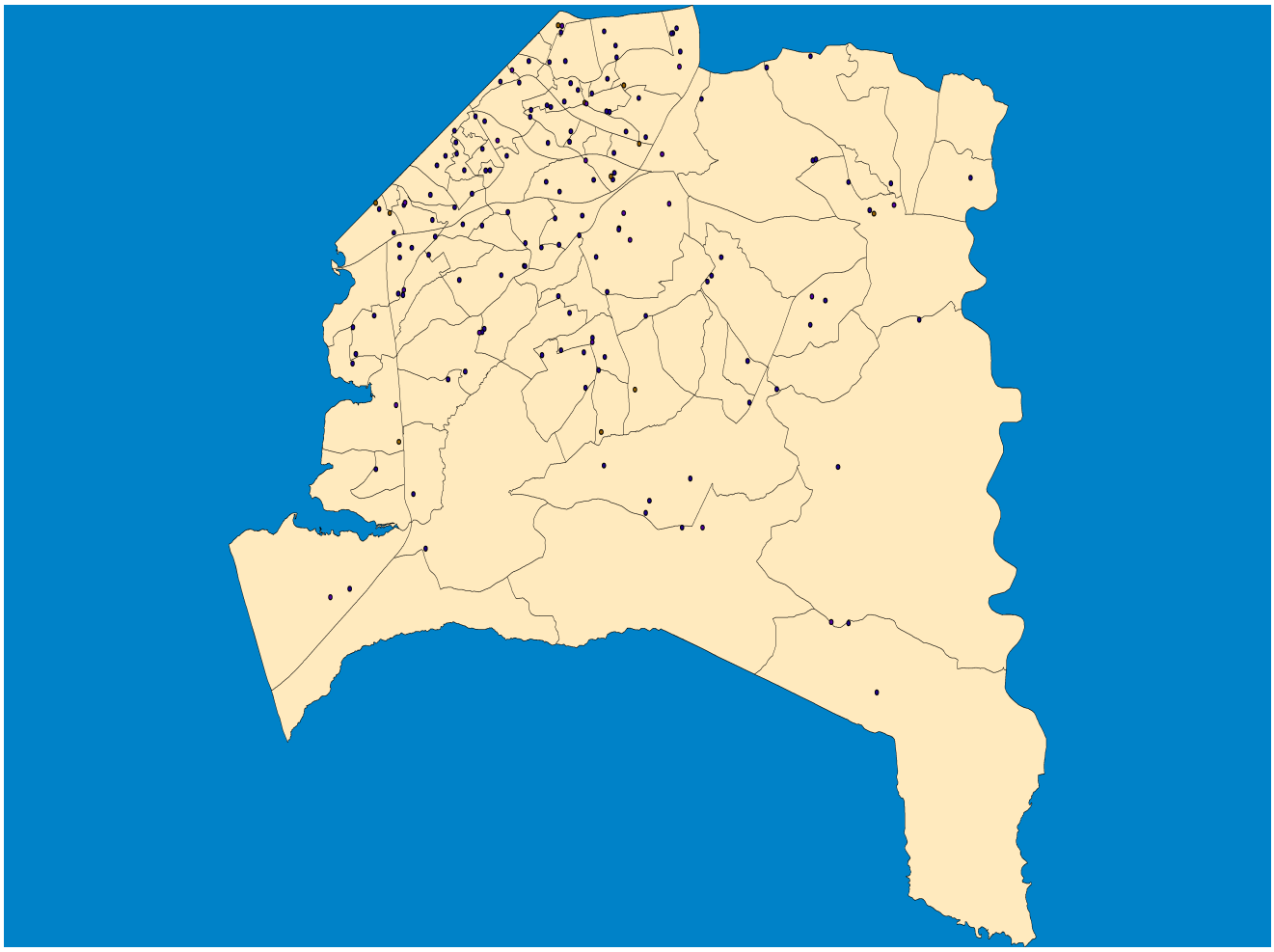
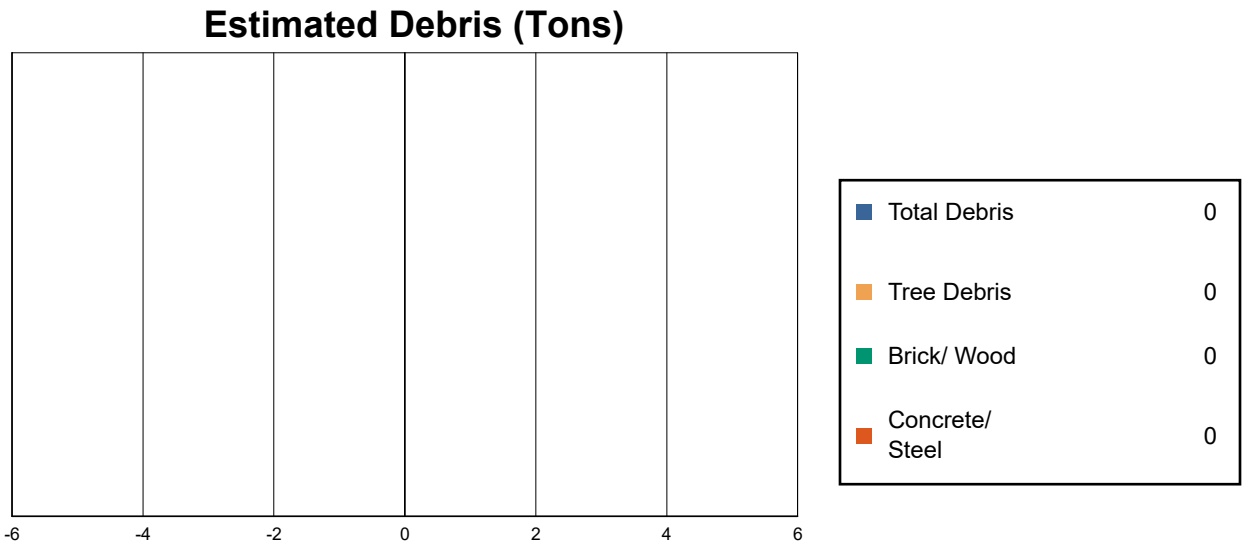


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

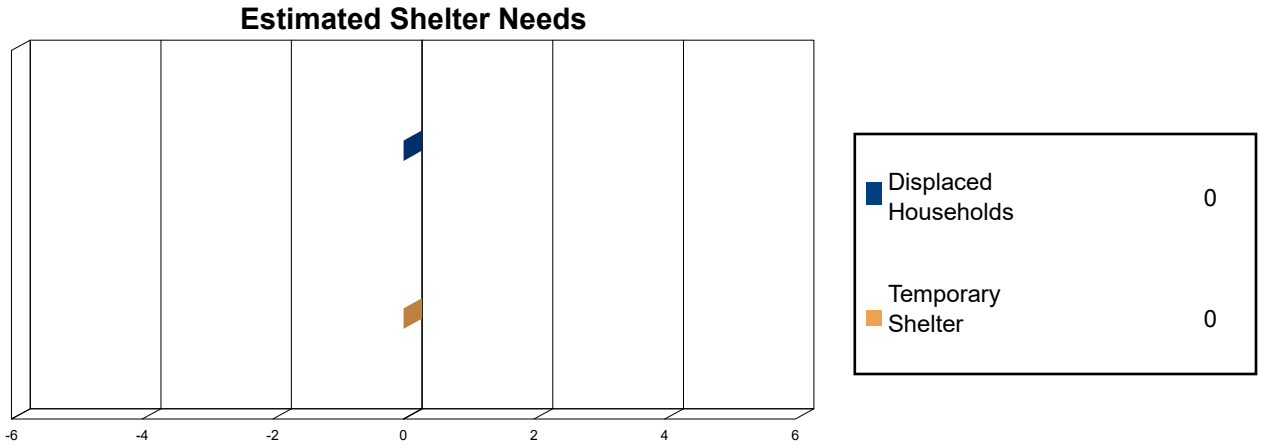


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 0 tons of debris will be generated. Of the total amount, 0 tons (0%) is Other Tree Debris. Of the remaining 0 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 0 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

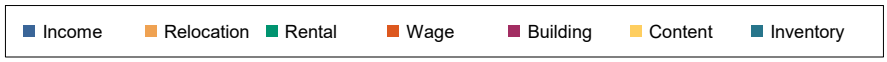
The total economic loss estimated for the hurricane is 0.0 million dollars, which represents 0.00 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 0 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 0% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

**Loss by Business Interruption Type (left)
and Building Damage Type (right)**



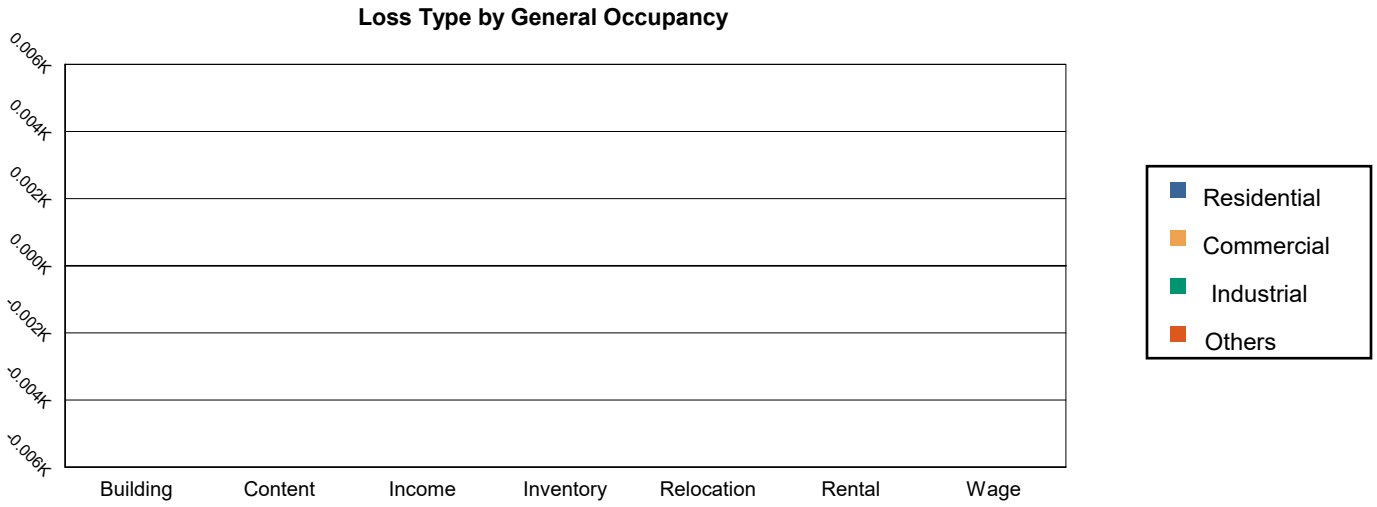


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	0.00	0.00	0.00	0.00	0.00
	Content	0.00	0.00	0.00	0.00	0.00
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.00	0.00	0.00	0.00	0.00
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Total

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
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Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 50-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
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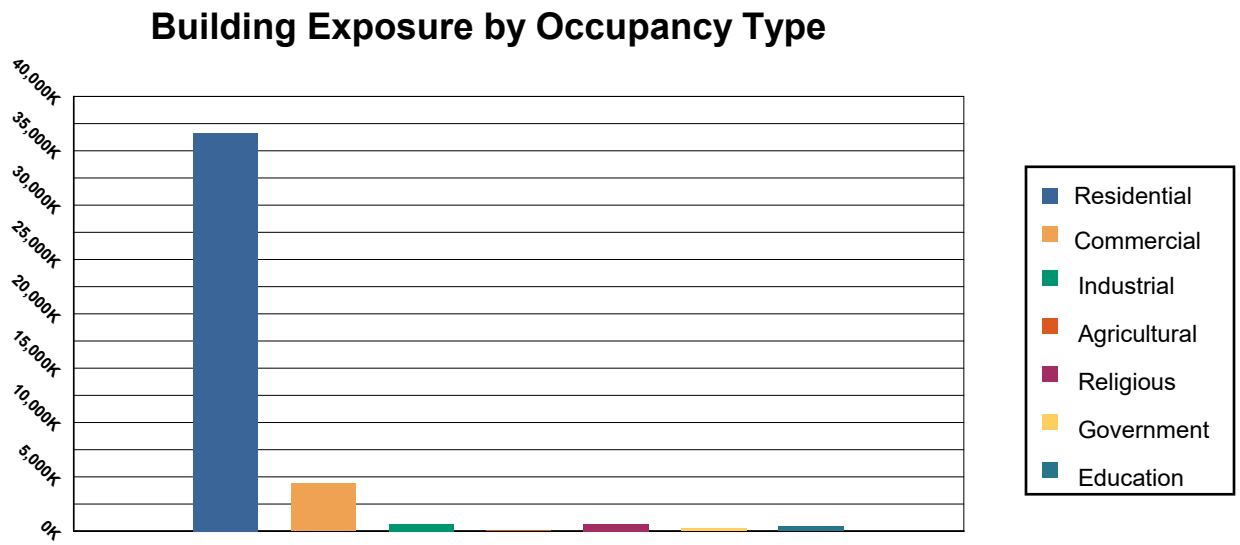


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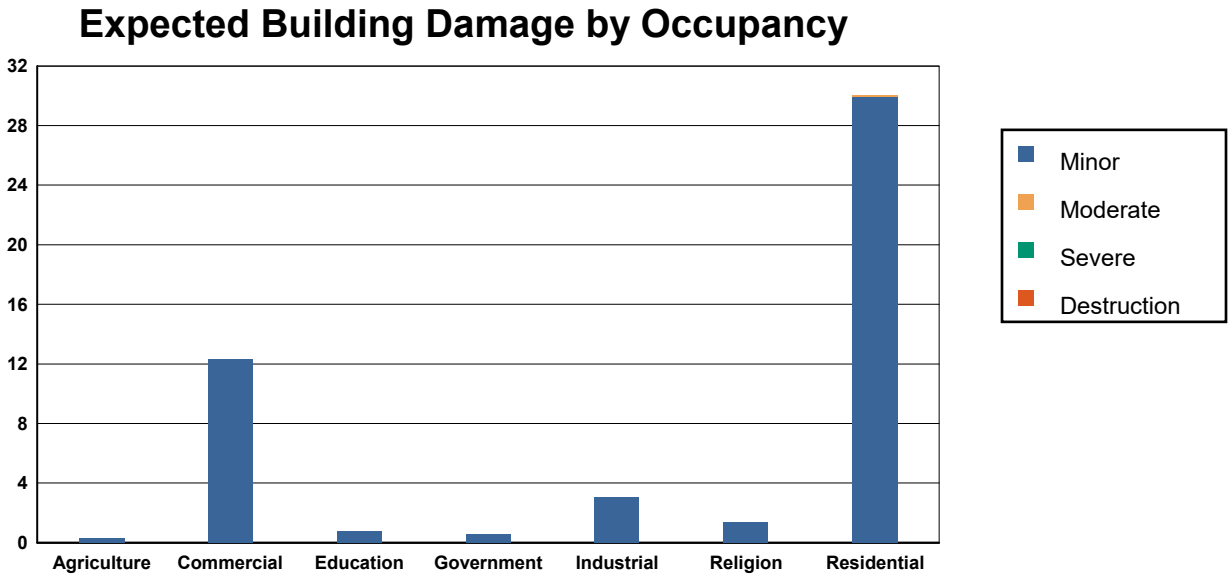


Table 2: Expected Building Damage by Occupancy : 50 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	185.71	99.84	0.29	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	5,494.70	99.78	12.30	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Education	311.24	99.76	0.76	0.24	0.00	0.00	0.00	0.00	0.00	0.00
Government	211.45	99.74	0.55	0.26	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1,206.98	99.75	3.02	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Religion	758.66	99.82	1.34	0.18	0.00	0.00	0.00	0.00	0.00	0.00
Residential	98,862.99	99.97	29.93	0.03	0.08	0.00	0.00	0.00	0.00	0.00
Total	**107,031.73**		**48.19**		**0.08**		**0.00**		**0.00**	

Table 3: Expected Building Damage by Building Type : 50 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,098	99.69	3	0.31	0	0.00	0	0.00	0	0.00
Masonry	28,957	99.88	34	0.12	0	0.00	0	0.00	0	0.00
MH	988	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	3,245	99.73	9	0.27	0	0.00	0	0.00	0	0.00
Wood	69,842	100.00	1	0.00	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

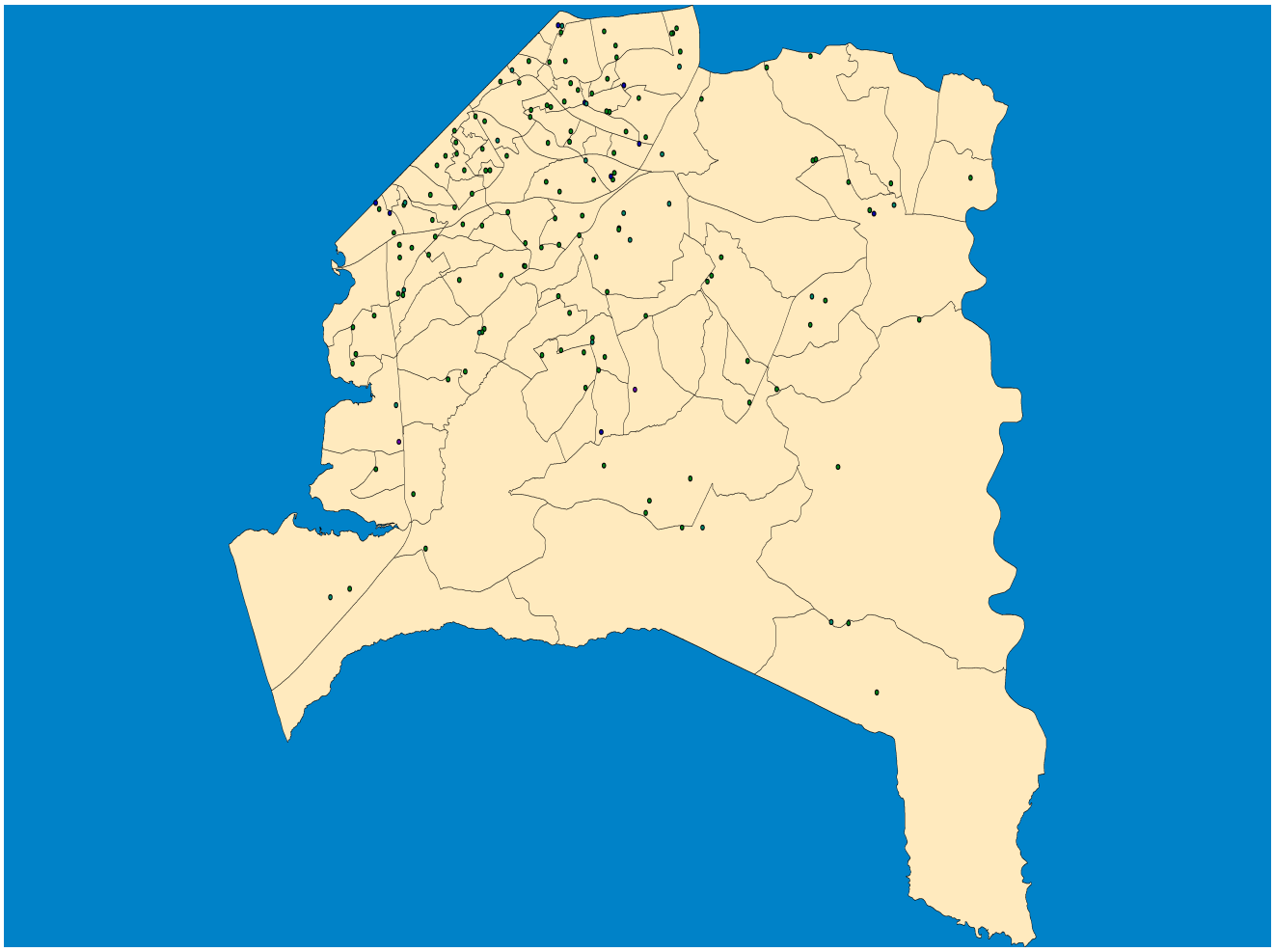
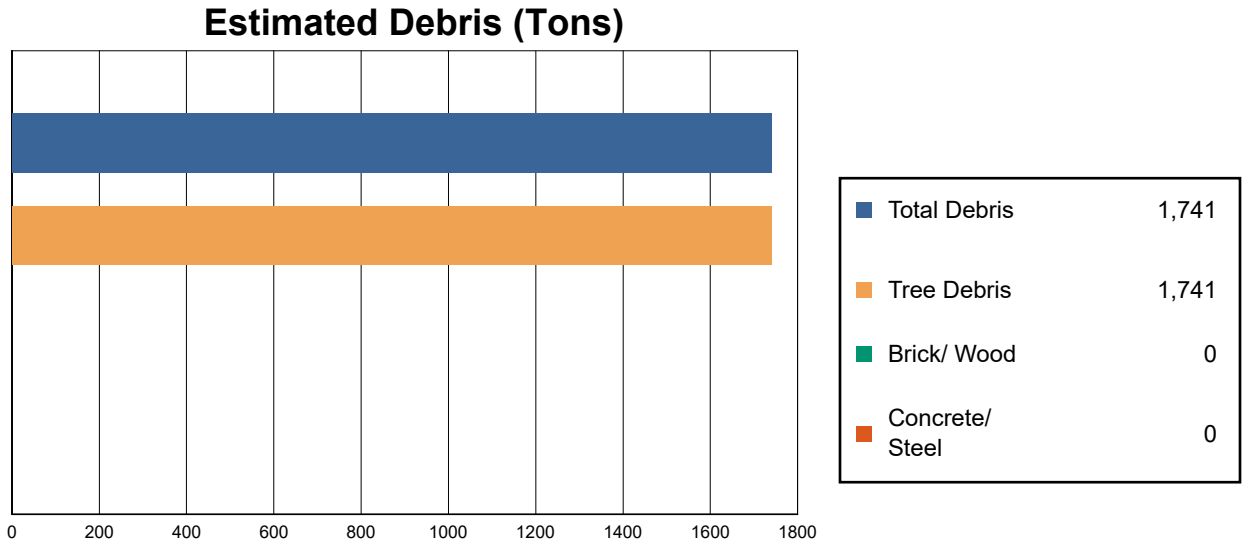


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

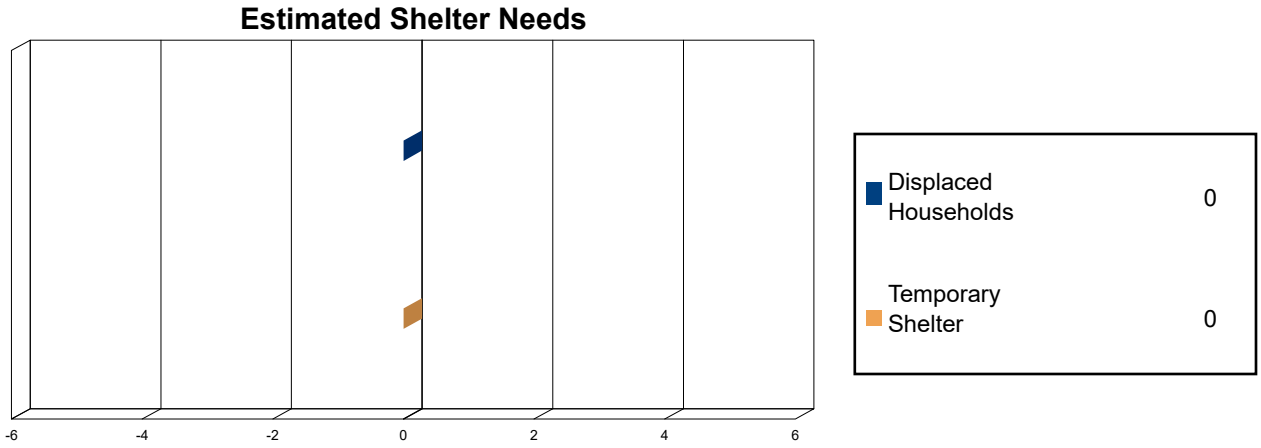


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 1,741 tons of debris will be generated. Of the total amount, 1,420 tons (82%) is Other Tree Debris. Of the remaining 321 tons, Brick/Wood comprises 0% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 0 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 321 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

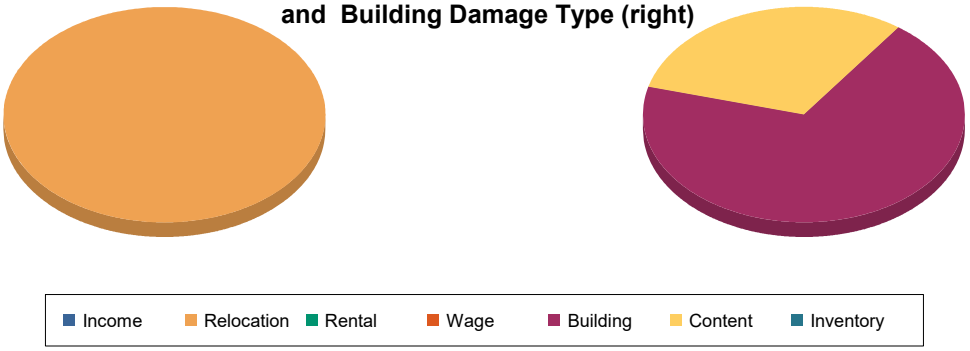
The total economic loss estimated for the hurricane is 2.5 million dollars, which represents 0.01 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 3 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 100% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy



Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	1,753.52	0.00	0.00	0.00	1,753.52
	Content	777.39	0.00	0.00	0.00	777.39
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**2,530.91**	**0.00**	**0.00**	**0.00**	**2,530.91**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	0.21	0.00	0.00	0.00	0.21
	Rental	0.00	0.00	0.00	0.00	0.00
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.21**	**0.00**	**0.00**	**0.00**	**0.21**

Total

Total	**2,531.12**	**0.00**	**0.00**	**0.00**	**2,531.12**

Appendix A: County Listing for the Region

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- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
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Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 100-year Return Period

Print Date: Wednesday, November 30, 2022

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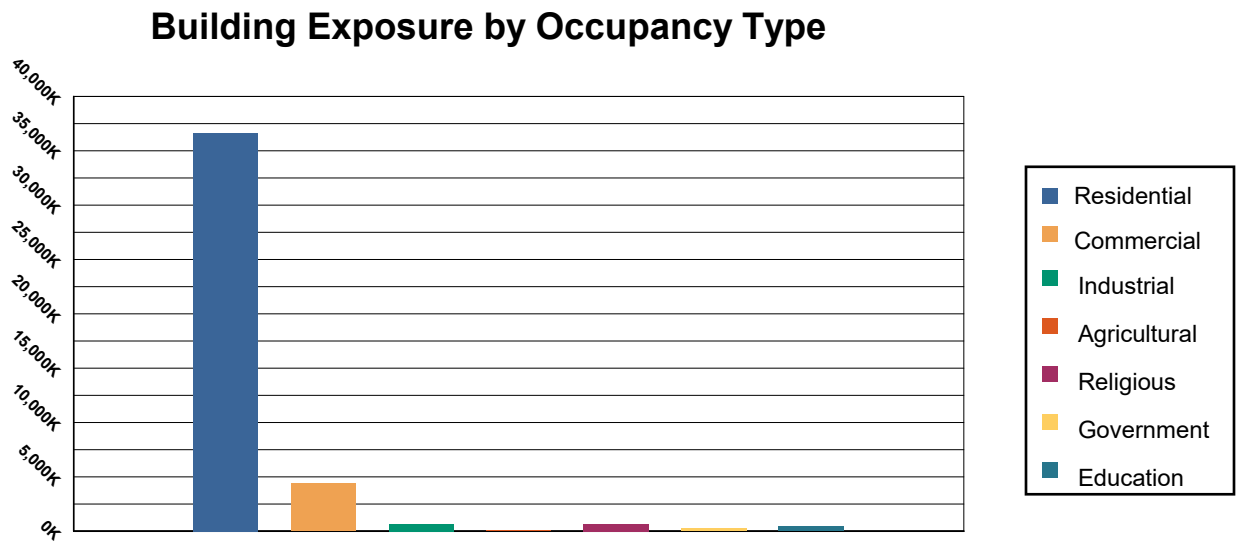


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Commercial	4,369,374	10.14%
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Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 2 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

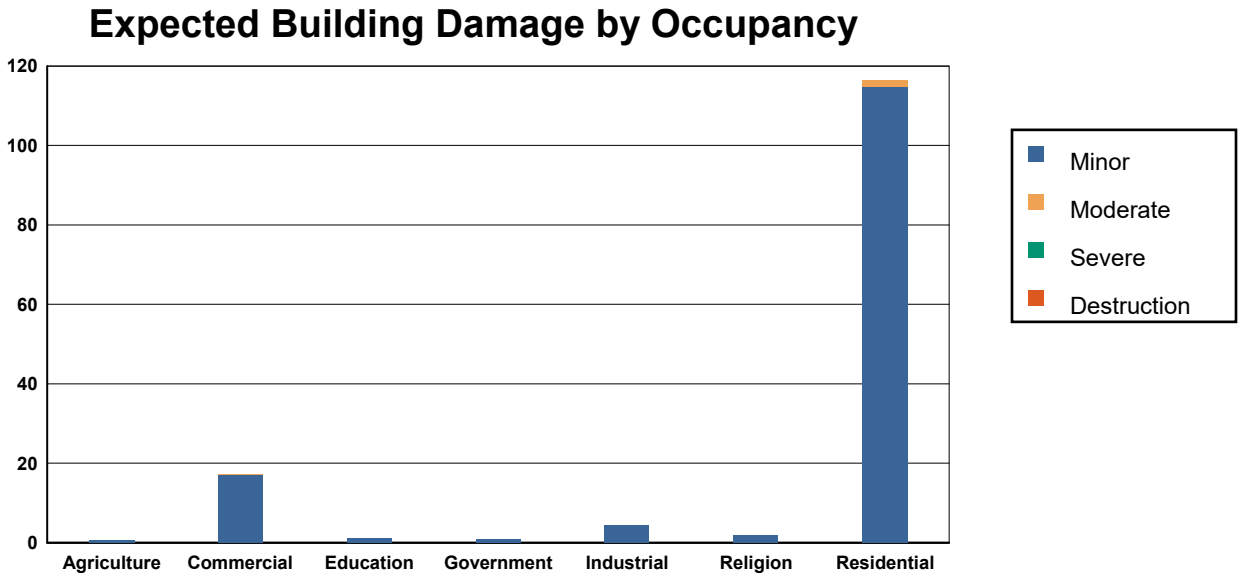


Table 2: Expected Building Damage by Occupancy : 100 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	185.41	99.68	0.58	0.31	0.01	0.01	0.00	0.00	0.00	0.00
Commercial	5,489.77	99.69	17.09	0.31	0.14	0.00	0.00	0.00	0.00	0.00
Education	310.92	99.65	1.08	0.35	0.00	0.00	0.00	0.00	0.00	0.00
Government	211.16	99.60	0.84	0.40	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1,205.68	99.64	4.32	0.36	0.01	0.00	0.00	0.00	0.00	0.00
Religion	758.09	99.75	1.91	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Residential	98,776.62	99.88	114.65	0.12	1.72	0.00	0.00	0.00	0.00	0.00
Total	**106,937.63**		**140.48**		**1.89**		**0.01**		**0.00**	

Table 3: Expected Building Damage by Building Type : 100 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,096	99.57	5	0.43	0	0.00	0	0.00	0	0.00
Masonry	28,923	99.76	67	0.23	2	0.01	0	0.00	0	0.00
MH	988	100.00	0	0.00	0	0.00	0	0.00	0	0.00
Steel	3,242	99.62	12	0.38	0	0.00	0	0.00	0	0.00
Wood	69,795	99.93	48	0.07	0	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

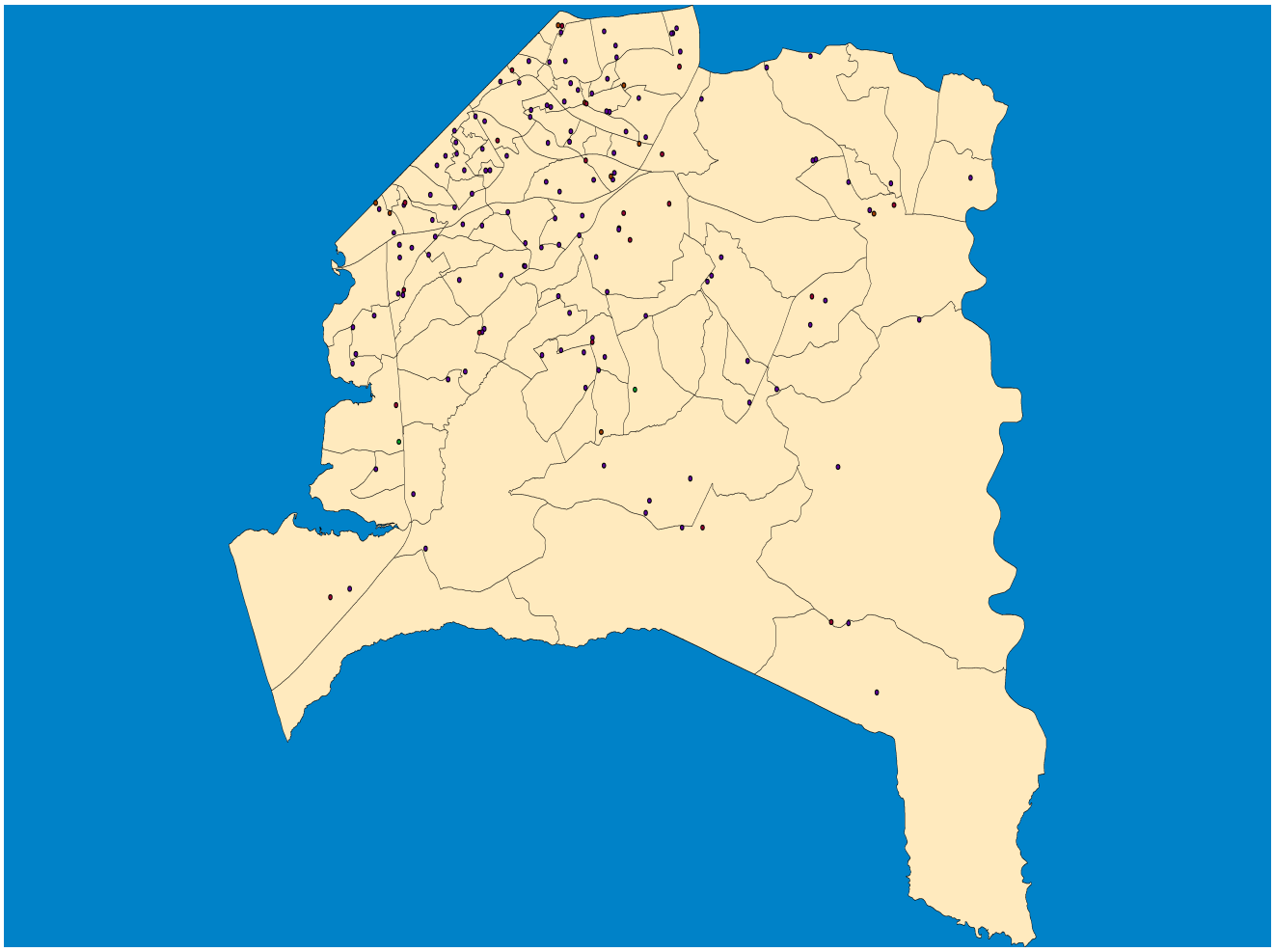
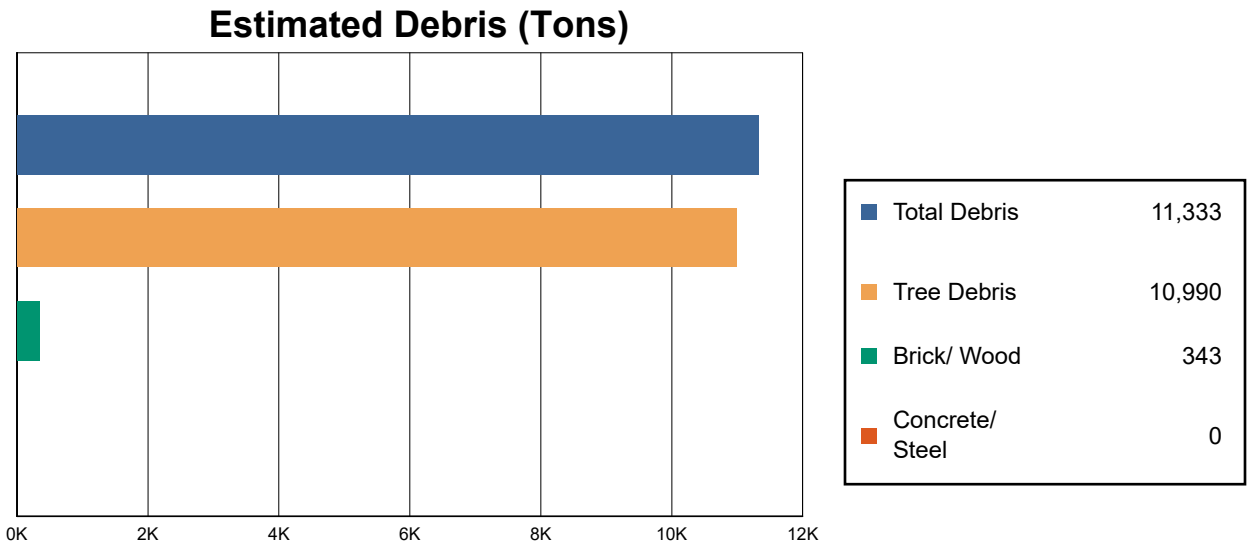


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

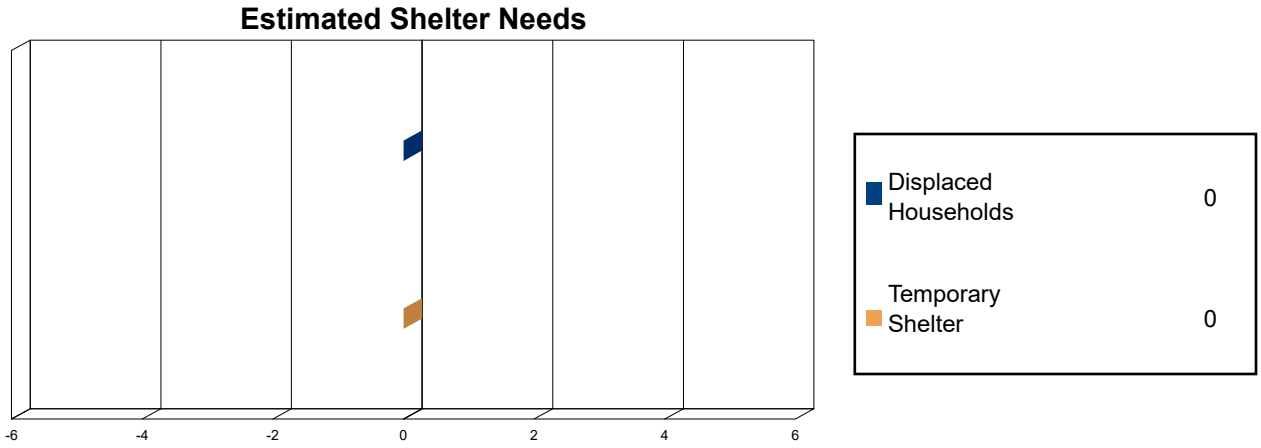


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 11,333 tons of debris will be generated. Of the total amount, 9,084 tons (80%) is Other Tree Debris. Of the remaining 2,249 tons, Brick/Wood comprises 15% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 14 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 1,906 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

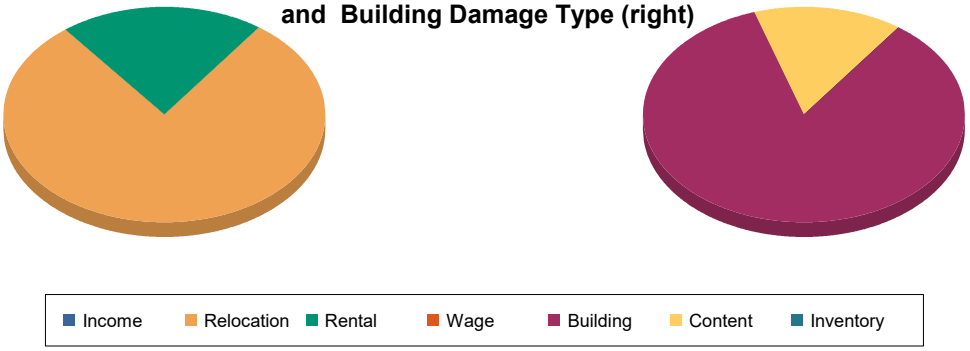
The total economic loss estimated for the hurricane is 18.8 million dollars, which represents 0.04 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 19 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy



Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	15,657.93	225.42	44.48	69.01	15,996.84
	Content	2,827.74	0.00	0.00	0.04	2,827.78
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**18,485.67**	**225.42**	**44.48**	**69.05**	**18,824.62**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	11.98	0.69	0.01	0.04	12.72
	Rental	3.31	0.00	0.00	0.00	3.31
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**15.29**	**0.69**	**0.01**	**0.04**	**16.03**

Total

Total	**18,500.96**	**226.11**	**44.49**	**69.09**	**18,840.66**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 200-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 298.39 square miles and contains 87 census tracts. There are over 119 thousand households in the region and a total population of 325,001 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 107 thousand buildings in the region with a total building replacement value (excluding contents) of 43,092 million dollars (2014 dollars). Approximately 92% of the buildings (and 85% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 107,080 buildings in the region which have an aggregate total replacement value of 43,092 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

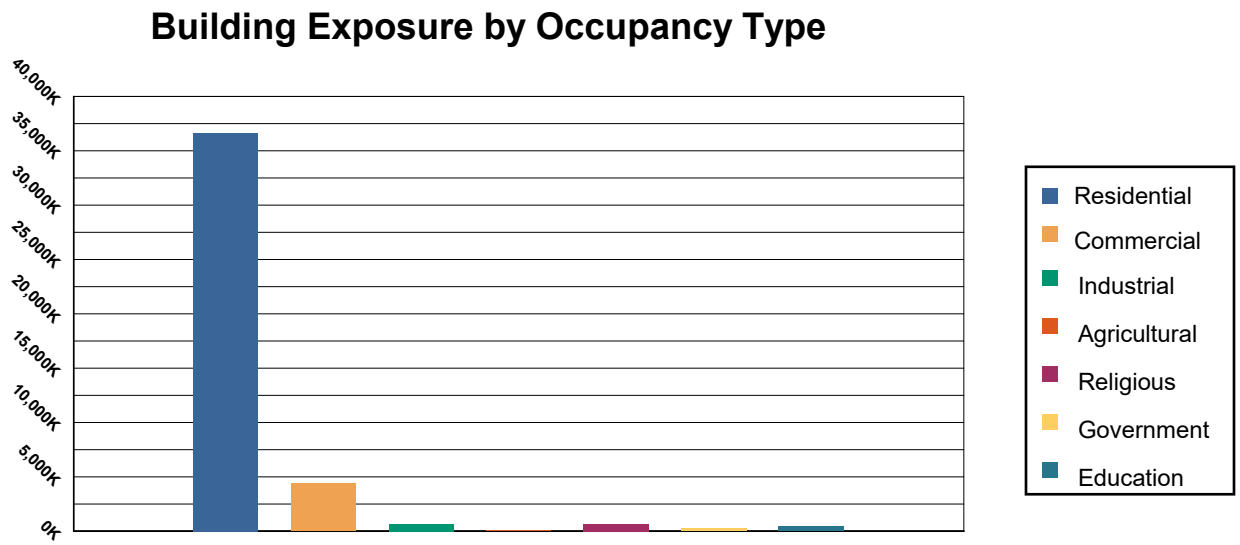


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	36,647,464	85.04%
Commercial	4,369,374	10.14%
Industrial	672,227	1.56%
Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 23 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

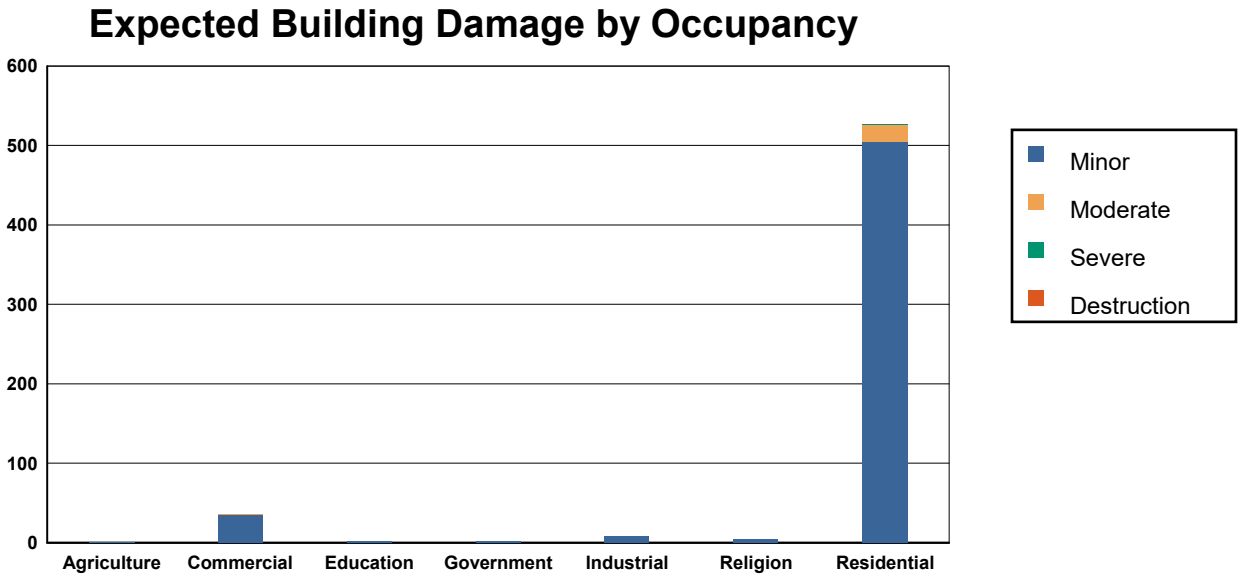


Table 2: Expected Building Damage by Occupancy : 200 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	184.95	99.43	1.02	0.55	0.03	0.02	0.01	0.00	0.00	0.00
Commercial	5,471.28	99.35	34.87	0.63	0.85	0.02	0.00	0.00	0.00	0.00
Education	309.94	99.34	2.06	0.66	0.00	0.00	0.00	0.00	0.00	0.00
Government	210.52	99.30	1.48	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1,201.63	99.31	8.34	0.69	0.02	0.00	0.01	0.00	0.00	0.00
Religion	756.15	99.49	3.85	0.51	0.00	0.00	0.00	0.00	0.00	0.00
Residential	98,366.12	99.47	504.31	0.51	22.49	0.02	0.08	0.00	0.00	0.00
Total	**106,500.59**		**555.93**		**23.39**		**0.10**		**0.00**	

Table 3: Expected Building Damage by Building Type : 200 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,092	99.14	9	0.85	0	0.00	0	0.00	0	0.00
Masonry	28,745	99.15	228	0.79	18	0.06	0	0.00	0	0.00
MH	988	99.99	0	0.00	0	0.01	0	0.00	0	0.00
Steel	3,230	99.25	24	0.73	0	0.01	0	0.00	0	0.00
Wood	69,574	99.61	266	0.38	3	0.00	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

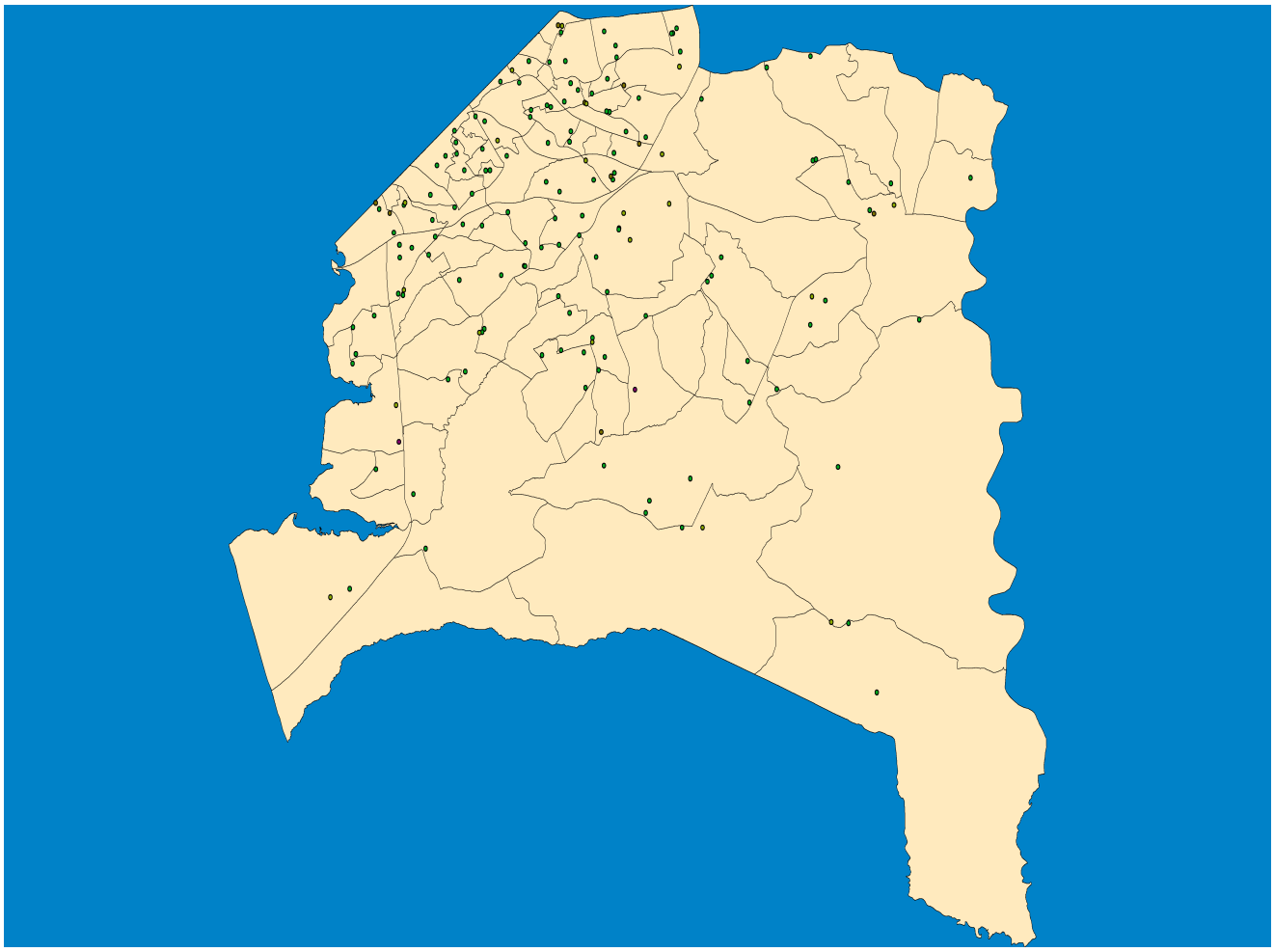
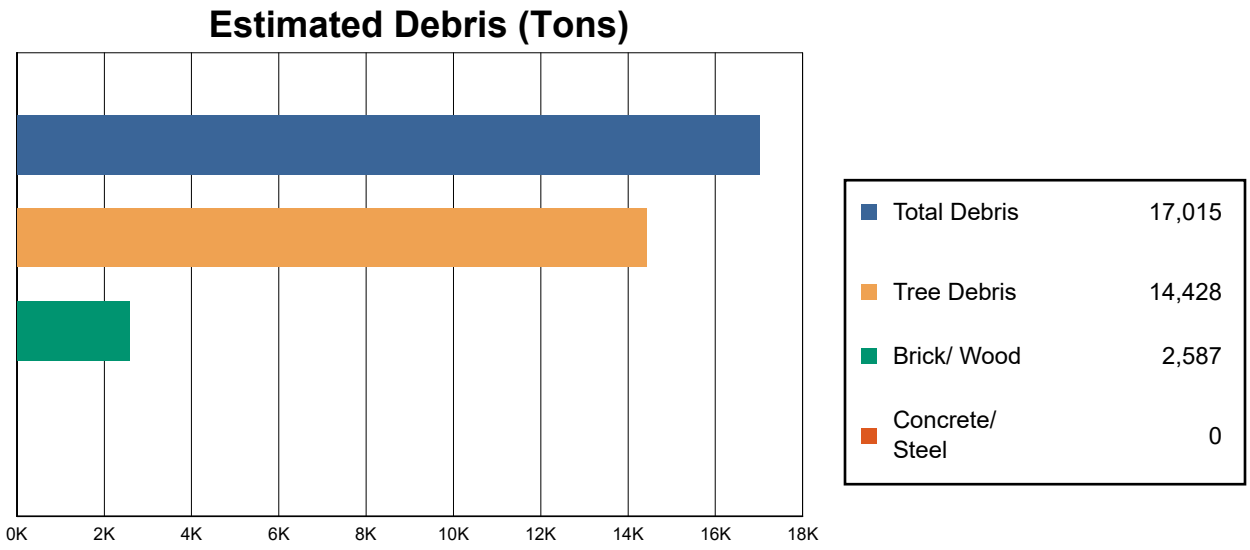


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

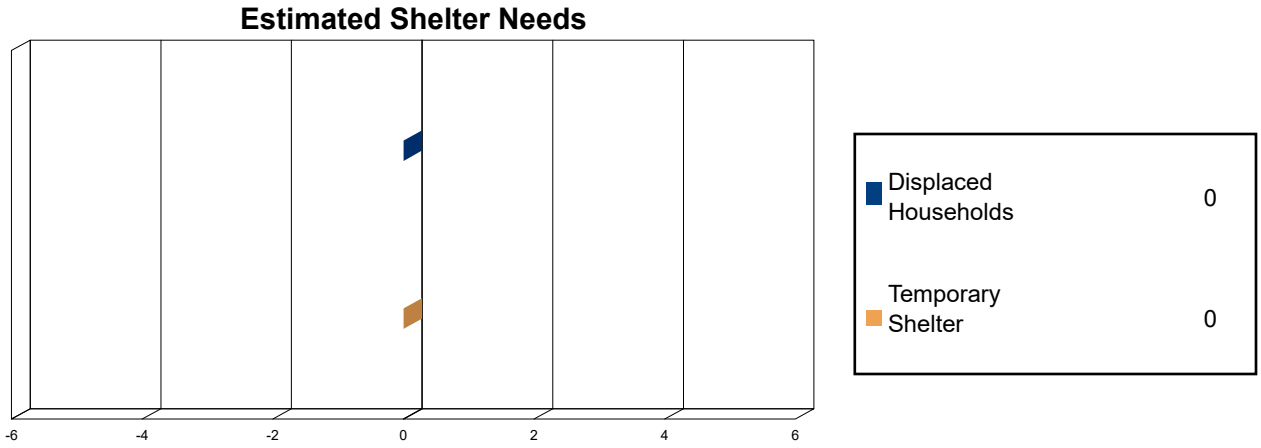


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 17,015 tons of debris will be generated. Of the total amount, 10,017 tons (59%) is Other Tree Debris. Of the remaining 6,998 tons, Brick/Wood comprises 37% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 103 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 4,411 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

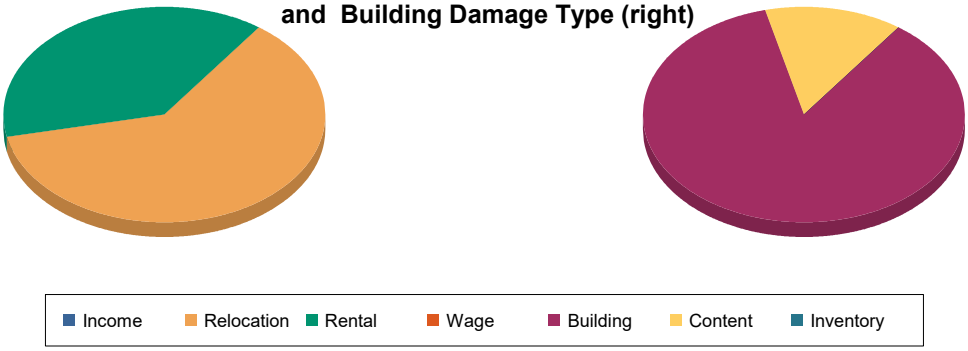
The total economic loss estimated for the hurricane is 58.2 million dollars, which represents 0.13 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 58 million dollars. 0% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

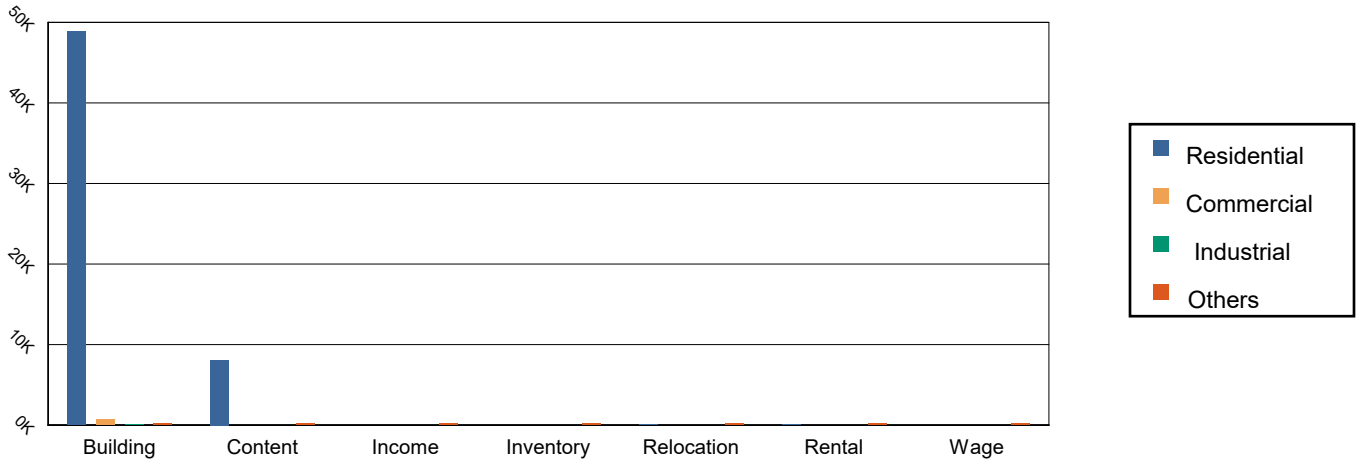


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	48,863.55	665.20	106.45	218.98	49,854.18
	Content	8,107.58	0.00	0.00	0.00	8,107.58
	Inventory	0.00	0.00	0.00	0.00	0.00
	Subtotal	**56,971.12**	**665.20**	**106.45**	**218.98**	**57,961.75**
Business Interruption Loss						
	Income	0.00	0.00	0.00	0.00	0.00
	Relocation	117.57	5.72	0.00	0.09	123.37
	Rental	76.82	0.00	0.00	0.00	76.82
	Wage	0.00	0.00	0.00	0.00	0.00
	Subtotal	**194.39**	**5.72**	**0.00**	**0.09**	**200.19**

Total

Total	**57,165.51**	**670.92**	**106.45**	**219.06**	**58,161.94**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 500-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

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The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 298.39 square miles and contains 87 census tracts. There are over 119 thousand households in the region and a total population of 325,001 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 107 thousand buildings in the region with a total building replacement value (excluding contents) of 43,092 million dollars (2014 dollars). Approximately 92% of the buildings (and 85% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 107,080 buildings in the region which have an aggregate total replacement value of 43,092 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

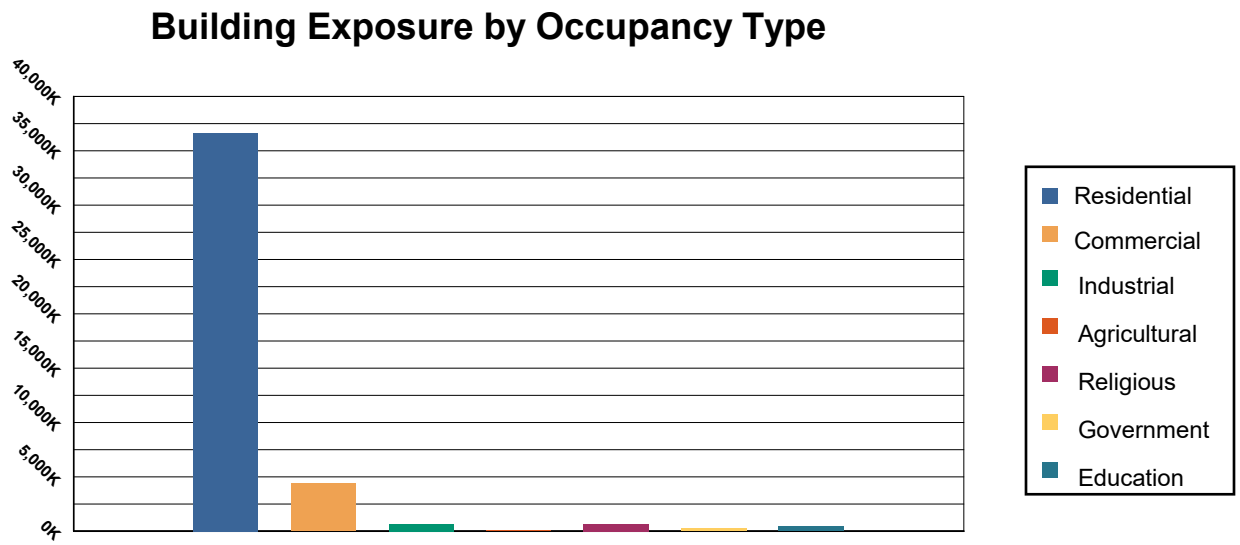


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	36,647,464	85.04%
Commercial	4,369,374	10.14%
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Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 214 buildings will be at least moderately damaged. This is over 0% of the total number of buildings in the region. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

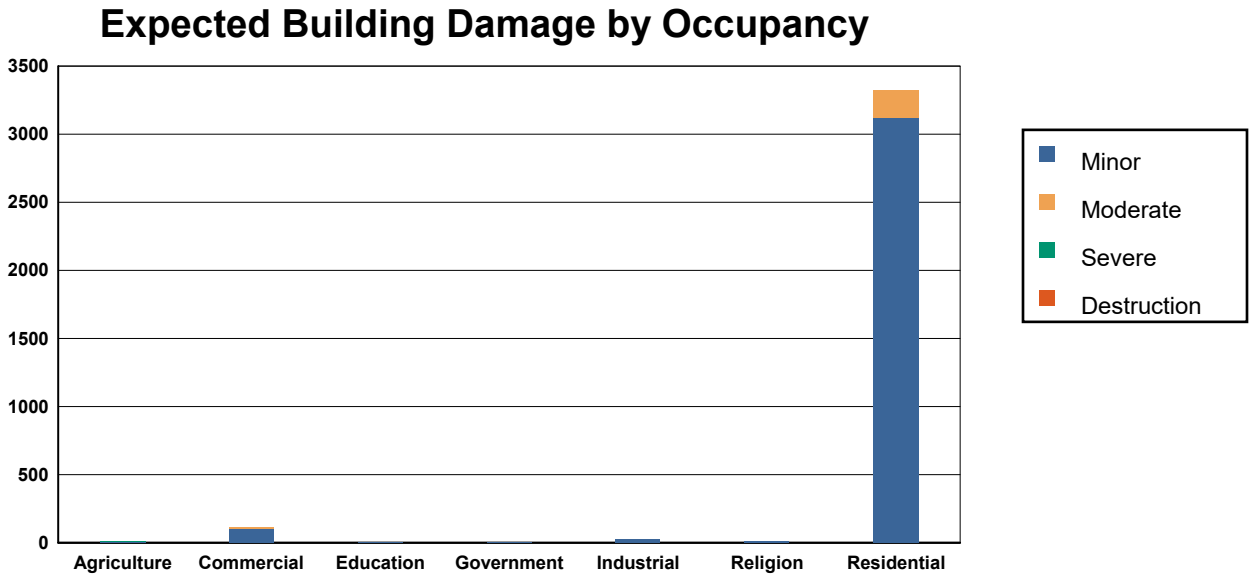


Table 2: Expected Building Damage by Occupancy : 500 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	180.88	97.25	4.41	2.37	0.53	0.28	0.18	0.10	0.01	0.00
Commercial	5,392.76	97.93	104.84	1.90	8.94	0.16	0.46	0.01	0.00	0.00
Education	305.86	98.03	6.00	1.92	0.15	0.05	0.00	0.00	0.00	0.00
Government	207.45	97.85	4.43	2.09	0.13	0.06	0.00	0.00	0.00	0.00
Industrial	1,184.80	97.92	24.02	1.99	1.02	0.08	0.14	0.01	0.01	0.00
Religion	746.00	98.16	13.71	1.80	0.29	0.04	0.00	0.00	0.00	0.00
Residential	95,573.97	96.64	3,116.83	3.15	201.55	0.20	0.22	0.00	0.43	0.00
Total	**103,591.71**		**3,274.23**		**212.61**		**1.01**		**0.44**	

Table 3: Expected Building Damage by Building Type : 500 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,075	97.61	26	2.32	1	0.07	0	0.00	0	0.00
Masonry	27,842	96.04	1,019	3.51	129	0.45	0	0.00	0	0.00
MH	985	99.69	2	0.24	1	0.05	0	0.00	0	0.02
Steel	3,185	97.87	64	1.95	5	0.16	0	0.01	0	0.00
Wood	67,750	97.00	2,029	2.90	64	0.09	0	0.00	0	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

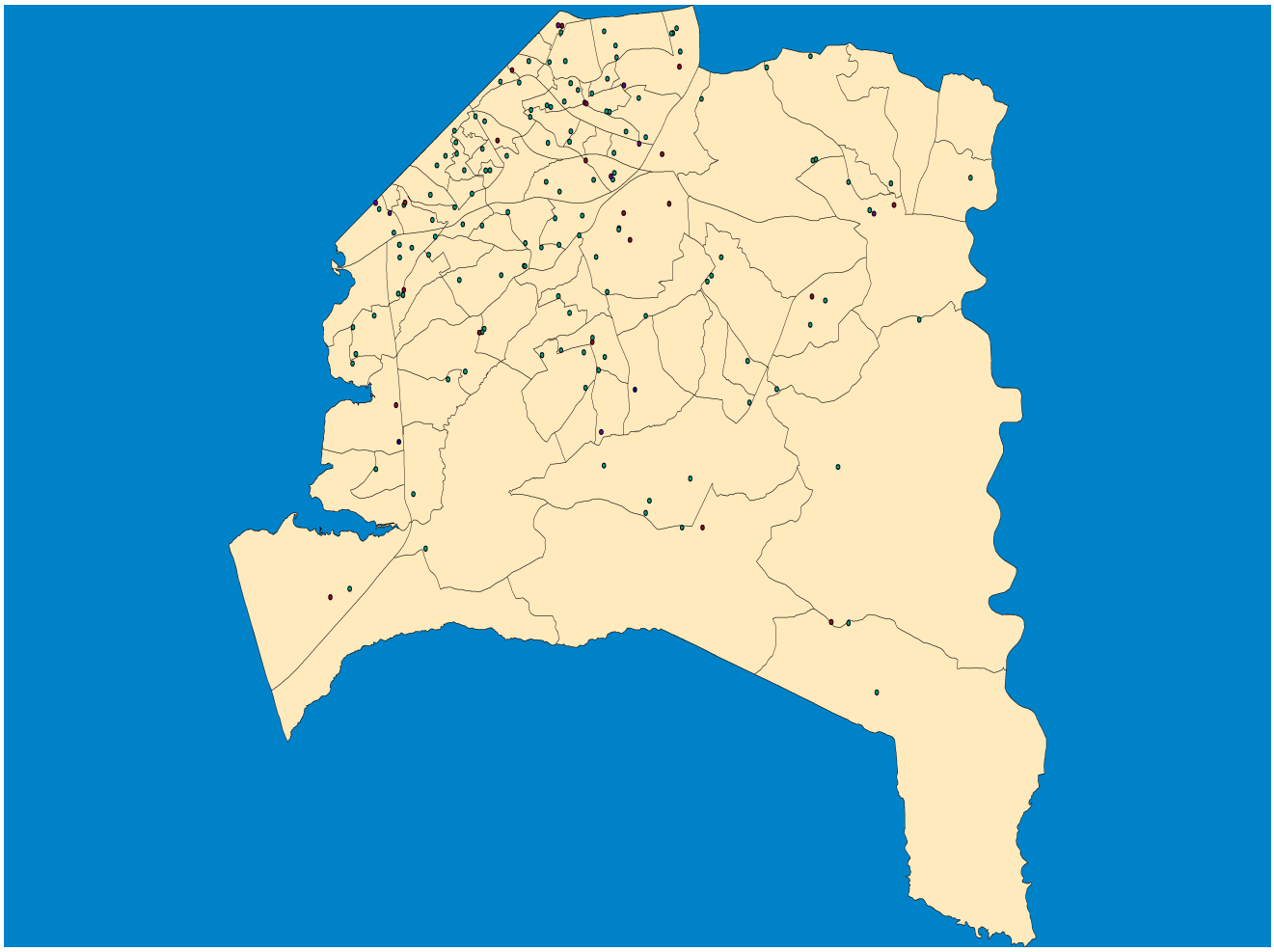
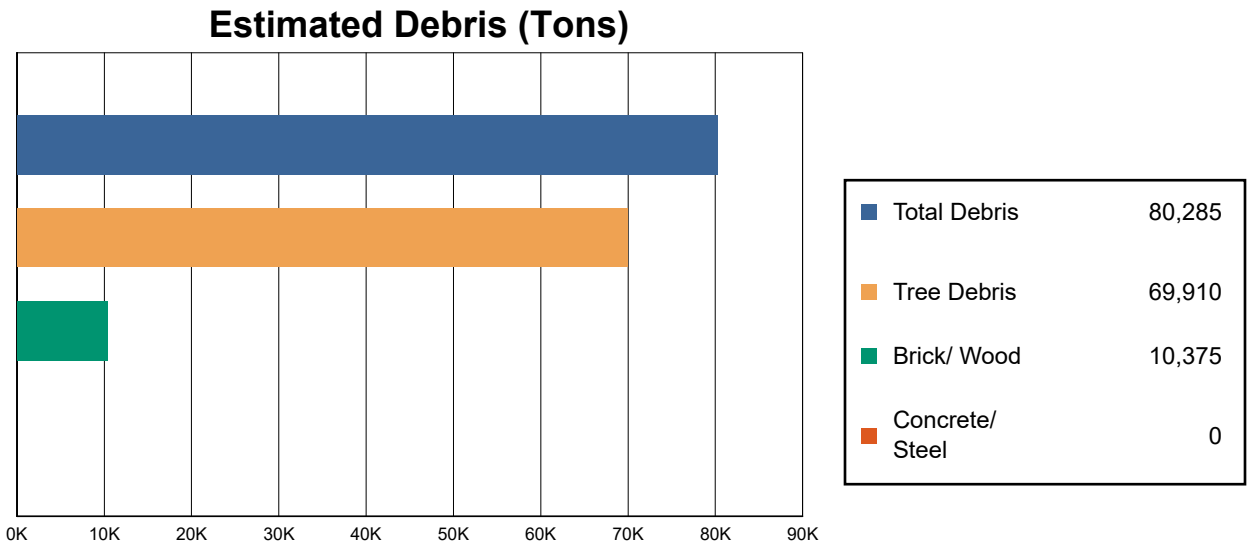


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

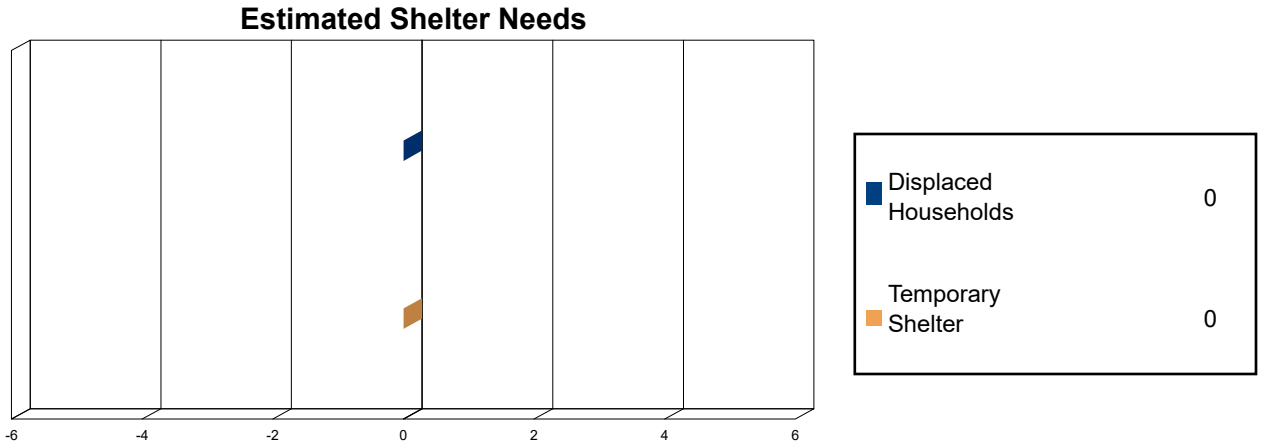


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 80,285 tons of debris will be generated. Of the total amount, 52,185 tons (65%) is Other Tree Debris. Of the remaining 28,100 tons, Brick/Wood comprises 37% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 415 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 17,725 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

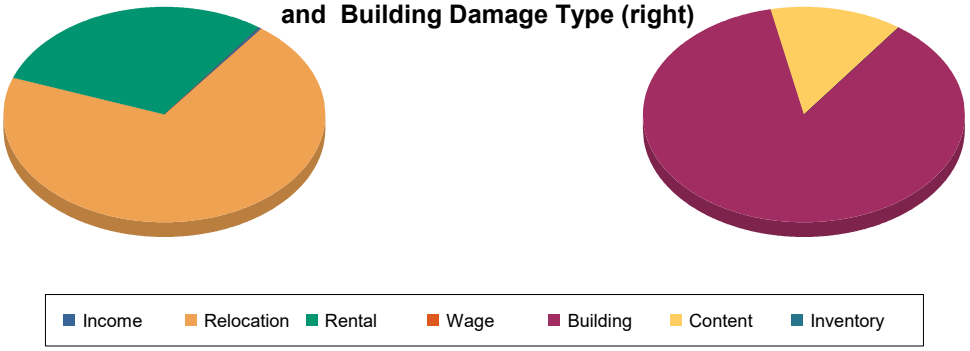
The total economic loss estimated for the hurricane is 167.5 million dollars, which represents 0.39 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 167 million dollars. 4% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 98% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

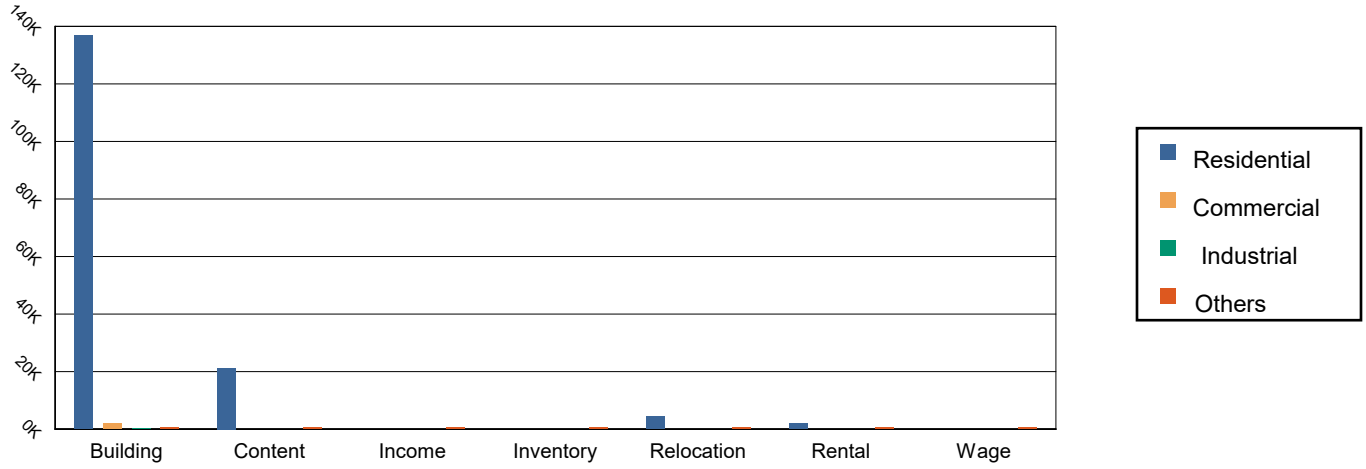


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	136,914.68	1,930.18	280.91	603.39	139,729.16
	Content	21,213.90	48.59	31.34	18.75	21,312.57
	Inventory	0.00	1.99	6.04	1.34	9.38
	Subtotal	**158,128.58**	**1,980.76**	**318.29**	**623.49**	**161,051.11**
Business Interruption Loss						
	Income	0.00	15.13	0.02	0.00	15.15
	Relocation	4,433.50	72.33	3.54	6.21	4,515.59
	Rental	1,875.70	6.82	0.02	0.02	1,882.55
	Wage	0.00	5.45	0.03	0.00	5.49
	Subtotal	**6,309.20**	**99.73**	**3.61**	**6.24**	**6,418.77**

Total

Total	**164,437.77**	**2,080.48**	**321.90**	**629.73**	**167,469.88**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**

Hazus: Hurricane Global Risk Report

Region Name: pg_Hur_prob_south

Hurricane Scenario: Probabilistic 1000-year Return Period

Print Date: Wednesday, November 30, 2022

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The hurricane loss estimates provided in this report are based on a region that includes 1 county(ies) from the following state(s):

- Maryland

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 298.39 square miles and contains 87 census tracts. There are over 119 thousand households in the region and a total population of 325,001 people (2010 Census Bureau data). The distribution of population by State and County is provided in Appendix B.

There are an estimated 107 thousand buildings in the region with a total building replacement value (excluding contents) of 43,092 million dollars (2014 dollars). Approximately 92% of the buildings (and 85% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 107,080 buildings in the region which have an aggregate total replacement value of 43,092 million (2014 dollars). Table 1 presents the relative distribution of the value with respect to the general occupancies. Appendix B provides a general distribution of the building value by State and County.

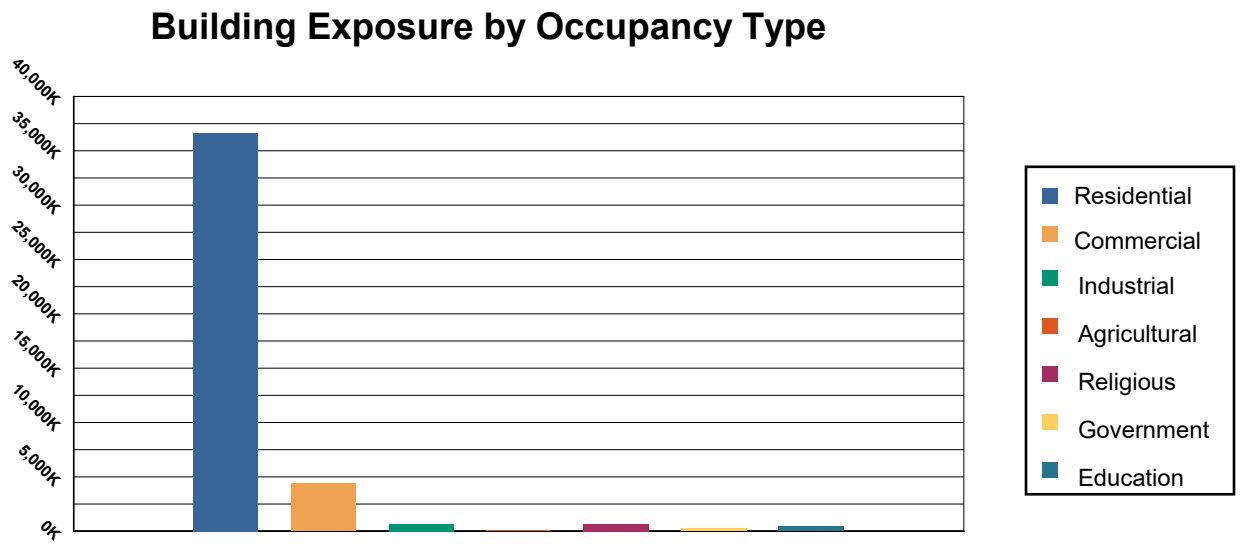


Table 1: Building Exposure by Occupancy Type

Occupancy	Exposure ($1000)	Percent of Tot
Residential	36,647,464	85.04%
Commercial	4,369,374	10.14%
Industrial	672,227	1.56%
Agricultural	56,429	0.13%
Religious	678,618	1.57%
Government	265,117	0.62%
Education	403,198	0.94%
Total	**43,092,427**	**100.00%**

Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 229 beds. There are 129 schools, 20 fire stations, 9 police stations and no emergency operation facilities.

Hurricane Scenario

Hazus used the following set of information to define the hurricane parameters for the hurricane loss estimate provided in this report.

Scenario Name:	Probabilistic
Type:	Probabilistic

Building Damage

General Building Stock Damage

Hazus estimates that about 628 buildings will be at least moderately damaged. This is over 1% of the total number of buildings in the region. There are an estimated 5 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Hurricane technical manual. Table 2 below summarizes the expected damage by general occupancy for the buildings in the region. Table 3 summarizes the expected damage by general building type.

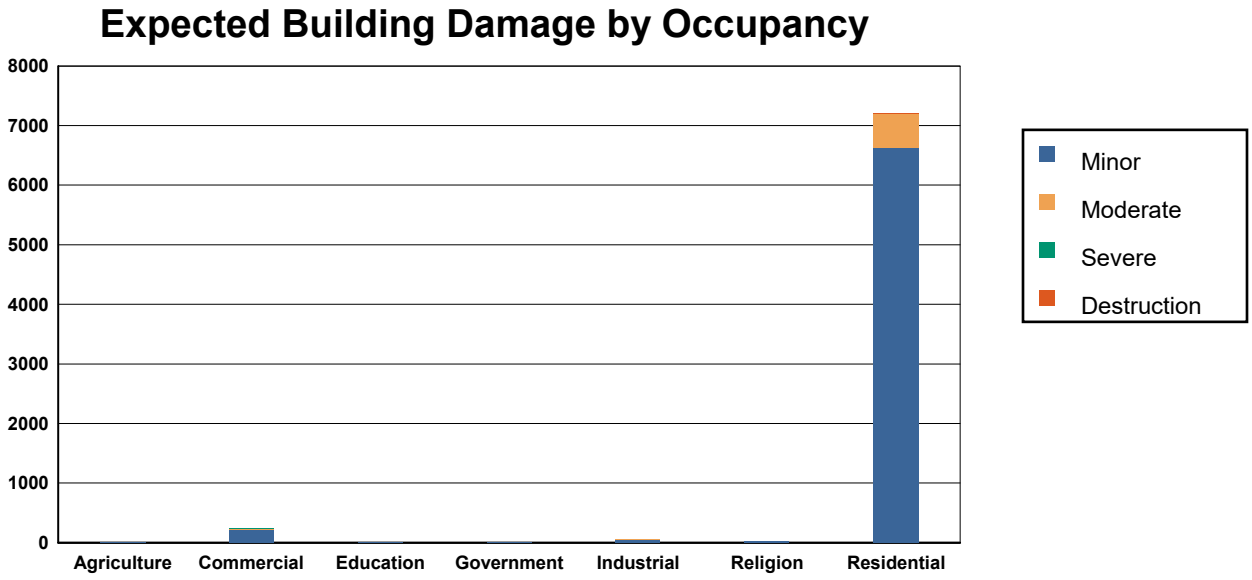


Table 2: Expected Building Damage by Occupancy : 1000 - year Event

	None		Minor		Moderate		Severe		Destruction	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	175.88	94.56	8.32	4.47	1.27	0.68	0.51	0.28	0.02	0.01
Commercial	5,264.71	95.60	215.14	3.91	25.23	0.46	1.91	0.03	0.00	0.00
Education	299.60	96.03	11.78	3.77	0.62	0.20	0.00	0.00	0.00	0.00
Government	203.32	95.91	8.21	3.87	0.46	0.22	0.00	0.00	0.00	0.00
Industrial	1,159.62	95.84	46.07	3.81	3.72	0.31	0.58	0.05	0.02	0.00
Religion	729.01	95.92	29.72	3.91	1.27	0.17	0.00	0.00	0.00	0.00
Residential	91,683.20	92.71	6,616.97	6.69	586.32	0.59	1.31	0.00	5.20	0.01
Total	**99,515.35**		**6,936.22**		**618.89**		**4.31**		**5.23**	

Table 3: Expected Building Damage by Building Type : 1000 - year Event

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,050	95.35	48	4.34	3	0.31	0	0.00	0	0.00
Masonry	26,608	91.78	2,030	7.00	350	1.21	2	0.01	1	0.00
MH	979	99.13	6	0.66	2	0.16	0	0.00	1	0.06
Steel	3,115	95.74	121	3.73	16	0.48	2	0.05	0	0.00
Wood	65,151	93.28	4,476	6.41	213	0.30	0	0.00	3	0.00

Essential Facility Damage

Before the hurricane, the region had 229 hospital beds available for use. On the day of the hurricane, the model estimates that 229 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

Thematic Map of Essential Facilities with greater than 50% moderate

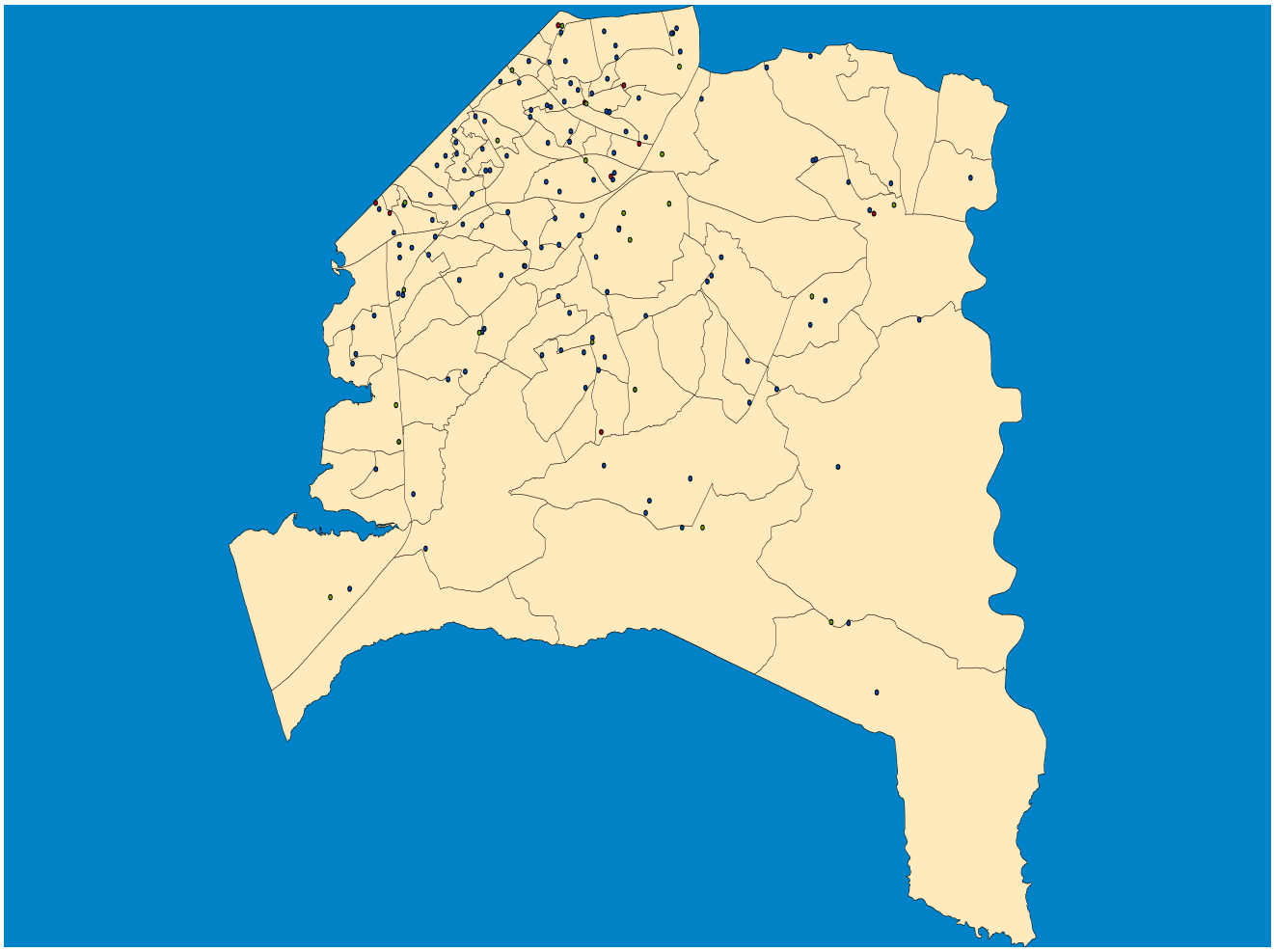
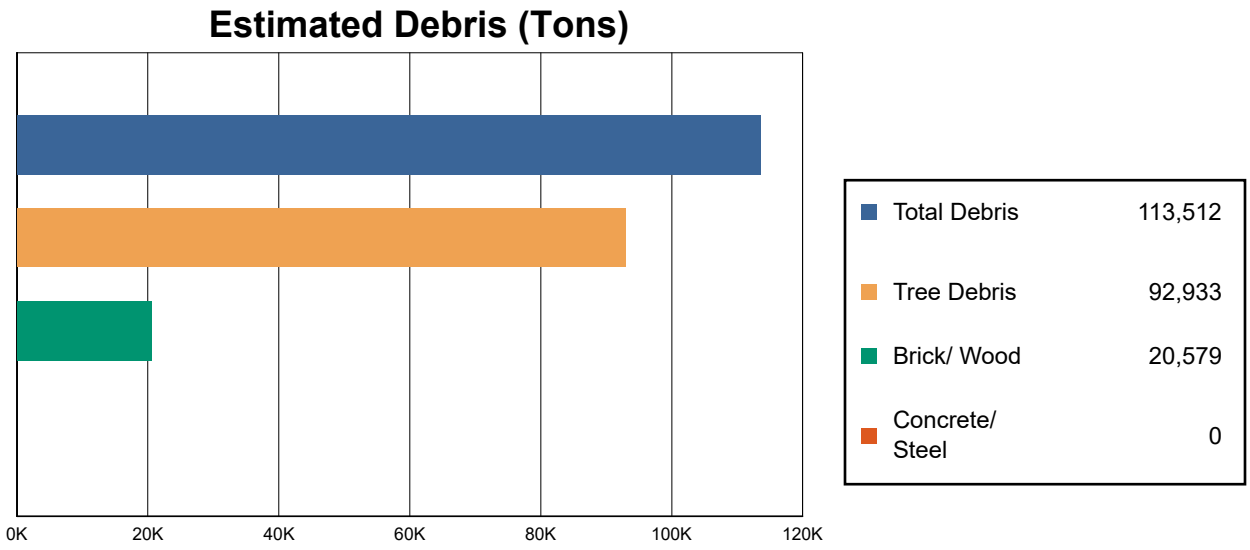


Table 4: Expected Damage to Essential Facilities

		# Facilities		
Classification	**Total**	**Probability of at Least Moderate Damage > 50%**	**Probability of Complete Damage > 50%**	**Expected Loss of Use < 1 day**
Fire Stations	20	0	0	20
Hospitals	2	0	0	2
Police Stations	9	0	0	9
Schools	129	0	0	129

Induced Hurricane Damage

Debris Generation

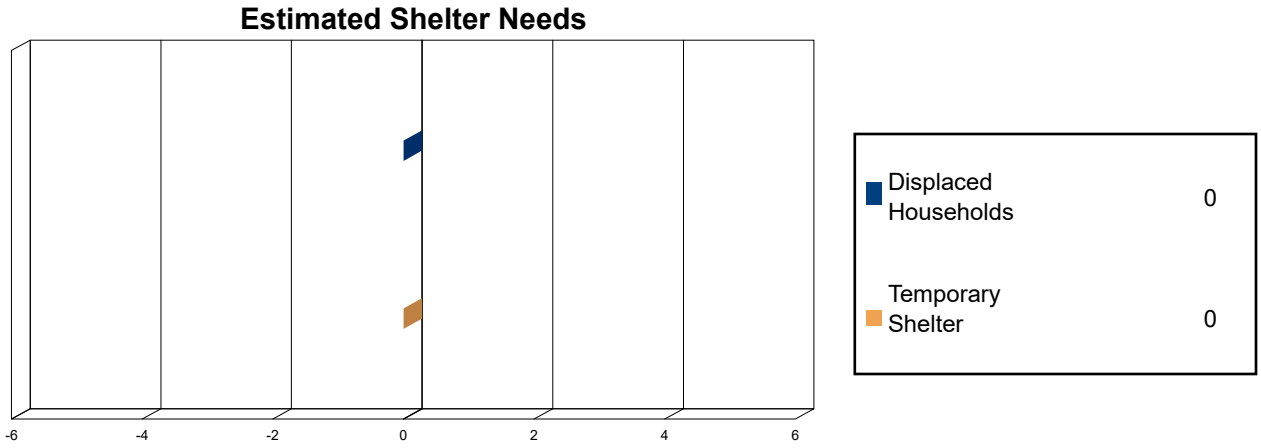


Hazus estimates the amount of debris that will be generated by the hurricane. The model breaks the debris into four general categories: a) Brick/Wood, b) Reinforced Concrete/Steel, c) Eligible Tree Debris, and d) Other Tree Debris. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 113,512 tons of debris will be generated. Of the total amount, 65,730 tons (58%) is Other Tree Debris. Of the remaining 47,782 tons, Brick/Wood comprises 43% of the total, Reinforced Concrete/Steel comprises of 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 823 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 27,203 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

Social Impact

Shelter Requirement



Hazus estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 0 households to be displaced due to the hurricane. Of these, 0 people (out of a total population of 325,001) will seek temporary shelter in public shelters.

Economic Loss

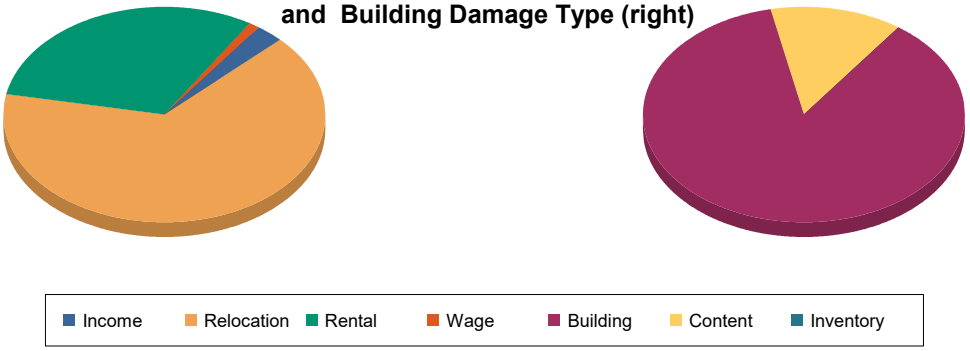
The total economic loss estimated for the hurricane is 273.2 million dollars, which represents 0.63 % of the total replacement value of the region's buildings.

Building-Related Losses

The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane.

The total property damage losses were 273 million dollars. 4% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 97% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Loss by Business Interruption Type (left) and Building Damage Type (right)



Loss Type by General Occupancy

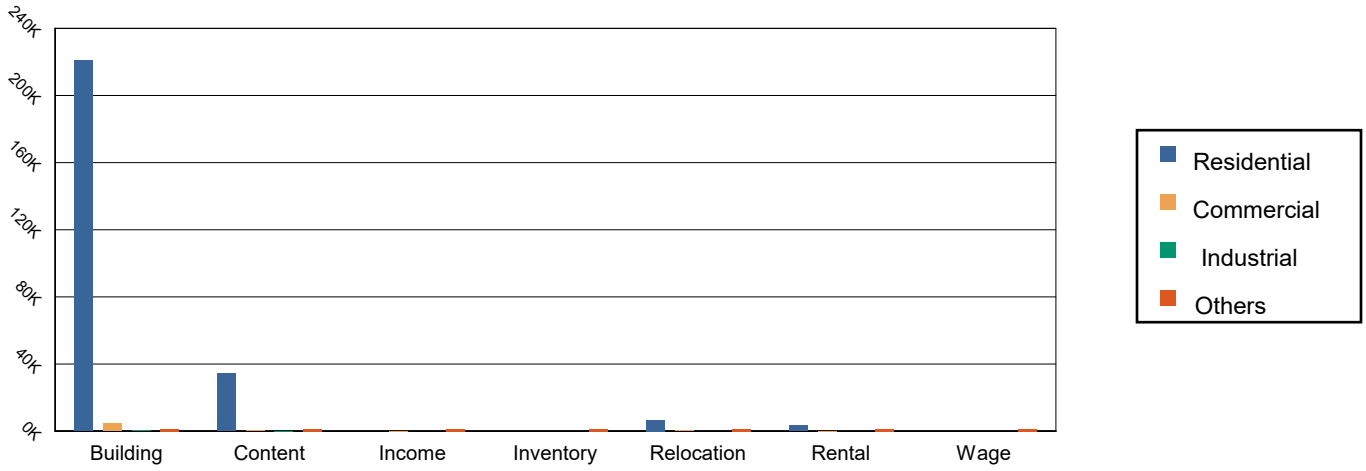


Table 5: Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	220,782.88	4,339.72	624.18	1,288.13	227,034.91
	Content	34,400.96	508.44	173.34	116.54	35,199.29
	Inventory	0.00	12.50	28.74	4.15	45.39
	Subtotal	**255,183.84**	**4,860.65**	**826.26**	**1,408.83**	**262,279.59**
Business Interruption Loss						
	Income	0.00	307.31	1.34	0.00	308.65
	Relocation	6,767.00	354.00	17.48	27.09	7,165.57
	Rental	3,237.17	139.47	1.10	0.33	3,378.07
	Wage	0.00	109.37	2.21	0.00	111.59
	Subtotal	**10,004.17**	**910.15**	**22.13**	**27.43**	**10,963.87**

Total

Total	**265,188.01**	**5,770.80**	**848.39**	**1,436.26**	**273,243.46**

Appendix A: County Listing for the Region

Maryland
- Prince George's

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Maryland				
Prince George's	325,001	36,647,464	6,444,963	43,092,427
Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**
Study Region Total	**325,001**	**36,647,464**	**6,444,963**	**43,092,427**