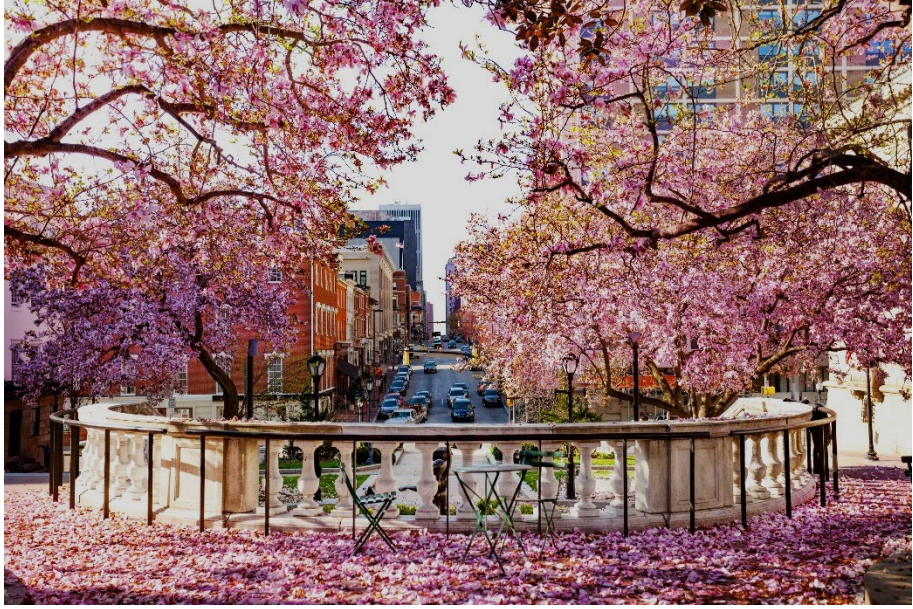
Appendix A: Engagement Strategy

Appendix A includes the engagement strategy for the 2023 update of the Disaster Preparedness and Planning Project (DP3).



Baltimore Office of Sustainability
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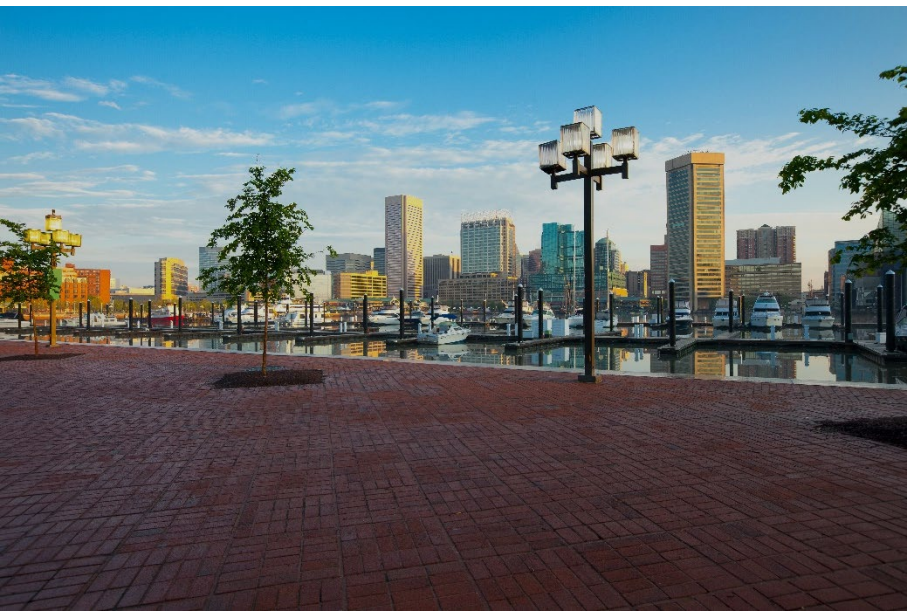
CITY of BALTIMORE · DEPARTMENT of PLANNING ·

CITY OF BALTIMORE

Brandon M. Scott
Mayor

Engagement Strategy

2023 Baltimore City Disaster Preparedness and Planning Project (DP3)



Purpose 3
Goals for Engagement 3
Participants 3
Points of Engagement 6
Engagement Methods 12
Community Rating System Considerations 14
Integration with Existing and Ongoing Efforts 15
Continued Engagement 16
Appendix A: Hazard Mitigation Advisory Committee Members 18
Appendix B: StoryMap Narrative 24
Welcome 25
General Information 26
Participation and Engagement 29
Draft Plan for Review 30
Resources 30
Appendix C: Engagement Toolkit 31
Social Media Posts 32
Emails 40
Flyers 42
Key Points About the DP3 Update 43
Appendix D: Summary Survey Results 44

Purpose

The engagement strategy serves as a roadmap to guide and document stakeholder and community engagement during the development of the 2023 Baltimore City Disaster Preparedness and Planning Project (DP3). This engagement strategy is a living document that will be referenced and updated throughout the planning process to ensure it remains current and includes guidance and feedback received from the advisory teams responsible for overseeing the DP3 update.

Goals for Engagement

- Inform stakeholders and community members about risks associated with natural and human-caused hazards.
- Foster a collaborative process to develop a mitigation strategy to reduce identified risks.
- Demonstrate how mitigation solutions support co-benefits that improve quality of life both now and in the future.
- Design community-informed mitigation solutions that align with other community and City priorities (or identify mitigation solutions that are community-informed).
- Develop a better sense of the demographics of individuals actively engaged and participating in the planning process.
- Increase engagement with diverse neighborhoods and communities.

Participants

Many parties support the preparation of the DP3 update, including City officials and discipline leads, the planning support consultant (Tetra Tech, Inc.), stakeholders, neighboring jurisdictions, nonprofits, private businesses, and community members. The Baltimore Office of Sustainability (BoS) is the lead for developing and maintaining the DP3. The organizations and individuals involved in the development of the DP3 are described below.

Core Planning Team (CPT)

The CPT is an advisory team that is responsible for making key decisions during the planning process, maintaining the schedule and timeline, reviewing deliverables and plan drafts, informing the development of content for outreach and engagement, providing information and data to inform the plan content, and assisting in identifying solutions for challenges or issues that may arise during the planning process. **Table 1** lists the CPT members along with their titles and organizations.

Table 1. CPT Members

Name	Title	Sector/Area of Expertise
Baltimore City Office of Sustainability (BoS)		
Bruna Attila	Coastal Resources Planner	Land Use and Development and Natural and Cultural Resources
Joanna Birch	Floodplain Manager	Land Use and Development and Floodplain Management
Aubrey Germ	Climate and Resilience Planner	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Quentin Klein-Alfano	Climate Outreach Intern	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Ava Richardson	Director	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Valerie Rupp	Climate and Resilience Program Manager	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Department of Planning (DOP)		
Nicholas O'Gara	GIS Analyst	Land Use and Development and GIS
Jamie Williams	City Planner Supervisor	Land Use and Development and GIS
Office of Emergency Management (OEM)		
Michelle Smith	Preparedness Section Chief	Emergency Management
Elise Whiteford	Planning Section Chief	Emergency Management
Department of Public Works (DPW)		
Kimberly Grove	Chief, Office of Compliance & Research	Infrastructure

Hazard Mitigation Advisory Committee (HMAC)

The HMAC also serves as an advisory team and provides oversight of the planning process. The HMAC's role is to advise the CPT on community needs and concerns and ensure community representation and inclusion in the planning process. The HMAC membership strives for inclusion of agencies and organizations that will serve as lead and supporting implementers of the Mitigation Strategy. The HMAC will operate under a set of ground rules that they established, and their meetings will be open to the public and advertised (see Community Rating System [CRS] Considerations for additional information). The list of HMAC members is included in **Appendix A**.

Equity HMAC Subcommittee

This subcommittee prioritizes representation from socially vulnerable populations within the City as well as other key stakeholders identified through the planning process. This includes representatives from community organizations and Resilience Hub leaders. The 2018 DP3 included recommendations to broaden outreach and engagement efforts to include greater representation from all Baltimore

neighborhoods and communities. The list of subcommittee members is included in **Appendix A**.

Stakeholders and Community Members

Stakeholders are the individuals, agencies, and jurisdictions that have a vested interest in the recommendations of the DP3, including all HMAC members and the general community. Diligent efforts are being made to ensure broad regional and local representation in this planning process. Stakeholder outreach was performed early in the planning process and will continue throughout the planning process. Below are highlights of stakeholder and community engagement.

- All HMAC meetings will be open to the public and advertised via the Baltimore Office of Sustainability's DP3 website. (https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/).
- The HMAC will be provided outreach materials by Tetra Tech and BoS to post on their websites and social media platforms and distribute as hard copies.
- Stakeholder and neighboring jurisdiction surveys will be deployed to obtain input regarding vulnerabilities, capabilities, and mitigation projects.
- Drafts of the DP3 will be posted on the Baltimore Office of Sustainability's website and advertised using social media platforms, email, and other platforms.
- Continuous group and individual email correspondence will be sent to regional stakeholders and neighboring communities to encourage participation in the planning process.

The following stakeholders were invited to participate in the development of the DP3 update. Due to the considerable number of potential stakeholders that have a vested interest in the DP3, the list is not meant to serve as a comprehensive summary of all stakeholders but demonstrates the scope and breadth of stakeholder outreach efforts made during the DP3 update process.

City Officials

City officials represent the decision-makers and policymakers in the City. These representatives are vital to successfully obtaining funding and identifying a legislative pathway to implement the DP3. In addition, their participation and engagement in the DP3 process aids in equipping them with risk information. City officials include:

- Mayor's Office
- Sustainability Commission
- Infrastructure Commission
- Planning Commission

Federal and State Agencies

Federal and State agencies are a source of data and information for developing the plan's content and will ultimately review and approve the plan. The Maryland Department of Emergency Management (MDEM) is charged with providing technical assistance, as applicable, and reviewing the DP3. The Federal Emergency Management Agency (FEMA) is responsible for reviewing and approving the DP3. Representatives from MDEM and FEMA are invited to participate in the planning process through the HMAC.

Information regarding hazard identification and the risk assessment for the DP3 update was requested and received or incorporated by reference from the following Federal agencies and organizations:

- National Climatic Data Center (NCDC)
- National Hurricane Center (NHC)
- National Oceanic and Atmospheric Administration (NOAA)
- National Weather Service (NWS)
- Storm Prediction Center (SPC)
- U.S. Army Corps of Engineers (USACE)
- U.S. Census Bureau
- U.S. Department of Agriculture (USDA)
- U.S. Department of Health and Human Services
- U.S. Environmental Protection Agency (USEPA)
- U.S. Geological Survey (USGS)

Neighboring Jurisdictions

Hazard impacts occur across jurisdictional boundaries. Engaging neighboring jurisdictions in the planning process provides a pathway to identify regional-scale mitigation actions to reduce risk at a larger scale. The following neighboring jurisdictions are engaged in the planning process:

- Anne Arundel County
- Baltimore County
- Howard County

Points of Engagement

The 2023 DP3 planning process prioritizes providing multiple opportunities for stakeholders and community members to participate in the process and provide feedback. **Table 2** lists the key engagement milestones and tentative dates.

Table 2. Engagement Milestones and Dates

Milestone	Tentative Date
Public Kickoff Workshop	April 2023
Hazard Profiles Posted for Public Review	June 2023
Public Risk Assessment Workshop	June 2023

Milestone	Tentative Date
Stakeholder Mitigation Action Workshop	July 2023
Draft available for Review by the Public, Baltimore City Planning Commission, and Maryland Department of Emergency Management	July 2023
Public Project Prioritization Workshop (to support development of Project Portfolio)	August 2023
Final Draft Submitted to FEMA Region III	September 2023
Final DP3 Adopted by City and Approved by FEMA	December 2023
Public Review Meeting of Adopted Plan	January 2024

Public Engagement

- **Public Comment Period:** Stakeholders and community members will be able to access a Survey Monkey link available on the BoS website and shared widely with stakeholders and partners to provide comments on each chapter of the DP3.

A number of public meetings and public engagement opportunities were held throughout the DP3 planning process. Please see the table below for individual descriptions of the engagement opportunities.

Table 3. Public Engagement Opportunities

Date	DMA 2000 Requirement	Description of Activity
May 2, 2023	1b, 5c	Public Kickoff Meeting: The purpose of the meeting was to describe the purpose and goals of the Disaster Preparedness and Planning Project (DP3), provide an overview of the process to develop the plan and highlight opportunities for stakeholders and the community to participate, discuss the City's past experiences with disasters, and discuss community concerns and needs regarding disasters.
June 21, 2023	1b, 5c	Sustainability Open House: The purpose of this event was to introduce those in and around Baltimore City to various activities occurring in the City, including ongoing initiatives. Tetra Tech and the Baltimore City Office of Sustainability hosted a table to gather additional public input on hazard areas within the City. Methods of engagement included a disaster jeopardy game, a map to collect hazard areas, hardcopies of the public and stakeholder surveys, QR codes which linked to the online public and stakeholder surveys, and information on what the DP3 is.

Planning Commission Engagement

The DP3 will be introduced to the Planning Commission during the initial public review and formally submitted for review and adoption subsequent to comments from the review period being integrated into the plan.

CPT and HMAC Meetings

The CPT and HMAC will meet frequently throughout the development of the plan. This will provide several opportunities to gain feedback and guidance as well as ensure the most up-to-date data is utilized for the plan. These regular meetings will be used to accomplish the following:

- Share information and participate in workshops to identify hazards.
- Assess risks.
- Review existing inventories of critical facilities and identify new critical facilities.
- Assist in updating and developing new mitigation goals and strategies.
- Provide continuity through the process to ensure that natural hazards vulnerability information and appropriate mitigation strategies are incorporated.

The CPT and HMAC will meet as follows:

- CPT – Biweekly
- HMAC – Monthly
    - Social Equity HMAC Subcommittee – Monthly

All members of the CPT and HMAC will have the opportunity to review the draft plan and support interaction with other stakeholders and community members. **Table 3** provides a summary of CPT and HMAC meetings. This table also identifies which Disaster Mitigation Act (DMA) 2000 requirements the activities satisfy. The table identifies only the formal meetings held during plan development and does not reflect all planning activities conducted by individuals and groups throughout the planning process.

Table 4. CPT and HMAC Meeting Schedule

Date	DMA 2000 Requirement	Description of Activity
February 27, 2023	2, 3a, 3b, 3c, 3d, 3e	CPT Meeting #1: Introduce CPT to the DP3 update process, discuss mitigation planning, project organization, roles and responsibilities, data collection, hazards of concern, and schedule of the plan.
March 10, 2024	2, 3a, 3b, 3c, 3d, 3e, 4a	CPT Meeting #2:

Date	DMA 2000 Requirement	Description of Activity
		Review updates to the schedule based on previous feedback, finalize the identification of HMAC, and establish a vision for the 2023 planning process and DP3.
March 24, 2023	2, 3a, 3b, 3c, 3d, 3e, 4a	CPT Meeting #3: The purpose of the meeting was to review the draft Engagement Strategy and to identify key topics for the Hazard Mitigation Advisory Committee kickoff meeting.
April 4, 2023	2, 3a, 3b, 3c, 3d, 3e, 4a	HMAC Meeting #1: Introduce HMAC to the DP3 update process, discuss mitigation planning, project organization, roles and responsibilities, data collection, hazards of concern, and schedule of plan.
April 5, 2023	2, 5c	CPT Meeting #4: The purpose of the meeting was to provide a debrief on the April 4, 2023 HMAC Meeting, discuss the upcoming Public Kickoff Meeting, identify topics for upcoming CPT meetings, and identify the next steps in the planning process.
April 21, 2023	2, 5a, 5c	CPT Meeting #5: The purpose of the meeting was to provide an update on the planning process, review preparations for the upcoming Public Kickoff Meeting, review the 2023 DP3 Update Framework, and identify how it differs from the 2018 DP3.
May 2, 2023	2, 3a, 3b, 4a, 4b	HMAC Meeting #2: The purpose of the meeting was to discuss the status of the project, review the schedule, finalize the hazards of concern, and evaluate a selection of mitigation strategies and actions from the 2018 DP3.
May 5, 2023	2, 4a, 4b, 5a, 5c	CPT Meeting #6: The purpose of the meeting was to provide an update on the planning process, recap the public kickoff meeting, review 2018 DP3 vision and goals, debrief the HMAC meeting, and review the 2018 DP3 mitigation strategies.
May 19, 2023	2, 4a, 4b, 5a	CPT Meeting #7: The purpose of the meeting was to provide an update on the planning process, review revised goals, identify mitigation action categories, and discuss the 2018 DP3 action prioritization criteria.
May 30, 2023	2, 4a, 4b, 5c	HMAC Meeting #3: The purpose of the meeting was to discuss the status of the project, review the schedule, finalize the 2023 vison and goals, and review the social media and outreach products.

Date	DMA 2000 Requirement	Description of Activity
June 2, 2023	2, 5c	CPT Meeting #8: The purpose of the meeting was to provide an update on the planning process, debrief the HMAC meeting, showcase the StoryMap and new outreach materials, provide preliminary survey results, and address preparations for the next Public Workshop at the Sustainability Open House.
June 12, 2023	1b, 2, 3c, 4b	Equity Subcommittee Meeting #1: The purpose of the meeting was to introduce hazard mitigation and the Disaster Preparedness and Planning Project (DP3), review the roles and responsibility of Equity subcommittee, receive feedback from subcommittee members, and distribute resources for future meetings.
June 16, 2023	2, 4b, 5a	CPT Meeting #9: The purpose of the meeting was to provide an update on the planning process, review and approve suggested mitigation categories for the 2023 DP3 update and conduct a working session to review the 2018 DP3 natural systems and public services mitigation strategies.
June 27, 2023	2, 3c, 3d, 3e, 4b	HMAC Meeting #4: The purpose of the meeting was to provide an update on the planning process status, review preliminary 2023 DP3 risk assessment results, and brainstorm mitigation strategies and actions for inclusion in the 2023 DP3.
June 30, 2023	2, 4b, 5a	CPT Meeting #10: The purpose of the meeting was to provide an update on the planning process and conduct a working session to review the 2018 DP3 natural systems and public services mitigation strategies.
July 14, 2023	2, 4b, 5a	CPT Meeting #11: The purpose of the meeting was to provide an update on the planning process, discuss the intent and agenda for the upcoming in-person Mitigation Strategy Workshop, discuss the intent and agenda for the upcoming Equity Subcommittee meeting, and continue the review of the 2018 DP3 Mitigation Strategy.
July 17, 2023	2, 3c, 3d, 3e, 4b	Equity Subcommittee Meeting #2: The purpose of the meeting was to review the preliminary risk assessment results, provide an overview of what a mitigation strategy is, through discussion identify potential problems and solutions which can be turned into mitigation actions, facilitate an open discussion session, and distribute resources for future meetings.

Date	DMA 2000 Requirement	Description of Activity
July 19, 2023	2, 4b, 4c, 5a, 5b	Mitigation Strategy Workshop: The purpose of this workshop is to introduce the purpose and intent of the Mitigation Strategy, review the status of the 2018 DP3 actions and provide updates to the status, and identify any new actions for the 2023 DP3 update.
August 11, 2023	2	CPT Meeting #12: The purpose of the meeting was to provide an update on the planning process, review the results from the in-person Mitigation Strategy Workshop, provide an overview of the Draft 2023 DP3 and receive comments/feedback.
August 14, 2023	2	Equity Subcommittee Meeting #2: The purpose of the meeting was to provide an overview of the Draft 2023 DP3 and receive comments/feedback and facilitate an open discussion session.
August 11 – September 11, 2023	1b, 2	Public Review: Draft HMP posted to public project website; all plan participants were notified and asked to assist with the public outreach including social media. Neighboring communities and stakeholders were notified of the posting as well.
August 22, 2023	2	HMAC Meeting #5: The purpose of the meeting was to provide an update on the planning process, review the results from the in-person Mitigation Strategy Workshop, provide an overview of the Draft 2023 DP3 and receive comments/feedback.
November 30, 2023	1a	Plan adoption by resolution by the Department of Planning

Note: All activities/efforts were conducted during the National Emergency response to the COVID-19 pandemic.

TBD = To be determined.

Each number in column 2 identifies specific DMA 2000 requirements, as follows:

1a – Prerequisite – Adoption by the Local Governing Body

1b – Public Participation

2 – Planning Process – Documentation of the Planning Process

3a – Risk Assessment – Identifying Hazards

3b – Risk Assessment – Profiling Hazard Events

3c – Risk Assessment – Assessing Vulnerability: Identifying Assets

3d – Risk Assessment – Assessing Vulnerability: Estimating Potential Losses

3e – Risk Assessment – Assessing Vulnerability: Analyzing Development Trends

4a – Mitigation Strategy – Local Hazard Mitigation Goals

4b – Mitigation Strategy – Identification and Analysis of Mitigation Measures

4c – Mitigation Strategy – Implementation of Mitigation Measures

5a – Plan Maintenance Procedures – Monitoring, Evaluating, and Updating the Plan

5b – Plan Maintenance Procedures – Implementation through Existing Programs

5c – Plan Maintenance Procedures – Continued Public Involvement

Engagement Methods

Baltimore Office of Sustainability Website

The Office of Sustainability website hosts the DP3 webpage, which provides status updates as well as background information about the DP3, including the identified hazards, goals and objectives, strategy areas, and methodology. The previous editions of the DP3 are also available for viewing. In addition, the DP3 webpage hosts the DP3 StoryMap.

StoryMap

A StoryMap will be built by the contract consultant to visualize the DP3 planning process. The GIS-based application offers an interactive narrative to explain the steps of assembling the 2023 DP3, further assisting Baltimore City in engaging with members of the public. The StoryMap is hosted on the Baltimore Office of Sustainability's website on the DP3 webpage. Draft language for inclusion on the StoryMap is available in **Appendix B**.

Social Media

Social media has been used throughout the DP3 update to engage stakeholders and members of the public and encourage their involvement in this process. This encouragement came in the form of graphics and verbiage notifying the public and stakeholders of upcoming meetings, directing individuals to the DP3 webpage for more information, and providing background information on the DP3 update. Social media outreach includes efforts through Facebook, Twitter, and Instagram accounts operated by multiple Baltimore City governmental departments. Members of the HMAC will be encouraged to post on their social media outlets. The Engagement Toolkit, which includes example key messages, social media posts, and graphics, is available in **Appendix C**.

Email

The Baltimore Office of Sustainability and the contract consultant will use email to arrange meetings, discuss schedules, and ensure the overall planning process is kept on track. The CPT and HMAC members will also use email to inform community members of upcoming opportunities for involvement in the plan, such as the monthly HMAC meetings, which are open to the public. The Engagement Toolkit containing example emails is available in **Appendix C**.

Surveys

Multiple surveys will be deployed throughout the planning process to assist with collecting stakeholder and community feedback on the DP3 content. The following surveys will be deployed.

- **Public:** This survey will identify the community's exposure to hazards and the location of hazards within the community, which the City may not have been aware of. The summarized results of this survey may be found in **Appendix D**. https://www.surveymonkey.com/r/DP3PublicSurvey
- **Stakeholder:** This survey will engage stakeholders (i.e., utilities, transportation, business/commerce, emergency services, health/medical) to collect input in terms of capabilities, vulnerabilities, and potential projects. The summarized results of this survey may be found in **Appendix D**. https://www.surveymonkey.com/r/DP3StakeholderSurvey
- **Neighboring Jurisdictions:** Neighboring communities will be contacted due to hazard similarities. Effects of natural disasters may be similar in surrounding jurisdictions, and involving neighboring communities in the planning process could reap mutual benefits and assist in regional coordination of disaster mitigation planning. https://www.surveymonkey.com/r/DP3NeighborSurvey

In addition to outreach via email and social media, hard copies of surveys were provided at the following locations.

- **Harlem Gardens:** a senior center in the Harlem Park neighborhood in West Baltimore
- **Bentalou Recreation Center:** in the Lexington neighborhood in West Baltimore
- **Edmondson Commons:** a senior center in the Harlem Park neighborhood in West Baltimore
- **Harvey Johnson Towers:** an apartment complex in the Sandtown Winchester neighborhood in West Baltimore
- **Plantation Park Heights:** an urban farm in the Park Heights neighborhood in Northwest Baltimore
- **MonteVerde Apartments:** an apartment complex in the Park Circle neighborhood in Northwest Baltimore
- **Oliver Senior Center-Home:** a senior center, as well as an additional drop-off in its associated community center, in the Broadway East neighborhood in East Baltimore
- **Herring Run Branch of the Enoch Pratt Free Library:** in the Belair Edison neighborhood in East Baltimore
- **Cherry Hill Branch of the Enoch Pratt Free Library:** in South Baltimore

Other engagement included:

- Posters for the DP3 Plan Survey at the West Baltimore Marc Station in Midtown Edmondson.
- Tabled at the JFX Farmers Market in Downtown Baltimore
- Tabled at the Cherry Hill Farmers Market in the Cherry Hill neighborhood, in South Baltimore
- Tabled at the Onyx Farmers' & Artisans' Market in Old Goucher neighborhood in Central Baltimore
- Tabled at the Plantation Park Heights Food Giveaway in the Park Heights neighborhood, Northwest Baltimore, during a Morgan State event at the farm and during their Senior Volunteer day.
- Tabled at the Liberty Grace Church of God GROW Center in Ashburton in West Baltimore.

Group Presentations

Members of advisory teams conducted targeted outreach to various special interest groups to increase awareness of the DP3 planning process. These engagement points included the following:

- **LEPC:** Provide updates on DP3 update process, inclusion of man-made hazards, and opportunity to participate through HMAC.
- **Waste Working Group:** Focus on how to better integrate and expand waste management and waste reduction goals with hazard mitigation planning. Invite them to join the HMP update process and collaborate on enhancing risk reduction strategies for our solid waste system.

Community Rating System Considerations

Baltimore City participates in the CRS, a voluntary incentive program that recognizes and encourages floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Participating in the program provides insurance premium discounts to policyholders in the City. The below considerations have the potential to earn the City additional points in the CRS program.

- Ensure Floodplain Management and Planning Department (land use) are actively engaged in the planning process.
- Ensure a quorum during HMAC meetings.
- Formally recognize the HMAC by the appropriate governing body.
- Document the planning process.
- Encourage public and community participation in the HMAC.
- Convene members for each key step in the planning process.
- Make meetings open to the public and post meeting schedules publicly.

- Hold a public information meeting within two months of the planning process beginning.
- Hold a public review meeting.
- Explain the planning process on the Baltimore Office of Sustainability website.
- Provide a public webcast that explains the planning process and solicits input.
- Distribute a questionnaire asking the public for information on their natural hazards, problems, and viable solutions.
- Utilize outreach activities to explain the planning effort and seek comment; activities may include brochures, mailers, information booths, presentations to civic organizations, etc.
- Promote and document plan integration.
- Coordinate with organizations outside the City's governance structure.
- Include an assessment of Special Flood Hazard Areas (SFHA), repetitive loss areas, areas known to flood but not mapped in the SFHA, and surface flooding areas identified in other studies.
- Inventory levees and dams.

Integration with Existing and Ongoing Efforts

The City of Baltimore DP3 strives to use the best available technical information, plans, studies, and reports throughout the plan update process to support hazard profiling; risk and vulnerability assessment; review and evaluation of mitigation capabilities; and identification, development, and prioritization of City mitigation strategies.

Effective mitigation is achieved when hazard awareness and risk management approaches and strategies become an integral part of public activities and decision-making. Within the City of Baltimore, there are many existing plans and programs that support hazard risk management, and thus it is critical that this hazard mitigation plan integrate and coordinate with and complement those mechanisms.

The consultant, CPT, HMAC, and numerous stakeholders involved in the planning effort will work collaboratively to identify plans, reports, and other technical information. Relevant documents, including plans, reports, and ordinances to be integrated, include:

- Existing local and regional capabilities
- Needs and opportunities to develop or enhance capabilities, which may be identified within the mitigation strategies
- Mitigation-related goals or objectives considered in the review and update of the overall DP3 goals and objectives
- Proposed, in-progress, or potential mitigation projects, actions, and initiatives to be incorporated into the updated mitigation strategy

The following local regulations, codes, ordinances, and plans will be reviewed during this process to develop mitigation planning goals, objectives, and strategies that are

consistent across local and regional planning and regulatory mechanisms to accomplish complementary and mutually supportive strategies:

- Master/Comprehensive Plans
- Building Codes
- Zoning and Subdivision Ordinances
- NFIP Flood Damage Prevention Ordinances
- Site Plan Requirements
- Stormwater Management Plans
- Emergency Management and Response Plans
- Land Use and Open Space Plans
- Capital Plans
- Climate Adaptation Plan (2012)
- Comprehensive Master Plan (2006)
- Solid Waste Plan (2013)

Continued Engagement

The City of Baltimore is committed to the continued involvement of the public in the hazard mitigation process. This DP3 update will be made available for review on the DP3 public website. The Office of Sustainability shall be responsible for receiving, tracking, and filing public comments regarding this DP3 update.

The public will have an opportunity to comment on the DP3 update as a part of the annual mitigation planning evaluation process and the next five-year mitigation plan update. The DP3 Coordinator is responsible for coordinating the plan evaluation portion of the meeting, soliciting feedback, collecting and reviewing the comments, and ensuring their incorporation in the five-year plan update, as appropriate. Members of the CPT will assist the DP3 Coordinator.

Additional meetings may also be held as deemed necessary. The purpose of these meetings would be to provide the public with an opportunity to express concerns, opinions, and ideas about the DP3. After completion of this DP3 update, implementation and ongoing maintenance will continue to be a function of the CPT. The CPT will review the plan and accept public comment as part of an annual review and as part of five-year mitigation plan updates.

A notice regarding annual updates of the plan will be publicized annually after the DP3 Committee's annual evaluation and posted on the public website.

Baltimore City has identified a DP3 Coordinator who is responsible for receiving, tracking, and filing public comments regarding this DP3 update:

Contact Name	Mailing Address	Email Address	Phone Number
Aubrey Germ, Climate and Resilience Planner	417 E Fayette St. 8th Floor Baltimore, MD 21202	aubrey.germ@baltimorecity.gov	410-396-5917

Appendix A: Hazard Mitigation Advisory Committee Members

Table 5. HMAC Members

Name	Title	Sector/Area of Expertise
Baltimore City Health Department (BCHD)		
Kim Eshleman	Director, Office of Public Health Preparedness and Response (OPHPR)	Health and Social Services
Alice Huang	Acting Assistant Commissioner, Community Services	Health and Social Services, Equity, and Community Advocacy
Kay Webster	Deputy Director, OPHPR	Health and Social Services and Emergency Management
Baltimore City Recreation and Parks (BCRP)		
Dan Coy	Chief of Forestry	Natural and Cultural Resources
Kendra Moore	Recreation Manager South District	Natural and Cultural Resources
DPW		
Yolanda Cason	Operations Manager I, Solid Waste	Infrastructure
Toya Sykes-Coates	Chief of Solid Waste Administration	Infrastructure
Kimberly Grove	Chief, Office of Compliance and Research	Infrastructure
Yvonne Moore-Jackson	Bureau Head, Solid Waste	Infrastructure
Yosef Kebede	Bureau Head, Water and Wastewater	Infrastructure
Antoine Smith	Emergency Response and Preparedness	Infrastructure and Emergency Management
Theresa Wilson	Operations Officer III	Infrastructure
Baltimore Gas and Electric (BGE)		
Danielle Gooden	Governmental and External Affairs Manager	Private Sector, Infrastructure, and Energy
Matt Piechocki	Senior Emergency Preparedness Administrator	Private Sector, Infrastructure, Energy, and Emergency Management
BoS		
Bruna Attila	Coastal Resources Planner	Land Use and Development and Natural and Cultural Resources

Name	Title	Sector/Area of Expertise
Joanna Birch	Floodplain Manager	Land Use and Development and Floodplain Management
Aubrey Germ	Climate and Resilience Planner	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Amy Gilder-Busatti	Sustainability Manager	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Ava Richardson	Director	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Valerie Rupp	Climate and Resilience Program Manager	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Department of General Services (DGS)		
Marwan Alkarajat	Chief, Capital Projects and Energy Division	Infrastructure and Energy
Herman Guadalupe	Engineer Supervisor	Infrastructure
Christopher Hepler	Construction Project Supervisor II	Infrastructure
Julia Kalloz	Energy Division Chief	Infrastructure and Energy
DOP		
Lindsay Adams	Food Resilience Planner	Equity and Food Resilience
Nicholas O'Gara	GIS Analyst	Land Use and Development and GIS
Kyle Leggs	City Planning Supervisor	Land Use and Development
Stacy Montgomery	Historic Preservation Planner Supervisor, Commission for Historical and Architectural Preservation (CHAP)	Land Use and Development and Historic Preservation
Lauren Schiszik	Historic Preservation Planner, CHAP	Land Use and Development and Historic Preservation
Jamie Williams	City Planner Supervisor	Land Use and Development and GIS
DOT		
Tavon Braxton	Deputy Director of Operations	Infrastructure and Transportation
William Ethridge	City Planner II	Infrastructure and Transportation
Environmental Control Board (ECB)		
Natasha Neale	Community Program Liaison	Environmental Hazards

Name	Title	Sector/Area of Expertise
Brandi Welsh	Community Program Liaison	Environmental Hazards
Maryland Department of Emergency Management (MDEM)		
Bridget Cantwell	Hazard Mitigation Planner	Emergency Management
Aliyah Russell	Project Officer	Emergency Management
Mayor's Office		
Angela McCauley	Emergency Services Manager (Homeless Services)	Equity and Community Advocacy
Anthony Scott	Associate Director of Project Management	Economic Development
Candisse Bennett-Parker	Director (Correspondence and Constituent Services	Equity and Community Advocacy
Graham Young	Project Manager (Infrastructure Development)	Infrastructure
Justin Elszasz	Chief Data Officer	Cyber
Masuma Islam Lonczak	Deputy Director (Immigrant Affairs)	Equity and Community Advocacy
OEM		
Michelle Smith	Preparedness Section Chief	Emergency Management
Elise Whiteford	Planning Section Chief	Emergency Management
Waterfront Partnership of Baltimore		
Allison Blood	Healthy Harbor Program Manager	Non-profit, Economic Development, Land Use and Development, Housing, Infrastructure, Natural and Cultural Resources, Equity, and Community Advocacy
Baltimore City Department of Housing and Community Development (DHCD)		
Eric Booker	Deputy Commissioner, Housing Code Enforcement and Emergency Operations	Housing
Baltimore City Sheriff's Office		
Chaya Deitsch	Director of Emergency Management	Safety and Security
Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)		
Al Frenette	Protective Security Advisor	Emergency Management, Infrastructure, and Cyber

Name	Title	Sector/Area of Expertise
Maryland Insurance Administration		
Joy Hatchette	Associate Commissioner for Consumer Education and Advocacy	Emergency Management and Community Advocacy
Maryland Zoo		
Jess Henson	Senior Director Risk and Safety	Non-profit, Natural and Cultural Resources, and Emergency Management
Maryland Port Administration (MPA)		
Cindy Hudson	Environmental Manager	Infrastructure and Economic Development
Baltimore Police Department (BPD)		
Tom Jugan	Detective	Safety and Security
Baltimore City Information and Technology (BCIT)		
Kevin Kearney	Chief Information Security Officer	Cyber
FEMA Region 3		
Joshua Norris	Hazard Mitigation Planner	Emergency Management
InfoSec / BCIT		
Ron Rego	Cybersecurity Engineer	Cyber
South Baltimore Gateway Partnership		
Brad Rogers	Executive Director	Non-profit, Economic Development, Land Use and Development, Housing, Infrastructure, Natural and Cultural Resources, Equity, and Community Advocacy
Baltimore City Fire Department (BCFD)		
Kevin Ryan	HazMat Tech	Emergency Management
Baltimore Development Corporation (BDC)		
Larysa Salamacha	Managing Director	Quasigovernmental, Economic Development and Land Use and Development
Baltimore Metropolitan Council		
Eileen Singleton	Principal Transportation Engineer	Infrastructure
Johns Hopkins University		
Benjamin Zaitchik	Earth and Planetary Sciences Professor	Academia and Climate Change

Table 6. Equity Subcommittee Members

Name	Title	Sector/Area of Expertise
Baltimore City Office of Sustainability (BoS)		
Aubrey Germ	Climate and Resilience Planner	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Valerie Rupp	Climate and Resilience Program Manager	Land Use and Development, Natural and Cultural Resources, Climate Change, and Sustainability
Public Members		
Alexandra Grayson		
Bonnie Sorak		
Cameron Snell		
Daniella Hutcherson		
Jacques Benter		
Jeenly Louis		
Lynette Hodge		
Naadiya Hutchinson		
Ritzy Chirinos		
Sharon Hayes		
Tiffany Page-Cooper		
Tim Barrows		

Appendix B: StoryMap Narrative

THE CONTENT BELOW IS FOR INCLUSION ON THE BALTIMORE OFFICE OF SUSTAINABILITY WEBSITE

Welcome

The DP3 is a hazard mitigation plan (HMP) documenting the City's efforts to reduce risk from natural and man-made hazards, such as flooding or cyber terrorism. Risk is determined by the hazard's impact to community assets, such as the population, built and natural environments, and the economy. The goal of the project is to minimize the impacts and damage to people, property, the environment, and the economy. During this planning project, the City, local leaders, and community members will work in tandem to identify risks, assess capabilities, and formulate a strategy to reduce disaster vulnerability.

A HMP is required by federal agencies for communities to be eligible for certain types of mitigation funding to reduce hazard risk. This funding, in addition to other funding sources, supports the implementation of the long-term mitigation strategy developed during the DP3's planning process.

Public and stakeholder participation and feedback is a vital part of the DP3's planning process. A StoryMap has been developed for the update process to provide project updates and resources throughout the planning process. Please visit the StoryMap to access surveys, meeting information, plan drafts, maps, and additional information. Please check regularly for information on upcoming opportunities to engage in the planning process. **INSERT STORYMAP LINK**

If you would like to contact the project team, please use the following contact information:

Project Contact:
Aubrey Germ
aubrey.germ@baltimorecity.gov

Quick Links

LINKS WILL GO DIRECTLY TO THIS CONTENT ON THE STORYMAP

- **General Information:** Learn more about hazard mitigation, the planning process, and the schedule.
- **Participation and Engagement:** Learn about ways to participate in the development of the plan. Complete surveys and find information for upcoming meetings.
- **Draft Plan for Review:** Review and provide comments on the drafts of the plan.
- **Resources:** Access additional resources for grant information.

THE CONTENT BELOW IS FOR INCLUSION ON THE STORYMAP

General Information

What Is Hazard Mitigation?

Natural hazards have the potential to cause loss of life, property loss, environmental degradation, economic hardship, and threats to public health and safety. While an important aspect of community resilience deals with disaster recovery (i.e., those actions that a community must take to repair damages and make itself whole in the wake of a natural disaster), an equally important aspect of community resilience involves hazard mitigation.

Hazard mitigation consists of sustained actions taken to lessen the impact of future disasters; it is an ongoing process that occurs before, during, and after disasters. The Baltimore City Disaster Preparedness and Planning Project (DP3) is a hazard mitigation plan (HMP) documenting the City's efforts to reduce risk from natural and man-made hazards, such as flooding or cyber terrorism. Hazard mitigation actions taken in advance of a hazard event are essential to breaking the typical disaster cycle of damage, reconstruction, and repeated damage. With careful selection, hazard mitigation actions can be a long-term, cost-effective means of reducing the risk of loss and help create a more disaster-resistant and resilient community.

If you would like to contact the project team, please use the following contact information:

Project Contact:
Aubrey Germ
aubrey.germ@baltimorecity.gov

What Is a Hazard Mitigation Plan?

The DP3 is Baltimore City's hazard mitigation. A hazard mitigation plan is a well-organized and well-documented evaluation of the hazards that a community is susceptible to and the extent to which these events will occur. Hazard mitigation plans identify an area's vulnerability to the effects of the hazards as well as the goals, objectives, and actions required for minimizing future loss of life, injury, property damage, and economic disruption because of hazard events.

Previous versions of the DP3 are linked below:

- 2013 DP3
  - 2017 DP3 Status Report
  - 2018 DP3 State Report
- 2018 DP3

- 2021 DP3 Status Report

Purpose and Need for the DP3

A hazard mitigation plan is developed before a disaster strikes. The plan identifies community policies, actions, and tools for long-term implementation to reduce risk and potential for future losses. The plan is adopted, implemented, and maintained on an ongoing basis to ensure the plan remains current and addresses the most pressing concerns of the community.

Under the federal Disaster Mitigation Act of 2000 (DMA 2000), communities that do not have a FEMA-approved hazard mitigation plan in place are no longer eligible for FEMA project grant monies under long-standing programs such as the Flood Mitigation Assistance Program (FMA), Hazard Mitigation Grant Program (HMGP), and the Building Resilience Infrastructure and Communities (BRIC) program.

Outcomes: Identifying Mitigation Projects and Other Benefits

A major focus of this plan will be to identify effective mitigation projects and realistic implementation strategies, including identifying potential funding streams. This includes projects that may be eligible for federal funding through FEMA grants or other federal sources as well as projects that may not qualify for federal funding but are still important to a community. This planning process will help lay the groundwork for implementation of both federally fundable and non-federally fundable mitigation projects.

In addition to identifying effective mitigation projects, a plan will also assist in the following ways:

- Increased understanding of hazards and risk the community faces
- Eligibility for federal funds for pre-disaster mitigation planning under DMA 2000
- Developing partnerships that support planning and mitigation efforts and may offer potential financial savings, including reduced flood insurance premiums, broader resources for funding of mitigation projects, and enhanced benefit-cost ratios
- Enhanced coordination of hazard mitigation with comprehensive planning and zoning
- Development of more sustainable and disaster-resistant communities
- Reduced long-term impacts and damages to human health and structures and reduced repair costs

Proactive mitigation leads to the development of sustainable, cost-effective projects. In contrast, reactive mitigation tends to yield “quick fix” alternatives that may cost too much and accomplish too little. Proactive mitigation is also far more cost-effective

than paying to clean up and rebuild after disasters happen. Danger to the population and damage to property can be reduced if the region evaluates where and how disasters may occur and takes steps to reduce those risks.

Process Overview

The planning process will follow the following eight phases through to project implementation. This includes five key steps:

- **Organize the Resources:** A Core Planning Team and Hazard Mitigation Advisory Committee will guide the development of the DP3. The Core Planning Team is composed of discipline leads for the City. The HMAC is composed of stakeholders and community members.
- **Identify Hazards and Conduct Risk Assessment:** The CPT and HMAC will identify the hazards that pose the greatest risk to the City and present the greatest concern to community members. Vulnerabilities associated with these hazards will inform the risk assessment and identify what level of risk the hazards pose to the City.
- **Assess Capabilities:** The planning teams will identify local, State, and Federal capabilities that support hazard mitigation and help reduce risk. This includes staff capacity and capability, funding, regulations and policies, etc.
- **Develop Mitigation Strategy:** The mitigation strategy will be developed in collaboration with City representatives, stakeholders, and community members. It includes the shared goals and objectives that have been established for the DP3. The strategy serves as a roadmap for identifying and prioritizing actions and projects to undertake to address the risk identified in the risk assessment.
- **Adopt and Implement the Plan:** The plan will be adopted by the City and implemented. During implementation, the City will continuously monitor, evaluate, and update the plan to ensure it remains current and progress towards reducing risk can be tracked.

While natural disasters cannot be prevented from occurring, the continued implementation of our hazard mitigation plan over the long-term will gradually but steadily lessen the impacts associated with hazard events in our region.

Schedule

Key milestones in the planning process are available below. Please note dates may change to accommodate the actual implementation of the project. Keep checking back for additional updates or changes in the schedule.

Table 7. Project Milestones

Milestone	Tentative Date
Public Kickoff Workshop	May 2023
Hazard Profiles Posted for Public Review	June 2023
Public Risk Assessment Workshop	June 2023
Public Mitigation Action Workshop	July 2023
Draft available for Review by the Public, Baltimore City Planning Commission, and Maryland Department of Emergency Management	July 2023
Public Review Meeting	August 2023
Final Draft Submitted to FEMA Region III	September 2023
Final DP3 Adopted by City and Approved by FEMA	December 2023

Participation and Engagement

Community and stakeholder participation is a vital part of the hazard mitigation planning process. The DP3 is a community-focused plan that prioritizes addressing community members' concerns and needs as it relates to natural and man-made hazards and disasters. Keep checking the engagement page regularly for information on planning progress, to take our survey, and to review and comment on the draft plan.

Meetings

- Public Kickoff Meeting – May 2023
- Risk Assessment Meeting – June 2023
- Mitigation Strategy Meeting – July 2023
- Public Review Meeting – July 2023

Monthly Hazard Mitigation Advisory Committee meetings are open to the public.

Surveys

- **Public Survey:** The City of Baltimore developed a Public Preparedness Survey to assist in providing the public with an outlet to contribute to the DP3 update. Thank you for participating in this important initiative by providing us with your anonymous survey contribution. Please visit the survey at: https://www.surveymonkey.com/r/DP3PublicSurvey
- **Stakeholder Survey:** As part of the DP3 update planning process, we are engaging stakeholders and are looking for your assistance (i.e., utilities,

transportation, business/commerce, emergency services, health/medical). Please consider taking the stakeholder survey to provide input about capabilities, vulnerabilities, and potential projects. Please visit the survey at: https://www.surveymonkey.com/r/DP3StakeholderSurvey

- **Neighboring Jurisdiction Survey:** As part of the DP3 update planning process, we are engaging our neighboring communities. The effects of natural disasters may be similar in your jurisdiction, and your involvement in this process could reap mutual benefits. By participating in the review of this plan, you will be engaging in the regional coordination of disaster mitigation planning. Please visit the survey at: https://www.surveymonkey.com/r/DP3NeighborSurvey
- **Problem Areas Survey:** We invite the public and community members to identify problem areas in the City. These may be areas that experience frequent flooding during storm events, areas where sinkholes have occurred, or areas where power was loss during a storm. Please visit the survey at: https://arcg.is/1CPynH0

Draft Plan for Review

The draft City of Baltimore Disaster Preparedness and Planning Project (DP3) will be available for public review in July 2023. Please check back for updates.

Resources

- FEMA Hazard Mitigation Planning
- FEMA Hazard Mitigation Assistance Grant Programs
- 2018 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Appendix C: Engagement Toolkit

Social Media Posts

Facebook

The City of Baltimore is updating the Disaster Preparedness and Planning Project (DP3). This plan enables participating jurisdictions to continue to be eligible for federal funding to rebuild stronger after disasters have struck. Please visit the website and take the citizen preparedness survey: https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

The City of Baltimore is updating the Disaster Preparedness and Planning Project (DP3). Please consider attending the kickoff meeting on April 4. Visit the website for more information: https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

The City of Baltimore's Disaster Preparedness and Planning Project (DP3) update is kicking off. Stay engaged in the process and take the public survey: https://www.surveymonkey.com/r/DP3PublicSurvey

Have you experienced flooding or other natural disasters in the City of Baltimore? If so, take the Disaster Preparedness and Planning Project (DP3) Public Preparedness survey today to let the City know your concerns. https://www.surveymonkey.com/r/DP3PublicSurvey

Did you know all HMAC meetings for the City of Baltimore DP3 are open to the public? Come join us in discussing hazard mitigation in the City! Meeting dates can be found on our website: https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

Twitter/Instagram

The City of Baltimore's Disaster Preparedness and Planning Project (DP3) update is kicking off. Stay informed and engaged in the process. Visit: https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

Please take the public survey and participate in the City of Baltimore Disaster Preparedness and Planning Project (DP3): https://www.surveymonkey.com/r/DP3PublicSurvey

Attend the City of Baltimore Disaster Preparedness and Planning Project (DP3) kickoff meeting on April 4. Visit: https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

Have you experienced flooding or other natural disasters in the City of Baltimore? Take our survey:
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https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

Graphics

BALTIMORE CITY
DP3 2023 UPDATE
YOUR INPUT IS NEEDED TO HELP
REDUCE LOSSES FROM DISASTERS
VISIT THE HAZARD MITIGATION WEBSITE TO LEARN MORE
https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/
Brandon M. Scott
Mayor
Baltimore Office
of Sustainability
People • Planet • Prosperity

Brandon M. Scott
Mayor

Baltimore Office of Sustainability

Baltimore City Disaster Preparedness and Planning Project (DP3)

Baltimore City is updating our Disaster Preparedness and Planning Project (DP3). The intent of the plan is to help identify, reduce, or eliminate long-term risk and protect people and property.

WE WANT TO HEAR FROM YOU!

https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

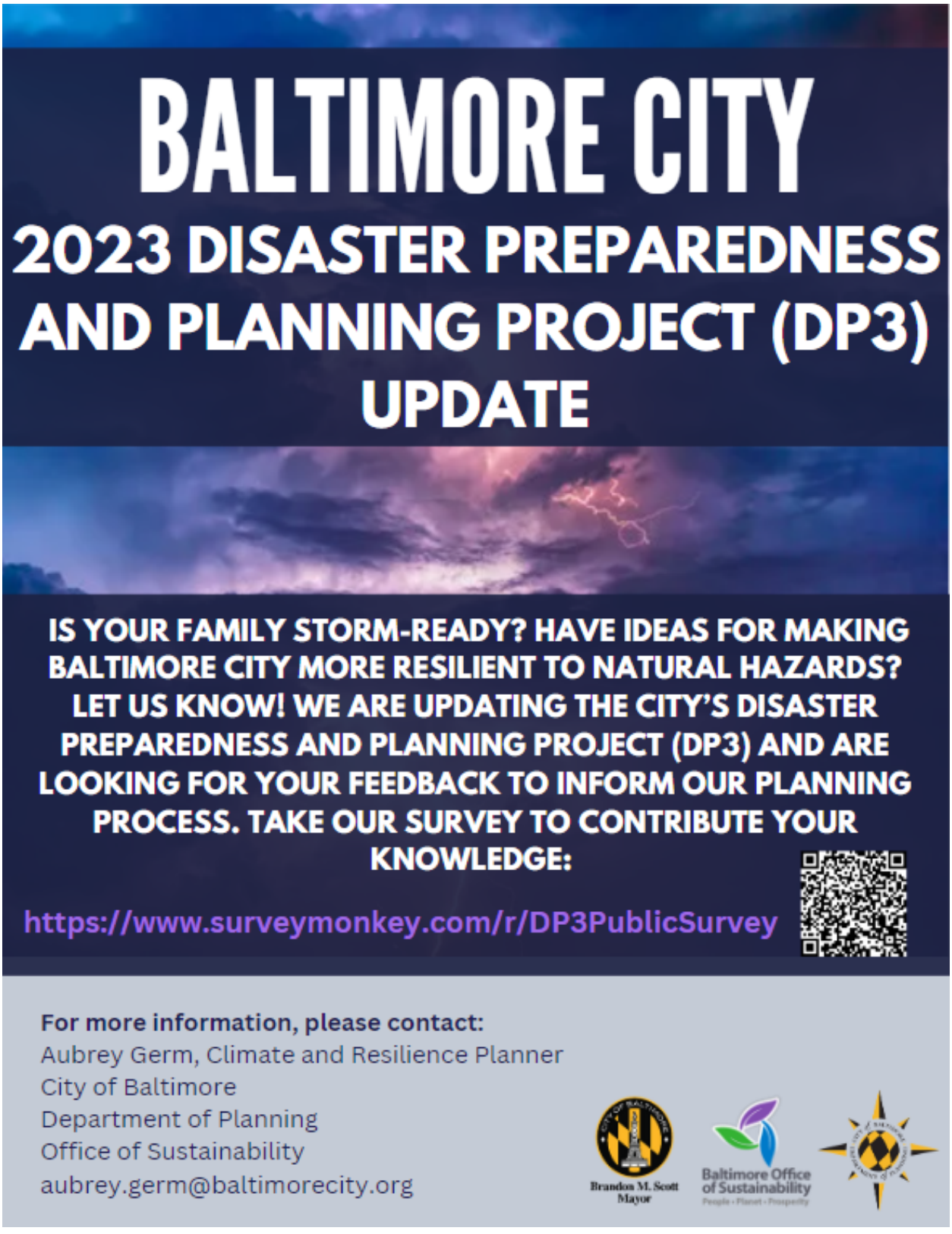
BALTIMORE CITY DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3)

Baltimore City is updating the City's Disaster Preparedness and Planning Project (DP3). The DP3 is a blueprint for reducing property damage and saving lives from the effects of future disasters, and enabling the county and municipalities to be eligible for funding to complete qualifying mitigation projects.

To find out more, visit the DP3 website:
https://www.baltimoresustainability.org/plans/disaster-preparedness-plan/

BALTIMORE CITY
DISASTER PREPAREDNESS AND
PLANNING PROJECT (DP3) UPDATE
LIVE OR WORK IN THE CITY? WE NEED YOUR HELP!
Grants & Funding
Plan & Prepare
Mitigate
TAKE THE
PUBLIC SURVEY

ARE YOU PREPARED FOR A DISASTER?
Join the conversation!
• Do you have a plan?
• Do you have an emergency kit?
• Are you ready for the next big storm?
TAKE THE SURVEY
https://www.surveymonkey.com/r/DP3PublicSurvey


BALTIMORE CITY
2023 DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3) UPDATE
IS YOUR FAMILY STORM-READY? HAVE IDEAS FOR MAKING BALTIMORE CITY MORE RESILIENT TO NATURAL HAZARDS? LET US KNOW! WE ARE UPDATING THE CITY'S DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3) AND ARE LOOKING FOR YOUR FEEDBACK TO INFORM OUR PLANNING PROCESS. TAKE OUR SURVEY TO CONTRIBUTE YOUR KNOWLEDGE:
https://www.surveymonkey.com/r/DP3PublicSurvey
For more information, please contact:
Aubrey Germ, Climate and Resilience Planner
City of Baltimore
Department of Planning
Office of Sustainability
aubrey.germ@baltimorecity.org
Brandon M. Scott
Mayor
Baltimore Office of Sustainability

Emails

Upcoming Meetings

Good Morning/Afternoon,

The City of Baltimore is updating its Disaster Preparedness and Planning Project (DP3), a hazard mitigation plan. You are invited to participate in the upcoming ____ meeting on ____. As a part of this plan update, the public is welcomed and encouraged to participate, as residents can provide incredible insight to ongoing hazards in their community. We hope to see you at the ___ meeting on ___.

Sincerely,

Take the Survey

Public Survey

Good Morning/Afternoon,

The City of Baltimore is updating its Disaster Preparedness and Planning Project (DP3), a hazard mitigation plan. As a resident and/or a worker within the City of Baltimore, you play a key role in understanding the natural hazards within the City. We would like to understand your experiences with natural and human-made hazards and incorporate this information into the 2023 DP3 update. To do so, please consider taking our Public Survey which can found through this link: https://www.surveymonkey.com/r/DP3PublicSurvey

Sincerely,

Neighbor Survey

Good Morning/Afternoon,

The City of Baltimore is updating its Disaster Preparedness and Planning Project (DP3), a hazard mitigation plan. As a municipality which borders the City of Baltimore, our communities experience similar hazards. Please consider taking our Neighboring Community Survey, which will assist in the regional coordination of disaster mitigation planning. The survey can be found through this link: https://www.surveymonkey.com/r/DP3NeighborSurvey

Sincerely,

Stakeholder Survey

Good Morning/Afternoon,

The City of Baltimore is updating its Disaster Preparedness and Planning Project (DP3), a hazard mitigation plan. As an entity operating in the City of Baltimore, your organization plays a key role as a stakeholder in this DP3 update. Please consider taking our Stakeholder Survey, which will assist in collecting input regarding capabilities, vulnerabilities, and potential projects. The survey can be found through this link: https://www.surveymonkey.com/r/DP3StakeholderSurvey

Sincerely,

Flyers

BALTIMORE CITY DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3)

2023 Update

WHAT IS THE DP3?

The DP3 is a hazard mitigation plan, which includes the review and incorporation of existing plans and programs that can support or enhance hazard mitigation. The plan must assess the risk to natural hazards that may impact the planning area and identify and prioritize mitigation actions that can be taken. The HMP must also include a strategy for maintaining the plan, which must be updated every 5 years. FEMA regulations require that the public must be engaged in all phases of the plan's development.

WHAT ARE THE BENEFITS OF THE DP3?

Mitigation planning will help the City prepare for disasters, before they happen, to reduce impacts when a disaster occurs. Benefits include:

- Identifying actions for risk reduction that are agreed upon by stakeholders and the public,
- Focusing resources on the greatest risks and vulnerabilities,
- Building partnerships by involving citizens, organizations, and businesses,
- Increasing education and awareness of threats and hazards, as well as their risks,
- Communicating priorities to state and federal officials, and
- Aligning risk reduction with other community objectives.

LIVE OR WORK IN BALTIMORE CITY? TAKE OUR SURVEY!

https://www.surveymonkey.com/r/SussexHMPPublic

-or-

scan the QR code to complete the survey

FAQS

What is mitigation? Any sustained action taken to reduce/ eliminate long-term risk to life and property from a hazard event.

How can you reduce/eliminate risk? Identify mitigation actions/ projects/activities or processes that can include 1) Local plans and regulations; 2) Structure and infrastructure projects; 3) Natural systems protection; 4) Education and awareness programs.

What grant funding is available? FEMA Hazard Mitigation Assistance grant funding is available with a FEMA-approved Hazard Mitigation Plan (annual and post-disaster opportunities).

How can I support the plan? Take the public survey! This will help us obtain input and get a better understanding of public preparedness for hazard events.

Where can I see the 2023 plan? Sections of the draft plan will be available August 2023 for download, review and comment on the Baltimore City DP3 website at: https://www.sussex.nj.us/cn/webpage.cfm?tpid=11091

IF YOU HAVE QUESTIONS, CONTACT:

Aubrey Germ, Climate and Resilience Planner
City of Baltimore
Department of Planning
Office of Sustainability
aubrey.germ@baltimorecity.gov

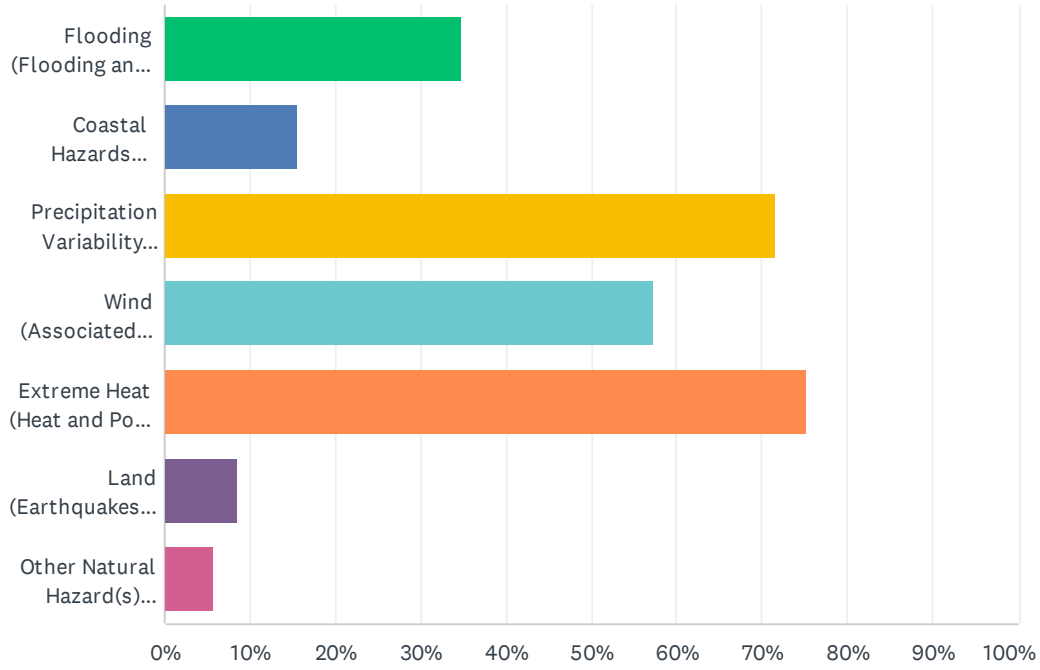
Key Points About the DP3 Update

- The City of Baltimore's Department of Planning, Office of Sustainability is leading the 2023 Disaster Preparedness and Planning Project (DP3) update.
- The City of Baltimore's Disaster Preparedness and Planning Project (DP3) is a Hazard Mitigation Plan; the 2023 update is the second update to the plan (first adopted in 2013, then again in 2018).
- The Disaster Mitigation Act of 2000 specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard mitigation plans as a precondition for receiving FEMA mitigation project grants.
- A hazard mitigation plan:
    - Provides an overview of the impacts of natural hazards on communities
    - Provides a roadmap to reducing the impact of these hazards
    - Requires a FEMA-approved natural hazard mitigation plan to be eligible for pre-disaster mitigation funding
    - Requires five-year updates to maintain eligibility
- The new April 2023 FEMA guidelines require:
    - Mitigation actions for every hazard of concern
    - Discussion on future impacts on hazards from climate change
    - Integration of the HMP into local plans and day-to-day operations
    - Discussion on socially vulnerable populations and how hazards can impact them
- Having an HMP helps:
    - Increase education and awareness on natural hazards and community vulnerabilities
    - Build partnerships with government, organizations, businesses, and the public to reduce risk
    - Identify long-term strategies for risk reduction with input from stakeholders and the public
    - Identify cost-effective mitigation actions that focus resources on the greatest risks areas
    - Integrate planning efforts and risk reduction with other community planning efforts
    - Align risk reduction with other county or municipal objectives
    - Communicate priorities to potential funders
    - Access FEMA funds – by participating in and adopting the HMP, the City will remain eligible for FEMA pre- and post-disaster mitigation funding (HMGP, FMA, BRIC, and PDM)

Appendix D: Summary Survey Results

Q1 In the last five years, which of the following natural hazard events have you experienced in Baltimore City? Check all that apply.

Answered: 141 Skipped: 16



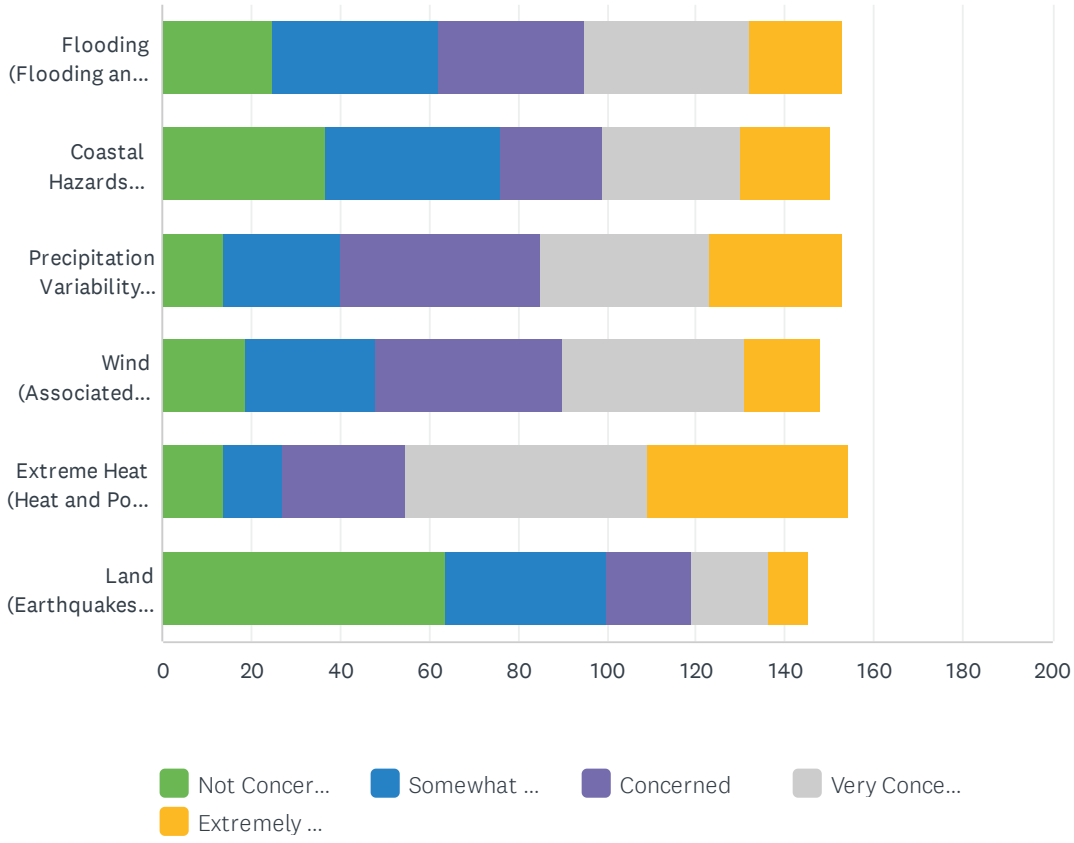
ANSWER CHOICES	RESPONSES	
Flooding (Flooding and Dam Failure)	34.75%	49
Coastal Hazards (Tropical Storms and Hurricanes, Sea Level Rise, Storm Surge/Coastal Inundation, Tsunami)	15.60%	22
Precipitation Variability (Thunderstorms with Lightning and Hail, Winter Storms, Nor'easters, Drought)	71.63%	101
Wind (Associated with Storms, Derechos, Tornados)	57.45%	81
Extreme Heat (Heat and Poor Outdoor Air Quality)	75.18%	106
Land (Earthquakes, Landslides, Karst/Sinkholes)	8.51%	12
Other Natural Hazard(s) (please specify)	5.67%	8
Total Respondents: 141		

#	OTHER NATURAL HAZARD(S) (PLEASE SPECIFY)	DATE
1	Cholera	6/28/2023 2:19 AM
2	Mosquitos - More standing water/land shifting beneath structures	6/28/2023 2:06 AM
3	(Left Blank)	6/13/2023 1:37 AM
4	Wildfire / manmade impacts on air quality	6/10/2023 7:12 PM
5	Microburst	6/3/2023 8:55 AM
6	I live in Howard Park. One of the threats our community experiences are old growth Trees that	6/1/2023 1:09 PM

	tower over our homes. One day they will come down. Most homeowners are aware of the threats, but do not have the funds have them taken down, or at least trim them	
7	Power outages	5/15/2023 6:03 PM
8	trees falling	4/21/2023 2:51 PM

Q2 How concerned are you about the following natural hazards in Baltimore City? Please check one for each hazard.

Answered: 155 Skipped: 2

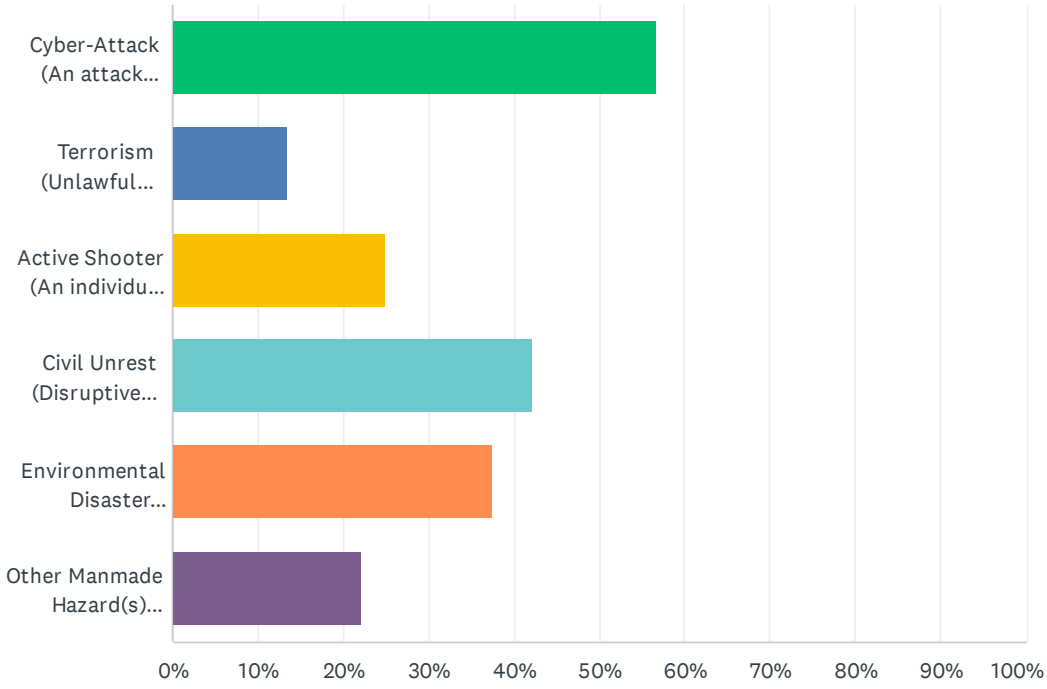


	NOT CONCERNED	SOMEWHAT CONCERNED	CONCERNED	VERY CONCERNED	EXTREMELY CONCERNED	TOTAL RESPONDENTS
Flooding (Flooding and Dam Failure)	16.45% 25	24.34% 37	21.71% 33	24.34% 37	13.82% 21	152
Coastal Hazards (Tropical Storms and Hurricanes, Sea Level Rise, Storm Surge/Coastal Inundation, Tsunami)	24.83% 37	26.17% 39	15.44% 23	20.81% 31	13.42% 20	149
Precipitation Variability (Thunderstorms with Lightning and Hail, Winter Storms,Nor'easters, Drought)	9.27% 14	17.22% 26	29.80% 45	25.17% 38	19.87% 30	151
Wind (Associated with Storms; Derechos; Tornados)	12.93% 19	19.73% 29	28.57% 42	27.89% 41	11.56% 17	147
Extreme Heat (Heat and Poor Outdoor Air Quality)	9.15% 14	8.50% 13	18.30% 28	35.29% 54	29.41% 45	153
Land (Earthquakes, Landslides, Karst/Sinkholes)	44.76% 64	25.17% 36	13.29% 19	11.89% 17	6.29% 9	143

#	OTHER NATURAL HAZARD(S) (PLEASE SPECIFY)	DATE
1	Earthquakes need to be address annually	6/10/2023 7:12 PM
2	Not Sure	6/8/2023 3:45 PM
3	What do you do when your home health crises? (Upon asking the respondent to clarify, they stated that COVID was a concern in their home) + Homeless People	6/8/2023 2:47 PM
4	Climate Change	6/8/2023 2:32 PM
5	sinkholes happen often in Baltimore	5/5/2023 3:40 PM
6	Another pandemic	4/26/2023 9:46 AM
7	overheating due to lack of trees	4/21/2023 2:51 PM

Q3 In the last five years, which of the following manmade hazard events have you experienced in Baltimore City? Check all that apply.

Answered: 104 Skipped: 53



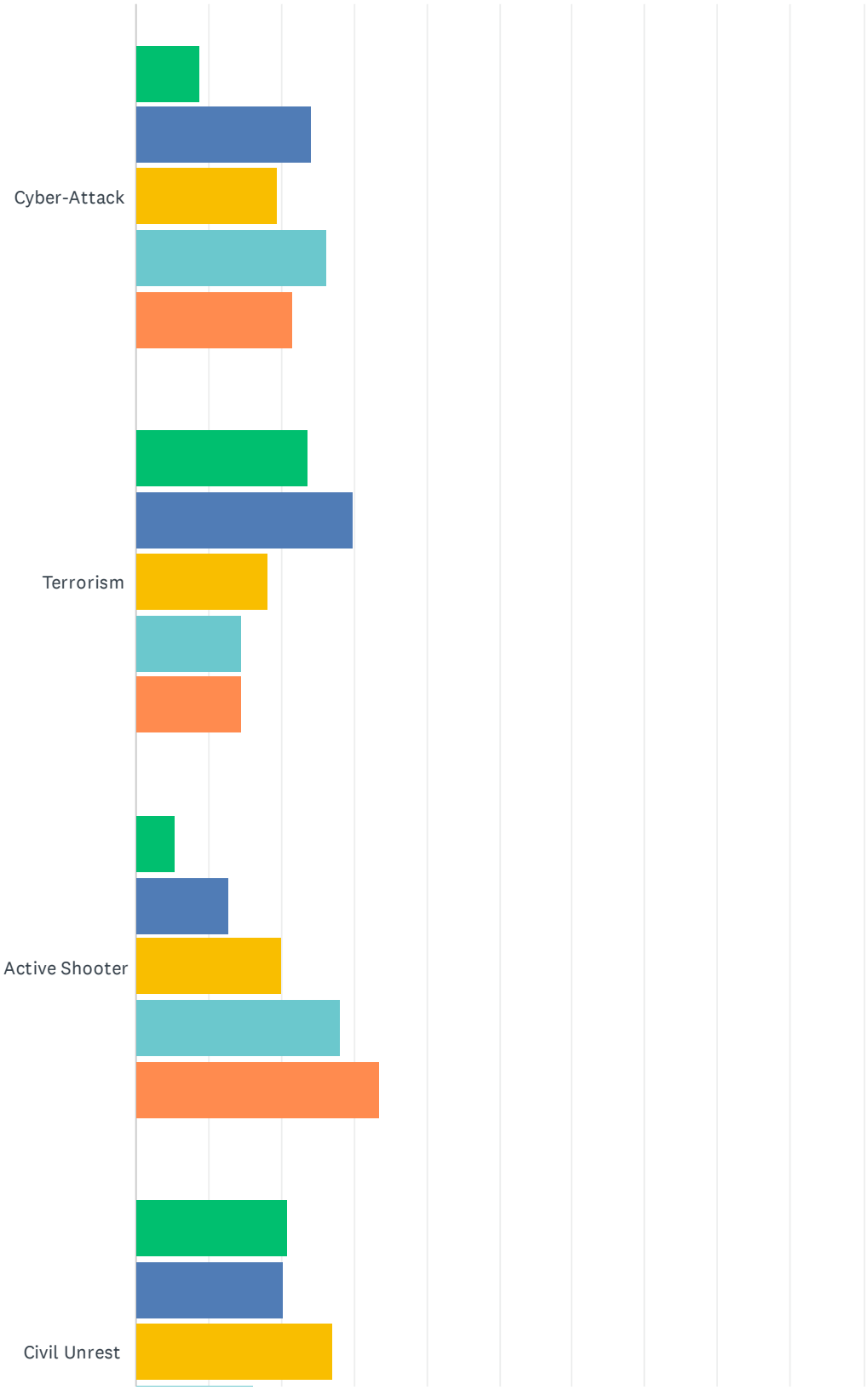
ANSWER CHOICES	RESPONSES	
Cyber-Attack (An attack meant to damage or destroy a computer network or system)	56.73%	59
Terrorism (Unlawful violence or threat of unlawful violence to cause fear)	13.46%	14
Active Shooter (An individual actively engaged in harming or attempting to harm people in a confined populated area; does not include gun violence)	25.00%	26
Civil Unrest (Disruptive demonstrations or assemblies)	42.31%	44
Environmental Disaster (Catastrophic events caused by humans that harm the environment such as oil spills, chemical spills, and nuclear incidents)	37.50%	39
Other Manmade Hazard(s) (please specify)	22.12%	23
Total Respondents: 104		

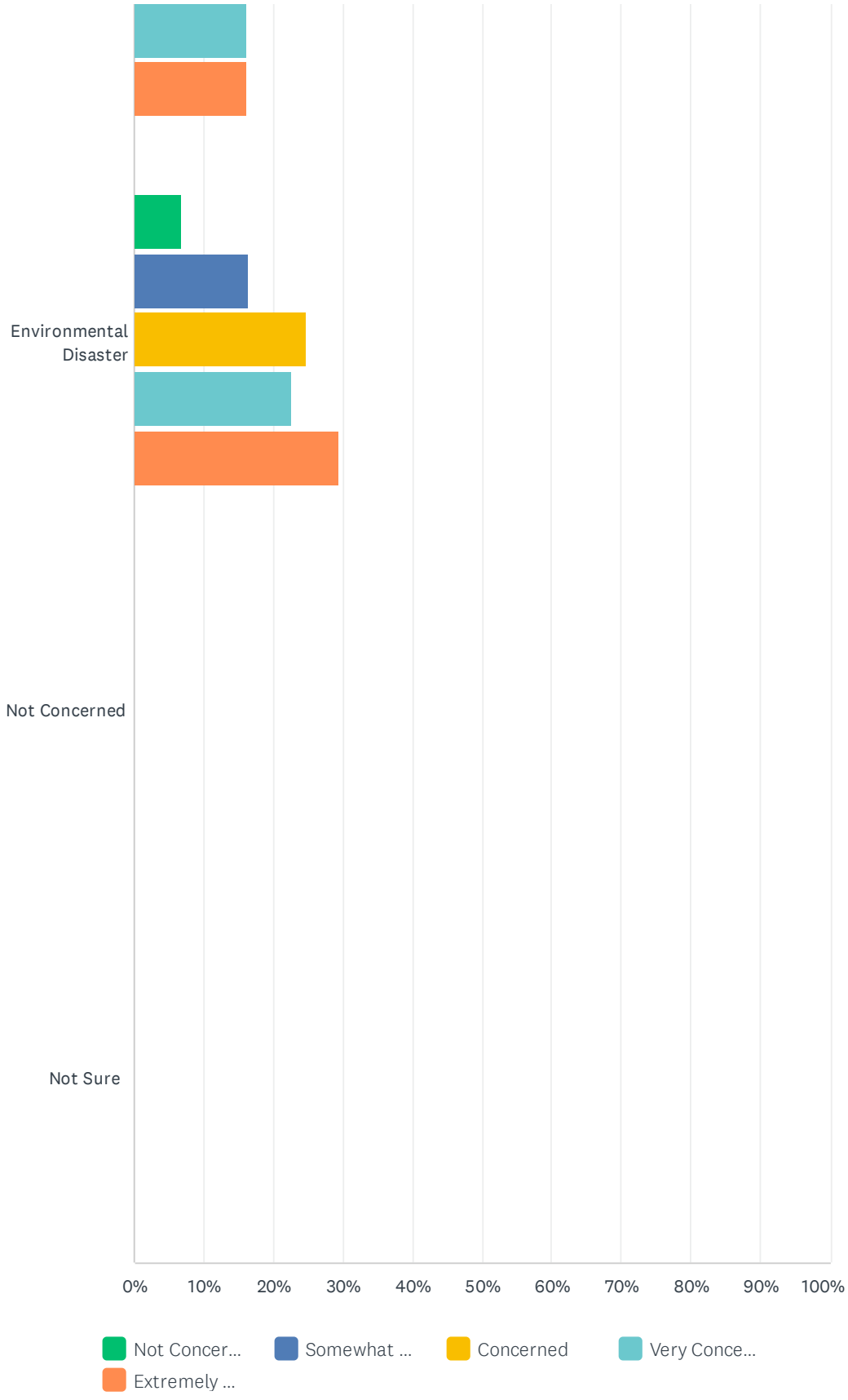
#	OTHER MANMADE HAZARD(S) (PLEASE SPECIFY)	DATE
1	Worn down buses	6/28/2023 2:55 AM
2	None (survey wouldn't allow blank)	6/25/2023 12:13 PM
3	Extremely poor air quality, poor water quality	6/18/2023 11:54 AM
4	polluted water events	6/13/2023 3:50 PM
5	Specifically Chemical Spills and Oil Spills	6/13/2023 1:06 AM

6	Global pandemic	6/11/2023 9:11 PM
7	Electrical Fire in abandoned home	6/11/2023 11:24 AM
8	Wildfire	6/10/2023 7:12 PM
9	None	6/3/2023 11:58 AM
10	Dangerous and reckless drivers.	6/3/2023 8:55 AM
11	Pandemic	5/31/2023 11:30 PM
12	Neighbors Tracking Me through my cell phone and devices on my car	5/31/2023 8:25 AM
13	Oil spill by railroad	5/30/2023 3:21 PM
14	Crime, gun violence, illegal driving, dirt bikes, litter everywhere	5/16/2023 7:48 AM
15	N/A	5/15/2023 6:03 PM
16	None	5/6/2023 10:36 AM
17	none	5/6/2023 9:34 AM
18	None	5/4/2023 11:43 AM
19	PM2.5 pollution from trucks, trains and ships at dock, pollution from the incinerator, dust from coal and salt piles, toxic fumes from railroal yard andpiles of discarded rail ties, truck driving on non truck routes, crosswalks that are not ADA compliant, potholes in bike lanes, strret crossing with no marked crosswalk and no traffic walk signs	5/4/2023 11:03 AM
20	Sewage water came in from the basement pipes and flooded my house with dirty sewage water. Also rats the wiring out of my car.	5/3/2023 2:38 PM
21	Failing public services	5/2/2023 7:06 AM
22	police terror and state oppression	4/26/2023 4:15 PM
23	fire, building collapse, toxic water due to man-made trash	4/21/2023 2:51 PM

Q4 How concerned are you about the following manmade hazards in Baltimore City? Please check one for each hazard.

Answered: 152 Skipped: 5



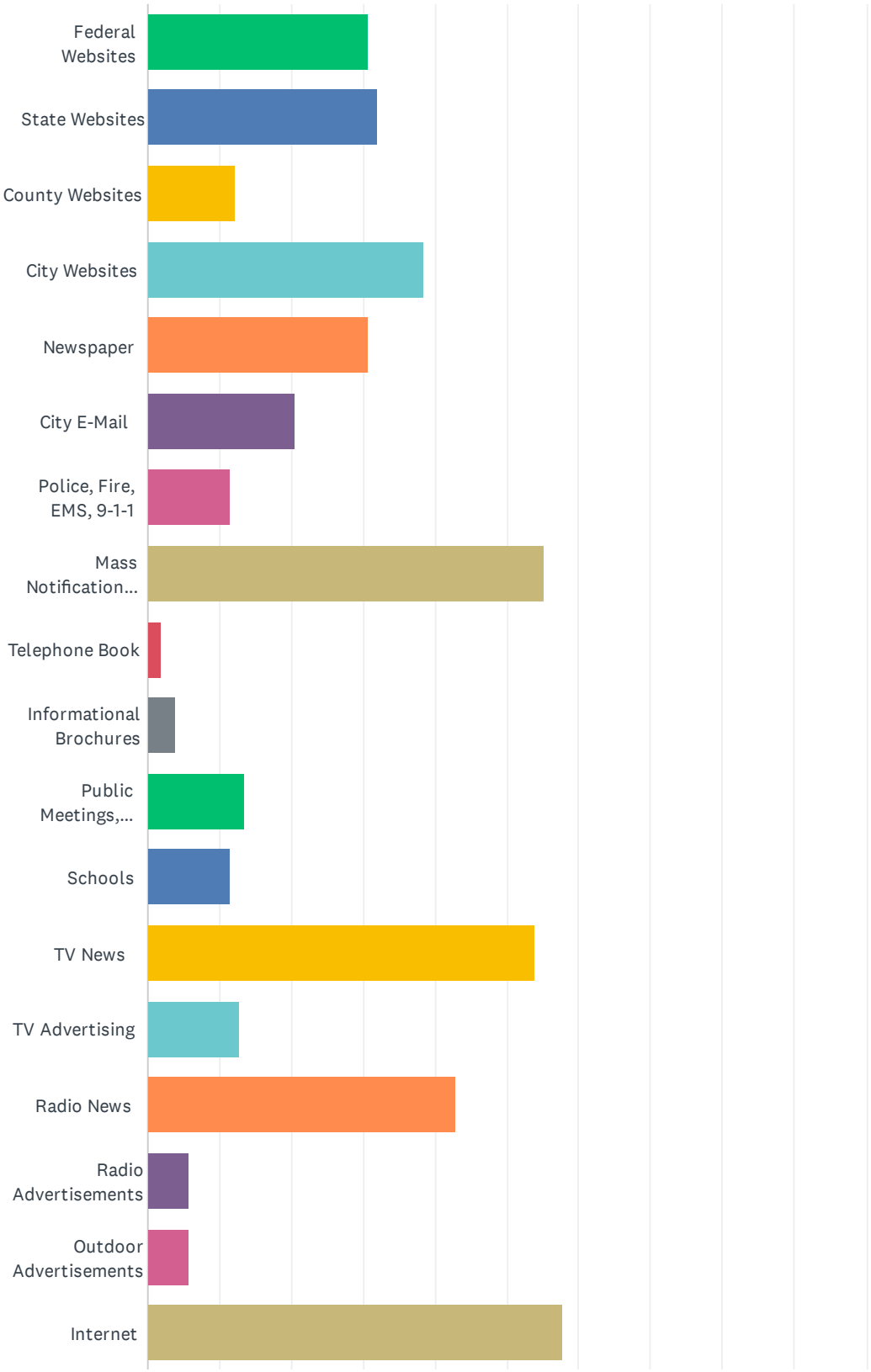

Environmental Disaster
Not Concerned
Not Sure
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Not Concer...
Somewhat ...
Concerned
Very Conce...
Extremely ...

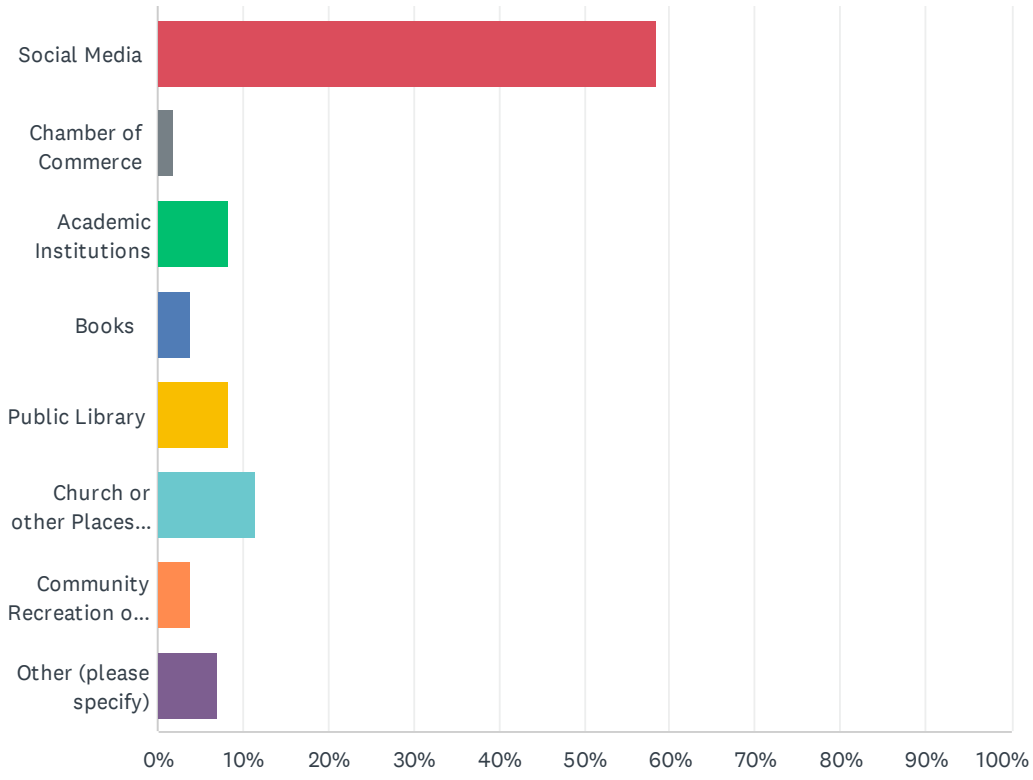
	NOT CONCERNED	SOMEWHAT CONCERNED	CONCERNED	VERY CONCERNED	EXTREMELY CONCERNED	TOTAL RESPONDENTS
Cyber-Attack	8.72% 13	24.16% 36	19.46% 29	26.17% 39	21.48% 32	149
Terrorism	23.61% 34	29.86% 43	18.06% 26	14.58% 21	14.58% 21	144
Active Shooter	5.37% 8	12.75% 19	20.13% 30	28.19% 42	33.56% 50	149
Civil Unrest	20.95% 31	20.27% 30	27.03% 40	16.22% 24	16.22% 24	148
Environmental Disaster	6.85% 10	16.44% 24	24.66% 36	22.60% 33	29.45% 43	146
Not Concerned	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0
Not Sure	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0

#	OTHER MANMADE HAZARD(S) (PLEASE SPECIFY)	DATE
1	Abandoned Homes catching and spreading fires in row homes	6/11/2023 11:24 AM
2	AI	6/8/2023 2:32 PM
3	Police/National Guard responding to civil disputes	6/8/2023 2:23 PM
4	Very concerned about getting killed by a reckless driver.	6/3/2023 8:55 AM
5	Neighbors damaging my property with chemicals and physical destruction	5/31/2023 8:25 AM
6	Drinking water contamination	5/28/2023 12:40 PM
7	Bio-Terrorism - very concerned	5/16/2023 12:03 AM
8	see question 3 for specifics	5/4/2023 11:03 AM
9	Government incompetence	4/26/2023 9:46 AM
10	excessive heat due to lack of trees and vegetation	4/21/2023 2:51 PM

Q5 How do you receive your information concerning a disaster? Check all that apply.

Answered: 156 Skipped: 1




Social Media
Chamber of Commerce
Academic Institutions
Books
Public Library
Church or other Places...
Community Recreation o...
Other (please specify)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

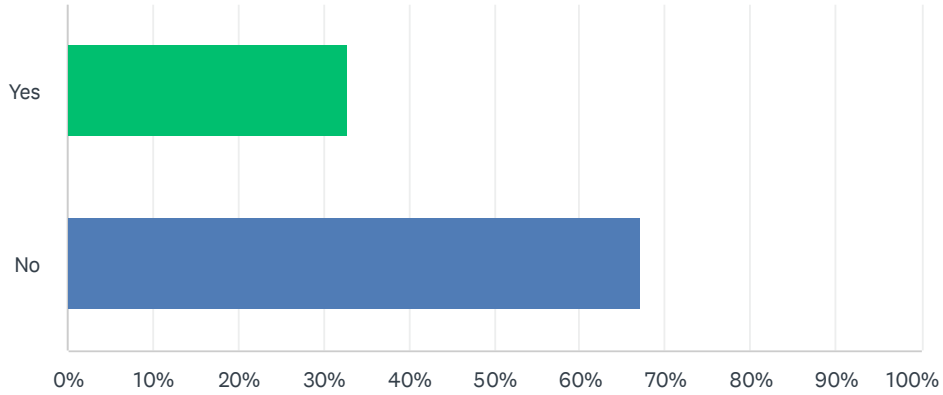
ANSWER CHOICES	RESPONSES	
Federal Websites	30.77%	48
State Websites	32.05%	50
County Websites	12.18%	19
City Websites	38.46%	60
Newspaper	30.77%	48
City E-Mail	20.51%	32
Police, Fire, EMS, 9-1-1	11.54%	18
Mass Notification System (e.g., BMORE ALERT)	55.13%	86
Telephone Book	1.92%	3
Informational Brochures	3.85%	6
Public Meetings, Workshops, Public Awareness Events	13.46%	21
Schools	11.54%	18
TV News	53.85%	84
TV Advertising	12.82%	20
Radio News	42.95%	67
Radio Advertisements	5.77%	9
Outdoor Advertisements	5.77%	9
Internet	57.69%	90
Social Media	58.33%	91
Chamber of Commerce	1.92%	3
Academic Institutions	8.33%	13
Books	3.85%	6
Public Library	8.33%	13
Church or other Places of Worship	11.54%	18
Community Recreation or Service Center	3.85%	6
Other (please specify)	7.05%	11
Total Respondents: 156		

#	OTHER (PLEASE SPECIFY)	DATE
1	As a former FEMA employee I get announcements regularly	6/1/2023 1:09 PM
2	witnesses and myself 2shooting and 3 car jackings in my community past year	5/31/2023 8:25 AM
3	Work - I work in public health preparedness	5/30/2023 4:31 PM
4	Juan Vazquez	5/27/2023 2:01 PM
5	Nextdoor app	5/16/2023 6:00 PM

6	311	5/16/2023 12:03 AM
7	Word of mouth	5/15/2023 6:03 PM
8	Youtube	5/4/2023 11:43 AM
9	Block captain	5/2/2023 7:06 AM
10	Scouts	5/1/2023 8:45 PM
11	word of mouth / friends	4/26/2023 4:15 PM

Q6 In the past, has your home been damaged by a hazard event? For example, flood waters entering the first floor of your home or power outage due to heat.

Answered: 155 Skipped: 2



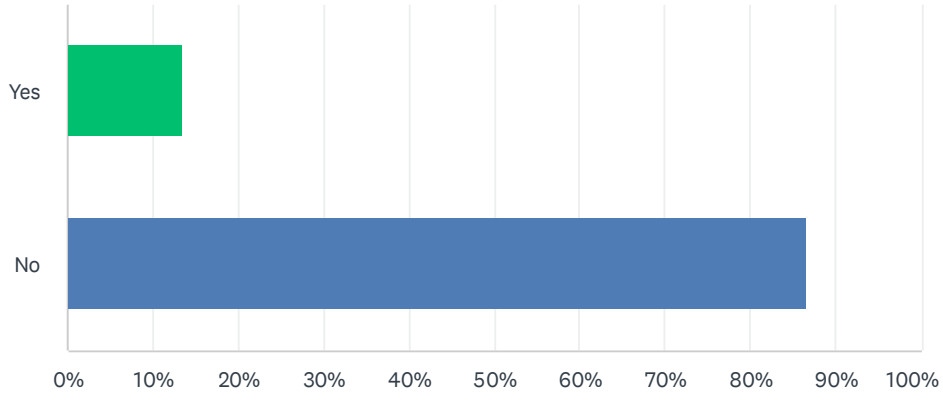
ANSWER CHOICES	RESPONSES	
Yes	32.90%	51
No	67.10%	104
TOTAL		155

#	PLEASE EXPLAIN THE TYPE OF DAMAGE SUSTAINED AND WHEN IT OCCURRED.	DATE
1	water flooding into my home and a power outage	6/29/2023 9:41 AM
2	Next to question 9, they have written "Some insurers won't provide renters insurance in Canton due to flooding possibility."	6/28/2023 2:47 AM
3	Tree - Wind	6/28/2023 2:06 AM
4	power outage during heat	6/16/2023 1:54 PM
5	Several power outages, fire spreading from adjacent home	6/11/2023 11:24 AM
6	Power outage	6/10/2023 8:15 AM
7	A tree fell on my house, use during Hurricane Irene, 2011	6/8/2023 1:39 PM
8	Basement flooded	6/7/2023 9:25 PM
9	2019: wind damage from severe thunderstorm - wind broke off part of a tree, which damaged roof/gutter and tore away downspout from side of house 2018: wind-driven heavy rain leaked through window frame on one side of house and caused damage	6/5/2023 3:26 PM
10	A microburst during a rainstorm forced a lot of water into my home through air vents and around windows, destroyed my outdoor deck furniture and landscaping.	6/3/2023 8:55 AM
11	power outage due to heat during the summer	6/3/2023 7:02 AM
12	The earthquake that we had that was centered in VA (maybe 2011) cracked some inside walls.	6/2/2023 4:29 PM
13	Power outage	5/30/2023 9:05 PM
14	Multiple power outages for prolonged periods of time across the past 3 years.	5/30/2023 4:31 PM

15	power outage, damage to my roof due to high winds	5/30/2023 1:13 PM
16	Power outage last summer for several hours on hot days	5/28/2023 12:40 PM
17	last august, severe wind blew down huge trees, flooded property, with lengthy power outage	5/16/2023 12:17 PM
18	Water damage. Residents in Maryland experienced the earthquake in the city for the first time a few years ago. Power outrage from thunderstorm that hit grid in the area and electricity was out for hours.	5/16/2023 11:41 AM
19	Chimney fire	5/16/2023 6:05 AM
20	Power Outages for more than 4 hrs - 2019 (?), downed wires and lost of internet - 2022, downed tree branches requiring BGE to remove - 2021.	5/16/2023 12:03 AM
21	Basement flood	5/15/2023 10:38 PM
22	Windstorm blew off roofing	5/15/2023 8:53 PM
23	Power outage due to the storm	5/15/2023 6:03 PM
24	Roof and subsequent water damage from storms, large fallen tree branches in yard, multi-day power outage	5/10/2023 11:01 AM
25	Flooding due to intense storms and power outages due to heat	5/8/2023 3:13 PM
26	trees down. damage to awning. power out for 3 dayy, had to throw out $300 in food	5/8/2023 11:59 AM
27	Wind damage	5/7/2023 7:19 PM
28	Power outages due to heat and extreme weather	5/5/2023 5:02 PM
29	Power outage due to relatively mild storms	5/3/2023 8:11 PM
30	Flooded basement in 2016	5/3/2023 3:20 PM
31	Everything in my basement got destroyed by sewer water	5/3/2023 2:38 PM
32	power outages due to summer storms	5/2/2023 5:55 PM
33	Wind and heavy rain damage to roof, flooding in basement, power outages,	5/1/2023 8:45 PM
34	Massive rainfall in short amount of time collapsed part of roof	5/1/2023 7:49 PM
35	flooding in basement during heavy rain	4/26/2023 4:15 PM
36	structural damage due to hurricaine/TS winds.	4/21/2023 2:51 PM

Q7 If you answered 'yes' above, did you report the damages to your local police, fire departments, or emergency management agency?

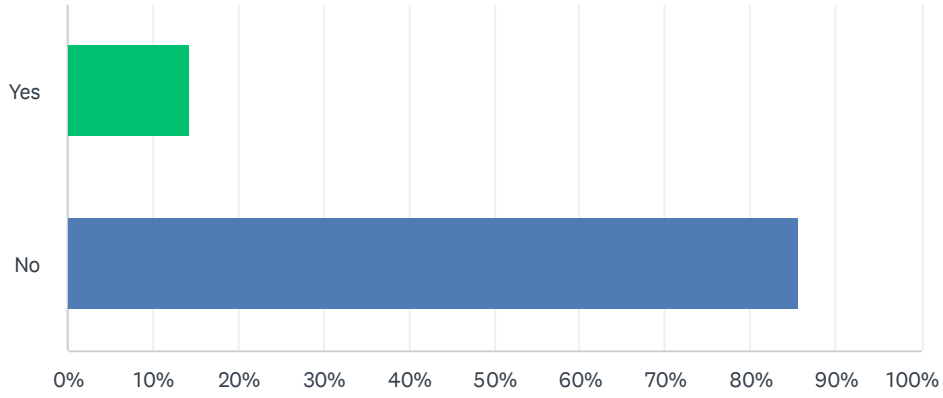
Answered: 111 Skipped: 46



ANSWER CHOICES	RESPONSES	
Yes	13.51%	15
No	86.49%	96
TOTAL		111

Q8 To the best of your knowledge, is your home located in an area that is known to flood?

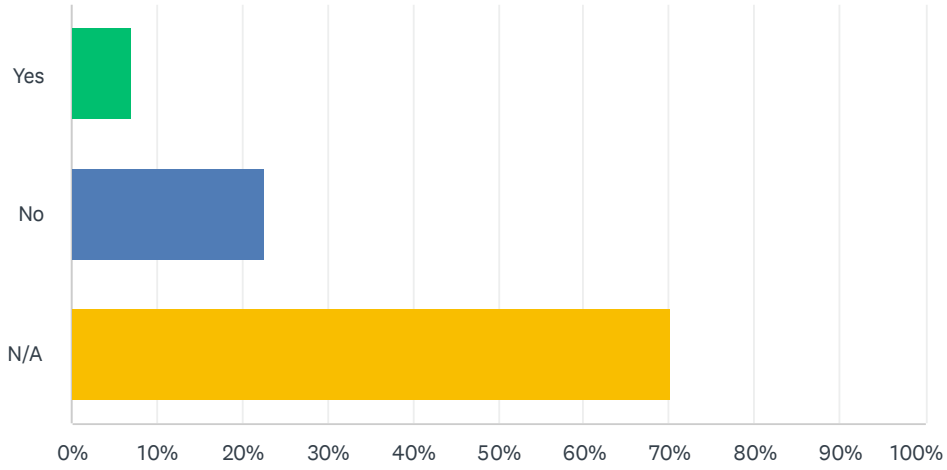
Answered: 148 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	14.19%	21
No	85.81%	127
TOTAL		148

Q9 If you live in an area that is known to flood, do you have flood insurance?

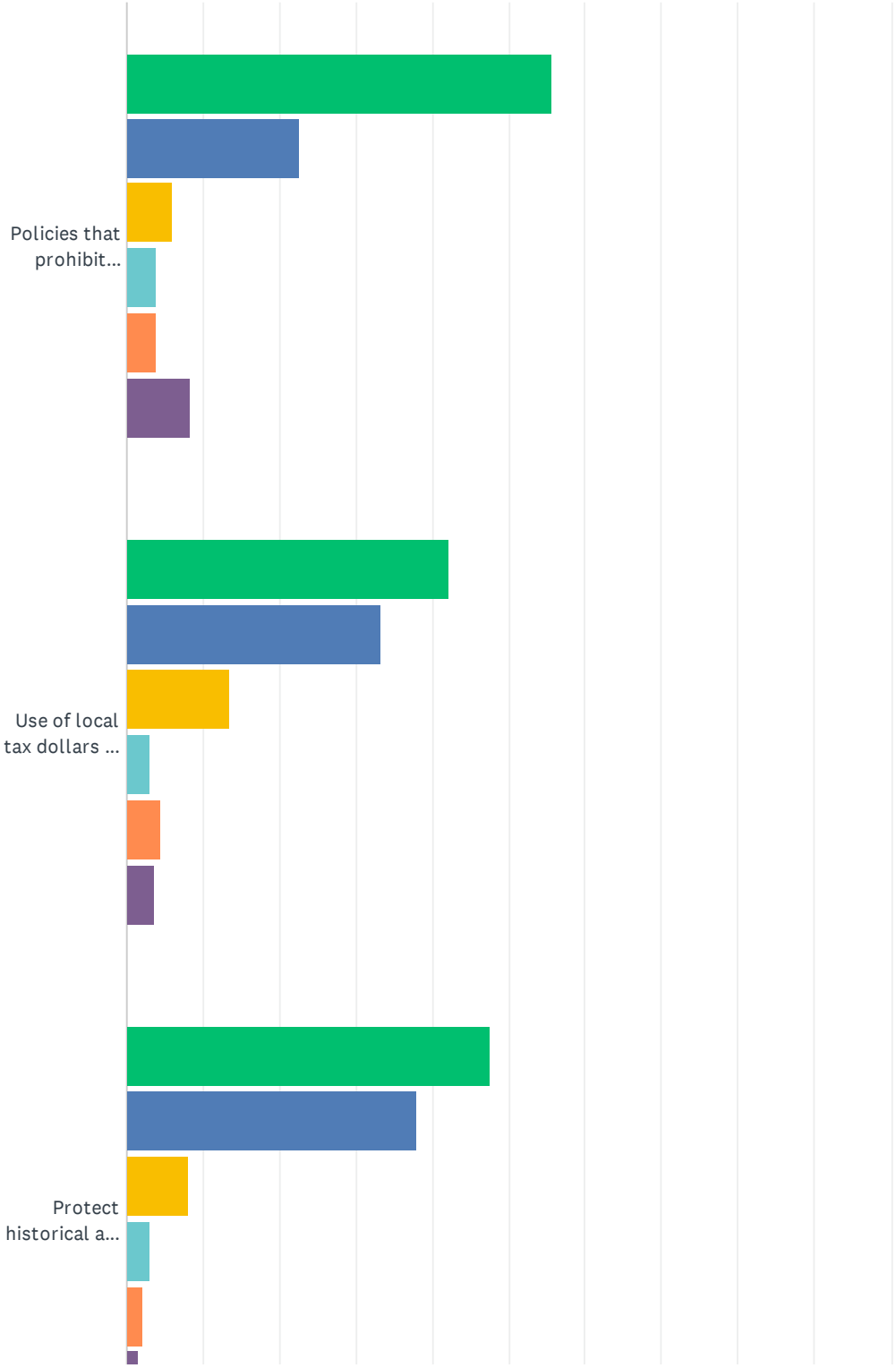
Answered: 141 Skipped: 16

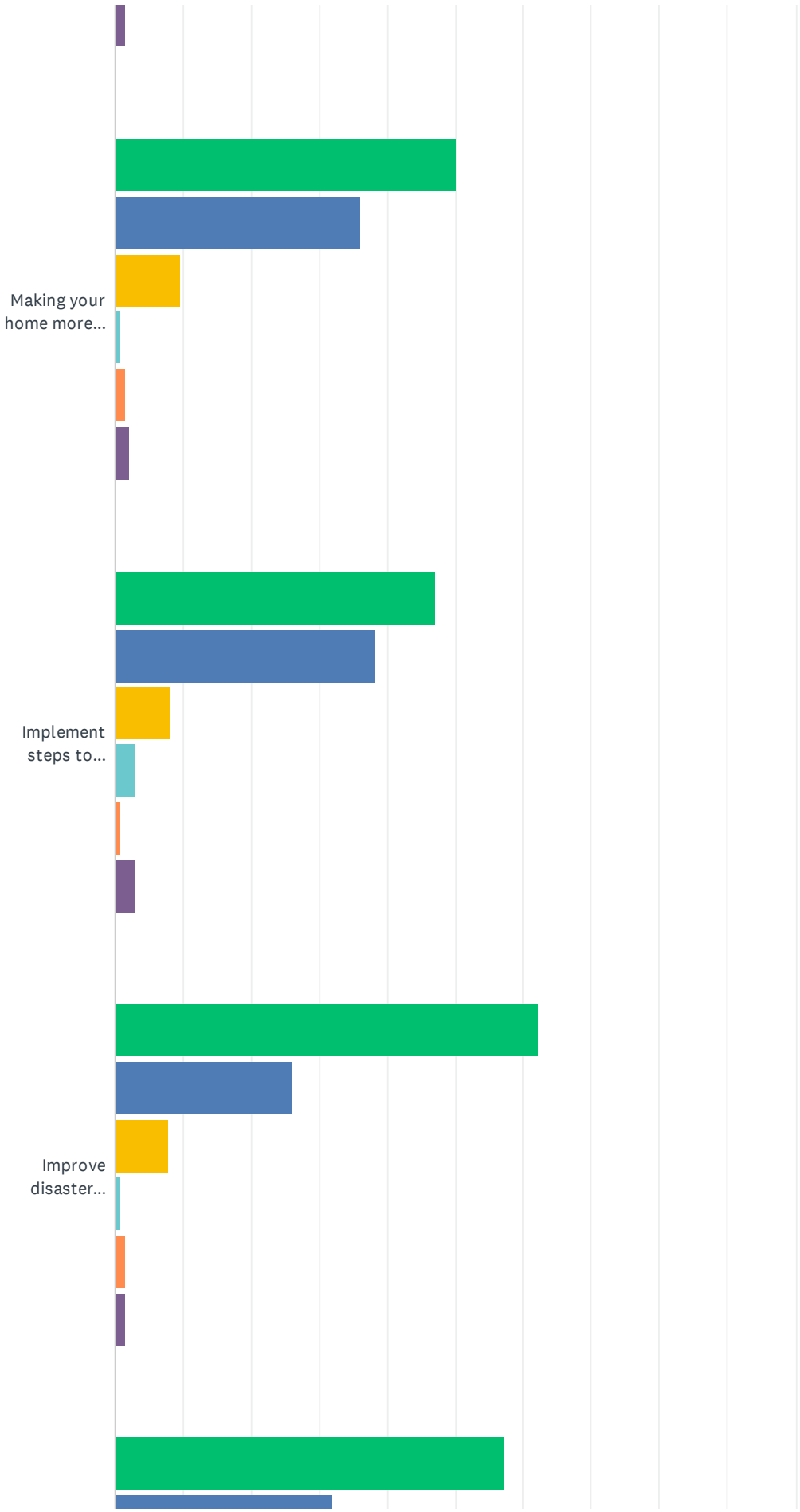


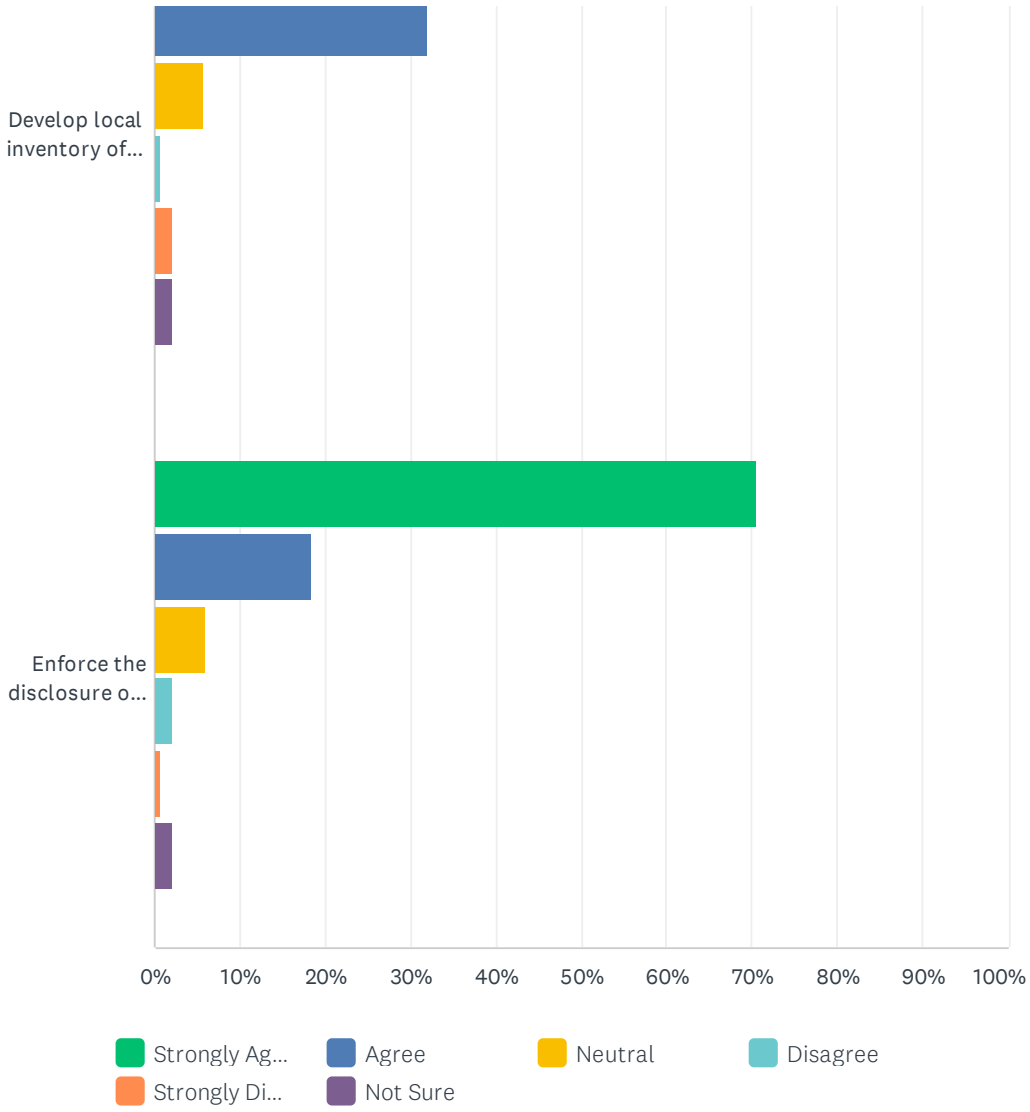
ANSWER CHOICES	RESPONSES	
Yes	7.09%	10
No	22.70%	32
N/A	70.21%	99
TOTAL		141

Q10 A number of activities can reduce impacts and damages from natural hazards. Please check the box that best represents your opinion on the following strategies to reduce the impacts and damages from natural hazards in the City.

Answered: 139 Skipped: 18




Making your home more...
Implement steps to...
Improve disaster...

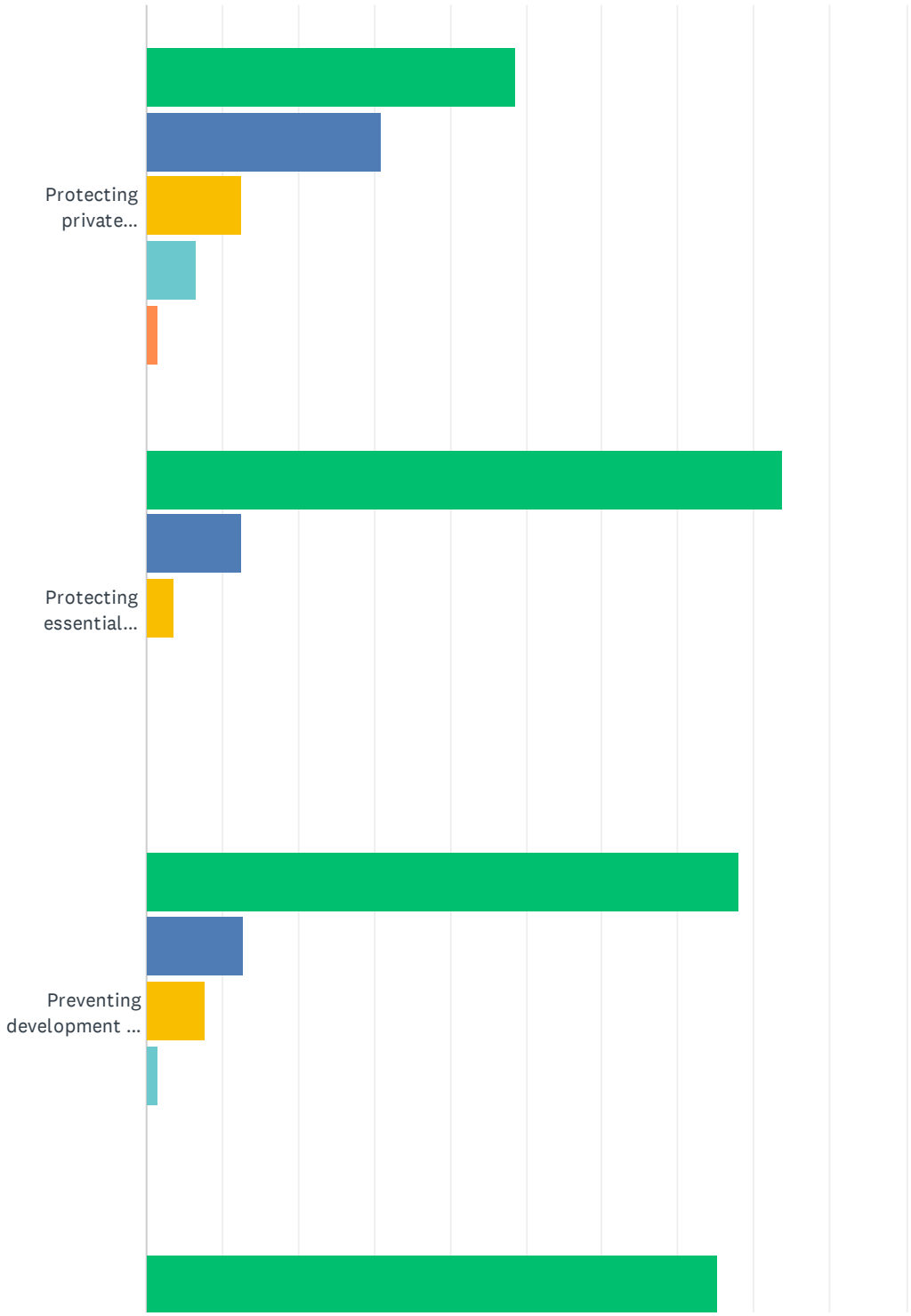


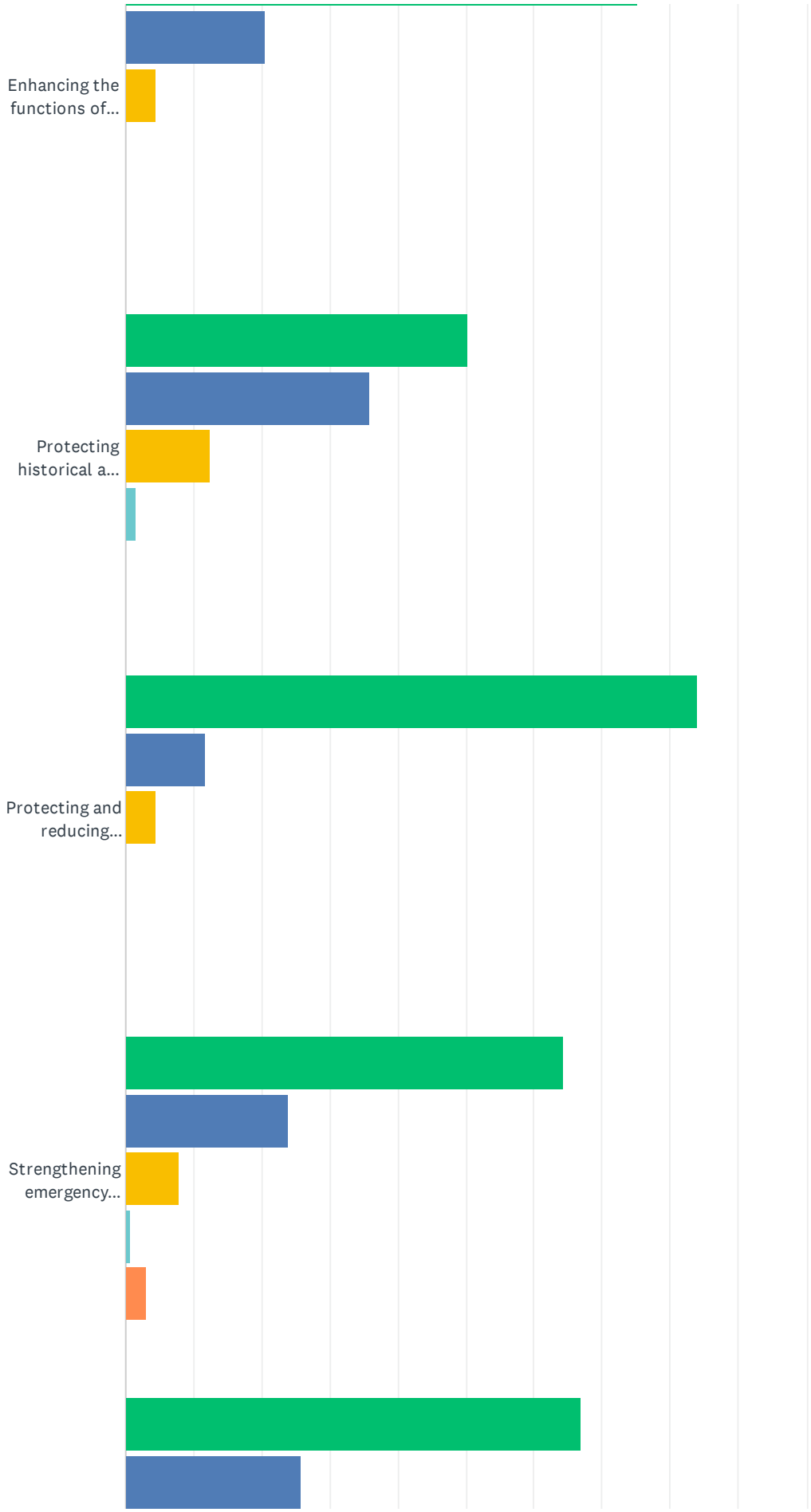
	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	NOT SURE	TOTAL
Policies that prohibit development in areas subject to natural hazards	55.64% 74	22.56% 30	6.02% 8	3.76% 5	3.76% 5	8.27% 11	133
Use of local tax dollars to reduce risks and losses from natural hazards	42.22% 57	33.33% 45	13.33% 18	2.96% 4	4.44% 6	3.70% 5	135
Protect historical and cultural assets	47.45% 65	37.96% 52	8.03% 11	2.92% 4	2.19% 3	1.46% 2	137
Making your home more disaster-resilient	50.00% 68	36.03% 49	9.56% 13	0.74% 1	1.47% 2	2.21% 3	136
Implement steps to safeguard the local economy following a disaster	47.06% 64	38.24% 52	8.09% 11	2.94% 4	0.74% 1	2.94% 4	136
Improve disaster preparedness of local schools	62.32% 86	26.09% 36	7.97% 11	0.72% 1	1.45% 2	1.45% 2	138
Develop local inventory of at-risk buildings and infrastructure	57.25% 79	31.88% 44	5.80% 8	0.72% 1	2.17% 3	2.17% 3	138
Enforce the disclosure of natural hazard risks during real estate transactions	70.59% 96	18.38% 25	5.88% 8	2.21% 3	0.74% 1	2.21% 3	136

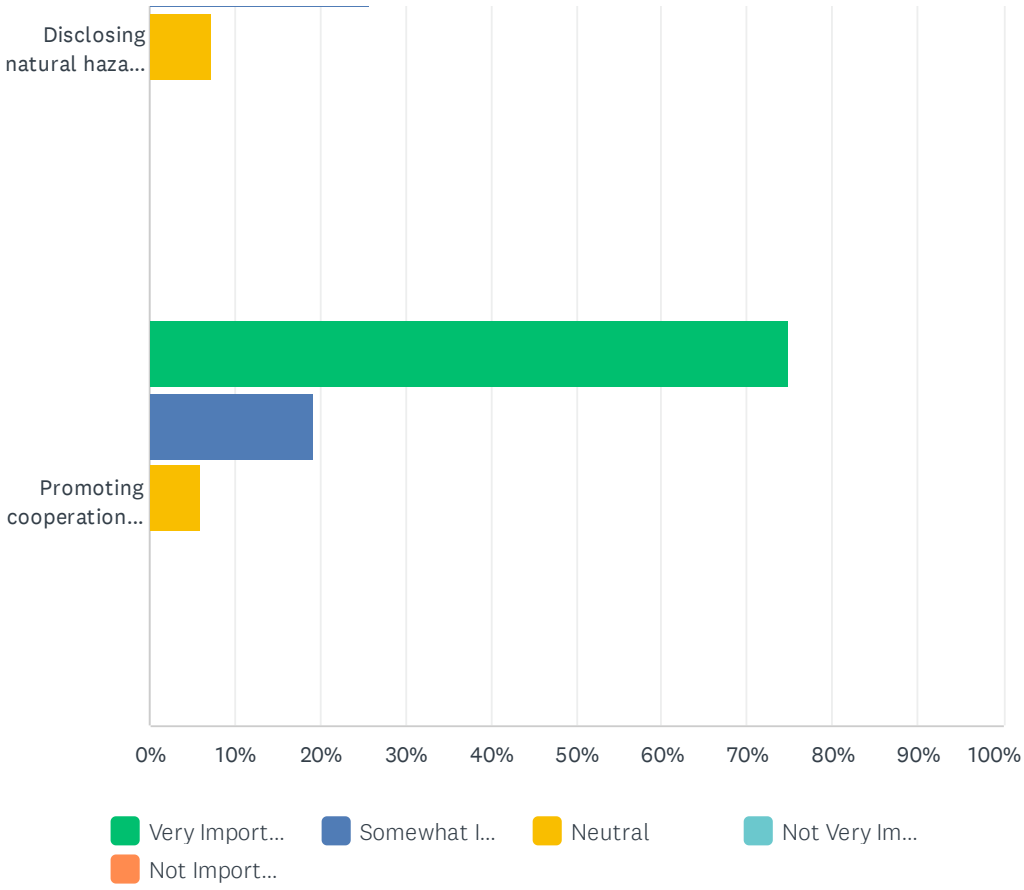
#	OTHER (PLEASE SPECIFY)	DATE
1	Resilient coastlines, ecological restoration, native habitat and pollinator corridors, increased green infrastructure and landscaping, updated zoning policies for green spaces with native habitat	6/18/2023 12:00 PM
2	Tax penalties for abandoned/unoccupied homes	6/11/2023 11:27 AM
3	Create diaster relief planning board	6/10/2023 7:15 PM
4	Ensure investments in resilience benefit the most vulnerable populations	5/30/2023 9:11 PM
5	Would like to see more private investment/funding esp if developers build in or near high risk areas	5/6/2023 11:02 AM
6	Take action to prevent man-made disasters (e.g. preventing a future crisis like the proposal to ship toxic wastewater from East Palestine to the Back River WWTP by banning the disposal of toxic materials in our sewer system)	4/26/2023 4:22 PM
7	Control hazardous industries and companies	4/21/2023 2:56 PM

Q11 Natural hazards can have a significant impact on a community, but planning for these events can help lessen the impacts. The following statements will help us determine the priorities of our residents regarding planning for natural hazards in Baltimore City. Please tell us how important each one is to you.

Answered: 139 Skipped: 18




Enhancing the functions of...
Protecting historical a...
Protecting and reducing...
Strengthening emergency...



	VERY IMPORTANT	SOMEWHAT IMPORTANT	NEUTRAL	NOT VERY IMPORTANT	NOT IMPORTANT	TOTAL
Protecting private property	48.53% 66	30.88% 42	12.50% 17	6.62% 9	1.47% 2	136
Protecting essential community places and services	83.82% 114	12.50% 17	3.68% 5	0.00% 0	0.00% 0	136
Preventing development in hazardous areas	78.03% 103	12.88% 17	7.58% 10	1.52% 2	0.00% 0	132
Enhancing the functions of natural features (e.g., streams, wetlands)	75.18% 103	20.44% 28	4.38% 6	0.00% 0	0.00% 0	137
Protecting historical and cultural landmarks	50.36% 69	35.77% 49	12.41% 17	1.46% 2	0.00% 0	137
Protecting and reducing damages to utilities (e.g., electricity, water, sewer)	83.94% 115	11.68% 16	4.38% 6	0.00% 0	0.00% 0	137
Strengthening emergency services (e.g., police, fire, EMS)	64.49% 89	23.91% 33	7.97% 11	0.72% 1	2.90% 4	138
Disclosing natural hazard risks during real estate transactions	66.91% 91	25.74% 35	7.35% 10	0.00% 0	0.00% 0	136
Promoting cooperation among public agencies, residents, non-profit organizations, and local businesses	74.81% 101	19.26% 26	5.93% 8	0.00% 0	0.00% 0	135

#	OTHER (PLEASE SPECIFY)	DATE
1	better notification of residents of disasters	6/29/2023 9:44 AM

2	Police is crossed out above, Fire and EMS are underlined.	6/28/2023 2:12 AM
3	No more money to the police.	6/27/2023 4:46 PM
4	Ew! Fuck Private Property! Fuck the Police, Love EMS + fire services	6/8/2023 2:28 PM
5	Direct more investment and resources to most vulnerable populations	5/30/2023 9:11 PM
6	work with communities to develop plans before disasters happen and broadly communicate the plan	5/4/2023 11:13 AM
7	Mandate disaster mitigation for new development	5/1/2023 7:56 PM
8	Strengthen fire and EMS, not police	4/26/2023 4:22 PM

Q12 Please identify any specific weaknesses that you are aware of in your community (e.g., flood-prone areas or specific properties, essential places that lack backup power, etc.). Please list street names and other specific identifiers if possible.

Answered: 70 Skipped: 87

#	RESPONSES	DATE
1	Heatwave preparedness is lacking in most underfunded communities (eg. west Baltimore tree canopy, etc.) -Flooding on Eastern Ave in Fells Point -Many damaged, clogged, or otherwise nonfunctional stream drains in butchers hill	6/28/2023 9:52 AM
2	Sometimes trees in areas like Canton are prone to falling. Also take care of the bridges!!! Routine maintenance goes a long way.	6/28/2023 2:43 AM
3	N/A	6/28/2023 2:36 AM
4	Communication	6/28/2023 2:20 AM
5	Back up in wooded areas	6/28/2023 2:15 AM
6	Excessive Ticket Cameras in black neighborhoods. Example along Liberty Ave. Racist traps.	6/28/2023 2:12 AM
7	Poorly maintained buildings, basement apartments which flood during storms. Old York Road.	6/27/2023 4:46 PM
8	N/A	6/27/2023 4:38 PM
9	Unsure? Otterbein Area.	6/27/2023 4:35 PM
10	Unaware!	6/27/2023 4:25 PM
11	Na	6/27/2023 10:29 AM
12	None known	6/18/2023 1:14 PM
13	N/a	6/18/2023 12:05 PM
14	lack of natural habitats that naturally work to lessen these impacts while promote cleaner air/water - wetlands, trees, green spaces	6/16/2023 1:58 PM
15	flooding of the Jones Falls near 40th St	6/13/2023 3:57 PM
16	N/A	6/13/2023 1:38 AM
17	Flood prone, fire risk, lack of back-up power	6/13/2023 1:25 AM
18	Availability awareness	6/13/2023 1:12 AM
19	Flood prone state wide, no preparedness for most natural disasters.	6/13/2023 1:00 AM
20	1300 BLCK of Bruce Street (Electrical Poles Access)	6/13/2023 12:51 AM
21	N/a	6/11/2023 1:43 PM
22	Abandoned/unoccupied homes	6/11/2023 11:27 AM
23	Ignorance of low income tenants to resources	6/10/2023 7:15 PM
24	North of Patterson Park: Sinkhole on Baltimore street and Linwood, very old pipes prone to breakage, not enough rain gardens/green spaces to absorb rain. Some neighbors lack air conditioning and struggle in the heat	6/10/2023 8:22 AM
25	N/A	6/8/2023 3:42 PM
26	N/A	6/8/2023 3:25 PM

27	Unsafe water in house	6/8/2023 3:23 PM
28	N/A	6/8/2023 3:19 PM
29	Cherry Hill does not have a grocery store	6/8/2023 3:10 PM
30	Drain flooding	6/8/2023 2:49 PM
31	Storm water system flooding near harbor, water drainage in general, trash.	6/8/2023 2:34 PM
32	Lack of access to financial resources for poor/disabled/disenfranchised.	6/8/2023 2:28 PM
33	Lack of access to safe water	6/8/2023 2:17 PM
34	n/a	6/8/2023 1:48 PM
35	Trees over power lines	6/8/2023 1:45 PM
36	Liter on the streets	6/7/2023 12:33 PM
37	flooding in fells point (Thames street)	6/4/2023 12:53 PM
38	None	6/3/2023 12:02 PM
39	None specifically in my neighborhood (Barre Circle).	6/3/2023 9:11 AM
40	na	6/2/2023 4:35 PM
41	Unknown	6/2/2023 4:33 PM
42	Mount Washington (Dixon Hill - Dixon Rd, Maywood Rd) power lines are overhead in a neighborhood with many trees. Power lines should be buried!	5/30/2023 9:11 PM
43	Identification of appropriate safe shelter buildings in the event of a hazard specific to each community, perhaps a city-wide map of shelters appropriate for particular disasters. Regular awareness campaigns. Use of text or smartphone alert systems to warn of hazards like water quality disruptions or chemical spills	5/30/2023 4:38 PM
44	none that i am aware of	5/30/2023 3:14 PM
45	none that I'm aware of	5/30/2023 1:18 PM
46	Aging sewer systems, water runoff, too much concrete and not enough trees	5/22/2023 4:49 PM
47	Not aware of specifics	5/17/2023 5:17 PM
48	NA	5/16/2023 6:02 PM
49	Community Recreation Center, schools, childcare facilities in West Baltimore (Harlem Park - Sandtown-Winchester area for part of the area is in low land (valley). Fire Department being without electricity or backup power. Engine 8 - Truck 10 West Baltimore Fire Station, 1500 West Lafayette Avenue. Harlem Park Elementary/Middle School, Harlem Park Recreation Center, Head Start Program, Apartment Building 1500 W. Edmondson Avenue, stores and businesses located in the are of Edmondson Avenue including residential homes. (parts of Calhoun, Calhoun, and Carrollton Avenue.	5/16/2023 11:52 AM
50	Power lines should be underground. We need after-school and summer programs to decrease juvenile crime. A concerted effort between the city, schools, and churches is desperately needed to combat the ridiculous amount of litter in Baltimore.	5/16/2023 8:01 AM
51	I see the lack of the work force in all of these areas as a huge weakness. Qualified personnel will be needed first in my opinion. In m area are huge, old trees that are at risk of falling and have fallen - Howard Park area.	5/16/2023 12:25 AM
52	East Balt- Walther Ave, Hamilton, Harford, Belair Rds: poor road repair has led to increased sinkholes in past 5yrs; lack of Code Enforcement response to address hoarding/unkept yards that have been reported. Poor to no response from City Tree services to cut dead trees, overgrown trees into power lines has led to increased power outages in the area. Poor cell phone tower coverage has led to increased internet reported outages in East Baltimore in past 3 years.	5/15/2023 10:48 PM
53	N/a	5/11/2023 9:45 AM

54	Bad cracked streets with large pot holes by e redwood st	5/8/2023 4:38 PM
55	possible lack of backup power: Waverly Library, 400 E. 33rd St 21218; New Waverly United Methodist Church, 642 E 33rd St 21218; St. Moses Church, 400 E 31st St 21218; Waverly Y, 900 E 33rd St 21218; Sts Philips and James, 2801 N Charles St, 21218; CVS, 3200 St Paul St, 21218; University Baptist Church, 3501 N Charles St, 21218; Cathedral Church of the Incarnation, 4 E University Pkwy, 21218	5/7/2023 8:40 PM
56	Im not sure	5/7/2023 7:23 PM
57	In the alley behind Newport Avenue, between Roland Hts & Old Cold Spring, there are trees that have grown over time that put the utility lines (power, telecom) at risk. It's hard to pinpoint ownership of the properties with the trees, plus most of the trees are in the alley behind sheds facing the alley behind Falls Rd. Sometimes it's been challenging getting correct information or just getting anything from any utility company out to cut the tree branches back. The Baltimore 311 app has only 3 options for the damage mitigation: Fallen Limb, Tree Inspection, Tree Down. Maybe there should be an opening for Utility Lines At Risk, & for the City to coordinate evaluation & mitigation to reduce the risk of downed utility lines. Or if the City can't help with this then create some sort of identifier for lines so residents can easily know who to call.	5/6/2023 11:02 AM
58	N/A (thank goodness)	5/6/2023 9:54 AM
59	Between E. Belvedere to Hillen Rd, extending to E. Northern Pkwy is very flood prone. Mainly due to abundance of leaves and trash that accumulate in the sewer and gutter run off	5/5/2023 3:49 PM
60	We have a lot of street flooding because the storm water system was not designed for large rain events and the paving over of everything - no semipermeable surfaces, lack of green space	5/4/2023 11:13 AM
61	The water treatment plants and the power grid throughout the city have demonstrated a lack of robustness several times over the last few years	5/3/2023 8:22 PM
62	1/2 our neighborhood floods. Rock Hill, Hineline, Coolidge, the lower part of Haverhill all flood. 311 doesn’t help. AT ALL. Too many community groups fight with each other they do nothing to help us when it floods. They don’t do anything to prevent the flooding like the old group did. You can only get help after the floods if your friends with Ms. Porter and her group.	5/3/2023 2:45 PM
63	Unknown	5/3/2023 2:25 PM
64	I work in a flood zone in Carroll-Camden (1220 block of Wicomico Street). We are insulated as a raised building but the street floods often, especially during large rain events. This is true of the length of Wicomico Street from 1100 - 1600.	5/3/2023 2:15 PM
65	N/A	5/2/2023 5:59 PM
66	The inner harbor promenade has flooding even on dry days in lower areas. The Stadium Square development area floods during heavy rains. Franklintown Road experienced extreme flash flooding and is still vulnerable. The buried Harris Creek streambed floods in McElderry Park. In extreme heat the Rec Centers and schools should all be cooling sites but are not. There is a 10 degree difference between Baltimore’s rich and poor neighborhoods which could kill in extreme heat	5/2/2023 7:37 AM
67	N/A	5/1/2023 7:56 PM
68	21217 ZIP Code	4/28/2023 8:06 PM
69	We could definitely use a resilience hub in the Waverly area	4/26/2023 4:22 PM
70	the weakening of our police and fire departments is an extreme risk to our safety	4/21/2023 2:56 PM

Q13 In the event of an emergency, would you know who in your neighborhood is most at risk and might need help?

Answered: 114 Skipped: 43

#	RESPONSES	DATE
1	Kind of. Lots of families with children on my block, who might need extra support	6/29/2023 9:44 AM
2	no, I have not had the opportunity to meet my immediate neighbors, but I would jump at the chance if I saw one	6/28/2023 9:52 AM
3	Seniors	6/28/2023 2:56 AM
4	don't know	6/28/2023 2:48 AM
5	No	6/28/2023 2:45 AM
6	Older people?	6/28/2023 2:43 AM
7	N/A	6/28/2023 2:36 AM
8	No	6/28/2023 2:34 AM
9	People experiencing homelessness, areas that have been historically marginalized (West Baltimore, Middle East)	6/28/2023 2:29 AM
10	no	6/28/2023 2:22 AM
11	Unhoused/Elderly	6/28/2023 2:20 AM
12	No	6/28/2023 2:15 AM
13	Most of my street is retired elderly who will all need help - Rockdale Court neighborhood.	6/28/2023 2:12 AM
14	The elderly and disabled, and those in basement apartments (for flooding)	6/27/2023 4:46 PM
15	No	6/27/2023 4:38 PM
16	No	6/27/2023 4:35 PM
17	no	6/27/2023 4:31 PM
18	Seniors	6/27/2023 4:25 PM
19	Some neighbors	6/27/2023 10:29 AM
20	No	6/18/2023 1:14 PM
21	Yes	6/18/2023 12:05 PM
22	Children and elderly	6/18/2023 12:00 PM
23	yes. we are close with our neighbors and know who to keep an eye on and reach out during these events.	6/16/2023 1:58 PM
24	not beyond my immediate neighbors	6/13/2023 3:57 PM
25	No	6/13/2023 1:44 AM
26	My whole building	6/13/2023 1:41 AM
27	N/A	6/13/2023 1:38 AM
28	All senior buildings they are underserved.	6/13/2023 1:35 AM
29	The elderly and those with mobility issues. Children as well.	6/13/2023 1:25 AM
30	NO	6/13/2023 1:17 AM

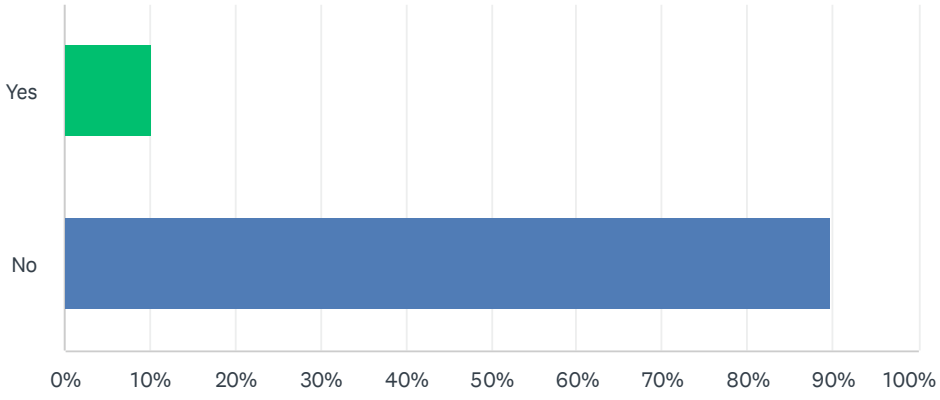
31	N/A	6/13/2023 1:12 AM
32	Need more community meeting to make people aware.	6/13/2023 1:07 AM
33	The elderly live at the block of 1400 Broadway	6/13/2023 1:04 AM
34	No	6/13/2023 1:00 AM
35	Community Disaster	6/13/2023 12:56 AM
36	Elderly!!!	6/13/2023 12:51 AM
37	There are two old age homes across the street from me.	6/13/2023 12:47 AM
38	No	6/11/2023 9:24 PM
39	No	6/11/2023 1:43 PM
40	No	6/11/2023 11:27 AM
41	Yes	6/10/2023 7:15 PM
42	No	6/10/2023 1:31 PM
43	Yes!	6/10/2023 8:22 AM
44	Yes	6/8/2023 3:57 PM
45	Most seniors would need assistance in the event of emergency heat.	6/8/2023 3:47 PM
46	N/A	6/8/2023 3:42 PM
47	No, not super close with neighbors	6/8/2023 3:31 PM
48	No	6/8/2023 3:28 PM
49	N/A	6/8/2023 3:25 PM
50	Seniors	6/8/2023 3:23 PM
51	no	6/8/2023 3:19 PM
52	the homeless population and the women and children	6/8/2023 3:10 PM
53	My neighbor	6/8/2023 2:49 PM
54	no	6/8/2023 2:42 PM
55	no	6/8/2023 2:34 PM
56	Yes, old/disabled/homeless	6/8/2023 2:28 PM
57	There are two old age homes across the street from me	6/8/2023 2:20 PM
58	No, I would not	6/8/2023 1:48 PM
59	I know of some.	6/8/2023 1:45 PM
60	No	6/7/2023 9:28 PM
61	Yes. Children, Elderly, and Disabled Individuals.	6/7/2023 12:33 PM
62	Yes elderly	6/7/2023 9:25 AM
63	maybe	6/5/2023 3:33 PM
64	Yes, I know of elderly neighbors with mild disabilities that need to be checked on first.	6/4/2023 10:45 PM
65	No	6/4/2023 12:53 PM
66	No	6/3/2023 12:02 PM
67	Yes, I know some at least. It is a small close-knit neighborhood.	6/3/2023 9:11 AM
68	Not necessarily - this could be strengthened	6/2/2023 8:29 PM

69	No	6/2/2023 7:16 PM
70	No	6/2/2023 4:45 PM
71	no	6/2/2023 4:35 PM
72	Yes	6/2/2023 4:33 PM
73	No	6/2/2023 3:44 PM
74	On my block, yes. Outside my area No	6/1/2023 1:23 PM
75	Yes	5/31/2023 9:59 AM
76	yes	5/31/2023 8:34 AM
77	Yes, elderly residents	5/30/2023 9:11 PM
78	To some extent, but not all individuals	5/30/2023 4:38 PM
79	Senior citizens.	5/30/2023 3:28 PM
80	no	5/30/2023 3:14 PM
81	no	5/30/2023 1:18 PM
82	No	5/22/2023 4:49 PM
83	No I do not.	5/17/2023 5:17 PM
84	No. Maybe I just haven't found the right ways to engage, but my neighborhood doesn't feel very tight-knit and I haven't gotten to know my neighbors well though I'd like to.	5/16/2023 11:02 PM
85	No	5/16/2023 6:02 PM
86	not really	5/16/2023 12:20 PM
87	Senior citizens, schools, children, businesses, fire department and those areas listed above in prior question.	5/16/2023 11:52 AM
88	Yes.	5/16/2023 8:01 AM
89	There are older residents on my block.	5/16/2023 12:25 AM
90	Yes	5/15/2023 10:48 PM
91	Yes	5/15/2023 8:57 PM
92	Yes	5/15/2023 6:09 PM
93	No	5/11/2023 9:45 AM
94	No	5/10/2023 11:06 AM
95	Yes	5/8/2023 4:38 PM
96	yes	5/7/2023 8:40 PM
97	No	5/7/2023 7:23 PM
98	Somewhat	5/6/2023 11:02 AM
99	Yes; those who are elderly or not as mobile	5/6/2023 9:54 AM
100	Yes	5/5/2023 3:49 PM
101	no	5/4/2023 11:13 AM
102	no	5/3/2023 8:22 PM
103	no	5/3/2023 3:27 PM
104	I would not know	5/3/2023 3:06 PM
105	Yup. I don’t know if I’d help them though. Bottom line is people don’t help each other here anymore.	5/3/2023 2:45 PM

106	No	5/3/2023 2:25 PM
107	I know some people but not all who may need help during an emergency.	5/3/2023 2:15 PM
108	No	5/2/2023 5:59 PM
109	Yes because the association has a block captain group	5/2/2023 7:37 AM
110	Somewhat; I am aware of elderly neighbors and those with children	5/1/2023 8:48 PM
111	Elderly neighbors who live alone	5/1/2023 7:56 PM
112	Yes the senior citizens/older adults	4/28/2023 8:06 PM
113	Not really. My neighborhood did some mutual aid work at the beginning of the pandemic so have some info from that work, but there isn't a current structure to support a community-led emergency response within our neighborhood.	4/26/2023 4:22 PM
114	yes	4/21/2023 2:56 PM

Q14 Does your neighborhood have a community mutual aid group or wellness checklist?

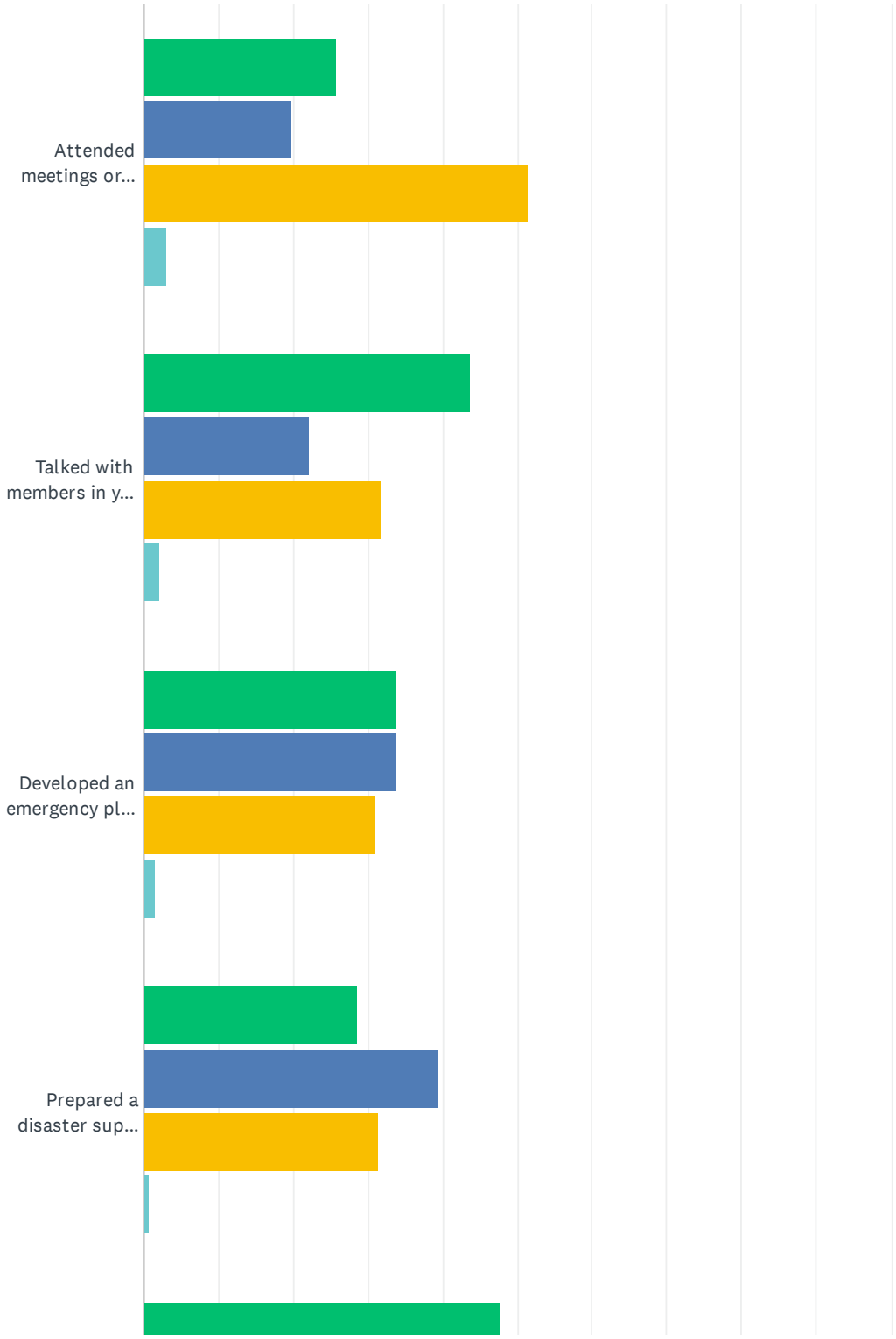
Answered: 128 Skipped: 29

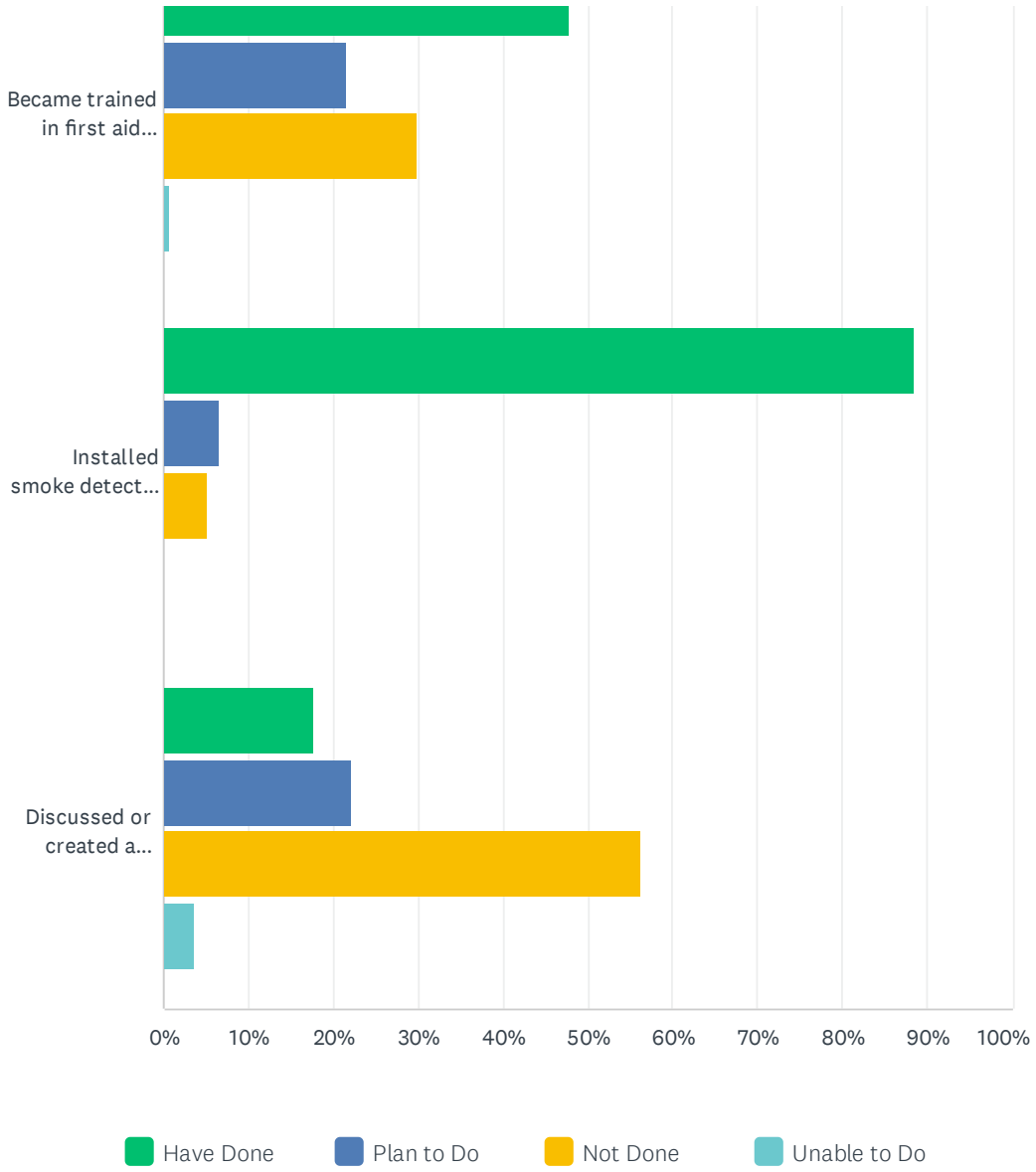


ANSWER CHOICES	RESPONSES	
Yes	10.16%	13
No	89.84%	115
Total Respondents: 128		

Q15 In the following list, please check those activities that you have done in your home, plan to do in the near future, have not done, or are unable to do. Please check one answer for each activity that you or someone in your household have done.

Answered: 138 Skipped: 19





	HAVE DONE	PLAN TO DO	NOT DONE	UNABLE TO DO	TOTAL
Attended meetings or received information on natural disasters or emergency preparedness	25.74% 35	19.85% 27	51.47% 70	2.94% 4	136
Talked with members in your home about what to do in case of a natural disaster or emergency	43.70% 59	22.22% 30	31.85% 43	2.22% 3	135
Developed an emergency plan for your home and family in order to decide what everyone will do in the event of a disaster or emergency	33.82% 46	33.82% 46	30.88% 42	1.47% 2	136
Prepared a disaster supply kit with extra food, water, batteries, etc.	28.47% 39	39.42% 54	31.39% 43	0.73% 1	137
Became trained in first aid and/or CPR	47.76% 64	21.64% 29	29.85% 40	0.75% 1	134
Installed smoke detectors throughout home	88.41% 122	6.52% 9	5.07% 7	0.00% 0	138
Discussed or created a utility shutoff procedure in the event of a natural disaster	17.78% 24	22.22% 30	56.30% 76	3.70% 5	135

#	OTHER (PLEASE SPECIFY)	DATE
1	Installed carbon monoxide detectors in home	6/5/2023 3:33 PM
2	I live in apt so some of this I have not personally fone	6/2/2023 3:44 PM
3	Installed a back-up generator. Stockpiled non-perishable foods.	5/16/2023 8:01 AM
4	We need a way for the City to let me know when a disaster happens and what the evacuation plan is ahead of time.	5/4/2023 11:13 AM
5	I plan to sell my house to move my family to the county	5/3/2023 2:45 PM
6	Researching CERT and looking for info to present at neighborhood association meeting. Presenting safety items during said meeting	5/1/2023 8:48 PM
7	Need to be train	4/28/2023 8:06 PM

Q16 Do you have any other comments, questions, or concerns regarding hazard mitigation in Baltimore City?

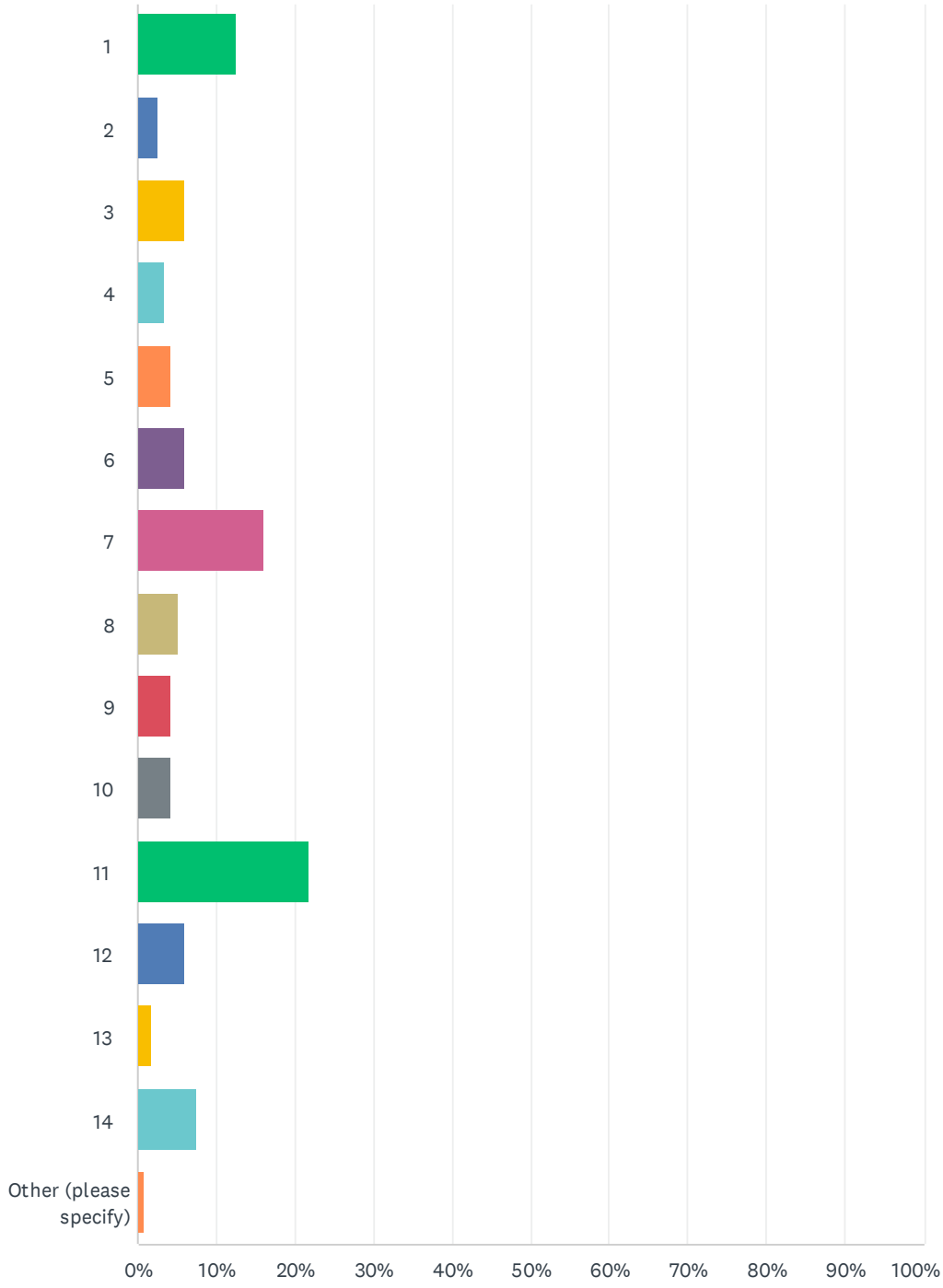
Answered: 53 Skipped: 104

#	RESPONSES	DATE
1	Need better notification system for community members. Is BMORE alter active?	6/29/2023 9:44 AM
2	N/A	6/28/2023 2:36 AM
3	I feel like not a lot of young adults are aware of these natural disasters or emergency preparedness. Which i do not like. I feel like there's not an alertness from people about the possibility of a manmade or natural disaster.	6/28/2023 2:34 AM
4	I am a public health grad student, and I work on food system resilience planning. How do you all work to incorporate food issues/planning into disaster mitigation? The Hopkins Center for a Livable Future has a resource called Food System Resilience: A planning Guide for Local Government that addresses this.	6/28/2023 2:29 AM
5	Hazard Response	6/28/2023 2:20 AM
6	No	6/28/2023 2:15 AM
7	Senior community lists of resources in event of flooding or other known high risk events.	6/28/2023 2:12 AM
8	no	6/27/2023 4:31 PM
9	Not at this time	6/27/2023 4:25 PM
10	No	6/27/2023 10:29 AM
11	N/a	6/18/2023 12:05 PM
12	More integration with built and natural/green mitigation efforts. EJ communities need aid and resilience as well.	6/18/2023 12:00 PM
13	I don't think I've ever heard about such a thing happening locally, but would be interested if offered: "Attended meetings or received information on natural disasters or emergency preparedness"	6/13/2023 3:57 PM
14	N/A	6/13/2023 1:41 AM
15	Not at time, will be attending community meetings!!!	6/13/2023 12:51 AM
16	Hosting some sort of disaster preparedness webinar would be nice.	6/11/2023 9:24 PM
17	Is the county more prepared?	6/10/2023 7:15 PM
18	N/A	6/8/2023 3:42 PM
19	Public Housing for Seniors	6/8/2023 3:23 PM
20	N/A	6/8/2023 3:19 PM
21	How do I activate my community in preparing them for disaster? Is the office of sustainability hiring?	6/8/2023 3:10 PM
22	No, I do not	6/8/2023 1:48 PM
23	No	6/8/2023 1:45 PM
24	Everyone needs to be aware and plan before a disaster happens! What is Hazard Mitigation? What are some examples? How can this impact Baltimore City? If Any, What resources are there?	6/7/2023 12:33 PM
25	No	6/7/2023 9:25 AM

26	no	6/5/2023 3:33 PM
27	I am not aware of any emergency shelter in Northeast Baltimore city!	6/4/2023 10:45 PM
28	Baltimore will suffer	6/3/2023 12:02 PM
29	No.	6/3/2023 9:11 AM
30	Cell phone towers.	6/2/2023 7:16 PM
31	no	6/2/2023 4:35 PM
32	No	6/2/2023 4:33 PM
33	No	5/31/2023 9:59 AM
34	Huge potential to invest in green infrastructure	5/30/2023 9:11 PM
35	In South Baltimore, we enter many of our neighborhoods using bridges and/or train tracks. If a bridge were to collapse or a disabled train were to block the ability to continue a street, how will emergency assistance reach us? As it currently stands, we would be trapped.	5/30/2023 3:28 PM
36	In case of evacuation, is there a list of designated places in the various quadrants of the city?	5/17/2023 5:17 PM
37	None	5/16/2023 6:02 PM
38	Is there free training in the areas of Disaster Preparedness available for city residents? Where is it? What day and time will it be available for citizens?	5/16/2023 11:52 AM
39	Currently in Baltimore it seems there are two very distinct threats to our safety and quality of life--teenagers and litter.	5/16/2023 8:01 AM
40	No	5/15/2023 8:57 PM
41	No	5/15/2023 6:09 PM
42	I think engaging community associations could be one way to get the word out	5/6/2023 11:02 AM
43	None	5/6/2023 9:54 AM
44	The way to bring more awareness to hazard mitigations, the gov agencies can provide presentations and trgs. as needed to neighborhood associations	5/5/2023 3:49 PM
45	The City needs to develop plans with the community first. Then it needs to broadly communicate the plans. Finally, the city needs a rapid way to tell residents about the disaster.	5/4/2023 11:13 AM
46	Is there one website that has all of the resources our family can access for info about preparing for hazards?	5/3/2023 3:27 PM
47	The neighborhood groups fight each other to run for political office when they’re supposed to be helping people in the community. They do everything they can to get on the news or in magazines but they don’t actually help anyone here. We need to go back to the old way where people helped each other and the community groups help people.	5/3/2023 2:45 PM
48	We are doomed. Thankfully I know Jesus so I rest assured.	5/3/2023 2:25 PM
49	None.	5/3/2023 2:15 PM
50	Extreme heat and flash flooding need emergency attention. Please consider relocating families from harm and greening spaces with repeated flooding.	5/2/2023 7:37 AM
51	Train the children and senior citizens	4/28/2023 8:06 PM
52	The City needs to prioritize community care and wellbeing, not policing. Police do not increase safety or security during a crisis; they make it worse by criminalizing people during traumatic and stressful events. Divesting from policing and reinvesting those funds into community building will increase resilience during disasters.	4/26/2023 4:22 PM
53	Id like more info on what a utility shutoff procedure entails	4/26/2023 9:48 AM

Q17 Please indicate the Council District in which you live (see image below):

Answered: 119 Skipped: 38

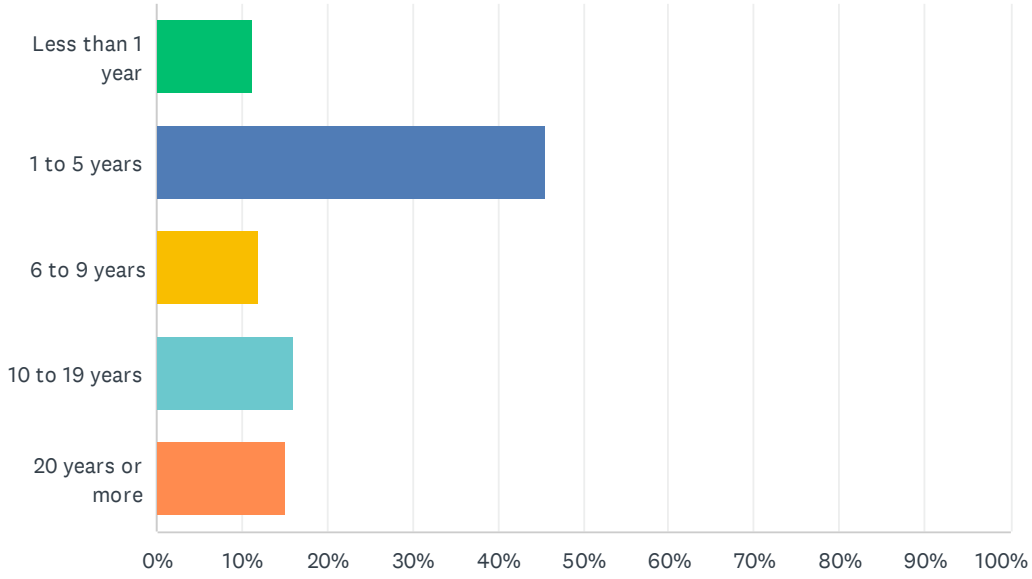


ANSWER CHOICES	RESPONSES	
1	12.61%	15
2	2.52%	3
3	5.88%	7
4	3.36%	4
5	4.20%	5
6	5.88%	7
7	15.97%	19
8	5.04%	6
9	4.20%	5
10	4.20%	5
11	21.85%	26
12	5.88%	7
13	1.68%	2
14	7.56%	9
Other (please specify)	0.84%	1
Total Respondents: 119		

#	OTHER (PLEASE SPECIFY)	DATE
1	Towson	5/3/2023 3:28 PM

Q18 How long have you lived here?

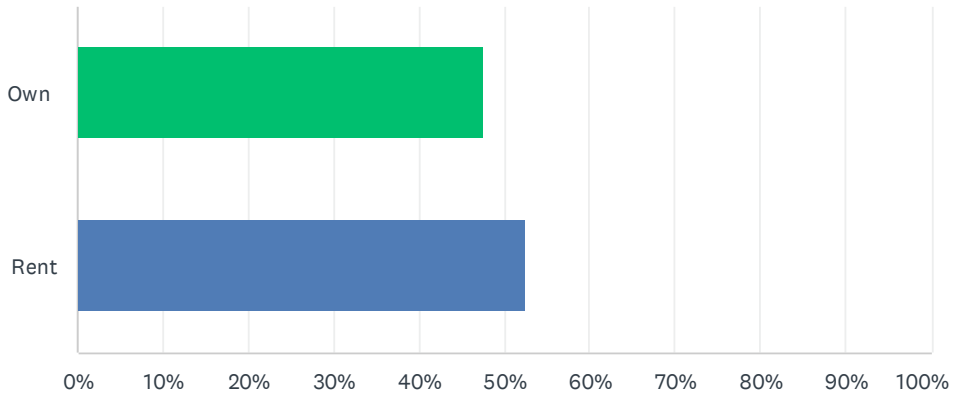
Answered: 125 Skipped: 32



ANSWER CHOICES	RESPONSES	
Less than 1 year	11.20%	14
1 to 5 years	45.60%	57
6 to 9 years	12.00%	15
10 to 19 years	16.00%	20
20 years or more	15.20%	19
TOTAL		125

Q19 Do you own or rent your home?

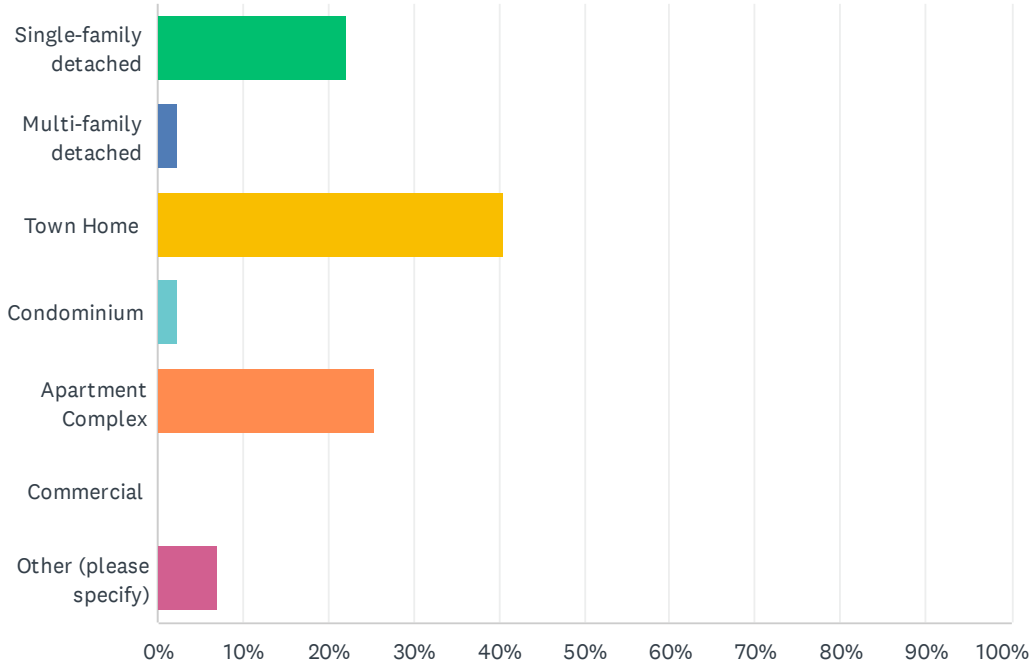
Answered: 124 Skipped: 33



ANSWER CHOICES	RESPONSES	
Own	47.58%	59
Rent	52.42%	65
TOTAL		124

Q20 What type of residence do you live in?

Answered: 126 Skipped: 31



ANSWER CHOICES	RESPONSES	
Single-family detached	22.22%	28
Multi-family detached	2.38%	3
Town Home	40.48%	51
Condominium	2.38%	3
Apartment Complex	25.40%	32
Commercial	0.00%	0
Other (please specify)	7.14%	9
TOTAL		126

#	OTHER (PLEASE SPECIFY)	DATE
1	Senior Highrise	6/13/2023 1:08 AM
2	Detached	6/8/2023 2:50 PM
3	Connected Home	6/8/2023 2:43 PM
4	row home	5/30/2023 1:20 PM
5	Singe Family Home	5/16/2023 11:56 AM
6	Single-family semi-detached	5/16/2023 8:02 AM
7	single-family rowhouse	5/7/2023 8:42 PM

8	Rowhouse (no garage)	5/6/2023 11:07 AM
9	Row home	4/28/2023 8:07 PM

Q21 What street is your property on? (optional, will be kept confidential - only used to identify hazard areas such as flooding)

Answered: 81 Skipped: 76

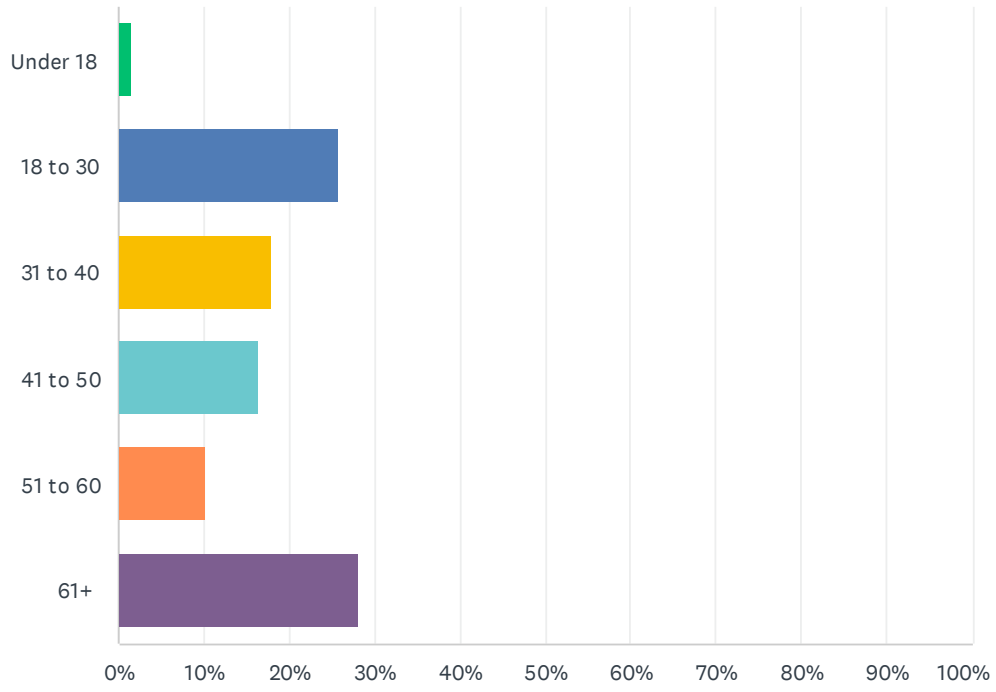
#	RESPONSES	DATE
1	Gough St. in Butchers Hill	6/28/2023 9:53 AM
2	Foster Ave	6/28/2023 2:48 AM
3	Fait Avenue	6/28/2023 2:43 AM
4	Denmore Ave	6/28/2023 2:40 AM
5	Rockdale Ct.	6/28/2023 2:12 AM
6	Old York Road	6/27/2023 4:48 PM
7	E. Lexington St.	6/27/2023 4:38 PM
8	Andrew Pl.	6/27/2023 4:36 PM
9	Franklin and howard	6/18/2023 1:15 PM
10	Webster	6/18/2023 12:06 PM
11	Bouldin	6/18/2023 12:01 PM
12	Martin luther king blvd	6/17/2023 8:56 PM
13	S Chester Street	6/16/2023 1:59 PM
14	Weldon Ave.	6/13/2023 3:58 PM
15	S. Hanover St.	6/13/2023 1:45 AM
16	Gough St.	6/13/2023 1:18 AM
17	Park Heights	6/13/2023 1:08 AM
18	N. Broadway	6/13/2023 1:05 AM
19	Eutaw Place	6/13/2023 12:56 AM
20	Bruce St.	6/13/2023 12:51 AM
21	N Calvert St	6/11/2023 1:44 PM
22	Baltimore St	6/11/2023 11:28 AM
23	Rose	6/10/2023 8:23 AM
24	Edmonson Ave	6/8/2023 3:58 PM
25	N. Calvert	6/8/2023 3:11 PM
26	S. Chester Street	6/8/2023 3:07 PM
27	S. Eutaw Street	6/8/2023 2:34 PM
28	West Lexington	6/8/2023 2:28 PM
29	McCulloh Street	6/8/2023 1:50 PM
30	Cheswolde Road	6/8/2023 1:46 PM
31	Light	6/7/2023 9:29 PM

32	Beehler Ave	6/7/2023 12:35 PM
33	Mount	6/7/2023 9:26 AM
34	S. High Street	6/5/2023 3:36 PM
35	Berkshire Road	6/4/2023 10:46 PM
36	Thames Street	6/4/2023 12:53 PM
37	W. Barre St.	6/3/2023 9:13 AM
38	Penhurst Avenue	6/3/2023 7:07 AM
39	Hamilton Ave	6/2/2023 8:30 PM
40	West Mt. Vernon Place	6/2/2023 7:20 PM
41	White Ave.	6/2/2023 4:36 PM
42	Green Meadow Parkway	6/2/2023 4:34 PM
43	Park Ave 500 block	6/2/2023 3:45 PM
44	Milford Ave.	6/1/2023 1:24 PM
45	Winterbourne	5/31/2023 10:01 AM
46	Ashburton Street	5/31/2023 8:37 AM
47	Dixon Road	5/30/2023 9:12 PM
48	Guilford Ave	5/30/2023 4:41 PM
49	Sidney Avenue	5/30/2023 3:29 PM
50	Jackson	5/30/2023 3:14 PM
51	Harford Road	5/30/2023 1:20 PM
52	S Curley St	5/28/2023 11:18 AM
53	Fernhill Avenue	5/17/2023 5:20 PM
54	W Lombard	5/16/2023 11:03 PM
55	The Alameda	5/16/2023 6:03 PM
56	Fair Oaks	5/16/2023 12:21 PM
57	Stricker Street	5/16/2023 11:56 AM
58	Dobler Avenue	5/16/2023 8:02 AM
59	Fernpark	5/16/2023 12:27 AM
60	Clydesdale Avenue	5/15/2023 8:59 PM
61	Chesley	5/15/2023 6:10 PM
62	Jasper St	5/11/2023 9:46 AM
63	Fleetwood Ave.	5/10/2023 11:07 AM
64	Grindall	5/8/2023 4:54 PM
65	E redwood	5/8/2023 4:43 PM
66	University Place	5/7/2023 8:42 PM
67	Newport Avenue	5/6/2023 11:07 AM
68	Gittings	5/6/2023 9:55 AM
69	Ramblewood Rd	5/5/2023 3:50 PM

70	Haubert	5/4/2023 11:14 AM
71	Calvert St.	5/3/2023 8:24 PM
72	E Hamburg St.	5/3/2023 3:07 PM
73	Greenvale	5/3/2023 2:46 PM
74	Pimlico Road	5/3/2023 2:26 PM
75	Medfield Avenue	5/3/2023 2:15 PM
76	Woodward	5/2/2023 6:00 PM
77	Warren Ave	5/2/2023 7:38 AM
78	Cedarhurst	5/1/2023 8:49 PM
79	Read Street	5/1/2023 7:57 PM
80	Homestead	4/26/2023 4:22 PM
81	W. Randall	4/21/2023 2:57 PM

Q22 Please indicate your age range:

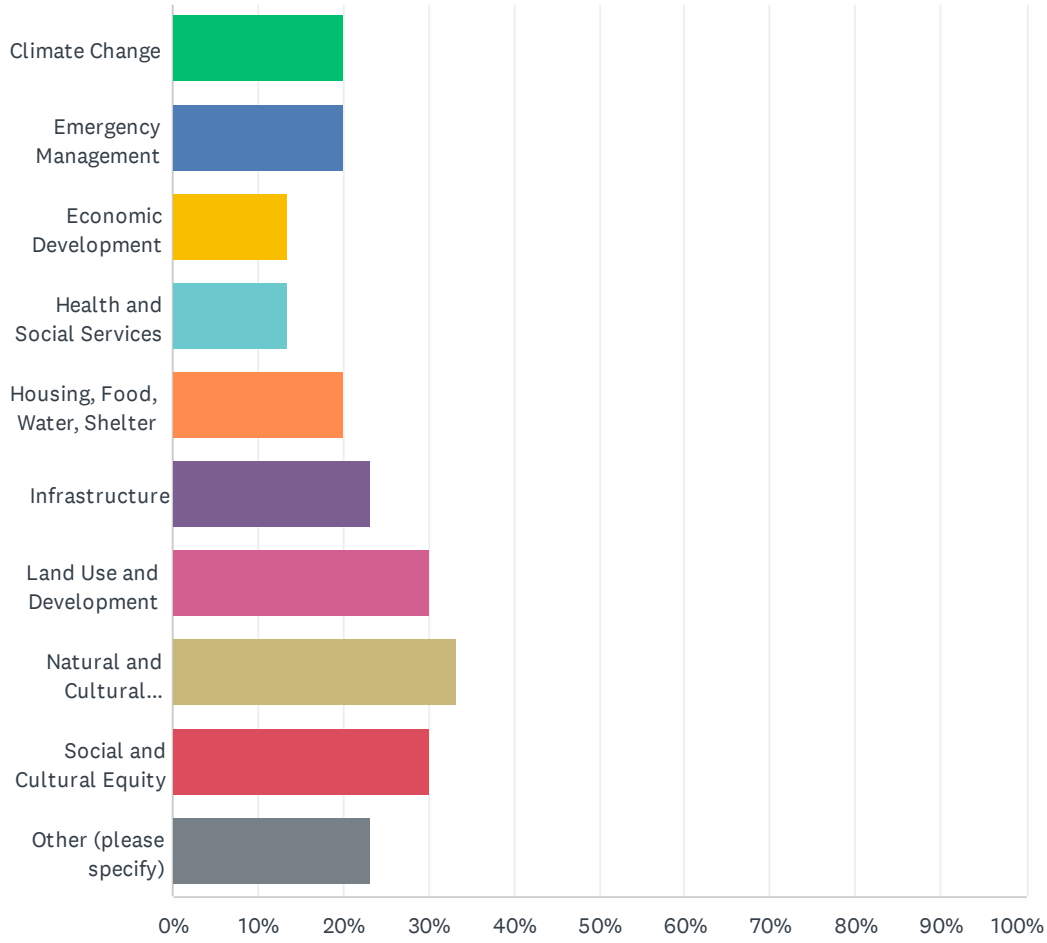
Answered: 128 Skipped: 29



ANSWER CHOICES	RESPONSES	
Under 18	1.56%	2
18 to 30	25.78%	33
31 to 40	17.97%	23
41 to 50	16.41%	21
51 to 60	10.16%	13
61+	28.13%	36
TOTAL		128

Q1 contained personal information from respondents and has been omitted from this summary.

Q1 Which of the following sectors and areas of expertise do you represent? Mark all that apply.

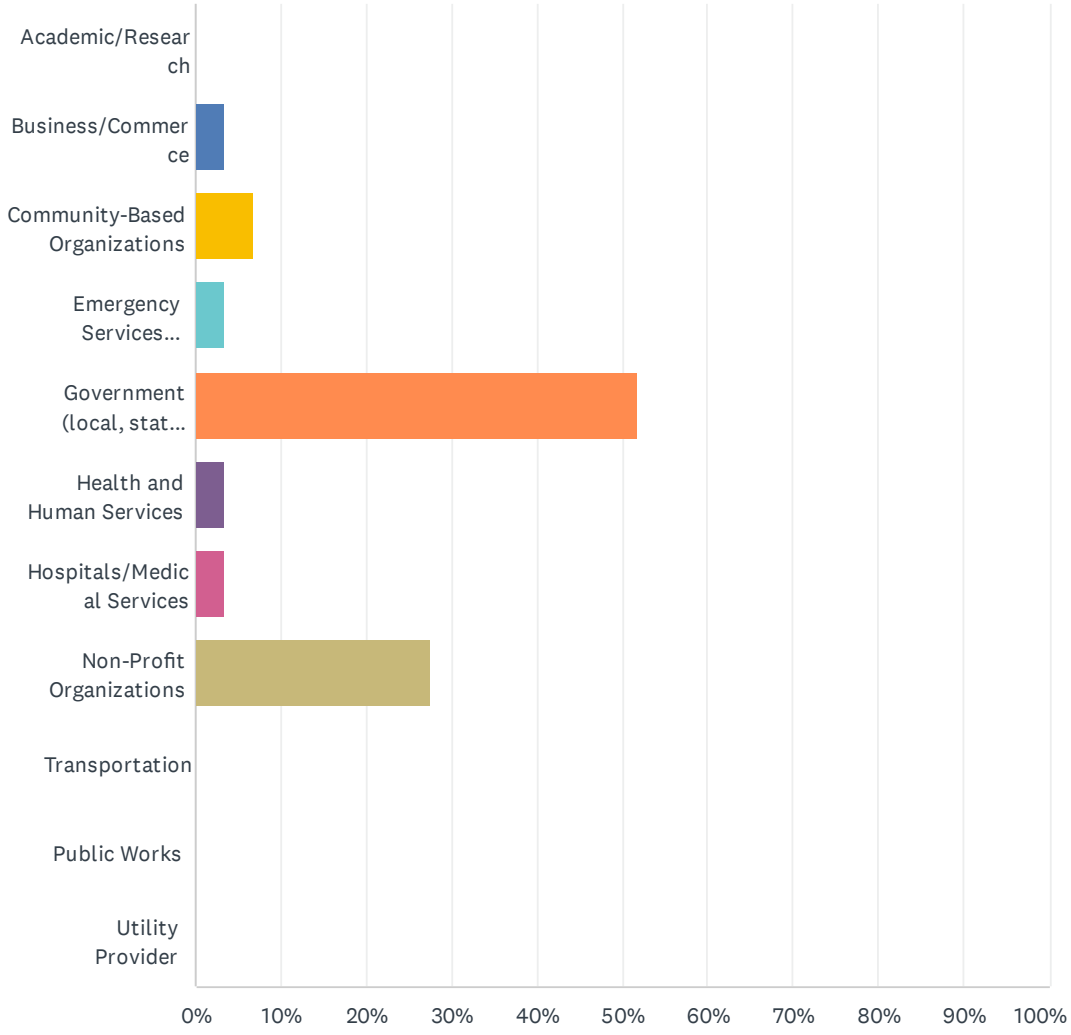


ANSWER CHOICES	RESPONSES	
Climate Change	20.00%	6
Emergency Management	20.00%	6
Economic Development	13.33%	4
Health and Social Services	13.33%	4
Housing, Food, Water, Shelter	20.00%	6
Infrastructure	23.33%	7
Land Use and Development	30.00%	9
Natural and Cultural Resources	33.33%	10
Social and Cultural Equity	30.00%	9
Other (please specify)	23.33%	7
Total Respondents: 30		

#	OTHER (PLEASE SPECIFY)	DATE
1	Insurance, Mitigation response	6/28/2023 9:19 AM
2	Environmental, green infrastructure, career pathways	6/7/2023 11:36 AM
3	Community Isssues	5/31/2023 8:49 AM
4	constituent services	5/30/2023 1:22 PM
5	focus is transportation, I am involved in climate projects and emergency preparedness projects also	5/3/2023 9:04 AM
6	Transportation	4/28/2023 3:57 PM
7	Emergency Response	4/19/2023 9:14 AM

Q3 What category does your facility operation/service fall under?

Answered: 29 Skipped: 2



ANSWER CHOICES	RESPONSES	
Academic/Research	0.00%	0
Business/Commerce	3.45%	1
Community-Based Organizations	6.90%	2
Emergency Services (police, fire, EMS)	3.45%	1
Government (local, state, or federal)	51.72%	15
Health and Human Services	3.45%	1
Hospitals/Medical Services	3.45%	1
Non-Profit Organizations	27.59%	8
Transportation	0.00%	0
Public Works	0.00%	0
Utility Provider	0.00%	0
TOTAL		29

#	OTHER (PLEASE SPECIFY)	DATE
1	Aquarium	6/13/2023 2:16 PM

Q4 Based on the above category, please provide additional description and information as to what your organization does or offers (please explain)

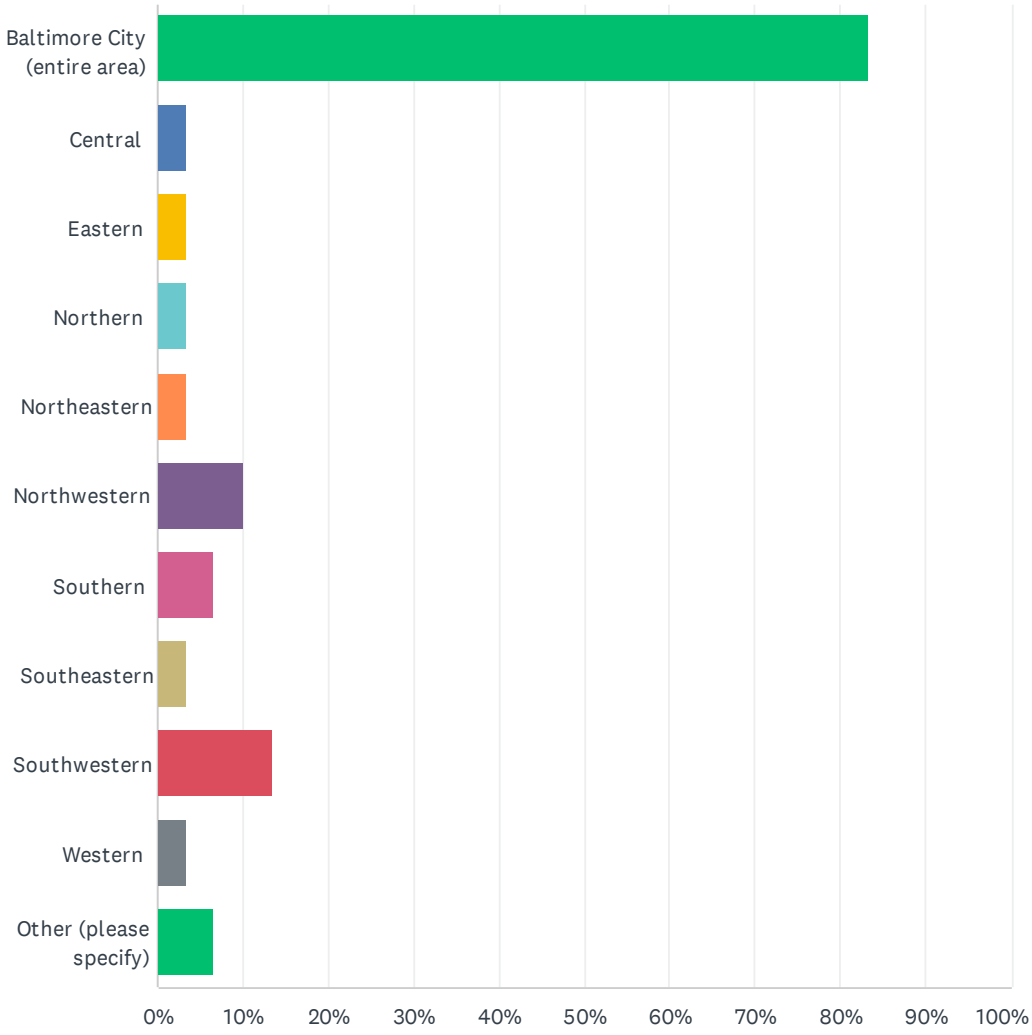
Answered: 27 Skipped: 4

#	RESPONSES	DATE
1	Baltimore City Health Department Mission: To protect health, eliminate disparities, and enhance the wellbeing of everyone in our community through education, coordination, advocacy, and direct service delivery. In collaboration with other city agencies, health care providers, community organizations, and funders, BCHD aims to empower all Baltimoreans with the knowledge, access, and environment that will enable healthy living. BCHD has a wide-ranging area of responsibility, including acute communicable diseases, animal control, chronic disease prevention, emergency preparedness and response, HIV/STD, maternal-child health, restaurant inspections, school health, services for older adults, and youth trauma services. The agency includes a workforce of approximately 800+ employees.	6/29/2023 1:13 PM
2	the state agency that regulates the business of insurance within the state	6/28/2023 9:19 AM
3	The National Aquarium is a nonprofit with a mission to inspire conservation of the world's aquatic treasures. We care for a live collection while specializing in rescue and habitat restoration.	6/27/2023 11:35 AM
4	Urban environmental land trust	6/21/2023 7:56 PM
5	Research, data, analyses, community engagement, reporting	6/15/2023 8:00 AM
6	To be a strong proponent and protector of our environment and the health and vitality of our communities" – DPW Vision Statement	6/14/2023 3:28 PM
7	Resiliency Hub	6/14/2023 1:59 PM
8	We offer energy efficient plans and products that help aid low income families.	6/14/2023 1:12 PM
9	We connect people in need with quality of life recourses provided by local, state, and federal providers.	6/14/2023 6:21 AM
10	Our mission is to protect birds and the places they need, today and tomorrow.	6/13/2023 2:53 PM
11	National Aquarium hosts more than 1 Million guests each year. We offer education opportunities to more than 100,000 students. We engage local communities in conservation. Across the state of Maryland from 2019 to 2022, the National Aquarium generated $1.3 billion in economic impact and $109 million in state and local tax revenue.	6/13/2023 2:16 PM
12	BCRP Park Maintain all Parks ie Grass cutting, Trash removal, Ball Field Maintenance, Fence repair, Trash can install etc....	6/13/2023 10:54 AM
13	Resiliency hub. Park development	6/5/2023 8:55 AM
14	We serve the community of Fairmount Park. We look to maintain the neighborhood and advocate for the community.	5/31/2023 9:10 AM
15	Secure the needs of the community. Help provide summer employment for the youth and our transitional population.	5/31/2023 8:49 AM
16	Cybersecurity and Infrastructure Security	5/31/2023 7:47 AM
17	Historic Preservation review for historic buildings in the city	5/30/2023 2:42 PM
18	City Council	5/30/2023 1:22 PM
19	Baltimore VA Medical Center, Loch Raven VA Medical Center, Baltimore VA Annex all provide health care and social services to Veterans.	5/26/2023 9:12 AM
20	regional transportation planning, cooperative purchasing, reservoir protection, rideshare coordination, emergency preparedness, fair housing planning	5/3/2023 9:04 AM

21	Business assistance	5/1/2023 3:30 PM
22	Project planning and prioritization of infrastructure investments that assist the Agency and the City to create a multi-modal transportation system for citizens to live, work, learn, and play.	4/28/2023 3:57 PM
23	DOP- regulates zoning and development practices in the city.	4/26/2023 8:52 AM
24	Economic development authority, funded by casino revenues, spearheading Reimagine Middle Branch and the Middle Branch Resiliency Initiative.	4/25/2023 5:52 PM
25	Baltimore Housing Authority provides safe and sanitary housing for low-income residence	4/25/2023 6:44 AM
26	HABC provides permanent affordable housing for low-income residents in Baltimore City	4/19/2023 10:47 AM
27	respond to all emergencies. FD is first line responder to any emergency	4/19/2023 9:14 AM

Q5 Please identify the region of your facility(ies) and/ or primary service area. You may choose more than one if your service area covers multiple regions, or “Baltimore City (entire area)” if your service area is city-wide:

Answered: 30 Skipped: 1

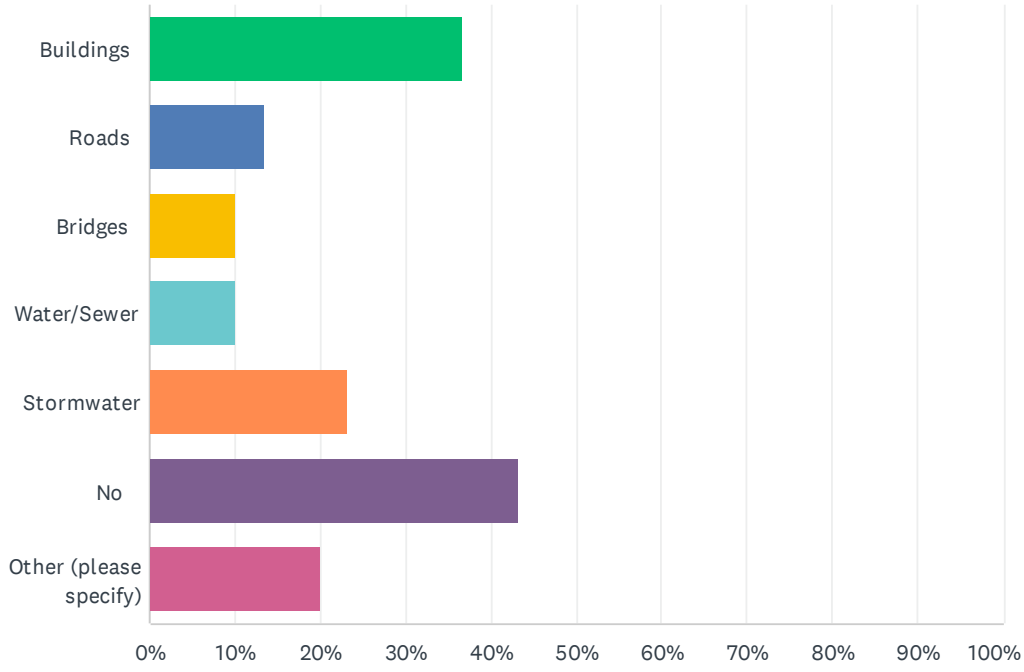


ANSWER CHOICES	RESPONSES	
Baltimore City (entire area)	83.33%	25
Central	3.33%	1
Eastern	3.33%	1
Northern	3.33%	1
Northeastern	3.33%	1
Northwestern	10.00%	3
Southern	6.67%	2
Southeastern	3.33%	1
Southwestern	13.33%	4
Western	3.33%	1
Other (please specify)	6.67%	2
Total Respondents: 30		

#	OTHER (PLEASE SPECIFY)	DATE
1	also include Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's counties	5/3/2023 9:04 AM
2	Coastal zone/tidal reach of the bay.	4/26/2023 8:52 AM

Q6 Does your organization maintain or manage any of the following within your designated service area? If not, answer “No” at the bottom, otherwise check all that apply.

Answered: 30 Skipped: 1



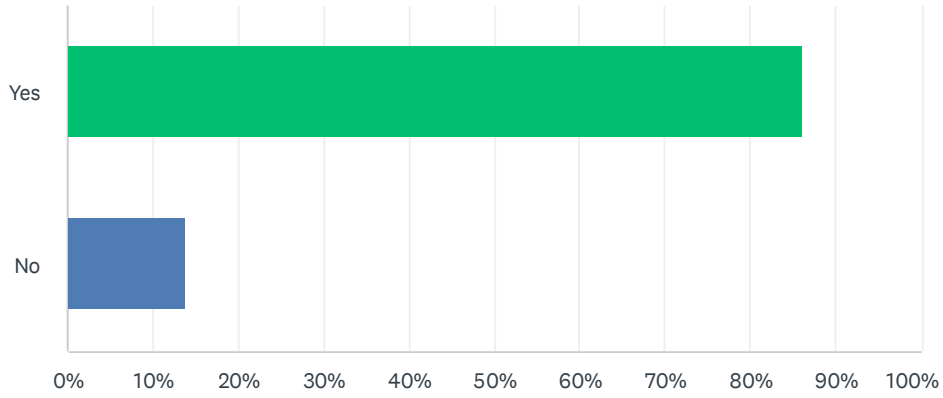
ANSWER CHOICES	RESPONSES	
Buildings	36.67%	11
Roads	13.33%	4
Bridges	10.00%	3
Water/Sewer	10.00%	3
Stormwater	23.33%	7
No	43.33%	13
Other (please specify)	20.00%	6
Total Respondents: 30		

#	OTHER (PLEASE SPECIFY)	DATE
1	Insurance companies	6/28/2023 9:19 AM
2	Parks, gardens, forest patches	6/21/2023 7:56 PM
3	N/A	6/14/2023 1:12 PM
4	trees are natural stormwater management systems	6/7/2023 11:36 AM
5	Parks	4/25/2023 5:52 PM

6	emergency response to all these areas	4/19/2023 9:14 AM

Q7 Does your organization work with or help support socially vulnerable populations that may be at higher risk for hazard impacts? Socially vulnerable populations may be considered "socially vulnerable" because of a variety of factors like socioeconomic status, household composition, minority status, limited proficiency to read or speak English, housing type, and transportation.

Answered: 29 Skipped: 2



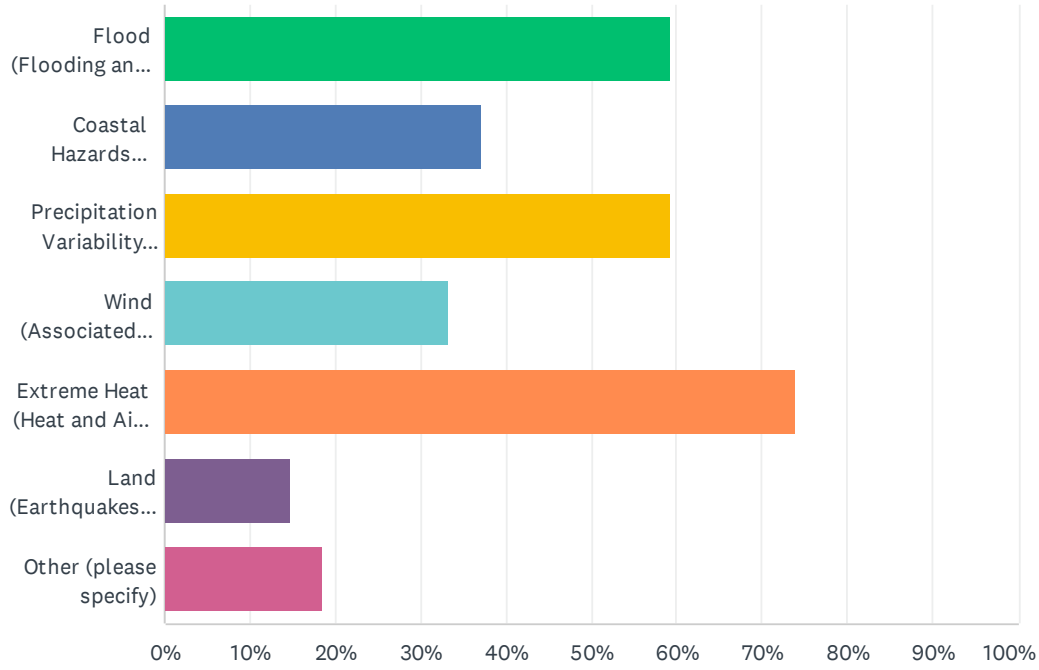
ANSWER CHOICES	RESPONSES	
Yes	86.21%	25
No	13.79%	4
TOTAL		29

#	IF YOU ANSWERED YES, PLEASE DESCRIBE HOW YOUR ORGANIZATION WORKS WITH OR SUPPORTS SOCIALLY VULNERABLE POPULATIONS.	DATE
1	BCHD's Division of Aging provides services and supports that are specifically targeted for older adults. Our Field Health Services program coordinates non-emergency transportation services to medical appointments for individuals who qualify for medical assistance (Medicaid) in Baltimore City.	6/29/2023 1:13 PM
2	Helps people who are having issues or complaints with their insurance companies when it comes to handling claims	6/28/2023 9:19 AM
3	We have a team dedicated to community engagement, providing access to natural green spaces, educational resources, and youth programing.	6/27/2023 11:35 AM
4	Protecting green space some of which provides food.	6/21/2023 7:56 PM
5	We conduct research and document long term dynamics of environmental injustice. We develop programs and knowledge to address those injustices.	6/15/2023 8:00 AM
6	Resiliency Hub	6/14/2023 1:59 PM
7	We offer aid to low income families	6/14/2023 1:12 PM
8	We provide prepared foods on Fridays and groceries throughout the month.	6/14/2023 6:21 AM
9	We work alongside people, including socially vulnerable populations, to create and maintain	6/13/2023 2:53 PM

	biodiverse green spaces of all shapes and sizes that benefit birds and people. We advocate for legislation that benefit birds and people. Future programs seek to employ people, including socially vulnerable populations, in the creation and maintenance of bird- and people-friendly green spaces in Baltimore.	
10	National Aquarium has strong relationships with communities in South Baltimore and Jonestown. We are also an EJ advocate on the city, state and federal level.	6/13/2023 2:16 PM
11	We are focused on planting trees in our lowest canopy neighborhoods which suffer the most from extreme heat and flooding.	6/7/2023 11:36 AM
12	We communicate with the older population in the community to made their needs are met.	5/31/2023 9:10 AM
13	By providing security assessments and training upon request.	5/31/2023 7:47 AM
14	We help people complete applications when they are making alterations to historic buildings, including making them adaptable to climate change.	5/30/2023 2:42 PM
15	Provide health care services and social services to Veterans including: home-based care, home oxygen, prosthetics, homeless, spine cord patients, mental health services, dialysis and addiction.	5/26/2023 9:12 AM
16	we consider impacts on vulnerable populations and have created a vulnerable population index https://bmc.maps.arcgis.com/apps/webappviewer/index.html?id=b1e22c0caa7644ccb58484b00610712f	5/3/2023 9:04 AM
17	business assistance for minority business owners	5/1/2023 3:30 PM
18	DOT hired a consultant to develop an equity score for each neighborhood in the City and create a map to assist us with directing infrastructure improvements such as traffic calming, into high equity score neighborhoods	4/28/2023 3:57 PM
19	We would coordinate services to protect vulnerable populations during emergencies.	4/27/2023 4:22 PM
20	DOP identifies/accounts for vulnerable/disadvantaged populations in the city in its plans, which are (hopefully) used by other City agencies when siting/prioritizing projects that address issues, and furthers sustainability and resiliency against climate impacts.	4/26/2023 8:52 AM
21	We work to improve low income minority communities	4/25/2023 5:52 PM
22	We are responsible for responding to residents during any crisis which may involve relocation.	4/19/2023 10:47 AM

Q8 For which hazard(s) do you feel that you or your organization have a special interest and/or expertise? Check all that apply.

Answered: 27 Skipped: 4

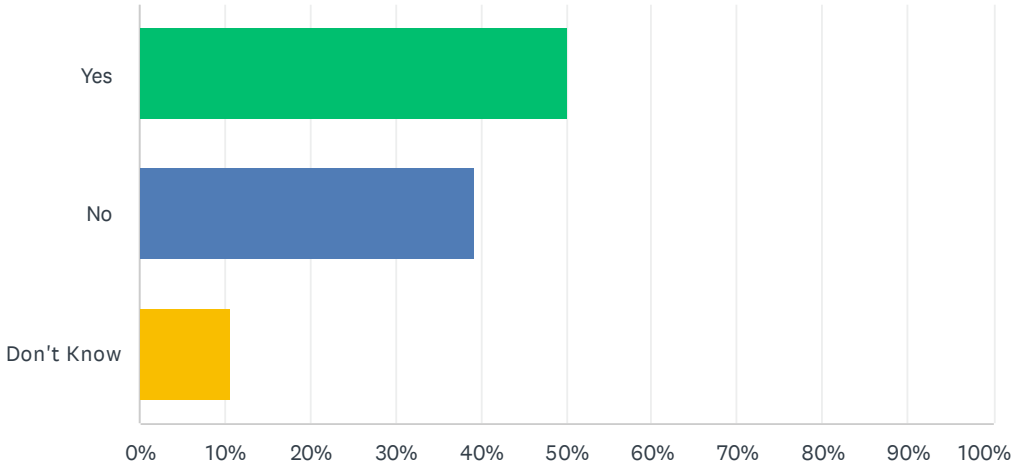


ANSWER CHOICES	RESPONSES	
Flood (Flooding and Dam Failure)	59.26%	16
Coastal Hazards (Tropical Storms and Hurricanes; Sea Level Rise; and Storm Surge/Coastal Inundation; Tsunami)	37.04%	10
Precipitation Variability (Precipitation; Thunderstorms, with Lightning and Hail; Winter Storms and Nor'easters; Drought)	59.26%	16
Wind (Associated with Storms; Derechos; Tornados)	33.33%	9
Extreme Heat (Heat and Air Quality)	74.07%	20
Land (Earthquakes; Landslides; Karst/Sinkholes)	14.81%	4
Other (please specify)	18.52%	5
Total Respondents: 27		

#	OTHER (PLEASE SPECIFY)	DATE
1	Infectious Disease Outbreaks, Epidemic/Pandemic	6/29/2023 1:09 PM
2	N/A	6/14/2023 1:21 PM
3	we are particularly interested in hazards that impact the transportation system, while it's being used or the impacts from the hazard on the system	5/3/2023 9:38 AM
4	debris (trees/traffic poles, etc.) in the roadway	4/28/2023 4:01 PM
5	all hazards	4/19/2023 9:15 AM

Q9 Looking back at previous hazard events, have buildings/facilities/structures you have worked in and/ or are responsible for been impacted by a hazard (ex. damage/closures/etc.)?

Answered: 28 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	50.00%	14
No	39.29%	11
Don't Know	10.71%	3
TOTAL		28

Q10 If you answered “Yes” to the above question, please describe the event that caused or is causing (if recurring) damage and loss of service/ property. If quantifiable data is available, please provide that as well (number of damaged structures, monetary loss, etc.) (please explain)

Answered: 14 Skipped: 17

#	RESPONSES	DATE
1	Heatwaves	6/15/2023 8:02 AM
2	Flood	6/14/2023 2:02 PM
3	Hurricane Isabel flooded our building on Pier 3. There have been several "close calls" since then. Our electrical infrastructure needs major upgrades in order to be prepared for future flooding events.	6/13/2023 2:20 PM
4	2018 Ellicott city flood	6/5/2023 9:02 AM
5	Wind and rain caused damage to homes in the from fallen trees.	5/31/2023 9:21 AM
6	NA	5/31/2023 8:54 AM
7	Derechos, hurricanes/tropical storms, heavy rain/flooding, earthquakes, etc all impact historic buildings and impact development of those buildings.	5/30/2023 2:45 PM
8	gas explosion that destroyed several homes in the Fallstaff community	5/30/2023 1:24 PM
9	Loss of water, flooding, power loss loss. Services were temporarily curtailed or transition to telehealth/other locations while repairs were made.	5/26/2023 9:19 AM
10	we are not specifically responsible for any aspects of the transportation system but we are aware of the impacts of hazards - costs to repair, maintain, time lost by travelers/goods movers, lost travel reliability, lost mobility options	5/3/2023 9:38 AM
11	flooding	5/1/2023 3:36 PM
12	Properties along the Middle Branch are listed in the prior DP3 and the Nuisance Flood Plan as having a history of / future risk of flooding and erosion.	4/25/2023 6:33 PM
13	Flooding in the Cherry Hill community.	4/25/2023 6:46 AM
14	Flooding and wind (which may result in loss o power) impacts us throughout the year.	4/19/2023 10:52 AM

Q11 Looking at where your facilities or services are located in Baltimore City, what areas do you believe to be the most vulnerable to hazards? What are these hazards? (please explain).

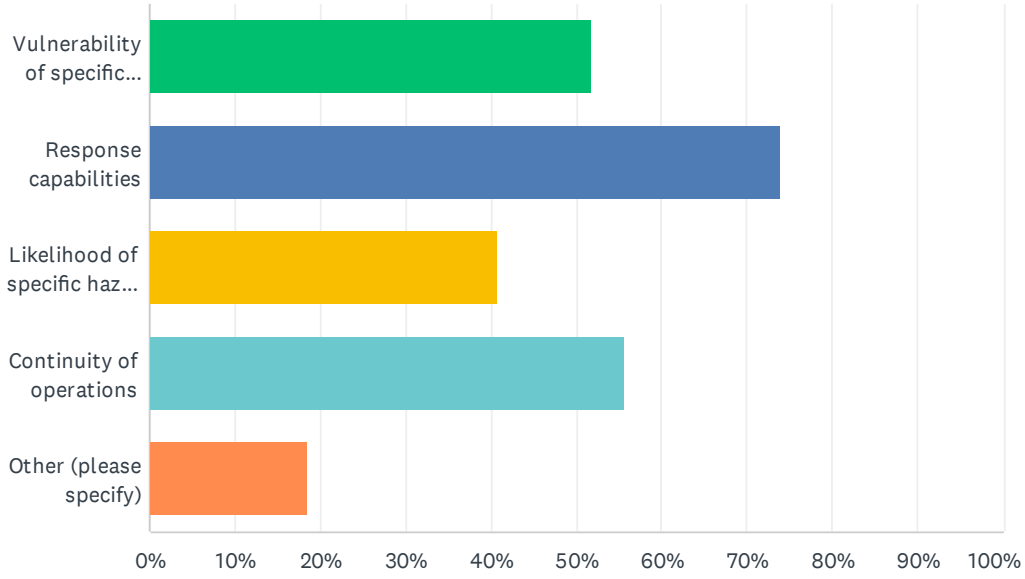
Answered: 23 Skipped: 8

#	RESPONSES	DATE
1	Heat waves in historic, inner city neighborhoods.	6/21/2023 7:58 PM
2	Heatwaves, vector borne diseases by mosquitos and ticks	6/15/2023 8:02 AM
3	Office is Drinking water treatment facility. Hazards include anything that impacts service. Also Chlorine and other chemicals are stored on site - so exposure of staff in the event of emergencies could be a factor.	6/14/2023 3:32 PM
4	Weather related —flooding and heat	6/14/2023 2:02 PM
5	North Baltimore. Hazards are heat, cold(snow) and recently air quality.	6/14/2023 1:21 PM
6	Storm drains clogged with debris which blocks the flow of storm water, causing flooding. Trees on City property which are not maintained. High winds causes limb brakeage and power outage.	6/14/2023 6:31 AM
7	We work with several partners across the city, including Stillmeadow Community Fellowship, whose area in West Baltimore experienced extreme flooding during a storm event in 2018. Neighborhoods in Southeast Baltimore (Fells Point) along the Inner Harbor experience recurring flooding. Neighborhoods in West, East, and Southeast Baltimore in which we work experience extreme heat, forcing the cancelation of outdoor programs.	6/13/2023 3:19 PM
8	ALL low lying areas are vulnerable for flooding - including "sunny day flooding" events that will be more frequent in the coming years.	6/13/2023 2:20 PM
9	None	6/13/2023 11:00 AM
10	Much of the 21229 ZIP Code along the Frederick Avenue. Corder is vulnerable to flooding and flash flooding.	6/5/2023 9:02 AM
11	Trees from the park Leaken and Gwynn Falls park are not properly maintained.	5/31/2023 9:21 AM
12	The Port and Inner Harbor	5/31/2023 7:50 AM
13	Fells Point, Dickeyville, Downtown Landmarks vulnerable to flooding	5/30/2023 2:45 PM
14	communities that are in flood plains	5/30/2023 1:24 PM
15	Loss of utilities is our facilities' greatest vulnerability, especially water and power. The infrastructure is very old and there are not always redundancies in place. HVAC is also a concern for our aging facilities.	5/26/2023 9:19 AM
16	we are interested in the whole city, we have observed vulnerable areas as being low lying, coastal, areas where infrastructure may need more maintenance to withstand more extreme events, critical infrastructure relying on electricity, extreme heat impacts on air quality as well as health of people that don't have cool places to go; extreme cold impacts on water mains	5/3/2023 9:38 AM
17	flooding in areas along the Jones Falls, streams, areas heavily asphalted with poor stormwater management,	5/1/2023 3:36 PM
18	Downtown, loss of electricity, loss of communications/internet	4/28/2023 4:01 PM
19	Frederick Ave, Hiilen rd and 25th street, Jones Falls Mills, Purnell Drive, W. Forest Park, Northpoint and Quad Ave., S. Hanover St. and Frankfurst Ave.,W. Patapsco Ave.,E. Patapsco between Shell and Pennington,S. Hanover St. @ Harbor Hospital,2700 Spelman Rd, Cherry Hill, Fells Point- Thames St., Lancaster, Caroline.	4/27/2023 4:26 PM

20	Areas located in mapped and unmapped floodplains, including in the coastal zone. Often those areas also experience extreme heat issues due to high rates of impervious surfaces.	4/26/2023 9:00 AM
21	Storm surge, flooding, storm damage, and erosion to properties along the Middle Branch and its tributaries. Particularly: Top Golf, Casino, BGE Spring Garden, Incinerator, Baltimore Peninsula, ONE Westport, MedStar Harbor Hospital	4/25/2023 6:33 PM
22	Flooding in the southwest area (Cherry Hill, Westport)	4/19/2023 10:52 AM
23	low lying flood prone areas	4/19/2023 9:15 AM

Q12 What are your agency's primary concerns regarding hazards?

Answered: 27 Skipped: 4



ANSWER CHOICES	RESPONSES	
Vulnerability of specific facilities	51.85%	14
Response capabilities	74.07%	20
Likelihood of specific hazard events	40.74%	11
Continuity of operations	55.56%	15
Other (please specify)	18.52%	5
Total Respondents: 27		

#	OTHER (PLEASE SPECIFY)	DATE
1	The effect of climate change on habitats on which birds, particularly migratory species, rely. These biodiverse green spaces benefit people in the form of Carbon sequestration, cooling, and stormwater control.	6/13/2023 3:19 PM
2	vulnerability of our seniors	5/31/2023 8:54 AM
3	emergency work that happens that further damages a historic building	5/30/2023 2:45 PM
4	in most cases, a hazard event will not significantly impact my agency from doing our work, hazards will impact the systems we focus on, particularly transportation	5/3/2023 9:38 AM
5	Responsiveness to impacted residents	4/19/2023 10:52 AM

Q13 What challenges or barriers to reducing vulnerability in Baltimore City do you see?

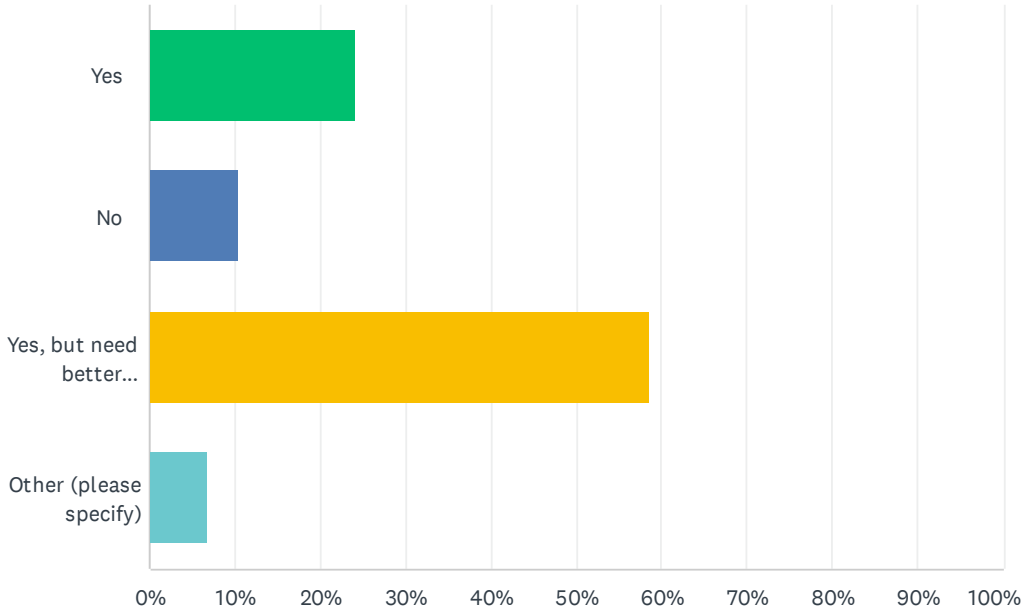
Answered: 24 Skipped: 7

#	RESPONSES	DATE
1	Large percentage of city population is low-income and/or may have reduced access to resources and information to prepare themselves and their families and recover from impact of emergency events	6/29/2023 1:09 PM
2	Equitable access to resources needed: cooling places (i.e., free pool access, air-conditioning); access to healthy fresh foods; access to natural green spaces.	6/27/2023 11:38 AM
3	Lack of awareness and failure to coordinate policy, planning, strategies, operations, and use of current science and data	6/15/2023 8:02 AM
4	Overall - getting information and resources to vulnerable populations. Bmore Alert is used inconsistently and most people don't know about it. Related to DPW - investment in facilities.	6/14/2023 3:32 PM
5	Available resources	6/14/2023 2:02 PM
6	The challenges would be determining who to help and how to effectively execute	6/14/2023 1:21 PM
7	Routinely clean storm drains. Prune trees on City owned property. Compel landlords and property owners do the same. Use natural barriers to block off abandoned streets and alleys in order to curtail illegal dumbing.	6/14/2023 6:31 AM
8	The coordination of local action among the larger regional landscape in order to make meaningful change; systemic issues of racism, poverty, and the mistrust it has caused between residents and government; political will in Baltimore City; funding; the privatization of the waterfront if it does not include SLR mitigation; development	6/13/2023 3:19 PM
9	The whole of the Inner Harbor (reaching into downtown) is at risk of flooding. Major comprehensive infrastructure investments must be made in order to protect our assets downtown.	6/13/2023 2:20 PM
10	Vacant Buildings	6/13/2023 11:00 AM
11	Consistent planning and conscious coordination of emergency management and continuous planning to reduce vulnerability	6/5/2023 9:02 AM
12	We have a couple situations where trees blocked the two exits out of the community. Which by also created problems getting into the community.	5/31/2023 9:21 AM
13	awareness	5/31/2023 8:54 AM
14	Politics and aging infrastructure.	5/31/2023 7:50 AM
15	costs	5/30/2023 2:45 PM
16	power outages, communication disruption due to down power lines	5/30/2023 1:24 PM
17	Ensuring hospitals and healthcare facilities are prioritized during utility failures and water outages. Better understanding of how city outages will affect facilities. Having mapping of utility dependencies to hospitals.	5/26/2023 9:19 AM
18	funding to address vulnerabilities of existing and planned infrastructure; funding to enhance resilience and reduce vulnerabilities of underserved communities; make sure decision makers (at local and state levels) understand the impacts of hazards and support actions to address (including funding); some communities may need to be educated about the vulnerabilities and actions needed to address them	5/3/2023 9:38 AM
19	lack and/or limited resources to reduce vulnerability within the city's aging infrastructure	5/1/2023 3:36 PM
20	Flooding as a result of both sea level rise and more violent weather events due to climate	4/28/2023 4:01 PM

	change	
21	Funding, lengthy processes for mitigation.	4/27/2023 4:26 PM
22	Funding for: 1) further sea-level rise/increases in precipitation rates studies and their impacts in the city, and 2) implementation of mitigation projects.	4/26/2023 9:00 AM
23	The solution, for these hazards is to construct wetlands, vegetated berms, and other nature-based infrastructure to protect these facilities. The new DP3 needs to provide a strong and unambiguous language calling for this, in order to help persuade state and federal regulators to allow this infrastructure to be built.	4/25/2023 6:33 PM
24	financial, grant funding greatly reduced to equip special operations	4/19/2023 9:15 AM

Q14 Are you aware of the number and location of vulnerable populations in your community/operating area?

Answered: 29 Skipped: 2

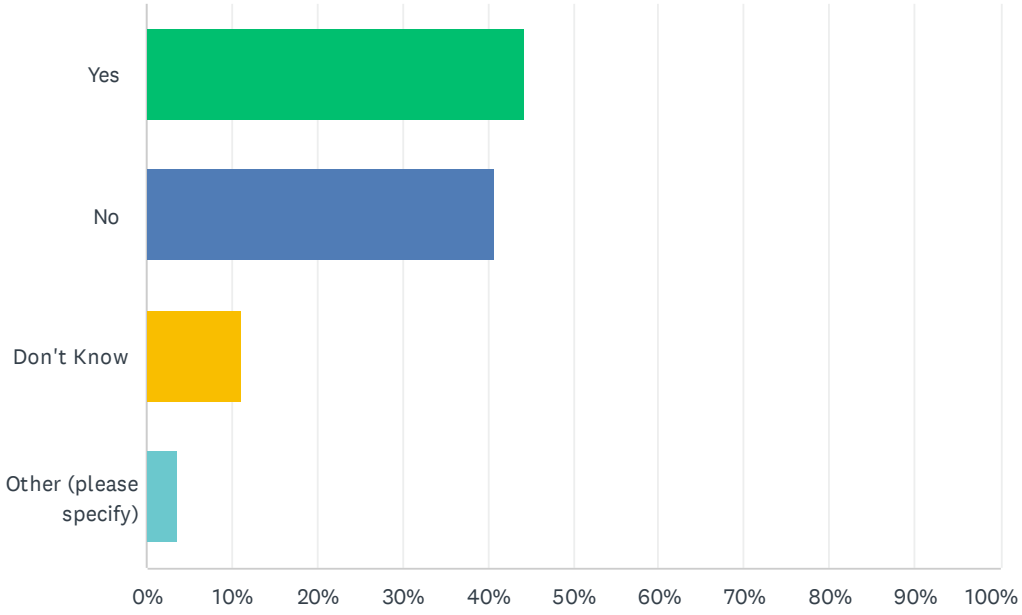


ANSWER CHOICES	RESPONSES	
Yes	24.14%	7
No	10.34%	3
Yes, but need better information	58.62%	17
Other (please specify)	6.90%	2
TOTAL		29

#	OTHER (PLEASE SPECIFY)	DATE
1	More information is required.	6/14/2023 1:21 PM
2	we do have information on this on our web page https://baltometro.org/transportation/data-maps/vulnerable-populations-index and on an interactive map https://bmc.maps.arcgis.com/apps/webappviewer/index.html?id=b1e22c0caa7644ccb58484b00610712f but we could always use better information	5/3/2023 9:38 AM

Q15 Does your agency own or lease facilities?

Answered: 27 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	44.44%	12
No	40.74%	11
Don't Know	11.11%	3
Other (please specify)	3.70%	1
TOTAL		27

#	OTHER (PLEASE SPECIFY)	DATE
1	all city owned	4/19/2023 9:16 AM

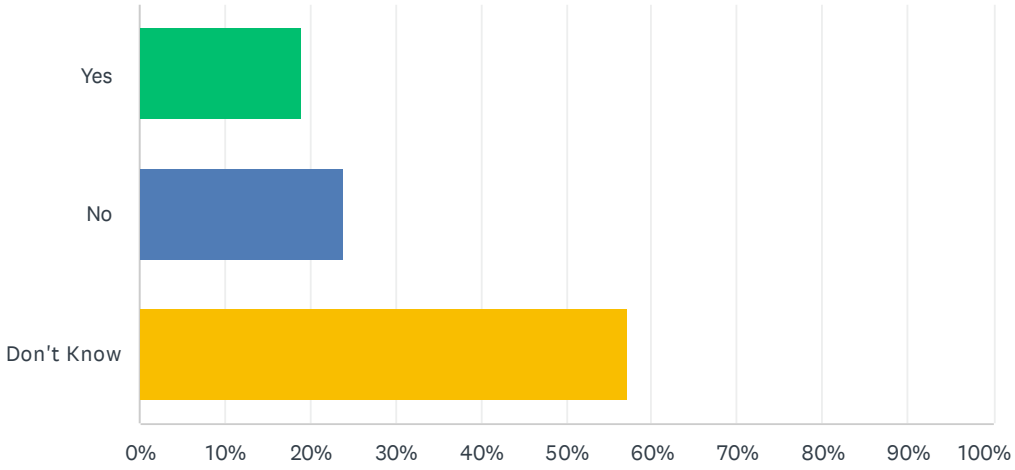
Q16 Of those facilities that your agency owns or leases, are any viewed as critical facilities or community lifelines?

Answered: 16 Skipped: 15

#	RESPONSES	DATE
1	yes	6/29/2023 1:08 PM
2	no	6/27/2023 11:39 AM
3	No	6/15/2023 8:03 AM
4	Yes - Drinking Water, Sewage, Stormwater, and Trash/Waste treatment & Distribution	6/14/2023 3:36 PM
5	Yes	6/14/2023 2:04 PM
6	Our current location will be viewed as a lifeline once the resiliency hub is open. I am not sure if this location currently a lifeline to the community.	6/14/2023 1:23 PM
7	Pathway Forward, Inc. is the community engagement entity of the Allen AME Church. Since 1860 (161-years), Allen has been providing for the to the social, spiritual, and physical development of Baltimore City residents. In the eyes of the community we are an anchor.	6/14/2023 6:40 AM
8	No	6/13/2023 2:22 PM
9	yes	6/13/2023 11:02 AM
10	N/A	5/31/2023 9:25 AM
11	n/a	5/30/2023 2:46 PM
12	n/a	5/30/2023 1:25 PM
13	Yes- hospitals	5/26/2023 9:21 AM
14	no	5/1/2023 3:37 PM
15	We don’t own or lease them, but BGE Spring Gardens, MedStar Harbor Hospital, I-95/395, the Hanover Street Bridge, and the Hanover/Potee causeways to Brooklyn all count.	4/25/2023 6:35 PM
16	yes	4/19/2023 10:53 AM

Q17 Are your facilities susceptible to impacts from hazards? For example, your fire department is located in a floodprone area.

Answered: 21 Skipped: 10



ANSWER CHOICES	RESPONSES	
Yes	19.05%	4
No	23.81%	5
Don't Know	57.14%	12
TOTAL		21

#	IF YES, PLEASE SPECIFY THE FACILITIES AND DAMAGES SUSTAINED.	DATE
1	Depends on the hazard - sanitary lines and treatment are often near floodplains. Earthquake/Terrorism are unlikely - but Drinking water treatement, reservoirs, and distribution networks, sewage treatment/distribution networks, and even trash facilities (like the incinerator) could be at risk.	6/14/2023 3:36 PM
2	susceptible to flooding	6/13/2023 2:22 PM
3	Flooding- VA Loch Raven	5/26/2023 9:21 AM

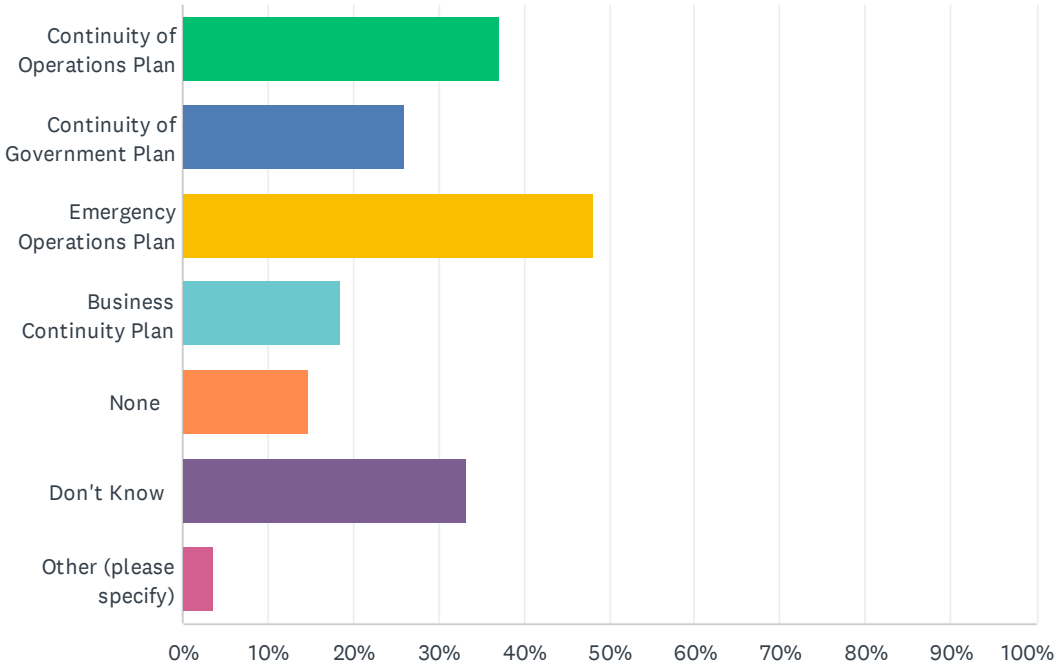
Q18 What support does your organization need from Baltimore City to help reduce vulnerabilities to your facilities?

Answered: 17 Skipped: 14

#	RESPONSES	DATE
1	none	6/15/2023 8:03 AM
2	Plan for what to do in various risk situations.	6/14/2023 3:36 PM
3	Ready resources to food and water and supplies	6/14/2023 2:04 PM
4	Still determining	6/14/2023 1:23 PM
5	A solar powered generator. Stop-the-bleed and first aid training. Protocol regarding who to call in the event of a disaster.	6/14/2023 6:40 AM
6	city-wide major infrastructure changes to combat sea level rise	6/13/2023 2:22 PM
7	Continued Support	6/13/2023 11:02 AM
8	Starting either better communication and cooperation between agencies working together.	5/31/2023 9:25 AM
9	where to get help	5/31/2023 8:57 AM
10	Continued information sharing, availability of Local, State and Federal resources available to those critical facilities.	5/31/2023 7:51 AM
11	n/a	5/30/2023 2:46 PM
12	Ensure redundancy for power, sewer and water feeds to the hospitals. Understand which utilities affect which hospitals.	5/26/2023 9:21 AM
13	we will continue to work with City staff to learn about what is needed and being done to ensure our transportation planning work (and other work) is aligned with and incorporates the City work; we continue to appreciate the participation of City staff in our projects	5/3/2023 9:41 AM
14	Support for mitigation grant projects	4/27/2023 4:27 PM
15	Once again, specific and unambiguous language in the DP3 calling for nature based infrastructure to protect shoreline facilities	4/25/2023 6:35 PM
16	Not sure at this time	4/19/2023 10:53 AM
17	more funding	4/19/2023 9:16 AM

Q19 Is your organization covered by any of the following plans? Check all that apply

Answered: 27 Skipped: 4



ANSWER CHOICES	RESPONSES	
Continuity of Operations Plan	37.04%	10
Continuity of Government Plan	25.93%	7
Emergency Operations Plan	48.15%	13
Business Continuity Plan	18.52%	5
None	14.81%	4
Don't Know	33.33%	9
Other (please specify)	3.70%	1
Total Respondents: 27		

#	OTHER (PLEASE SPECIFY)	DATE
1	Citywide Mass Evacuation	4/28/2023 4:05 PM

Q20 What capabilities does your agency have to help address hazards?

Answered: 20 Skipped: 11

#	RESPONSES	DATE
1	BCHD has a dedicated office (Office of Public Health Preparedness and Response - OPHPR) to plan for and coordinate the agency's response to public health emergencies. OPHPR maintains BCHD's emergency plans, coordinates and tracks emergency preparedness training for staff, manages the agency's tier I and II emergency response team (BCHD leadership and managers specially trained for emergency response), and provides leadership and expertise for response during emergency events.	6/29/2023 1:08 PM
2	Extensive. It is part of our overall operations.	6/15/2023 8:05 AM
3	not sure	6/14/2023 3:37 PM
4	Water distribution, solar power	6/14/2023 2:06 PM
5	Still being established	6/14/2023 1:25 PM
6	Training is needed in all arears.	6/14/2023 6:41 AM
7	None of which I'm aware.	6/13/2023 3:23 PM
8	Depending on Service needed in Parks	6/13/2023 11:05 AM
9	None	5/31/2023 9:28 AM
10	none	5/31/2023 8:59 AM
11	Mitigation resources prior to an event or incident and after incident response.	5/31/2023 7:54 AM
12	Design Guidelines to encourage people to make their historic buildings more resilient.	5/30/2023 2:51 PM
13	The VA has a comprehensive emergency management program to develop capabilities to support all-hazards. We have an integrated network (VISN 5) to support Baltimore facilities and a national capability to support the entire federal system.	5/26/2023 9:26 AM
14	we can incorporate these considerations into our plans, programs, and projects as appropriate	5/3/2023 9:50 AM
15	DOTs Citywide Mass Evacuation plan has an appendix that includes information on our physical and personnel assets available during an emergency	4/28/2023 4:05 PM
16	Interagency coordination, Contrail OneRAIN access, BMORE alert, 311 Salesforce.	4/27/2023 4:29 PM
17	Development of plans that identify the hazard. Other City agencies are responsible for the implementation of actions.	4/26/2023 9:05 AM
18	Hazard mitigation through the construction of nature based infrastructure	4/25/2023 6:56 PM
19	Housing Authority has a large amount of staff skilled and non-skilled personnel in the maintenance field	4/25/2023 6:50 AM
20	prepared for all types of responses(water, land based, collapse, resulting hazmat situations)	4/19/2023 9:19 AM

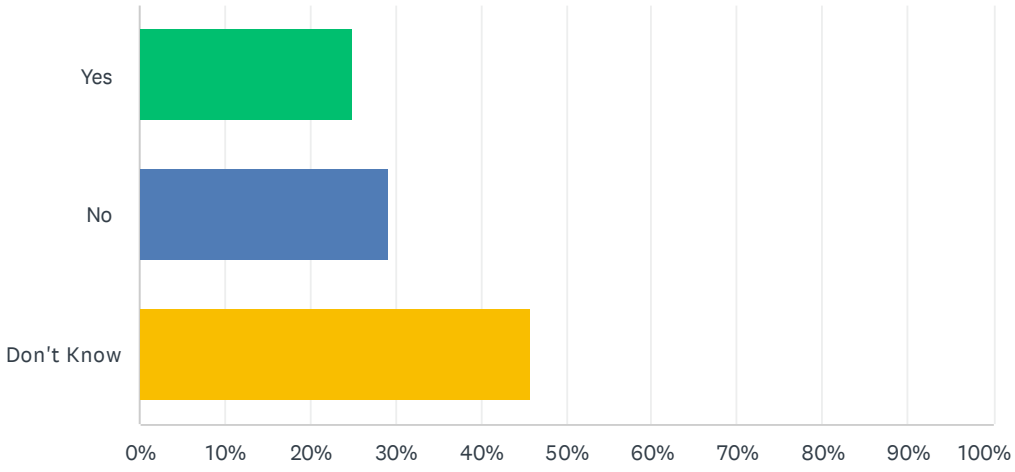
Q21 What plans or studies has your agency developed that relate to hazards, the climate, new or existing facilities, vulnerable populations, or other areas related to hazard mitigation?

Answered: 18 Skipped: 13

#	RESPONSES	DATE
1	BCHD has a large number of relevant plans - list can be made available upon request	6/29/2023 1:08 PM
2	Too many to list. It is part of the DNA of the US Forest Service,	6/15/2023 8:05 AM
3	Installing solar panels	6/14/2023 2:06 PM
4	We are actively working on the plan that will assist the community once a natural disaster occurs. we are still working on how we will operate and who we will assist.	6/14/2023 1:25 PM
5	We need the City to provide us with a plan.	6/14/2023 6:41 AM
6	None of which I'm aware.	6/13/2023 3:23 PM
7	We recently finalized our Climate Action and Resilience Roadmap that includes a Hazard Assessment	6/13/2023 2:27 PM
8	We are aware of neighbors and keep in contact with them.	5/31/2023 9:28 AM
9	none	5/31/2023 8:59 AM
10	Ongoing work in the area of Extreme Weather.	5/31/2023 7:54 AM
11	Fells Point Flood Mitigation Guidelines: https://chap.baltimorecity.gov/sites/default/files/2018-12_FellsPointFlood_FINAL.PDF	5/30/2023 2:51 PM
12	Climate survey, annual HVAs, annual hazmat assessments, we also have a GIS mapping system that identifies all vulnerable patients in the VA system.	5/26/2023 9:26 AM
13	Vulnerable Population Index https://bmc.maps.arcgis.com/apps/webappviewer/index.html?id=b1e22c0caa7644ccb58484b00610712f Climate Change Resilience planning https://baltometro.org/environment/planning-areas/climate-change-resilience Air quality/emissions related to transportation https://baltometro.org/environment/planning-areas/air-quality Food/water security grant work Evacuation planning/preparedness for DOTs/DPWs Long range transportation plan includes considerations of climate change; currently updating our plan - called Resilience 2050 - and have prepared a white paper on climate change and resilience https://publicinput.com/Resilience2050whitepapers#0	5/3/2023 9:50 AM
14	Citywide Mass Evacuation	4/28/2023 4:05 PM
15	Baltimore City Nuisance Flood Plan, Critical Area Management Program Manual, Natural Resources Code Floodplain Ordinance, CAP, DP3.	4/26/2023 9:05 AM
16	Reimagine Middle Branch Plan	4/25/2023 6:56 PM
17	We have developed an emergency response and evacuation plan	4/19/2023 10:55 AM
18	City Hazmat EOP Plan	4/19/2023 9:19 AM

Q22 Is your agency currently involved in conducting any studies or developing any programs which would further support Baltimore City's hazard mitigation program? Studies can include hazard-specific information, data gathering which supports risk assessments, including economic data, or statistical data of other types.

Answered: 24 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes	25.00%	6
No	29.17%	7
Don't Know	45.83%	11
TOTAL		24

#	IF YES, PLEASE BRIEFLY DESCRIBE THE TYPE OF STUDY UNDERWAY, AND LIST THE ANTICIPATED YEAR OF COMPLETION.	DATE
1	too many to list.	6/15/2023 8:05 AM
2	We can share our hazard assessment but most of the info was taken from the State of Maryland or NOAA	6/13/2023 2:27 PM
3	In the process of updating our historic preservation design guidelines to incorporate recommendations of the 2018 Flood Mitigation study and other work that makes historic buildings more resilient.	5/30/2023 2:51 PM
4	see answer to question 21	5/3/2023 9:50 AM
5	In beginning stages of working on tidal mitigation project for USACE- but this is very preliminary and is not guaranteed.	4/27/2023 4:29 PM
6	CAP and DP3.	4/26/2023 9:05 AM
7	The Middle Branch Resiliency Initiative, 50+ acres of wetlands and nature based infrastructure	4/25/2023 6:56 PM

Q23 Does your agency currently have any mitigation projects or activities underway? If so, please describe.

Answered: 14 Skipped: 17

#	RESPONSES	DATE
1	again, too many to list.	6/15/2023 8:05 AM
2	Solar panels	6/14/2023 2:06 PM
3	Resiliency Hub is being developed.	6/14/2023 1:25 PM
4	None	6/14/2023 6:41 AM
5	None related to human hazards	6/13/2023 3:23 PM
6	National Aquarium committed to becoming net-zero GHG emissions buy 2035. Our focus is to lead the way in reducing our carbon footprint and help others follow our path. In addition to decarbonization, energy efficiency measures, water conservation and waste reduction, we work with volunteers and communities to plants trees and restore habitat.	6/13/2023 2:27 PM
7	No	5/31/2023 9:28 AM
8	no	5/31/2023 8:59 AM
9	Ongoing vulnerability assessments and training in coordination with BPD and OEM.	5/31/2023 7:54 AM
10	No	5/30/2023 2:51 PM
11	Loch Raven is replacing its chillers/boilers. They just completed work on the water valves/meters.	5/26/2023 9:26 AM
12	our mitigation work focuses on emissions from transportation https://baltometro.org/environment/planning-areas/air-quality	5/3/2023 9:50 AM
13	Stage 1 of the MBRI, $53 million in nature based infrastructure now in development	4/25/2023 6:56 PM
14	Not sure	4/19/2023 10:55 AM

Q24 Please provide a list of projects or programs that your facility or organization would like to complete in order to reduce your vulnerability to damages and losses, including loss of operation/service, to hazard events.

Answered: 14 Skipped: 17

#	RESPONSES	DATE
1	This is on-going. I think one item missing from your list is vector-borne diseases such as dengue, chickgenya, and zika.	6/15/2023 8:06 AM
2	Water mitigation, green projects	6/14/2023 2:07 PM
3	N/A	6/14/2023 1:25 PM
4	Stop-the-Bleed and related first aid certification.	6/14/2023 6:43 AM
5	We are interested in creating and maintaining habitat including urban forests, which would indirectly reduce vulnerability by way of stormwater management and Carbon sequestration. We are also interested in workforce development, employing people from vulnerable communities in the creation and maintenance of this habitat, in addition to the enjoyment of neighborhood green spaces.	6/13/2023 3:27 PM
6	Upgrade our emergency power infrastructure Install onsite renewable energy decarbonize our operations	6/13/2023 2:29 PM
7	As stated earlier Parks Services needs a plan to maintain trees near population areas and near electrical wires.	5/31/2023 9:32 AM
8	Continued support of city partners that request CISA products and services.	5/31/2023 7:55 AM
9	Updating our Design Guidelines and Following up on our 2018 Fells Point Flood Mitigation Study	5/30/2023 2:52 PM
10	We would like to be able to access city water when we experience a water failure with the Baltimore VA Medical Facility. For example, use a hydrant to fill 55 gal. drums to support continued operations/patient care until we can get water restored.	5/26/2023 9:28 AM
11	we are investigating applying for funds through the USDOT PROTECT Program to develop a Regional Resilience Implementation Plan; have not decided if that will move forward yet, applications are due mid August	5/3/2023 9:53 AM
12	Receive the camera upgrades and extra cameras through BRIC grant applied for by DPW.	4/27/2023 4:30 PM
13	Improved floodplain requirements that include flood prone areas outside of the regulated floodplain, and that also regulate right-of-way construction. Zoning updates that account for sea-level rise and areas that are (and will be) unfit for development.	4/26/2023 9:09 AM
14	We are now starting work on Stage 2 of the MBRI	4/25/2023 6:58 PM

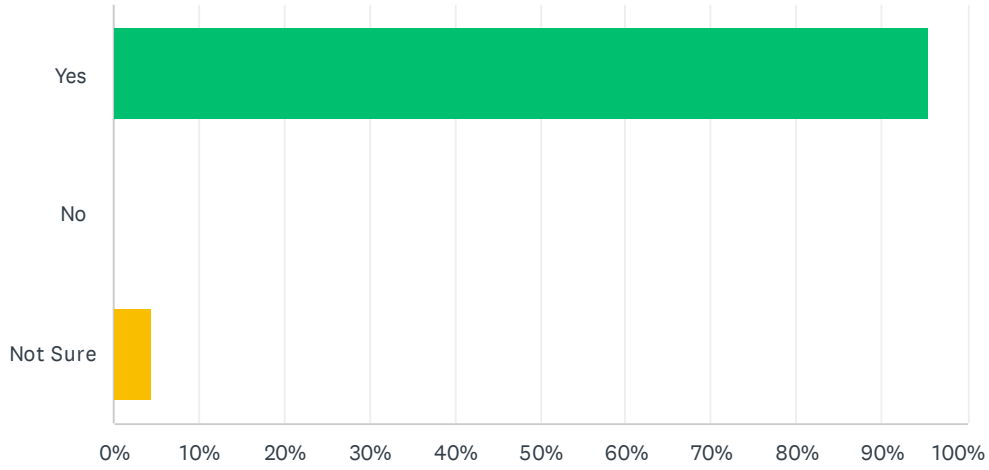
Q25 Please list any projects or programs that you have recently implemented that will reduce your facility's/organization's vulnerability, damage, and losses, including loss of operation/service, to hazard events.

Answered: 14 Skipped: 17

#	RESPONSES	DATE
1	It is on-going monitoring and preparation.	6/15/2023 8:06 AM
2	Future water mitigation and solar power	6/14/2023 2:07 PM
3	N/A	6/14/2023 1:25 PM
4	We see the need and became a hub for Baltimore City. We look to DPW to provided training and guidance.	6/14/2023 6:43 AM
5	None of which I'm aware - we do not own any facilities.	6/13/2023 3:27 PM
6	upgrading the glass pyramid ensures our building is better protected from weather, provides for energy efficiency and will help protect migrating bird populations	6/13/2023 2:29 PM
7	Hiring more employee Creating more Jobs specific to needs Training	6/13/2023 11:06 AM
8	N/A	5/31/2023 9:32 AM
9	N/A	5/31/2023 7:55 AM
10	n/a	5/30/2023 2:52 PM
11	Updating chillers/boilers at Loch Raven.	5/26/2023 9:28 AM
12	for the most part, we don't implement but we develop resources for local jurisdictions to use, links to most recent work were included previously	5/3/2023 9:53 AM
13	Update to the City's floodplain Ordinance.	4/26/2023 9:09 AM
14	Stage 1 of the MBRI ($53 million in wetlands and nature based infrastructure near BGE Spring Gardens and MedStar Harbor Hospital) is now underway.	4/25/2023 6:58 PM

Q26 Does your agency provide assistance to any socially vulnerable or underserved populations in Baltimore City?

Answered: 22 Skipped: 9

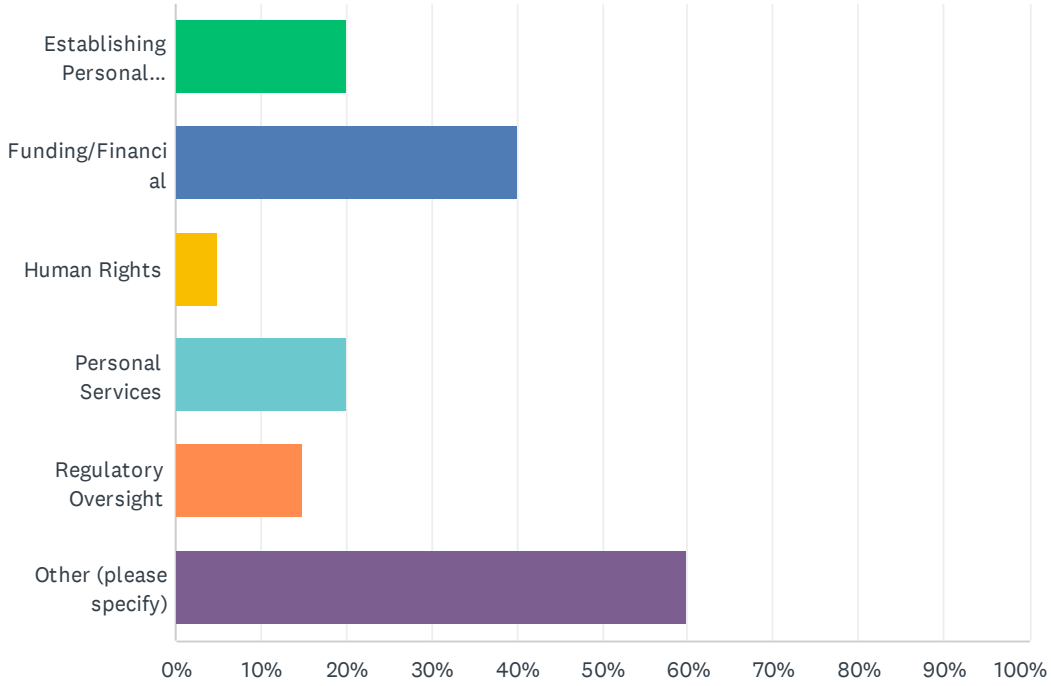


ANSWER CHOICES	RESPONSES	
Yes	95.45%	21
No	0.00%	0
Not Sure	4.55%	1
TOTAL		22

#	OTHER (PLEASE SPECIFY)	DATE
1	I don't think I would categorize what we provide as "assistance" in the way that organizations who provide food, shelter, formal education, court services, etc. provide.	6/13/2023 3:45 PM
2	improved access to programs	6/13/2023 2:32 PM
3	Summer Programs After school Programs Free meals	6/13/2023 11:09 AM
4	we have staff working on fair housing planning https://baltometro.org/community/planning-areas/regional-fair-housing-planning this work includes a Regional Fair Housing Group https://www.baltometro.org/community/committees/regional-fair-housing-group the BMC also works with local jurisdictions on a housing voucher program https://www.baltometro.org/community/programs/baltimore-regional-project-based-voucher-program	5/3/2023 10:11 AM
5	coordinate to protect vulnerable populations during emergencies, i.e.- worked with City agencies for water deliveries to nursing homes, etc. during E Coli. event. We also opened up warming centers for complex cold events.	4/27/2023 4:33 PM
6	respond to emergency needs	4/19/2023 9:21 AM

Q27 If yes, what types of services do you provide?

Answered: 20 Skipped: 11



ANSWER CHOICES	RESPONSES	
Establishing Personal Services	20.00%	4
Funding/Financial	40.00%	8
Human Rights	5.00%	1
Personal Services	20.00%	4
Regulatory Oversight	15.00%	3
Other (please specify)	60.00%	12
Total Respondents: 20		

#	OTHER (PLEASE SPECIFY)	DATE
1	unsure what qualifies as "personal services"	6/29/2023 1:08 PM
2	research	6/15/2023 8:08 AM
3	water, sewer, trash, - billing and bill reduction related to these.	6/14/2023 3:40 PM
4	Programs for youth/Seniors	6/13/2023 11:09 AM
5	Protection of people and assets serving socially vulnerable population.	5/31/2023 7:57 AM
6	trouble shooting problems and concerns	5/30/2023 1:38 PM
7	Housing, transportation	5/26/2023 9:31 AM
8	housing vouchers (limited number)	5/3/2023 10:11 AM

9	neighborhood traffic calming, red light/speed cameras, speed bumps	4/28/2023 4:54 PM
10	coordination,	4/27/2023 4:33 PM
11	Funding for Grants, parks, Rec Centers, youth programs	4/25/2023 7:00 PM
12	medical, fire, etc.	4/19/2023 9:21 AM

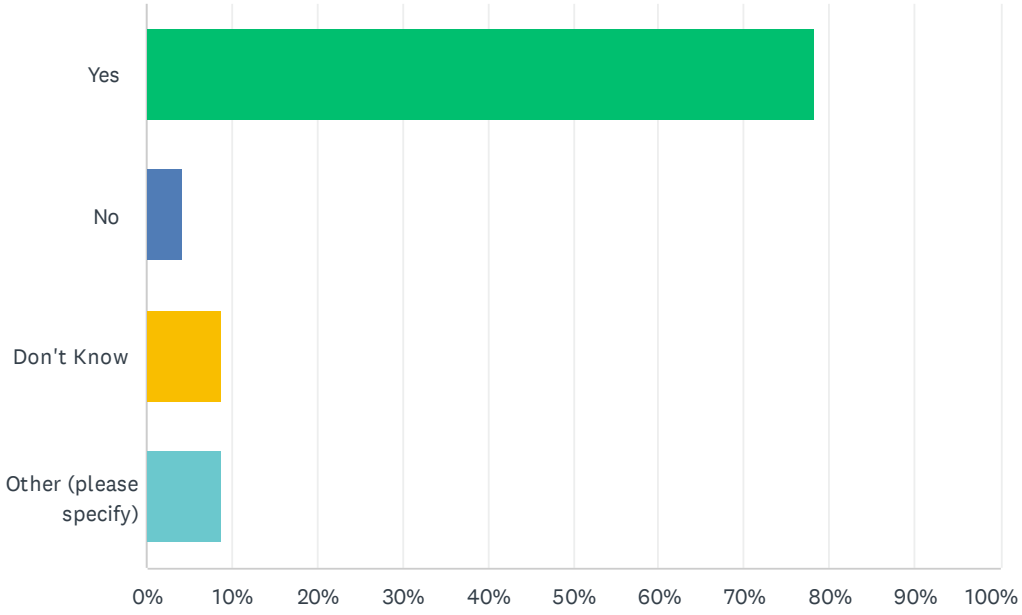
Q28 Please provide a list of the populations or communities served by your agency.

Answered: 18 Skipped: 13

#	RESPONSES	DATE
1	BCHD serves the entirety of Baltimore City	6/29/2023 1:08 PM
2	extensive, across the region.	6/15/2023 8:08 AM
3	all residents, businesses, and organizations in the City of Baltimore and some (drinking water) in Baltimore County	6/14/2023 3:40 PM
4	Irvington, Westgate	6/14/2023 2:09 PM
5	Provided we have the capacity, we serve all who show up.	6/14/2023 6:51 AM
6	NA	6/13/2023 3:45 PM
7	Youth Seniors Disabled	6/13/2023 11:09 AM
8	Fairmount Park Community	5/31/2023 9:38 AM
9	Everyone	5/31/2023 7:57 AM
10	Owners of historic buildings in Baltimore City	5/30/2023 2:53 PM
11	all residents in our district	5/30/2023 1:38 PM
12	Veterans	5/26/2023 9:31 AM
13	the housing voucher program is for low income populations overall our work serves the whole Baltimore region; in our work, we work to identify populations/communities that may be underserved as needed to address their specific needs (we are working to improve on this). We (are required to) adhere to Title VI requirements.	5/3/2023 10:11 AM
14	minority and women owned businesses	5/1/2023 3:41 PM
15	those without power during winter weather; homeless populations who needed to be relocated during HVAC failure event in summer '22.	4/27/2023 4:33 PM
16	Citywide.	4/26/2023 9:13 AM
17	15 neighborhoods in South Baltimore	4/25/2023 7:00 PM
18	all communities and populations	4/19/2023 9:21 AM

Q29 Do you provide these services during times of disaster?

Answered: 23 Skipped: 8



ANSWER CHOICES	RESPONSES	
Yes	78.26%	18
No	4.35%	1
Don't Know	8.70%	2
Other (please specify)	8.70%	2
TOTAL		23

#	OTHER (PLEASE SPECIFY)	DATE
1	NA	6/13/2023 3:45 PM
2	we don't really have a role during disasters; however, a couple of our emergency preparedness staff assisted with food distribution during the early pandemic	5/3/2023 10:11 AM

Q30 What barriers and community characteristics exist within Baltimore City that may create additional vulnerabilities to hazards? This may include but is not limited to access to transportation, broadband access, economic disadvantages, physical health (chronic diseases), limited physical mobility, age (older adults and children), and rural communities.

Answered: 17 Skipped: 14

#	RESPONSES	DATE
1	limited English proficiency; social isolation (especially for disabled and older adults)	6/29/2023 1:08 PM
2	suspicion of government agencies and "do-gooders".	6/15/2023 8:08 AM
3	Communication (internet, cell phone, etc) - if something happened -we would need to communicate whether water is safe, if any system is compromised - this is true of the whole city. Bmore alert seems like a start -but I have seen it used for Covid (makes sense) one community meeting attended by the mayor (doesn't make sense) the curfew (makes sense) but not the air quality alert (why not used, I'm not sure). Use is inconsistent and probably people are under enrolled.	6/14/2023 3:40 PM
4	Limited access to transportation and free services	6/14/2023 2:09 PM
5	Post information (multiple languages) on the light rail, bus stops, libraries, near schools and college campuses. Use an ongoing public service announcement campaign.	6/14/2023 6:51 AM
6	limited access to biodiverse, safe green spaces caused by vehicular traffic, crime; access to safe drinking water caused by aging infrastructure	6/13/2023 3:45 PM
7	Funding for Programs Accessibility to everyone	6/13/2023 11:09 AM
8	All of the above are problems in various parts of the city and need addressing to one degree or another.	5/31/2023 9:38 AM
9	Economic disadvantages undermanned first responders, socioeconomic issues, aging infrastructure.	5/31/2023 7:57 AM
10	costs, limited access to internet	5/30/2023 2:53 PM
11	all of the above items listed are potential barriers	5/30/2023 1:38 PM
12	socioeconomic, transportation access, chronic disease, limited mobility/vision, food availability, affordable housing, employment	5/26/2023 9:31 AM
13	in addition to those items listed, perhaps concern for physical safety could be a barrier to evacuating - concern about interacting with police as well as concern about with other members of the public; also limited English proficiency	5/3/2023 10:11 AM
14	all the barriers mentioned above including lack of access to information	5/1/2023 3:41 PM
15	communications	4/27/2023 4:33 PM
16	Vulnerable communities are often located in high-hazard areas, including areas that are flood prone, that lack green spaces and pervious surfaces, and areas that experience extreme heat.	4/26/2023 9:13 AM
17	South Baltimore neighborhoods are physically isolated by highways, railroads, and rivers. Cherry Hill is particularly isolated, with only 3 points of ingress/egress, two of which are bridges and one of which goes through a flood zone.	4/25/2023 7:00 PM

Q31 Do you have any questions or comments for Baltimore City?

Answered: 11 Skipped: 20

#	RESPONSES	DATE
1	You might consider using the Forest Service's Stew-Map resource as an on-going tool. You might consider establishing a "science advisory group" to assist on an on-going basis for current research, data, and modeling.	6/15/2023 8:09 AM
2	No	6/14/2023 2:09 PM
3	Not at this time.	6/14/2023 1:26 PM
4	We must and can do better by our most vulnerable.	6/14/2023 6:51 AM
5	No	6/13/2023 3:46 PM
6	More systems in place to deal with trash all over the city. This also means a quicker response to citizens requests. Bulk trash more available. Recycling of yard waste on a regular basis.	5/31/2023 9:43 AM
7	None.	5/31/2023 7:57 AM
8	no	5/30/2023 2:53 PM
9	I hope these responses are helpful, please contact me with any questions	5/3/2023 10:12 AM
10	Please provide explicit language mandating / demanding nature based infrastructure in the Middle Branch to assist in convincing regulatory agencies to grant permits for these critical projects.	4/25/2023 7:01 PM
11	I am new to this committee and unable to answer some of the questions moving forward. I will have more information from our agency.	4/25/2023 6:53 AM

Appendix B: Meeting Documentation

Appendix B includes meeting agendas, participants, and meeting minutes, as applicable, for meetings convened during the development of the Disaster Preparedness and Planning Project 2023 update. This documentation includes items for Core Planning Team, Hazard Mitigation Advisory Committee, and Equity Subcommittee meetings.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Kick-Off Meeting - Agenda
Friday, February 24, 2023
9:30 a.m. – 11:00 a.m.
Meeting Link

1. **Introductions**
    - Tetra Tech's role

2. **Overview of Planning Process**
    - Purpose and Requirements (FEMA, MDEM, and CRS)
    - Phases in the process
    - Steering Committees and Community Engagement
        - Core Planning Team (CPT)
        - Hazard Mitigation Advisory Committee (HMAC)
        - Community Stakeholders and General Public

3. **Schedule**
    - Overview of key milestones and meetings
    - Core Planning Team (CPT): Biweekly
    - HMAC meetings: Monthly

4. **Organizing Resources**
    - Identifying participating agencies/departments/stakeholders
    - Reviewing the 2018 DP3 (best practices, areas for improvement, 2023 vision, framework, actions)

5. **Engagement Strategy**
    - Public Meetings and Workshops
    - BoS website updates
    - StoryMap
    - City's current capabilities and capacity to support
    - Public Engagement Strategy

6. **Hazard Identification and Risk Assessment**
    - Review 2018 Hazards of Concern
    - Data Collection

7. **Questions and Discussion**

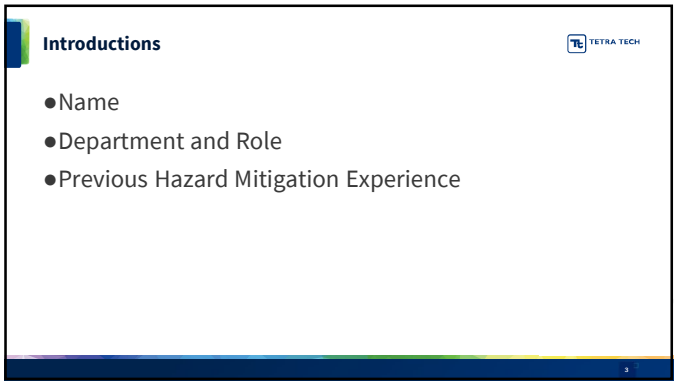
8. **Next Steps**

2023 City of Baltimore
Disaster Preparedness and
Planning Project (DP3)
Core Planning Team Kickoff
Brandon M. Scott
Mayor
Baltimore Office
of Sustainability
TETRA TECH

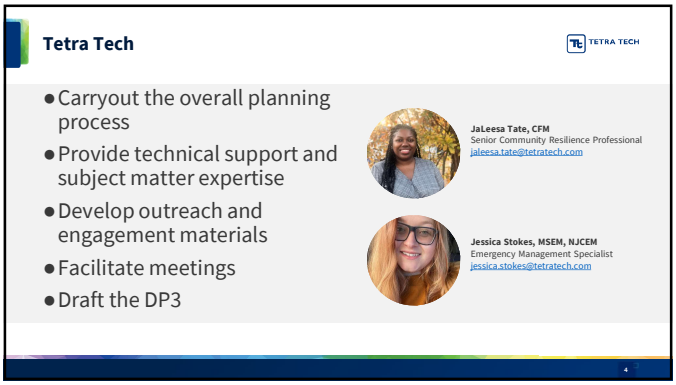
1

Today's Topics
TETRA TECH
INTRODUCTIONS
OVERVIEW OF PLANNING PROCESS
SCHEDULE
ORGANIZING RESOURCES
ENGAGEMENT STRATEGY
HAZARD IDENTIFICATION AND RISK ASSESSMENT
QUESTIONS AND DISCUSSION
NEXT STEPS
2

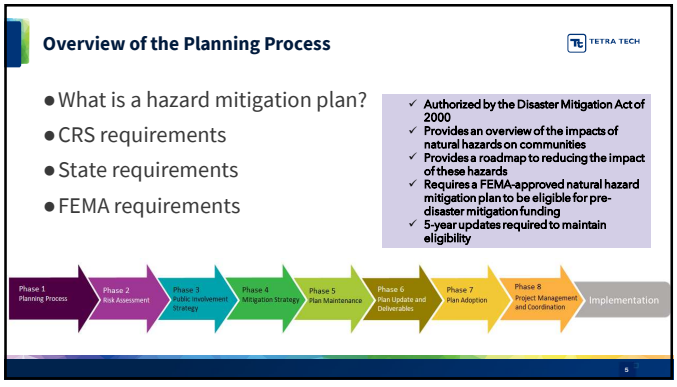
2


Introductions
TETRA TECH
Name
Department and Role
Previous Hazard Mitigation Experience
3

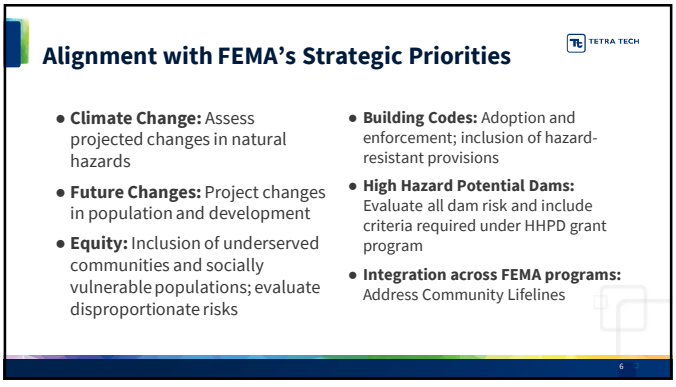
3


Tetra Tech
TETRA TECH
Carryout the overall planning process
Provide technical support and subject matter expertise
Develop outreach and engagement materials
Facilitate meetings
Draft the DP3
JaLeesa Tate, CFM
Senior Community Resilience Professional
jaleesa.tate@tetratech.com
Jessica Stokes, MSEM, NJCEM
Emergency Management Specialist
jessica.stokes@tetratech.com
4

4


Overview of the Planning Process
TETRA TECH
What is a hazard mitigation plan?
CRS requirements
State requirements
FEMA requirements
Authorized by the Disaster Mitigation Act of 2000
Provides an overview of the impacts of natural hazards on communities
Provides a roadmap to reducing the impact of these hazards
Requires a FEMA-approved natural hazard mitigation plan to be eligible for pre-disaster mitigation funding
5-year updates required to maintain eligibility
Phase 1 Planning Process
Phase 2 Risk Assessment
Phase 3 Public Involvement Strategy
Phase 4 Mitigation Strategy
Phase 5 Plan Maintenance
Phase 6 Plan Update and Deliverables
Phase 7 Plan Adoption
Phase 8 Project Management and Coordination
Implementation
5

5


Alignment with FEMA's Strategic Priorities
TETRA TECH
Climate Change: Assess projected changes in natural hazards
Future Changes: Project changes in population and development
Equity: Inclusion of underserved communities and socially vulnerable populations; evaluate disproportionate risks
Building Codes: Adoption and enforcement; inclusion of hazard-resistant provisions
High Hazard Potential Dams: Evaluate all dam risk and include criteria required under HHPD grant program
Integration across FEMA programs: Address Community Lifelines
6

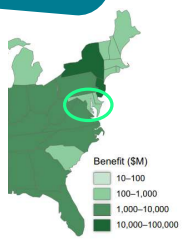
6

Hazard Mitigation Works!

According to the January 2019 National Institute of Building Sciences Natural Hazard Mitigation Saves: 2018 Interim Report, federal mitigation grants save $6 for every $1 spent!

Mitigation saves in every in state! Maryland can save up to $100 million in benefits.

National Benefit-Cost Ratio Per Peril *BCR numbers in this study have been rounded	Federally Funded
Overall Hazard Benefit-Cost Ratio	6:1
Riverine Flood	7:1
Hurricane Surge	Too few grants
Wind	5:1
Earthquake	3:1
Wildland-Urban Interface Fire	3:1



7

Schedule Milestones

Milestone	Est. Date of Completion
Public Kickoff Workshop	March 29, 2023
Hazard Profiles Posted for Public Review	May 3, 2023
Public Risk Assessment Workshop	May 17, 2023
Stakeholder Mitigation Action Workshop	June 20, 2023
Public Mitigation Action Workshop	June 28, 2023
Mitigation Strategy Updated	July 7, 2023
CPT and HMAC Review Draft DP3	July 26, 2023
Public Review Period	August 1 – 31, 2023
Public Review Meeting	August 31, 2023
Draft Submitted to MDEM	September 7, 2023
Draft Submitted to FEMA Region III	October 2, 2023
Final DP3 Adopted by City and Approved by FEMA	December 15, 2023

8

Schedule Details

9

Role of Stakeholder Groups

- **Core Planning Team (CPT)** serves as the discipline leads to guide the development of the DP3. The CPT will meet to discuss project status, troubleshoot any issues, inform the development of HMAC and public meeting materials, and review drafts.
- **Hazard Mitigation Advisory Committee (HMAC)** composed of stakeholders across disciplines and community leaders. Provides input and guidance on the development of the DP3 advises the CPT on community needs and concerns to ensure community representation and inclusion in the planning process.
- **Community Stakeholders and General Public** may be businesses, private citizens, community organizations, etc. Provides a direct opportunity for engagement and inclusion in the planning process.

10

2018 Hazard Mitigation Advisory Committee

Baltimore Office of Sustainability	Baltimore City Police Department	Maryland Port Administration	Maryland Historical Trust	Maryland Emergency Management Agency
Office of Emergency Management	Baltimore City Department of Public Works	Maryland Department of Natural Resources	Baltimore City Department of Planning	Waterfront Partnership of Baltimore
Baltimore City Mayor's Office	Baltimore Metropolitan Council	Baltimore Gas and Electric Co	Department of General Services	Baltimore Historical & Architectural Preservation
Federal Emergency Management Agency	KCI Technologies, Inc.	Maryland Insurance Administration	Department of Transportation	Baltimore City Fire Department
Community Leaders	Moffatt & Nichol, Inc.	BCT Architects	SP&D	HealthCare Ready
Baltimore City Health Department	Michael Baker International			

11

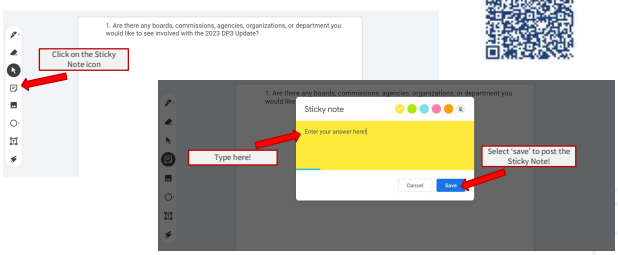
Expanding Participation

BMORE Beautiful	Housing Authority of Baltimore City	Environmental Control Board	Baltimore Sheriff's Office	Baltimore City Youth Commission
John Hopkins University	Baltimore City Law Department	Baltimore City Recreation and Parks	Aging Services	Baltimore Development Corporation
Baltimore City Department of Housing and Community Development	Baltimore City Information & Technology	Mayor's Office of Correspondence and Constituent Services	Baltimore UASI Recovery Committee	Mayor's Office of Infrastructure and Development
Say YES!				

12

Are there any boards, commissions, agencies, organizations, or department you would like to see involved with the 2023 DP3 Update?

https://jamboard.google.com/d/1jkjeq8HH9C71M1QXJA_PQsImMLGo-Bw3aXsgcr1scxc/viewer?f=0



13

2018 DP3 Recommendations for Moving Forward

- Continue planning efforts centered on increasing community resilience, including ongoing formalization and expansion of Resiliency Hubs.
- Use community resilience initiatives to address varying regional concerns.
- Broaden public outreach and engagement efforts to include greater representation from all Baltimore neighborhoods and communities in planning efforts.
- Introduce solutions-oriented public engagement practices designed to solicit community-driven solutions.

14

2018 DP3 Recommendations for Moving Forward

- Determine a strategy for incorporating information on vulnerable populations collected during the development of this plan.
- Use public feedback to identify vulnerable populations and specify vulnerable populations to the greatest extent possible.
- Develop criteria and a strategy for integrating man-made hazards into the next DP3 with input from the public at the outset.
- Integrate food resilience into mitigation and preparedness efforts.
- Integrate Historic and Cultural Resources Hazard Mitigation Strategy.

15

2018 DP3 Mitigation Goals

1. Protect the health, safety and welfare of Baltimore City residents and visitors.
2. Prevent damage to structures, infrastructure, and critical facilities.
3. Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).
4. Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that exceed past experience.
5. Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.
6. Provide support to increase efforts toward a better Community Rating System (CRS) community rating.

16

2018 DP3 Mitigation Strategies and Actions

- Infrastructure (IN) – 22 Strategies, 104 Actions
  - IN-1: Protect and enhance the resiliency and redundancy of electricity system
    - Determine low-lying substation vulnerability and outline options for adaptation and mitigation
- Buildings (B) – 10 Strategies, 40 Actions
  - B-4: Update a list of flood prone and repetitive loss buildings to consider for acquisition
    - Pursue grants to acquire flood prone properties when and where feasible
- Natural Systems (NS) – 8 Strategies, 25 Actions
  - NS-2: Increase and enhance the resilience and health of Baltimore's urban forest
    - Increase the urban tree canopy and target areas with urban heat island impacts
- Public Services (PS) – 10 Strategies, 44 Actions
  - PS-8: Conduct climate, resiliency, and emergency planning education and outreach
    - Incorporate environmental health and climate change into curriculum at schools, universities and health care facilities

17

Engagement Strategy

- Public Meetings and Workshops
- BoS website updates
- StoryMap
- Public Engagement Strategy

18

Hazard Identification and Risk Assessment

TETRA TECH

2018 DP3 Hazards of Concern

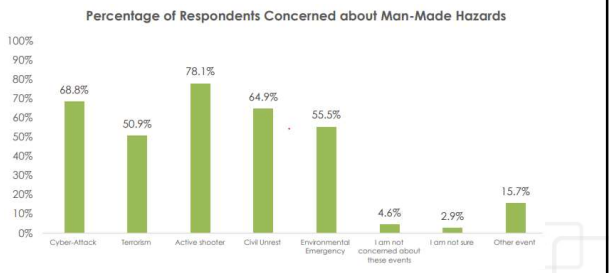
- Flooding
- Coastal Hazards
  - *Tropical Storms and Hurricanes*
  - *Sea Level Change*
  - *Tsunamis*
- Precipitation Variability
  - *Nor'easters*
  - *Drought*
- Wind
  - *Tornado*
  - *Derecho*
- Extreme Heat
  - *Air Quality and Respiratory Illnesses*
- Land
  - *Earthquakes*
  - *Land Subsidence*
  - *Urban Karst/Sinkholes*

19

19

2018 DP3 Community Survey Results

TETRA TECH



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Hazard Identification and Risk Assessment

TETRA TECH

2021 MDEM Hazards

Natural Hazards

- Coastal Hazards
- Dam Failures
- Drought
- Extreme Temperatures
- Floods
- Soil Movement
- Public Health Emergencies
- Thunderstorm
- Tornado
- Wildfires
- Wind
- Winter Storm

Human-Caused Hazards

- Active Shooter
- Civil Unrest
- Cyber-Attack
- Nuclear Incidents
- Terrorism
- Transportation Accidents

21

21

Data Collection

TETRA TECH

- Existing plans to integrate
- Critical Facilities Data
- FEMA CAV request
- Land Use and Development (new major development since 2018, planned major developments, number of construction permits issued)
- Dam data (location, inundation areas, etc.)
- Climate Change data
- Socially Vulnerable Populations data

22

22

Questions and Discussion

TETRA TECH

23

23

Next Steps

TETRA TECH

- Provide recommendations for HMAC members
- Compile data to inform the Risk Assessment and overall plan development
- Review 2018 DP3 framework
- Next meeting TBD

24

24

Project Contacts
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Tetra Tech
Senior Community Resilience Professional
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25

25

Brandon M. Scott
Mayor

Baltimore Office of Sustainability
People • Planet • Prosperity

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Kick-Off Meeting
Location of Meeting:	Teleconference
Date of Meeting:	February 27, 2023 @ 10:00AM

Attendees:

- Jessica Stokes, Tetra Tech (Outreach Lead)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Bruna Attila, Baltimore Office of Sustainability (Coastal Resources Planner)
- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner)
- Nicholas O'Gara, Baltimore Department of Planning (GIS Analyst)
- Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief)
- Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Jamie Williams, Baltimore Department of Planning (City Planner Supervisor)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)

Agenda Summary: The purpose of the meeting was to introduce the Core Planning Team members and contract consultant, provide an overview of the hazard mitigation planning process, and to begin the information gathering processes.

Item No.	Description	Action item(s):
1	Introductions • Baltimore City conducted a round table of introductions	-
2	Overview of Planning Process • The Hazard Mitigation Plan (HMP) planning process consist of eight phases. • A HMP is meant to provide an overview of the impacts of natural hazards on communities and provide a roadmap to reducing the impact of these hazards. • FEMA has updated their *Local Mitigation Planning Policy Guide* to include the effects of climate change and other future conditions, discussions on how the identified hazards will impact socially vulnerable populations, promotion of building code enhancements, and inclusion of High Hazard Potential Dams (HHPD). • The updated policy ultimately intends to facilitate a stronger alignment with other FEMA mitigation programs.	-
3	Schedule (dates are estimates, which are subject to change) • Public Kickoff Workshop – 03/29/2023 • Hazard Profiles Posted for Public Review – 05/03/2023	1. BoS to confirm the review timeline for the City's

	• Public Risk Assessment Workshop – 05/17/2023 • Stakeholder Mitigation Action Workshop – 06/20/2023 • Public Mitigation Action Workshop – 06/28/2023 • Mitigation Strategy Updated – 07/07/2023 • CPT and HMAC Review Draft DP3 – 07/26/2023 • Public Review Period – 08/01/2023-08/31/2023 • Public Review Meeting – 08/31/2023 • Draft Submitted to MDEM – 09/07/2023 • Draft Submitted to FEMA Region III – 10/02/2023 • Final DP3 Adopted by City an approved by FEMA – 12/15/2023 • Participants noted plan updates occurring concurrently to the 2023 DP3 update, including the Comprehensive Plan, Climate Adaptation Plan, and Solid Waste Plan; recommend maximizing efforts for plan integration.	Planning Commission and Maryland Department of Emergency Management (MDEM). 2. BoS to prepare a briefing for the Planning Commission and Sustainability Commission upon completion of the first draft of the DP3.
4	Organizing Resources • Core Planning Team (CPT) serves as the discipline leads to guide the development of the DP3. The CPT will discuss project status, troubleshoot issues, inform the development of HMAC and public meeting materials, and review drafts. • Hazard Mitigation Advisory Committee (HMAC) composed of stakeholders across disciplines and community leaders. Provides input and guidance on the development of the DP3 advises the CPT on community needs and concerns to ensure community representation and inclusion in the planning process. o Participants discussed including representatives from FEMA and MDEM to ensure engagement and feedback from these organizations during the development of the DP3. o Participants recommended forming a subcommittee composed of City Departments. o Participants recommended including representatives from Baltimore County (Chief Sustainability Officer). • Community Stakeholders and General Public may be businesses, private citizens, community organizations, etc. Provides a direct opportunity for engagement and inclusion in the planning process. Review of 2018 DP3 • The 'Moving Forward' chapter of the DP3 included 9 topic areas to consider for the 2023 update. These topic areas include: o Increasing community resilience and expanding Resilience Hubs o Address regional concerns	1. BoS to review 2018 HMAC participates and Tetra Tech recommendations to produce list of desired HMAC participates. 2. CPT to complete Jam Board exercise by C.O.B. 02/27. 3. CPT to review goals, strategies, and actions.

	○ Broaden public outreach and engagement for greater representation of community members ○ Provide solutions-oriented public engagement to solicit community-driven solutions ○ Integrated data on vulnerable populations ○ Identify vulnerable populations ○ Integrate man0made hazards ○ Integrate food resilience into mitigation and preparedness efforts ○ Integrate the Historic and Cultural Resources Hazard Mitigation Strategy • The 2018 Mitigation Plan had 6 goals, 50 strategies, and 213 implementation actions, categorized by sector (*infrastructure, buildings, natural systems, public services*). • Participants noted that the DP3 was developed to extend beyond the minimum requirements of a standard HMP. Strategies and Actions will be updated throughout the planning process to identify status, relevance, and provide an opportunity to deconflict. • Up to 10 high priority projects will be selected for a more detailed implementation plan to be developed.	
5	Engagement Strategy • Tetra Tech will develop an outreach strategy, including an interactive StoryMap, provide information to update City websites, create surveys for data gathering, and provide social media graphics for ready-made messaging. • Participants noted that events over the 5-year performance of the 2018 DP3 (2018 – 2023) have increased public interest in natural hazards, particularly flooding. • Participants noted that partner agencies can assist with outreach efforts and provided examples of past and ongoing outreach, including DPW's virtual rooms regarding the Consent Decree.	1. Tetra Tech to begin work on outreach tasks.
6	Hazard Identification and Risk Assessment • 2018 Hazards of Concern (HOCs): ○ Flooding ○ Coastal Hazards (*Tropical Storms and Hurricanes, Sea Level Change, and Tsunamis*) ○ Precipitation Variability (*Nor'easters and Drought*) ○ Wind (*Tornado and Derecho*) ○ Extreme Heat (*Air Quality and Respiratory Illnesses*) ○ Land (*Earthquakes, Land Subsidence, and Urban Karst/Sinkholes*)	1. CPT to review 2018 HOCs. 2. CPT to determine which man-made/human-caused hazards to include in 2023 DP3. 3. CPT to submit via One Drive uploads relevant plans,

	• Man-made hazards identified during public outreach efforts for the 2018 DP3 include:
	  ○ Cyber Attack, Terrorism, Active Shooter, Civil Unrest, Environmental Emergency
	• MDEM 2021 HOCs:
	  ○ Natural Hazards:
	  ▪ Coastal Hazards
	  ▪ Dam Failures
	  ▪ Drought
	  ▪ Extreme Temperatures
	  ▪ Floods
	  ▪ Soil Movement
	  ▪ Public Health Emergencies
	  ▪ Thunderstorm
	  ▪ Tornado
	  ▪ Wildfires
	  ▪ Wind
	  ▪ Winter Storm
	  ○ Man-made/Human-Caused Hazards
	  ▪ Active Shooter
	  ▪ Civil Unrest
	  ▪ Cyber Attack
	  ▪ Nuclear Incidents
	  ▪ Terrorism
	  ▪ Transportation Accidents
	• Participants noted that the City owns dams outside of the City's boundaries in Baltimore County; recommended that these are included in the Risk Assessment.
	• Data Collection:
	  ○ Plans to review for integration
	  ○ GIS data
	  ○ FEMA CAVs
	  ○ Current and projected developments
		documents, data to integrate into 2023 DP3.

7	Questions and Discussion • Discussion on potential HMAC members • Discussion on staying current with other City Plan updates • Discussion on Plan adoption process • Discussion on reducing the number of action items ○ Combine actions, be broad but narrow	-
8	Next Steps • CPT to provide recommendations for HMAC membership • CPT and Tetra Tech to continue data gathering efforts to being the Risk Assessment	1. CPT requested meetings be held on Fridays; BoS to schedule meetings for the

	• CPT to review the 2018 DP3, specifically the framework and structure • Intent for CPT to meet bi-weekly	remained of the planning process.

1. Are there any boards, commissions, agencies, organizations, or department you would like to see involved with the 2023 DP3 Update? (Participating agencies from 2018 are on the next sheet)

Recommended Sections to Include: Public Safety, Building Code Enforcement, Parks and Recreation, Planning/Community Development, Public Information Office, Transportation, State Emergency Management and NFIP, Regional Organizations.

Baltimore Social-Environmental Coalition (BSEC), this will have similar researchers from BES - Ben Zaitchik zaitchik@jhu.edu.

Blue Water Baltimore - Tony Bridges (Executive Director), tbridges@bluewaterbaltimore.org

South Baltimore Gateway Partnership - Reimagine Middle Branch Initiative, includes a large living shoreline project. Brad Rogers brogers@sbgpartnership.org

Baltimore Industrial Group - combo of other groups. http://baltimoreindustrialgroup.com/index.html. Rupert Denney r.denney@us.steinweg.com is on the board.

Interfaith Partnership of Chesapeake -- connection to religious organizations. Bonnie Sorak bonnie@interfaithchesapeake.org

Urban Sustainability Directors Network, Kristin Baja baja@usdn.org

Baltimore Metropolitan Council - Eileen Singleton led the BMC Climate Change Resource Guide, esingleton@baltometro.org

Mayor's Office of Infrastructure Development - Matt Garbark, Director. Matthew.Garbark@baltimorecity.gov

Maryland Port Authority

The Greater Baltimore Committee

Baltimore City Office of Equity and Civil Rights/ Equity Coordinators

Mayor's Commission on Disabilities

Baltimore City Community Associations

Mayor's Office of Immigrant Affairs

Public Safety Advisory Commission AKA the Citizens Advisory Commission for Public Safety (especially if we're looking at manmade hazards).

Mayor's Office of Neighborhoods

Mayor's Office of Digital Services (Jason Elszaz and Shelby Switzer)

EBCIT

Baltimore City Public School Emergency Management- Austin Seivold, ABSeivold@bcps.k12.md.us

Allen Frenette at Cyber-Security Security Agency (CISA) allen.frenette@cisa.dhs.gov

BUASI/Baltimore Metropolitan Council Jeramie Calandro jcalandro@baltometro.org. She headed completion of regional BUASI THIRA.

2018 Hazard Mitigation Advisory Committee

Baltimore Office of Sustainability	Baltimore City Police Department	Maryland Port Administration	Maryland Historical Trust	Maryland Emergency Management Agency
Office of Emergency Management	Baltimore City Department of Public Works	Maryland Department of Natural Resources	Baltimore City Department of Planning	Waterfront Partnership of Baltimore
Baltimore City Mayor's Office	Baltimore Metropolitan Council	Baltimore Gas and Electric Co	Department of General Services	Baltimore Historical & Architectural Preservation
Federal Emergency Management Agency	KCI Technologies, Inc.	Maryland Insurance Administration	Department of Transportation	Baltimore City Fire Department
Community Leaders	Moffatt & Nichol, Inc.	BCT Architects	SP&D	HealthCare Ready
Baltimore City Health Department	Michael Baker International			

Expanding Participation

BMORE Beautiful	Housing Authority of Baltimore City	Environmental Control Board	Baltimore Sheriff's Office	Baltimore City Youth Commission
John Hopkins University	Baltimore City Law Department	Baltimore City Recreation and Parks	Aging Services	Baltimore Development Corporation
Baltimore City Department of Housing and Community Development	Baltimore City Information & Technology	Mayor's Office of Correspondence and Constituent Services	Baltimore UASI Recovery Committee	Mayor's Office of Infrastructure and Development
Say YES!				

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, March 9, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Hazard Mitigation Advisory Committee**
   - Review proposed HMAC members
   - Discuss goals and objectives of HMAC kickoff meeting

4. **Engagement Strategy**
   - Public Meetings and Workshops
   - BoS website updates
   - StoryMap
   - City's current capabilities and capacity to support
   - Public Engagement Strategy

5. **Organizing Resources**
   - Revisit discussion of the 2018 DP3 planning process
     - Best practices
     - Areas for improvement
     - 2023 vision
     - Framework

6. **Hazard Identification and Risk Assessment**
   - Revisit 2018 Hazards of Concern – what man made hazards should be included?
   - Ask CPT to provide updates and availability on requested data

7. **Questions and Discussion**

8. **Next Steps**

DRAFT

1

Today's Topics

TETRA TECH

SCHEDULE

ENGAGEMENT STRATEGY

ORGANIZING RESOURCES

HAZARD IDENTIFICATION AND RISK ASSESSMENT

QUESTIONS AND DISCUSSION

NEXT STEPS

2

Schedule Details

TETRA TECH

3

Hazard Mitigation Advisory Committee Members

TETRA TECH

4

2023 Proposed HMAC – City

TETRA TECH

Name	Organization
Amy Gilder Busatti, Lindsay Adams	BoS
Chris Ryer, Stephanie Smith, Kyle Leggs, Chad Hayes	Planning
Kimberly Eshleman	Health Department
Fait Leech, Justin Williams	Mayor's Office
Mark Howe, Frederick Gilbart, Sgt. Tom Jugan, Brian Hopkins	BDP
Sophia Hosain	DPW
Alice Huang	Aging Services
Angela McCauley	Mayor's Office of Homeless Services
Jeff Holland, Eric Booker, Shawn Felder	DHCD
Janet Abrahams, Tracey Oliver-Keyser	Housing Authority
Samantha Luckhardt	BCIT
Bryant Smith, Darryl Sutton, Kendra Moore	Recreation and Parks
Candisse Bennett-Parker	Mayor's Office of Correspondence and Constituent Services

5

2023 Proposed HMAC – City

TETRA TECH

Name	Organization
Marwan Alkarajat, Julia Kalloz, Berke Attila	DGS
William Etheridge, Theo Ngongang	DOT
Stacy Montgomery, Lauren Schiszik	Historical and Architectural Preservation
Scott Brillman, James Wallace	Fire Department
Matt Garbark, Graham Young	Mayor's Office of Infrastructure Development
Jason Elszaz, Shelby Switzer	Mayor's Office of Digital Services
Austin Seivoid	Baltimore City Public Schools – Emergency Management

6

2023 Proposed HMAC – External

Name	Organization
Caitlin Whiteleather, Aliyah Russel	MDEM
Joshua Norris	FEMA
Chaya Deitsch	Balt. Co. Sheriff's Office
Laurie Schwartz	Waterfront Partnership of Baltimore
Ellen Singleton, Jeramie Calandro	Baltimore Metropolitan Council
Yorell Tuck	Stillmeadow Community Fellowship
Tracy Williams	KCI Technologies, Inc.
Barbara McMahon, Terry Horrocks	Maryland Port Administration
John Quinn	BGE
Mary Jo Rogers, Joy Hatchett	Maryland Insurance Administration
Craig Purcell	BCT Architects
Angie Im, Tom Cotter	HealthCare Ready
Ben Zaitchik	Baltimore Social-Environmental Coalition (BSEC) / JHU

7

Engagement Strategy

- Public Meetings and Workshops
- BoS website updates
- StoryMap
- Public Engagement Strategy

10

2023 Proposed HMAC – External

Name	Organization
Tony Bridges	Blue Water Baltimore
Brad Rogers	South Baltimore Gateway Partnership
Rupert Denney	Baltimore Industrial Group
Bonnie Sorak	Interfaith Partnership of Chesapeake
Allen Frenette	Cyber-Security Agency (CISA)

8

Engagement Strategy

- Two-way communication
  - A forum to provide updates on the status of the plan, but also receive information to guide the development and vision of the plan
  - Identify opportunities for 1-on-1 engagements and focus groups
- Schedule early and often
  - Identify times and days that will work for the targeted audience; maintain contact throughout the process
- Meaningful Participation
  - Communicate the role of each sector in the mitigation process; recommend who should be represented for each meeting
  - Provide information in multiple formats to accommodate varying learning styles
  - Leverage opportunities for integration

11

Still Need Recommended Representatives

- Baltimore Development Corporation
- Law Department
- DPW – Wastewater
- Maryland Historical Trust
- BMORE Beautiful
- The Greater Baltimore Committee
- Office of Equity and Civil Rights
- Baltimore Cit y Community Associations

9

Revisiting the 2018 DP3

BEST PRACTICES

AREAS FOR IMPROVEMENT

2023 VISION

12

2018 DP3 Mitigation Goals

TETRA TECH

1. Protect the health, safety and welfare of Baltimore City residents and visitors.
2. Prevent damage to structures, infrastructure, and critical facilities.
3. Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).
4. Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that exceed past experience.
5. Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.
6. Provide support to increase efforts toward a better Community Rating System (CRS) community rating.

13

2018 DP3 Recommendations for Moving Forward

TETRA TECH

- Continue planning efforts centered on increasing community resilience, including ongoing formalization and expansion of Resiliency Hubs.
- Use community resilience initiatives to address varying regional concerns.
- Broaden public outreach and engagement efforts to include greater representation from all Baltimore neighborhoods and communities in planning efforts.
- Introduce solutions-oriented public engagement practices designed to solicit community-driven solutions.

14

2018 DP3 Recommendations for Moving Forward

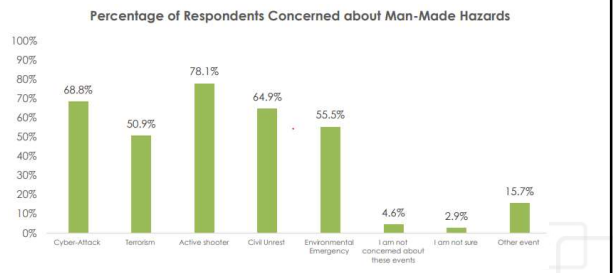
TETRA TECH

- Determine a strategy for incorporating information on vulnerable populations collected during the development of this plan.
- Use public feedback to identify vulnerable populations and specify vulnerable populations to the greatest extent possible.
- Develop criteria and a strategy for integrating man-made hazards into the next DP3 with input from the public at the outset.
- Integrate food resilience into mitigation and preparedness efforts.
- Integrate Historic and Cultural Resources Hazard Mitigation Strategy.

15

2018 DP3 Community Survey Results

TETRA TECH



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Data Collection

TETRA TECH

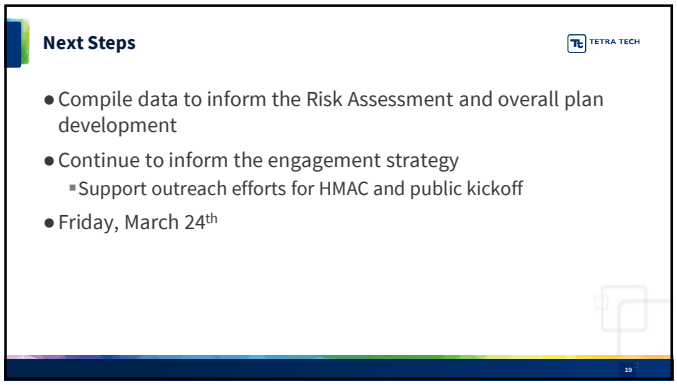
- Existing plans to integrate: *Comprehensive Plan, Climate Adaptation Plan, Solid Waste Management Plan*
- Critical Facilities Data: *City reps. have populated Tetra Tech "wish list", Tetra Tech will review and begin process to obtain data; does City have GBS data?*
- FEMA CAV request
- Land Use and Development (new major development since 2018, planned major developments, number of construction permits issued)
- Dam data (location, inundation areas, etc.): *Will be made available by DPW*
- Climate Change data
- Socially Vulnerable Populations data

17

Questions and Discussion

TETRA TECH

18


Next Steps
TETRA TECH
Compile data to inform the Risk Assessment and overall plan development
Continue to inform the engagement strategy
Support outreach efforts for HMAC and public kickoff
Friday, March 24th
19

19

Project Contacts
TETRA TECH
Aubrey Germ
Baltimore Office of Sustainability
Climate and Resilience Planner
aubrey.germ@baltimorecity.gov
JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
jaleesa.tate@tetratech.com
20

20

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Kick-Off Meeting
Location of Meeting:	Teleconference
Date of Meeting:	March 10, 2023 @ 10:00AM

Attendees:

- Bruna Attila, Baltimore Office of Sustainability (Coastal Resources Planner)
- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner)
- Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief)
- Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Jamie Williams, Baltimore Department of Planning (City Planner Supervisor)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- JaLeesa Tate, Tetra Tech (Project Manager)

Agenda Summary: The purpose of the meeting was to review updates to the schedule based on previous feedback, finalize the identification of Hazard Mitigation Advisory Committee Members, and establish a vision for the 2023 planning process and DP3.

Item No.	Description	Action item(s):
1	Welcome	-

2	Schedule Updates
	• Based on feedback during the CPT kickoff meeting the schedule was revised to accommodate sufficient time to submit the final draft plan to the Planning Commission in line with their meeting schedule. This resulted in the following revisions to the schedule:
	  o Website updates and Storymap develop pushed by one month into April.
	  o Risk Assessment and Capability Assessment pushed one month into April. This will also necessitate pushing the public Risk Assessment meeting by 1 month.
	  o CPT/HMAC draft plan review moved up to July.
	  o Public review moved up by 2 weeks. The public review will run concurrently with the Planning Commission review and MDEM review.
	• K. Groves recommended Baltimore Office of Sustainability connect with the Mayor's Office of Communications to amplify messaging regarding the DP3.
		1. A. Richardson will coordinate with the Mayor's Office of Communications

3	Hazard Mitigation Advisory Committee (HMAC) • The group reviewed the list recommended HMAC members; the list is a combination of representatives that participated in the 2018 planning process, CPT recommendations, and Tetra Tech recommendations. This list is inclusive and has representation from the FEMA recommended sectors. • The group made live updates and finalized the list.	1. BoS and Tetra Tech will finalize the HMAC membership list, schedule the kickoff meeting, and invite participants.
4	Engagement Strategy • Tetra Tech will develop an outreach strategy, including an interactive StoryMap, provide information to update City websites, create surveys for data gathering, and provide social media graphics for ready-made messaging. The engagement strategy will prioritize the following: o Two-way communication to provide updates on the plan, but also receive information to inform the content of the plan. o Scheduling to maximize participation and accommodate community needs as best as possible. o Meaningful participation focused on communicating each stakeholder's role in the process, providing information in multiple formats to accommodate varying learning styles, and leveraging opportunities for integration with ongoing initiatives. • Participants discussed developing a robust engagement strategy to increase opportunities for engagement of stakeholders and community members, including dedicated opportunities to provide comments and feedback on the content of the DP3. • M. Smith recommended offering hybrid meetings for engagement opportunities.	1. Tetra Tech will prepare the draft engagement strategy for review during the next CPT meeting.
5	Organizing Resources • The group discussed the following recommendations for strengthening the DP3 update and planning process: o Integrating the Nuisance Flood Plan: The plan contains vital information on the status of flood related mitigation actions as well as important data and geospatial shapefiles; the Nuisance Flood Plan will be included as an Addendum to the DP3. o Informing stakeholders how their involvement in the planning process and inclusion of mitigation actions aids in grant eligibility. o Consolidating mitigation actions to improve actionability and provide a clearer pathway for implementation; efforts to consolidate actions should be documented to	-

	ensure it is easy to identify how actions evolved during each update of the DP3. o Stronger incorporation of Community Rating System (CRS) activities for the 2023 DP3. o Inclusion of infographics to make critical information readily available and easier to identify throughout the DP3. o Stronger focus on governance and how governing bodies can support the implementation of the DP3. o The Risk Assessment should include mapping of critical facilities; the Emergency Operations Plan has an annex for critical facilities that can be integrated into the plan.	
6	Hazard Identification and Risk Assessment • Data Collection updates: o Existing plans to integrate: *Comprehensive Plan, Climate Adaptation Plan, Solid Waste Management Plan* o Critical Facilities Data: *City reps. have populated Tetra Tech "wish list", Tetra Tech will review and begin process to obtain data; does City have GBS data?* o Existing plans to integrate: *Comprehensive Plan, Climate Adaptation Plan, Solid Waste Management Plan* o Critical Facilities Data: *City reps. have populated Tetra Tech "wish list", Tetra Tech will review and begin process to obtain data; does City have GBS data?*	1. CPT to discuss Hazards of Concern and make final recommendations to present to HMAC. 2. Outstanding data needs to be addressed by City: Land Use and Development, climate change data, socially vulnerable populations data, and FEMA CAV visit reports. 3. Tetra Tech to continue with data collection efforts.
7	Questions and Discussion • Discussion on pet and large animal safety and preparedness; the Health Department has been coordinating with OEM on an Animal Protection Annex to the Emergency Operation Plan.	-
8	Next Steps • Continue compiling data to inform the Risk Assessment and overall plan development. • Continue to inform the engagement strategy; support efforts for HMAC and public kickoff • Next CPT meeting is scheduled for Friday, March 24th at 10:00am	1. Tetra Tech to prepare meeting materials for HMAC kickoff meeting.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, March 24, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

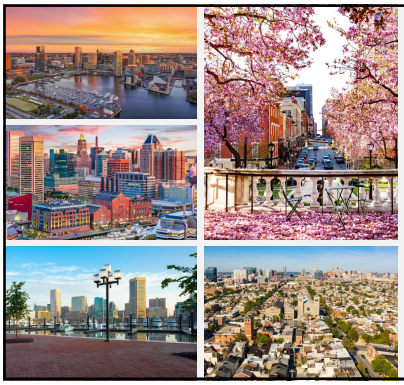
2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Hazard Mitigation Advisory Committee**

4. **Engagement Strategy**

5. **Questions and Discussion**

6. **Next Steps**



Disaster Preparedness and Planning Project (DP3)

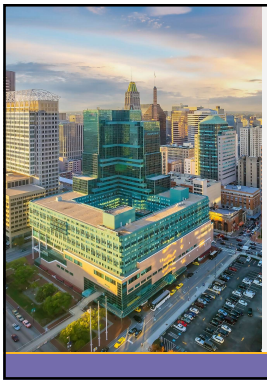
Core Planning Team Meeting #3

1

Topics

- HMAC Kickoff Meeting
- Engagement Strategy
- Questions and Discussion
- Next Steps

2



Hazard Mitigation Advisory Committee (HMAC) Kickoff

April 4 from 3:00 – 5:00 pm

Virtual

3

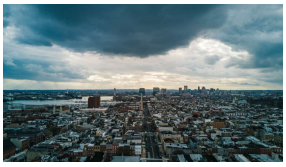
HMAC Kickoff

- Meeting invitation and calendar invite have been distributed.
- Social Equity Subcommittee comprised of community members and advocates.
  - Recommendations for members:
    - Franciscan Center (Resilience Hub)
    - Stillmeadow (Resilience Hub)
    - BUILD Baltimore
    - ***Who else?***

4

Tentative Agenda

- Hazard Mitigation Overview
  - Define hazard mitigation
  - State the reason for updating the plan
- Process Overview
  - 2023 timeline
  - Advisory team roles and responsibilities
  - Review results of hazards of concern survey
  - Identify critical facilities and lifelines
  - Review Engagement Strategy
  - Preliminary status check of 2018 actions



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Activities and Surveys

- **Hazards of Concern survey**: Deploy 1 week prior to the HMAC kickoff; stakeholders will begin to rank what hazards are most concerning, including natural and manmade hazards.
- **Assess what hazards have occurred the most since 2018 DP3**: In-meeting activity with live results, allows the CPT and project team to begin gauging stakeholders' perception of what they are experiencing and ground truth hazards of concerns survey results.
- **Identify critical facilities and lifelines**: In-meeting activity to identify what stakeholders would want to include beyond the FEMA Community Lifelines.
- **Assess challenges experienced when implementing 2018 DP3 actions**: In-meeting activity to identify what barriers exist in order to have the results inform future 2023 planning efforts. Also, provides preliminary status of 2018 DP3 actions.
- ***What additional information would be helpful to gather?***

6

7

Engagement Strategy Purpose and Goals

- Purpose:
  - Roadmap to guide and document stakeholder and community engagement.
  - Living document that will be referenced and updated throughout the process.
- ***What additional goals and values should be incorporated?***
- Goals:
  - Inform stakeholders and community members about risk to natural and manmade hazards.
  - Foster a collaborative process to develop a mitigation strategy to reduce risk.
  - Obtain a better sense of the demographics of individuals actively engaged and participating in the planning process.
  - Implement an equitable engagement process that includes representation from all of Baltimore's neighborhoods and communities.

8

8

Points of Engagement

Milestone	Tentative Date
Public Kickoff Workshop	April 2023
Hazard Profiles Posted for Public Review	June 2023
Public Risk Assessment Workshop	June 2023
Stakeholder Mitigation Action Workshop	July 2023
Public Mitigation Action Workshop	July 2023
Draft available for Review by the Public, Baltimore City Planning Commission, and Maryland Department of Emergency Management	July 17, 2023
Public Review Meeting	August 2023
Final Draft Submitted to FEMA Region III	September 1, 2023
Final DP3 Adopted by City and Approved by FEMA	December 15, 2023

What existing community events, meetings, etc. or City events would be good to participate in?

9

9

Engagement Methods

- Baltimore Office of Sustainability Website
- StoryMap (Interactive Website)
- Social Media
- Email
- Group Presentations

10

10

Surveys

- Surveys:
  - **Public**: Identify the community's exposure to hazards and the location of hazards within the community. https://www.surveymonkey.com/r/DP3PublicSurvey
  - **Stakeholder**: Engage stakeholders (i.e., utilities, transportation, business/commerce, emergency services, health/medical) to collect input in terms of capabilities, vulnerabilities, and potential projects. https://www.surveymonkey.com/r/DP3StakeholderSurvey
  - **Neighboring Jurisdictions**: Neighboring communities will be contacted due to hazard similarities; effects of natural disasters may be similar in surrounding jurisdictions, and involving neighboring communities in the planning process could reap mutual benefits and assist in regional coordination of disaster mitigation planning. https://www.surveymonkey.com/r/DP3NeighborSurvey

11

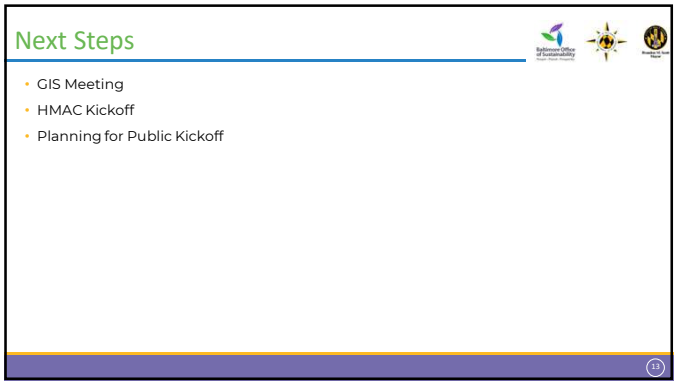
11

Incorporation of CRS Considerations

- Ensure a quorum during HMAC meetings
- Formally recognize the HMAC by the appropriate governing body
- Convene members for each key step in the planning process
- Make meetings open to the public and post meeting schedules publicly
- Hold a public information meeting within two months of the planning process beginning
- Hold a public review meeting
- Provide a public webcast that explains the planning process and solicits input
- Distribute a questionnaire asking the public for information on their natural hazards, problems, and viable solutions
- Promote and document plan integration
- Coordinate with organization outside the City's governance structure
- Include an assessment of SFHA, repetitive loss areas, areas known to flood but not mapped in the SFHA, and surface flooding areas identified in other studies
- Inventory levees and dams

12

12


Next Steps
GIS Meeting
HMAC Kickoff
Planning for Public Kickoff
13

13

Brandon M. Scott
Mayor

Baltimore Office of Sustainability
People • Planet • Prosperity

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	March 24, 2023 @ 10:00AM
Attendees:	• Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research) • Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief) • Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief) • Ava Richardson, Baltimore Office of Sustainability (Director) • JaLeesa Tate, Tetra Tech (Project Manager) • Jessica Stokes, Tetra Tech (Outreach Lead)
Agenda Summary:	The purpose of the meeting was to review the draft Engagement Strategy and to identify key topics for the Hazard Mitigation Advisory Committee kickoff meeting.

Item No.	Description	Action item(s):
1	Welcome	-
2	Hazard Mitigation Advisory Committee (HMAC) • Meeting invitations and calendar invites were sent out by BoS; the group reviewed the tentative agenda and activities/surveys. • A Social Equity Subcommittee will be convened to serve as a dedicated space for community members and advocates; all HMAC meetings are open the public. o The group provided recommendations for members for the Social Equity Subcommittee including the Mayor's Office of Neighborhoods, Cherry Hill Development Corporation, DPW Resident Advisors, South Baltimore Neighborhood Association, and Interfaith Partners for the Chesapeake. • The group discussed opportunities for small businesses to participate in the development of the plan. • The group noted that an assessment was completed previously for community members to self-identify critical facilities and lifelines within the community. • The group noted the importance of including manmade hazards.	1. BoS to invite recommended members to participate on the subcommittee.
3	Engagement Strategy • The group reviewed the key elements of the Engagement Strategy including purpose, goals, milestones, and methods (e.g., social media, flyers, surveys, etc.). o The group recommended including measurable goals.	1. BoS to provide feedback and comments on Engagement Strategy.

	○ The group recommended adding a goal to increase engagement with individuals with limited-English proficiency and/or English as a second language. • The group reviewed social media graphics for ready-made messaging. ○ The Engagement Strategy includes toolkit items for stakeholders and partners to use during community outreach events such as Mayor's Spring Clean Ups, resource fairs, and BCPS Summer Bash events. ○ The City has a PIO group that can also assist is socializing materials. ○ The group recommended reaching out to State partners to assist with outreach efforts. • The Engagement Strategy includes recommendations for the City to potentially gain points in the Community Rating System (CRS).	2. CPT to provide feedback and comments on Engagement Strategy.
4	Questions and Discussion • No additional discussion.	-
5	Next Steps • Conduct GOS focus meeting to review available data, discuss StoryMap, and determine transfer of data. • Continue compiling data to inform the Risk Assessment and overall plan development. • Finalize Engagement Strategy • Finalize materials for HMAC kickoff meeting • Continue planning for Public kickoff meeting • Next CPT meeting is scheduled for Thursday, April 6th at 10:00am	1. Tetra Tech to organize meeting with City GIS contacts and Tetra Tech GIS lead. 2. Tetra Tech to finalize materials for HMAC and develop Public kickoff materials.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, April 5, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Hazard Mitigation Advisory Committee Meeting Debrief**

4. **Public Kickoff Meeting**

5. **Topics for Upcoming CPT Meetings**

6. **Questions and Discussion**

7. **Next Steps**

1

Topics

- HMAC Kickoff Meeting Debrief
- Public Kickoff Meeting
- Topics for Upcoming CPT meetings
- Questions and Discussion
- Next Steps

2

3

Participation

- **Approximately 40 participants**
  - Planning: CHAP, BoS, Comp.
  - Office of Emergency Management
  - Public Works: Research and Environmental Protection, Solid Waste
  - Mayor's Office: Homeless Services, Chief Data Officer, Infrastructure Development, Immigrant Affairs
  - BCIT
  - Baltimore Metropolitan Council
  - Parks and Recreation
  - Department of Transportation
  - Health Department
  - Baltimore Development Corporation
  - Maryland Port Administration (Environmental Manager)
  - Waterfront Partnership
  - Baltimore City Sheriff's Office
  - Maryland Dept. of Emergency Management
  - Maryland Insurance Administration
  - FEMA
  - DHS CISA
  - Johns Hopkins University
  - South Baltimore Gateway Partnership
  - DGS (Energy Division)
  - Maryland Zoo
  - BGE
  - Baltimore Police Department

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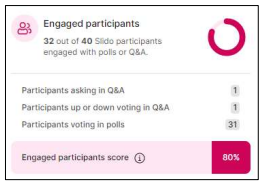
Participation



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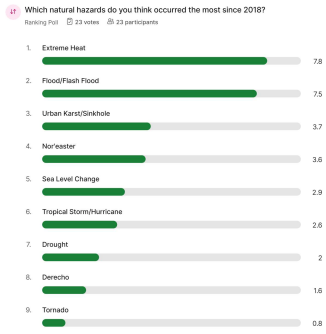
Hazards of Concern

- Defining thresholds (e.g., how is extreme heat measured)
- Metrics for measuring SLC and other gradual (long-term) hazards vs. episodic (event-based) hazards
- Hazards with high risk, but low occurrence
- Human-Caused: terrorism, water quality/contamination, train derailment (hazardous materials release)

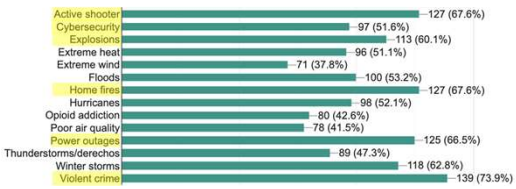


6

Hazards of Concern

Which hazards would you want a disaster preparedness training program to help you prepare for? Our definition of hazards includes natural hazards, technological hazards, and human caused threats. These hazards may have both city-wide and more localized impacts.

188 responses



7

7

Debrief

- Did we meet the objectives of the meeting?
- What was successful?
- What areas are there for improvement?
- Was the meeting interactive and engaging?
  - What other platforms can help boost engagement?
- Thoughts on discussions during the meeting?
  - Did you learn new information?
  - Were you surprised by anything you heard?
- Are there additional organizations who may benefit by participating?
- Recommendations for future meeting topics?
  - What objectives do we want to work towards during HMAC meetings?

10

10

Critical Facilities

What additional critical facilities should be considered?

Open text poll 39 responses 19 participants

- Water Impoundments*
- Stadiums
- Websites
- Maryland First Fiber (fiber and conduit)
- Laboratories
- Convention Center
- Manufacturing Hubs
- Airports*
- Nursing homes
- Senior Centers
- Dialysis Centers
- Data Centers
- Steam Plants / Steam Lines
- Grocery Stores
- Substance Abuse / Recovery Treatment

8

8

HMAC Kickoff

- Follow up materials:
  - Presentation
  - Link to BoS DP3 website and direct link to the 2018 DP3 and Appendix 5-1 All Strategies and Actions
  - Reminder to complete Hazards of Concern Survey
  - Deploy first Stakeholder survey focused on stakeholder capabilities and facilities, preliminary identification of mitigation actions, and assistance provided to socially vulnerable and underserved populations
  - Flyers and social media messaging for Public Kickoff Workshop

11

11

2018 DP3 Implementation

What steps have you taken to implement the 2018 DP3 actions? What challenges did you experience? (Include organization)

Open text poll 3 responses 3 participants

Anonymous
MDEM was likely party of the review process before the plan went to FEMA

Anonymous
BCHD- very difficult to implement many actions from 2018 due to lack of funding and staff to implement actions

Anonymous
Some of the actions felt too generic to confirm completion status.

9

9

Social Equity Subcommittee

- Tetra Tech and BoS will coordinate convening this subcommittee over the next month.
- Call for participants during May Public Kickoff Meeting.
- ***What topics areas should we prioritize for the subcommittee?***

12

12

13

Public Kickoff Meeting

- Conduct Virtually
  - Utilize Slido to encourage participation
  - Based on number of registered attendees may recommend breakout groups for open discussions
- Tetra Tech will set up registration
  - Collect demographic data
  - Collect contact information for future outreach
- Include survey link/QR code on outreach materials
- ***What is needed for Departments, PIOs, etc. to boost messaging?***

14

14

Tentative Agenda

- Welcome
- Purpose of Meeting
- What is the DP3?
- Planning Process
  - 4 Key Components (Organizing, Risk Assessment, Capabilities Assessment, and Mitigation Strategy)
  - Future Opportunities for Engagement
- ***Discussion:*** How have hazards impacted communities and individuals?
- ***Discussion:*** How do communities and individuals prepare for hazards?
- ***Discussion:*** What support (governmental and non-governmental) is needed to aid communities and individuals to prepare, respond, and recover from hazards?
- Final Questions Next Steps
- Closing

15

15

Future Meetings

- ***Do you have leads on meeting spaces?***

16

16

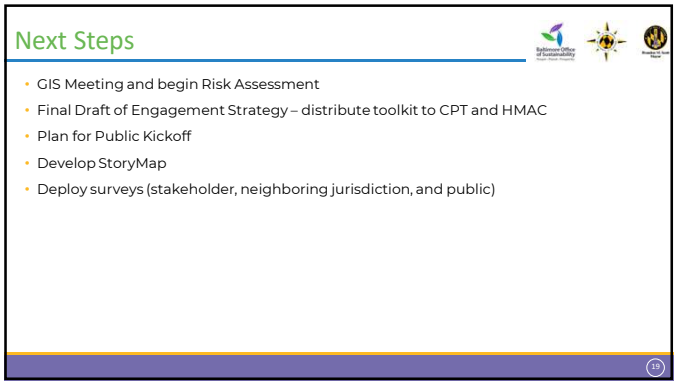
17

Suggestions for topics

- Community Rating System Integration
- ***What else?***

18

18


Next Steps
GIS Meeting and begin Risk Assessment
Final Draft of Engagement Strategy – distribute toolkit to CPT and HMAC
Plan for Public Kickoff
Develop StoryMap
Deploy surveys (stakeholder, neighboring jurisdiction, and public)
19

19

Brandon M. Scott
Mayor

Baltimore Office of Sustainability
People • Planet • Prosperity

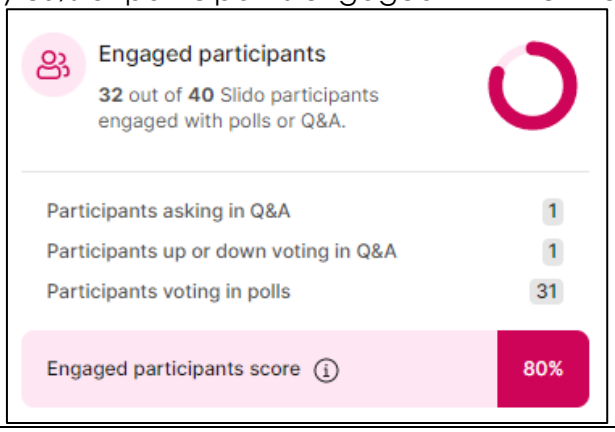
2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

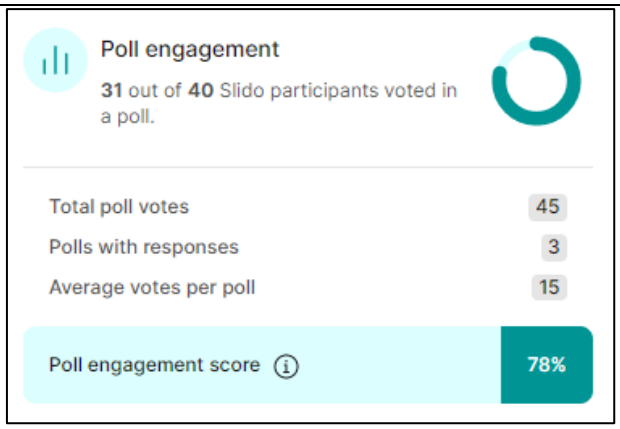
Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	April 05, 2023 @ 10:00AM

Attendees:

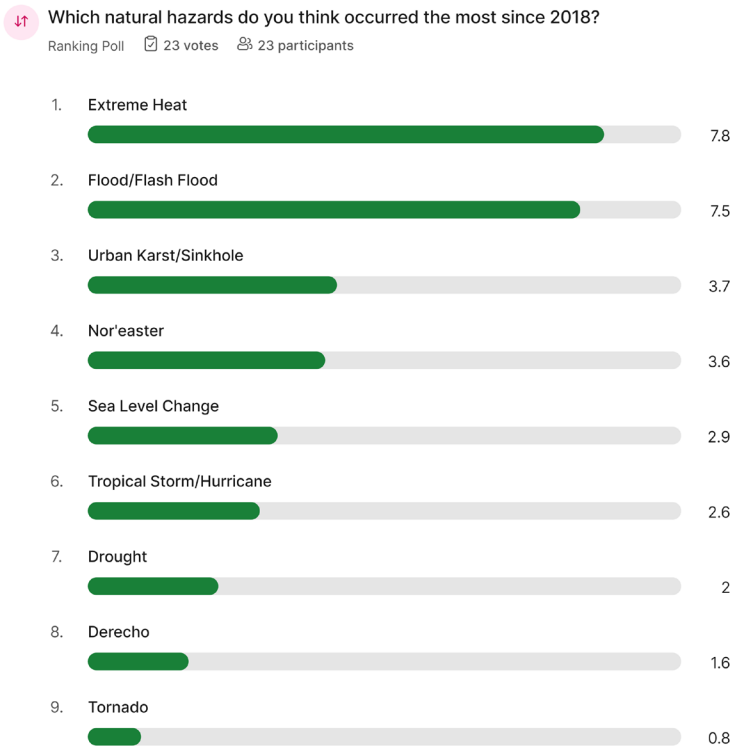
- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner)
- Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief)
- Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Jamie Williams, Baltimore Department of Planning (City Planner Supervisor)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)

Agenda Summary: The purpose of the meeting was to provide a debrief on the April 4, 2023, HMAC Meeting, discuss the upcoming Public Kickoff Meeting, identify topics for upcoming CPT meetings, and identify the next steps in the planning process.

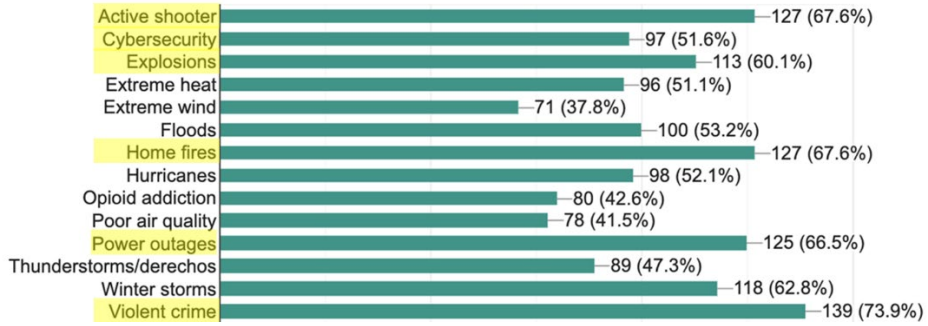
Item No.	Description	Action item(s):
1	Welcome	-
2	HMAC Kickoff Meeting Debrief • 40 participants from various City agencies and stakeholder organizations • Roughly 80% of participants engaged with the interactive tools 	1. BoS to send HMAC the following: Presentation, link to BoS DP3 website, reminder to complete hazards of concern survey and Stakeholder Survey, flyers, and social media messaging for Public Kickoff Workshop.



- Participants responded that extreme heat and flooding events occurred the most during the course of the performance period of the 2018 DP3.



- The project team reviewed a 2018 survey prepared by a BoS/OEM fellow to assess the publics perceptions of human-caused hazards.



- The HMAC identified additional critical facilities which should be considered; these included:
  - Water impoundments, stadiums, laboratories, manufacturing hubs, airports, nursing homes and senior centers, dialysis centers, grocery stores, and substance abuse/recovery treatment centers.
- The HMAC was asked about steps taken to implement the 2018 DP3.

What steps have you taken to implement the 2018 DP3 actions? What challenges did you experience? (Include organization)

Open text poll 3 responses 3 participants

Anonymous
MDEM was likely party of the review process before the plan went to FEMA

Anonymous
BCHD- very difficult to implement many actions from 2018 due to lack of funding and staff to implement actions

Anonymous
Some of the actions felt too generic to confirm completion status.

3	Public Kickoff Meeting
	• Meeting to be held virtually
	• Using interactive tools to encourage participation
	• Reviewed tentative meeting agenda
	  ○ Welcome
	  ○ Purpose of Meeting
	  ○ What is the DP3?
	  ○ Planning Process
	  ▪ 4 Key Components
	  ▪ Future Opportunities for Engagement
	  ○ Discussion: How have hazards impacted communities and individuals?
	  ○ Discussion: How do communities and individuals prepare for hazards?
	  ○ Discussion: What support (governmental and non-governmental) is needed to aid communities and
		1. Tetra Tech to set-up registration

	individuals to prepare, respond, and recover from hazards? o Final Questions/Next Steps o Closing • Any ideas for in-person meeting spaces for future Public Workshop Meetings?	
4	Topics for Upcoming CPT meetings • Community Rating System Integration • Any additional ideas?	-
7	Questions and Discussion • No additional questions or discussion.	-
8	Next Steps • GIS Meeting and begin Risk Assessment • Final Draft of Engagement Strategy – distribute toolkit to CPT and HMAC • Plan for Public Kickoff • Develop StoryMap • Deploy surveys (stakeholder, neighboring jurisdiction, and public)	-

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, April 21, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Public Kickoff Meeting**

4. **2018 DP3 Framework Review**

5. **Questions and Discussion**

6. **Next Steps**

1

Topics

- Status Update
- Public Kickoff Meeting
- Finalizing Hazards of Concern
- Reviewing 2018 DP3 Framework
- Questions and Discussion
- Next Steps

2

3

Schedule Details

4

5

Public Kickoff Meeting

- Registration is Open:
  - https://www.surveymonkey.com/r/DP3PublicWorkshop
- Problem Area Survey:
  - https://survey123.arcgis.com/share/c66d918b4d874f5e9479d64a9288fcd5
- Public Survey:
  - https://www.surveymonkey.com/r/DP3PublicSurvey

6

Tentative Agenda

- Welcome
- Purpose of Meeting
- What is the DP3?
- Planning Process
  - 4 Key Components (Organizing, Risk Assessment, Capabilities Assessment, and Mitigation Strategy)
  - Future Opportunities for Engagement
- ***Discussion:*** How have hazards impacted communities and individuals?
- ***Discussion:*** How do communities and individuals prepare for hazards?
- ***Discussion:*** What support (governmental and non-governmental) is needed to aid communities and individuals to prepare, respond, and recover from hazards?
- Final Questions Next Steps
- Closing

7

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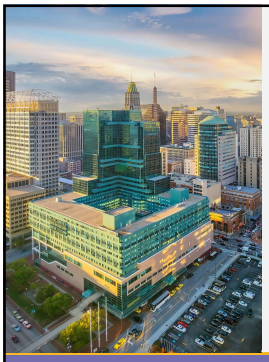


2018 Framework Review

8

8

Next Steps

- Finalize for Public Kickoff
- Develop StoryMap
- Begin Risk Assessment
- Deploy surveys (stakeholder, neighboring jurisdiction, and public)

9

9

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	April 21, 2023 @ 10:00AM
Attendees:	• Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research) • Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner) • Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief) • Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief) • Ava Richardson, Baltimore Office of Sustainability (Director) • Jamie Williams, Baltimore Department of Planning (City Planner Supervisor) • Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager) • Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director) • Nicholas O'Gara (GIS Analyst) • JaLeesa Tate, Tetra Tech (Project Manager) • Jessica Stokes, Tetra Tech (Planner)
Agenda Summary:	The purpose of the meeting was to provide an update on the planning process, review preparations for the upcoming Public Kickoff Meeting, review the 2023 DP3 Update Framework, and identify how it differs from the 2018 DP3.

Item No.	Description	Action item(s):
1	Welcome	-
2	Status Updates • On schedule in planning process. • Tetra Tech is beginning to work on Risk Assessment and Hazard Analysis; the project team has conducted meetings with the City's GIS SMEs.	-
3	Public Kickoff Meeting • Meeting scheduled for May 2, 2023, from 6:00-7:30PM. • Created a flyer which provides an overview to the planning process and describes why the plan is needed. The flyer also has links and QR codes for all surveys and registrations. • Meeting will focus on introducing hazard mitigation and hazard mitigation planning, the intent of the DP3, and how it relates to community members. The second half of the meeting will prioritize facilitated discussions to gather insight from community members.	-
4	2018 Framework Review	-

- Participants compared the 2018 DP3 framework and the suggested framework for the 2023 update. A comparison is provided below:

2018 TOC	2023 Update TOC
Chapter 1: Introduction • Project Overview • Changes for 2013 DP3 • Overview of Methodology • Overview of City of Baltimore • Plan Content	Chapter 1: Introduction • HM Planning Overview • DP3 Vision and changes from 2018 DP3 • Planning Process • Navigating the Plan
Chapter 2: Hazard Mitigation and Climate Adaptation • Introduction • Defining Key Concepts	Chapter 2: City Profile • History, Government, Geography & Environment, Population, Land Use & Development
Chapter 3: Hazard Assessment • Introduction • Hazard Assessment • Sections on each Hazard	Chapter 3: Risk Assessment • Vulnerability Assessment
Chapter 4: Risk and Vulnerability Assessment • Introduction • Vulnerability Tools Used • Assessing General Hazard Vulnerability • Detailed Vulnerability Assessment by Hazard • Selecting Key Vulnerabilities for DP3 Update	Chapter 4: Capability Assessment
Chapter 5: Strategies and Actions • Introduction and Vision • Current Hazard Mitigation & Climate Adaptation Actions • Urban Sectors for Consideration • Update Process • Mitigation and Adaptation Strategies by Sector	Chapter 5: Mitigation Strategy • Goals • Progress on Previous Plan • Existing Efforts • 2023 Actions • Putting Plan into Action
Chapter 6: Plan Implementation, Maintenance, and Revision • Implementation Guidance	Chapter 6: Plan Implementation and Maintenance • Adoption and Assurances • Implementing, Monitoring, and Reviewing Mitigation Actions • Monitoring, Evaluating, and Updating the Plan
Chapter 7: Moving Forward • Introduction • Recommendations for Sustaining Resilience-Building Efforts • Food Resilience • Integrating Historic and Cultural Considerations • Conclusion • Glossary	Chapter 7: Moving Forward
-	Chapter 8: Glossary
-	Chapter 9: References

	• Tetra Tech can combine multiple sections and chapters to cut down length if desired, but FEMA requirements must still be met. • Participants recommended including a description of the intersection of mitigation and adaptation in the introductory chapter.	
5	Questions and Discussion • Participants asked how the plan will address multiple crises occurring at once. o Cascading and compounding hazards will be discussed within each hazard profiles section. • Participants discussed the urban sectors utilized for the 2018 DP3 Mitigation Strategy; in the Infrastructure Urban Section grey and green infrastructure could also be included to integrate FEMA's focus on natural systems.	-
6	Next Steps • Working with GIS partners to obtain data and begin Risk Assessment.	Tetra Tech to contact Baltimore GIS about account information.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, May 5, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Public Kickoff Meeting Recap**

4. **Reviewing 2018 DP3 Vision and Goals**

5. **Hazard Mitigation Advisory Committee Debrief and Reviewing 2018 Mitigation Strategy Structure**

6. **Questions and Discussion**

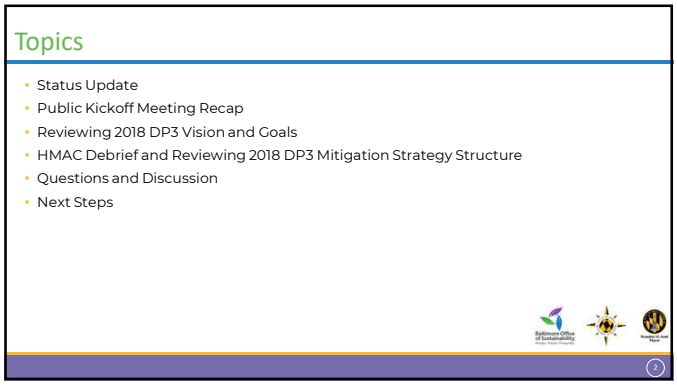
7. **Next Steps**

Disaster Preparedness and Planning Project (DP3)
Core Planning Team Meeting #6

1

Schedule Details
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Jan
Feb
March
Plan Development
Storymap website and Engagement Strategy
Hazard Mitigation Advisory Committee Meetings
Drafting Hazard Analysis and Risk Assessment
Drafting Capability Assessment
Drafting Goals and Mitigation Strategy
Initial Draft Plan
Final Draft Plan
Development of Executive Summaries
Review and Adoption
Review by CPT and HMAC
Public meetings for review and input
Review and Approval by Planning Commission
Plan submittal to MDEM and FEMA review
City and FEMA Approval

4


Topics
Status Update
Public Kickoff Meeting Recap
Reviewing 2018 DP3 Vision and Goals
HMAC Debrief and Reviewing 2018 DP3 Mitigation Strategy Structure
Questions and Discussion
Next Steps
2

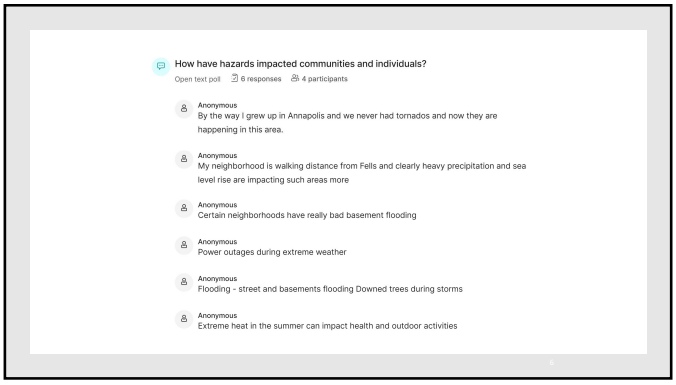
2

Public Kickoff Meeting
May 2, 2023 from 6:00 – 7:30 pm
Virtual
5

5

Status Updates
3

3


How have hazards impacted communities and individuals?
Open text poll
6 responses
4 participants
Anonymous
By the way I grew up in Annapolis and we never had tornados and now they are happening in this area.
Anonymous
My neighborhood is walking distance from Fells and clearly heavy precipitation and sea level rise are impacting such areas more
Anonymous
Certain neighborhoods have really bad basement flooding
Anonymous
Power outages during extreme weather
Anonymous
Flooding - street and basements flooding Downed trees during storms
Anonymous
Extreme heat in the summer can impact health and outdoor activities

6

What support (governmental and non-governmental) is needed to aid communities individuals to prepare, respond, and recover from hazards?

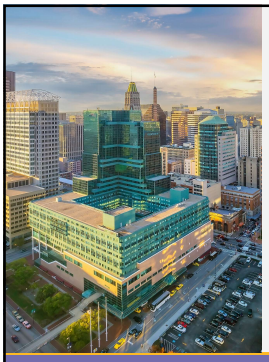
Open text poll | 3 responses | 2 participants

Anonymous
I think more resiliency hubs would be nice. Maybe at the intersection of districts 9,10, and 11

Anonymous
I think multiple of mechanisms for warning notifications to enhance preparedness is important. I hope the BMore Alert improvements mentioned are significant. For instance, just went to web page and it looks like they are phone call recording. Messaging and emails should be options.

Anonymous
I'm not sure. But I think educating local community organizations so they can share info with the community

7



2018 Vision and Goals Review

8

HMAC Debrief and 2018 Mitigation Strategy Structure Review

9

Structure

- **Infrastructure:** Maintaining the quality and necessary capacity of the built public infrastructure that services our daily needs will ensure public safety and economic security. DP3 includes strategies to protect our energy, wastewater, drinking water, and transportation infrastructure, among others.
- **Buildings:** Baltimore has a diverse and extensive collection of buildings in the city, many of which have historical significance. These structures are vulnerable to damage from hazards. Strategies within DP3 improve building design and code to protect against hazards and improve resource conservation.
- **Natural Systems:** Natural systems have the potential to be utilized as a mitigation strategy against climate change. DP3 strategies outline utilization of green corridors, preservation of shoreline areas, as well as water supply management tactics
- **Public Services:** Disaster preparedness and distribution of resources, information, and response plans is key to ensuring public safety and mitigating tragic consequences associated with hazards. DP3 creates coordinated planning and communication efforts, as well as education and outreach.

10

Next Steps

- Develop StoryMap
- Continue Risk Assessment
- Continue socializing surveys (stakeholder, neighboring jurisdiction, public, and problem area)

11

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	May 05, 2023 @ 10:00AM
Attendees:	• Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research) • Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner) • Michelle Smith, Baltimore Office of Emergency Management (Preparedness Section Chief) • Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief) • Ava Richardson, Baltimore Office of Sustainability (Director) • Jamie Williams, Baltimore Department of Planning (City Planner Supervisor) • Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director) • Bruna Attila, • Quentin Kline-Alfano, Baltimore Office of Sustainability (Intern) • JaLeesa Tate, Tetra Tech (Project Manager) • Jessica Stokes, Tetra Tech (Planner) • Grace Altenburg, Tetra Tech (Planner)
Agenda Summary:	The purpose of the meeting was to provide an update on the planning process, recap the public kickoff meeting, review 2018 DP3 vision and goals, debrief the HMAC meeting, and review the 2018 DP3 mitigation strategies.

Item No.	Description	Action item(s):
1	Welcome	-
2	Status Updates • The StoryMap is currently being developed; it is an interactive website to keep public informed, provided meeting information, host surveys, and make the draft plan accessible. • Engagement Strategy is ongoing • June workshops will be adjusted to account for delays with receiving GIS data and subsequently beginning to conduct the Risk Assessment. • Continuing to meet with City SMEs to identify and obtain GIS data.	-
3	Public Kickoff Meeting Recap • Meeting was held May 2, 2023, from 6:00-7:30PM • Seven residents participated - provided feedback based on diverse backgrounds • Conducted polling to prompt discussion. Responses to polling questions are provided below:	-

	How have hazards impacted communities and individuals? Open text poll 6 responses 4 participants Anonymous By the way I grew up in Annapolis and we never had tornados and now they are happening in this area. Anonymous My neighborhood is walking distance from Fells and clearly heavy precipitation and sea level rise are impacting such areas more Anonymous Certain neighborhoods have really bad basement flooding Anonymous Power outages during extreme weather Anonymous Flooding - street and basements flooding Downed trees during storms Anonymous Extreme heat in the summer can impact health and outdoor activities What support (governmental and non-governmental) is needed to aid communities individuals to prepare, respond, and recover from hazards? Open text poll 3 responses 2 participants Anonymous I think more resiliency hubs would be nice. Maybe at the intersection of districts 9,10, and 11 Anonymous I think multiple of mechanisms for warning notifications to enhance preparedness is important. I hope the BMore Alert improvements mentioned are significant. For instance, just went to web page and it looks like they are phone call recording. Messaging and emails should be options. Anonymous I'm not sure. But I think educating local community organizations so they can share info with the community • Participants recommended combining DP3 outreach efforts with other planned events in order to leverage community participation during the planned events. • Participants provided recommendations for public meeting venues (e.g., Reedbird Park Recreation Center, the National Aquarium, etc.)	
6	Reviewing 2018 DP3 Vision and Goals • Participants engaged in a working session to review, revise, and update the vision and goals from the 2018 DP3. o ***Vision***: Baltimore will be a City whose daily activities reflect a commitment shared by a government business, and citizens to reduce or eliminate impacts from current and future natural hazards. ▪ Suggested revisions to add the following language: 'all people who work, live, and play in the City', 'resilient', human-caused hazards', and 'equity'.	CPT to complete Jam Board (https://jamboard.google.com/d/17LS6P8fxDLzK23xzU14H5JNCz5bYCQgCkCSAFn1rC8g/edit?usp=sharing)

	○ ***Goal 1***: Protect the health, safety, and welfare of Baltimore City residents and visitors. ▪ Suggested revisions: include private sector and businesses; include 'all people who work, live, and play in the City'. ○ ***Goal 2***: Prevent damage to structures, infrastructure, and critical facilities. ▪ Suggested revisions: focus on disruption to operations and systems rather than facilities. ○ ***Goal 3***: Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private). ▪ No suggested revisions. ○ ***Goal 4***: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience. ▪ No suggested revisions. ○ ***Goal 5***: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore. ▪ No suggested revisions. ○ ***Goal 6***: Provide support to increase efforts toward a better Community Rating System (CRS) community rating. ▪ No suggested revisions.	
7	HMAC Debrief and Reviewing 2018 DP3 Mitigation Strategy Structure • **Infrastructure:** Maintaining the quality and necessary capacity of the built public infrastructure that services our daily needs will ensure public safety and economic security. DP3 includes strategies to protect our energy, wastewater, drinking water, and transportation infrastructure, among others. • **Buildings:** Baltimore has a diverse and extensive collection of buildings in the city, many of which have historical significance. These structures are vulnerable to damage from hazards. Strategies within DP3 improve building design and code to protect against hazards and improve resource conservation. • **Natural Systems:** Natural systems have the potential to be utilized as a mitigation strategy against climate change. DP3 strategies outline utilization of green corridors, preservation of shoreline areas, as well as water supply management tactics • **Public Services:** Disaster preparedness and distribution of resources, information, and response plans is key to ensuring public safety and mitigating tragic consequences associated with hazards. DP3 creates coordinated planning and communication efforts, as well as education and outreach.	-
8	Questions and Discussion	-

	• No additional questions or discussion.	
8	Next Steps • Continue development of StoryMap • Continue Risk Assessment • Continue socializing surveys (stakeholder, neighboring jurisdiction, public, and problem area)	-

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, May 19, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Review Revised Vision and Goals**

4. **Resilience Authority: City of Baltimore Council Bill 23-0385**

5. **FEMA Mitigation Action Categories**

6. **2018 Action Prioritization Criteria**

7. **Questions and Discussion**

8. **Next Steps**

Disaster Preparedness and Planning Project (DP3)

Core Planning Team Meeting #7

1

Topics

- Status Update
- Review Revised Vision and Goals
- Resilience Authority
- 2018 Action Review Criteria
- Questions and Discussion
- Next Steps

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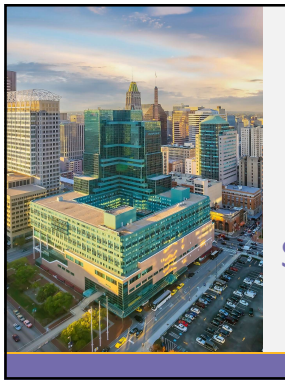
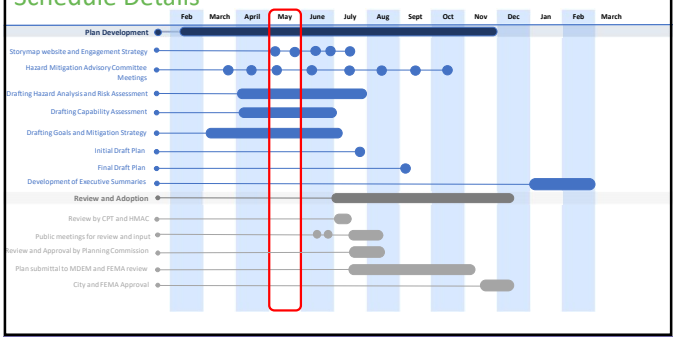


Status Updates

3

Schedule Details



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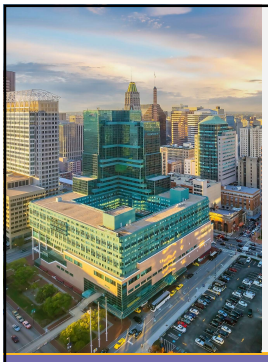


Review Revised Vision and Goals

5

2018 DP3	2023 Revisions
Vision: Baltimore will be a city whose daily activities reflect a commitment shared by government, business, and citizens to reduce or eliminate impacts from current and future natural hazards.	**Vision:** Baltimore is a resilience city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future natural and human-caused hazards.
Goal 1: Protect the health, safety and welfare of Baltimore City residents and visitors.	**Goal 1:** Ensure the equitable protection of the health, safety and welfare of all people who work, live, and play in the City.
Goal 2: Prevent damage to structures, infrastructure, and critical facilities.	**Goal 2:** Build the resilience of critical government and community functions, including facilities, services, and systems, to reduce or prevent impacts from hazard events.
Goal 3: Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).	No changes.
Goal 4: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience.	No changes.
Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.	No changes.
Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) community rating.	**Goal 6:** Provide support to increase efforts toward a better Community Rating System (CRS) classification.

6

7

8

2018 Action Prioritization Criteria

- Corrections to or deletion of the action.
- Are you still the lead agency for the actions?
- Has there been any change in the timeframe?
  - Short (<2 years), Medium (2-5 years), Long (>5 years)
- Has the Status of the action changed? Provide reasons for why there was no movement in past five years or lessons learned from progress made.
  - Still pending, Very early stages, Early stages, Mid stages, Advanced, Implemented/Ongoing
- Are there Performance Metrics that were developed and were implemented in the past 5 years?
- Are there any known changes to the priority of this action?

9

10

Next Steps

- Finalize StoryMap
- Finalize Social Media Graphics
- Continue Risk Assessment and plan development
- Continue socializing surveys (stakeholder, neighboring jurisdiction, public, and problem area)
- HMAC meeting Tuesday, May 30th @ 2:00 p.m.
- Topics for Next CPT Meeting:
  - HMAC Meeting Debrief
  - Public Workshop Preparations

11

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	May 19, 2023 @ 10:00AM

Attendees:

- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Jamie Williams, Baltimore Department of Planning (City Planner Supervisor)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- Bruna Attila, Baltimore Office of Sustainability (Coastal Resources Planner)
- Quentin Kline-Alfano, Baltimore Office of Sustainability (Intern)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)
- Grace Altenburg, Tetra Tech (Planner)

Agenda Summary: The purpose of the meeting was to provide an update on the planning process, review revised goals, identify mitigation action categories, and discuss the 2018 DP3 action prioritization criteria.

Item No.	Description	Action item(s):
1	Welcome	-

2	Status Updates
	• Outreach Update: Survey Responses
	  ○ 47 public, 9 stakeholder, and 1 neighboring
	  ○ Developed new social media and outreach materials
	  ○ Anticipating StoryMap Roll Out on May 29th
	• Public Workshop and HMAC meeting dates scheduled, and invitations distributed.
	  ○ Project team will serve as a vendor/booth representative during the Annual Sustainability Open House; this will serve as the risk assessment public workshop.
	• Continuing to collect data for Risk Assessment – met with City GIS SME to gather additional data.
		BoS will continue to identify opportunities for in-person engagements.

3	Review Revised Vision and Goals • Participants reviewed previous suggestions for updating the 2023 vision and goals; suggested edits are shown below in blue text.	Tetra Tech will make the suggested changes and distribute the goals to the CPT through email for additional feedback.

2018 DP3 Vision	2023 Revised Vision
Baltimore will be a city whose daily activities reflect a commitment shared by government, business, and citizens to reduce	Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current

	or eliminate impacts from current and future natural hazards.	and future natural and human-caused hazards.
	Comments: • Participants recommended stating 'climate-resilient' city.	
	2018 DP3 Goal	2023 Revised Goal
	Goal 1: Protect the health, safety and welfare of Baltimore City residents and visitors.	Goal 1: Ensure the equitable protection of the health, safety and welfare of all people who work, live, and play in the City.
	Comments: • Participants recommended restricting the sentence to read 'Equitably protect the health, safety, and welfare of those who work, live, and plan in the City'. • Participants discussed how to integrate social vulnerability into the goal.	
	Goal 2: Prevent damage to structures, infrastructure, and critical facilities.	Goal 2: Build the resilience of critical government and community functions, including facilities, services, and systems, to reduce or prevent impacts from hazard events.
	Comments: • Participants recommended omitting 'functions' in order to streamline the goal and ensure the focus is on the facilities, services, and systems with the City.	
	Goal 3: Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).	Goal 3: No changes.
	Comments: • Participants discussed the overall intent of this goal and the specific terminology applied in the goal; participants noted that the terminology (e.g., disaster prevention, planning) may have different meanings in different sectors and disciplines.	
	Goal 4: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience.	Goal 4: No changes.
	Comments: • Participants discussed the structure of the goal and how the goal prioritizes integrating climate change data.	
	Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.	Goal 5: No changes.
	Comments: • No comments	
	Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) community rating.	Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) classification.
	Comments: • Suggested change to correct terminology utilized by the CRS program.	
6	Resilience Authority: City of Baltimore Council Bill 23-0385 (facilitated by Ava, BoS) • There is new legislation requiring reporting on resilience focused planning efforts. • The Climate Action Plan and DP3 cover numerous items required by the proposed legislation; BoS is assessing what specific items are covered by each plan and what will require additional measure.	
7	FEMA Mitigation Action Categories • 2018 DP3 Mitigation Structure o Infrastructure	**Tabled to CPT #8**

	○ Buildings ○ Natural Systems ○ Public Services • FEMA Mitigation Types ○ Local Plans and Regulations ○ Structure and Infrastructure Projects ○ Natural Systems Protection ○ Education and Awareness Programs	
8	2018 Action Prioritization Criteria • Corrections to or deletion of the action • Are you still the lead agency for the actions? • Has there been any change in the timeframe? ○ Short (<2 years), Medium (2-5 years), Long (>5 years) • Has the Status of the action changed? Provide reasons for why there was no movement in past five years or lessons learned from progress made. ○ Still pending, Very early stages, Early stages, Mid stages, Advanced, Implemented/Ongoing • Are there Performance Metrics that were developed and were implemented in the past 5 years? • Are there any known changes to the priority of this action?	**Tabled to CPT #8**
9	Questions and Discussion • No additional questions or discussion.	-
10	Next Steps • Develop StoryMap • Continue Risk Assessment • Continue socializing surveys (stakeholder, neighboring jurisdiction, public, and problem area) • Topics for Next Meeting: ○ HMAC Meeting Review ○ Public Workshop Preparations	-

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, June 2, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Hazard Mitigation Advisory Committee Debrief**

4. **StoryMap**

5. **Outreach Materials**

6. **Preliminary Public Survey Results**

7. **Sustainability Open House Preparations**

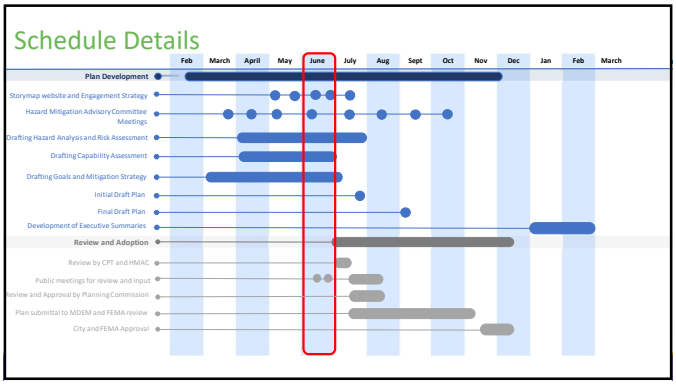
8. **Questions and Discussion**

9. **Next Steps**

Disaster Preparedness and Planning Project (DP3)

Core Planning Team Meeting #8

1



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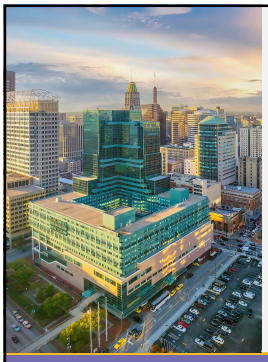
Topics

- Status Update
- HMAC Meeting Debrief
- Preliminary Public Survey Results
- Public Workshop Preparations
- Questions and Discussion
- Next Steps

2



HMAC Meeting Debrief

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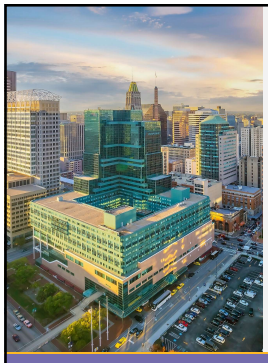


Status Updates

3

- Finalized vision and goals for the 2023 DP3.
- Reviewed outreach materials and discussed a variety of social media platforms and offices to reach a wider audience.
  - Everbridge, Facebook groups, Public City meetings, NextDoor, etc.
  - Hard copies distributed to office waiting rooms (ex. BCHD Clinic).
- Public and stakeholder survey was distributed.
- Email template language was provided to HMAC members to send out surveys to their networks.

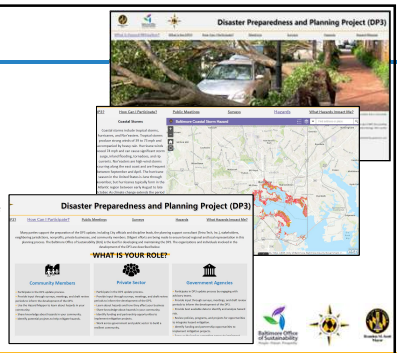
2023 Finalized Vision and Goals
Vision: Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future natural and human-caused hazards.
Goal 1: Ensure the equitable protection of the health, safety and welfare of all people who work, live, and play in the City.
Goal 2: Build the resilience of critical government and community functions, including facilities, services, and systems, to reduce or prevent impacts from hazard events.
Goal 3: Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).
Goal 4: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience.
Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.
Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) classification.

6

Story Map

- Interactive public facing plan website
- Explains hazard mitigation and the planning process
- Resource for upcoming public meeting dates and the public survey
- Provides definition and location of hazards of concern
- Community members can search their address to see what hazards they may be impacted by

Follow the link in the meeting chat to look!



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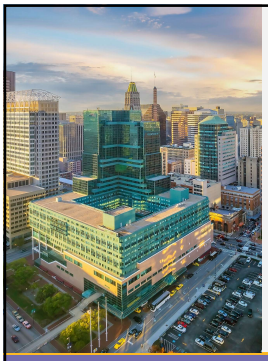


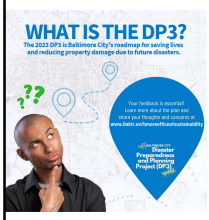
Baltimore Office of Sustainability

Brandon M. Scott Mayor

Preliminary Survey Results

10

Outreach Materials



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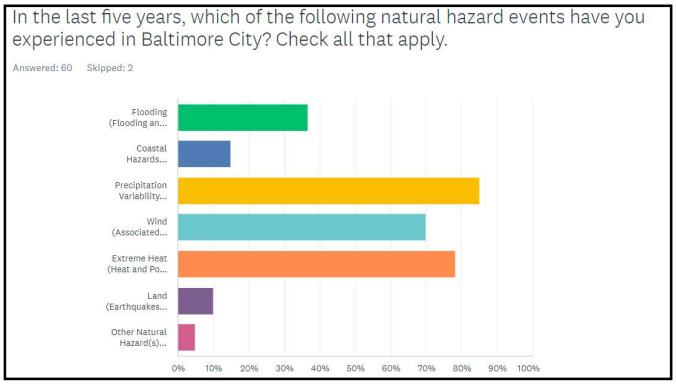

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Outreach Materials

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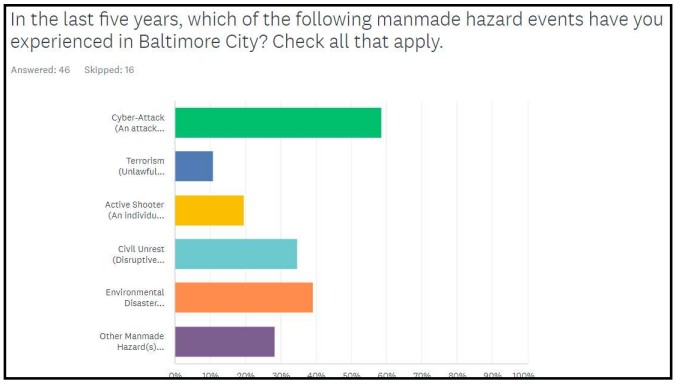

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Sustainability Open House Preparations

- Messaging for "What is the DP3?" and "How Can I Participate?"
- Computer available for community members to use the 'Hazard Mapper' from the StoryMap and search their address to identify what hazards may impact them.
- Hard copies of surveys in case they want to complete the survey while on-site.
- QR codes/Flyers for surveys and the StoryMap.

14

14

15

Next Steps

- Continue to **assist** with data collection and plan content creation
- Use social media graphics to **inform** the public of the plan update
- **Share** the link to the StoryMap via social media
- Sustainability Open House **June 21st at 4:30 p.m.**
- Topics for Next CPT Meeting:
  - Reviewing 2018 Mitigation Strategies and Actions
  - Developing the structure for the 2023 Mitigation Strategy

16

16

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	June 02, 2023 @ 10:00AM

Attendees:

- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- Tiffany Gamble-Sanchez, Baltimore Office of Emergency Management (Senior Emergency Planner)
- Quentin Klein-Alfano, Baltimore Office of Sustainability (Intern)
- Nicholas O'Gara, Baltimore Office of Sustainability (GIS Analyst)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)
- Grace Altenburg, Tetra Tech (Planner)

Agenda Summary: The purpose of the meeting was to provide an update on the planning process, debrief the HMAC meeting, showcase the StoryMap and new outreach materials, provide preliminary survey results, and address preparations for the next Public Workshop at the Sustainability Open House.

Item No.	Description	Action item(s):
1	Welcome	-

2	Status Updates
	• Accomplishments to-date:
	  ○ Continuing to conduct risk assessment; sea level rise scenarios have been agreed upon with stakeholder input.
	  ○ StoryMap is complete
	• Next Steps:
	  ○ Work with stakeholders to obtain geospatial data for hazardous materials facilities.
	• Surveys:
	  ○ Survey responses are increasing: 62 public responses, 15 stakeholder responses, and 3 neighboring community responses.
	  ○ BoS has deployed hard copy surveys at numerous community-centric locations and participated in tabling events at community events.
	  ○ Anne Arundel and Baltimore Counties have completed neighboring survey; Howard County input is still needed.
		-

	○ Continue outreach efforts to drive engagement and survey responses. ○ Surveys will close on Sunday, June 25, 2023.	
3	HMAC Meeting Debrief • Finalized 2023 Vision and Goals. • Reviewed outreach materials and identified potential communication platforms to boost efforts (e.g., Everbridge, Facebook groups, City meetings, NextDoor, BCHD clinics, etc.). • Email template sent to HMAC members to send out surveys.	-
6	Story Map • Now live (https://experience.arcgis.com/experience/3c6b15374abb47b3a6aca6645f76fe24). • The StoryMap will be updated continuously throughout the planning process with meeting information and other items.	-
7	Outreach Materials • Social media graphics have been developed specifically for Instagram and Facebook. In addition, flyers available to use during events. • Participants provided the following comments on the items: ○ Emphasis call-to-action (i.e., text in upper righthand corner change to non-cursive, bold lettering and consider repositioning) ○ Emphasis "make our plan, YOUR plan"; focus more on the development of the DP3 rather than individual/family preparedness	-
8	Preliminary Public Survey Results • When asked what natural hazards are most concerning. Respondents indicated extreme heat, precipitation variability (drought and nor'easter), and wind events were the greatest concern. • People had the greatest concern for active shooter and environmental disasters. Many people noted additional manmade hazards as truck traffic and air pollution, sewage backups, and utility interruptions. Comments • Interesting to see Cyber is becoming more concerning to people as time move on; it was ranked lower the last time.	-
9	Sustainability Open House Preparations	-

	• Messaging for "What is the DP3?" and "How Can I Participate?". • Computer available for community members to use the 'Hazard Mapper' from the StoryMap and search their address to identify what hazards may impact them. • Hard copies of surveys in case they want to complete the survey while on-site. • QR codes/flyers for surveys and the StoryMap. Comments: • Provide a map for people to draw on or place pushpins to identify problem areas. • Provide examples of previous disasters and ask what could have been done to better prepare the City; use the photos and ask others to identify location for awareness building. • Try to get information on how to make disaster preparedness less anxiety-inducing; what would make it easier? • Use email to receive images and information from those that attend. • Disaster trivia.	
10	Questions and Discussion • Discussion on upcoming City events which can be used to push outreach about the DP3 update – Baltimore Ecosystem Study is hosting a quarterly meeting focused on flooding which K. Grove will participate and highlight the DP3.	-

11	Next Steps
	• Continue to assist with data collection and plan content creation
	• Use social media graphics to inform the public of the plan update
	• Share the link to the StoryMap via social media
	• Sustainability Open House June 21st at 4:30 p.m.
	• Topics for Next CPT Meeting:
	  o Reviewing 2018 Mitigation Strategies and Actions
	  o Developing the structure for the 2023 Mitigation Strategy
		-

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, June 16, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **2018 Mitigation Categories**

4. **Mitigation Strategies**

5. **Questions and Discussion**

6. **Next Steps**

1

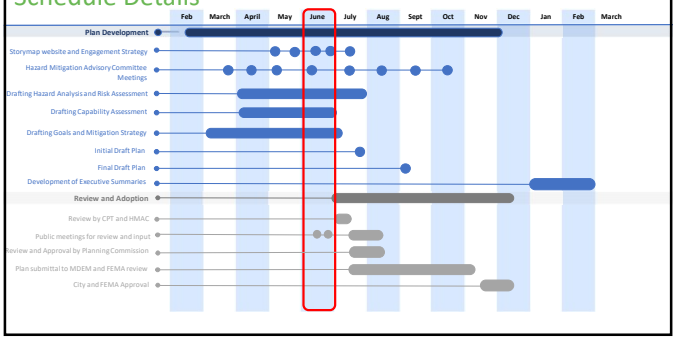
Topics

- Status Update
- 2018 Mitigation Categories
- Mitigation Strategies Review
- Questions and Discussion
- Next Steps

2

3

Schedule Details



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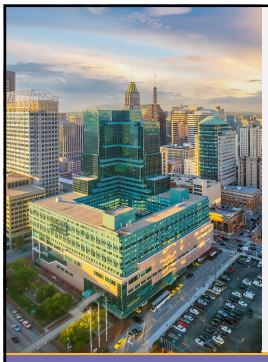

2018 Mitigation Categories

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2018 Mitigation Categories

- **Infrastructure**
  - Water systems distribution and treatment, schools and municipal buildings, transit systems, and other core assets
- **Buildings**
  - Homes, cultural institutions, offices, schools and universities, historic landmarks, critical facilities, community establishments, and places of worship
- **Natural Systems**
  - Trees, streams, vegetation
- **Public Services**
  - Relating to public health and human services are concerned with distributing information, building resources, improving communication, and establishing response plans

6

FEMA Mitigation Categories

- **Local Plans and Regulations (LPR)**
  - These actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built. These actions also include the development of strategic and operational plans which integrate mitigation.
- **Structure and Infrastructure Project (SIP)**
  - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- **Natural Systems Protection (NSP)**
  - These are actions that minimize damage and losses and preserve or restore the functions of natural systems.
- **Education and Awareness Programs (EAP)**
  - These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

7

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2018 DP3 Strategies

50 Strategies

- Infrastructure: 22
- Buildings: 10
- **Natural Systems: 8**
- **Public Services: 10**

Baltimore DP3 Strategies - Google Jamboard

10

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2023 Mitigation Category Recommendation

- **Infrastructure**
  - Actions that minimize damage and loss to critical infrastructure which protects/removes people from a hazard.
    - Includes water systems, transit systems, distribution systems, culverts, sewer systems, dams, and other core critical assets.
- **Buildings**
  - Actions that minimize damage and loss to existing structures that protect people from a hazard.
    - Includes homes, cultural and historical structures, academic institutions, offices, community establishments, religious institutions, and municipal structures.
    - Includes the policies and codes that influence land and building development.
- **Natural Systems**
  - Actions that minimize damage and losses and preserve or restore the functions of natural systems.
    - Includes utilization of green corridors, preservation of shoreline areas, and water supply management tactics.
- **Public Services**
  - Actions to inform and educate people on hazard information and mitigation practices.
    - Includes the development and implementation of strategic and operational plans.
    - Relates to public health and human services in terms of building resources and improving communication.

8

8

Review Criteria

We ask that when you review the strategies consider the following questions:

- Provide corrections or recommended deletion of the action. The actions are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc.
- Is the lead agency still the same? If not, can you identify which agency should serve as the lead?
- Is the action still relevant to the agency's work?
- Are there any known changes to the priority of this action? Why or why not?
- Has there been any change in the timeframe (Short, Medium, Long)?
- Has the status of the action changed? Provide reasons for why there was no movement in past five years or lessons learned from progress made (Still pending, Very early stages, Early stages, Mid stages, Advanced, Implemented/Ongoing)?
- Are there performance metrics that were developed and were implemented in the past 5 years?

11

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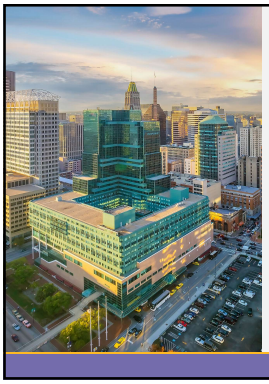

Mitigation Strategies

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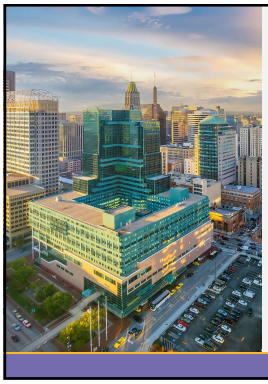


Questions and Discussion

12

12

Next Steps

- Continue to **assist** with data collection and plan content creation
- Use social media graphics to **inform** the public of the plan update
- **Share** the link to the StoryMap via social media
- Sustainability Open House **June 21st at 4:30 p.m.**
- Topics for Next CPT Meeting:
  - Continue review of the 2018 Mitigation Strategies

13

13

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	June 16, 2023 @ 10:00AM

Attendees:

- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- Tiffany Gamble-Sanchez, Baltimore Office of Emergency Management (Senior Emergency Planner)
- Quentin Klein-Alfano, Baltimore Office of Sustainability (Intern)
- Nicholas O'Gara, Baltimore Office of Sustainability (GIS Analyst)
- Rachel Whiteheart, DOP.
- Sandra Moyer, DOP. (Planner)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)
- Grace Altenburg, Tetra Tech (Planner)

Agenda Summary:

Item No.	Description	Actions:
1	Welcome	
2	Status Updates o Continuing to conduct Risk Assessment, we have our planners writing the basis for the hazard profiles and GIS analysts running hazard scenarios for inclusion in those profiles. o We will have a table at the Sustainability Open House on June 21st to showcase the DP3 process. We are developing materials based on comments from our last CPT Meeting, including a disaster jeopardy game, providing copies of surveys for individuals to complete, and utilizing a map so individuals can identify hazard areas they are familiar with. If people have pictures of past hazard events and disasters in the City, please send those to us. o Survey Responses ARE increasing, as of this morning there have been: • Public: 128 • Stakeholder: 27 • Neighboring Community: 4	
3	2018 Mitigation Categories	

Infrastructure
- Water systems distribution and treatment, schools and municipal buildings, transit systems, and other core assets

Buildings
- Homes, cultural institutions, offices, schools and universities, historic landmarks, critical facilities, community establishments, and places of worship

Natural Systems
- Trees, streams, vegetation

Public Services
- Relating to public health and human services are concerned with distributing information, building resources, improving communication, and establishing response plans

FEMA Mitigation Categories

Local Plans and Regulations (LPR)

These actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built. These actions also include the development of strategic and operational plans which integrate mitigation.

Structure and Infrastructure Project (SIP)
- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.

Natural Systems Protection (NSP)
- These are actions that minimize damage and losses and preserve or restore the functions of natural systems.

Education and Awareness Programs (EAP)
- These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

2023 Mitigation Category Recommendation

Infrastructure

Actions that minimize damage and loss to critical infrastructure which protects/removes people from a hazard.
- Includes water systems, transit systems, distribution systems, culverts, sewer systems, dams, and other core critical assets.

Buildings

	Actions that minimize damage and loss to existing structures that protect people from a hazard. • Includes homes, cultural and historical structures, academic institutions, offices, community establishments, religious institutions, and municipal structures. • Includes the policies and codes that influence land and building development. **Natural Systems** Actions that minimize damage and losses and preserve or restore the functions of natural systems. • Includes utilization of green corridors, preservation of shoreline areas, and water supply management tactics. **Public Services** Actions to inform and educate people on hazard information and mitigation practices. • Includes the development and implementation of strategic and operational plans. • Relates to public health and human services in terms of building resources and improving communication.	

6	Mitigation Strategies
	• 50 strategies
	  ○ Infrastructure: 22
	  ○ Buildings: 10
	  ○ Natural Systems: 8
	  ○ Public Services: 10
	
	• Provide corrections or recommended deletion of the action. The actions are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc.
	
	  • Is the lead agency still the same? If not, can you identify which agency should serve as the lead?
	  • Is the action still relevant to the agency's work?
	  • Are there any known changes to the priority of this action? Why or why not?
	  • Has there been any change in the timeframe (Short, Medium, Long)?
	  • Has the status of the action changed? Provide reasons for why there was no movement in past five years or lessons learned from progress made (Still pending, Very early stages, Early stages, Mid stages, Advanced, Implemented/Ongoing)?
	  • Are there performance metrics that were developed and were implemented in the past 5 years?	

7	Questions and Discussion	
8	Next Steps • Continue to **assist** with data collection and plan content creation • Use social media graphics to **inform** the public of the plan update • **Share** the link to the StoryMap via social media • Sustainability Open House **June 21st at 4:30 p.m.** • Topics for Next CPT Meeting: • Continue review of the 2018 Mitigation Strategies	

Notes from Jamboard

Strategy NS-1: Utilize green corridors and parks to help protect surrounding communities from the impacts of hazard events. (Lead Agency: BCRP)
Strategy NS-2: Increase and enhance the resilience and health of Baltimore's urban forest. (Lead Agency: BCRP, Forestry)

Aubrey: this could also include a nod to land trusts like Baltimore greenspace that expand greenspace protection and encourage community stewardship

Ava: These strategies are both still relevant to include.

Elise: Both strategies are still relevant.

Jo: both good strategies. Increasing the amount and size of these spaces also important.

Rachel: For NS-2- urban forest and street trees?; emphasize NGO partnerships; emphasize equity components.

Nick: Not my area of experience/expertise, but I like Aubrey's comment about fostering community stewardship.

Kim: Please include language on managing/ improving the health of the existing forests. There is a lot of emphasis on increasing canopy (new trees), but decreasing loss.

Valerie: Both seem relevant. BNS-1 is short term if they remain focused on utilizing the existing system. It could be expanded to be more specific and call of closing the gaps. NS-2: Should expansion of forested areas be included and more buffer or riparian plantings?

Strategy NS-3: Create an interconnected network of green spaces to support biodiversity and watershed based water quality management. (Lead Agency: DOP)
Strategy NS-4: Expand, protect, and restore riparian areas in the City. (Lead Agency: DOP)

Aubrey: Mention the implementation of the Green Network Plan and other important related plans / regulations - focus NS 4 on maximizing value / effectiveness of existing riparian areas.

Ava: NS4 could be more specific. What approaches should we take, how should we prioritize areas? Based on needs, impacted populations?

Rachel: NS3 - MD DHCD funding options.

Valerie: NS-3 Prioritization would make this more actionable. How does the Green Network Plan feed into this goal? Prioritization of certain areas would make this more actionable. Does the Green Network Plan cover this?

Kim: NS-3 feels very similar to NS-1. NS-2 feels very similar to NS-4. Are the only reason for separation the lead agency?

Strategy NS-5: Preserve and create new coastal buffer efforts and support creating more wetlands and soft shoreline along coastal areas. (Lead Agency: DOP)
Strategy NS-6: Require the City's drought management plan to account for changes in climate. (Lead Agency: DPW)

Aubrey: NS 6 is more of an IN strategy. NS 5 makes sense but also include what plan / regulatory mechanisms could be implemented to help with this (like CAMP).

Ava: NS5 seems like it'd need to include a few other agencies. Not sure who would be most appropriate. Also including WEDG guidelines.

Elise: No change recommended.

Jo: What about resilience strategies for the already highly developed coast in Baltimore?
Kim: Fine to keep.

Strategy NS-7: Integrate climate change and natural hazards planning into small watershed action plans (SWAPs). (Lead Agency: DOP)

Strategy NS-8: Conduct detailed ongoing analysis of climate information, trends in storm events, and hydrology to support policy changes responding to climate change. (Lead Agency: DOP)

Aubrey: NS 7 and 8 lead agency should be DPW.

Ava: NS7 - can we expand to include climate change and natural hazards planning more broadly. Can we be more specifics about the types of policies suggested in NS8.

Kim: NS-7 CRS needs us to think big, not SWAPS. And why is DOP the lead agency? NS-8, how is DOP doing this now?

Rachel: Parts of NS8 related to storm events/hydrology are reliant on state agency actions/updates. May need to hone in more on what Balt City has control over

Strategy PS-1: Strengthen emergency preparedness coordination between local government, NGOs, and private entities by updating the City Emergency Operations Plan (EOP) and related Emergency Support Functions (ESF). (Lead Agency: MOEM)
Strategy PS-2: Develop a Hazard Awareness Program. (Lead Agency: MOEM)

Aubrey: Can PS 1 be reversed such that it reads - Incorporate xyz in EOP and ESF updates; PS 2 can incorporate disaster literacy

Rachel: should PS2 also be integrated across scales (surrounding local govts, state govt, federal agencies)?

Strategy PS-3: Designate community leaders and organizations that can assist and provide support during hazard events. (Lead Agency: MOEM)
Strategy PS-4: Integrate climate change and natural hazards planning into all City and community plans. (Lead Agency: MOEM)

Aubrey: PS 3 and 4 lead agency can likely be DOP; PS 3 can be more geared toward finding and enhancing connections with orgs that are well positioned to provide.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, June 30, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Hazard Mitigation Advisory Committee Meeting Debrief**

4. **Mitigation Strategies**

5. **Questions and Discussion**

6. **Next Steps**

1

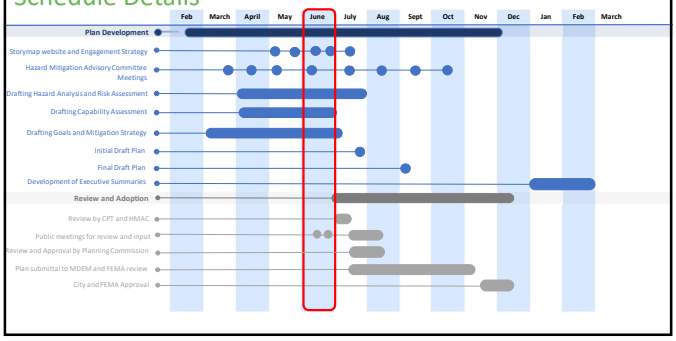
Topics

- Status Update
- HMAC Meeting #4 Debrief
- Continue review of the 2018 Mitigation Strategies
- Questions and Discussion
- Next Steps

2

3

Schedule Details



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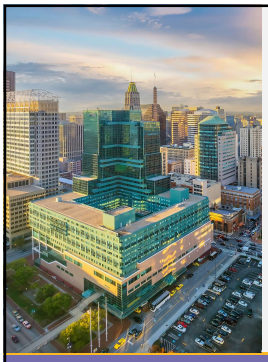

HMAC Meeting #4 Debrief

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HMAC Meeting #4 Debrief

- Solidified the 2023 Mitigation Categories
- Discussed the Sustainability Open House
- Discuss the Equity Subcommittee Meeting
- Reviewed the Preliminary Risk Assessment Results
- Brainstormed Mitigation Strategies

6

7

10

2018 DP3 Strategies

50 Strategies

- **Infrastructure: 22**
- **Buildings: 10**
- ✓ Natural Systems: 8
- ✓ Public Services: 10

Baltimore DP3 Strategies - Google Jamboard

8

8

Next Steps

- Continue to **assist** with data collection and plan content creation
- Use social media graphics to **inform** the public of the plan update
- **Share** the link to the StoryMap via social media
- Plan to **attend** the In-Person Mitigation Strategy meeting
  - Tentative Date and Time: Wednesday, July 19th from 4:30 PM - 6:30 PM
  - Tentative Location: 901 E Fayette St - Aquarium Animal Care Facility
- Topics for Next CPT Meeting:
  - Continue review of the 2018 Mitigation Strategies

11

11

Review Criteria

We ask that when you review the strategies consider the following questions:

- Provide corrections or recommended deletions. The strategies are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc.
- Is the lead agency still the same? If not, can you identify which agency should serve as the lead?
- Is the strategy still relevant to the City's work?
- Are there any known changes to the priority of this strategy? Why or why not?
- Are there performance metrics that were developed and were implemented in the past 5 years?

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2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	June 30, 2023 @ 10:00AM

Attendees:

- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- Tiffany Gamble-Sanchez, Baltimore Office of Emergency Management (Senior Emergency Planner)
- Quentin Klein-Alfano, Baltimore Office of Sustainability (Intern)
- Nicholas O'Gara, Baltimore Office of Sustainability (GIS Analyst)
- Rachel Whiteheart, DOP.
- Sandra Moyer, DOP. (Planner)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)
- Grace Altenburg, Tetra Tech (Planner)

Agenda Summary:

Item No.	Description	Notes:
1	Welcome	
2	Status Updates o Working to finalize the risk assessments. Hazard profiles are continuing to incorporate new analyses from our GIS Team. We are continuing to incorporate feedback received in all sections of the plan. o Survey Responses are increasing.	
3	HMAC Meeting #4 Debrief o Solidified the 2023 Mitigation Categories o Discussed the Sustainability Open House o Discuss the Equity Subcommittee Meeting o Reviewed the Preliminary Risk Assessment Results o Brainstormed Mitigation Strategies	

6	Mitigation Strategies • 50 strategies • **Infrastructure: 22** • **Buildings: 10** • Natural Systems: 8 • Public Services: 10 o Questions to consider when reviewing past actions and strategies: ▪ Provide corrections or recommended deletion of the action. The actions are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc. ▪ Is the lead agency still the same? If not, can you identify which agency should serve as the lead? ▪ Is the action still relevant to the agency's work? ▪ Are there any known changes to the priority of this action? Why or why not? ▪ Has there been any change in the timeframe (Short, Medium, Long)? ▪ Has the status of the action changed? Provide reasons for why there was no movement in past five years or lessons learned from progress made (Still pending, Very early stages, Early stages, Mid stages, Advanced, Implemented/Ongoing)? ▪ Are there performance metrics that were developed and were implemented in the past 5 years?	**B-1 Kim Grove**: The fire stations and police stations make sense as they are city owned. Hazard protection for private properties, what does that entail? B-1 Ava Richardson: should the strategy be to better track and inform hazard mitigation for those facilities? (ex. Hospitals, etc.) **B-1 Elise Whiteford**: we do not reach out to those facilities on whether they are in the floodplain, etc. We are not requiring them to have flood protection. Is there an initiative to start focusing on this? As of right now we do not have this. **B-1 Kim Grove**: OEM may not be the best for lead agency of this strategy. We should look at those routes (evacuation routes) to get to these facilities (hospitals, etc.) and their prone to flooding. B-2 could be broader as it related to floodplain regulations. **B-1 Elise Whiteford**: we have major flooding on some major roads which affect ambulance travel and traffic which can affect human life. **Ava Richardson**: **B-1** Conduct educational outreach for city-owned, residential, commercial, and industrial buildings about proper storage and disposal of hazardous materials and heating oil 2. Require hazardous materials stored in city-owned, residential, commercial, and industrial buildings within the floodplain to be elevated a minimum of 3 feet above the freeboard 3. Require new critical facilities to be designed with redundant operating systems 4. Require pre-wiring for generators at all facilities designated critical to agency operations and hazard response 5. Develop stricter flood regulations for critical facilities 6. Coordinate delivery of fuel and/or access to fuel for critical facility emergency generators. **B-2** Inventory hazard protections for critical facilities including hospitals, fire stations, police stations, hazardous material storage sites, etc. to enhance hazardous materials management practices, flooding protections and energy resilience... **B-3 Kim Groves**: **B-3 and B-2** can be combined. Only difference between in B-3 is that we are looking at it in terms of climate instead of what we have now. **B-4** A lot of focus on the floodplain, but we see a lot of inland flooding outside the regulated floodplain. Input from Housing, on the consideration of French drains and floodproofing for basements. **B-5 Kim Groves**: Just like B-1, this is not just city owned properties? Recommend thinking about the projectiles from wind, not just failure of structure but the projectiles (trees, debris, etc.). More language to incorporate this hazard impact.

		B-5 Ava Richardson: Anything outside of buildings, other things, that could help to protect these structures? Is there a way to capture wind energy? Wind turbines. Does this help to mitigate the impact of high-speed winds? Is there a way we can leverage high winds? **B-5 Elise Whiteford**: Urban design-wise I think the layout of buildings also has an impact on wind patterns. **B-7 Aubrey Germ**: Is this intended to go above and beyond the regulatory floodplain code? Inconsistent language (flood area vs. floodplain). Do the city schools have a sustainability strategy that came out in the last couple years? **Action 2 under B-8** should be updated to be relevant to the name of the city school sustainability strategy today. **B-7, B-8 Kim Grove**: inconsistent. Use language like: "including but not limited to..." **B-7 Ava Richardson**: Could we list the funding programs that would apply to these actions? Do we want to prioritize certain properties in the next 5 years? Prioritize repetitive loss properties. Helps to make these actions more specific and actionable. **B-10 Kim Groves**: For the HAZUS modeling, how does this compare to the results that have been recently released by FEMA in RAFT? Maybe recognize that there are more tools available to utilize. **B-10 Aubrey Germ**: Not sure if there is resources and capabilities to do HAZUS in-house. Perhaps more emphasis on publicly available tools. **B-10 Ava Richardson**: Perhaps centralizing some of these tools. Concerns with lack of coordination and could be duplicative.
7	Questions and Discussion	
8	Next Steps • Continue to **assist** with data collection and plan content creation • Use social media graphics to **inform** the public of the plan update • **Share** the link to the StoryMap via social media	

	• Plan to **attend** the In-Person Mitigation Strategy meeting • Tentative Date and Time: Wednesday, July 19th from 4:30 PM - 6:30 PM • Tentative Location: 901 E Fayette St - Aquarium Animal Care Facility • Topics for Next CPT Meeting: • Continue review of the 2018 Mitigation Strategies	

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, July 14, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **In-Person Mitigation Strategy Workshop**

4. **Mitigation Strategies**

5. **Equity Subcommittee Meeting**

6. **Questions and Discussion**

7. **Next Steps**

1

Topics

- Status Update
- In-Person Mitigation Strategy Workshop
- Upcoming Equity Subcommittee Meeting
- Continue review of the 2018 Mitigation Strategies
- Questions and Discussion
- Next Steps

2

3

Schedule Details

4

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Upcoming In-Person Mitigation Strategy Workshop

- **Date and Time**: Thursday, July 20th from 6:00 PM – 8:00 PM
- **Location**: 901 E Fayette St - National Aquarium Animal Care and Rescue Center
- Small group discussions on the development of the 2023 mitigation strategy and action categories.

6

7

2018 DP3 Strategies

50 Strategies

- **Infrastructure: 22**
- ✓ Buildings: 10
- ✓ Natural Systems: 8
- ✓ Public Services: 10

Baltimore DP3 Strategies - Google Jamboard

10

10

Upcoming Equity Subcommittee Meeting

- Meeting on Monday, July 17th
- Review the Risk Assessment Result
- Identification of community-focused mitigation actions

8

8

Review Criteria

We ask that when you review the strategies consider the following questions:

- Provide corrections or recommended deletions. The strategies are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc.
- Is the lead agency still the same? If not, can you identify which agency should serve as the lead?
- Is the strategy still relevant to the City's work?
- Are there any known changes to the priority of this strategy? Why or why not?
- Are there performance metrics that were developed and were implemented in the past 5 years?

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Next Steps

- Continue to **assist** with data collection and plan content creation
- Use social media graphics to **inform** the public of the plan update
- **Share** the link to the StoryMap via social media
- Plan to **attend** the In-Person Mitigation Strategy meeting
  - Date and Time: Thursday, July 20th from 6:00 PM – 8:00 PM
  - Location: 901 E Fayette St - National Aquarium Animal Care and Rescue Center
  - Topics for Next CPT Meeting:

13

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Status Meeting
Location of Meeting:	Teleconference
Date of Meeting:	July 14, 2023 @ 10:00AM
Attendees:	• Ava Richardson, Baltimore Office of Sustainability (Director) • Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director) • Sandra Moyer, DOP (Planner) • Elise Whiteford, Baltimore Office of Emergency Management (Planning Section Chief) • Aubrey Germ, Baltimore Office of Sustainability (Climate and Resilience Planner) • Tishawna McGowan, Baltimore Office of Emergency Management (Senior Emergency Planner) • JaLeesa Tate, Tetra Tech (Project Manager) • Jessica Stokes, Tetra Tech (Planner) • Grace Altenburg, Tetra Tech (Planner)
Agenda Summary:	

Item No.	Description	Notes:
1	Welcome	
2	Status Updates • Working to finalize the risk assessments. Hazard profiles are continuing to incorporate new analyses from our GIS Team. We are continuing to incorporate feedback received in all sections of the plan. • All surveys are now closed. We will begin exporting and sorting the survey responses to share with the CPT, then incorporating all relevant information into the various sections of the plan.	
3	In-Person Mitigation Strategy Workshop • **Date and Time**: Thursday, July 20th from 6:00 PM – 8:00 PM • **Location**: 901 E Fayette St - National Aquarium Animal Care and Rescue Center • Small group discussions on the development of the 2023 mitigation strategy and action categories.	
6	Equity Subcommittee Meeting	

	• Meeting on Monday, July 17th • Review the Risk Assessment Result • Identification of community-focused mitigation actions	
7	Mitigation Strategies • **Infrastructure: 22** ✓ Buildings: 10 ✓ Natural Systems: 8 ✓ Public Services: 10 Questions to consider when reviewing past actions and strategies: • Provide corrections or recommended deletions. The strategies are copied directly from the 2018 DP3, so please let us know any changes to agencies, etc. • Is the lead agency still the same? If not, can you identify which agency should serve as the lead? • Is the strategy still relevant to the City's work? • Are there any known changes to the priority of this strategy? Why or why not? • Are there performance metrics that were developed and were implemented in the past 5 years?	• Aubrey – Confused on IN-8. Does not feel like a tangible mitigation action. What level is this identifying more routes? • Elise – IN-8 would be DOT as lead agency. OEM and police would support them. • Aubrey- helpful things to have, how to be prepared in an evacuation. What are the components that could be tailored to the citizens. • Ava – I could see how this could be a risk mitigation approach. Prioritizing evacuation routes for future. Could have serious resilience implications. • Ava – was there plans to update one of the tunnels? Howard Street tunnel. How that development is being leveraged. • Ava – maybe related to working with the planning commission. Not sure if planning department has powers to acquire, etc. Okay to keep these lead agencies as is, as most of these projects are federally funded and the actions are very specific. • Aubrey – IN 11 – evaluate is not really an actionable word to use here, suggest promote, incorporate, implement. Etc. • More specific with the strategies IN 11. • Aubrey - #8 in actions, should be further reviewed. • Jessica – the building codes could all be rolled into one action. • Aubrey – broad strategy. Maybe add prioritizing nature-based solutions, rather than promoting additional hardening of the coast. • Ava – for the actions under IN 12, could be good to mention other projects 'inner harbor development' etc. Give more specifics for these actions.

		• Aubrey – IN 14 actions don't mention energy. Is this something that should be included? • Ava – maybe it would be good to include energy in the strategy and not in the actions. • Ava – What are the trade offs that we are willing to accept? Consistency across the programs and initiatives (IN 17 – 19). • Ava – Is it helpful, when we are mentioning trees, to mention other vegetations. IN case there are limitations for trees. Our goals are biodiversity, not just trees, but other vegetation. We should acknowledge this. • Ava – 21 and 22 are critical. 22 we should talk with the capital budgets team, it is a huge opportunity to leverage that investment every year for mitigation. Maybe making this more specific. Too broad in terms of providing a list of preventions that can be incorporated into projects.
8	Questions and Discussion	
9	Next Steps • Continue to **assist** with data collection and plan content creation • Use social media graphics to **inform** the public of the plan update • **Share** the link to the StoryMap via social media • Plan to **attend** the In-Person Mitigation Strategy meeting • Date and Time: Thursday, July 20th from 6:00 PM – 8:00 PM • Location: 901 E Fayette St - National Aquarium Animal Care and Rescue Center	

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, August 11, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **Mitigation Strategy Workshop Recap**

4. **Review the draft DP3 Plan**

5. **Questions and Discussion**

6. **Next Steps**

1

4

Topics

- Status Update
- Mitigation Strategy Workshop Recap
- DP3 Draft Review and Comment
- Questions and Discussion
- Next Steps

2

5

3

Mitigation Strategy Workshop Recap

- Diverse agency representation
  - 11 virtual participants
  - 18 in-person participants
- Completed capabilities assessment worksheets
- Provided overview of the process to develop the Mitigation Strategy
- Reviewed 2018 DP3 strategies
- Breakout groups discussed potential for new mitigation actions
  - Stream restoration
  - Support for preparedness, response, and recovery efforts focused on individuals experiencing homelessness
  - EV charging

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Review the DP3 Draft

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Notable Changes from 2018 DP3

- Reorganized hazards based on past events since the 2018 DP3, new data, and input from stakeholders and community members.
- Included human-caused hazards.
- Integrated socially vulnerable populations and underserved communities throughout the plan's development and risk assessment.
- Included qualitative assessment of the impacts on natural and cultural resources from hazard events.
- Aligned the plan with FEMA's updated guidance that prioritizes the following:
  - Climate Change
  - Future Changes (population and development)
  - Equity
  - Building Code Integration
  - High Hazard Potential Dam Integration

8

8

2023 DP3 Framework

- Section 1: Introduction
- Section 2: City Profile
- Section 3: Risk Assessment
- Sections 4 to 11: Hazard Profiles
- Section 12: Capability Assessment
- Section 13: Mitigation Strategy
- Section 14: Plan Implementation and Maintenance
- Section 15: Moving Forward
- Glossary
- Appendix A: Engagement Strategy
- Hazards of Concern:
  - Flooding
  - Coastal Hazards
  - Severe Storms
  - Drought
  - Extreme Temperature
  - Earthquake
  - Soil Movement
  - Human-Caused Hazards

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9

Section 1. Introduction

- Hazard Mitigation Planning Overview
  - Scope and Vision of Plan
  - Role of Climate Change and Climate Adaptation
  - Role of Social Vulnerability
  - Changes from last DP3
- Authorities and Responsibilities
  - FEMA Requirements
  - Planning Process
    - Organizing Resources
    - Schedule
    - Plan Integration and Existing Mitigation and Adaptation Efforts
  - Navigating the Plan

10

10

Section 2. City Profile

- History
- Government
- Physical Setting
  - Geography and Topography
  - Hydrography and Hydrology
  - Climate
- Community Composition
  - Population
  - Demographics
  - Vulnerable Populations and Underserved Communities
- Land Use Development
- Housing
- Physical Assets
  - General Building Stock
  - Cultural and Natural Resources
  - Critical Facilities/Infrastructure
  - Community Lifelines

11

11

Section 3. Risk Assessment

- Identification of Hazards of Concern
  - 2023 Hazards of Concern
  - Hazard Groupings
  - Methodology and Tools
    - Risk Assessment Tools
    - Risk Assessment Approach
    - Hazus Modeling and Exposure Analysis
    - Limitations
- Hazard Ranking
  - Methodology
  - Results

12

12

Sections 4. – 11. Hazard Profiles

- Hazard Description
- Location
- Extent
- Previous Occurrences and Losses
- Probability of Future Events
- Potential Impacts of Climate Change
- Vulnerability Assessment
  - Impacts to Population
    - Socially Vulnerable Populations and Underserved Communities
  - Impacts to Structures
    - Critical Facilities, Infrastructure, and Community Lifelines
  - Impacts to the Economy
  - Impacts to Natural, Historic, and Cultural Resources
- Future Changes that May Impact Vulnerability
  - Changes in Land Use and Development, Population, Climate Change
- Change in Vulnerability Since 2018 DP3

13

13

Section 14. Plan Implementation and Maintenance

- Adoption
- Plan Maintenance
- Monitoring, Evaluating, and Updating the DP3
- Integrating the DP3 into City Planning Mechanisms

16

16

Section 12. Capability Assessment

- Overview of the existing tools, resources, programs, policies, etc. that the City currently has in place to implement hazard mitigation and build resilience.
- Includes the following for each identified capability:
  - Description
  - Responsible Agency
  - Funding to Support Hazard Mitigation
  - Hazards Addresses

14

14

Section 15. Moving Forward

- Introduction
- Community Resilience Recommendations
- Food Resilience Recommendations
- Integration of Cultural and Historic Resources Recommendations
- Conclusion

17

17

Section 13: Mitigation Strategy

- Vision and Goals
- Progress on Previous Plan
- Mitigation Action Identification
- Mitigation Action Plan
- Mitigation Strategy Evaluation and Prioritization

15

15

FEMA Approval Process

18

18

FEMA Approval + City Adoption Process

- Draft DP3 Public Comment Period
  - Planning Commission comments
  - Sustainability Commission comments
  - City agency and other stakeholder comments
  - Regional partner comments
  - Community comments
  - State (MDEM) Review comments
- Incorporation of feedback to create Draft #2
- FEMA Review of Draft #2: 45 Days
- Incorporation of FEMA feedback to create Final DP3
  - FEMA will grant the plan 'Approvable Pending Adoption' status, meaning FEMA will approve the plan once it has been locally adopted.
- Presentation of Final DP3 to Sustainability Commission
  - November meeting
  - Affirmative vote
- Presentation of Final DP3 to Planning Commission
  - November 30th meeting
  - Affirmative vote
  - PC Signs Adoption Resolution
- Resolution is submitted to FEMA and FEMA grants final approval.
- **Note: the 2018 DP3 expires December 20, 2023**

19

19

Draft DP3 Public Comment Period

- Public Comment Period **August 11 - Sept 11th**
- Available on the Konveio Public Comment platform
  - https://baltimoreplanning.konveio.com/
- Need to create free user account
- Will be able to comment directly in the plan documents
- Each chapter posted separately for easier navigation

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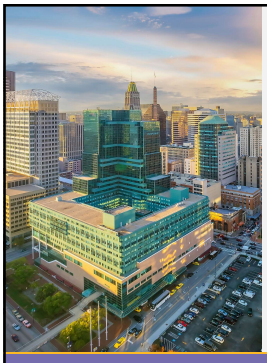

Questions and Discussion

21

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2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Core Planning Team Review Meeting
Location of Meeting:	Teleconference
Date of Meeting:	August 11, 2023 @ 10:00AM

Attendees:

- Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research)
- Ava Richardson, Baltimore Office of Sustainability (Director)
- Valerie Rupp, Baltimore Office of Sustainability (Community Grants Program Director)
- Joanna Birch, Baltimore Office of Sustainability (Floodplain Manager)
- Tiffany Gamble-Sanchez, Baltimore Office of Emergency Management (Senior Emergency Planner)
- Quentin Klein-Alfano, Baltimore Office of Sustainability (Intern)
- Nicholas O'Gara, Baltimore Office of Sustainability (GIS Analyst)
- Rachel Whiteheart, DOP.
- Sandra Moyer, DOP. (Planner)
- JaLeesa Tate, Tetra Tech (Project Manager)
- Jessica Stokes, Tetra Tech (Planner)
- Grace Altenburg, Tetra Tech (Planner)

Agenda Summary:

Item No.	Description	Notes:
1	Welcome and Status Updates	• Next steps are to review the plan and provide comment.
2	Mitigation Strategy Workshop	• **Kim Groves**: On EV charging: what was being discussed at the meeting was the transition to an EV fleet, to consider a backup source for EV charging stations. Ex.: Portable EV stations, with a propane fuel source, etc. ○ **JaLeesa Tate**: the plan captures this element and transition as well! • **JaLeesa Tate**: This workshop was also a great opportunity for partner building and networking. • **Kim Grove**: Are these just capital projects, or can this portfolio also include operational program enhancements, governance structuring / re-structuring (like regional coordination groups), or policy development.

3	Review the Draft DP3 Plan • Notable Changes • 2023 Framework • Section 1: Intro • Section 2: City Profile • Section 3: Risk Assessment • Section 4-11 Hazard Profiles • Section 12: Capability Assessment • Section 14: Implementation and Maintenance • Section 15: Moving Forward • FEMA Approval Process • Public Engagement	• **Kim Grove**: How is this changing with the update? How will the sub-cabinet be included? (Section 14). o **Ava Richardson**: Valeria Rupp and I are working on how to incorporate the working groups, and we need to figure out how to operationalize this moving forward. We will be hiring a middle position to manage the climate relevant projects and infrastructure and development in south Baltimore. We still need to figure this out in terms of capacity for each group. o **Kim Grove**: For the portfolio of projects, I would recommend to not limiting it to just capital projects, but also government restructuring ex. Sub-cabinet. Policy development also should be considered, ex. Policies to be developed for when disasters strike, we have the mechanisms in place for emergencies. o **Ava Richardson**: We do not have full details on the federal funding to be captured, but we talked about the resilience authority. We will have to do a study as a City, which will look more into this: resilience authority/government structure. This study will be completed to reflect and show these needs/capabilities for the City. o **JaLeesa Tate**: Make sure to make these comments on the plan during review so we can fully capture and integrate this specific information into the DP3. **Kim Groves:** How is the public comment period being advertised? I have not seen any emails yet. o **JaLeesa Tate**: we will provide the social media graphics and also emails will go out. The actual public comment period is being run through the Konveio platform. We will be uploading it in individual chapters.

		○ **Aubrey Germ**: This is the platform that we use for other plan reviews (comp plan, etc.).
8	Questions and Discussion	• None
9	Next Steps	• Review and provide feedback and comments on the DP3 draft using Konveio. • **Aubrey Germ**: Really helpful if all the agencies pulled together thoughts and comments (consolidated comments). Ex. Submit as an agency.

City of Baltimore
2023 Disaster Prepardedness and Planning Project (DP3)
Core Planning Team Meeting - Agenda
Friday, September 22, 2023
10:00 a.m. – 11:00 a.m.
Meeting Link

1. **Welcome**

2. **Schedule Updates**
   - Current place in schedule
   - Updates since last meeting

3. **DP3 Draft Review and Comment Recap**

4. **Questions and Discussion**

5. **Next Steps**

Disaster Preparedness and Planning Project (DP3)

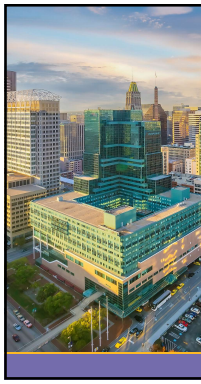
Core Planning Team Meeting #13

1

Topics

- Status Update
- DP3 Draft Review and Comment Recap
- Next Steps
- Questions and Discussion

2



Status Updates

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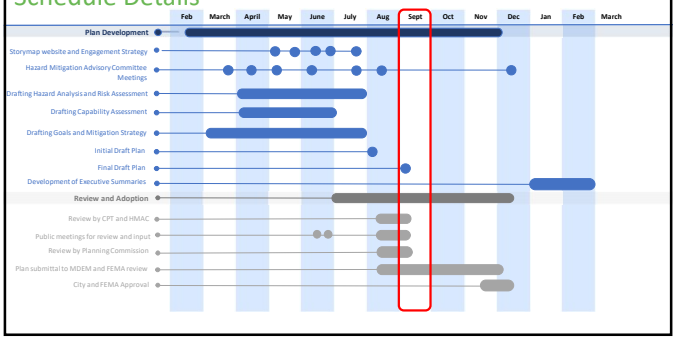
Schedule Details



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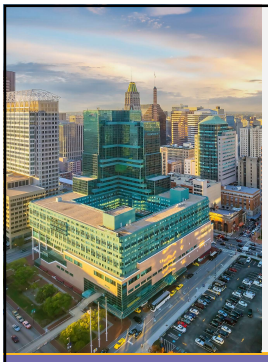

DP3 Draft Review and Comment Recap

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Summary of Comments

- **MDEM**
  - Conduct risk assessment specifically for dams
  - Strengthen documentation of NFIP participation and administration
  - Include narrative or table that demonstrates how mitigation actions were prioritized
  - Include brief narrative for project action status
- **City Agencies**
  - **MIMA**: strengthen language and provide additional statistics reflecting foreign-born individuals in the City; include MIMA capabilities and add as a support agency to mitigation actions
  - **BCHD**: provided additional data regarding cold- and heat-related illnesses, provided feedback on most appropriate lead and support agencies for mitigation actions
  - **OEM**: provided feedback on most appropriate lead and support agencies for mitigation actions
  - Ongoing meetings with City agencies to populate narrative for mitigation actions status

6

Summary of Comments

- Introduction and City Profile
  - Expand language regarding the importance and prioritization of green infrastructure, nature-based solutions, and biodiversity.
  - Expand on the City's history to reflect how historic discriminatory practices have contributed to present day inequities and increased vulnerability
  - Add language that recognizes disparities surrounding food and shelter.
- Risk Assessment and Hazard Profiles
  - Include discussions regarding air quality
  - Expand on events detailed in hazard materials releases
- Mitigation Strategy
  - Recommendations for new actions
  - Provide status updates on actions deemed high priority but delayed or no progress.

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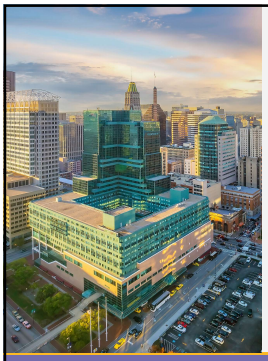

Questions and Discussion

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Next Steps: FEMA Approval Process

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FEMA Approval and City Adoption Process

- Draft DP3 Public Comment Period
  - Incorporation of feedback to create Draft #2
- FEMA Review of Draft #2: 45 Days
  - Incorporation of FEMA feedback to create Final DP3
- FEMA will grant the plan 'Approvable Pending Adoption' status, meaning FEMA will approve the plan once it has been locally adopted.
- Presentation of Final DP3 to Sustainability Commission
  - November meeting
  - Affirmative vote
- Presentation of Final DP3 to Planning Commission
  - November 30th meeting
  - Affirmative vote
  - PC Signs Adoption Resolution
- Resolution is submitted to FEMA and FEMA grants final approval.
- **Note: the 2018 DP3 expires December 20, 2023**

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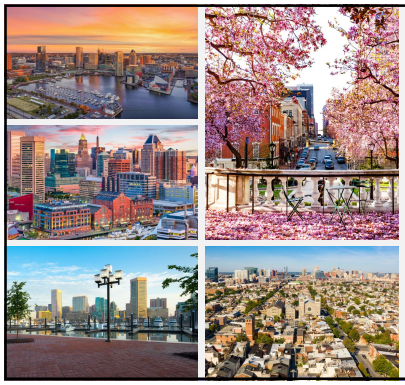
9

Purpose of Meeting:	Core Planning Team Status Meeting #13
Location of Meeting:	Teleconference
Date of Meeting:	September 22, 2023 @ 10:00AM
Attendees:	• Kimberly Grove, Baltimore Department of Public Works (Chief, Office of Compliance & Research) • Aubrey Germ, Baltimore Office of Sustainability • Ava Richardson, DOP • Tishawna McGowan, OEM • Sandra Moyer, BCFD • Michelle Smith, BCFD • Rachel Whiteheart, DOP • Elise Whiteford, OEM • Valerie Rupp, DOP • JaLeesa Tate, Tetra Tech (Project Manager) • Emily Vassallo, Tetra Tech (Planner)
Agenda Summary:	The purpose of the meeting was to provide an update on the planning process, draft review and comment recap. Additionally, next steps will be discussed.

Item No.	Description	Action item(s):
1	Welcome	-
2	Status Updates • Transitioning to socializing the plan and presenting it to the public and departments to include integration • Project portfolios • Public and Stakeholder review is completed • Moving into submittal to MDEM and FEMA review • Content development is complete	-
3	Comment Recap • State Comments: o Risk Assessment for dams included in the planning area. o Strengthen documentation of NFIP participation and administration o Include narrative or table that demonstrates how mitigation actions were prioritized. o Include brief narrative for project action status. • City Agencies o MIMA: Strengthen language and provide additional statistics reflecting foreign- born individuals in the City;	City to meet with agencies to clarify status of actions

	including MIMA capabilities and add as a support agency to mitigation actions o BCHD: Provide additional data regarding cold and heat related illnesses, provide feedback on most appropriate lead and support agencies for mitigation actions. o OEM: provided feedback on most appropriate lead and support agencies for mitigation actions. • Public Comments/Trends o Introduction and City Profile ▪ Expand language regarding importance and prioritization of green infrastructure. Nature based solutions, biodiversity. ▪ Expand on City's history. ▪ ▪ Add language that recognizes disparities surrounding food and shelter. o Risk Assessment and Hazard Profiles ▪ Include discussions regarding air quality. ▪ Expand on events in hazardous materials releases. o Mitigation Strategy ▪ New action recommendations ▪ Provide status updates on actions deemed high priority but delayed or no progress	
6	FEMA Approval Process • Incorporation of feedback to create Draft #2 • Presentation of Final draft to Sustainability Commission in November • Presentation of Final draft to Planning Commission on November 30th • State to approve and pass up to FEMA • Resolution submitted to FEMA and FEMA grants final approval. • The 2018 plan expires on December 20,2023	-
7	Questions and Concerns • None	-



Disaster Preparedness and Planning Project (DP3)

Hazard Mitigation Advisory Kickoff Meeting

Participate in activities via slido.com with code #DP3

1

HMAC Meeting Purpose

- **Kickoff the planning process** for Baltimore's Disaster Preparedness and Planning Project (DP3).
  - Traditionally a hazard mitigation plan detailing the City's risk to natural hazards
  - Adding human-caused hazards to this update
- **Introduce** the planning process and **obtain preliminary feedback** on plan content.
- The Hazard Mitigation Advisory Committee (HMAC) serves to **provide input and guidance** on the development of the DP3 and advises the planning team on community needs and concerns.
  - Comprised of City representatives, stakeholders, non-profits, and private sector.
  - FEMA requirement to have stakeholders involved.

2

Intro to Tetra Tech

- Carryout the overall planning process
- Provide technical support and subject matter expertise
- Develop outreach and engagement materials
- Facilitate meetings
- Draft and finalize the DP3

JaLeesa Tate, CFM
Senior Community Resilience Professional
jaleesa.tate@tetratech.com

Jessica Stokes, MSEM, NJCEM
Emergency Management Specialist
jessica.stokes@tetratech.com

3

Today's Topics

- INTRODUCTIONS
- HAZARD MITIGATION AND PLANNING OVERVIEW
- SCHEDULE
- ORGANIZING RESOURCES
- CONDUCTING RISK ASSESSMENT
- DEVELOPING PUBLIC INVOLVEMENT STRATEGY
- DEVELOPING MITIGATION STRATEGY
- QUESTIONS
- NEXT STEPS

4

Hazard Mitigation and Planning Overview

Mitigation planning happens before a disaster strikes. It results in safer, more resilient communities – reducing risk for the residents, businesses, and critical services in Baltimore City.

5

Hazard Mitigation

Mitigation is a sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.

"…provides the blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and local ability…" (CFR).

6

Hazard Mitigation

Mitigation saves $6 for every $1 spent on average. Maryland can save up to $100 million in benefits.

National Benefit-Cost Ratio Per Peril *BCR numbers in this study have been rounded	Federally Funded
Overall Hazard Benefit-Cost Ratio	6:1
Riverine Flood	7:1
Hurricane Surge	Too few grants
Wind	5:1
Earthquake	3:1
Wildland-Urban Interface Fire	3:1

Source: National Institute of Building Sciences

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Hazard Mitigation Planning

- Authorized by the Disaster Mitigation Act of 2000
- Provides an overview of the impacts of natural hazards on communities
- Provides a roadmap to reducing the impact of these hazards
- Requires a FEMA-approved natural hazard mitigation plan to be eligible for pre-disaster mitigation funding
- 5-year updates required to maintain eligibility

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FEMA Hazard Mitigation Assistance Funded Project

Middle Branch Resiliency Initiative, Stage 1 – $31.92 Million

- Green infrastructure to protect against flooding and SLR
- Increases the resilience of the Baltimore Gas and Electric Company's (BGE) Spring Gardens site and MedStar Harbor Hospital site.
- Benefits 410,000 nearby residents; customers of the BGE Spring Gardens facility and MedStar Harbor Hospital; and employees who work at both sites—representing 21% of the total population of Baltimore City and Baltimore and Anne Arundel counties.

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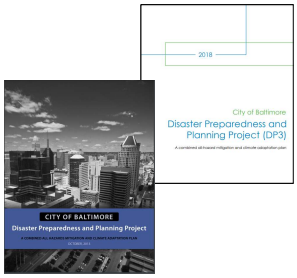
Hazard Mitigation Planning in Baltimore

2013 and 2018 DP3 Updates:

- Build off one another
- Geared toward natural hazards
- Identify not just mitigation but also adaptation solutions

DP3 Goals:

- **Protect the health, safety, and welfare** of Baltimore City residents and visitors
- **Prevent damage** to structures, infrastructure, and critical facilities
- **Build resilience and disaster prevention** and planning into all programs, policies and infrastructure
- **Enhance the city's adaptive capacity** to cope with future conditions
- Promote hazard mitigation and climate adaptation **awareness and education**
- Become an even **higher rated Community Rating System (CRS)** classified community



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2018 DP3 Recommendations for Moving Forward

- Continue planning efforts centered on increasing community resilience, including ongoing formalization and expansion of Resiliency Hubs.
- Use community resilience initiatives to address varying regional concerns.
- Broaden public outreach and engagement efforts to include greater representation from all Baltimore neighborhoods and communities in planning efforts.
- Introduce solutions-oriented public engagement practices designed to solicit community-driven solutions.

11

11

2018 DP3 Recommendations for Moving Forward

- Determine a strategy for incorporating information on vulnerable populations collected during the development of this plan.
- Use public feedback to identify vulnerable populations and specify vulnerable populations to the greatest extent possible.
- Develop criteria and a strategy for integrating man-made hazards into the next DP3 with input from the public at the outset.
- Integrate food resilience into mitigation and preparedness efforts.
- Integrate Historic and Cultural Resources Hazard Mitigation Strategy.

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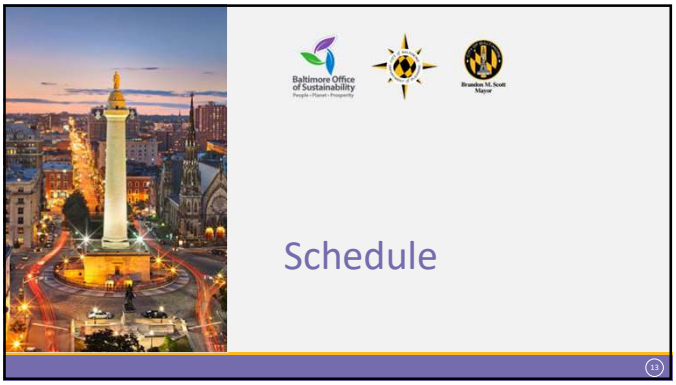

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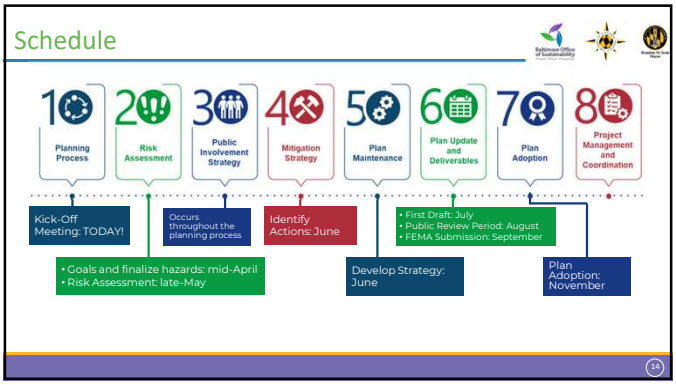

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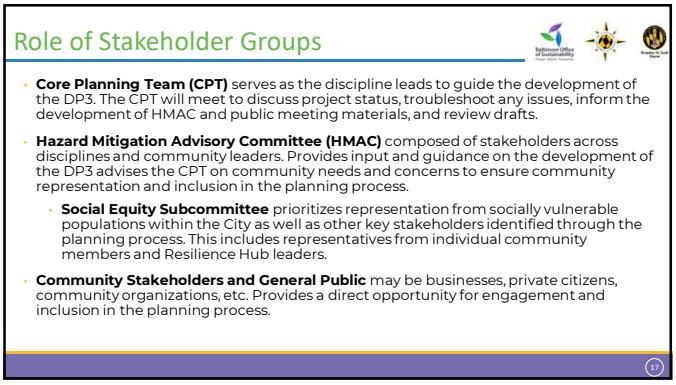

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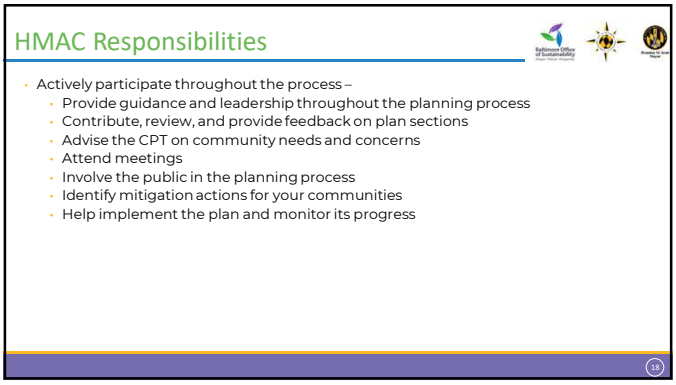

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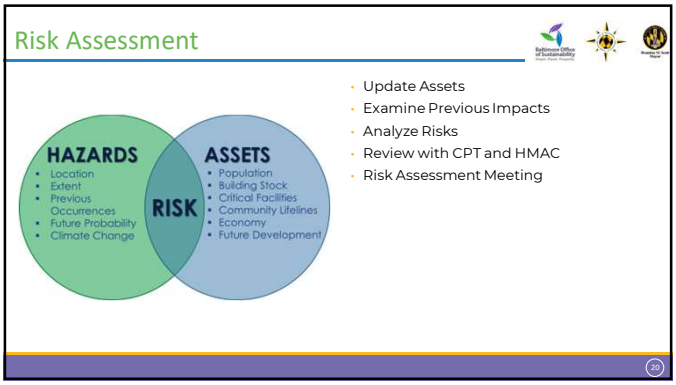

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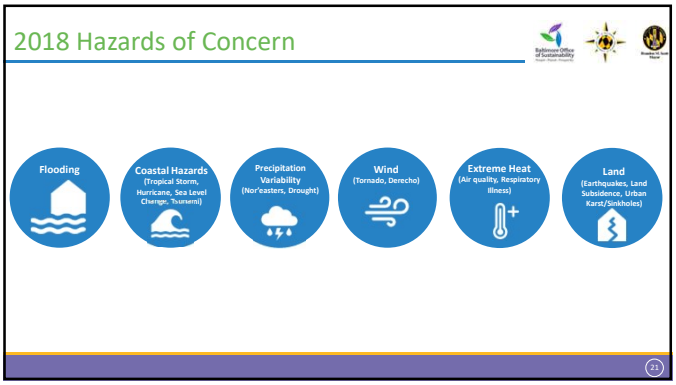

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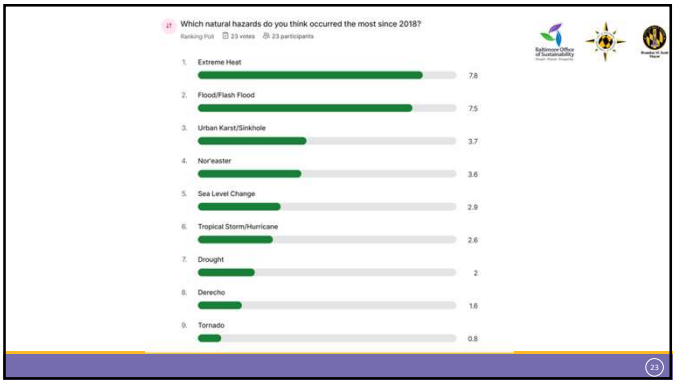

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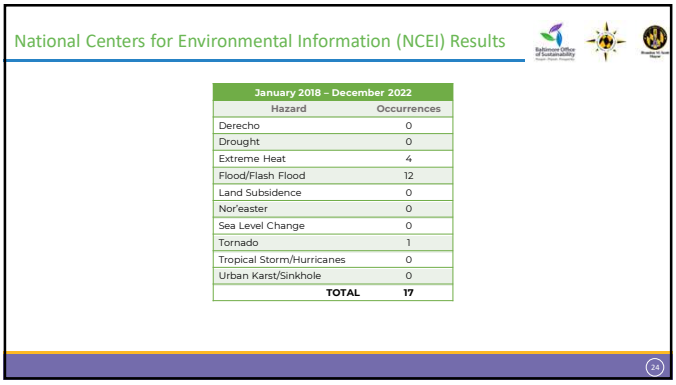

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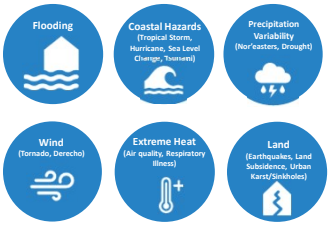
Updating the Hazards of Concern

- Looking at the hazards included in the 2018 plan…
  - Have additional hazards impacted the City since 2018?
  - Have hazards been mitigated and no longer cause damage?
  - Should additional hazards be included?
- How have hazards affected the City?
- Where are your problem areas?



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Critical Facilities and Community Lifelines (Assets)

- **Critical Facilities** provide essential services to the community, especially before, during, and after a disaster.
- **Community Lifelines** provide services that allow continuity of operations of critical business and government functions, and crucial to health and safety of residents.

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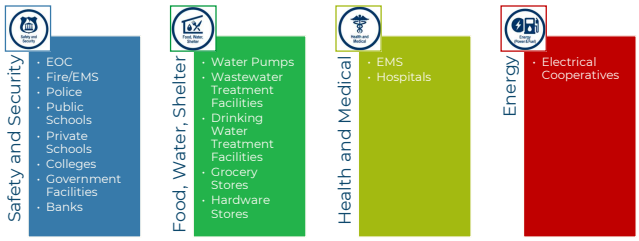
Critical Facilities and Community Lifelines (Assets)



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Critical Facilities and Community Lifelines (Assets)

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What additional critical facilities should be considered?

Start presenting to display the poll results on this slide.

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Critical Facilities

What additional critical facilities should be considered?

Open text poll · 39 responses · 19 participants

- Water Impoundments*
- Stadiums
- Websites
- Maryland First Fiber (fiber and conduit)
- Laboratories
- Convention Center
- Manufacturing Hubs
- Airports*
- Nursing homes
- Senior Centers
- Dialysis Centers
- Data Centers
- Steam Plants / Steam Lines
- Grocery Stores
- Substance Abuse / Recovery Treatment

30

Engagement Strategy

31

31

Engagement Priorities

- Two-way communication
  - A forum to provide updates on the status of the plan, but also receive information to guide the development and vision of the plan
  - Identify opportunities for 1-on-1 engagements and focus groups
- Schedule early and often
  - Identify times and days that will work for the targeted audience; maintain contact throughout the process
- Meaningful Participation
  - Communicate the role of each sector in the mitigation process; recommend who should be represented for each meeting
  - Provide information in multiple formats to accommodate varying learning styles
  - Leverage opportunities for integration

32

32

Engagement Strategy Purpose and Goals

- Purpose:
  - Roadmap to guide and document stakeholder and community engagement.
  - Living document that will be referenced and updated throughout the process.
- Goals:
  - Inform stakeholders and community members about risk to natural and manmade hazards.
  - Foster a collaborative process to develop a mitigation strategy to reduce risk.
  - Obtain a better sense of the demographics of individuals actively engaged and participating in the planning process.
  - Increase engagement of diverse neighborhoods and communities.

What additional goals and values should be incorporated?

33

33

Engagement Methods

- Baltimore Office of Sustainability Website
- StoryMap (Interactive Website)
- Social Media
- Surveys
- Email
- Group Presentations

34

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Surveys

- **Public**: Identify the community's exposure to hazards and the location of hazards within the community.
- **Stakeholder**: Engage stakeholders (i.e., utilities, transportation, business/commerce, emergency services, health/medical) to collect input in terms of capabilities, vulnerabilities, and potential projects.
- **Neighboring Jurisdictions**: Neighboring communities will be contacted due to hazard similarities; effects of natural disasters may be similar in surrounding jurisdictions, and involving neighboring communities in the planning process could reap mutual benefits and assist in regional coordination of disaster mitigation planning.

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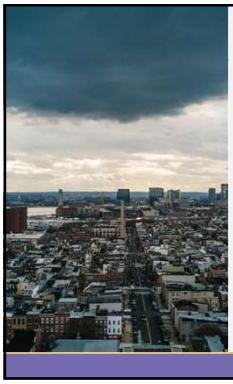

Developing Mitigation Strategy

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36

Capability Assessment and Mitigation Strategy

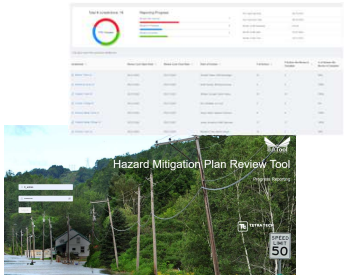
- Capabilities
  - What does your organization have to reduce risk to hazards?
- Goals
  - What outcomes do you want to achieve?
- Actions
  - What specific actions will be taken to reduce hazard risk?
- Action Plan
  - How will the actions be prioritized and implemented?

37

Review of 2018 Mitigation Strategy

Baseline Assessment Tool (BATool℠) Program

- Update the 2018 mitigation actions through the BATool℠ – less paperwork!
- Refresher training for planning partners
- Populate 2023 mitigation actions



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What steps have you taken to implement the 2018 DP3 actions? What challenges did you experience? (Include organization)

Start presenting to display the poll results on this slide.

39

What steps have you taken to implement the 2018 DP3 actions? What challenges did you experience? (Include organization)

Open text poll · 3 responses · 3 participants

Anonymous
MDEM was likely party of the review process before the plan went to FEMA

Anonymous
BCHD- very difficult to implement many actions from 2018 due to lack of funding and staff to implement actions

Anonymous
Some of the actions felt too generic to confirm completion status.

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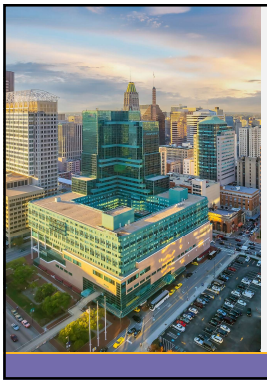

Next Steps

41

Next Steps

- Participate in surveys
- Participate in Public Kickoff meeting ***tentatively*** **May 2, 2023 at 6:00 p.m.**
- Prepare to provide status update on 2018 DP3 Actions
- Assist with data collection and plan content creation
- Next HMAC meeting **May 2, 2023 at 3:00 p.m.**

42

Questions

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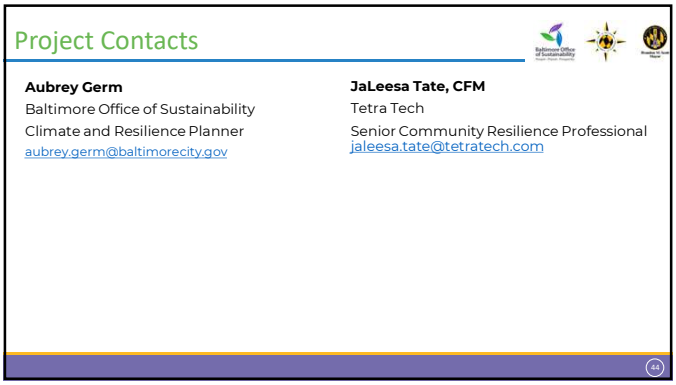
Project Contacts
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JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
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44

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Hazard Mitigation Advisory Committee Kick-Off Meeting
Location of Meeting:	Teleconference
Date of Meeting:	April 04, 2023 @ 3:00 P.M.

Attendees:

	Name	Title	Organization
x	Al Frenette	Protective Security Advisor	Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)
x	Alice Huang	Acting Assistant Commissioner, Community Services	Baltimore City Health Department (BCHD)
x	Aliyah Russell	Project Officer	Maryland Department of Emergency Management (MDEM)
x	Allison Blood	Healthy Harbor Program Manager	Waterfront Partnership of Baltimore
x	Amy Gilder-Busatti	Environmental Planner and Landscape Architect	Department of Planning (DOP)
x	Angela McCauley	Emergency Services Manager	Mayor's Office of Homeless Services (MOHS)
x	Anthony Scott	Associate Director of Project Management	Mayor's Office
x	Antoine Smith	Office of Emergency Response and Preparedness	Department of Public Works (DPW)
x	Aubrey Germ	Climate and Resilience Planner, BoS	DOP
x	Ava Richardson	Director, Baltimore Office of Sustainability (BoS)	DOP
x	Benjamin Zaitchik	Earth and Planetary Sciences Professor	Johns Hopkins University
x	Brad Rogers	Executive Director	South Baltimore Gateway Partnership
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x	Bridget Cantwell	Hazard Mitigation Planner	MDEM
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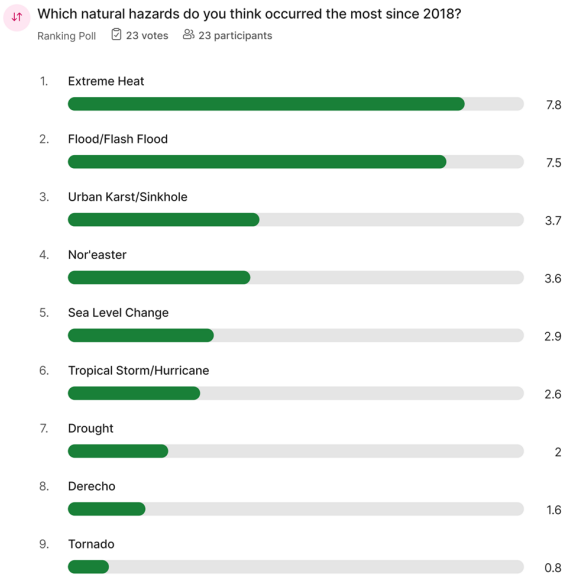
	x	Yosef Kebede	Bureau Head, Water and Wastewater	DPW
	x	Yvonne Moore-Jackson	Bureau Head, Solid Waste	DPW

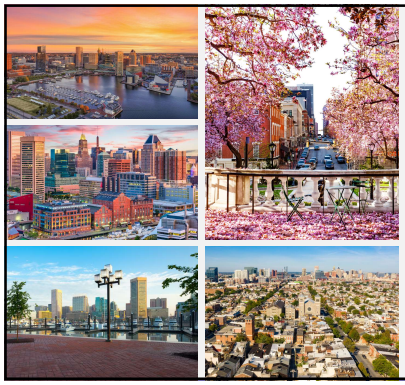
Agenda Summary: The purpose of the meeting was to introduce the concept of Hazard Mitigation Planning and the Planning Process, review the schedule, assist in the understanding of roles and responsibilities, provide an explanation of conducting the Risk Assessment, explain the DP3 Engagement Strategy, describe the development of the Mitigation Strategy, and give an Overview of next steps to the Hazard Mitigation Advisory Committee (HMAC).

Item No.	Description	Action item(s):
1	Welcome	-
2	Hazard Mitigation and Planning Overview • Mitigation is a sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event. • A hazard mitigation plan (HMP) provides an overview of the impacts of natural hazards on communities and is a roadmap to reducing the impact of these hazards. • The HMP meets FEMA requirements to maintain the City's eligibility for Federal Hazard Mitigation Assistance funding. • The 2023 DP3 update will follow FEMA Planning Policy effective April 2023.	-
3	Schedule • The planning process will occur over an accelerated timeline with the plan being adopted by the City in November 2023. Additional key milestones are provided below: o Public Kickoff Meeting: May 2023 o Conducting the Risk Assessment: late May 2023 o Developing the Mitigation Strategy: June 2023 o Releasing the first Draft: July 2023 o Review Period: August 2023	-

	○ Submission to FEMA: September 2023 ○ Plan Adoption: November 2023	
4	Organizing Resources • The key advisory teams and reviewers for the DP3 are as follows: ○ **Core Planning Team**: serves as the discipline leads to guide the development of the DP3. The CPT will meet to discuss project status, troubleshoot any issues, inform the development of HMAC and public meeting materials, and review drafts. ○ **HMAC**: composed of stakeholders across disciplines and community leaders. Provides input and guidance on the development of the DP3 advises the CPT on community needs and concerns to ensure community representation and inclusion in the planning process. ▪ **Social Equity Subcommittee**: prioritizes representation from socially vulnerable populations within the City as well as other key stakeholders identified through the planning process. This includes representatives from individual community members and Resilience Hub leaders. ○ **Stakeholders and the Public**: may be businesses, private citizens, community organizations, etc. Provides a direct opportunity for engagement and inclusion in the planning process. ○ **MDEM and FEMA**: will provide guidance and formal reviews throughout the plan's development. FEMA will provide final approval of the plan. • The HMAC responsibilities include: ○ Provide guidance and leadership throughout the planning process ○ Contribute, review, and provide feedback on plan sections ○ Advise the CPT on community needs and concerns ○ Attend meetings ○ Involve the public in the planning process ○ Identify mitigation actions for your communities ○ Help implement the plan and monitor its progress	-
5	Conducting Risk Assessment • To assess risk, the project team will evaluate hazards impacts on assets, such as the population, building stock, critical facilities, community lifelines, economy, and future development. • The project team reviewed 2018 hazards of concern and hazard groupings. ○ Participants were asked to take a poll on hazards occurring the most in the City since 2018; majority indicated 'extreme heat', 'flood/flash flood', 'urban karst/sinkhole', and nor'easter'. ○ Group discussion on inclusion of manmade hazards and which ones to potentially include in DP3 Update.	1. BoS to send reminder to complete Hazards of Concern Survey

	 o • The project team provided an explanation on critical facilities and community lifelines. o Participants were asked to take a poll on identifying additional critical facilities to include in the 2023 DP3 Update. Results included data centers, laboratories, grocery stores, senior centers, dialysis centers, and water impoundments.	
6	Engagement Strategy • The project team reviewed the priorities for engagement including fostering two-way communication, scheduling meetings in advance, and ensuring meaningful participation. • An Engagement Strategy is in development for the DP3. The purpose is to provide a roadmap to guide and document stakeholder and community engagement. The goals of the Engagement Strategy include: o Informing stakeholders and community members about risk to natural and manmade hazards. o Fostering a collaborative process to develop a mitigation strategy to reduce risk. o Obtaining a better sense of the demographics of individuals actively engaged and participating in the planning process. o Increasing engagement of diverse neighborhoods and communities. • Proposed engagement methods include utilizing the BoS website, interactive StoryMap, social media, surveys, emails, and group presentation.	1. Tetra Tech to finalize social media graphics and push out to group 2. BoS and Tetra Tech to finalize Engagement Strategy document 3. BoS to update website as needed 4. Tetra Tech to begin creation of StoryMap
7	Developing Mitigation Strategy • The project team provided an explanation on the differentiation of Capability Assessment and Mitigation Strategy. o Addressed that 2018 capabilities and mitigation actions will need to be reviewed and potentially revised. o Discussed use of BATool to review status (no progress, in progress, completed) of 2018 DP3 mitigation actions.	1. Tetra Tech to provide BoS with list of actions where Lead Agency needs to be defined

	○ Lead agencies will be responsible to complete this review; supporting agencies should provide lead agency with any updates. • Participants were asked to take a poll on challenges experienced when implementing the 2018 DP3 actions. Results included: ○ MDEM was likely part of the review process before the plan went to FEMA. ○ BCHD – very difficult to implement many actions from 2018 due to lack of funding and staff to implement actions. ○ Some of the actions felt too generic to confirm completion status.	2. Tetra Tech to create jurisdiction, users, and import 2018 DP3 actions into BATool for review 3. Tetra Tech to arrange BATool training with BoS and 2023 DP3 participants
8	Next Steps • Participate in surveys • Participate in Public Kickoff meeting (tentatively May 2 @ 6:00PM) • Prepare to provide status update on 2018 DP3 Actions • Assist with data collection and plan content creation • Next HMAC meeting May 2 @ 3:00PM	1. BoS and Tetra Tech to solidify Public Kickoff meeting date and time
9	Questions and Discussion • No questions received.	-



Disaster Preparedness and Planning Project (DP3)

Hazard Mitigation Advisory Committee Meeting #2

1

HMAC #2 Meeting Purpose

- **Discuss** the status of the planning process for Baltimore's Disaster Preparedness and Planning Project (DP3).
  - Where we currently are in the process.
- **Finalize** the hazards of concern and any hazard groupings.
- **Evaluate** five of the 2018 mitigation actions.
  - Provide input on action status, update wording, decide on whether to continue the actions provided.
  - This activity will serve as a guide to assist HMAC members with updating their 2018 mitigation actions.

2

Today's Topics

- INTRODUCTIONS
- PLANNING STATUS
- IDENTIFICAITON OF HAZARDS OF CONCERN
- MITIGATION ACTION EVALUATION
- NEXT STEPS
- QUESTIONS

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Planning Status

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Hazard Mitigation Planning

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Schedule

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Hazards of Concern
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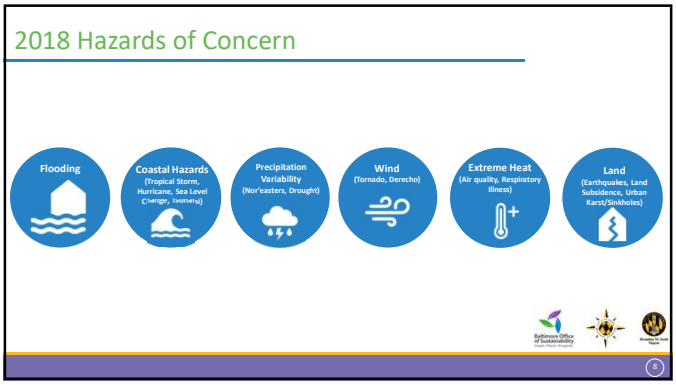
2018 Hazards of Concern
Flooding
Coastal Hazards
Precipitation Variability
(Nor'easters, Drought)
Wind
(Tornado, Derecho)
Extreme Heat
(Air quality, Respiratory Illness)
Land
(Earthquakes, Land Subsidence, Urban Karst/Sinkholes)
8

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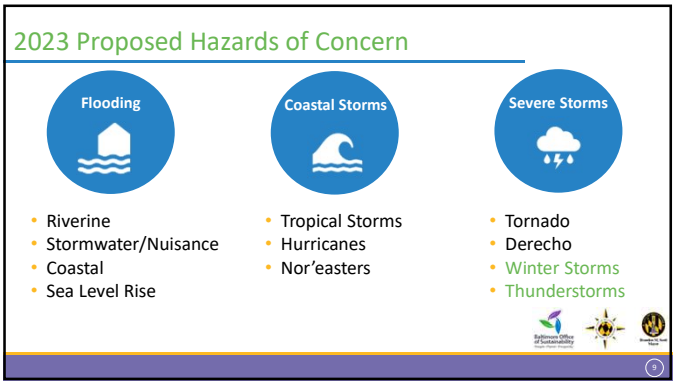
2023 Proposed Hazards of Concern
Flooding
Riverine
Stormwater/Nuisance
Coastal
Sea Level Rise
Coastal Storms
Tropical Storms
Hurricanes
Nor'easters
Severe Storms
Tornado
Derecho
Winter Storms
Thunderstorms
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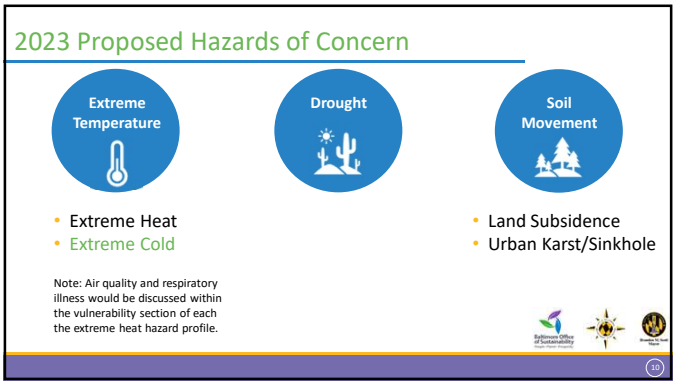
2023 Proposed Hazards of Concern
Extreme Temperature
Extreme Heat
Extreme Cold
Drought
Soil Movement
Land Subsidence
Urban Karst/Sinkhole
Note: Air quality and respiratory illness would be discussed within the vulnerability section of each the extreme heat hazard profile.
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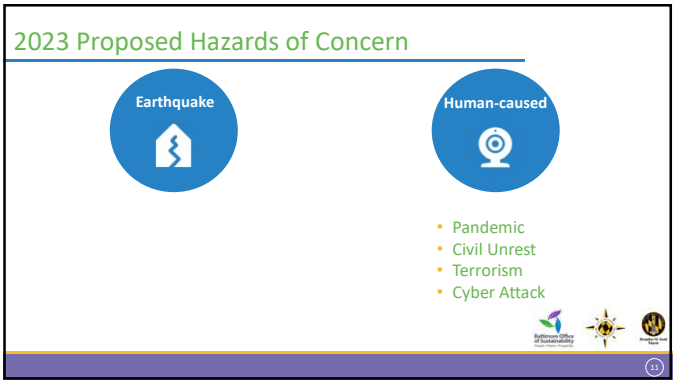
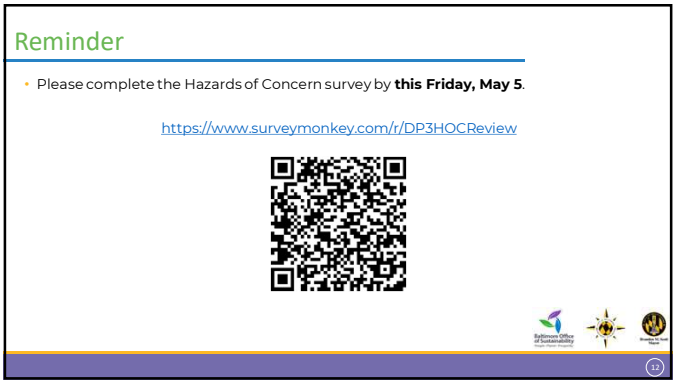

2023 Proposed Hazards of Concern
Earthquake
Human-caused
Pandemic
Civil Unrest
Terrorism
Cyber Attack
11

11


Reminder
Please complete the Hazards of Concern survey by this Friday, May 5.
https://www.surveymonkey.com/r/DP3HOCReview
12

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Evaluating Mitigation Actions

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Evaluating Mitigation Actions

IN-3: Ensure backup power generation for critical facilities and identified key infrastructure during power outages

- Implementation Actions:
  1. Investigate off-grid, on-site renewable energy systems, generators, and technologies for critical facilities to ensure redundancy of energy systems
  2. Seek funding to purchase and install generators for all city buildings designated as critical to agency functions
  3. Evaluate and ensure backup power generation is available to healthcare facilities (nursing homes, critical care facilities, hospitals, etc.)
- Lead Agency (Actions 1 & 2): DGS
- Lead Agency (Action 3): MDH
- Stakeholders: DGS, DOP, DOT, DPW, MOEM

14

14

Evaluating Mitigation Actions

IN-6: Evaluate and improve resiliency of communication systems that are in place for sudden extreme weather events

- Implementation Actions:
  1. Utilize new technologies such as fiber optics, external hook-ups, and mobile generators to improve resiliency
  2. Evaluate, improve and build redundancy into all public and inter-agency warning and communication systems
  3. Identify best practices for the installation and management of floodproofing for all communication infrastructure at risk of water damage
  4. Implement additional nurse triage phone lines and community health centers to reduce medical surge on hospitals
  5. Ensure continued operation of City government's various computer mainframes for email, control systems, and internet service by having stand-by batteries for each with a capacity sufficient for backup generation to operate
- Lead Agency (Action 1): Mayor's Office of Digital Equity)
- Lead Agency (Action 2 & 3): OEM
- Lead Agency (Action 4): MDH
- Lead Agency (Action 5): MOIT
- Stakeholders: BGE, DOT, Energy Office, FCC, BCIT, Private Entities, PSC, BCPD, BCFD, MOEM

15

15

Evaluating Mitigation Actions

NS-2: Increase and enhance the resilience and health of Baltimore's urban forest Baltimore's urban forests and trees offer countless environmental benefits but are vulnerable to climate change-related impacts and hazards, including storm surge, wind, and changes in average temperatures. Increasing Baltimore's tree canopy will improve stormwater management, increase air quality and reduce impacts from the urban heat island.

- Implementation Actions:
  1. Anticipate the impacts of future changes in temperature and weather on the urban forest by developing a comprehensive list of plant and tree species known to have a broad range of environmental tolerances
  2. Establish and routinely update a comprehensive tree inventory to anticipate insect and forest structural impacts of climate change
  3. Establish a comprehensive maintenance program that includes pruning for sound structure and the removal of hazardous limbs and trees. First focus on areas where vulnerable infrastructure is nearby such as energy supply and roads
  4. Continually adjust and modify planting details and specifications to assure the health and longevity of trees
  5. Increase the urban tree canopy and target areas with urban heat island impacts
- Lead Agency: Forestry
- Stakeholders: BCRP, BGE, Community Groups, DOP, DOT, DPW, MDNR, NGOs

16

16

Evaluating Mitigation Actions

PS-6: Anticipate and address potential disease outbreaks caused by extreme weather events and changing climatic conditions.

- Implementation Actions:
  1. Support studies of heat- and flood-related vector-borne diseases in the Baltimore region based on changing temperature and moisture
  2. Evaluate existing programs that detect disease outbreaks to determine their flexibility to respond to new conditions
- Lead Agency: BCHD
- Stakeholders: BCHD, CDC, DHMH, MDE, State Agencies

17

17

Evaluating Mitigation Actions

B-3: Strengthen City zoning, floodplain and construction codes to integrate anticipated changes in climate

- Implementation Actions:
  1. Review zoning code and strengthen language (where necessary) in order to better protect citizens and increase resiliency in buildings
  2. Review and amend existing building and floodplain regulations to require more flood-resistant new and existing structures when located in the floodplain
  3. Utilize open space category in zoning code to protect sensitive areas (stormwater sites, steep slopes, floodways, etc.)
  4. Review and increase Flood Protection Elevation (Base Flood Elevation + Freeboard) standards to the highest available State, Federal or local elevation level
  5. Evaluate and update stormwater management regulations to avoid increases in downstream flooding
  6. Adopt design requirements that include wet and dry floodproofing techniques
  7. Review and consider adoption of the International Green Construction code
- Lead Agency (Actions 1-6): DOP
- Lead Agency (Action 7): HCD
- Stakeholders: BDW, City Government, Community Groups, DHCD, DGS, DPW, NAHB, NGOs, MDE, Private developers, Private landowners

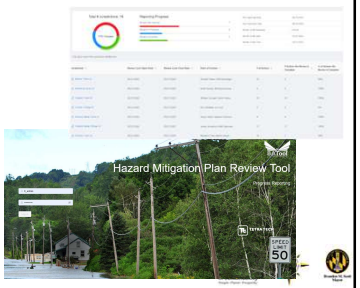
18

18

Review of 2018 Mitigation Strategy

Baseline Assessment Tool (BATool℠) Program

- Update the 2018 mitigation actions through the BATool℠ – less paperwork!
- Training for HMAC
- Populate 2023 mitigation actions
- Lead agencies to evaluate actions



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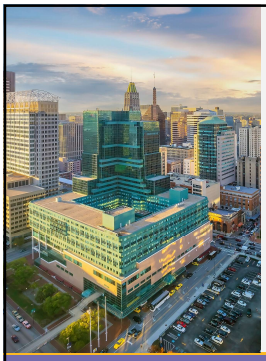

Next Steps

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Next Steps

- Complete Hazards of Concern survey by **this Friday, May 5**
- **Review** BATool instructional video on Youtube
  - To be distributed via email
  - Can offer a virtual training – this would be open to all HMAC members
- **Evaluate** 2018 mitigation actions using the BATool
- Continue to **assist** with data collection and plan content creation
- Next HMAC meeting **to be announced via email**

21

Questions

22

Project Contacts

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Baltimore Office of Sustainability
Climate and Resilience Planner
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JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
jaleesa.tate@tetratech.com

23

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Hazard Mitigation Advisory Committee Meeting #2
Location of Meeting:	Teleconference
Date of Meeting:	May 02, 2023 @ 2:00 P.M.

Attendees:

	Name	Title	Organization
X	Al Frenette	Protective Security Advisor	Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)
	Alice Huang	Acting Assistant Commissioner, Community Services	Baltimore City Health Department (BCHD)
	Aliyah Russell	Project Officer	Maryland Department of Emergency Management (MDEM)
	Allison Blood	Healthy Harbor Program Manager	Waterfront Partnership of Baltimore
	Amy Gilder-Busatti	Environmental Planner and Landscape Architect	Department of Planning (DOP)
X	Angela McCauley	Emergency Services Manager	Mayor's Office of Homeless Services (MOHS)
	Anthony Scott	Associate Director of Project Management	Mayor's Office
X	Antoine Smith	Office of Emergency Response and Preparedness	Department of Public Works (DPW)
X	Aubrey Germ	Climate and Resilience Planner, BoS	DOP
	Ava Richardson	Director, Baltimore Office of Sustainability (BoS)	DOP
X	Benjamin Zaitchik	Earth and Planetary Sciences Professor	Johns Hopkins University
X	Bonnie Sorak		
	Brad Rogers	Executive Director	South Baltimore Gateway Partnership
X	Brandi Welsh	Community Program Liaison	Environmental Control Board (ECB)
X	Bridget Cantwell	Hazard Mitigation Planner	MDEM
X	Bruna Attila	Coastal Planner, BoS	DOP
	Candisse Bennett-Parker	Director	Mayor's Office of Correspondence and Constituent Services
	Chaya Deitsch	Director of Emergency Management	Baltimore City Sheriff's Office
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	Herman Guadalupe	Engineer Supervisor	DGS
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	Justin Elszasz	Chief Data Officer	Mayor's Office
X	Kay Webster	Deputy Director, Office of Public Health Preparedness and Response (OPHPR)	BCHD
	Kendra Moore	Recreation Manager South District	Baltimore City Recreation and Parks (BCRP)
	Kevin Kearney	Chief Information Security Officer	Baltimore City Information and Technology (BCIT)
	Kevin Ryan	HazMat Tech	Baltimore City Fire Department (BCFD)
	Kim Eshleman	Director, OPHPR	BCHD
X	Kimberly Grove	Chief, Office of Compliance and Research	Baltimore Department of Public Works (DPW)
X	Kyle Leggs	City Planning Supervisor	DOP
	Larysa Salamacha	Managing Director	Baltimore Development Corporation (BDC)

		Lauren Schiszik	Historic Preservation Planner, Commission for Historical and Architectural Preservation (CHAP)	DOP
	X	Lindsay Adams	Food Resilience Planner	DOP
	X	Marvin Jones		
		Marwan Alkarajat	Chief, Capital Projects and Energy Division	DGS
		Masuma Islam Lonczak	Mayor's Office of Immigrant Affairs	Mayor's Office
	X	Matt Piechocki	Senior Emergency Preparedness Administrator	BGE
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	X	Valorie Rupp		
	X	William Ethridge	City Planner II	DOT
	X	Yolanda Cason	Operations Manager I, Solid Waste	DPW
		Yosef Kebede	Bureau Head, Water and Wastewater	DPW
		Yvonne Moore-Jackson	Bureau Head, Solid Waste	DPW

Agenda Summary: The purpose of the meeting was to discuss the current status of the project, review the schedule, finalize the hazards of concern, and evaluate a selection of mitigation strategies and actions from the 2018 DP3.

Item No.	Description	Action item(s):
1	Welcome	-
2	HMAC #2 Meeting Purpose • Discuss the status of the planning process for Baltimore's Disaster Preparedness and Planning Project (DP3). • Finalize the hazards of concern and hazard groupings. • Evaluate five of the 2018 mitigation strategies and actions. o Provide input on action status, update wording, decide on whether to continue the actions provided. o This activity will serve as a guide to assist HMAC members with updating the status of their 2018 mitigation actions.	-
3	Status Update/Schedule • Multiple phases of the planning process are being implemented concurrently. o Efforts are ongoing to gather data to conduct the Risk Assessment. o Public outreach is continuously occurring throughout the planning process; we have identified how to get the public more involved. • Project is currently on track.	-

	○ Hazards need to be finalized by the end of next week in order to begin the Risk Assessment.	
5	Hazards of Concern • The majority of natural hazards assessed in the 2018 DP3 will be carried forward to the 2023 update; the exception is the Tsunami hazards. Below is the proposed hazards and hazard groupings for the 2023 update. ○ Flooding ▪ Riverine ▪ Stormwater/Nuisance ▪ Coastal ▪ Sea Level Rise ○ Coastal Storms ▪ Tropical Storms ▪ Hurricanes ▪ Nor'easters ○ Severe Storms ▪ Tornado ▪ Derecho ▪ Winter Storms ▪ Thunderstorms ○ Extreme Temperatures ▪ Extreme Heat ▪ Extreme Cold ○ Drought ○ Soil Movement ▪ Land Subsidence ▪ Urban Karst/Sinkholes ○ Earthquake ○ Human-caused ▪ Pandemic ▪ Civil unrest ▪ Terrorism • Cyber attack • Participates asked what the difference between coastal flooding and sea level rise was. Coastal flooding is associated with storm events, such as a hurricane, and sea level rise occurs over a longer, gradual period of time. The group agreed to assess these hazards as separate hazards. • Participants recommended considering including invasive species and hazardous materials (specifically transportation of hazardous materials) as human-caused hazards. • Participants noted that hazard categorized as natural hazards can be exacerbated by human activity; the DP3 will include a discussion on how human activity can impact natural hazards.	-
7	Evaluating 2018 Mitigation Strategies and Actions • IN-3: Ensure backup power generation for critical facilities and identified key infrastructure during power outages Implementation **Actions:**	-

- Investigate off-grid, on-site renewable energy systems, generators, and technologies for critical facilities to ensure redundancy of energy systems.
- Seek funding to purchase and install generators for all city buildings designated as critical to agency functions.
- Evaluate and ensure backup power generation is available to healthcare facilities (nursing homes, critical care facilities, hospitals, etc.).

Participant Feedback:

- Additional clarity is needed regarding the roles of agencies assigned to an action.
- Some departments, such as DPW and OEM, could aid with implementation for this action.
- What role do State agencies have with implementing local mitigation actions.

- IN-6: Evaluate and improve resiliency of communication systems that are in place for sudden extreme weather events
  Implementation

  Actions:
  - Utilize new technologies such as fiber optics, external hook-ups, and mobile generators to improve resiliency.
  - Evaluate, improve, and build redundancy into all public and inter-agency warning and communication systems.
  - Identify best practices for the installation and management of floodproofing for all communication infrastructure at risk of water damage.
  - Implement additional nurse triage phone lines and community health centers to reduce medical surge on hospitals.
  - Ensure continued operation of City government's various computer mainframes for email, control systems, and internet service by having stand-by batteries for each with a capacity sufficient for backup generation to operate.

  Participant Feedback:
  - None
- NS-2: Increase and enhance the resilience and health of Baltimore's urban forest. Baltimore's urban forests and trees offer countless environmental benefits but are vulnerable to climate change-related impacts and hazards, including storm surge, wind, and changes in average temperatures. Increasing Baltimore's tree canopy will improve stormwater management, increase air quality, and reduce impacts from the urban heat island.

  Actions:
  - Anticipate the impacts of future changes in temperature and weather on the urban forest by developing a comprehensive list of plant and tree species known to have a broad range of environmental tolerances.
  - Establish and routinely update a comprehensive tree inventory to anticipate insect and forest structural impacts of climate change.
  - Establish a comprehensive maintenance program that includes pruning for sound structure and the removal of

hazardous limbs and trees. First focus on areas where vulnerable infrastructure is nearby such as energy supply and roads.
    - Continually adjust and modify planting details and specifications to assure the health and longevity of trees.
    - Increase the urban tree canopy and target areas with urban heat island impacts.

Participant Feedback:
    - Add flooding as a hazard in the 5th action and drought in the 2nd action.
    - The concept should be to manage existing forests in addition to the creation of new forests. This includes integrated vegetation management (including invasives) would be a part of this.
    - Emphasize planting in critical ecosystems – overlap with other buffer areas, etc.

- PS-6: Anticipate and address potential disease outbreaks caused by extreme weather events and changing climatic conditions.
Implementation

Actions:
    - Support studies of heat- and flood-related vector-borne diseases in the Baltimore region based on changing temperature and moisture.
    - Evaluate existing programs that detect disease outbreaks to determine their flexibility to respond to new conditions.

Participant Feedback:
    - Consider including infections such as waterborne infectious disease.
    - Add pooling or standing water as breeding ground for diseases in 1st action.

- B-3: Strengthen City zoning, floodplain, and construction codes to integrate anticipated changes in climate
Implementation

Actions:
    - Review zoning code and strengthen language (where necessary) in order to better protect citizens and increase resiliency in buildings.
    - Review and amend existing building and floodplain regulations to require more flood-resistant new and existing structures when located in the floodplain.
    - Utilize open space category in zoning code to protect sensitive areas (stormwater sites, steep slopes, floodways, etc.).
    - Review and increase Flood Protection Elevation (Base Flood Elevation + Freeboard) standards to the highest available State, Federal or local elevation level.
    - Evaluate and update stormwater management regulations to avoid increases in downstream flooding.
    - Adopt design requirements that include wet and dry floodproofing techniques.
    - Review and consider adoption of the International Green Construction code.

	Participant Feedback: o Use plain language when discussing building code, zoning code, and floodplain ordinance.	
8	Next Steps • Public Workshop to be held 05/02/23 • Complete Hazards of Concern survey by 05/05/23 • Review BATool instructional video on YouTube o To be distributed via email o Tetra Tech will offer a virtual training – this would be open to all HMAC members • Evaluate 2018 mitigation actions using the BATool • Continue to assist with data collection and plan content creation • Next HMAC meeting to be announced via email	1. Tetra Tech to provide YouTube link for BATool training
9	Questions and Discussion • No questions or discussion occurred.	-

1

HMAC Meeting Purpose

- Provide stakeholders an update on what has been accomplished to date in the process and where we are in the timeline.
- Review the draft 2023 DP3 vision and goals; the vision and goals set the stage for developing mitigation actions and solutions to reduce hazard risk in the City.
- Introduce public engagement tools to stakeholders and discuss how stakeholders can assist in boosting efforts.

2

Today's Topics

- PLANNING PROCESS STATUS
- PUBLIC KICKOFF MEETING RECAP
- 2023 DP3 VISION AND GOALS
- PUBLIC ENGAGEMENT
- NEXT STEPS
- QUESTIONS

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Planning Process Status

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Hazard Mitigation Planning

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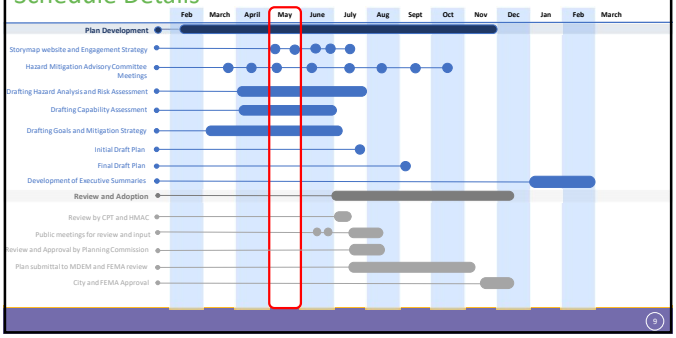
Schedule Details



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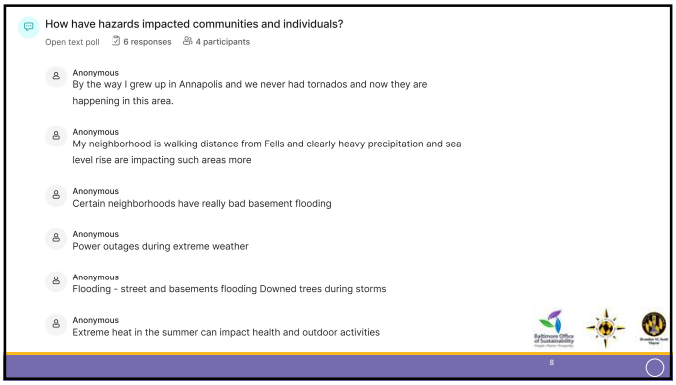

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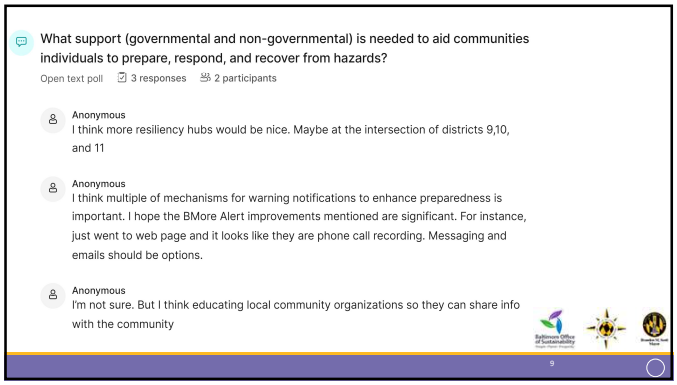

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2018 DP3	2023 Revisions
Vision: Baltimore will be a city whose daily activities reflect a commitment shared by government, business, and citizens to reduce or eliminate impacts from current and future natural hazards.	**Vision:** Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future hazards, especially those exacerbated by climate change.
Goal 1: Protect the health, safety and welfare of Baltimore City residents and visitors.	**Goal 1:** Ensure the equitable protection of the health, safety and welfare of all people who work, live, and play in the City, with specific consideration for the barriers and challenges that may result in disproportionate hazard impacts to socially vulnerable populations and underserved communities.
Goal 2: Prevent damage to structures, infrastructure, and critical facilities.	**Goal 2:** Strengthen the resilience of critical government and community facilities, services, and systems, to reduce or prevent impacts from natural and human-caused hazard events.
Goal 3: Build resilience and disaster prevention and planning into all programs, policies, and infrastructure (public and private).	**Goal 3:** Enhance the integration of resilience, disaster prevention, and planning into all City programs, policies, and operations.
Goal 4: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience.	**Goal 4:** Enhance the City of Baltimore's adaptive capacity and build institutional structures that can proactively cope with dynamic future conditions.
Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.	**Goal 5:** No changes.
Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) community rating.	**Goal 6:** Provide support to increase efforts toward a better Community Rating System (CRS) classification.

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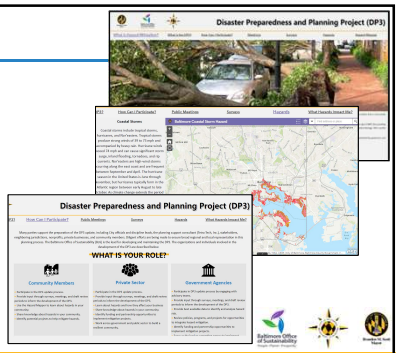
Story Map

- Interactive public facing plan website
- Explains hazard mitigation and the planning process
- Resource for upcoming public meeting dates and the public survey
- Provides definition and location of hazards of concern
- Community members can search their address to see what hazards they may be impacted by

Follow the link in the meeting chat to look!



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Outreach Materials

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Outreach Materials

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Surveys

- **Public**: Identify the community's exposure to hazards and the location of hazards within the community. https://www.surveymonkey.com/r/DP3PublicSurvey
- **Stakeholder**: Engage stakeholders (i.e., utilities, transportation, business/commerce, emergency services, health/medical) to collect input in terms of capabilities, vulnerabilities, and potential projects. https://www.surveymonkey.com/r/DP3StakeholderSurvey

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HMAC Social Equity Subcommittee

- Extended invitations to community members
- Positive responses and willingness to participate
- Will schedule kickoff meeting within the coming weeks

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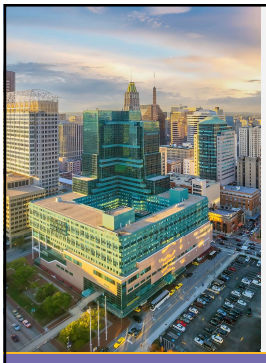

Next Steps

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Next Steps

- Continue to **assist** with data collection and plan content creation
- Use social media graphics to **inform** the public of the plan update
- **Share** the link to the StoryMap via social media
- Sustainability Open House **June 21st at 4:30 p.m.**
- Next HMAC meeting **June 27th at 2:00 p.m.**

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Questions

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Project Contacts

Aubrey Germ
Baltimore Office of Sustainability
Climate and Resilience Planner
aubrey.germ@baltimorecity.gov

JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
jaleesa.tate@tetratech.com

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21

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Hazard Mitigation Advisory Committee Meeting #3
Location of Meeting:	Teleconference
Date of Meeting:	May 30, 2023 @ 2:00 P.M.

Attendees:

	Name	Title	Organization
x	Al Frenette	Protective Security Advisor	Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)
	Alice Huang	Acting Assistant Commissioner, Community Services	Baltimore City Health Department (BCHD)
x	Aliyah Russell	Project Officer	Maryland Department of Emergency Management (MDEM)
	Allison Blood	Healthy Harbor Program Manager	Waterfront Partnership of Baltimore
	Amy Gilder-Busatti	Environmental Planner and Landscape Architect	Department of Planning (DOP)
x	Angela McCauley	Emergency Services Manager	Mayor's Office of Homeless Services (MOHS)
	Anthony Scott	Associate Director of Project Management	Mayor's Office
	Antoine Smith	Office of Emergency Response and Preparedness	Department of Public Works (DPW)
x	Aubrey Germ	Climate and Resilience Planner, BoS	DOP
x	Ava Richardson	Director, Baltimore Office of Sustainability (BoS)	DOP
	Benjamin Zaitchik	Earth and Planetary Sciences Professor	Johns Hopkins University
	Bonnie Sorak		
	Brad Rogers	Executive Director	South Baltimore Gateway Partnership
x	Brandi Welsh	Community Program Liaison	Environmental Control Board (ECB)
x	Bridget Cantwell	Hazard Mitigation Planner	MDEM
	Bruna Attila	Coastal Planner, BoS	DOP
	Candisse Bennett-Parker	Director	Mayor's Office of Correspondence and Constituent Services
	Chaya Deitsch	Director of Emergency Management	Baltimore City Sheriff's Office
	Christopher Hepler	Construction Project Supervisor II	Department of General Services (DGS)
x	Cindy Hudson	Environmental Manager	Maryland Port Administration (MPA)
	Dan Coy	Chief of Forestry	Baltimore City Recreation and Parks (BCRP)
	Danielle Gooden	Governmental and External Affairs Manager	Baltimore Gas and Electric (BGE)
x	Eileen Singleton	Principal Transportation Engineer	Baltimore Metropolitan Council
	Elise Whiteford	Planning Section Chief	Office of Emergency Management (OEM)
	Eric Booker	Deputy Commissioner, Housing Code Enforcement and Emergency Operations	Baltimore City Department of Housing and Community Development (DHCD)
x	Grace Altenburg	Resilience and Adaptation Planner	Tetra Tech
x	Graham Young	Project Manager	Mayor's Office of Infrastructure Development (MOID)
	Herman Guadalupe	Engineer Supervisor	DGS
x	JaLeesa Tate	Project Manager	Tetra Tech
	Jamie Williams	City Planner Supervisor	DOP
	Jess Henson	Senior Director Risk and Safety	Maryland Zoo
x	Jessica Stokes	Outreach Lead	Tetra Tech
x	Joanna Birch	Floodplain Manager, BoS	DOP
	Joshua Norris	Hazard Mitigation Planner	FEMA Region 3
x	Joy Hatchette	Associate Commissioner for Consumer Education and Advocacy	Maryland Insurance Administration
	Julia Kalloz	Energy Division Chief	DGS
	Justin Elszasz	Chief Data Officer	Mayor's Office
x	Kay Webster	Deputy Director, Office of Public Health Preparedness and Response (OPHPR)	BCHD
	Kendra Moore	Recreation Manager South District	Baltimore City Recreation and Parks (BCRP)
	Kevin Kearney	Chief Information Security Officer	Baltimore City Information and Technology (BCIT)
	Kevin Ryan	HazMat Tech	Baltimore City Fire Department (BCFD)
x	Kim Eshleman	Director, OPHPR	BCHD
x	Kimberly Grove	Chief, Office of Compliance and Research	Baltimore Department of Public Works (DPW)
	Kyle Leggs	City Planning Supervisor	DOP

		Larysa Salamacha	Managing Director	Baltimore Development Corporation (BDC)
		Lauren Schiszik	Historic Preservation Planner, Commission for Historical and Architectural Preservation (CHAP)	DOP
	x	Luis Calderon		
		Lindsay Adams	Food Resilience Planner	DOP
		Marvin Jones		
		Marwan Alkarajat	Chief, Capital Projects and Energy Division	DGS
	x	Marcus William		
		Masuma Islam Lonczak	Mayor's Office of Immigrant Affairs	Mayor's Office
		Matt Piechocki	Senior Emergency Preparedness Administrator	BGE
		Michelle Smith	Preparedness Section Chief	OEM
	x	Natasha Neale	Community Program Liaison	ECB
		Nicholas O'Gara	GIS Analyst	DOP
		Ron Rego	Cybersecurity Engineer	InfoSec / BCIT
		Scott Brillman	Acting Deputy Director	OEM
		Shelly Smith	Preparedness Section Chief	OEM
	x	Stacy Montgomery	Historic Preservation Planner Supervisor, CHAP	DOP
		Tara Josberger	Climate Outreach Intern, BoS	DOP
		Tavon Braxton	Deputy Director of Operations	Department of Transportation (DOT)
		Theresa Wilson	Operations Officer III	DPW
		Tom Jugan	Detective	Baltimore Police Department (BPD)
		Toya Sykes-Coates	Chief of Solid Waste Administration	DPW
	x	Valorie Rupp	Climate and Resilience Program Manager	BoS
		William Ethridge	City Planner II	DOT
		Yolanda Cason	Operations Manager I, Solid Waste	DPW
		Yosef Kebede	Bureau Head, Water and Wastewater	DPW
		Yvonne Moore-Jackson	Bureau Head, Solid Waste	DPW

Agenda Summary: The purpose of the meeting was to discuss the current status of the project, review the schedule, finalize the 2023 vison and goals, and review the social media and outreach products.

Item No.	Description	Action item(s):
1	Welcome	-
2	HMAC #3 Meeting Purpose • Provide stakeholders an update on what has been accomplished to date in the process and where we are in the timeline. • Review the draft 2023 DP3 vision and goals; the vision and goals set the stage for developing mitigation actions and solutions to reduce hazard risk in the City. • Introduce public engagement tools to stakeholders and discuss how stakeholders can assist in boosting efforts.	-

3	Status Update/Schedule
	• Multiple phases of the planning process are being implemented concurrently.
	  o Efforts are ongoing to gather data to conduct the Risk Assessment.
	  o Public outreach is continuously occurring throughout the planning process; the project team has received 53 public responses, 10 stakeholder responses, and 2 neighboring jurisdiction response.
		-

	▪ Office of Sustainability is expanding outreach efforts, targeting in-person engagements, and providing hard copies of the surveys. • Held a meeting with Office of Emergency Management to discuss hazardous materials, specifically transportation through the Howard Street Tunnel. o Hazards need to be finalized by the end of next week in order to begin the Risk Assessment. • The Risk Assessment public workshop will be combined with the Annual Sustainability Open House on June 21, 2023.	
4	Public Kickoff Meeting Recap • Meeting was held May 2, 2023, from 6:00-7:30PM • Seven residents participated - provided feedback based on diverse backgrounds • Conducted polling to prompt discussion. Responses to polling questions are provided below: **How have hazards impacted communities and individuals?** Open text poll 6 responses 4 participants Anonymous By the way I grew up in Annapolis and we never had tornados and now they are happening in this area. Anonymous My neighborhood is walking distance from Fells and clearly heavy precipitation and sea level rise are impacting such areas more Anonymous Certain neighborhoods have really bad basement flooding Anonymous Power outages during extreme weather Anonymous Flooding - street and basements flooding Downed trees during storms Anonymous Extreme heat in the summer can impact health and outdoor activities **What support (governmental and non-governmental) is needed to aid communities individuals to prepare, respond, and recover from hazards?** Open text poll 3 responses 2 participants Anonymous I think more resiliency hubs would be nice. Maybe at the intersection of districts 9,10, and 11 Anonymous I think multiple of mechanisms for warning notifications to enhance preparedness is important. I hope the BMore Alert improvements mentioned are significant. For instance, just went to web page and it looks like they are phone call recording. Messaging and emails should be options. Anonymous I'm not sure. But I think educating local community organizations so they can share info with the community	-

<table>
<tr>
<td>5</td>
<td>2023 Draft Vision and Goals

Participants were asked to provide feedback (verbal, through the meeting chat, or using the meeting reactions). Participants did not have additional revisions for the draft vision and goals. The 2023 vision and goals are as follows:

<table>
<tr><th>2018 DP3</th><th>2023 Revisions</th></tr>
<tr><td>Vision: Baltimore will be a city whose daily activities reflect a commitment shared by government, business, and citizens to reduce or eliminate impacts from current and future natural hazards.</td><td>Vision: Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future hazards, especially those exacerbated by climate change.</td></tr>
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<tr><td>Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.</td><td>Goal 5: No changes.</td></tr>
<tr><td>Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) community rating.</td><td>Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) classification.</td></tr>
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<td>6</td>
<td>Public Engagement

The StoryMap is live and available for participants to review and provide feedback; the StoryMap is an interactive public facing website that explains the hazard mitigation planning process, provides upcoming meeting information, hosts the surveys, defines hazards, and allows users to search their address to determine what hazards may impact them.
Participants provided the following feedback regarding outreach:

Next Door gets the most interest; agency liaisons have Next Door access.
Potential to investigate using the Everbridge System (follow up with Scott Brillman).
Quentin, BoS, has been doing targeted outreach in neighborhoods that have experienced hazard events. This includes community centers, recreation centers, senior seniors, libraries. Community events include the JFX farmer's market, Cherry Hill farmer's market, and Druid Hill farmer's market. Additionally, he has attended 2 Park Heights food giveaways.

</td>
<td>BoS will follow up with Kim Eshleman to provide hard copies for the BCHD Clinic lobby/waiting areas.</td>
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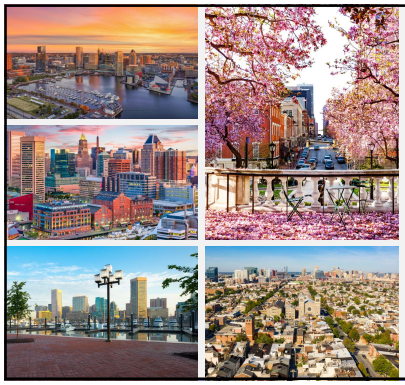
	▪ People are generally interested and concerned about hazards in the community, but do not have confidence in the City's efforts currently. o Department of Planning Comprehensive Planners have been amplifying surveys. o Ava, BoS, is meeting with council members to get surveys and materials to their districts. o There is an opportunity to amplify the DP3 at the June Commission for Historical and Architectural Preservation (CHAP) hearing. o Aubrey, BoS, reached out to community members who previously expressed interest in climate-related issues in the City. To-date there have been 15 positive responses of individuals willing to participate on the HMAC's Social Equity Subcommittee.	
7	Next Steps • Continue to assist with data collection and plan content creation. • Use social media graphics to inform the public of the plan update. • Share the link to the StoryMap via social media. • Sustainability Open House June 21st at 4:30 p.m. • Next HMAC meeting June 27th at 2:00 p.m.	-
8	Questions and Discussion • No additional questions or discussion.	-



Disaster Preparedness and Planning Project (DP3)

Hazard Mitigation Advisory Committee (HMAC):

Equity Subcommittee Meeting

1

Meeting Purpose

- Describe the **purpose and goals** of the Disaster Preparedness and Planning Project (DP3).
- Provide an overview of the **process to develop the plan** and highlight **opportunities for integrating equity**.
- Discuss **social vulnerability** within the City as it relates to hazards.
- Discuss community **concerns and needs** regarding disasters.

2

2

Intro to Tetra Tech

- Carryout the overall planning process
- Provide technical support and subject matter expertise
- Develop outreach and engagement materials
- Facilitate meetings
- Draft and finalize the DP3

JaLeesa Tate, CFM
Senior Community Resilience Professional
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Jessica Stokes, MSEM, NJCEM
Emergency Management Specialist
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Grace Altenburg
Planner
grace.altenburg@tetratech.com

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Today's Topics

- INTRODUCTIONS
- WHAT IS THE DP3?
- SOCIAL VULNERABILITY AND HAZARD MITIGATION
- GROUP DISCUSSION
- QUESTIONS
- NEXT STEPS

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Introductions

- Name
- Affiliation or Neighborhood
- Previous experience with hazard mitigation
- Areas of concern or interest

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What is the DP3?

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What is the DP3?

The DP3 is Baltimore's Hazard Mitigation Plan.

Hazard Mitigation is a sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.

It can also be...

- Economic Development
- Revitalization and Beautification
- Natural Resource Conservation
- Cost Savings

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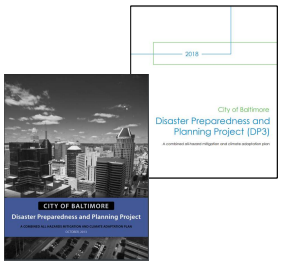
DP3 Vision

Baltimore is a **resilient city** whose daily activities reflect a **commitment shared** by all people who work, live, and play in the City to **reduce or eliminate impacts from current and future hazards**, especially those **exacerbated by climate change**.



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DP3 Goals

- Ensure the equitable protection of the health, safety and welfare of all people, with specific consideration for the barriers and challenges that may result in disproportionate hazard impacts.
- Strengthen the resilience of critical government and community facilities, services, and systems.
- Enhance the integration of resilience, disaster prevention, and planning into all City programs, policies, and operations.
- Enhance the City of Baltimore's adaptive capacity to proactively cope with dynamic future conditions.
- Promote hazard mitigation and climate adaptation awareness and education.
- Better Community Rating System (CRS) classification.

9

9

Intended Outcomes

- Increased understanding of hazards and risk the community faces.
- Eligibility for federal funds for mitigation grant programs.
- Developing partnerships that support planning and mitigation efforts.
- Enhanced coordination of hazard mitigation with comprehensive planning and zoning.
- Development of more sustainable and disaster-resistant communities.
- Reduced long-term impacts and damages to human health and structures.

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Steering Committees

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Planning Process

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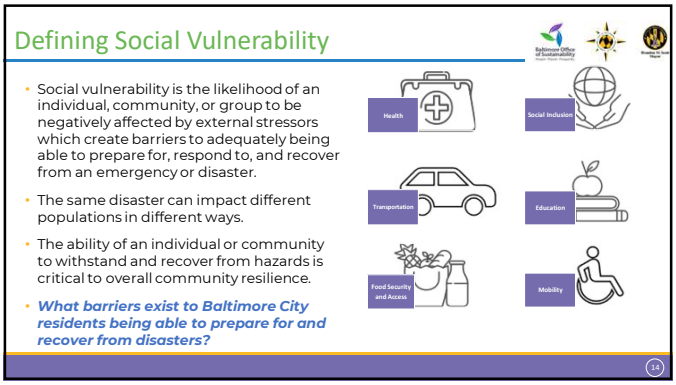

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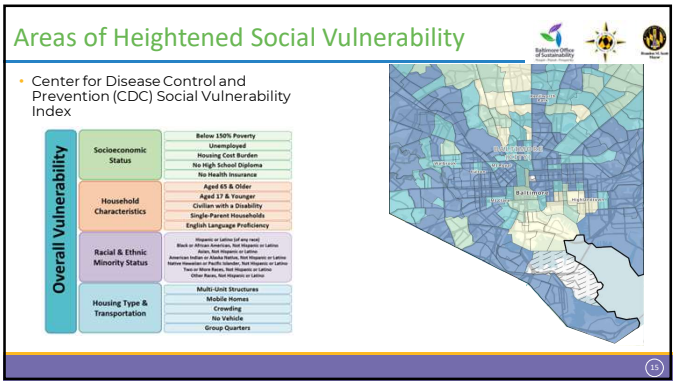

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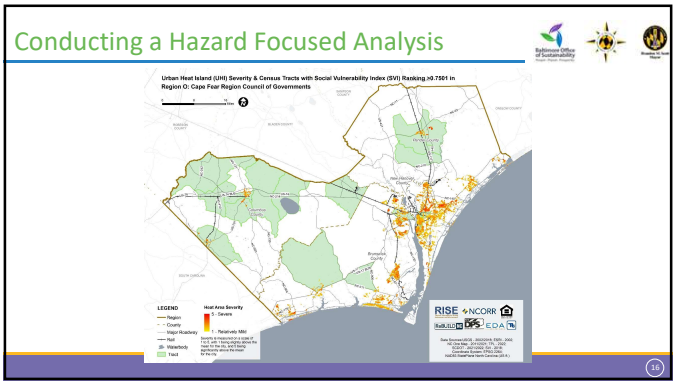

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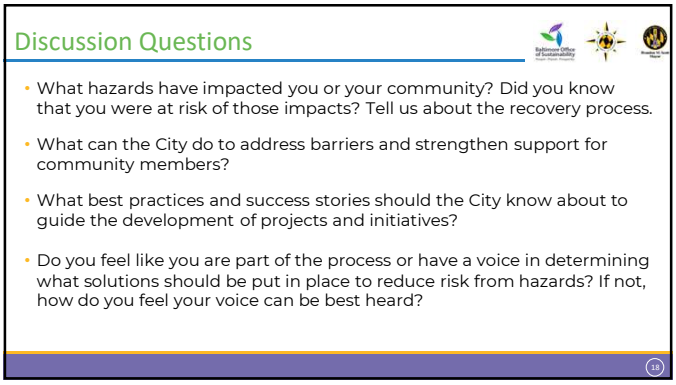

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Open Discussion and Questions

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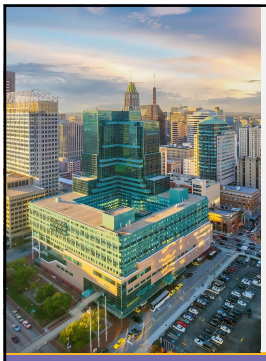

Next Steps

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Story Map

- Interactive public facing plan website
- Explains hazard mitigation and the planning process
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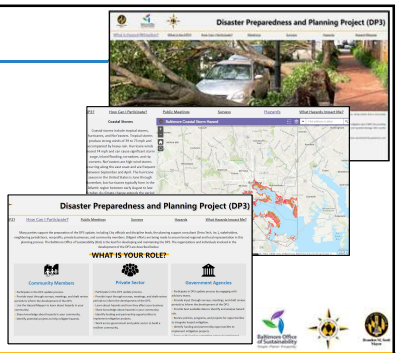

21

Surveys

- **Public**: Identify the community's exposure to hazards and the location of hazards within the community. https://www.surveymonkey.com/r/DP3PublicSurvey
- **Stakeholder**: Engage stakeholders (i.e., utilities, transportation, business/commerce, emergency services, health/medical) to collect input in terms of capabilities, vulnerabilities, and potential projects. https://www.surveymonkey.com/r/DP3StakeholderSurvey

22

Sustainability Open House

- June 21st from 4:30-7:30 pm
- Morgan State University in the Graves Business School Atrium (4200 Hillen Rd #4254, Baltimore, MD 21218).
- Learn about the efforts taking place across Baltimore to make the city more sustainable, more equitable and more resilient.

23

Project Contacts

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24

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Equity Subcommittee Meeting #1
Location of Meeting:	Teleconference
Date of Meeting:	June 12, 2023 @ 6:00 P.M.

Attendees:

	Name
	Aaron Ren
X	Alexandra Grayson
X	Aubrey Germ
X	Bonnie Sorak
X	Cameron Snell
X	Daniella Hutcherson
X	Grace Altenburg
	Howard Hughes
X	Jacques Benter
X	JaLeesa Tate
X	Jennly Louis
	Jordan Washington
	Justine Ramos
	Justine Ramos
x	Lynette Hodge
x	Naadiya Hutchinson
x	Ritzy Chirinos
x	Sharon Hayes
x	Tiffany Page-Cooper
x	Tim Barrows
x	Valerie Rupp

Agenda Summary: The purpose of the meeting was to introduce hazard mitigation and the Disaster Preparedness and Planning Project (DP3), review the roles and responsibility of Equity subcommittee, receive feedback from subcommittee members, and distribute resources for future meetings.

Item No.	Description	Action item(s):

1	Welcome and Introductions
	• A. Germ opened the meeting and introduced Tetra Tech.
	  o Tetra Tech will provide technical support throughout the process and draft the DP3.
	• Attendees introduced themselves and noted the following areas of interest and concern:
	  o Hazards: flooding, water quality, sewage back-ups,
	  o Learning how community members can participate
	  o Understanding how sustainability relates to hazard mitigation
	  o Understanding how hazards may impact transportation systems
	  o Learning how to decrease hazard risk, particularly from hazardous materials release
	  o Understanding how disaster notifications and warnings work in the City
		-

2	What is the DP3?
	• Hazard mitigation was defined as any sustained action that reduces or eliminates long-term risk to people and property from future disasters. Hazard mitigation measures can also serve as a catalyst for economic development, revitalization and beautification, natural resources conservation, and cost savings.
	• The vision of the 2023 DP3 is as follows: Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future hazards, especially those exacerbated by climate change.
	• The goals for the 2023 DP3 have been updated and are as follows:
	  ○ Goal 1: Ensure the equitable protection of the health, safety, and welfare of all people who work, live, and play in the City, with specific consideration for the barriers and challenges that may result in disproportionate hazard impacts to socially vulnerable populations and underserved communities.
	  ○ Goal 2: Strengthen the resilience of critical government and community facilities, services, and systems, to reduce or prevent impacts from natural and human-caused hazard events.
	  ○ Goal 3: Enhance the integration of resilience, disaster prevention, and planning into all City programs, policies, and operations.
	  ○ Goal 4: Enhance the City of Baltimore's adaptive capacity and build institutional structures that can proactively cope with dynamic future conditions.
	  ○ Goal 5: Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.
	  ○ Goal 6: Provide support to increase efforts toward a better Community Rating System (CRS) classification.
	• The intended outcomes of the planning process are to increase understanding of hazards and risk, maintain eligibility for grant funding, develop partnerships, integrate planning efforts, build community resilience, and reduce long-term impacts from hazards.
	• The plan consists of three steering committees including the Core Planning Team (CPT), Hazard Mitigation Advisory Committee (HMAC), and the Equity Subcommittee (to the HMAC). The Equity Subcommittee will raise community concerns and identify community needs for integration into the plan.
	  ○ The CPT serves as discipline leads and guides the development of the plan. This group will coordinate with the project team to discuss project status, troubleshoot any issues, inform the development of meeting materials, and review plan drafts.
	  ○ The HMAC includes the CPT members and provides input and guidance on the development of the plan and focus on the plan's content.
	• The planning process consist of the following nine steps: 1) organize resources, 2) conduct the assessment, 3) update the risk assessment, 4) development the mitigation strategy, 5) define the plan
		-

	maintenance, 6) prepare the updated DP3 draft, 7) review and finalize the updated DP3 draft, 8) submit the updated DP3 draft for formal review, and 9) facilitate the adoption of the updated DP3.	

3	Social Vulnerability and Hazard Mitigation
	• Social vulnerability is the likelihood of an individual, community, or group to be negatively affected by external stressors which create barriers to adequately being able to prepare for, respond to, and recover from an emergency or disaster.
	  o External stressors may include health risk, access to transportation, food security and access, social inclusion, educational attainment, and mobility.
	• Participants noted the following as barriers existing within Baltimore City:
	  o Isolation from society due to kids being sick and having to stay home; family members living far apart
	  o Limited finances
	  o The City's infrastructure and buildings are not ADA friendly
	  o High population of renters and transient population that may not know where to get information regarding emergencies and disasters.
	  o Limited or no access to broadband
	  o Understanding warning and notification information
	  o Identifying what organizations are ready to provide assist during response and recovery.
	  o Hazards being caused of exacerbated by people
	  o Concerns regarding police role in response and recovery and public distrust
	  o Long-term recovery is lacking
		-

4	Group Discussion
	• Participants were asked the following questions:
	  o What hazards have impacted you or your community? Did you know that you were at risk of those impacts? Tell us about the recovery process.
	  o What can the City do to address barriers and strengthen support for community members?
	  o What best practices and success stories should the City know about to guide the development of projects and initiatives?
	  o Do you feel like you are part of the process or have a voice in determining what solutions should be put in place to reduce risk from hazards? If not, how do you feel your voice can be best heard?
	• Participants provided the following feedback:
	  o There is a lack of support post-disaster due to the volume of support that is required; developing plans for providing adequate support (through trained staff and/or volunteers) would be beneficial.
	  o Disasters and hazard impacts can be caused and/or exacerbated by humans.
		-

	○ The City should consider the relationship between the community and law enforcement, when identifying staffing for disaster support activities. Pre-existing distrust can harm disaster assistance efforts. ○ Support for undocumented individuals needs to be available. ○ Warning and notification, such as sirens for flash floods, have been successful in neighboring communities; there needs to be additional educational outreach to educate people on the differences and meanings of the warnings and notifications. ○ Meal distribution programs during COVID-19 can serve as success stories. ○ Interconnected of systems (e.g., communications, power, transportation) needs to be evaluated. ○ Provide additional information about federal, state, and regional resources that may be available following a disaster. ○	
5	Question • Participants asked if the City conducts disaster drills. The City completes training and exercises, but BoS can follow-up with the Office of Emergency Management to provide additional information.	BoS to provide information on the frequency of training and exercises completed by the Office of Emergency Management.
6	Next Steps • The scheduled time for the meeting passed prior to covering next steps; next steps were provided to participants on the meeting agenda and via email. Next steps included: ○ Sharing the DP3 StoryMap ○ Completing the public survey ○ Register for the Annual Sustainability Open House	BoS to provide meeting materials.

1

HMAC Meeting Purpose

- Provide stakeholders an update on what has been accomplished to date in the process and where we are in the timeline.
- Review the preliminary 2023 DP3 risk assessment results; the risk assessment identifies hazards, risks, impacts, and vulnerabilities.
- Brainstorm potential mitigation strategies and actions for inclusion in the 2023 DP3; these strategies and actions serve as the roadmap for reducing risk.

2

Today's Topics

- PLANNING PROCESS STATUS
- PUBLIC OUTREACH RECAP
- PRELIMINARY RISK ASSESSMENT
- MITIGATION STRATEGY BRAINSTORM
- NEXT STEPS
- QUESTIONS

3

4

Schedule Details

5

6

7

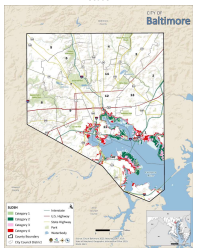
Coastal Storm

Costal Storms are often accompanied by flooding, storm surge, and high wind. These events can have detrimental impacts, especially on the historic structures located along the waterfront such as Fell's Point.

Population Exposed
580 In Category 1 Storm Surge
2,726 In Category 3 Storm Surge
5,886 In Category 3 Storm Surge
9,532 In Category 4 Storm Surge

Previous Occurrences
6 Federal Disasters since 1950
4 Notable events since 2018

Location



Building Replacement Cost Value
$1,007,383,510 In Category 1 Storm Surge
$12,474,050,158 In Category 2 Storm Surge
$24,705,664,962 In Category 3 Storm Surge
$31,987,248,372 In Category 4 Storm Surge

Climate Change Impacts
Rising global temperature and sea levels will exacerbate coastal storms. Rising sea levels will also expand the location of coastal storms further inland.

Hazard Types
Tropical Storm
Hurricane
Nor'easter

10

Baltimore Office of Sustainability
People · Planet · Prosperity

Brandon M. Scott
Mayor

Preliminary Risk Assessment Results

8

Severe Storm

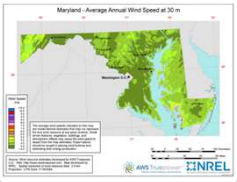
Severe storms can occur anywhere in the City at any time and have the potential to be life-threatening. It is critical for the community to prepare and be aware of forecasts in their local jurisdictions.

Population Exposed
591,489 (100%)
The entire City is susceptible

Previous Occurrences
11 Federal Disasters since 1950
6 Snowstorms
5 Severe Storm

Notable Occurrences
In June 2012, a derecho impacting MD, VA, and D.C traveled 750 mi. producing winds over 75 mph. The storm caused 7 fatalities, 3 of which were in MD.

Location



Potential Impacts
- Essential Services Interruptions
- Power Outages
- Traffic Accidents
- Downed Trees
- Property Damage
- Personal Injury / Loss of Life

Climate Change Impacts
By 2050, if emissions are lowered, there will be a 4.8°F increase in temperatures. If emissions are not reduced, the temperature could increase by nearly 9°F. Increases will be more conducive to increased frequency and intensity of severe storms (e.g., thunderstorms, tornados).

Hazard Types
Winter Storm
Thunderstorm
Derecho
Tornado

11

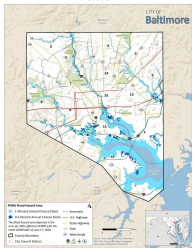
Flood

Foods are one of the most frequent and costly natural hazards in the City of Baltimore in terms of human hardship and economic loss, particularly to communities that lie within flood prone areas or floodplains of a major water source.

Population Exposed
1,767 (0.3%) In 1% Annual Chance Flood Area
4,982 (0.8%) In 0.2% Annual Chance Flood Area

Dams
10 Dams
6 High Hazard
2 Poor Condition

Location



Building Replacement Cost Value
$9,080,888,105 In 1% Annual Chance Flood Area
$17,106,270,708 In 0.2% Annual Chance Flood Area

Land Exposed
3,352 (6.5%)

Climate Change Impacts
Annual number of 2-inch precipitation events averaged 2.5 days per year during 2005–2020, compared to 1.8 days per year during 1950–2004.

Hazard Types
Riverine / Inland
Flash Flood
Urban / Stormwater
Coastal / Nuisance
Sea Level Rise
Dam Failure

9

Drought

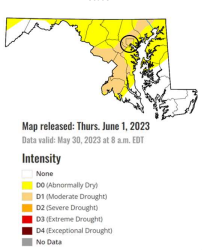
Droughts can affect Baltimore City's industries and make day to day tasks more difficult to complete when water usage must be monitored.

Population Exposed
591,489 (100%)
The entire City is susceptible

Potable Water Impacts
3 Reservoirs
86B Gallons of water stored
1.8M People Served

When experiencing drought, the City's reservoirs may not retain enough water causing a depletion in the total water supply available.

Location



Building Replacement Cost Value
Droughts may trigger wildfires and reduce fire-fighting capabilities. Risk to property and life is greatest within those areas where forested areas adjoin urbanized.

Land Exposed
119 Food-producing urban farms

Climate Change Impacts
By 2050, if emissions are lowered, there will be a 4.8°F increase in temperatures. If emissions are not reduced, the temperature could increase by nearly 9°F.

Hazard Types
Meteorological
Hydrological
Agricultural
Socioeconomic

12

Extreme Temperatures

Extreme temperature includes both heat and cold events, which affects the entire City including, human health, commercial/agricultural businesses and has primary and secondary effects on infrastructure.

Population Exposed

591,489

(100%)

The entire City is susceptible

Extremes in Baltimore City

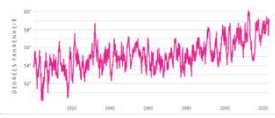
Heat Index of 105°F and higher

Code Red Alert

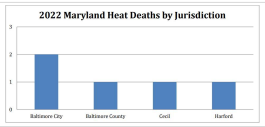
13°F and below including windchill

Code Blue Alert

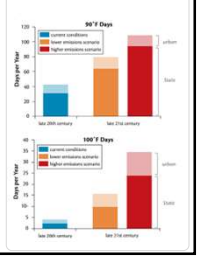
Average Temperature in Baltimore City



2022 Maryland Heat Deaths by Jurisdiction



Climate Change Impacts



13

Human-caused

Though human-caused hazards are considered rare events, the impacts which the City would experience could be detrimental to the economy, transportation, and in some cases the environment.

Population Exposed (Cyber)

Individual scale: Perpetrators may gather personal information and gain access to financial accounts; gain access to home security, disable or manipulate the system; expose medical records by accessing patients' data stored on the internet or in the cloud.

Governmental or corporate scale: Impacts from a cyber-attack may not directly impact the general population, but the effects could be trickled down if government-based community programs are unavailable due to the attack.

Population Exposed (Hazardous Materials)

Due to the varied location of different hazardous substances and waste sites in Baltimore City, the entire City is considered vulnerable to this hazard. Potential losses from hazardous substances incidences include human health and life and property resources. These types of incidents can lead to injury, illnesses, and/or death from both the involved persons and those living in the impacted areas.

Location

Hazard Types

- Cyber-Attack
- Hazardous Materials

16

Earthquake

Earthquakes in the City of Baltimore are a low-probability and high-consequence event, an earthquake can have devastating impacts on the City . Ground shaking can lead to the collapse of buildings and bridges and disrupt gas lines, electricity, and phone service.

Population Exposed

591,489

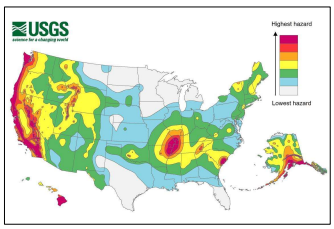
(100%)

The entire City is susceptible

Notable Occurrences

The strongest earthquake felt in the Baltimore region was a **5.8 magnitude** Virginia earthquake, originating in Louisa County on August 23, 2011. This event caused considerable damage in Baltimore; several buildings were damaged, including the Baltimore Basilica, which reported **$3-5 million** in damages.

Location



Hazard Types

- Surface Faulting
- Ground Motion
- Liquefaction
- Tectonic Deformation
- Tsunami
- Seiche

14

Baltimore Office of Sustainability

Brandon M. Scott Mayor

Mitigation Strategy Brainstorm

17

Soil Movement

In recent years Baltimore has experienced significant soil movement events including landslides and sinkholes.

Population Exposed

25,424

(4.3%)

In areas with grade >30%

Previous Occurrences

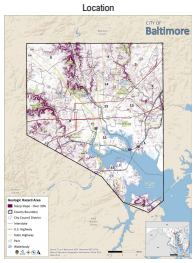
$18.5M

Repair cost for 26th Street landslide (2014)

3

Homes demolished due to North Ave. sinkhole (2022)

Location



Building Replacement Cost Value

$13,285,156,888

In areas with grade >30%

Climate Change Impacts

Annual number of 2-inch precipitation events averaged 2.5 days per year during 2005–2020, compared to 1.8 days per year during 1950–2004.

Increases in precipitation events can overly saturate the ground causing it to become unstable.

Hazard Types

- Land Subsidence
- Landslide
- Urban Karst / Sinkhole

15

2023 Mitigation Categories

- **Infrastructure:** Actions that minimize damage and loss to critical infrastructure.
  - Includes water systems, transit systems, distribution systems, culverts, sewer systems, dams, and other core critical assets.
- **Buildings:** Actions that minimize damage and loss to existing structures.
  - Includes homes, cultural and historical structures, academic institutions, offices, community establishments, religious institutions, and municipal structures.
  - Includes the policies and codes that influence land and building development.
- **Natural Systems:** Actions that minimize damage and losses and preserve or restore the functions of natural systems.
  - Includes utilization of green corridors, preservation of shoreline areas, and water supply management tactics.
- **Public Services:** Actions to inform and educate people on hazard information and mitigation practices.
  - Includes the development and implementation of strategic and operational plans.
  - Relates to public health and human services in terms of building resources and improving communication.

18

19

Next Steps

- **Share** the link to the **StoryMap** via social media
- Stay on the look out for information on the **in-person stakeholder Mitigation Strategy Workshop** (tentative for week of July 17th)
- Next HMAC meeting **July 25th at 2:00 p.m.**

20

21

Project Contacts

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22

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Hazard Mitigation Advisory Committee Meeting #4
Location of Meeting:	Teleconference
Date of Meeting:	June 27, 2023 @ 2:00 P.M.

Attendees:

	Name	Title	Organization
X	Al Frenette	Protective Security Advisor	Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)
	Alice Huang	Acting Assistant Commissioner, Community Services	Baltimore City Health Department (BCHD)
X	Aliyah Russell	Project Officer	Maryland Department of Emergency Management (MDEM)
	Allison Blood	Healthy Harbor Program Manager	Waterfront Partnership of Baltimore
	Amy Gilder-Busatti	Environmental Planner and Landscape Architect	Department of Planning (DOP)
X	Andrew Shaw		Mayor's Office
X	Angela McCauley	Emergency Services Manager	Mayor's Office of Homeless Services (MOHS)
	Anthony Scott	Associate Director of Project Management	Mayor's Office
X	Antoine Smith	Office of Emergency Response and Preparedness	Department of Public Works (DPW)
X	Aubrey Germ	Climate and Resilience Planner, BoS	DOP
X	Ava Richardson	Director, Baltimore Office of Sustainability (BoS)	DOP
	Benjamin Zaitchik	Earth and Planetary Sciences Professor	Johns Hopkins University
	Bonnie Sorak		
	Brad Rogers	Executive Director	South Baltimore Gateway Partnership
X	Brandi Welsh	Community Program Liaison	Environmental Control Board (ECB)
X	Bridget Cantwell	Hazard Mitigation Planner	MDEM
	Bruna Attila	Coastal Planner, BoS	DOP
	Candisse Bennett-Parker	Director	Mayor's Office of Correspondence and Constituent Services
X	Chanel McCoy		Mayor's Office
	Chaya Deitsch	Director of Emergency Management	Baltimore City Sheriff's Office
	Christopher Hepler	Construction Project Supervisor II	Department of General Services (DGS)
X	Cindy Hudson	Environmental Manager	Maryland Port Administration (MPA)
	Dan Coy	Chief of Forestry	Baltimore City Recreation and Parks (BCRP)
	Danielle Gooden	Governmental and External Affairs Manager	Baltimore Gas and Electric (BGE)
	Eileen Singleton	Principal Transportation Engineer	Baltimore Metropolitan Council
X	Elise Whiteford	Planning Section Chief	Office of Emergency Management (OEM)
	Eric Booker	Deputy Commissioner, Housing Code Enforcement and Emergency Operations	Baltimore City Department of Housing and Community Development (DHCD)
X	Grace Altenburg	Resilience and Adaptation Planner	Tetra Tech
X	Graham Young	Project Manager	Mayor's Office of Infrastructure Development (MOID)
X	Herman Guadalupe	Engineer Supervisor	DGS
X	JaLeesa Tate	Project Manager	Tetra Tech
	Jamie Williams	City Planner Supervisor	DOP
	Jess Henson	Senior Director Risk and Safety	Maryland Zoo
X	Jessica Stokes	Outreach Lead	Tetra Tech
X	Joanna Birch	Floodplain Manager, BoS	DOP
	Joshua Norris	Hazard Mitigation Planner	FEMA Region 3
X	Joy Hatchette	Associate Commissioner for Consumer Education and Advocacy	Maryland Insurance Administration
X	Julia Kalloz	Energy Division Chief	DGS
	Justin Elszasz	Chief Data Officer	Mayor's Office
X	Kay Webster	Deputy Director, Office of Public Health Preparedness and Response (OPHPR)	BCHD
	Kendra Moore	Recreation Manager South District	Baltimore City Recreation and Parks (BCRP)
	Kevin Kearney	Chief Information Security Officer	Baltimore City Information and Technology (BCIT)
	Kevin Ryan	HazMat Tech	Baltimore City Fire Department (BCFD)
X	Kim Eshleman	Director, OPHPR	BCHD

	X	Kimberly Grove	Chief, Office of Compliance and Research	Baltimore Department of Public Works (DPW)
	X	Kyle Leggs	City Planning Supervisor	DOP
		Larysa Salamacha	Managing Director	Baltimore Development Corporation (BDC)
		Lauren Schiszik	Historic Preservation Planner, Commission for Historical and Architectural Preservation (CHAP)	DOP
	X	Luis Calderon		
		Lindsay Adams	Food Resilience Planner	DOP
		Marvin Jones		
		Marwan Alkarajat	Chief, Capital Projects and Energy Division	DGS
	X	Marcus William		
		Masuma Islam Lonczak	Mayor's Office of Immigrant Affairs	Mayor's Office
		Matt Piechocki	Senior Emergency Preparedness Administrator	BGE
		Michelle Smith	Preparedness Section Chief	OEM
		Natasha Neale	Community Program Liaison	ECB
	X	Nicholas O'Gara	GIS Analyst	DOP
	X	Rachel Whiteheart		
	X	Ron Rego	Cybersecurity Engineer	InfoSec / BCIT
	X	Sandra Moyer		BCFD
		Scott Brillman	Acting Deputy Director	OEM
		Shelly Smith	Preparedness Section Chief	OEM
	X	Stacy Montgomery	Historic Preservation Planner Supervisor, CHAP	DOP
		Tara Josberger	Climate Outreach Intern, BoS	DOP
		Tavon Braxton	Deputy Director of Operations	Department of Transportation (DOT)
	X	Theresa Wilson	Operations Officer III	DPW
		Tom Jugan	Detective	Baltimore Police Department (BPD)
	X	Toya Sykes-Coates	Chief of Solid Waste Administration	DPW
	X	Valorie Rupp	Climate and Resilience Program Manager	BoS
	X	William Ethridge	City Planner II	DOT
	X	Yolanda Cason	Operations Manager I, Solid Waste	DPW
		Yosef Kebede	Bureau Head, Water and Wastewater	DPW
		Yvonne Moore-Jackson	Bureau Head, Solid Waste	DPW

Agenda Summary: The purpose of the meeting was to provide an update on the planning process status, review preliminary 2023 DP3 risk assessment results, and brainstorm mitigation strategies and actions for inclusion in the 2023 DP3.

Item No.	Description	Action item(s):
1	Welcome Statements	-
2	Planning Process Status • Participated in the June 21st Sustainability Open House • Working to identify opportunities to host a stakeholder workshop to discuss the mitigation strategy; same for a public meeting to discuss strategy with the public. • Exploring opportunities to hold a public meeting once the plan is finalized to social the final plan. • Working to identity and obtain data related to hazardous materials. • Public outreach is continuously occurring throughout the planning process; the project team has received 134 public responses, 33 stakeholder responses, and 4 neighboring jurisdiction responses.	-
3	Community Outreach	**Tetra Tech**

	• The Sustainability Open House on June 21st was well attended.
	  ○ People were interested in learning more about how to participate in the planning process, and additional responses to the public and stakeholder surveys were received.
	  ○ We received a few more responses on problem areas – community members often noted downed trees being a concern.
	• The Equity Subcommittee Meeting on June 12th had 13 community members and stakeholders attend. Identified concerns include:
	  ○ Hazards: flooding, water quality, sewage back-ups,
	  ○ Learning how community members can participate.
	  ○ Understanding how sustainability relates to hazard mitigation.
	  ○ Understanding how hazards may impact transportation systems.
	  ○ Learning how to decrease hazard risk, particularly from hazardous materials release.
	  ○ Understanding how disaster notifications and warnings work in the City.
	• The Equity Committee also discussed barriers which contribute to social vulnerability, including:
	  ○ Isolation from society due to kids being sick and having to stay home; family members living far apart.
	  ○ Limited finances
	  ○ The City's infrastructure and buildings are not ADA friendly.
	  ○ High population of renters and transient population that may not know where to get information on emergencies and disasters.
	  ○ Limited or no access to broadband
	  ○ Understanding warning and notification information
	  ○ Identifying what organizations are ready to provide assist during response and recovery.
	  ○ Hazards being caused of exacerbated by people.
	  ○ Concerns regarding police role in response and recovery and public distrust
	  ○ Long-term recovery is lacking.
	
	Comments:
	• Interest in the Disaster Jeopardy game; Grace to share the link with the group.
	• OEM and DPW to share with Equity Committee public facing information regarding the evacuation plans for the City.
		• Still looking to get data for critical communities and hazardous material facilities.
		
		• End of this week to finalize analysis.
		
		• On schedule to have the first draft available late July, early August.

4	Preliminary Risk Assessment Results
	• Flood –
	  ○ Comments:
	  ▪ **Ron Rego**: Population exposed? Only looking at residents, correct?
	  • **JaLeesa Tate**: Yes, it's only based off residential data.
	  ▪ **Ava Richardson**: for the replacement costs, is that looking at overall, or just buildings in particular? Does it factor human health or quantifiable data?
		Baltimore City
		• To get contact for Forestry GIS; Shannon Eagan and Daniel Coy.

- **JaLeesa Tate**: Only on property damage.
- **Kim Grove**: concept that this city doesn't operate in a bubble. Being able to move goods and services has an economic impact. The area where the 1% flooding can occur, Is there any thought of roadway/transportation systems that can be impacted by this type of flood?
  - **JaLeesa Tate**: That's included in the State assets. We're waiting on more critical facilities and assets, such as roads and rails.
- **Joanna Birch**: if we use this language going forward, the city regulates the 1% and the 2% the same way. I refer to it as the same thing: regulatory floodplain.
  - **JaLeesa Tate**: That's helpful, as we have a brief discussion that there are natural areas not designated by FEMA that also flood. We emphasize that the SFHA has a higher risk, and areas outside of it also have risk, but it may have different impacts and/or results.

- Coastal Storm –
  - Comments:
    - No comments.
- Severe Storm –
  - Comments:
    - **Ava Richardson**: For climate change impacts, is it possible to clarify if it refers to global or local temperatures? Also, updating with most up-to-date census data as we get closer to the final date.
      - **JaLeesa Tate**: I believe it should be statewide. For the census, the 2020 number is one number, the ACS has a separate one, and additional data is available through the City Council website; we opted to go with the City Council data since it's more localized, but we can discuss and make sure we're using the most appropriate one.

- Drought –
  - Comments:
    - **Ava Richardson**: For the land exposed, is it possible to factor in trees or canopy cover into this data? Particularly older trees. We can talk with our GIS team to get this data.
      - **JaLeesa Tate**: We can, we'll just need the shapefile for that. Otherwise, we can try reaching out to someone at Forestry.
      - **Kim Grove**: The Chesapeake Bay program updated the high-resolution data in 2017 and I believe they were using data from US Forest Service. Forest / tree canopy GIS contact

Shannon Eagan. Include *Daniel Coy*, which is the city forester.

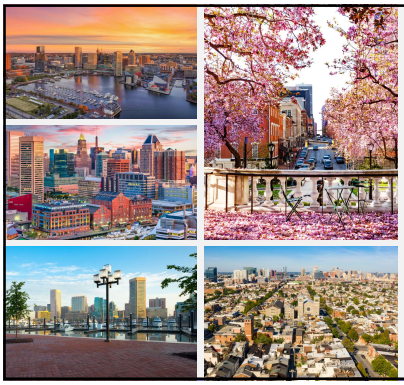
- Extreme Temperature –
  - Comments:
    - **Kim Eshleman**: Just note that Code Red Extreme Heat alerts in Baltimore city are based on heat index, not degrees F. And one more note along the same lines, the code blue extreme cold declarations are around wind chill, not degrees F.
    - **Ava Richardson**: For heat deaths by jurisdiction, I wonder if it's helpful to look at percentage increase due to other causes. The numbers are low, which is a good thing, but also wonder if they could be under reporting. Kim, could it be helpful to have other metrics?
      - **Kim Eshleman**: Is there a goal with the death data? I don't think it's due to under reporting, but if a death is associated at all with temperature, it is reported. In the State's heat report, and what we track in the city, are only during extreme heat and cold seasons. There are extreme cold deaths that occur outside of the season, but the death can still be hypothermia. There's some nuances we can discuss offline.
      - **JaLeesa Tate**: I'll reach out to you, Kim, because that can be helpful. For the hazards, we report damages in a narrative form, economic damages, and fatalities and impacts to population. It is harder to get that information for extreme temperatures, and because people don't report or realize it's tied together.

- Earthquake –
  - Comments:
    - No comments.
- Soil Movement –
  - Comments:
    - **Ava Richardson**: can you explain how soil movement is different from soil erosion? Do you think erosion is something we could assess further through the lens of HM based on the data DPW has?
      - **JaLeesa Tate**: I will work to get you a full scientific explanation to this.
    - **Kim Grove**: DPW tracks reports of erosion problems, not just related to construction.
    - **Ava Richardson**: Kim, do you think erosion is something we could assess further through the lens of HM based on the data DPW has?

	• **Kim Grove:** Yes, as it relates to micro-bursts (high intensity rainfall).
	
	• Human-Caused –
	  ○ Comments:
	  ▪ **Ron Rego**: Cyber-attack can be scary because they can attack water facilities, traffic lights, all sorts of things.
	  • **Elise Whiteford**: tier II, Shelly was mentioning this and should be getting you some answers there.	

5	Mitigation Strategy Brainstorm
	• Infrastructure: Actions that minimize damage and loss to critical infrastructure.
	  ○ Includes water systems, transit systems, distribution systems, culverts, sewer systems, dams, and other core critical assets.
	• Buildings: Actions that minimize damage and loss to existing structures.
	  ○ Includes homes, cultural and historical structures, academic institutions, offices, community establishments, religious institutions, and municipal structures.
	  ○ Includes the policies and codes that influence land and building development.
	• Natural Systems: Actions that minimize damage and losses and preserve or restore the functions of natural systems.
	  ○ Includes utilization of green corridors, preservation of shoreline areas, and water supply management tactics.
	• Public Services: Actions to inform and educate people on hazard information and mitigation practices.
	  ○ Includes the development and implementation of strategic and operational plans.
	  ○ Relates to public health and human services in terms of building resources and improving communication.
	
	Comments:
	• **JaLeesa Tate**: What are tangible things you think the City can do to reduce its risks? Is there anything else that you're already doing?
	  ○ **Kim Grove**: DPW has been regulating, assessing, replacing, and lining 1% of the drinking water infrastructure (potential for failure, and consequence for failure) (15 mi. per year); addressing the greatest risk factor locations first.
	  ○ **Theresa Wilson**: performing infrastructure audits to get clear picture of challenges. May involve funding but seems important. Utilize Community Relations Liaisons who have the "ear of the community" (and community associations/ leaders) to gain in- person feedback about the conditions they have experienced or have concerns about occurring.
	  ○ **Joanna Birch**: We already do stuff under the public services category for Floodplain through the CRS. We send mailers to everyone in the regulatory floodplain and an additional mailer to those that live in repetitive loss areas. I also think informational inserts are included in water bills from time to time.
		-

	○ **Elise Whiteford**: not funded yet but, acquisition of Fredrick Manor (alternatives). In the works. ○ **Joanna Birch**: Developing a data base of property within the city, vacant lots, and things like that, that have no structure on it. We can acquire and keep as green spaces or put a requirement in it. We can put buffers to waterways and underground systems. Preliminary database right now. Repetitive loss overlay, and waterways. ○ **Ava Richardson**: Universal design standards to better accommodate people with disabilities during/after hazard events. Incorporating more living structures into buildings.	
6	Next Steps • Share the link to the StoryMap via social media. • Stay on the lookout for information on the in-person stakeholder Mitigation Strategy Workshop (tentative for week of July 17th). • Next HMAC meeting July 25th at 2:00 p.m.	-
7	Questions and Discussion • No questions or comments.	-



Disaster Preparedness and Planning Project (DP3)

Hazard Mitigation Advisory Committee (HMAC):

Equity Subcommittee Meeting

1

Meeting Purpose

- Review the preliminary results of the risk assessment to ground-truth the scientific findings with the lived experiences of the community.
- Identify community-focused mitigation actions that address community needs and concerns.

2

Today's Topics

- OVERVIEW OF RISK ASSESSMENT RESULTS
- OVERVIEW OF MITIGATION STRATEGIES AND ACTIONS
- GROUP DISCUSSION
- NEXT STEPS

3

Risk Assessment

4

Purpose of the Risk Assessment

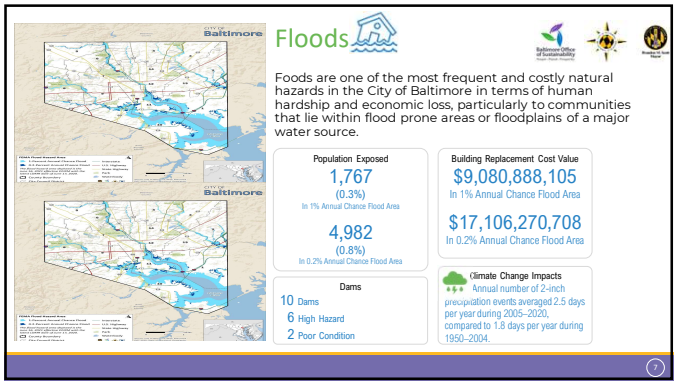
- A risk assessment identifies the hazards that are the *most likely* or *most damaging* to the City. The assessment calculates the potential losses (e.g., human exposure or injury and economic damages) the City may if the hazard were to occur.
- Positions the City to utilize local knowledge and data to determine priorities for hazard mitigation and resilience efforts.
  - Analyze current data and historic impacts
  - Identify what is relevant to the City to recommend locally driven results
  - Assess the potential for emerging and future hazards
- Simply put we want to identify what current and future hazards impact the region and reduce impacts while preparing for the future.

5

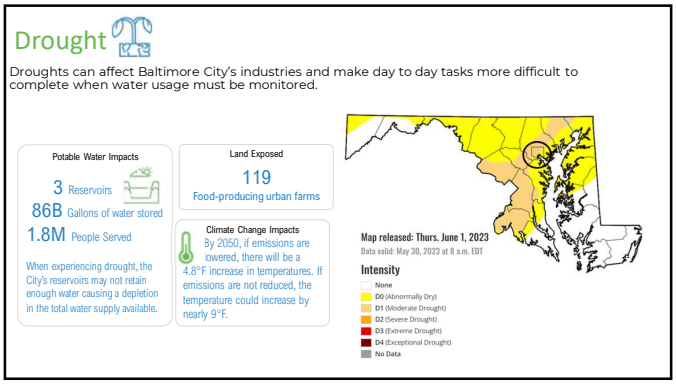
Process for Conducting the Risk Assessment

- Identify and describe current and future hazards
  - Location and extent
  - Past occurrences and impacts
  - Future probability
- Identify and assess potential impacts on assets
  - People
  - Public service facilities
  - Critical facilities
- Analyze risks
  - Intersection of vulnerability, hazards, and exposure
- Develop a roadmap to build resilience

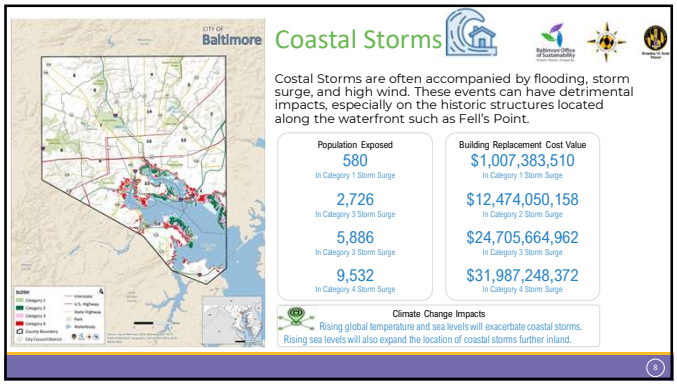
6


Floods
Foods are one of the most frequent and costly natural hazards in the City of Baltimore in terms of human hardship and economic loss, particularly to communities that lie within flood prone areas or floodplains of a major water source.
Population Exposed
1,767
(0.3%)
In 1% Annual Chance Flood Area
4,982
(0.8%)
In 0.2% Annual Chance Flood Area
Building Replacement Cost Value
$9,080,888,105
In 1% Annual Chance Flood Area
$17,106,270,708
In 0.2% Annual Chance Flood Area
Dams
10 Dams
6 High Hazard
2 Poor Condition
Climate Change Impacts
Annual number of 2-inch precipitation events averaged 2.5 days per year during 2005–2020, compared to 1.8 days per year during 1950–2004.

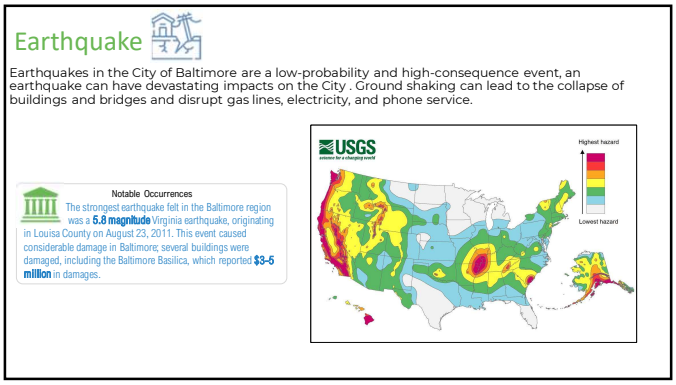
7


Drought
Droughts can affect Baltimore City's industries and make day to day tasks more difficult to complete when water usage must be monitored.
Potable Water Impacts
3 Reservoirs
86B Gallons of water stored
1.8M People Served
When experiencing drought, the City's reservoirs may not retain enough water causing a depletion in the total water supply available.
Land Exposed
119
Food-producing urban farms
Climate Change Impacts
By 2050, if emissions are lowered, there will be a 4.8°F increase in temperatures. If emissions are not reduced, the temperature could increase by nearly 9°F.
Map released: Thurs. June 1, 2023
Data valid: May 30, 2023 at 8 a.m. EDT
Intensity
None
D0 (Abnormally Dry)
D1 (Moderate Drought)
D2 (Severe Drought)
D3 (Extreme Drought)
D4 (Exceptional Drought)
No Data

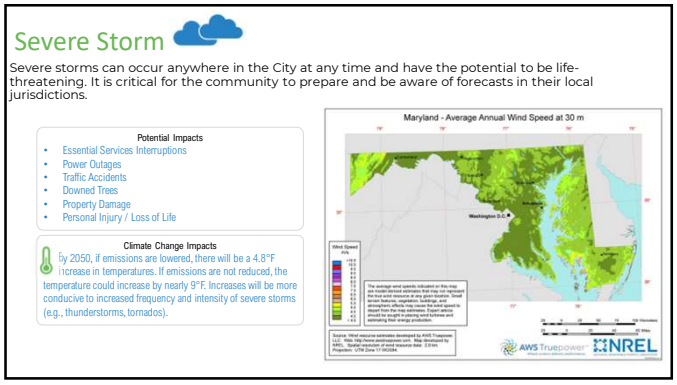
10


Coastal Storms
Costal Storms are often accompanied by flooding, storm surge, and high wind. These events can have detrimental impacts, especially on the historic structures located along the waterfront such as Fell's Point.
Population Exposed
580
In Category 1 Storm Surge
2,726
In Category 3 Storm Surge
5,886
In Category 3 Storm Surge
9,532
In Category 4 Storm Surge
Building Replacement Cost Value
$1,007,383,510
In Category 1 Storm Surge
$12,474,050,158
In Category 2 Storm Surge
$24,705,664,962
In Category 3 Storm Surge
$31,987,248,372
In Category 4 Storm Surge
Climate Change Impacts
Rising global temperature and sea levels will exacerbate coastal storms. Rising sea levels will also expand the location of coastal storms further inland.

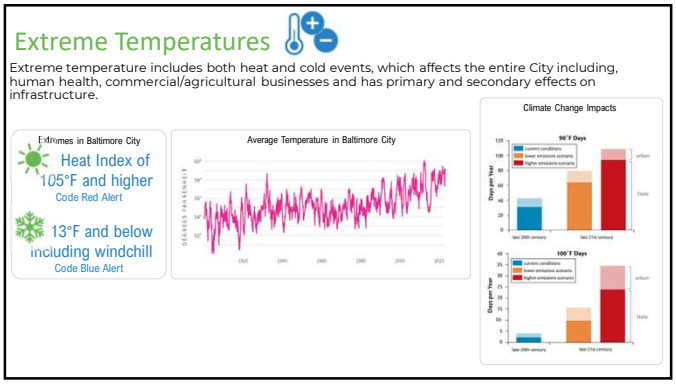
8


Earthquake
Earthquakes in the City of Baltimore are a low-probability and high-consequence event, an earthquake can have devastating impacts on the City . Ground shaking can lead to the collapse of buildings and bridges and disrupt gas lines, electricity, and phone service.
Notable Occurrences
The strongest earthquake felt in the Baltimore region was a 5.8 magnitude Virginia earthquake, originating in Louisa County on August 23, 2011. This event caused considerable damage in Baltimore; several buildings were damaged, including the Baltimore Basilica, which reported $3-6 million in damages.
USGS
Highest hazard
Lowest hazard

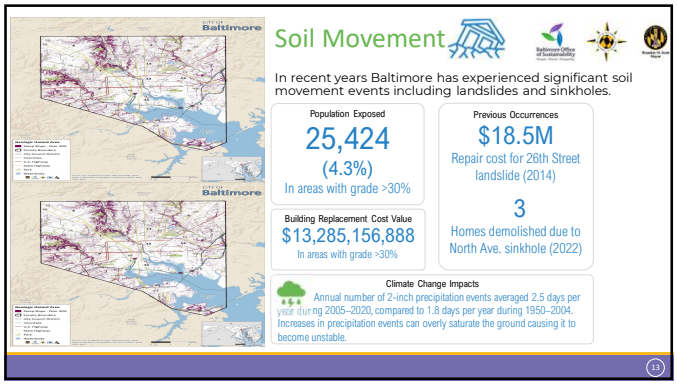
11


Severe Storm
Severe storms can occur anywhere in the City at any time and have the potential to be life-threatening. It is critical for the community to prepare and be aware of forecasts in their local jurisdictions.
Potential Impacts
Essential Services Interruptions
Power Outages
Traffic Accidents
Downed Trees
Property Damage
Personal Injury / Loss of Life
Climate Change Impacts
By 2050, if emissions are lowered, there will be a 4.8°F increase in temperatures. If emissions are not reduced, the temperature could increase by nearly 9°F. Increases will be more conducive to increased frequency and intensity of severe storms (e.g., thunderstorms, tornados).
Maryland - Average Annual Wind Speed at 30 m
AWS Truepower
NREL

9


Extreme Temperatures
Extreme temperature includes both heat and cold events, which affects the entire City including, human health, commercial/agricultural businesses and has primary and secondary effects on infrastructure.
Extremes in Baltimore City
Heat Index of 105°F and higher
Code Red Alert
13°F and below including windchill
Code Blue Alert
Average Temperature in Baltimore City
Climate Change Impacts
90°F Days
100°F Days

12



13

Human-caused

Though human-caused hazards are considered rare events, the impacts which the City would experience could be detrimental to the economy, transportation, and in some cases the environment.

Population Exposed (Cyber)

Individual scale: Perpetrators may gather personal information and gain access to financial accounts; gain access to home security, disable or manipulate the system; expose medical records by accessing patients' data stored on the internet or in the cloud.

Governmental or corporate scale: Impacts from a cyber-attack may not directly impact the general population, but the effects could be trickled down if government-based community programs are unavailable due to the attack.

Population Exposed (Hazardous Materials)

Due to the varied location of different hazardous substances and waste sites in Baltimore City, the entire City is considered vulnerable to this hazard. Potential losses from hazardous substances incidences include human health and life and property resources. These types of incidents can lead to injury, illnesses, and/or death from both the involved persons and those living in the impacted areas.

14

Baltimore Office of Sustainability

Brandon M. Scott Mayor

Mitigation Strategy

15

Purpose of the Mitigation Strategy

- The **Mitigation Strategy** is the City's roadmap to reduce the risk of hazards identified in the DP3. The strategy is based on hazard impacts, asset vulnerability, and the City's capabilities.
- **Mitigation Actions** are specific activities, such as policies, projects, and studies, that stakeholders identify to reduce risk.
  - Forward-looking and incorporate changing conditions for the life of the City's assets
  - Consider changing demographics and development patterns.
  - Examples of actions may include elevating electrical and HVAC equipment to reduce the likelihood of damage from floodwaters or planting trees to lower temperatures exacerbated by pavement.

16

Developing the Mitigation Strategy

- Assess City Capabilities
  - What tools and resources does the City have to reduce risk to hazards?
- Establish Goals
  - What outcomes do we want to achieve?
- Identify Actions
  - What specific actions will be taken to reduce hazard risk?
- Action Plan
  - How will the actions be prioritized and implemented?

17

2023 Vision and Goals

Vision: Baltimore is a resilient city whose daily activities reflect a commitment shared by all people who work, live, and play in the City to reduce or eliminate impacts from current and future hazards, especially those exacerbated by climate change.

- **Goal 1:** Ensure the equitable protection of the health, safety, and welfare of all people who work, live, and play in the City, with specific consideration for the barriers and challenges that may result in disproportionate hazard impacts to socially vulnerable populations and underserved communities.
- **Goal 2:** Strengthen the resilience of critical government and community facilities, services, and systems, to reduce or prevent impacts from natural and human-caused hazard events.
- **Goal 3:** Enhance the integration of resilience, disaster prevention, and planning into all City programs, policies, and operations.
- **Goal 4:** Enhance the City of Baltimore's adaptive capacity and build institutional structures that can proactively cope with dynamic future conditions.
- **Goal 5:** Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore.
- **Goal 6:** Provide support to increase efforts toward a better Community Rating System (CRS) classification.

18

Mitigation Action Categories

- **Infrastructure:** Actions that minimize damage and loss to critical infrastructure.
  - Includes water systems, transit systems, distribution systems, culverts, sewer systems, dams, and other core critical assets.
- **Buildings:** Actions that minimize damage and loss to existing structures.
  - Includes homes, cultural and historical structures, academic institutions, offices, community establishments, religious institutions, and municipal structures.
  - Includes the policies and codes that influence land and building development.
- **Natural Systems:** Actions that minimize damage and losses and preserve or restore the functions of natural systems.
  - Includes utilization of green corridors, preservation of shoreline areas, and water supply management tactics.
- **Public Services:** Actions to inform and educate people on hazard information and mitigation practices.
  - Includes the development and implementation of strategic and operational plans.
  - Relates to public health and human services in terms of building resources and improving communication.

19

19

Examples of Mitigation Actions

Preventative
- Floodplain mapping and regulations
- Open space preservation
- Stormwater management

Property Protection
- Relocation, acquisition, or elevation

Natural Resource Protection
- Wetland protection
- Erosion and sediment control
- Environmental corridors

Construction Projects
- Floodwalls
- Storm drain improvements
- Channel modifications

Repetitively Damaged Infrastructure
- Retrofit to higher standards

Public Information
- Outreach projects
- Real estate disclosure
- Map information
- Environmental education

20

20

Group Discussion

21

21

Discussion Questions: Risk Assessment

- ***Do the hazard impacts and losses from the Risk Assessment align with where you perceive the vulnerabilities in the City to exist?***
- ***Is there anything from the Risk Assessment that you were surprised to learn?***
- ***How can the City effectively communicate risk to the community?***

22

22

Discussion: Mitigation Strategy

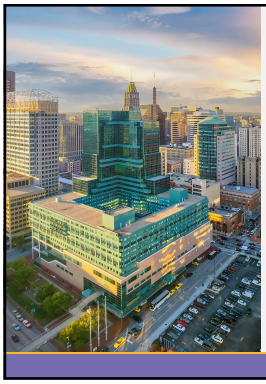
What actions can the City and stakeholders take to reduce risk?

Best Practices for Identifying Actions
- Focus on projects which build capacity
  - Knowledge exchange, skill building, and tool creation
- Set the stage for adaptation projects
  - Medium- and long-term initiatives which require planning and design
- Develop multi-disciplinary projects which provide co-benefits
  - Nature-based solutions
  - Construction
  - Hybrid (nature-based and construction)

Prioritizing Equitable Outcomes
- How will the action/project contribute to more equitable access to resources and benefits in the wider community?
- Are the long-term needs of people from historically marginalized groups considered in our long-term planning?
- Are there good equity and inclusion practices in other organizations, departments, or community organizations that can inform the implementation?

23

23



Next Steps

24

24

Next Steps

- Explore the plan's **interactive website** and learn more about the hazards that may impact the City (Story Map)
- Complete the Mitigation Action Development Worksheet by end of day Friday, July 21st. Form
- **Provide comments** on the draft plan when it becomes available for public review

25

25

Project Contacts

Aubrey Germ
Baltimore Office of Sustainability
Climate and Resilience Planner
aubrey.germ@baltimorecity.gov

JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
jaleesa.tate@tetratech.com

26

26

Purpose of Meeting:	Equity Subcommittee Meeting #2
Location of Meeting:	Teleconference
Date of Meeting:	July 17, 2023 @ 6:00 P.M.

Attendees:

	Name
	Aaron Ren
x	Alexandra Grayson
x	Aubrey Germ
x	Bonnie Sorak
x	Cameron Snell
	Daniella Hutcherson
x	Grace Altenburg
	Howard Hughes
	Jacques Benter
x	JaLeesa Tate
x	Jennly Louis
x	Jessica Stokes
	Jordan Washington
	Justine Ramos
x	Lynette Hodge
x	Michelle "Shelly" Smith
x	Naadiya Hutchinson
x	Ritzy Chirinos
	Sharon Hayes
	Tiffany Page-Cooper
	Tim Barrows
	Valerie Rupp

Agenda Summary: The purpose of the meeting was to review the preliminary risk assessment results, provide an overview of what a mitigation strategy is, through discussion identify potential problems and solutions which can be turned into mitigation actions, facilitate an open discussion session, and distribute resources for future meetings.

Item No.	Description	Action item(s):
1	Preliminary Risk Assessment Results • A risk assessment identifies the hazards that are the most likely or most damaging to the City. The assessment calculates the potential losses the City may experience if the hazard were to occur. • Risk is how hazards impact the City's assets (e.g., population, structures, economy, and environment). • Hazards of Concern for the 2023 DP3 Update: o Flood o Coastal Storm o Severe Storm o Drought o Earthquake o Extreme Temperature o Soil Movement o Human-Caused Comments:	-

	• **Naadiya Hutchinson**: Does the flood replacement cost value include sewage backups?
	  ○ **Jessica Stokes**: The assessment accounts for structures with a footprint in the FEMA mapped floodplain. The flood profile in the DP3 discusses multiple types of flooding, but the RA results are based on properties within the floodplain.
	• **Cameron Snell**: Are homes and businesses without insurance include in the RA result totals?
	  ○ **Jessica Stokes**: Yes
	  ○ **Aubrey Germ**: Baltimore's participation in the Community Rating System (CRS) means that residents in the regulated floodplain receive a 25% discount on their NFIP policies.
	• **Naadiya Hutchinson**: How does the City provide notification of severe storm warnings?
	  ○ **Michelle "Shelly" Smith**: Baltimore uses a service through Everbridge that sends automatic alerts to residents, based on cell phones and residents can opt-in to receive additional notifications. OEM is currently transitioning from a previous system (CodeRed) and the transition is on-going. Additional information on the City's notification system can be requested from michelle.smith@baltimorecity.gov or tishawna.mcgowan@baltimore.com
	• **Bonnie Sorak**: Drought effects new tree plantings – cascading impacts.
	• **Lynette Hodge**: Are there designs on fire in this plan?
	• **Bonnie Sorak**: Does drought also have land impacts as well?
	  ○ **JaLeesa Tate:** Drought can contribute to increased subsidence due to drawing more ground water to supply our needs.	

2	Mitigation Strategy Overview • Risk Reduction • Using Mitigation Strategies to Reduce Risk • Mitigation Strategy Categories • Updating the Mitigation Strategy • Connecting to the Mitigation Strategy Comments: • **Bonnie Sorak**: Suggest adding "pray" to the vision statement, especially since so many of the sustainability hubs are at churches. • **Jay**: What mitigation actions are there to mitigate the impacts of UHI and extreme heat, specifically in areas that may have higher social vulnerabilities? ○ Aubrey Germ named a number of strategies.	-

3	Group Discussion
	• What hazards have impacted you or your community, and what issues have they caused?
	  ○ Responses:
	  ▪ No Response to this question.
	• What can the City do to resolve those issues? Is there more than one solution?
	  ○ Responses:
	  ▪ No response to this question.
		-

- Do you think residents in the City would benefit from more localized outreach regarding hazards more likely to happen in the various City Council Districts?
    - Responses:
        - No response to this question.
- How to socialize risk information:
    - Prompting on buses.
    - Spreading info through news outlets.
    - Partnership with community associations and nonprofits to disseminate information. Newsletters, community bulletins, and social media.
    - Libraries.
    - Gospel radio/general radio.
    - Text messaging.
    - Robo calls.
    - Academia.
    - Messages/information can be inserted with water bills.
- Solutions:
    - Improving infrastructure in coastal areas; lots of low-income communities on coast.
    - Develop policy to decrease the number of Haz. mat. facilities; support stormwater management; tree plantings, long term care and maintenance; horticulture.
    - Get in contact with leaders, community development corporations, to further communication. These are useful outlets for disseminating hazard information.
    - Education outlets (university, environmental groups) -- could be good to get a sense to add on to these outlets.
    - Piggy backing on libraries - create a bookmark with where people can get resources and information.
    - I agree with the library idea, there's heavy traffic during the summer in Enoch Pratt. I could also discuss it with the Baltimore Beat, I'm fine ion their editors.
    - I will always support the partnership with community associations and nonprofits to disseminate information. Newsletters, community bulletins, and social media
    - Does drought also have land impacts as well as water decreases in underground streams?
    - Are there designs on fire in this plan?
    - Drought - And effects new tree plantings
    - Engaging the press around ways to improve risk and resilience is a great idea - I feel like things are usually covered only after something happens.
    - Actions the city and stakeholders can take are including folks with lived experience at the table while making these decisions. Creating a collaborative and inclusive space to really work with the community, especially those nonprofits that are already doing this work that may just need more financial and moral support.
    - Baltimore Green Space is offering a stormwater management event on 8/8 that's free: https://linktr.ee/baltimoregreenspace

	○ Messages/information can be inserted with water bills. ○ **Lynette Hodge**: Tree maintenance; funding/grant for tree plantings and community greening; stormwater management. ○ **Ritzy Chirinos**: Actions the city and stakeholders can take are including folks with lived experience at the table while making these decisions. Creating a collaborative and inclusive space to really work with the community, especially those nonprofits that are already doing this work that may just need more financial and moral support. ○ **Alexandra Grayson**: More measurable goals.; assess trouble with tree plantings and barriers. Identify what is stopping many of the mitigation strategies coming to fruition. ○ **Jay**: Learn from other places that are ahead of the curve such as Rotterdam sister city) and what they are doing to be sustainable. Their innovative practices for sustainable design and zoning. Baltimore can also do something similar. Reform the building codes, etc.; more sustainable construction – net zero, more innovative zoning. ○ **Naadiya Hutchinson**: consideration of renter engagement since renters can't make decisions on retrofitting. I currently live in rental housing and my landlord doesn't live in the city, so not sure if he would receive informational handouts on retrofitting/ these types of programs. ○ **Lynette Hodge**: or the aspect of providing funds, i think a requirement that the organization should serve under resourced communities. from and equity standpoint much of the resources stay in the white L. ○ **Bonnie Sorak**: Partnering with orgs that are deeply involved with disaster response like the American Red Cross and the 7th Day Adventist Church to disseminate disaster preparedness best practices.	
4	Questions/Open Discussion • How can city effectively communicate risk to the community? ○ Bus advertising ○ News/newspapers ○ Social media ○ Partner with community associations and nonprofits ○ Libraries ○ Community bulletins ○ Public service announcements via radio ○ Text/call messaging ○ Universities – outreach and insights • Is there anything from the risk assessment that you were surprised? ○ Didn't even think to assess drought within the City. ○ Surprised about the impacts from soil movement hazards. • What actions can the city and stakeholders take to reduce risk? ○ Improving old infrastructure ○ Increasing tolerance to flood risk. ○ Engaging the press around ways to improve risk and resilience. ○ Decrease number of hazmat facilities in Baltimore	-

	○ Stormwater management policies ○ Tree planting, maintenance ○ Permaculture techniques ○ Funding available or partnerships for community programs that have an 'ear on the ground.' ○ Include folks with lived experience at the table while making the decisions. ○ Create a collaborative and inclusive space to work with the community, especially nonprofits that are already doing this work that may just need more financial and moral support. ○ Measurable actions (in general) ○ Partnering with orgs that are deeply involved with disaster response like the American Red Cross and the 7th Day Adventist Church to disseminate disaster preparedness best practices. ○ Learn from outside agencies and governments on their best practices and implementation. ○ Update zoning codes and policies ○ Renter rights and engagement	
5	Next Steps • Explore the plan's interactive website and learn more about the hazards that may impact the City (Story Map) • Provide comments on the draft plan when it becomes available for public review	-

1

Topics

- Status Update
- Mitigation Strategy Workshop Recap
- DP3 Draft Review and Comment
- Questions and Discussion
- Next Steps

2

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Schedule Details

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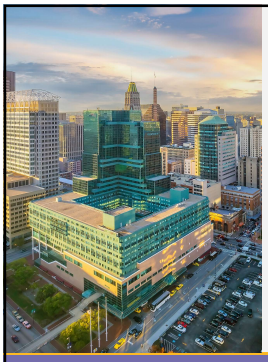

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Mitigation Strategy Workshop Recap

- Diverse agency representation
  - 11 virtual participants
  - 18 in-person participants
- Completed capabilities assessment worksheets
- Provided overview of the process to develop the Mitigation Strategy
- Reviewed 2018 DP3 strategies
- Breakout groups discussed potential for new mitigation actions
  - Stream restoration
  - Support for preparedness, response, and recovery efforts focused on individuals experiencing homelessness
  - EV charging

6

Review the DP3 Draft

7

7

Notable Changes from 2018 DP3

- Reorganized hazards based on past events since the 2018 DP3, new data, and input from stakeholders and community members.
- Included human-caused hazards.
- Integrated socially vulnerable populations and underserved communities throughout the plan's development and risk assessment.
- Included qualitative assessment of the impacts on natural and cultural resources from hazard events.
- Aligned the plan with FEMA's updated guidance that prioritizes the following:
  - Climate Change
  - Future Changes (population and development)
  - Equity
  - Building Code Integration
  - High Hazard Potential Dam Integration

8

8

2023 DP3 Framework

- Section 1: Introduction
- Section 2: City Profile
- Section 3: Risk Assessment
- Sections 4 to 11: Hazard Profiles
- Section 12: Capability Assessment
- Section 13: Mitigation Strategy
- Section 14: Plan Implementation and Maintenance
- Section 15: Moving Forward
- Glossary
- Appendix A: Engagement Strategy
- Hazards of Concern:
  - Flooding
  - Coastal Hazards
  - Severe Storms
  - Drought
  - Extreme Temperature
  - Earthquake
  - Soil Movement
  - Human-Caused Hazards

9

9

Section 1. Introduction

- Hazard Mitigation Planning Overview
  - Scope and Vision of Plan
  - Role of Climate Change and Climate Adaptation
  - Role of Social Vulnerability
  - Changes from last DP3
- Authorities and Responsibilities
  - FEMA Requirements
  - Planning Process
    - Organizing Resources
    - Schedule
    - Plan Integration and Existing Mitigation and Adaptation Efforts
  - Navigating the Plan

10

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Section 2. City Profile

- History
- Government
- Physical Setting
  - Geography and Topography
  - Hydrography and Hydrology
  - Climate
- Community Composition
  - Population
  - Demographics
  - Vulnerable Populations and Underserved Communities
- Land Use Development
- Housing
- Physical Assets
  - General Building Stock
  - Cultural and Natural Resources
  - Critical Facilities/Infrastructure
  - Community Lifelines

11

11

Section 3. Risk Assessment

- Identification of Hazards of Concern
  - 2023 Hazards of Concern
  - Hazard Groupings
  - Methodology and Tools
    - Risk Assessment Tools
    - Risk Assessment Approach
    - Hazus Modeling and Exposure Analysis
    - Limitations
- Hazard Ranking
  - Methodology
  - Results

12

12

Sections 4. – 11. Hazard Profiles

- Hazard Description
- Location
- Extent
- Previous Occurrences and Losses
- Probability of Future Events
- Potential Impacts of Climate Change
- Vulnerability Assessment
  - Impacts to Population
    - Socially Vulnerable Populations and Underserved Communities
  - Impacts to Structures
    - Critical Facilities, Infrastructure, and Community Lifelines
  - Impacts to the Economy
  - Impacts to Natural, Historic, and Cultural Resources
- Future Changes that May Impact Vulnerability
  - Changes in Land Use and Development, Population, Climate Change
- Change in Vulnerability Since 2018 DP3

13

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Section 14. Plan Implementation and Maintenance

- Adoption
- Plan Maintenance
- Monitoring, Evaluating, and Updating the DP3
- Integrating the DP3 into City Planning Mechanisms

16

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Section 12. Capability Assessment

- Overview of the existing tools, resources, programs, policies, etc. that the City currently has in place to implement hazard mitigation and build resilience.
- Includes the following for each identified capability:
  - Description
  - Responsible Agency
  - Funding to Support Hazard Mitigation
  - Hazards Addresses

14

14

Section 15. Moving Forward

- Introduction
- Community Resilience Recommendations
- Food Resilience Recommendations
- Integration of Cultural and Historic Resources Recommendations
- Conclusion

17

17

Section 13: Mitigation Strategy

- Vision and Goals
- Progress on Previous Plan
- Mitigation Action Identification
- Mitigation Action Plan
- Mitigation Strategy Evaluation and Prioritization

15

15

FEMA Approval Process

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FEMA Approval + City Adoption Process

- Draft DP3 Public Comment Period
  - Planning Commission comments
  - Sustainability Commission comments
  - City agency and other stakeholder comments
  - Regional partner comments
  - Community comments
  - State (MDEM) Review comments
- Incorporation of feedback to create Draft #2
- FEMA Review of Draft #2: 45 Days
- Incorporation of FEMA feedback to create Final DP3
  - FEMA will grant the plan 'Approvable Pending Adoption' status, meaning FEMA will approve the plan once it has been locally adopted.
- Presentation of Final DP3 to Sustainability Commission
  - November meeting
  - Affirmative vote
- Presentation of Final DP3 to Planning Commission
  - November 30th meeting
  - Affirmative vote
  - PC Signs Adoption Resolution
- Resolution is submitted to FEMA and FEMA grants final approval.
- **Note: the 2018 DP3 expires December 20, 2023**

19

19

Draft DP3 Public Comment Period

- Public Comment Period **August 11 - Sept 11th**
- Available on the Konveio Public Comment platform
  - https://baltimoreplanning.konveio.com/
- Need to create free user account
- Will be able to comment directly in the plan documents
- Each chapter posted separately for easier navigation

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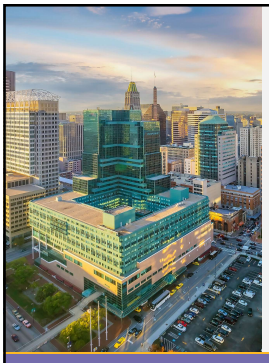


Questions and Discussion

21

21

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Hazard Mitigation Advisory Committee Meeting #7
Location of Meeting:	Teleconference
Date of Meeting:	August 22, 2023 @ 2:00 P.M.

Attendees:

	Name	Title	Organization
	Al Frenette	Protective Security Advisor	Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA)
	Alice Huang	Acting Assistant Commissioner, Community Services	Baltimore City Health Department (BCHD)
X	Aliyah Russell	Project Officer	Maryland Department of Emergency Management (MDEM)
	Allison Blood	Healthy Harbor Program Manager	Waterfront Partnership of Baltimore
	Amy Gilder-Busatti	Environmental Planner and Landscape Architect	Department of Planning (DOP)
	Andrew Shaw		Mayor's Office
	Angela McCauley	Emergency Services Manager	Mayor's Office of Homeless Services (MOHS)
X	Anthony Galloway		
	Anthony Scott	Associate Director of Project Management	Mayor's Office
	Antoine Smith	Office of Emergency Response and Preparedness	Department of Public Works (DPW)
X	Aubrey Germ	Climate and Resilience Planner, BoS	DOP
X	Ava Richardson	Director, Baltimore Office of Sustainability (BoS)	DOP
X	Benjamin Zaitchik	Earth and Planetary Sciences Professor	Johns Hopkins University
	Bonnie Sorak		
	Brad Rogers	Executive Director	South Baltimore Gateway Partnership
	Brandi Welsh	Community Program Liaison	Environmental Control Board (ECB)
	Bridget Cantwell	Hazard Mitigation Planner	MDEM
	Bruna Attila	Coastal Planner, BoS	DOP
	Candisse Bennett-Parker	Director	Mayor's Office of Correspondence and Constituent Services
	Chanel McCoy		Mayor's Office
	Chaya Deitsch	Director of Emergency Management	Baltimore City Sheriff's Office
	Christopher Hepler	Construction Project Supervisor II	Department of General Services (DGS)
X	Cindy Hudson	Environmental Manager	Maryland Port Administration (MPA)
	Dan Coy	Chief of Forestry	Baltimore City Recreation and Parks (BCRP)
	Danielle Gooden	Governmental and External Affairs Manager	Baltimore Gas and Electric (BGE)
X	Eileen Singleton	Principal Transportation Engineer	Baltimore Metropolitan Council
	Elise Whiteford	Planning Section Chief	Office of Emergency Management (OEM)
X	Eric Booker	Deputy Commissioner, Housing Code Enforcement and Emergency Operations	Baltimore City Department of Housing and Community Development (DHCD)
X	Grace Altenburg	Resilience and Adaptation Planner	Tetra Tech
	Graham Young	Project Manager	Mayor's Office of Infrastructure Development (MOID)
X	Herman Guadalupe	Engineer Supervisor	DGS
X	JaLeesa Tate	Project Manager	Tetra Tech
	Jamie Williams	City Planner Supervisor	DOP
	Jess Henson	Senior Director Risk and Safety	Maryland Zoo
X	Jessica Stokes	Outreach Lead	Tetra Tech
	Joanna Birch	Floodplain Manager, BoS	DOP
	Joshua Norris	Hazard Mitigation Planner	FEMA Region 3
X	Joy Hatchette	Associate Commissioner for Consumer Education and Advocacy	Maryland Insurance Administration
X	Julia Kalloz	Energy Division Chief	DGS
	Justin Elszasz	Chief Data Officer	Mayor's Office
X	Kay Webster	Deputy Director, Office of Public Health Preparedness and Response (OPHPR)	BCHD
	Kendra Moore	Recreation Manager South District	Baltimore City Recreation and Parks (BCRP)
	Kevin Kearney	Chief Information Security Officer	Baltimore City Information and Technology (BCIT)
	Kevin Ryan	HazMat Tech	Baltimore City Fire Department (BCFD)
X	Kim Eshleman	Director, OPHPR	BCHD

	X	Kimberly Grove	Chief, Office of Compliance and Research	Baltimore Department of Public Works (DPW)
		Kyle Leggs	City Planning Supervisor	DOP
		Larysa Salamacha	Managing Director	Baltimore Development Corporation (BDC)
		Lauren Schiszik	Historic Preservation Planner, Commission for Historical and Architectural Preservation (CHAP)	DOP
	X	Luis Calderon		
		Lindsay Adams	Food Resilience Planner	DOP
		Marvin Jones		
		Marwan Alkarajat	Chief, Capital Projects and Energy Division	DGS
		Marcus William		
	X	Masuma Islam Lonczak	Mayor's Office of Immigrant Affairs	Mayor's Office
	X	Matt Piechocki	Senior Emergency Preparedness Administrator	BGE
	X	Michelle Smith	Preparedness Section Chief	OEM
		Natasha Neale	Community Program Liaison	ECB
	X	Nicholas O'Gara	GIS Analyst	DOP
		Rachel Whiteheart		
	X	Ron Rego	Cybersecurity Engineer	InfoSec / BCIT
		Sandra Moyer		BCFD
		Scott Brillman	Acting Deputy Director	OEM
		Shelly Smith	Preparedness Section Chief	OEM
		Stacy Montgomery	Historic Preservation Planner Supervisor, CHAP	DOP
		Tara Josberger	Climate Outreach Intern, BoS	DOP
		Tavon Braxton	Deputy Director of Operations	Department of Transportation (DOT)
	X	Theresa Wilson	Operations Officer III	DPW
		Tom Jugan	Detective	Baltimore Police Department (BPD)
		Toya Sykes-Coates	Chief of Solid Waste Administration	DPW
	X	Valorie Rupp	Climate and Resilience Program Manager	BoS
	X	William Ethridge	City Planner II	DOT
		Yolanda Cason	Operations Manager I, Solid Waste	DPW
		Yosef Kebede	Bureau Head, Water and Wastewater	DPW
		Yvonne Moore-Jackson	Bureau Head, Solid Waste	DPW

Agenda Summary:

Item No.	Description	Action item(s):
1	Welcome Statements	- **None**
2	Mitigation Strategy Workshop Recap	- **None**
3	Review the DP3 Draft - Notable Changes from the 2018 DP3 - 2023 DP3 Framework - Introduction - City Profile - Risk Assessment	- **Masuma Lonczak:** Hello. I want bring light to including immigrant population as one of the groups of vulnerable populations. - **Ava Richardson:** A land use map for the city is being finalized. Not sure it will be completed in

	- Hazard Profiles - Capability Assessment - Mitigation Strategy - Plan Implementation and Maintenance - Moving Forward - FEMA Approval process - FEMA Approval + City Adoption Process Draft DP3 Public Comment Period	time, but perhaps we can include it if the timing works out. -
7	Questions and Discussion	-

Disaster Preparedness and Planning Project (DP3)

Hazard Mitigation Advisory Committee (HMAC):

Equity Subcommittee Meeting

1

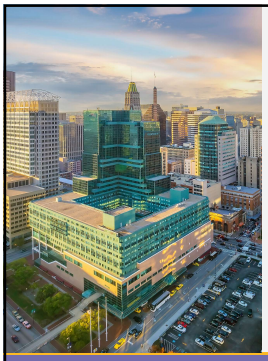
Meeting Purpose

- Walkthrough each section of the 2023 DP3 draft and develop an understanding of what content is located in the plan.
- Walkthrough the review and approval process for the 2023 DP3; identify opportunities for public comments and feedback.

2

Planning Process

3



Review the DP3 Draft

4

Notable Changes from 2018 DP3

- Reorganized hazards based on past events since the 2018 DP3, new data, and input from stakeholders and community members.
- Included human-caused hazards.
- Integrated socially vulnerable populations and underserved communities throughout the plan's development and risk assessment.
- Included qualitative assessment of the impacts on natural and cultural resources from hazard events.
- Aligned the plan with FEMA's updated guidance that prioritizes the following:
  - Climate Change
  - Future Changes (population and development)
  - Equity
  - Building Code Integration
  - High Hazard Potential Dam Integration

5

2023 DP3 Framework

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  - Extreme Temperature
  - Earthquake
  - Soil Movement
  - Human-Caused Hazards

6

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- Hazard Mitigation Planning Overview
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  - Role of Climate Change and Climate Adaptation
  - Role of Social Vulnerability
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  - Planning Process
    - Organizing Resources
    - Schedule
    - Plan Integration and Existing Mitigation and Adaptation Efforts
  - Navigating the Plan

7

7

Section 2. City Profile

- History
- Government
- Physical Setting
  - Geography and Topography
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  - Demographics
  - Vulnerable Populations and Underserved Communities
- Land Use Development
- Housing
- Physical Assets
  - General Building Stock
  - Cultural and Natural Resources
  - Critical Facilities/Infrastructure
  - Community Lifelines

8

8

Section 3. Risk Assessment

- Identification of Hazards of Concern
  - 2023 Hazards of Concern
  - Hazard Groupings
- Methodology and Tools
- Hazard Ranking

9

9

Sections 4. – 11. Hazard Profiles

- Hazard Description
- Location
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Section 12. Capability Assessment

- Overview of the existing tools, resources, programs, policies, etc. that the City currently has in place to implement hazard mitigation and build resilience.
- Includes the following for each identified capability:
  - Description
  - Responsible Agency
  - Funding to Support Hazard Mitigation
  - Hazards Addresses

11

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Section 13: Mitigation Strategy

- Vision and Goals
- Progress on Previous Plan
- Mitigation Action Identification
- Mitigation Action Plan
- Mitigation Strategy Evaluation and Prioritization

12

12

Section 14. Plan Implementation and Maintenance

- Adoption
- Plan Maintenance
- Monitoring, Evaluating, and Updating the DP3
- Integrating the DP3 into City Planning Mechanisms

13

13

Section 15. Moving Forward

- Introduction
- Community Resilience Recommendations
- Food Resilience Recommendations
- Integration of Cultural and Historic Resources Recommendations
- Conclusion

14

14

Reminder of Intended Outcomes

- Increased understanding of hazards and risk the community faces.
- Eligibility for federal funds for mitigation grant programs.
- Developing partnerships that support planning and mitigation efforts.
- Enhanced coordination of hazard mitigation with comprehensive planning and zoning.
- Development of more sustainable and disaster-resistant communities.
- Reduced long-term impacts and damages to human health and structures.

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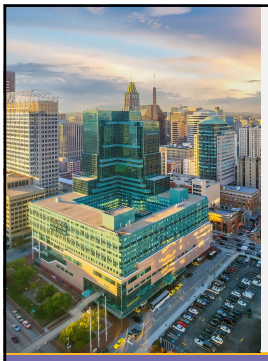

Review and Approval

16

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Draft DP3 Public Comment Period

- Public Comment Period **August 11 - Sept 11th**
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  - https://baltimoreplanning.konveio.com/
- Need to create free user account
- Will be able to comment directly in the plan documents
- Each chapter posted separately for easier navigation

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Advisory and Review Teams

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FEMA Approval Process

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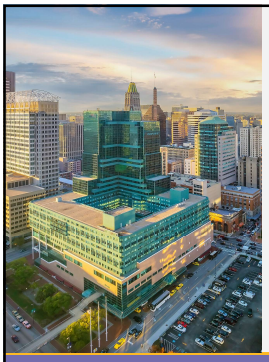

Questions and Discussion

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Project Contacts

Aubrey Germ
Baltimore Office of Sustainability
Climate and Resilience Planner
aubrey.germ@baltimorecity.gov

JaLeesa Tate, CFM
Tetra Tech
Senior Community Resilience Professional
jaleesa.tate@tetratech.com

21

21

2023 City of Baltimore Disaster Preparedness and Planning Project (DP3)

Purpose of Meeting:	Equity Subcommittee Meeting – Final Review
Location of Meeting:	Teleconference
Date of Meeting:	August 14, 2023 @ 6:00 P.M.

Attendees:

	Name
	Aaron Ren
X	Alexandra Grayson
X	Aubrey Germ
	Bonnie Sorak
	Cameron Snell
	Daniella Hutcherson
X	Grace Altenburg
	Howard Hughes
X	Jacques Benter
X	JaLeesa Tate
	Jennly Louis
X	Jessica Stokes
	Jordan Washington
	Justine Ramos
X	Lynette Hodge
	Michelle "Shelly" Smith
X	Naadiya Hutchinson
	Ritzy Chirinos
	Sharon Hayes
	Tiffany Page-Cooper
	Tim Barrows
	Valerie Rupp

Agenda Summary:

Item No.	Description	Action item(s):
1	Welcome & Meeting Purpose	-
2	Planning Process – Phase 7	**Naadiya Hutchinson**: Suggest doing open office hours to go through the draft since it is a large document.
3	Review the DP3 Draft - Notable Changes from 2018 DP3 - 2023 Framework o Introduction o City Profile o Risk Assessment o Hazard Profiles o Capability Assessment	**Lynette Hodge:** Does the physical setting map describe the health of greenspaces? Healthier greenspaces provide support in event of heavy stormwater, and the risk of being near unhealthy spaces. **Jessica Stokes:** No but acknowledged in the flood hazard profile. **Aubrey Germ:** This section (City Profile) is more built out than the last plan and includes some useful consolidated information and background.

	○ Mitigation Strategies ○ Plan Implementation and Maintenance ○ Moving Forward - Reminder of Intended Outcomes	**Lynnette Hodge:** Maybe there is opportunity for prescriptive work that can be done to support the plan.
4	Review and Approval ○ Draft DP3 Public Comment Period ○ Advisory and Review Teams ○ FEMA Approval Process	**Naadiya Hutchinson:** Note – the comment link is not on the Office of Sustainability landing page. **Aubrey Germ:** Will be updated shortly.
5	Questions and Discussion	**Naadiya Hutchinson:** Will there be time to go through the content of the plan? Interested in going through the 2018 changes for the 2024 plan. **Alexandra Grayson:** Can we check out section 13 as a group? **Lynnette Hodge:** Are there requirements for the lead agencies that participated in this to report back on the feasibility of the actions are as time goes on? **JaLeesa Tate:** Yes, on two parts. For the Federal FEMA requirement annual plan update 1.) to track the action status. 2.) and to make sure this plan is actionable.

Appendix C: Socially Vulnerable Population Exposure by Hazards

This appendix includes exposure data for socially vulnerable populations for spatially mapped hazards. For the purposes of the exposure analyses socially vulnerable populations included the following individuals and communities:

- Older adults (over 65 years of age)
- Children (under 5 years of age)
- Non-English speaking
- Persons with disabilities
- Limited access to transportation
- Black, Indigenous, and People of Color (BIPOC)
- Individuals living in group quarters
- Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersec, Asexual, and Additional Identities (LGBTQIA+)

Flood

Table 1. Estimated Vulnerable Population Located in the 1-Percent Flood Hazard Areas

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+	Percent of District Total
1	56	1.2%	42	1.3%	14	1.2%	52	1.2%	73	1.2%	75	1.2%	132	1.2%	5	1.3%	3	1.3%
2	1	<0.1%	1	<0.1%	0	0.0%	1	<0.1%	2	<0.1%	2	<0.1%	9	<0.1%	0	0.0%	0	0.0%
3	6	0.1%	2	0.1%	0	0.0%	5	0.1%	3	0.1%	4	0.1%	27	0.1%	4	0.1%	0	0.0%
4	5	0.1%	2	0.1%	0	0.0%	4	0.1%	5	0.1%	6	0.1%	26	0.1%	2	0.1%	0	0.0%
5	17	0.2%	8	0.2%	2	0.2%	14	0.2%	15	0.2%	16	0.2%	51	0.2%	2	0.3%	0	0.0%
6	1	<0.1%	0	0.0%	0	0.0%	1	<0.1%	1	<0.1%	1	<0.1%	2	<0.1%	0	0.0%	0	0.0%
7	24	0.4%	7	0.4%	1	0.3%	30	0.4%	36	0.4%	55	0.4%	124	0.4%	4	0.4%	1	0.4%
8	76	1.0%	29	1.0%	4	1.0%	82	1.0%	78	1.0%	111	1.0%	395	1.0%	6	0.9%	2	1.2%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	11	0.2%	8	0.2%	2	0.2%	17	0.2%	28	0.2%	28	0.2%	60	0.2%	1	0.4%	0	0.0%
11	33	0.6%	13	0.6%	5	0.6%	36	0.6%	50	0.6%	101	0.6%	117	0.6%	12	0.6%	2	0.6%
12	5	0.1%	2	0.1%	1	0.2%	8	0.1%	12	0.1%	18	0.1%	32	0.1%	6	0.1%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	3	<0.1%	1	<0.1%	0	0.0%	3	<0.1%	3	<0.1%	4	<0.1%	11	<0.1%	2	<0.1%	0	0.0%
Baltimore City (Total)	**238**	**0.3%**	**115**	**0.3%**	**29**	**0.3%**	**253**	**0.3%**	**306**	**0.3%**	**421**	**0.3%**	**986**	**0.2%**	**44**	**0.2%**	**8**	**0.3%**

Source: U.S. Census Bureau 2021, ACS; FEMA 2021

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 2. Estimated Vulnerable Population Located in the 0.2-Percent Flood Hazard Areas

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+	Percent of District Total
1	189	4.2%	141	4.2%	48	4.2%	177	4.2%	247	4.2%	255	4.2%	448	4.2%	17	4.3%	10	4.4%
2	5	0.1%	3	0.1%	1	0.1%	5	0.1%	6	0.1%	7	0.1%	29	0.3%	0	0.0%	0	0.0%
3	6	0.1%	2	0.1%	0	0.0%	5	0.1%	3	0.1%	4	0.1%	27	0.1%	4	0.1%	0	0.0%
4	5	0.1%	2	0.1%	0	0.0%	4	0.1%	5	0.1%	6	0.1%	26	0.1%	2	<0.1%	0	0.0%
5	36	0.4%	17	0.5%	5	0.4%	29	0.4%	32	0.4%	34	0.4%	108	0.4%	3	0.4%	1	0.7%
6	4	<0.1%	1	<0.1%	0	0.0%	3	<0.1%	3	<0.1%	5	<0.1%	14	0.1%	1	0.1%	0	0.0%
7	26	0.4%	8	0.4%	1	0.3%	33	0.4%	39	0.4%	60	0.4%	135	0.4%	4	0.4%	1	0.4%
8	110	1.4%	41	1.4%	6	1.5%	118	1.4%	113	1.4%	160	1.4%	570	1.8%	9	0.9%	2	1.2%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	23	0.5%	17	0.5%	5	0.5%	38	0.5%	61	0.5%	62	0.5%	131	0.4%	1	0.2%	0	0.0%
11	187	3.2%	71	3.3%	29	3.2%	202	3.2%	281	3.2%	567	3.2%	657	3.2%	68	3.2%	10	3.4%
12	17	0.4%	7	0.4%	2	0.3%	26	0.4%	40	0.4%	63	0.4%	108	0.5%	19	0.9%	1	0.4%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	11	0.2%	4	0.2%	1	0.1%	11	0.2%	13	0.2%	17	0.2%	42	0.1%	7	5.6%	1	0.3%
Baltimore City (Total)	**619**	**0.7%**	**314**	**0.9%**	**98**	**1.0%**	**651**	**0.7%**	**843**	**0.7%**	**1,240**	**0.8%**	**2,295**	**0.6%**	**135**	**0.6%**	**26**	**0.9%**

Source: U.S. Census Bureau 2021, ACS; FEMA 2021

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Dam Failure

Table 3. Estimated Vulnerable Population Located in the Dam Inundation Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	33	0.7%	25	0.7%	8	0.7%	31	0.7%	44	0.8%	45	0.7%	79	0.7%	3	0.8%	2	0.9%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	113	1.8%	35	1.8%	6	1.7%	142	1.8%	167	1.8%	256	1.8%	582	1.8%	18	1.8%	4	1.6%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	9	0.2%	4	0.2%	1	0.2%	16	0.2%	22	0.2%	32	0.2%	57	0.2%	1	0.2%	0	0.0%
10	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
11	34	0.6%	13	0.6%	5	0.6%	36	0.6%	50	0.6%	102	0.6%	118	0.6%	12	0.6%	2	0.7%
12	1	<0.1%	0	0.0%	0	0.0%	1	<0.1%	1	<0.1%	2	<0.1%	4	<0.1%	1	<0.1%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**190**	**0.2%**	**77**	**0.2%**	**20**	**0.2%**	**226**	**0.2%**	**284**	**0.2%**	**437**	**0.3%**	**842**	**0.2%**	**35**	**0.1%**	**8**	**0.3%**

Source: U.S. Census Bureau 2021, ACS

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population. Dam Inundation Areas are an aggregated dataset of all 'Sunny Day' Dam Inundation Areas; with the exception of JH Bayview Dam being a 'Brim Full' scenario.

Coastal Hazards

Table 4. Estimated Vulnerable Population Located in the SLOSH Category 1 Storm Surge Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	59	1.3%	44	1.3%	15	1.3%	55	1.3%	77	1.3%	80	1.3%	140	1.3%	5	1.3%	3	1.3%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
11	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.0%	1	<0.1%	1	<0.1%	0	0.0%	0	0.0%
12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**59**	**0.1%**	**44**	**0.1%**	**15**	**0.1%**	**55**	**0.1%**	**78**	**0.1%**	**81**	**0.1%**	**141**	**0.0%**	**5**	**0.0%**	**3**	**0.1%**

Source: U.S. Census Bureau 2021, ACS; NOAA 2023

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 5. Estimated Vulnerable Population Located in the SLOSH Category 2 Storm Surge Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	273	6.1%	203	6.1%	69	6.0%	256	6.1%	356	6.1%	368	6.1%	646	6.1%	24	6.1%	14	6.1%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	1	<0.1%	1	<0.1%	0	0.0%	2	<0.1%	3	<0.1%	3	<0.1%	6	<0.1%	0	0.0%	0	0.0%
11	7	0.1%	3	0.1%	1	0.1%	7	0.1%	10	0.1%	20	0.1%	23	0.1%	2	0.1%	0	0.0%
12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**281**	**0.3%**	**207**	**0.6%**	**70**	**0.7%**	**265**	**0.3%**	**369**	**0.3%**	**391**	**0.3%**	**675**	**0.2%**	**26**	**0.1%**	**14**	**0.5%**

Source: U.S. Census Bureau 2021, ACS; NOAA 2023
Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 6. Estimated Vulnerable Population Located in the SLOSH Category 3 Storm Surge Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	459	10.2%	343	10.3%	117	10.3%	430	10.2%	600	10.3%	619	10.2%	1,088	10.2%	40	10.2%	23	10.3%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	8	0.2%	6	0.2%	2	0.2%	13	0.2%	21	0.2%	21	0.2%	45	0.2%	0	0.0%	0	0.0%
11	157	2.7%	59	2.7%	25	2.8%	170	2.7%	236	2.7%	476	2.7%	552	2.7%	57	2.7%	8	2.7%
12	3	0.1%	1	0.1%	0	0.0%	4	0.1%	7	0.1%	10	0.1%	18	0.1%	3	0.1%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**627**	**0.8%**	**409**	**1.1%**	**144**	**1.4%**	**617**	**0.7%**	**864**	**0.7%**	**1,127**	**0.7%**	**1,703**	**0.4%**	**100**	**0.4%**	**31**	**1.1%**

Source: U.S. Census Bureau 2021, ACS; NOAA 2023

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 7. Estimated Vulnerable Population Located in the SLOSH Category 4 Storm Surge Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	562	12.5%	419	12.5%	143	12.5%	526	12.5%	733	12.5%	757	12.5%	1,330	12.5%	49	12.5%	28	12.5%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	35	0.7%	26	0.7%	8	0.8%	57	0.7%	92	0.7%	94	0.7%	199	0.7%	2	0.7%	0	0.0%
11	407	7.0%	154	7.1%	64	7.1%	439	7.0%	610	7.1%	1,233	7.1%	1,430	7.1%	148	7.1%	21	7.1%
12	40	0.7%	16	0.9%	5	0.9%	61	1.0%	94	1.0%	148	1.0%	254	1.0%	45	1.0%	2	1.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**1,044**	**1.2%**	**615**	**1.7%**	**220**	**2.1%**	**1,083**	**1.2%**	**1,529**	**1.3%**	**2,231**	**1.5%**	**3,213**	**0.8%**	**244**	**1.0%**	**51**	**1.8%**

Source: U.S. Census Bureau 2021, ACS; NOAA 2023

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 8. Estimated Vulnerable Population Located in the projected 2050 Mean Sea Level Rise (1-Percent Annual Chance Flood) Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	200	4.5%	149	4.5%	51	4.5%	187	4.5%	261	4.5%	270	4.5%	473	4.5%	18	4.5%	10	4.5%
2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
8	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
10	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
11	15	0.3%	6	0.3%	2	0.2%	16	0.3%	22	0.3%	45	0.3%	52	0.3%	5	0.3%	1	0.3%
12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
13	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Baltimore City (Total)	**215**	**0.3%**	**155**	**0.4%**	**53**	**0.5%**	**203**	**0.2%**	**283**	**0.2%**	**315**	**0.2%**	**526**	**0.1%**	**23**	**0.1%**	**11**	**0.4%**

Source: U.S. Census Bureau 2021, ACS; Eastern Shore Regional GIS Cooperative 2016
Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Soil Movement

Table 9. Estimated Vulnerable Population Located in the Landslide (Steep Slope >30% Grade) Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	60	1.3%	44	1.3%	15	1.3%	56	1.3%	78	1.3%	80	1.3%	141	1.3%	5	1.3%	3	1.3%
2	243	4.4%	132	4.4%	61	4.4%	238	4.4%	288	4.4%	361	4.4%	1,532	4.4%	21	4.4%	10	4.4%
3	208	3.5%	58	3.5%	16	3.4%	191	3.5%	123	3.5%	133	3.5%	1,010	3.5%	148	3.5%	8	3.5%
4	431	6.7%	210	6.7%	25	6.7%	377	6.7%	419	6.7%	529	6.7%	2,234	6.7%	168	6.7%	12	6.7%
5	518	6.4%	240	6.4%	75	6.4%	421	6.4%	456	6.4%	486	6.4%	1,546	6.4%	47	6.4%	10	6.4%
6	409	4.9%	115	4.9%	27	4.9%	379	4.9%	387	4.9%	541	4.9%	1,584	4.9%	126	4.9%	9	4.9%
7	320	5.2%	98	5.2%	18	5.2%	403	5.2%	471	5.2%	725	5.2%	1,645	5.2%	51	5.2%	13	5.2%
8	486	6.2%	183	6.2%	24	6.1%	522	6.2%	499	6.2%	708	6.2%	2,521	6.2%	41	6.2%	11	6.2%
9	215	4.4%	88	4.3%	28	4.4%	372	4.4%	516	4.4%	767	4.4%	1,354	4.4%	18	4.4%	5	4.4%
10	225	4.7%	164	4.7%	50	4.7%	363	4.7%	581	4.7%	593	4.7%	1,261	4.7%	12	4.7%	3	4.7%
11	160	2.8%	60	2.7%	25	2.8%	172	2.8%	239	2.8%	484	2.8%	561	2.8%	58	2.8%	8	2.8%
12	86	2.0%	35	2.1%	12	2.1%	131	2.1%	201	2.0%	317	2.0%	546	2.0%	97	2.0%	5	2.1%
13	80	1.7%	46	1.7%	10	1.7%	116	1.7%	199	1.7%	182	1.7%	538	1.7%	2	1.7%	4	1.7%
14	342	5.4%	126	5.4%	38	5.4%	319	5.4%	384	5.4%	518	5.4%	1,247	5.4%	218	5.4%	18	5.4%
Baltimore City (Total)	**3,783**	**4.5%**	**1,599**	**4.4%**	**424**	**4.1%**	**4,060**	**4.4%**	**4,841**	**4.2%**	**6,423**	**4.2%**	**17,719**	**4.5%**	**1,011**	**4.2%**	**118**	**4.1%**

Source: U.S. Census Bureau 2021, ACS; USGS 2014

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Human-Caused

Table 10. Estimated Vulnerable Population Located in the 1/2 Mile of Hazardous Materials Roadway Routes Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	1,760	39.3%	1,313	39.3%	448	39.2%	1,649	39.3%	2,298	39.3%	2,374	39.3%	4,168	39.3%	154	39.2%	89	39.3%
2	3,202	57.9%	1,743	57.9%	797	57.9%	3,125	57.9%	3,783	57.9%	4,747	57.9%	20,157	57.9%	270	58.0%	129	58.0%
3	5,159	86.2%	1,438	86.1%	405	86.2%	4,725	86.1%	3,049	86.2%	3,298	86.2%	25,011	86.1%	3,658	86.2%	191	86.2%
4	5,173	80.8%	2,516	80.8%	300	80.8%	4,526	80.8%	5,025	80.8%	6,345	80.8%	26,816	80.8%	2,019	80.8%	149	81.0%
5	5,609	69.1%	2,598	69.1%	812	69.0%	4,567	69.1%	4,941	69.1%	5,266	69.1%	16,752	69.1%	506	69.0%	104	69.3%
6	6,417	76.8%	1,810	76.8%	419	76.8%	5,946	76.8%	6,075	76.8%	8,482	76.8%	24,850	76.8%	1,971	76.8%	143	77.0%
7	4,671	75.6%	1,433	75.6%	264	75.6%	5,872	75.6%	6,868	75.6%	10,572	75.6%	23,991	75.6%	747	75.6%	185	75.8%
8	6,089	78.1%	2,301	78.1%	306	78.0%	6,540	78.1%	6,257	78.1%	8,873	78.1%	31,612	78.1%	515	78.0%	134	78.1%
9	4,172	84.7%	1,714	84.7%	543	84.7%	7,218	84.7%	10,011	84.7%	14,867	84.7%	26,260	84.7%	357	84.8%	99	84.9%
10	3,526	74.2%	2,572	74.2%	782	74.2%	5,699	74.2%	9,109	74.2%	9,302	74.2%	19,765	74.2%	185	74.3%	44	73.9%
11	5,274	91.3%	1,993	91.3%	828	91.3%	5,691	91.3%	7,902	91.3%	15,963	91.3%	18,519	91.3%	1,913	91.3%	270	91.4%
12	3,711	88.3%	1,492	88.3%	508	88.3%	5,641	88.3%	8,667	88.3%	13,681	88.3%	23,544	88.3%	4,170	88.3%	202	88.4%
13	3,600	76.6%	2,056	76.6%	446	76.6%	5,218	76.6%	8,940	76.6%	8,195	76.6%	24,163	76.6%	96	76.6%	195	76.5%
14	6,042	95.7%	2,223	95.6%	672	95.8%	5,636	95.7%	6,779	95.7%	9,145	95.7%	22,025	95.7%	3,854	95.7%	313	95.6%
Baltimore City (Total)	**64,405**	**77.1%**	**27,202**	**74.6%**	**7,530**	**73.2%**	**72,053**	**77.7%**	**89,704**	**77.6%**	**121,109**	**79.0%**	**307,635**	**77.8%**	**20,413**	**84.4%**	**2,246**	**77.8%**

Source: U.S. Census Bureau 2021, ACS; Maryland DOT 2019

Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Table 11. Estimated Vulnerable Population Located in the 1/2 Mile of Hazardous Materials Railway Routes Hazard Area

City Council District	Over 65	Percent of District Total	Under 5	Percent of District Total	Non-English Speaking	Percent of District Total	Disability	Percent of District Total	Poverty Level	Percent of District Total	Limited Transportation[1]	Percent of District Total	BIPOC	Percent of District Total	Group Quarters	Percent of District Total	LGBTQIA+[2]	Percent of District Total
1	2,073	46.3%	1,547	46.3%	528	46.3%	1,943	46.3%	2,707	46.3%	2,797	46.3%	4,911	46.3%	182	46.2%	105	46.3%
2	400	7.2%	218	7.2%	100	7.3%	391	7.2%	473	7.2%	593	7.2%	2,519	7.2%	34	7.2%	16	7.3%
3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5	2,708	33.3%	1,255	33.4%	392	33.3%	2,205	33.3%	2,386	33.3%	2,543	33.3%	8,089	33.3%	244	33.3%	50	33.4%
6	4,740	56.7%	1,337	56.7%	310	56.8%	4,391	56.7%	4,487	56.7%	6,264	56.7%	18,354	56.7%	1,456	56.7%	106	56.9%
7	4,662	75.5%	1,430	75.5%	263	75.3%	5,859	75.5%	6,854	75.5%	10,550	75.5%	23,942	75.5%	746	75.5%	184	75.6%
8	1,748	22.4%	661	22.4%	88	22.4%	1,877	22.4%	1,796	22.4%	2,547	22.4%	9,075	22.4%	148	22.4%	39	22.4%
9	4,703	95.4%	1,932	95.5%	612	95.5%	8,136	95.5%	11,284	95.5%	16,758	95.5%	29,601	95.5%	402	95.6%	112	95.7%
10	4,398	92.5%	3,207	92.5%	975	92.5%	7,107	92.5%	11,360	92.5%	11,601	92.5%	24,650	92.5%	230	92.6%	55	92.2%
11	5,288	91.6%	1,998	91.6%	831	91.6%	5,707	91.6%	7,923	91.6%	16,007	91.6%	18,570	91.6%	1,918	91.6%	271	91.7%
12	3,975	94.6%	1,598	94.6%	544	94.6%	6,041	94.6%	9,282	94.6%	14,651	94.6%	25,214	94.6%	4,465	94.6%	217	94.7%
13	3,406	72.4%	1,945	72.5%	422	72.5%	4,937	72.5%	8,458	72.5%	7,753	72.5%	22,861	72.5%	91	72.5%	185	72.4%
14	2,302	36.4%	847	36.4%	256	36.5%	2,147	36.4%	2,583	36.5%	3,485	36.5%	8,392	36.5%	1,468	36.5%	119	36.4%
Baltimore City (Total)	**40,403**	**48.4%**	**17,975**	**49.3%**	**5,321**	**51.7%**	**50,741**	**54.7%**	**69,593**	**60.2%**	**95,549**	**62.3%**	**196,179**	**49.6%**	**11,384**	**47.1%**	**1,457**	**50.5%**

Source: U.S. Census Bureau 2021, ACS; Maryland DOT 2019
Notes: Persons per household = 2.32. Number used to calculate Non-English-speaking population.

Appendix D: Checking in on the NFIP

Appendix D includes responses to questions related to administration and enforcement of the National Flood Insurance Program (NFIP) and Baltimore City's Floodplain Management Code. Topics discussed in the questionnaire include:

- Floodplain Identification and Mapping
- Floodplain Management
- Flood Insurance

Floodplain Identification and Mapping

1. Who is your FPA or floodplain manager? Please provide office/agency name, position title, and contact information. **Joanna Birch, Department of Planning - Floodplain Manager, Joanna.birch@baltimorecity.gov 410-396-1224**
2. Where do you keep your FIRM and FIS report? **All current and historic FIRMs and FIS reports are stored on a shared network drive which is regularly backed up in cloud storage.**
3. Has your community adopted the most recent FIRM? When was the adoption? Where is that information stored? Has your community updated the floodplain ordinance language to include the current FIRM and FIS? **Baltimore City has adopted the most recent FIRMs. They were adopted on June 16th, 2021. The City's floodplain code § 2-3(a)(1) states: The official floodplain map is the most current Flood Insurance Rate Map, as prepared by the Federal Emergency Management Agency.**
4. Does your municipality support requests for map updates? **Yes.**
5. Is there a specific agency/department responsible for compiling these updates and tracking LOMCs? **Department of Planning, Office of Sustainability. The floodplain manager compiles and tracks these changes along with the current and historic FIRMs and FIS reports.**
6. Do you collect updated technical or scientific data and modeling? How do you share this with FEMA? **The city collects technical data and modeling in two different ways. Currently, the city is undertaking a huge effort to determine the capacity of our stormwater sewer. This data will be used to develop watershed master plans as well as guide development and improvements to our storm drain network. The first way in which the city collects these data are by gathering the data ourselves internally through interagency collaboration. The second way in which the city requires and collects information is when permit applicants are required to complete H&H modeling. Requiring this is rare but does occur. Sometimes an applicant will complete this type of study on their own without being required, for example, on small unmapped streams that feed into the larger, mapped rivers in the city.**
7. Does your municipality provide assistance with local floodplain determinations? If yes, specify how. **Yes. The floodplain manager participates in pre-development meetings as a resource for developers before the submission of permits in the building process. In these meetings specific questions can be asked along with the presentation of plans for comment. The floodplain manager also assists any other requests that come in through the Department of Planning by citizens, realtors, or other interested parties. This assistance can be provided via email, phone, or in person if necessary.**
8. Do the people/agencies responsible for using these tools in your community have the access they need? Which tools does your community rely on? **Yes. The city relies heavily on a resource maintained by the Department of Housing called CoDeMap. This map service includes a variety of map data useful to internal city staff, residents, developers, and anyone interested in information on the location of the floodplain as well as the Flood Protection Elevation. Data is taken directly from FEMA and shows all the data present on the FIRMs alongside other city information. Anyone with internet access can utilize this tool and determine their**

location in reference to the floodplain and what the Flood Protection Elevation would be.

Floodplain Management

1. Does your municipality issue permits for all proposed development in the SFHA? What office/ position is responsible? **Yes. The Department of Planning Floodplain Manager and Coastal Planner positions are responsible.**
2. Does your municipality require BFE data for subdivision proposals and other development proposals larger than 50 lots or 5 acres? If so, what department or office is responsible? **Yes, BFE data is required if the proposal involves more than 5 lots or 5 acres. The Department of Planning (floodplain manager) is responsible for reviewing these submissions.**
3. How does your community identify substantially improved structures? When do they intervene? **Substantially improved structures are " any combination of repairs, reconstruction, rehabilitation, additions, or other improvements to a structure made during the 6-year period immediately preceding a permit application, the aggregate cost of which, together with the cost of the work proposed by the latest permit application, equals or exceeds 50% of the fair market value of the structure before the improvement is started." These projects are identified during the permitting process. Permits will be held until all requirements are met that bring the substantially improved structure into full compliance with current floodplain regs.**
4. Does your community have a coordinated process to determine substantial damage and to permit repair and improvement? Does the municipality conduct substantial damage assessments in the SFHA? Does your community have a plan for who will conduct substantial damage assessments and a procedure for assessment? **When a permit comes in to rebuild a substantially damaged property, the applicant must submit an alternative analysis to determine if the structure can be relocated to a less hazardous site. Substantial damage assessments are conducted in the floodway. Department of Planning staff conduct site visits after suspected substantial damage has been done after intense weather events. Staff then rely on pictures, information gathered by 311 and other city agencies, along with permit applications to repair to identify substantially damaged properties. Currently there is no written procedure for DoP staff to utilize when doing these assessments. We utilized FEMA published guidance to complete these assessments, including *Substantial Improvement/ Substantial Damage Desk Reference*** *FEMA P-758.*
5. Does your municipality require Elevation Certificates for new or substantially improved structures? If yes, how is it documented and which office/agency/department is responsible? **The Floodplain Manager within the Department of Planning is responsible for reviewing elevation certificates. All new construction and substantially improved structures in the Floodplain District must have an elevation certificate. For commercial structures, Floodproofing elevations for all new construction and all substantial improvements to an are required by the Department of Planning. For residential structures: the elevation of the lowest floor and lowest elevation of machinery serving the structure must be certified on an elevation certificate based on finished construction.**

6. How does the municipality enforce the floodplain ordinance sections? How does the municipality address SI/SD violations? **The Floodplain Manager may issue a stop work order if any development or person has failed to comply with or otherwise has violated any provision of a rule or regulation adopted under the Floodplain Ordinance. The stop work order may be issued to the person responsible for the violation or that person's authorized agent; the developer or owner of the development or that person's authorized agent; and on-site personnel. The violation notice must be served in person; by certified or registered mail; or if the identity or whereabouts of the person responsible, developer, or owner is unknown, by posting a copy of notice in a conspicuous place in or on the property. The contents of the violation must describe the nature of the violation; describe the remedial action needed to correct the violation; specify a responsible period of time within which to complete the remedial action. The Floodplain Manager may institute or cause to be instituted any appropriate legal proceeding.**
7. Has your municipality had a Community Assistance Visit? If so, were any corrective actions required? **Baltimore City has previously had a CAV. The City completed the CRS recertification process in July 2022. While this process is not exactly like that of a CAV, the CRS process requires a very close look at all of the activities and regulations Baltimore has in place. This information is submitted to a contractor responsible for communicating our success in these activities and our class rating at the end of the process.**
8. Does your municipality have or is considering higher ordinance standards than the NFIP? Please describe the higher standards and where they are documented. **Baltimore has several areas within floodplain code where higher standards have been adopted. Two ways in which this is most evident can be seen in the fact that Baltimore City considers both the 100-year and 500-year to be one in the same. The city has also adopted 2-feet of freeboard which is applied to any Flood Protection Elevation determined within the City's floodplain district.**
9. Are any local officials/departments in your community interested in a training? What topics relate most to your community? **One sources of training that would be beneficial to the City would be covering Risk Rating 2.0 and the NFIP changes that have come about as a result.**

Flood Insurance

1. How does the municipality educate community members about the availability and value of flood insurance? **The Baltimore Office of Sustainability has a website dedicated to flood-insurance and includes a variety of topics. The City also notifies residents located in the Special Flood Hazard Area annually about their status as a resident in the SFHA and flood insurance information.**
2. Does the municipality inform community property owners about changes to the FIRM that would impact their insurance rates? **Map changes are announced to the residents and a public comment period is utilized. After changes are made official, residents newly mapped in the Special Flood Hazard Area will receive communication via mail from the city. Communication about specific changes to rates is not possible at this time. With the introduction of Risk Rating 2.0, all of the factors contributing to the rates of a flood insurance policy cannot be easily communicated. Instead, resources for determining how changes could affect those rates are shared with City residents in the SFHA.**

3. How does the municipality provide general assistance to community members regarding insurance issues? **The City's floodplain member is available as a resource to provide assistance via phone, email, or through the Office of Sustainability's general email. Events are also regularly attended where the floodplain manager is available for questions or support. Some flood prone communities have standing quarterly meetings during which multiple agencies interface with the community members and give support for these kinds of issues.**
4. Does the municipality keep track of the number of residential and non-residential structures in the SFHA? How many structures are in the SFHA in your community? **Yes.**
5. Does the municipality have any levees or levee systems in its jurisdiction? **No.**
6. Is the levee or levee system certified and accredited? **N/A**
7. Is the levee or levee system a Provisionally Accredited Levee (PAL)? **N/A**
8. Is the levee or levee system part of the USACE Rehabilitation and Inspection Program? **N/A**
9. Does your community have any Major Dams or High Hazard Dams, and if so, have you applied for FEMA's High Hazard Potential Dam grant? **No. N/A**