

Appendix 1-5: Public and Other Meetings

1. Resiliency Hub meetings (December 2017)

- 12/11/2017 Agenda
- 12/12/2017 Agenda and Meeting Notes

2. 2018 Sustainability Town Hall (April 2018)

- Flier
- Demographics of attendees

3. HSPC Meeting (April 2018)

- Meeting slides

4. Sustainability Commission (June 2018)

- Meeting minutes

5. Community Public Comment Meeting (August 2018)

- Meeting slides
- Sign-in sheet
- Public comments received

6. Sustainability Commission (October 2018)/Planning Commission (November 2018)

- Meeting slides (same for both)

Baltimore Community Resiliency Hubs

Agenda

When: Monday, December 11, 1:30-3:00 pm

Where: City Hall, 100 N Holliday Street, 6th floor, Citistat Room
Baltimore, Maryland 21202

1:30-1:40 Welcome & Introductions

- Meeting goals
- Introductions around the room

1:40-2:00 Update on Status of Resiliency Hubs

- Resiliency Hub program goals, purpose and process
- Brief update on the status of hubs
- Questions & Discussion

2:00-2:15 Solar+Storage: How Cities are Using this Technology to Support Emergency Management and Resilience (Seth Mullendore, Clean Energy Group, & Deb Perry, Institute for Sustainable Communities)

- What is solar+storage and what are the opportunities & limitations of this technology?
- How are other US cities using solar+storage to support community resilience?
- What tools, resources, and support can Baltimore's Resiliency Hubs access to help plan and implement solar+storage projects?

2:15-2:55 Supporting Resiliency Hubs in Planning and Operation

- Review potential roles/points of interconnection with city agencies
- Overview of draft MOU

2:55-3:00 Summarize Next Steps



Mayor's Office
Emergency Management





Community Resiliency Hubs Stakeholder Meeting

POWER House Community Center | 316 S. Caroline Street, Baltimore, MD
December 12, 2017 | 10:00 AM – 1:00 PM

AGENDA

Meeting Goals:

- Provide an opportunity for city staff and resiliency hub leaders to meet and share their experiences to date.
- Learn how other cities are implementing resilient solar to support community resilience.
- Connect with experts, tools, resources, and case studies that may help accelerate projects in Baltimore.
- Identify common challenges in the development and implementation of resiliency hubs to inform city staff and support partners.

10:00 – 10:15 AM	Welcome, Purpose, and Agenda Overview Anne Draddy, <i>Sustainability Coordinator, City of Baltimore Office of Sustainability</i> and David McMillan, <i>Director, Mayor's Office of Emergency Management</i>
10:15 – 10:25	Introductions
10:25 – 10:55	Resiliency Hubs Status Report Each resiliency hub will have five minutes to introduce themselves and provide a brief update on their status.
10:55 – 11:30	Facilitated Discussion Participants will have an opportunity to ask each other questions, discuss common challenges, and identify shared needs.

- 11:30 – 11:45 **Resilient Solar: Projects, Tools, and Resources**
Seth Mullendore, *Vice President and Project Director, Clean Energy Group*
Debra Perry, *Program Director, Institute for Sustainable Communities*
- Hear how resilient solar is being used to support community resilience in other parts of the U.S., including California, New York, and Florida, and learn about resources available to help support project planning and implementation.
- 11:45 – 12:15 PM **Memorandum of Understanding and Other Next Steps**
The City of Baltimore will lead a discussion exploring next steps to implement resiliency hubs, including:
- Draft Memorandum of Understanding
 - Areas where additional help is available and/or needed
 - Specific next steps and action items
- 12:15 – 12:45 **Lunch**
- 12:45 – 1:00 **Tour of Power HOUSE**

Meeting Notes December 12 10AM

Baltimore Community Resiliency Hubs

Short Recap of meeting on 12/11

City gov't can help empower communities

Baltimore's approach to resiliency hubs is different from other cities

Baltimore is vulnerable to major weather events

- HUBs can support people during these times

- Many people do not have support to self-sustain

Office of Sustainability to write grants and help setup

MOEM will be main point of contact once established

"neighbors supporting neighbors"

What is resiliency? What is a Resiliency Hub?

- Resources, community, sustainability (energy efficiency, solar), etc.

MOEM - first 24 to 72 hours for response; Resiliency Hubs can support community during event

- City has emergency plan - "How much will be shared with Hubs?" - MOU should/will provide guideline

Hub Locations and Updates

First Mount Calvary Baptist Church

Challenges:

- slated roof, solar may not be an option

- Backup generator (location, access)

- Having volunteers versus a dedicated staff makes a difference

Alternatives - small solar array w storage

Church is already active in community (food & clothing giveaway, AA, soup kitchen)

People use church for events

Partners with local police district

Hub will be an addition to what they are currently doing

- Great empowerment tool

Created questions for community outreach - explained what is a Hub and why

Provided information about emergency kits

Created partnership with Flanagan Asphalt

The Door

Need to hear how other locations are establishing Hubs

Working with partners in the area e.g. Hopkins, Healthcare Ready

Looking into grants/funding

Available equipment (snow blowers, radio); doing community training

Also working with community association

Volunteers doing CERT training

Leveraging existing assets

Challenges:

- Solar panels - currently looking at alternatives

- Concerns about stabilizing roof? - will reach out to roofing engineering company

Living Classrooms

Need to be conscious of safety concerns to children in facility - how to transition from classroom to Hub

- Operational model required

Meeting Notes December 12 10AM

UA House solar system will be installed next year

Balancing power and critical load

Gap between large residential and small commercial systems (Power52)

Power House is being installed today - rooftop system with battery storage

Already a resiliency center in other aspects

Did a community survey - most people don't think about leaving home in an emergency

Next step is outreach and education

Where to go and how to prepare in an emergency

Community CERT training, looking to getting an in-house trainer

Strong empowerment and good communication

What should Hubs have in case of a medical or large-scale emergency? How can they assist?

Challenges:

Expectations of stocking resources (what, how, replenishment)

Power House already acts as Hub

Staff trained to deal with different situations

Senior citizen outreach

Community first bond/communication

Data on vulnerable residents (seniors, disabled, people w prescriptions)

Oliver Community

Neighborhood of about 6000

Already established Emergency Team (all volunteers)

FEMA training and CERT training

Community wide census updated yearly

Most people shelter in place - provided resources for this and in case of evacuation

Partnership with Civic Works

Need partnerships with community or organizations and team in place before establishing hub

Communication education for what to do in weather emergency

Staging prior to weather event

Point of contact at MOEM

Challenges:

Finding a location

Making sure relationship is established before location setup

Megachurch/Groundswell - Empowerment Temple

Groundswell is working to put solar and battery storage on site

Plan to become emergency shelter

Anticipating end of next year construction

No current challenges - still in planning process

Implementing sustainability plan

Emergency response training

Church is active in community

Health Dept.

review how to connect Hubs and pharmacies

Community partnership for cooling centers

Partner with Hubs to be cooling centers

Most centers are not open on weekends or holidays, Hubs could fill that gap

Code Blue and Code Red days

Code Red - day before declaration and notification

Meeting Notes December 12 10AM

- Notification for city partners and cooling center partners
- Health Alert Network as notification and contact information method
- Look to Hubs to open site for the day
- Interested in end of day data to analyze attendance
- Partnered with MD Food Bank for water delivery

Need to hear operation/availability hours from each site

MOEM

- Each MOU will be customized to address safety concerns
- Looking back to prior extreme weather events - finding locations was an issue, so was providing information; Hubs would have made a difference
- Direct contact to Hubs, call list, list of contact information, mass email preceding a weather emergency
- Hubs point of contact for next steps
- Provide an example list of recent events where Hubs could have assisted, city expectations of Hubs, can help guide MOUs?
- Baltimore buildings are less vulnerable to wind
- Low percentage of grounded power lines
- Hubs can help support psychological resilience/address mental health issues

Questions or Concerns

What is the timespan for keeping Hubs open? - MOU will address this

- Best to close before evening/night

Each Hub will be different in what they do

Need to consider liability issues - MOU

Non-internet information access

Reporting back data after an emergency - After Action Report

Periodic MOU meetings to review progress

Community credibility

- Don't want to give false promises to community

Baltimore is an innovator for community based hub program

Brochures are individualized, no city logos

Indoor and outdoor banners at locations

Success?

- Communication

- Safe space

- Community relationships

Developing policies and procedures outside of the MOU

Establishing clear expectations

Solar + Storage (ICS and Clean Energy Group)

- Benefits of learning from other cities

- Solar is being used across country but is not operational in an emergency

- Cost of batteries (lithium ion) have dropped 70% since 2010

- Standard solar system is grid tied

- Resilient solar + storage

 - Critical load panel

 - Batteries

- Different stages of implementation

Meeting Notes December 12 10AM

Hartley Nature Center, Duluth, MN

NYC - Solar Market Pathways

- More resilient solar post Superstorm Sandy

- Solar Roadmap

San Francisco

- Top down approach

- Solar roadmap

- 12 centers around the city (schools, community centers, etc.)

- Challenges with retrofiting

- Grant from Dept. of Energy

- Online calculation tool

Thinking about critical load, what needs power and how much

Clean Energy Group can provide assistance with research or questions

NREL optimization tool

Resilient Power Project - Resilient Power Toolkit

MOU

Formulating ideas on further development

Comments on drafts?

Basic overview of what city can provide and minimal requirements of Hubs

- Individual scope of work customized for each Hub

Document can be revised on yearly or as needed basis

Draft will potentially be circulated

Meeting with each Hub about ideas

- Feedback, hours of operation, etc.

Discussing what the MOU would look like with the Hubs

- Planning for a future meeting?

Why a MOU versus a letter of intent?

ANNUAL SUSTAINABILITY OPEN HOUSE



LEARN, ENGAGE, CONNECT AND BE HEARD

Review the updated
citywide
sustainability plan
for a more equitable
Baltimore.

**FREE FOOD!
FREE PARKING!!
FREE TREES!!!**

APRIL 11, 2018 | 6-8 PM

WAR MEMORIAL

DIRECTLY ACROSS FROM CITY HALL

101 N GAY STREET

REGISTER AT BALTIMORESUSTAINABILITY.ORG



2018 Sustainability Open House Demographics of Attendees

Gender

	City	Open House
Women	53%	62%
Men	47%	38%

Race

	City	Open House
Black	62%	36%
White	30%	55%
Other races		9%

Age

	City	Open House
Under 18	21%	2%
18-24	11%	12%
25-34	19%	27%
35-44	12%	19%
45-64	25%	29%
Over 65	12%	12%

DP3 PLAN UPDATE

BALTIMORE CITY DEPARTMENT OF PLANNING

April 19, 2018



Disaster Preparedness and Planning Project (DP3)

- The current DP3 expires in November 2018, and the Office of Sustainability and the Mayor's Office of Emergency Management have secured grant funding for the update.
- FEMA requires that hazard mitigation plans be updated every 5 years.
- This DP3 update is on an accelerated schedule, since a draft is due to MEMA/FEMA approximately August 2018.
- In addition to the required elements of a hazard mitigation plan, this 2018 DP3 update will include an equity lens, community resilience hubs and plans, watershed adaptation implementation/SWAPs (tentative), food resilience, and man-made hazards (TBD).
- Will be reconvening the DP3 Advisory Committee to solicit guidance, support and feedback in the development of goals, strategies and actions, with a tentative date of June 22, 11:00-12:00 (emails coming soon).



KEY STEPS/TIMELINE

- Convene Advisory Committee
- Conduct hazard review and risk analysis; incorporate man-made hazards to the extent feasible
- Outline how an equity lens can be used during plan development, during strategy identification, and to improve the equity of plan implementation
- Solicit community input during plan update process
- Streamline and prioritize list of strategies and projects, with a focus on identifying new, defined projects to mitigate hazards
- Complete draft plan update by August 1 for public review; incorporate comments and prepare draft for MEMA and FEMA review by end of August
- Finalize plan, incorporating any requested MEMA and FEMA changes
- Continue community engagement, especially on the addition of man-made threats, until the end of the grant period
- October - Obtain Sustainability (10/17) and Planning Commission (10/18 or 11/1) approval
- November - Send back to FEMA for full approval
- 11/22/18 - Final deadline for full approval



Sustainability Commission
Curtis Bay Recreation Center
Wednesday, June 20th , 4:00-6:30 PM

Opener – Becca

- Neighbors - How are you connected? How do you want to connect? How will you connect?

Curtis Bay, Brief History & Community Issues/Projects - Destiny Watford
Greater Baybrook Community Land Trust and Free Your Voice (Ben Franklin HS)

Curtis Bay

- Mountains of coal, burned out homes, endless sea of issues working to find solutions
- Residents more likely to suffer from lung disease and asthma than other parts of the city
-
- Must digest pieces of history to understand perspectives
- Handout of interview of Hawkins Point resident – where the city landfill resides.
-
- How we make decisions in our neighborhood
- How we allow others to make decisions about our neighborhood.

Structural racism and the role it plays in our organizing and in our neighborhood

- Yet another community of color getting pushed out
- It sounded like a nice place to live with the pond and the orchards
- 5 years ago, a plan to locate the nation's largest incinerator here.
 - the organizing resulted in the end of the incinerator

Wagner's Point (primarily white) – lived in houses with plumbing

Fairfield (primarily black) – lived in shacks, no plumbing until decades later.

- Segregated, company towns, living in poverty, in toxic environments. Forced relocation because of the hazardous conditions.
- Dumping ground mentality is associated with race
- How can we find common ground?
 - Re-educate ourselves
 - Understand the fight is not with each other.
 - Develop leaders
 - Stand up together
 - Demand basic human rights
 - Address racism by addressing the core issues of our community together

Hazel Street Fire – Michelle

July 3, 2017 – right next to a fire station

- Hydrants were turned off. Forgot to turn them back on after inspection. Anne Arundel County Fire arrived 20 minutes later.
- Many had no insurance
- Neighbors scattered: the sense of community was gone
- \$850/month and not in good condition
- Nearby street still vacant from a fire

What can be done?

- Only we, the community, can make the change to make it better for those who come after us.
- This fire was a breaking point. It caused residents to pull together to break the cycle.
- How do we change this reality that we have been facing for decades?
- How can we create affordable housing?
- 10 homes = \$2M rebuild – affordable, quality homes.
- We are dealing with trucks from industry, coal, a poor housing market.
- How do we address these in a real way?

Community Land Trust (CLT)– Development without displacement

Board composed of community members living in CLT homes

Business and development are not bad. But how do we face these challenges in a way that is community driven?

- Affordable housing – lots of substandard housing in the city
- The community must speak up
- Community-led
- Community ownership of land
- 2016 – 18K signatures got it on the ballot
- There is a housing trust fund and the City put \$2M into it.
- A stronger commitment from the city is needed
- There is no funding mechanism
- A petition is being shared to get legislation passed
- Without it, risk continuing the cycle of 517 vacants
- Without out, risk gentrification
- Part of an effort with 6 community land trusts throughout the city
- July 3rd event – mourn what was lost and celebrate what we are building

What other community needs?

- Food access
- Vacancies
- Trash and pollution
- Crime and Safety

Approval of the May Commission meeting minutes

Commission Work Groups

Transportation, Local Economy, Measures of Success

Commission Meetings

- July 18th we will have a meeting
- August meeting - need a poll.
- Dig into Plan
- September meeting – need a location/community
 - Park Heights as a potential location
 - Empowerment Temple
 -
 - Send location recommendations to me

Commissioner Greg Sawtell

- New, innovative, collaboration among Free Your Voice, United Workers, Towson University and Ben Franklin HS
- Community-engaged research co-taught in a biology class with emergent learning.
- How do we maintain creative, vibrant, historical study and research in an unstable environment? (the HS)
- For 3 years working on different models at the HS. (high teacher turnover)
- The science teacher, Ms Joy, is the longest standing teacher in the school and has a trust for the work.
- Students spend the year with neighborhood leaders to dig deep and create action projects around issues important to the students.
- This validates student ideas – sustained engagement and treating the students as scholars.

Filbert Street Community Garden - Rodette Jones, Volunteer Manager

Compost Collective Project in partnership with Institute of Local Self Reliance with funding from Abell Foundation.

- Community driven compost project
- Two students from Ben Franklin HS and a supervisor
- 27 residential customers
- 1 Commercial customer: Raw Juice.
- 400 lbs weekly processed
- 3-bin compost system and looking to add another one (labor intensive)
- Would like \$6K system to reduce turnaround to 2-3 weeks
- Bee Enterprise - 17 beehives - 5 gallons / 31 pints of honey sold
- Yard of the Week Program – instills pride in the neighborhood

UWW and Free Your Voice

Critical thinking and problem solving in the community

Ideas coming out of the neighborhood

Must be heard and validated

Ideas must be brought to city as priorities and with funding attached

Becca –Baltimore Corps,

Planning Academy

Send out Rodette's email for the honey on July 3rd ish

Greg will send out diagram of process to hold themselves and others accountable to a community process

Staff Comments

- 20 of 21 Commissioners are sworn in
- Equity Assessment bill – Councilman Brandon Scott introduced
 - Amendments are being considered around phasing in the program, training staff, clarify requirements
- Ethics Training – working to create a date for Commissioners over the summer.
- Resend out Financial Disclosure – online password doesn't work. \$10-in person
- Equity Implementation Guide - Avis, Inez, Miriam, Sam Hopkins, (sbh@HopkinsandAssociates.com) Maliha, Jen Leonard
- Disaster Preparedness Plan Update in process includes community engagement, incorporation of new science, look at human-made threats
 - Send out live streaming link to Friday meeting
 - What is the Sustainability Plan
 - Ambitious plan on many topics/issues
 - Allow ourselves as a city to look forward based on where we are and where we want to go
 - Attempt to be equitable/use an equity lens
 - Sustainability : people, planet, prosperity

DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3)

BALTIMORE CITY DEPARTMENT OF PLANNING

August 29, 2018 - Public Comment Meeting



Agenda

- Overview of Disaster Preparedness and Planning Project (DP3)
 - What is new in 2018 update?
- Strategies in the plan
- Community engagement findings
- *Moving Forward* - Recommendations



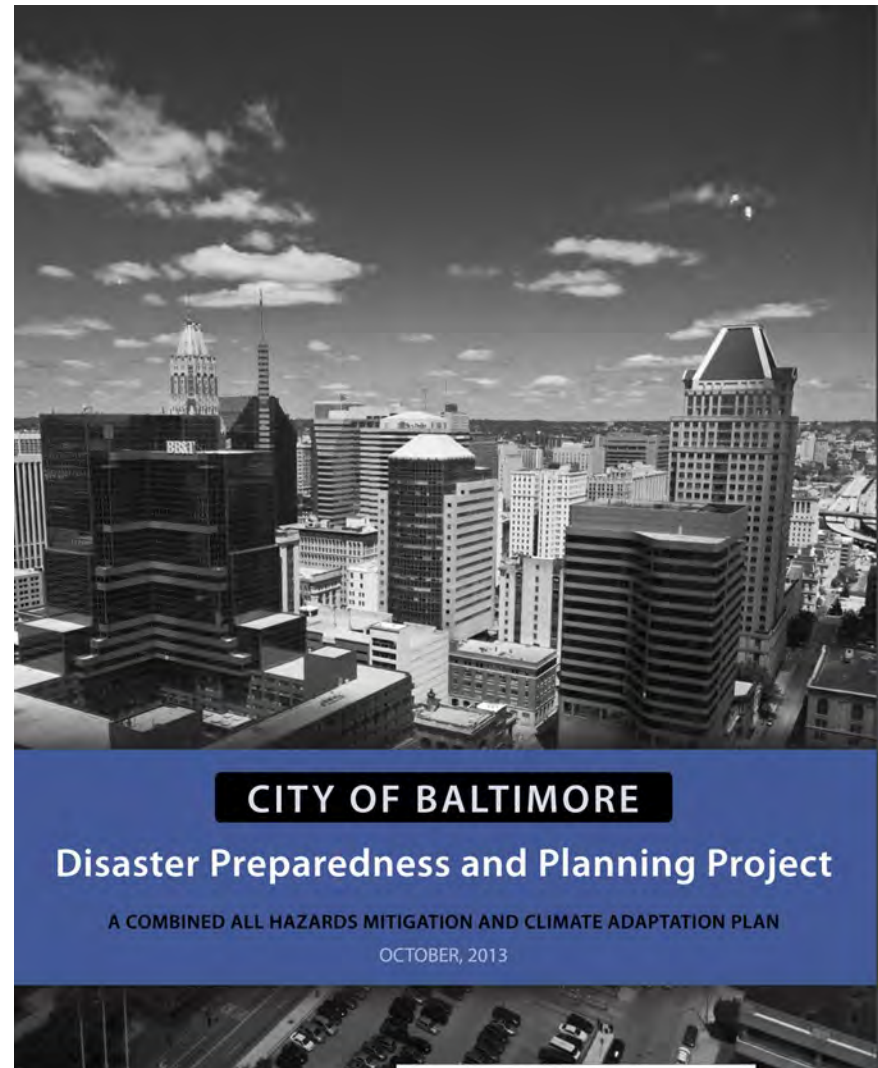
Disaster Preparedness and Planning Project (DP3)

Created in 2013, the Disaster Preparedness and Planning Project describes the City's approach to hazard mitigation and climate adaptation

Integrates:

- All Hazards Mitigation Plan-addresses the **cause** of climate change
- Climate Adaptation Plan-addresses the **impacts** of climate change

Links research, outreach, and strategies/actions to address existing and future climate change impacts



DP3 Vision and Goals

❖ 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.

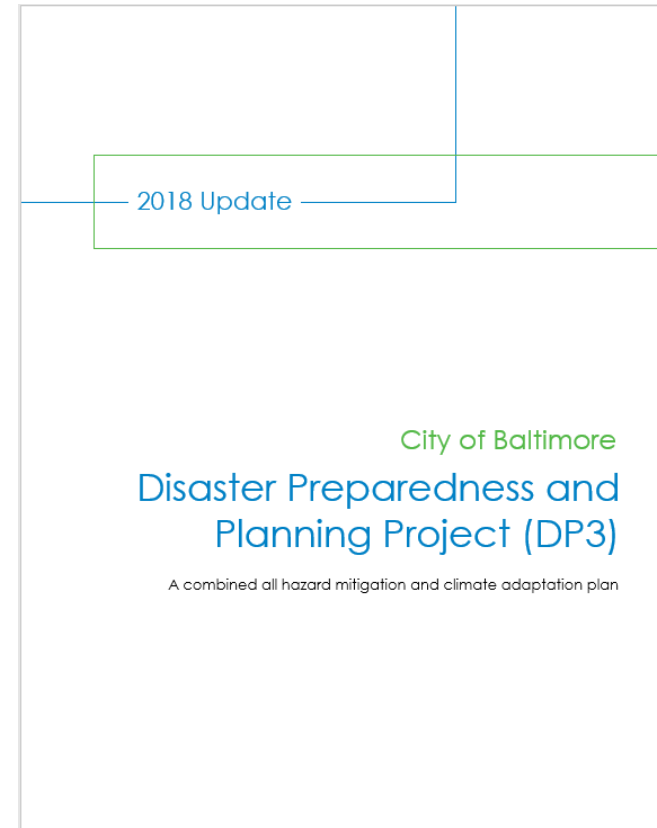
❖ Goals

- 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 (public and private)
- Enhance the City of Baltimore's adaptive capacity and build institutional structures that can cope with future conditions that are beyond past experience
- Promote hazard mitigation and climate adaptation awareness and education throughout the City of Baltimore
- Provide support to increase efforts toward a better Community Rating System (CRS) community rating

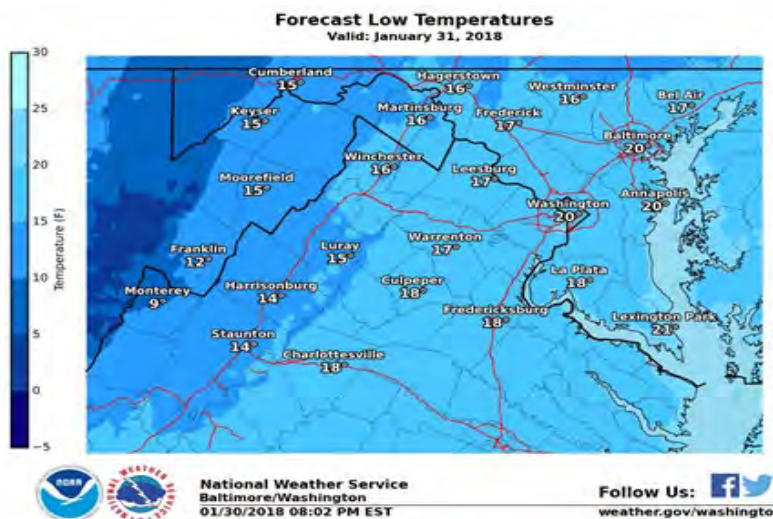


2018 DP3 Update – What is New?

- New information on related plans
- Updated mitigation strategies
- Successes since 2013 DP3
 - New zoning code with an open space designation
 - Creation of four pilot Resiliency Hubs
 - Progress toward funding of stream restoration and other flood-minimizing projects
 - Landscape Manual
- Equity Lens
- New chapter, *Moving Forward*



January 30, 2018 Extreme Cold Event



May 15, 2018 - Jones Falls Floods at Meadow Mill



May 27, 2018 Frederick Ave. Flood



July 2, 2018 Extreme Heat

**CODE RED
IN BALTIMORE**

Extremely hot temperatures expected.

Take necessary precautions
to stay safe & healthy.**BALTIMORE
CITY HEALTH
DEPARTMENT**Visit health.baltimorecity.gov
for more information.

July 30, 2014 - Nuisance Flooding



July 4, 2016 Mulberry St. Sinkhole



View of the sinkhole that has formed on W. Mulberry Street between Paca and Greene streets. (Barbara Haddock Taylor / Baltimore Sun)

March 4, 2016 Declared



December 17, 2016 Winter/Ice Event



Aftermath of series of accidents on I-95 Saturday following a morning ice storm. (Video by Karl Merton Ferron)



DP3 Hazards Identified

- **Flooding:** Flooding and Dam Failure
- **Coastal Hazards:** Tropical Storms and Hurricanes; Sea Level Rise; and Storm Surge/Coastal Inundation; Tsunami
- **Precipitation Variability:** Thunderstorms, with Lightning and Hail; Winter Storms and Nor' Easters; Drought
- **Wind:** Thunderstorm Winds & Derechos; Tornados
- **Extreme Heat:** Heat and Air Quality
- **Land:** Earthquakes; Landslides/subsidence; Sinkholes



Advisory Committee

- Distributed July 2-16, 2018
- Survey Results- (22) Participants
- Composite Score



Local Hazard Risk Perspective Survey Results

Table 3-1: Local Risk Perspective Survey

HAZARDS	LOCAL RISK PERSPECTIVE SURVEY RESULTS
Flooding	
Flood	Very Concerned
Dam Failure	Somewhat Concerned
Coastal Hazards	
Tropical Storms & Hurricanes	Very Concerned
Storm Surge/Coastal Inundation	Concerned
Sea Level Change	Very Concerned
Tsunami	Not Concerned
Precipitation Variability	
Thunderstorms (Lightning & Hail)	Concerned
Winter Storms & Nor'Easter	Concerned
Drought	Somewhat Concerned
Wind	
Thunderstorm Winds & Derecho	Concerned
Tornados	Somewhat Concerned
Extreme Heat	
Heat & Air Quality	Very Concerned
Land	
Earthquakes	Not Concerned
Land slump/Subsidence	Not Concerned
Sinkholes	Concerned



2018 Risk Assessment Methodology

Five (5) rating parameters were used to develop hazard risk ranking for the (15) identified fifteen hazards.

- **Probability**

Probability means the likelihood of the hazard occurring and are defined in terms of general descriptors, (for example, unlikely, somewhat likely, likely, highly likely), historical frequencies, statistical probabilities, and/or hazard probability maps.

- **Deaths**

Hazard related deaths correlate to the severity of impact to the community from any specific hazards.

- **Injuries**

Hazard related injuries correlate to the severity of impact to the community from any specific hazards.

- **Damages**

Hazard related damages include both property and crop damages and correlate to the severity of impact to the community from any specific hazards.

- **Local Hazard Risk Perspective**

A local hazard risk perspective provides a basis for determining those hazards that are of concern to people who work and/or live in the planning area. Levels of concern are defined in terms of general descriptors, (for example, not concerned, somewhat concerned, concerned, very concerned).



Risk Assessment Methodology

Specific rating criteria used in the analysis. All rating criteria are equally weighted

Table 3-2: Hazard Rating Criteria

Probability Rating		Local Risk Perspective		Damages	
Rating	Criteria	Rating	Criteria	Rating	Criteria
1	0-0.49 events/year	1	Not Concerned	1	None
2	0.50-1 events/year	2	Somewhat Concerned	2	Minor
3	1.1-2.5 events/year	3	Concerned	3	Significant
4	2.6 or more events/year	4	Highly Concerned	4	Major
Deaths			Injuries		
Rating	Criteria	Rating	Criteria	Rating	Criteria
1	None	1	None	1	None
4	1 or more	4	1 or more	4	1 or more



Disaster Preparedness and Planning Project (DP3)

Introduction of HIRA Rankings into Strategy Ranking

Results from the 2018 HIRA to the Strategy provided top ranked hazards: Flooding, Sea Level Change, Winter Storms & Nor'easter, Thunderstorm Winds & Derecho, and Heat & Air Quality

Table 3-3: Overall Hazard Risk Ranking

Hazards	Probability	Deaths	Injuries	Damages	Local Risk Perspective	Hazard Risk Ranking
Flooding						
Flood	3	4	4	4	4	19
Dam Failure	1	1	1	1	2	5
Coastal Hazards						
Tropical Storms & Hurricanes	1	1	1	4	4	11
Storm Surge/Coastal Inundation	2	1	1	2	3	9
Sea Level Change	4	1	1	4	4	14
Tsunami	1	1	1	1	1	5
Precipitation Variability						
Thunderstorms (Lightning & Hail)	1	4	4	1	3	13
Winter Storms & Nor'easter	4	4	4	4	3	19
Drought	1	1	1	4	2	9
Wind						
Thunderstorm Winds & Derecho	4	4	4	4	3	19
Tornados	1	1	4	3	2	11
Extreme Heat						
Heat & Air Quality	4	4	4	1	4	17
Land						
Earthquakes	1	1	1	4	1	8
Landslump/Subsidence	1	1	1	1	1	5
Sinkholes	3	1	1	4	3	12



Results

LOCAL HAZARD RISK PERSPECTIVE	HIRA RESULTS (Preliminary)
Flood Tropical Storm/ Hurricane Sea Level Change Heat & Air Quality	Flood Sea Level Change Winter Storm Thunderstorm Winds & Derecho Heat & Air Quality



DP3 Hazards and Strategies

Strategies

- Infrastructure
- Buildings
- Natural Systems
- Public Services



Key Priority Strategies

Infrastructure

- **Strategy IN-8:** Identify additional alternative routes and modes for effective transport and evacuation efforts during emergency situations
 - **Action:** Develop and prioritize clearance and specified transportation routes for delivery of emergency response supplies

Are you familiar with city evacuation routes? What would help you become more familiar?

- **Strategy IN-9:** Alter transportation systems in flood-prone areas in order to effectively manage stormwater
 - **Action:** Expand and reinforce existing stormwater education programs

What could a stormwater education program look like? How could it benefit you?



Key Priority Strategies

Public Services

- **Strategy PS-2: Develop a Hazard Awareness Program**
 - Action: Evaluate and improve community health center strategies for communicating with patients during an emergency
 - Action: Create a standardized early warning system for members of the public and educate them on actions they should take when alarm sounds
Do you recognize alarm sounds and have evacuation plans?
- **Strategy PS-3: Designate community leaders and organizations that can assist and provide support during hazard events**
 - Action: Prior to an event, identify lead contacts serving vulnerable populations and coordinate actions to maximize safety and information sharing
Do you know your community leaders?



New Strategies

Resiliency

- Increase the number of Resiliency Hubs / Develop training and guidance documents for Resiliency Hub Leaders
- Initiate community resilience planning, outreach, and support for seniors in heat events

Are you familiar with Resiliency Hubs?

What other community resilience strategies should be in the plan?

Flooding

- Pursue grants for Flood Control measures to alleviate flooding in the most flood prone areas

Have city efforts to respond to flooding before been successful, or what would you change?

How else would you want the city to respond to flooding?

View all new strategies in Chapter 5 - page 136 of draft plan.



New Strategies

Food Resilience

- Increase the amount of land permanently set aside for food production (e.g. community gardens, market gardens, commercial urban agriculture)
- Implement the Plan for Food Access During Incidents and Disasters

Have you had challenges accessing food, or know residents that have?

What other food resilience strategies should be in the plan?

View all new strategies in Chapter 5 - page 136 of draft plan.



COMMUNITY ENGAGEMENT IN DP3 UPDATE



Community Engagement Overview

Equity and Outreach Subcommittee

- Dept. of Planning
- Office of Sustainability
- Health Department
- Mayor's OEM
- Community leaders

Engage Vulnerable Populations

- Homeless Services Program (Mayor's office)
- Faith-based Communities
- Senior Centers
- Early life and family centers

Public Survey

- Concern for natural hazards *and* man-made crises
- Concern for specific populations



Natural Hazards

How concerned are you for the hazards below?

- Flooding
- Coastal Hazards
 - *Hurricanes, Sea Level Rise, Storm Surge, Coastal Inundation*
- Precipitation Variability
 - *Precipitation, Winter Storms, Drought, Dam Failure*
- Extreme Wind
- Extreme Heat
- Extreme Cold
- Land Events
- Disease Outbreak

A. Very Concerned

B. Concerned

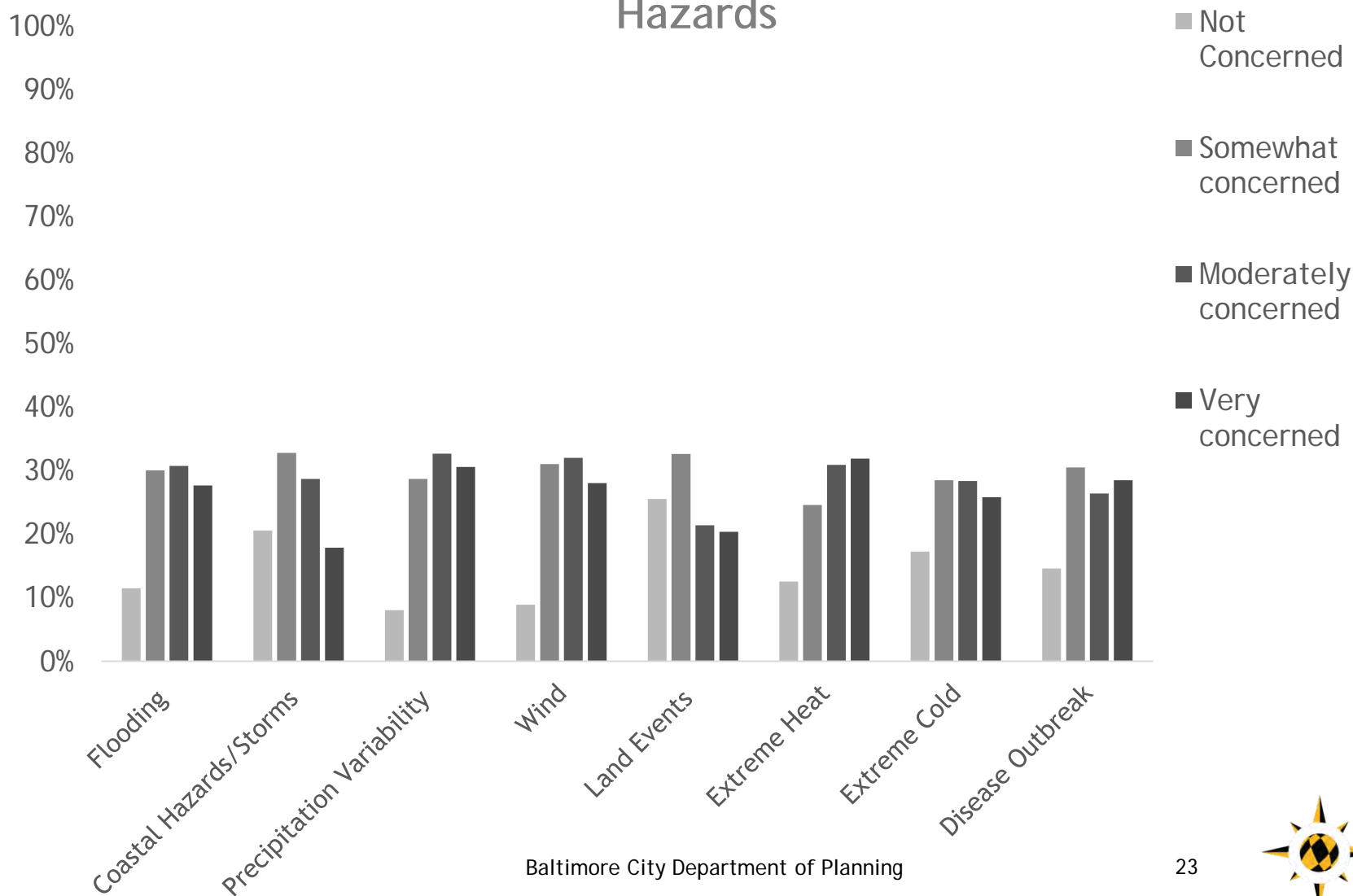
C. Somewhat concerned

D. Not concerned



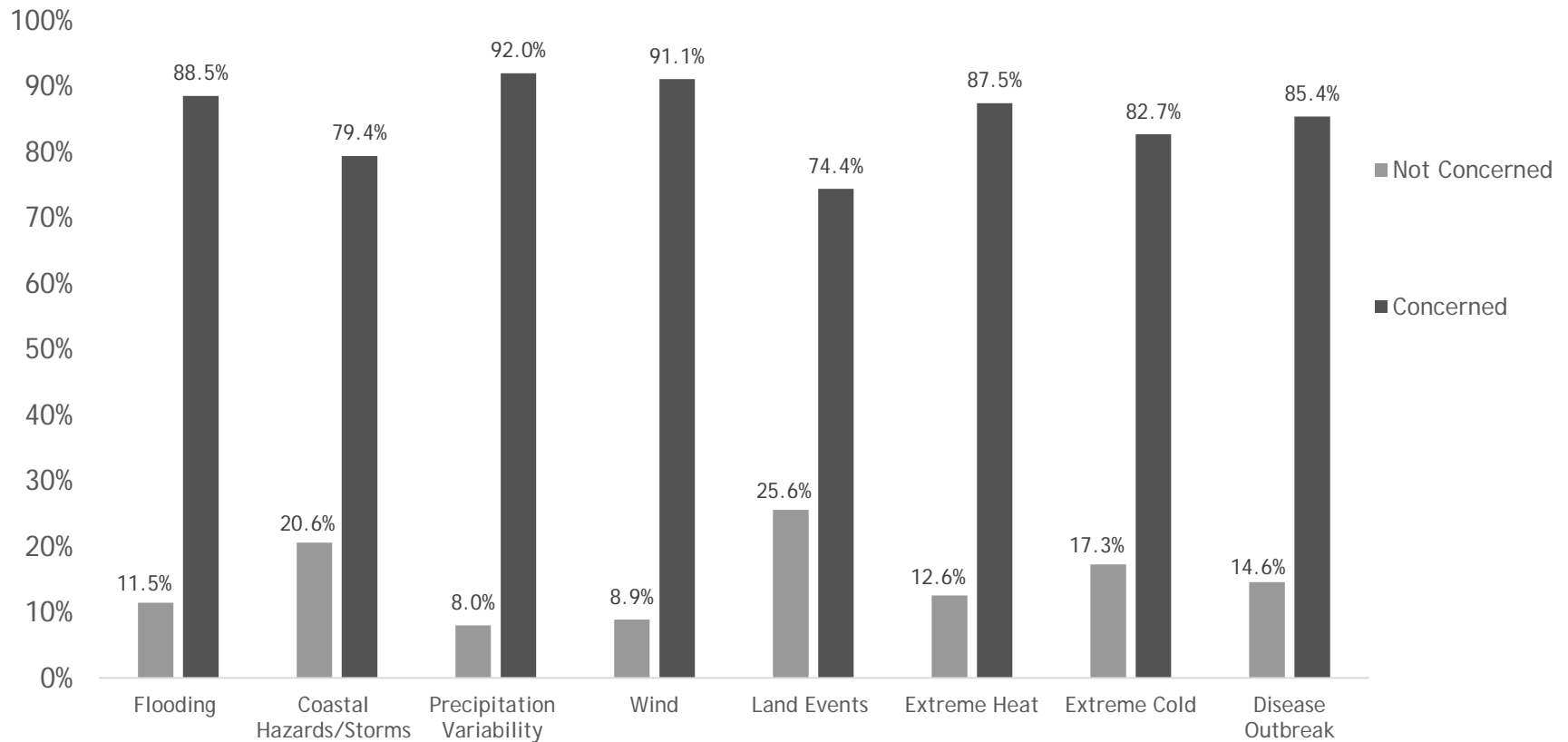
Survey Results: Natural Hazard Concerns

Percentage of Respondents Concerned About Natural Hazards

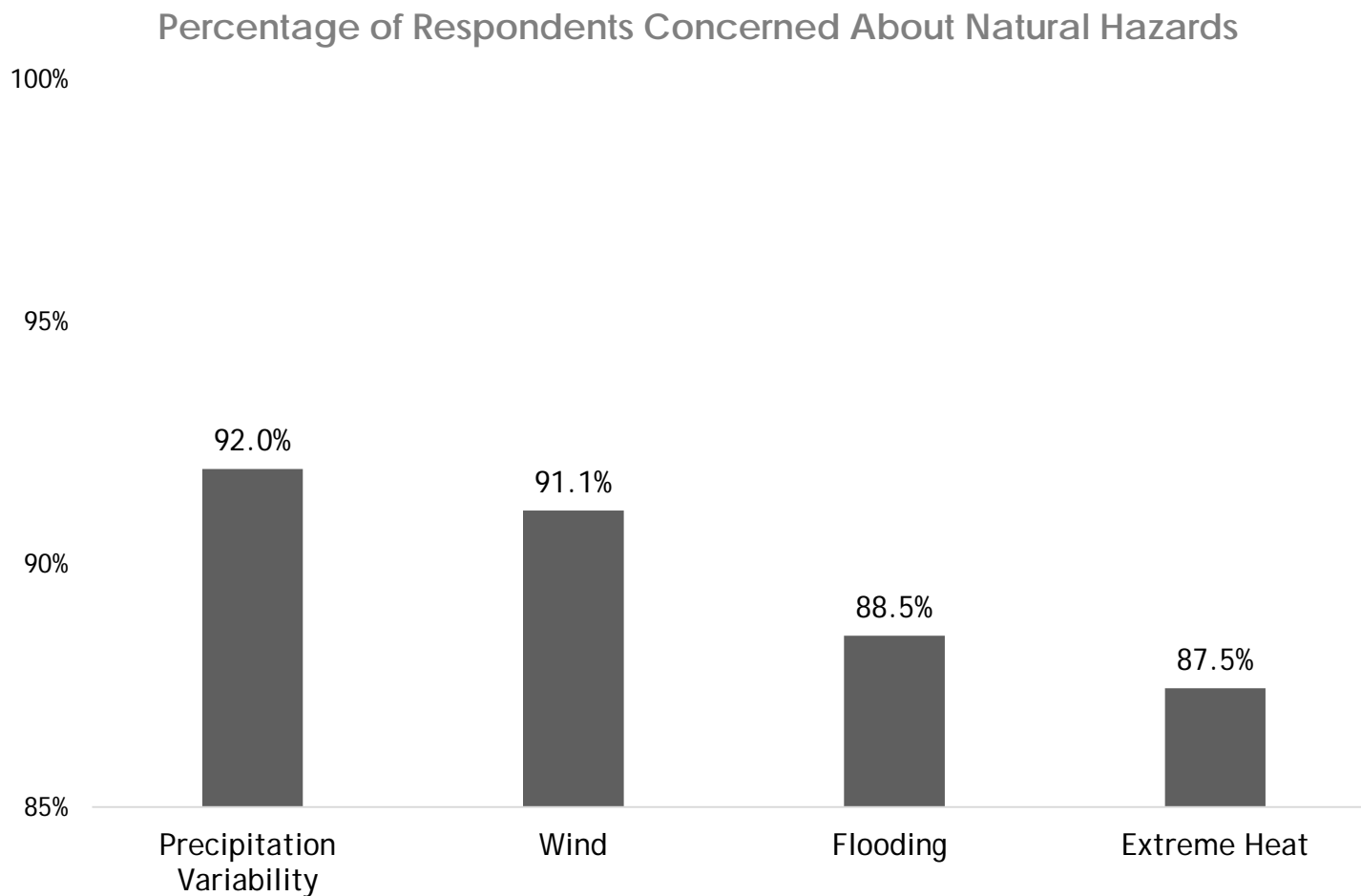


Survey Results: Natural Hazard Concerns

Percentage of Respondents Concerned About Natural Hazards



Survey Results: Natural Hazard Concerns



Natural Hazards of Greatest Concern (By Net Concern)



Man-Made Hazards

What man-made hazards are you concerned about?

- Cyber-attack
- Terrorism
- Active Shooter
- Civil Unrest
- Environmental Emergency
 - *Oil spill, hazardous waste*
- Something else?

What do these events mean to you?

How would you define them?

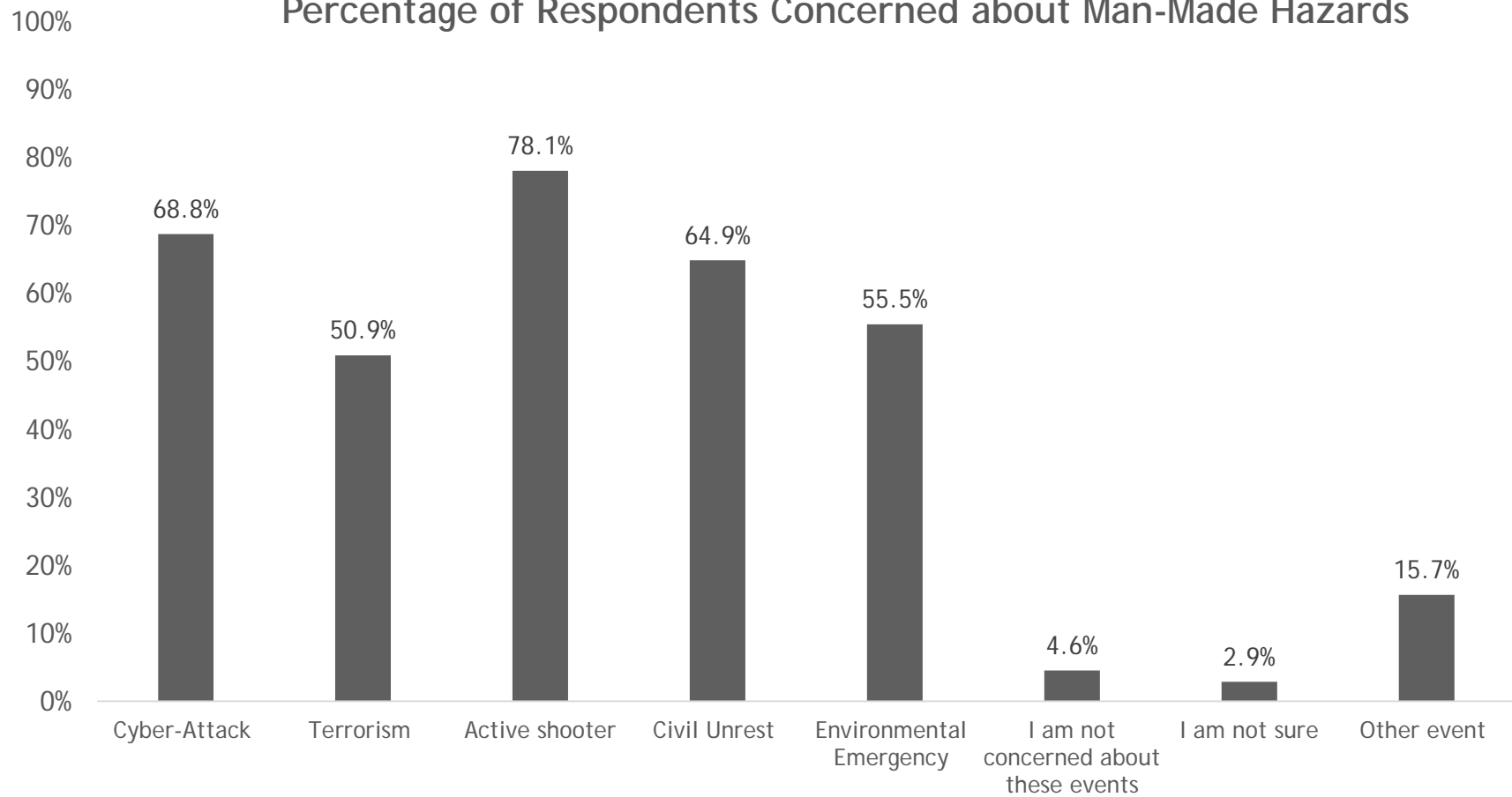
Do you feel at risk for them?

Have you been impacted by any?



Survey Results: Concern for Man-Made Hazards

Percentage of Respondents Concerned about Man-Made Hazards



Vulnerable Populations

Do you feel your neighborhood is particularly at risk for any hazards?

What groups or communities do you feel are at particular risk in Baltimore?

"Folks with some disabilities may not be able to get to resources or get away from an emergency on their own"

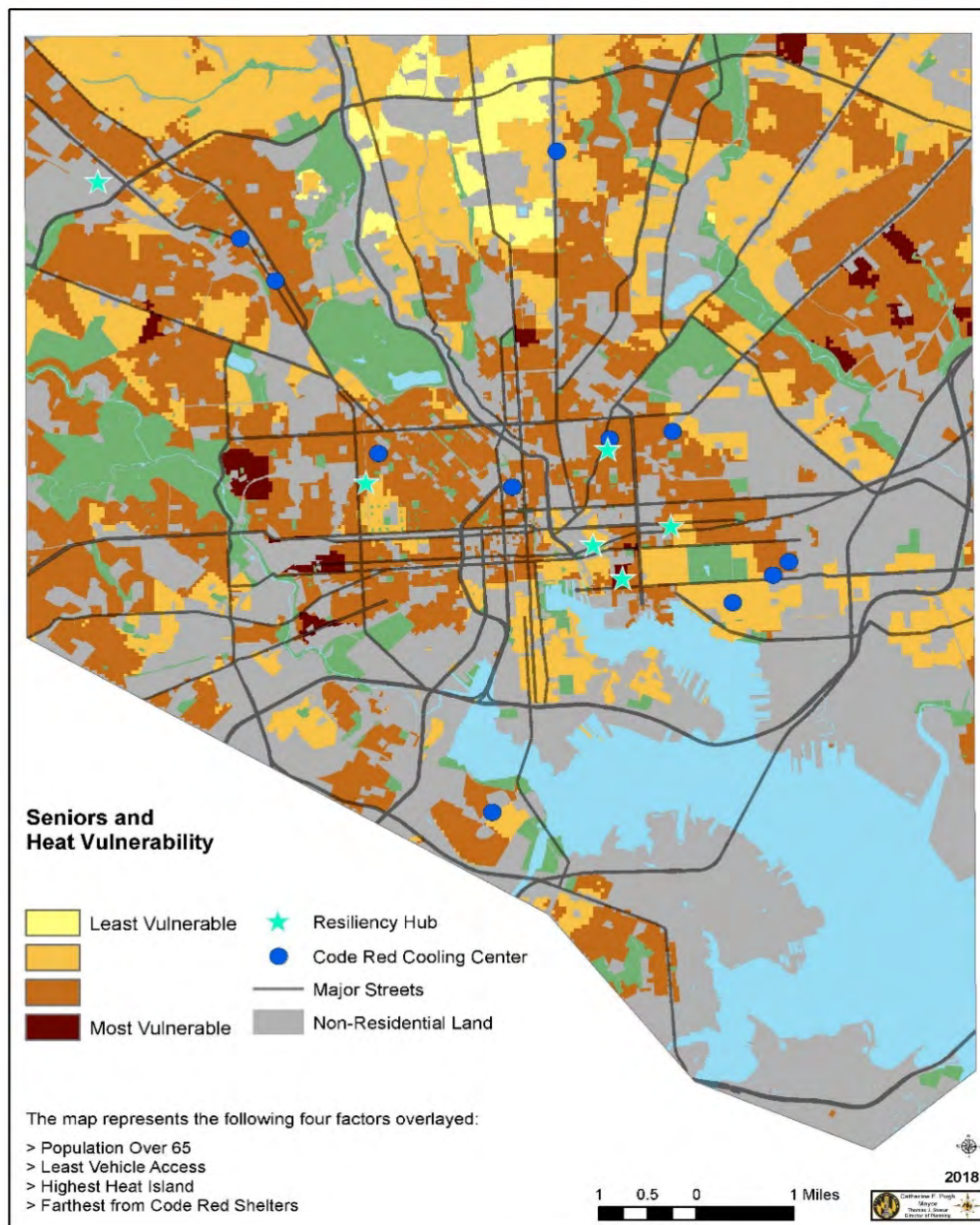
"Those with low income often times do not have A/C or heat in the extreme weather"

"People living in low-lying areas are obviously more subject to the ravages of flooding."

"Severe weather must be horrible to deal with when homeless"



Vulnerable Populations - Seniors and Heat Vulnerability



Community Engagement: Targeted Outreach Themes

What specific groups are you worried about?

"If people are not alerted about high winds with enough time, that can cause problems in terms of damaging or destroying the structures they've set up for themselves." - Concerning the Homeless Population

"Churches around the city are a powerful hub for community outreach (Think about all the homeless that get fed by churches, and view them as trustworthy resources). The city needs to utilize this already existing system." -Community Organizer

How can the city engage the public more?

"We have to re-learn how we do things - we're always taught to stop drop and roll, But Texas taught us that approach doesn't work" - One Local Church Official

What recent events most concern you?



MOVING FORWARD – RECOMMENDATIONS



Moving Forward Recommendations

Community Resilience

- Formalize and expand Resiliency Hubs
 - *How could a Resiliency Hub serve your community?*
- Use community resilience initiatives to address neighborhood concerns
 - *What hazards do you feel your neighborhood is at particular risk for?*
- Broaden outreach in planning efforts
 - *What is the best way for the city to engage with you community? (Nextdoor app? Email? Your community association?)*
- Ask the public for their ideas on solutions to challenges and hazards
 - *How would you like to engage with the city on planning efforts?*



Moving Forward Recommendations (cont'd)

Community Resilience

- Specify vulnerable populations as much as possible
 - *What are vulnerable populations that may not be obvious? (E.g. Homeless LGBTQ+, residents near dense tree canopies)*
- Integrate man-made hazards into the DP3
 - *What man-made hazards should be in the plan? Which should not?*



Moving Forward Recommendations (cont'd)

Food Resilience

- Implement *Plan for Food Access during Incidents and Disasters*
 - Details the City's short-term emergency preparedness protocols related to supporting private and non-profit food entities during emergency events
- Baltimore Food System Resilience Advisory Report
 - Recommendations and considerations can be used as a framework to guide future planning and work to increase resilience and preparedness in the food system.



Historic Preservation

- Developing a hazard mitigation planning strategy for the City's historic resources



Next Steps

Public Comment Period

- August 27th – September 7th
- bmoresustainable.civiccomment.org

FEMA and MEMA Review Plan

- September 10th

Baltimore City Planning Commission Approve Plan

- November 29th



2018 Update

City of Baltimore
Disaster Preparedness & Planning Project
[DP3]

Open Comment Period: August 27–Sept 7, 2018

To share your comments on the 2018 DP3 Update, please visit:
bmoresustainable.civiccomment.org



DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3)

PUBLIC COMMENT MEETING

AUGUST 29TH, 2018 | 6:00PM TO 7:30PM

29TH ST. COMMUNITY CENTER, 300 E. 29TH STREET, BALTIMORE, MD 21218

Name	E-Mail	Phone
Melissa Sheeder	NDSchool for the Blind	melissas@ndschblind.org
Robert Patterson	rowpatterson@aol.com	443-676-6935
Phil Lee	plee@moffattnichol.com	(410) 563-7300
Tihane Ambrose	thone.ambrose@maryland.gov	410
Sean Davis	sdavis@mcayta.com	410.935.5050
Elizabeth Simms	elizabethsimms20@yahoo.com	443-803-5102
Curtis McMeekin	mcmeekin_db@comcast.net	
Valerie LaCour	Valerie.LaCour@baltimorecity.gov	410-396-6802
Winston Parks - Bey	WINSTONBEY@HOTMAIL.COM	443-271-1947
Sharon Gaudin	gaudinone@comcast.net	410 960 1139



[illegible]

2018 DP3 Update Public Meeting – Public Comments

- Start public engagement sooner – and if surveys are used again, put paper-based copies around the city with receiving receptacles (e.g. at banks, grocery stores, etc. with drop boxes for completed surveys)
- Have a longer public comment period – two weeks is not enough time
- Have meetings like this during the spring or fall – too hard to get to these during the cold or heat of summer
- In survey and other engagement, don't give race/ethnicity options. Allow respondents to write in a response so they are not 'boxed in'
- One attendee wanted to know if the public meeting was a federal requirement
- List all of the different subcommittees' members in the plan (potentially in call-out boxes)
- Post the strategy list and high priority strategy documents separately on Civicomment
- Incorporate CERT into the strategy list (education portion)
- Include the illiterate population and those without tech access into vulnerable pop. engagement
- Focus engagement on geographically vulnerable areas (for example, Outreach focused in Fell's point about flood preparedness)
- Survey demographics data: Be clear about why this information is being collected even if it is voluntary, recognize that because it is based on personal identification there may be some error in the data.
- Earthquake hazard identification and reference to VA epicenter
- Concern for coordination and distribution of goods and services during disaster - how is it managed and How do I find out more
- Need more information on the development and direction of resiliency hubs – how do I get involved
- Survey did not cover full range of literacy applications
- Include CERT reference in plan
- Account for geographical differences in plan – highlight low lying, flood prone areas and areas susceptible to flash floods that are not in floodplain
- Hazards cross political lines -- How does the plan address that and who is responsible for coordination
- Is there any political drive to complete the plan and implementation of particular actions?

- We should not overlook the importance of the Resiliency Hubs in the community. When properly educated, all citizens will understand the Hubs functions and services, that is they help/serve the citizens in time of need.
- Are you familiar with the BMORE Beautiful Program in the City (through the City's Environmental Control Board, Executive Director Rebecca Woods. I'm one of her Board Members)? It is currently in 46 neighborhoods. Most have block captains who work directly with the City. This program builds trust between the neighborhood and the City. With trust, much can be accomplished. Initially, this program was to address trash and neighborhood beautification. I have been working with Rebecca Woods to expand the Program to address other issues, such as education, health, crime, etc. Instead of having different City Programs, overlapping, duplicating, to address different or same issues, it would be better to centralize its efforts, such as through BMORE Beautiful. You should speak with Rebecca to introduce the Resiliency Hub concept into the neighborhoods.

2018 Update

City of Baltimore
Disaster Preparedness and
Planning Project (DP3)

A combined all hazard mitigation and climate adaptation plan

2018 DISASTER PREPAREDNESS AND PLANNING PROJECT (DP3)

Planning Commission Presentation
November 1, 2018

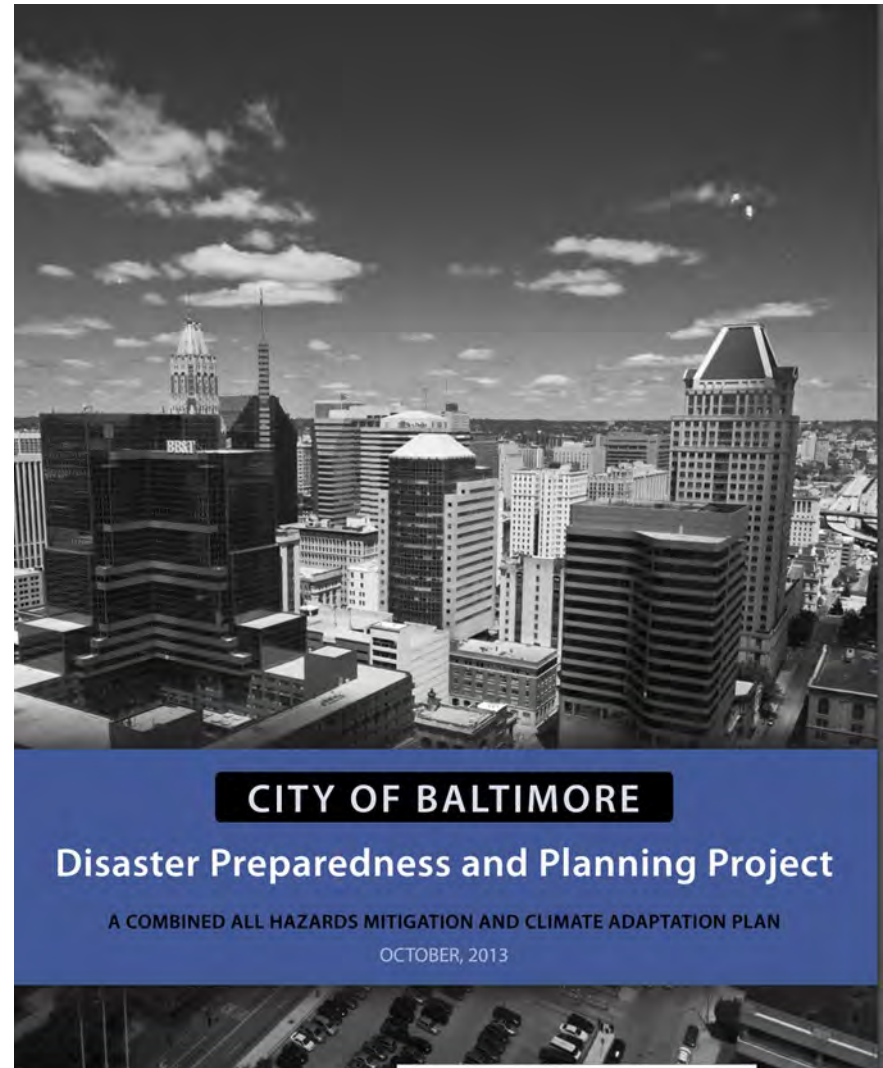


What is the DP3?

Created in 2013, the Disaster Preparedness and Planning Project describes the City's approach to hazard mitigation and climate adaptation

Integrates:

- All Hazards Mitigation Plan—planning for natural hazards
- Climate Adaptation Plan—addresses the impacts of climate change
- Strategies/actions to address existing hazards and future climate change impacts



Why is it Important for Baltimore?

Vision

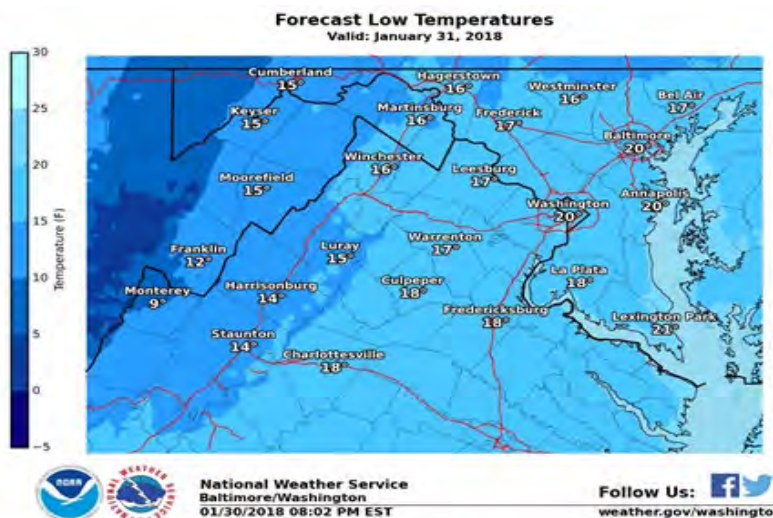
Baltimore will be a city whose daily activities reflect a commitment shared by government, business, and citizens to **reduce or eliminate impacts from current and future natural hazards.**

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 (public and private)
- Enhance the City of Baltimore's **adaptive capacity** and build institutional structures that can cope with future conditions that are beyond past experience
- Promote hazard mitigation and climate adaptation awareness and **education** throughout the City of Baltimore
- Provide support to increase efforts toward a better **Community Rating System (CRS)** community rating



January 30, 2018 Extreme Cold Event



May 15, 2018 - Jones Falls Floods at Meadow Mill



May 27, 2018 Frederick Ave. Flood



July 2, 2018 Extreme Heat

**CODE RED
IN BALTIMORE**

Extremely hot temperatures expected.

Take necessary precautions
to stay safe & healthy.**BALTIMORE
CITY HEALTH
DEPARTMENT**Visit health.baltimorecity.gov
for more information.

Relationship to the Baltimore Sustainability Plan

The Baltimore Sustainability Plan | 2009



The Baltimore Sustainability Plan | 2019



Sustainability Plan Framework

Community	Human-Made Systems	Climate and Resilience	Nature in the City	Economy
Neighbors	Neighborhoods	Community Preparedness	Trees and Forests	Urban Agriculture
Environmental Literacy	Housing Affordability	Energy	Green Infrastructure	Local Economy
Healthy School Environments	Buildings	Greenhouse Gas Emissions	Water in the Environment	Workforce Development
Waste and Recycling	Transportation	Clean Air	Biodiversity	Arts and Culture
	Noise	Food Systems	People and Nature	

Climate Action Plan (CAP) | 2012



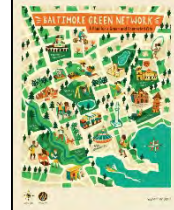
Disaster Preparedness Project and Plan (DP3)



Homegrown Baltimore (HGB) | 2013

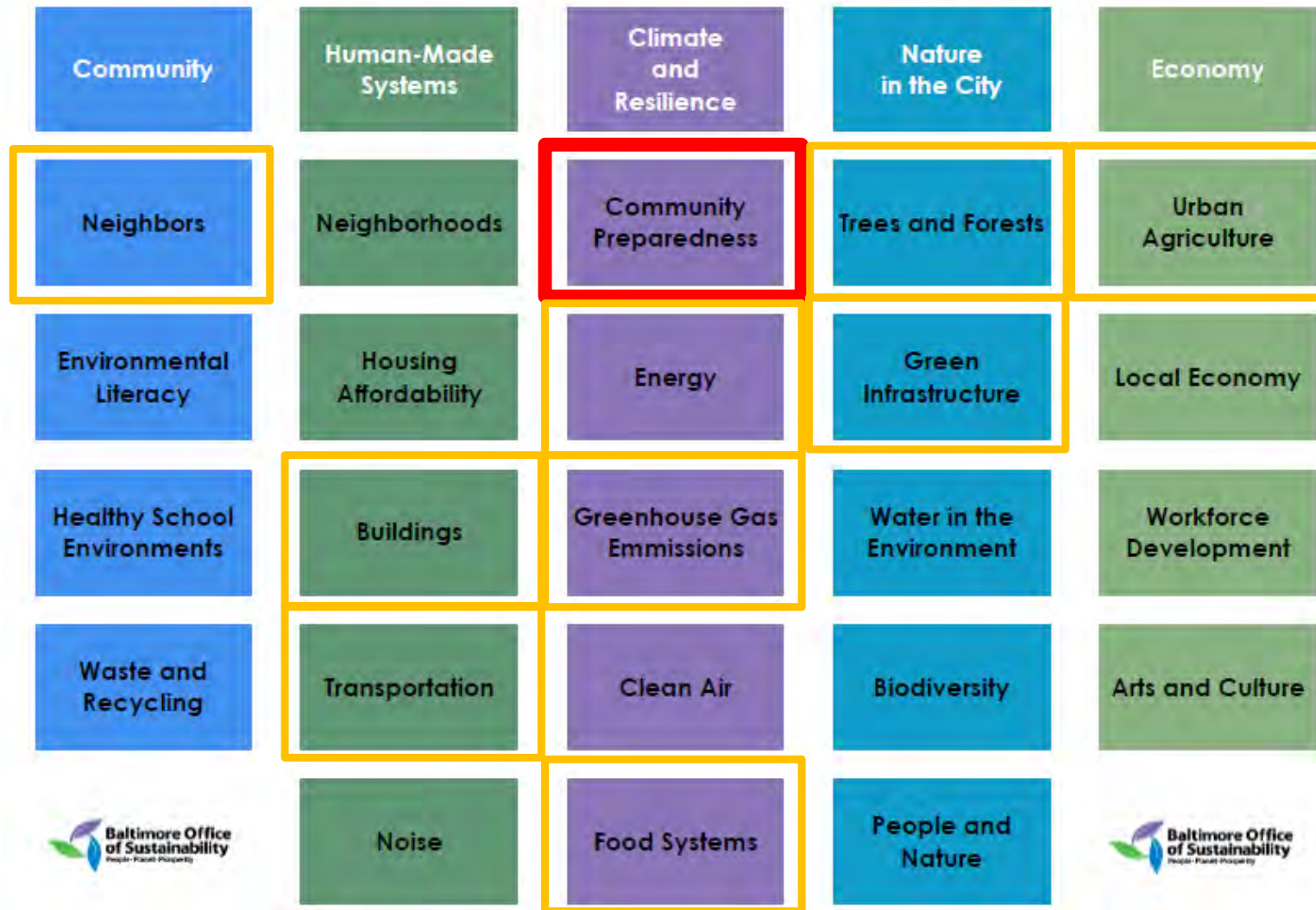


Baltimore Green Network (BGN) | 2018



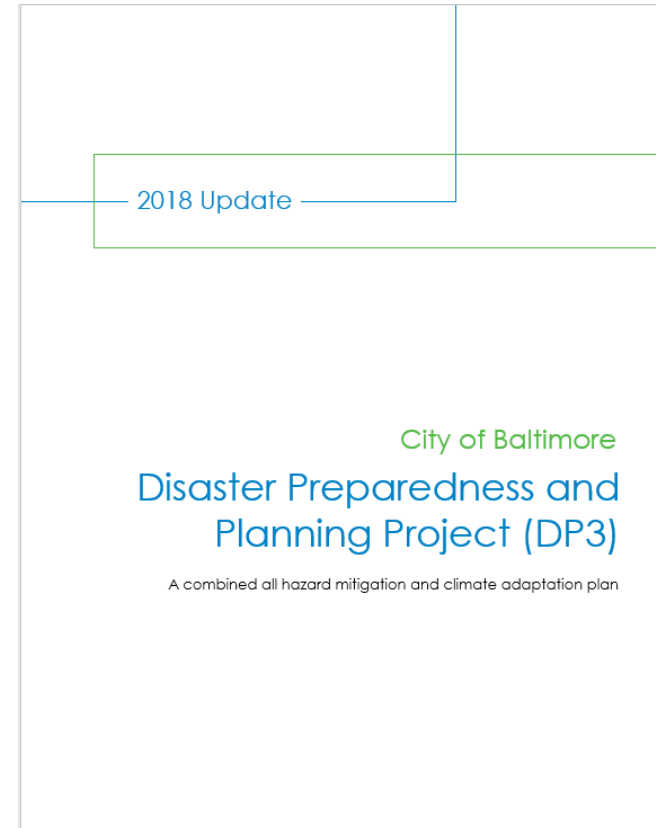
Relationship to the Baltimore Sustainability Plan

Sustainability Plan Framework



2018 DP3 Update

- Profiles of occurrences of hazard events
- New Hazard Identification and Risk Assessment
- Assessment of the geographic extent and Baltimore's risk and vulnerability for each hazard
- Updated mitigation strategies and actions with new prioritization ranking
- Recommendations to foster continued equitable engagement and strengthen community resilience



Natural Hazards Identified

- **Flooding:** Flooding and Dam Failure
- **Coastal Hazards:** Tropical Storms and Hurricanes; Sea Level Rise; and Storm Surge/Coastal Inundation; Tsunami
- **Precipitation Variability:** Thunderstorms, with Lightning and Hail; Winter Storms and Nor' Easters; Drought
- **Wind:** Thunderstorm Winds & Derechos; Tornados
- **Extreme Heat:** Heat and Air Quality
- **Land:** Earthquakes; Landslides/subsidence; Sinkholes



Community Engagement Overview

Equity and Outreach Subcommittee

- Dept. of Planning
- Office of Sustainability
- Health Department
- Mayor's OEM
- Community leaders

Engage Vulnerable Populations

- Homeless Services Program (Mayor's office)
- Faith-based Communities
- Senior Centers
- Early life and family centers

Public Survey

- Concern for natural hazards *and* man-made crises
- Concern for specific populations



Strategies and Actions: Examples

Infrastructure

- IN-1: Protect and enhance the resiliency and redundancy of electricity systems
- IN-16: Enhance and expand stormwater infrastructure and systems

Buildings

- B-1: Develop and implement hazard protections for critical facilities

Natural Systems

- NS-4: Expand, protect and restore riparian areas in the city

Public Services

- PS-2: Develop a Hazard Awareness Program



Moving Forward Recommendations

Community Resilience

- Formalize and expand Resiliency Hubs
- Use community resilience initiatives to address neighborhood concerns
- Broaden outreach in planning efforts
- Ask the public for their ideas on solutions to challenges and hazards
- Specify vulnerable populations as much as possible
- Integrate man-made hazards into the DP3



Moving Forward Recommendations (cont'd)

Food Resilience

- Implement *Plan for Food Access during Incidents and Disasters*
 - Details the City's short-term emergency preparedness protocols
- Baltimore Food System Resilience Advisory Report
 - Can be used as a framework to guide future planning and work to increase resilience and preparedness



Historic Preservation

- Developing a hazard mitigation planning strategy for the City's historic resources



Plan Approval & Adoption

Updated Plan Posted

October 16, 2017

Respond to final FEMA comments

TBD

Sustainability Commission Approval

Wednesday, October 24th

Planning Commission (for Adoption)

Thursday, November 1st



Questions & Comments

