

## C. Meeting and Other Participation Documentation

### **Stakeholder Planning Meeting Documentation**

1. 2020 Annual Review and Kickoff, 2020.2.19
2. 2021 Annual Review and HMP Planning Workshop, 2021.2.23
3. Capability Assessment Workshop, 2021.10.04
4. Mitigation Strategy Brainstorm Workshop: Nature Based Solutions, 2021.10.18
5. Mitigation Strategy Brainstorm Workshop: Housing and Infrastructure Solutions, 2021.10.20
6. Mitigation Strategy Workshop, 2021.11.19
7. Final Plan Review Workshop (Public), 2022.01.31

### **Steering Committee Meeting Documentation**

8. Steering Committee Meeting, 2020.10.30
9. Steering Committee Meeting, 2020.12.01
10. Steering Committee Meeting, 2021.01.05
11. Steering Committee Meeting, 2021.02.04
12. Steering Committee Meeting, 2021.03.04
13. Steering Committee Meeting, 2021.04.07
14. Steering Committee Meeting, 2021.06.21
15. Steering Committee Meeting, 2021.08.04
16. Steering Committee Meeting, 2021.09.14
17. Steering Committee Meeting, 2021.12.14
18. Steering Committee Meeting, 2022.01.07

### **Focus Group/Workgroup Meeting Documentation**

19. Public Safety Focus Group, 2020.10.01
20. Educational Institutions Focus Group, 2021.04.01
21. Historic and Cultural Resources Focus Group, 2021.04.12
22. Flooding Focus Group, 2021.04.19
23. Infrastructure Focus Group, 2021.04.22
24. Individuals with Disabilities and Access & Functional Needs Focus Group, 2021.06.24
25. Grants & Funding Workgroup Meeting, 2021.03.12
26. Grants & Funding Workgroup Meeting, 2021.3.31
27. Grants & Funding Workgroup Meeting, 2021.04.13
28. Grants & Funding Workgroup Meeting, 2021.06.08

### **Other Meetings, Trainings and Workshops**

29. PYN Navy Yard, 2019.12.18
30. City's Equitable Engagement Collaborative, 2020.10.28
31. Flood Risk Management Task Force Meeting (FRMTF), 2021.05.11
32. Mitigation Grants Workshop, 2020.10.13
33. Mitigation Grants Workshop, 2021.05.19

## **Public Meetings**

34. Community Chat, Public Meeting, 2021.03.18
35. AKA-DST Sorority, Public Meeting, 2021.04.06
36. Block Captain's Meeting, Public Meeting, 2021.04.15
37. Citizen's Planning Institute, 2021.05.19
38. OWN Community Meeting, Public Meeting, 2021.06.01
39. READYHome, Emergency Preparedness Presentation with HMP addition

## **Other**

40. Monthly Newsletter Sample
41. Public Hazard Mitigation Survey -English
42. Public Hazard Mitigation Survey - Spanish
43. Results of Public Survey
44. Social Media Toolkit
45. Hazard Mitigation Plan Blog Post
46. Feedback Matrix





FEMA

## Philadelphia Hazard Mitigation Planning Workshop

### *The Game of Extremes “Train the Trainers”*

February 19, 2020

Delaware Valley Regional Planning Commission

#### **AGENDA**

- 8:30 a.m. Networking and Coffee
- 9:00 a.m. Welcome – Robert Graff, DVRPC
  - Framing and Purpose
    - Mari Radford, Federal Emergency Management Agency (FEMA)
    - Derek Ziegler, Philadelphia Office of Emergency Management (OEM)
- 9:15 a.m. Philadelphia Climate History and Projections
  - Robert Graff, DVRPC
- 9:40 a.m. *The Game of Extremes*
  - Kristin Baja, Urban Sustainability Directors’ Network
- 1:00 p.m. Lunch (provided)
- 1:45 p.m. Transitional Remarks/Introduction

#### **Philadelphia Hazard Mitigation Planning Track**

- 1:50 p.m. Hazard Mitigation Planning for Philadelphia
  - Emma Giardina & Carolyn Caton, Philadelphia Office of Emergency Management
- 3:45 p.m. Closing Remarks
- 4:00 p.m. Event Ends

#### **“Train the Trainers” Track**

- 1:50 p.m. Resources for Running Your Own Workshop
  - Robert Graff, DVRPC & Kristin Baja, Urban Sustainability Directors’ Network
- 2:30 p.m. Event Ends



*This event is approved for 4.0 APA AICP CM credits Event #9195303  
<https://www.planning.org/events/eventsingle/9195303/>*

*Certificates of participation will be provided upon request for other CE programs.*



## MEMORANDUM

To: Derek Ziegler, Deputy Director for Planning

From: Emma Giardina, Hazard Planning Coordinator

CC: Carolyn Caton, Infrastructure Program Manager

Date: February 24, 2022

Subject: **Hazard Mitigation Event Recap, 2.19.2020**

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### Event Summary

On February 19, 2020, Philadelphia Office of Emergency Management (OEM) teamed up with FEMA Region III and the Delaware Valley Regional Planning Commission (DVRPC) to host a workshop for the 2022 update of Philadelphia's Hazard Mitigation Plan (HMP). The purpose of this kickoff event was to: provide our planning partners with an overview of the HMP and HMP planning process; identify data, tools and resources for the plan update; and to explore the ways that climate change could be better integrated in Philadelphia's HMP.

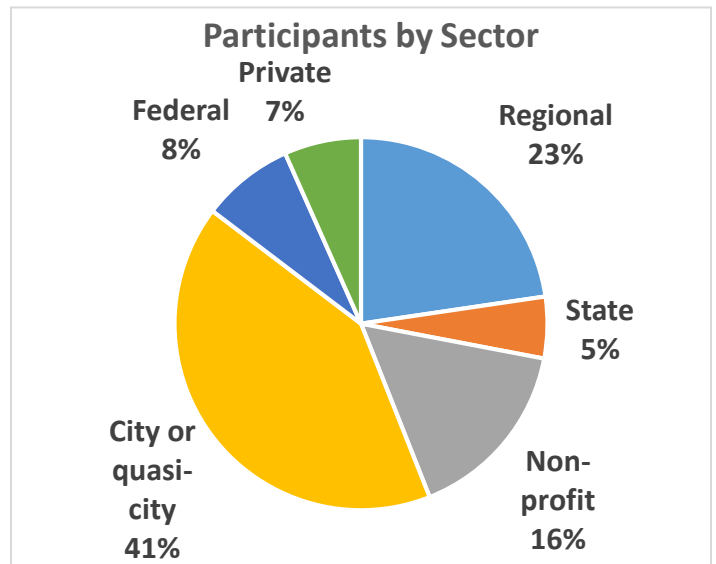
The first half of the day was led by Kristen Baja of the Urban Sustainability Director's Network (USDN). Workshop attendees participated in "The Game of Extremes", a hands-on training where participants took an in-depth look at the ways that climate change impacted a fictional town called "Muggytown." Participants were challenged to prioritize city assets and identify climate adaptation & mitigation strategies based on a limited budget. This training replicates the real-life decisions and conversations that happen during a Hazard Mitigation Plan update.

The afternoon session, led by Philadelphia OEM, provided participants with a high-level overview of the Hazard Mitigation Plan and the update process for the 2022 plan. Philadelphia OEM sought input on the planning process from subject matter experts in the room through a series of group discussions.

### Participants

The targeted audience for this workshop was Philadelphia's planning community. Approximately 75 representatives from the following agencies or organizations were in attendance:

**City & Quasi-city government Partners:**  
Department of Public Property (DPP), Licenses & Inspections (L&I), Philadelphia City Planning Commission (PCPC), Office of Sustainability (OOS), Philadelphia Department of Public Health (PDPH), Philadelphia Fire Department (PFD), Philadelphia OEM, Parks & Recreations



(PPR), Streets, Office of Risk Management, The School District of Philadelphia (SDP), Philadelphia Gas Works (PGW), Philadelphia Water Department (PWD), Philadelphia International Airport, SEPTA

**Private-Sector Partners & Nonprofits:** Temple University, Drexel University, AMTRAK, Hospital & Healthsystem Association of PA (HAP), Fairmount Park Conservancy, Urban Sustainability Director's Network, PECO, Audubon Pennsylvania

**State & Federal Partners:** Pennsylvania Emergency Management Agency (PEMA), Federal Emergency Management Agency (FEMA) Regions II & III, PA State Historic Preservation Office, United State Coast Guard Sector Delaware Bay, Pennsylvania Department of Transportation (PennDOT)

**Regional Partners:** DVRPC, Delaware County Planning, Chester County Department of Emergency Services, Delaware River Port Authority (DRPA), Montgomery County Department of Public Safety

## Outcomes

Several planning initiatives, data analysis studies, and community engagement strategies were identified by participants as resources that could facilitate the update of the HMP.

### Data Analysis & Studies

- Germantown Flood Relief Study, PWD
- Post rain event reports, PWD
- Studies on the effects of climate change on water quality, sea level rise, and drinking water quality, PWD
- Steep slope mapping, L&I
- Flood Health Risk & Vulnerability Study, PDPH
- Updated heat vulnerability index, PDPH
- New 2020 Census data
- Historic Flood Map, FRMTF

### Tools & Resources

- IWAMS database of city facilities, DPP
- New Eclipse software for data on private properties, L&I
- Coastal Effects of Climate Change in Southeastern PA Storymap, DVRPC
- New COOP planner is being hired, OEM & OIT
- ARCHES database of Philadelphia's historic structures, Philadelphia Historical Commission

### Plans & Initiatives

- Climate Adaptation Plan, OOS
- Hydrologic and Hydraulic (H&H) study, Philadelphia International Airport (PHL)
- Master Plan update, PHL
- Fire Risk Study, PFD

- Remapping Schuylkill River Floodway, USACE & Flood Risk Management Task Force (FRMTF)
- FRMTF Strategic Plan Update, FRMTF
- Seaburn & Pandemic Influenza Plan updates, PDPH
- I-95 Redevelopment Plan
- Urban Forest Plan, PPR
- Philadelphia Long Range Plan, PCPC

### **Community Engagement Strategies**

The HMP is a public facing plan requiring input from community members and business owners throughout Philadelphia. The following community engagement strategies and best practices were shared by participants:

- Workshop in a box, [FDR Park Plan](#)
- Translate the plan and advertisements for community workshops
- Advertise workshops using multiple methods including newspapers and flyers
- Use plain language whenever possible
- Use the Hemingway app to determine readability of text
- Keep the plan open for comments after the plan is adopted to gather more feedback for annual updates
- Collaborate with other agencies conducting community outreach on similar topics

Seven groups of participants were asked to identify the **stakeholders**, **city assets** and **hazards** that should be considered in the 2022 Hazard Mitigation Plan. Below is a summary of their answers.

### **Stakeholders**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Transit Security Working Group</li> <li>• Climate Change Advisory Group, PDPH</li> <li>• Economic Development Partners</li> <li>• Representatives from the business community</li> <li>• Philanthropic Funders (William Penn Foundation)</li> <li>• Media, Public Information Officers</li> <li>• Behavioral Health</li> <li>• Public Safety</li> <li>• Colleges/Universities</li> <li>• Environmental Organizations</li> <li>• Volunteers</li> <li>• MDO</li> <li>• City Council</li> <li>• Culture Centers and Museums</li> <li>• Insurance providers/experts</li> <li>• Grants Office</li> <li>• Registered Community Organizations</li> </ul> | <ul style="list-style-type: none"> <li>• Block Captains</li> <li>• Government at all levels</li> <li>• Public Health representatives</li> <li>• Vulnerable populations</li> <li>• Senior Centers</li> <li>• Hospitals</li> <li>• Students</li> <li>• Surrounding communities</li> <li>• Tourism industry</li> <li>• Chamber of Commerce</li> <li>• Faith-based community</li> <li>• Senior Citizens</li> <li>• Homeless</li> <li>• SEPTA</li> <li>• Non-profits</li> <li>• PennDot</li> <li>• EPA</li> <li>• NOAA</li> <li>• Homeland Security</li> </ul> |
|--|---|

## Critical Assets in the City

- Schools
- Health Centers
- Airports
- Roads, Bridges, Transit stations
- Water & Wastewater treatment
- Prisons
- Public Safety
- Historic and Cultural Centers
- Communication systems
- Fuel sites
- Utilities
- Libraries
- Neighborhood associations
- Religious institutions
- Data
- Recreational trails
- Quadplex
- Swimming pools

## Hazards

*The numbers next to each hazard represents the number of groups out of 7 total groups that listed that hazard as one that would stretch the resources of the city and/or their agency.*

- Extreme Heat, 7
- Terrorism (Bio and Cyber), 6
- Flooding (Pluvial, fluvial flooding & storm surge), 5
- Severe Weather, 5
- Infrastructure failure, aging infrastructure, 5
- Pandemics/Epidemics, Opioids, 4
- Fire, 2
- Gun Violence, 2
- Hazardous Materials Release, 2
- Hurricanes, 2
- Snow, 2
- Utility Disruptions, 1
- Aircraft accidents, 1
- Extreme Cold, 1
- Traffic fatalities, 1
- Vector borne diseases, 1
- Earthquake, 1
- Climate Change, 1
- High Winds, 1
- Erosion, 1
- Sink Holes, 1
- Watermain breaks, 1
- Lead, Asbestos, 1

## Next Steps

Some immediate next steps following this workshop include:

1. Follow up with workshop participants regarding tools, resources and plans identified that could be helpful during this plan update;
2. Identify opportunities for further collaboration with the Office of Sustainability and the Urban Sustainability Director's Network to integrate climate change into the 2022 plan update;
3. Create an online planning hub to facilitate collaboration and keep stakeholders informed throughout the update;
4. Identify workgroups and an advisory committee to aid in the completion of the plan update; and
5. Continue to expand stakeholder outreach by engaging more private-sector partners, businesses, and community organizations.

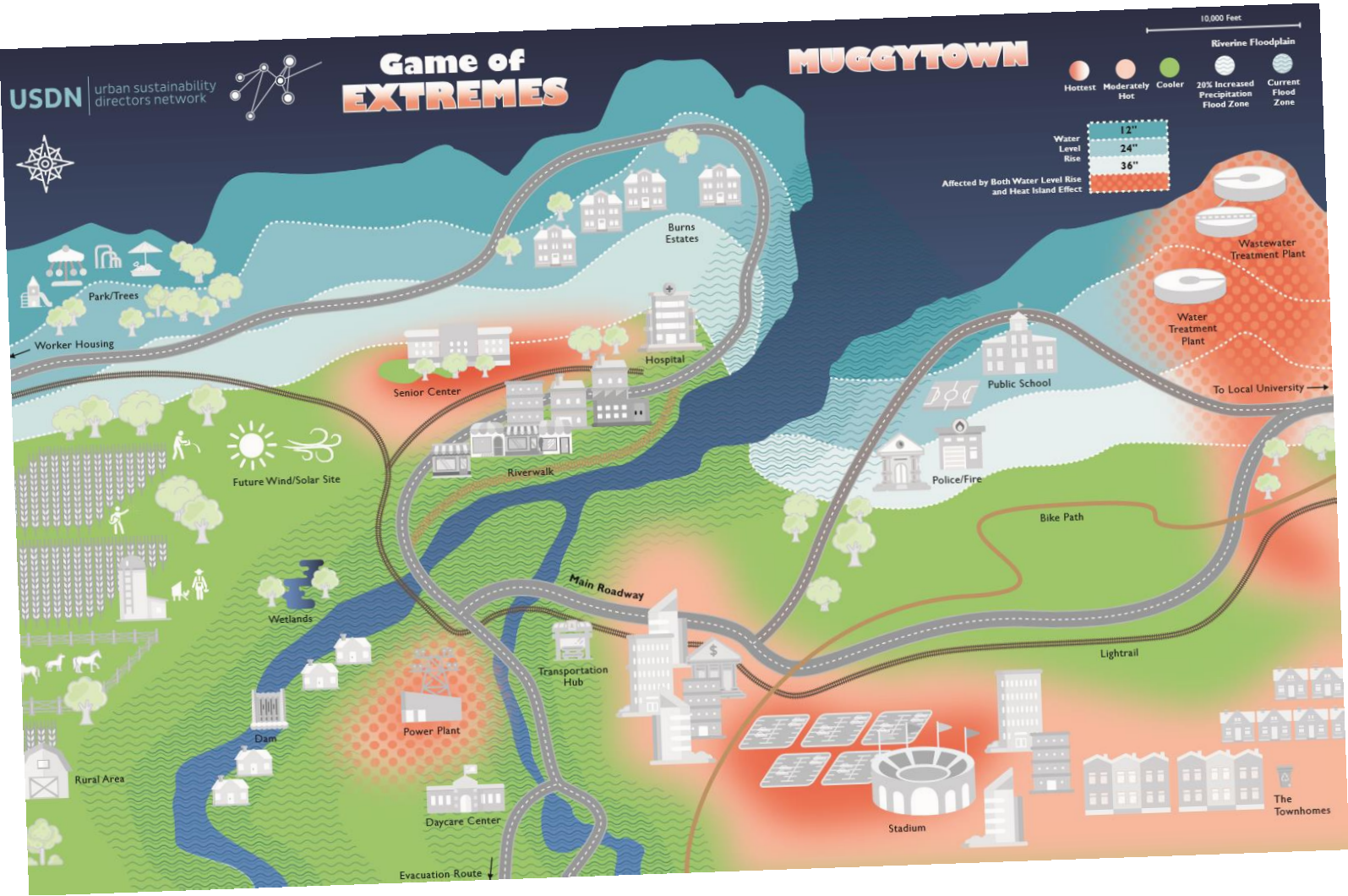
# Philadelphia's All-Hazard Mitigation Plan

Understanding the 2022 Plan Update



# Game of EXTREMES

# MUGGYTOWN





# What are the key assets, stakeholders and hazards we should consider in Philadelphia's plan?

## ASSET

### Power Plant

The power plant was built in 1987 and becomes overwhelmed, i.e., experiences brown- and black-outs, by the city's electricity demand during extreme heat. Also, plant components themselves are increasingly stressed because of increases in average annual temperature.

During last year's heat wave, roughly 30% of the population was without power for several days. Two years ago, the heavy river flooding made the power plant inoperable.

## Transportation Planner

**Role:** You represent the interests of the Muggytown Transit Agency (MTA), which maintains the town's roads and public transit including buses, and light rail. You are actively involved in planning initiatives and deeply care about sustainability and safety.

You were in a car accident two years ago and are disabled from driving. You live along the Riverwalk area. You take your child to Daycare everyday by car.

### Goals:

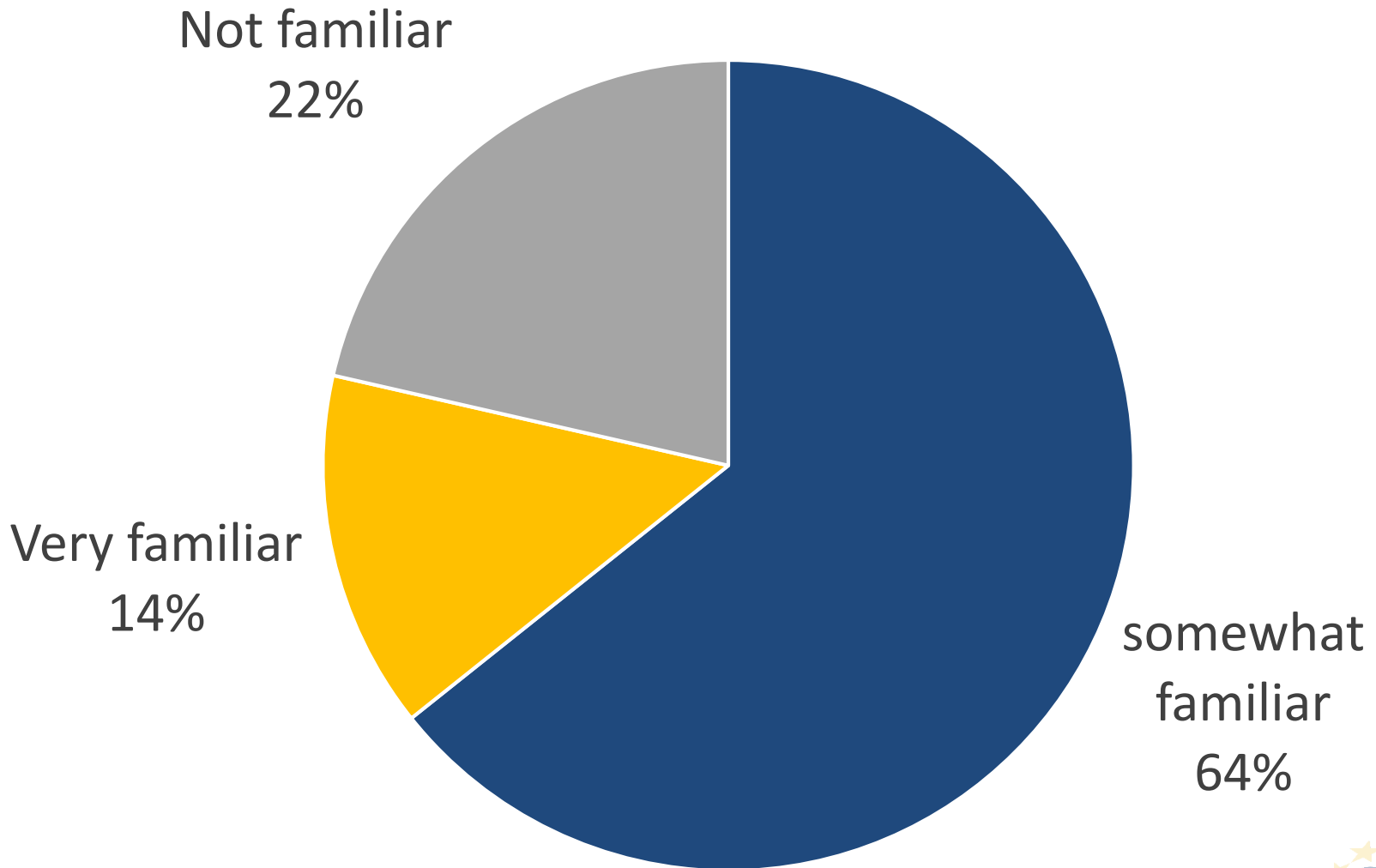
- Manage and plan reliable transportation options for the city
- Advocate with your agency's leadership to take the changing climate into account

## RIVERINE FLOODING DISRUPTION

A massive storm system dumped **20 inches of rain on the city within 24 hours**. This caused major flash flooding across the city, creating a crisis for people and assets in riverine flood zones. This is the most precipitation the city has experienced in a 24-hour period. Scientists are saying these types of rain events will be increasingly common. It took nearly a week for the waters to recede.

People in flood zones were stranded on top of their houses and their cars, and with floodwaters overtaking the major roadways, emergency rescue took days. In addition, many assets sustained flood-related damages, including mold infestations.

# How familiar are you with the Hazard Mitigation Planning Process?



# This Afternoon

- A high-level overview
- Gather input & identify resources
- Outline planning process & next steps



# Definitions

## Hazard

Any **source of potential damage**, harm or health effects on something or someone

## Risk

The potential that a hazard will cause damage or harm

## Hazard Mitigation

The act of **reducing** or **eliminating** the risk of natural, man made or technological disasters

# What is a Hazard Mitigation Plan?

Plan that assesses natural and human caused hazards and identifies cost-effective policies and actions that can reduce the risks and impacts of those hazards.

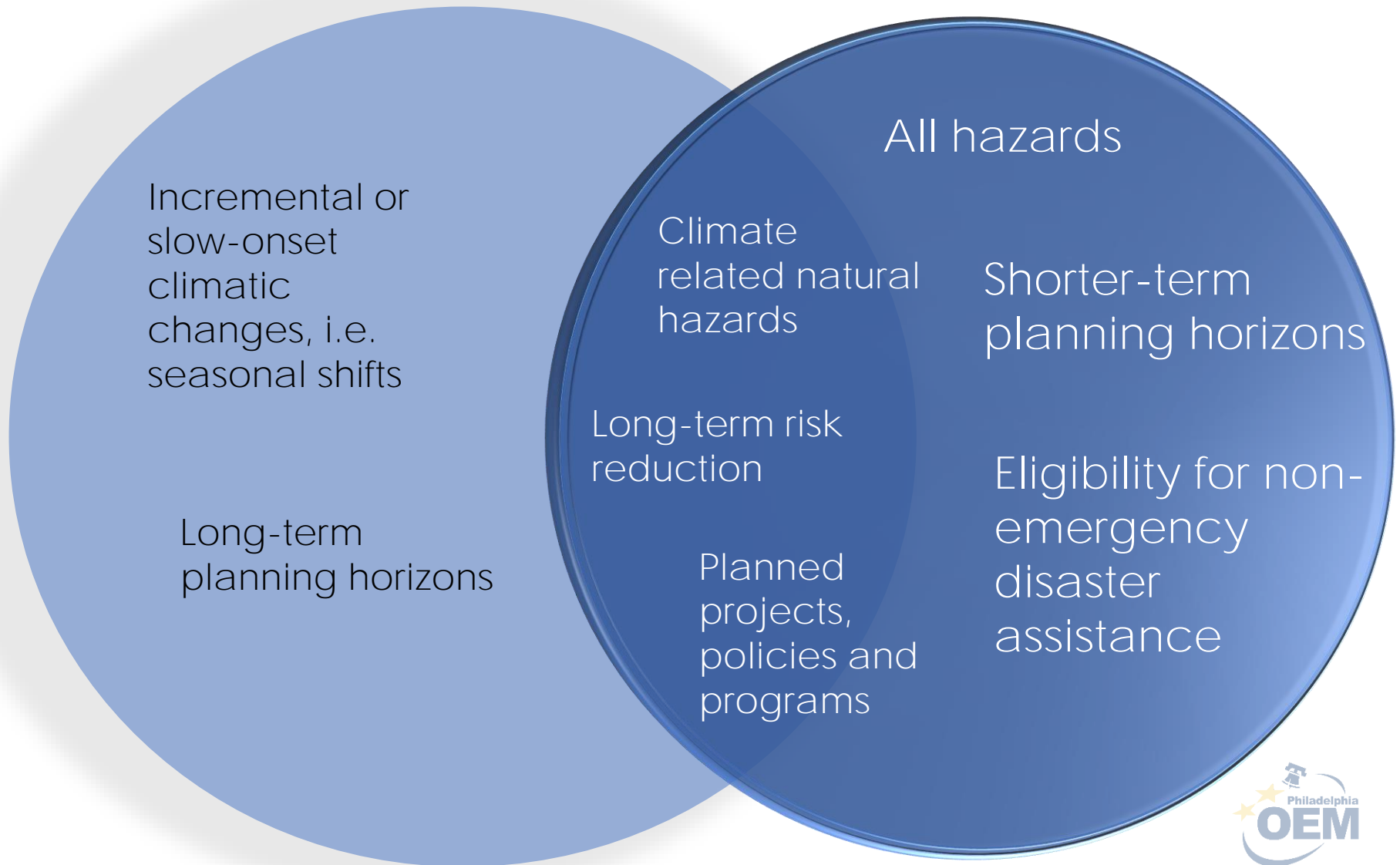


Required update: May 2022



# Climate Adaptation Planning

# Hazard Mitigation Planning



# Why Hazard Mitigation?

Top 5 costliest disasters between 1980-2019

|                          |                 |
|--------------------------|-----------------|
| Hurricane Katrina – 2005 | \$168.8 Billion |
| Hurricane Harvey – 2017  | \$130.0 Billion |
| Hurricane Maria – 2017   | \$93.6 Billion  |
| Hurricane Sandy – 2012   | \$73.5 Billion  |
| Hurricane Irma – 2017    | \$52.0 Billion  |



Data gathered from US Department of Commerce and NOAA



**NOAA** NATIONAL CENTERS FOR  
ENVIRONMENTAL INFORMATION  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION





"Hurricane Floyd, in 1999, was Eastwick's most devastating flood event in recent memory. Cobbs and Darby Creeks overflowed, inundating the area with four to five feet of water, requiring evacuation of about 1000 Eastwick residences."

**1999**







Picture | The Philadelphia Inquirer

# More Mitigation Measures, More Savings



**One dollar invested in mitigation =  
six dollars U.S. saves in future costs**



# Why Hazard Mitigation Planning?



# What's in our plan?

## Community Profile

An overview of Philadelphia's physical, social and built environment

## Hazard Profile

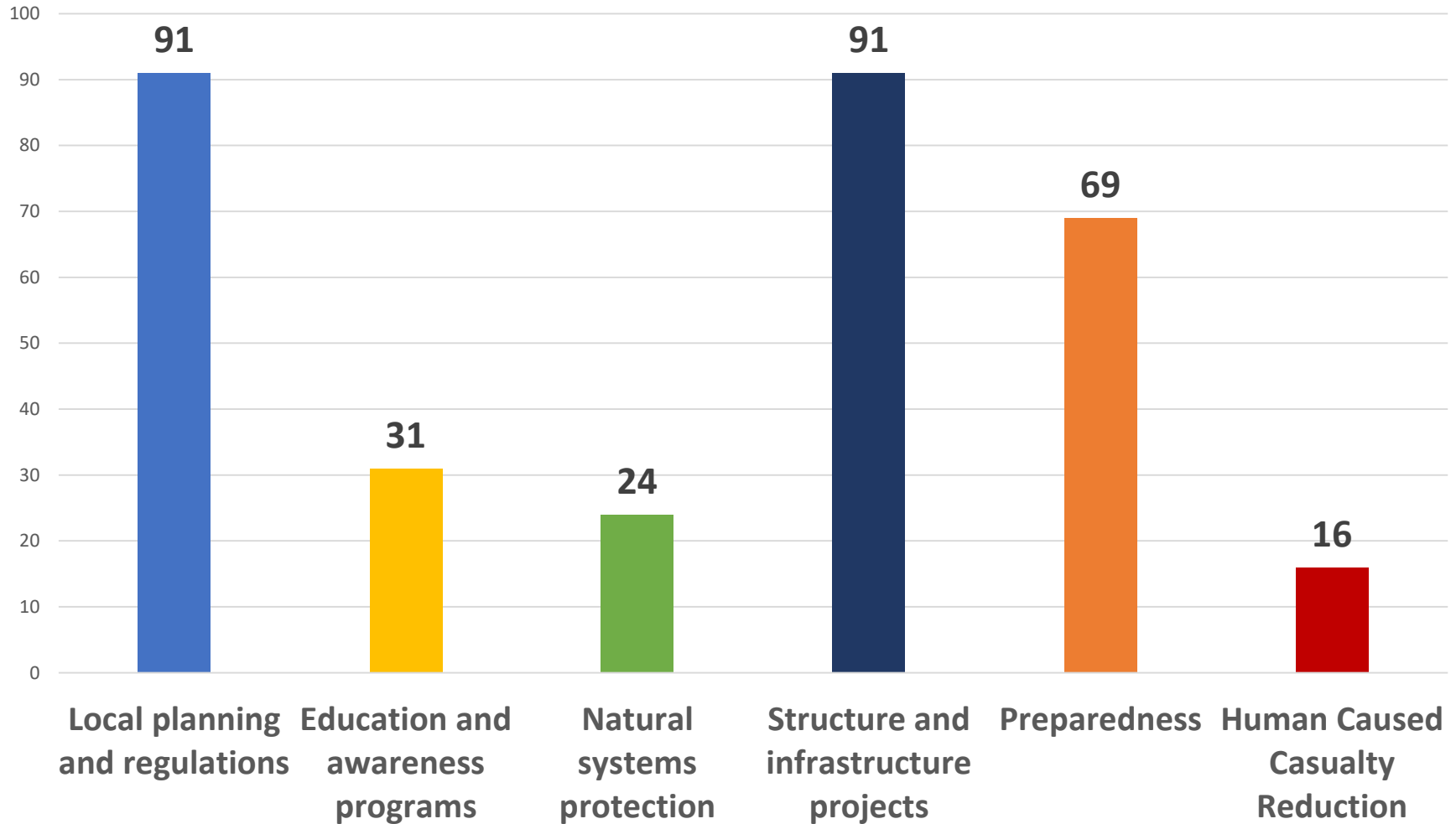
Description and risk analysis of hazards in Philadelphia

## Mitigation Strategy

A list of prioritized projects that reduce the risk of hazards, including

- 134 Existing Actions
- 195 Potential Actions

# Mitigation Actions by Category



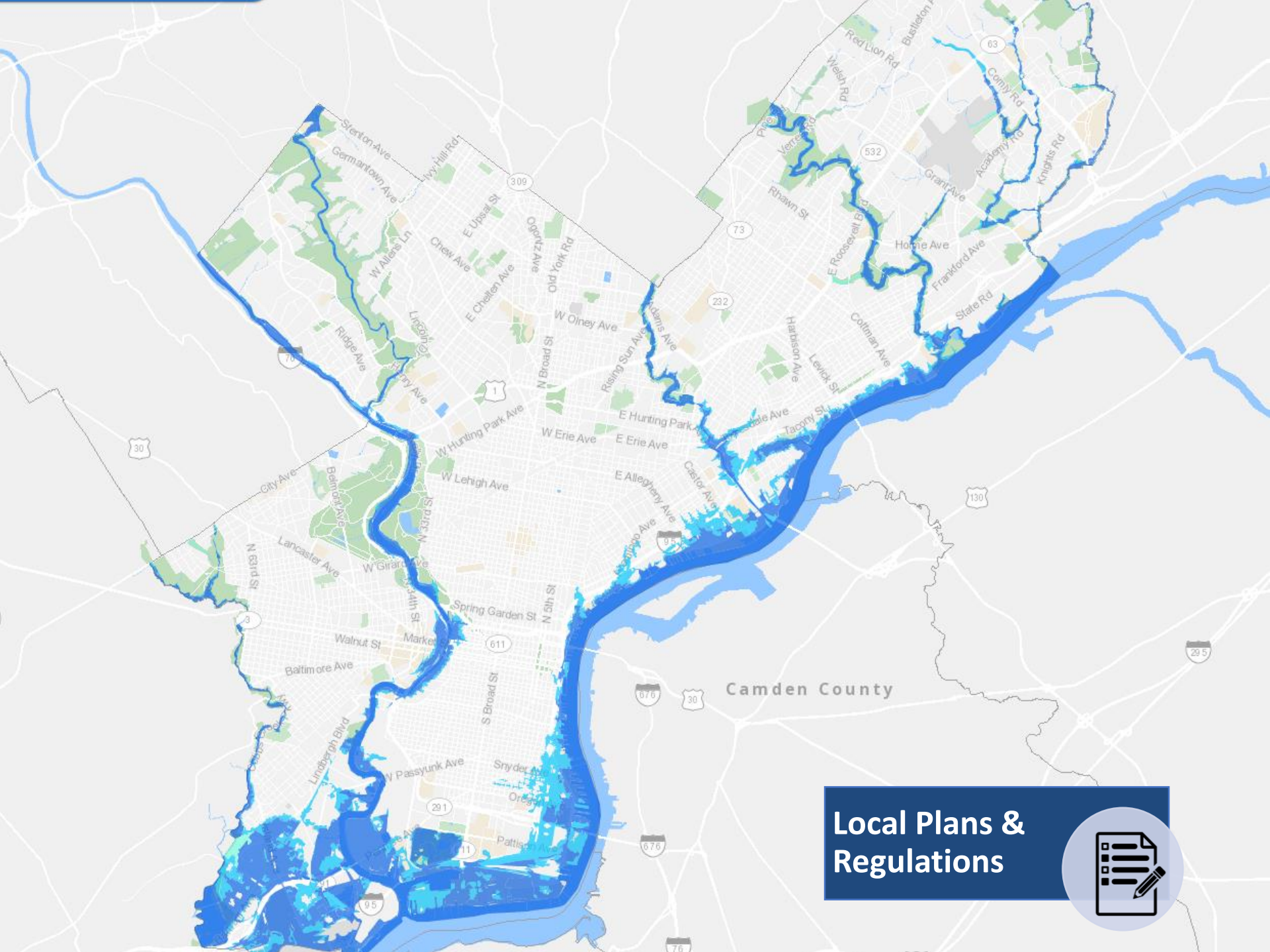




**Text** "READYPhila"  
to 888-777

Education &  
Awareness





Camden County

# Local Plans & Regulations







Structure &  
Infrastructure





# Bleeding control

Tourniquet and Bandage Training  
School District of Philadelphia

TEMPLE HEALTH  
TEMPLE UNIVERSITY HOSPITAL



Casualty  
Reduction



What mitigation  
accomplishments  
would you highlight?



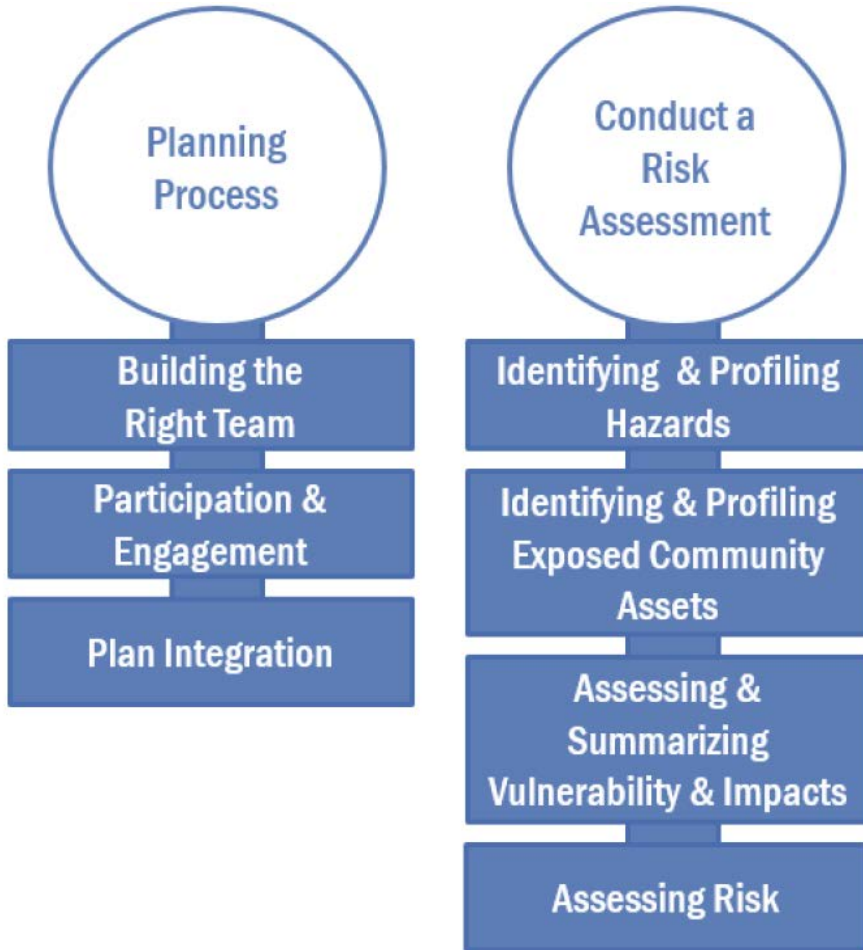
# Short Break



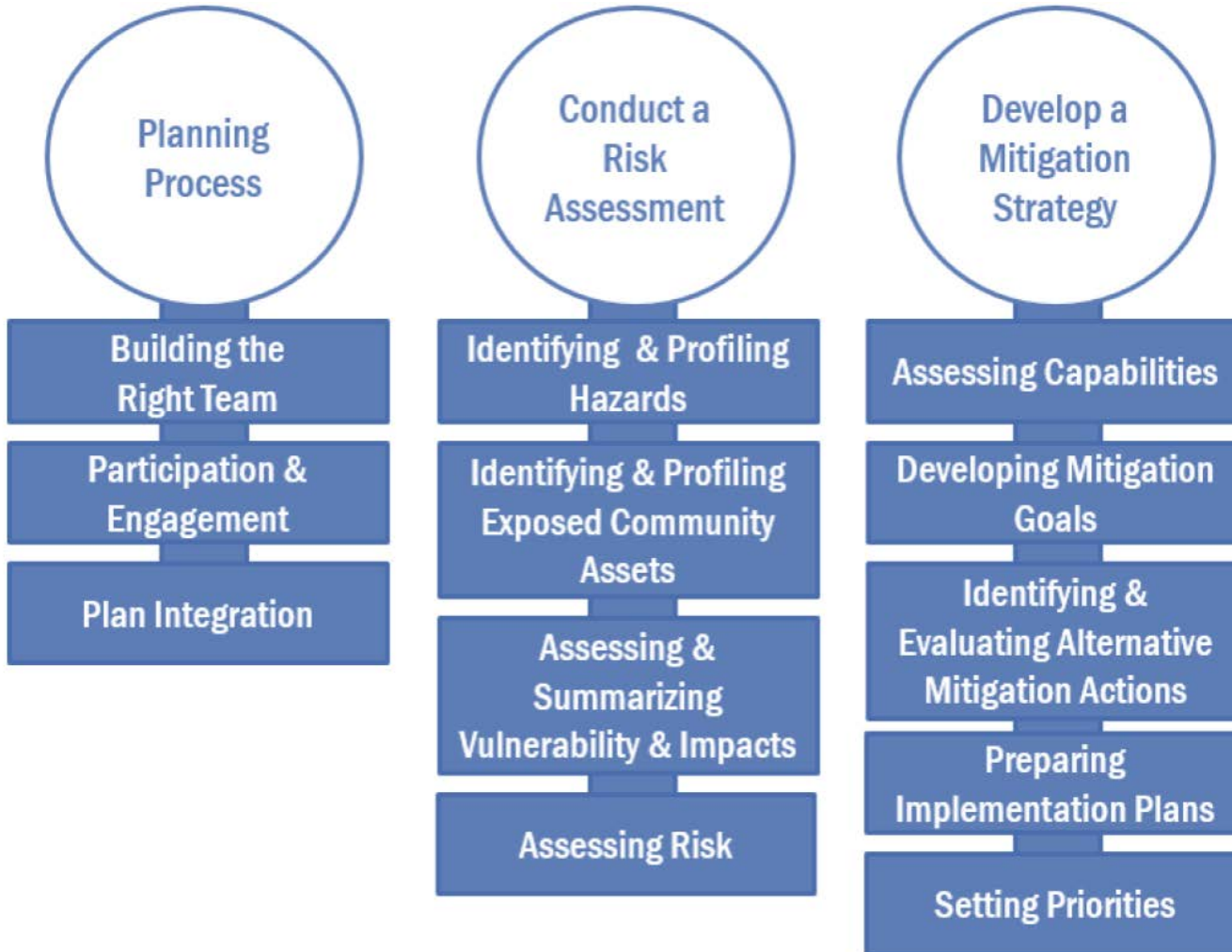
# The Planning Process



# The Planning Process

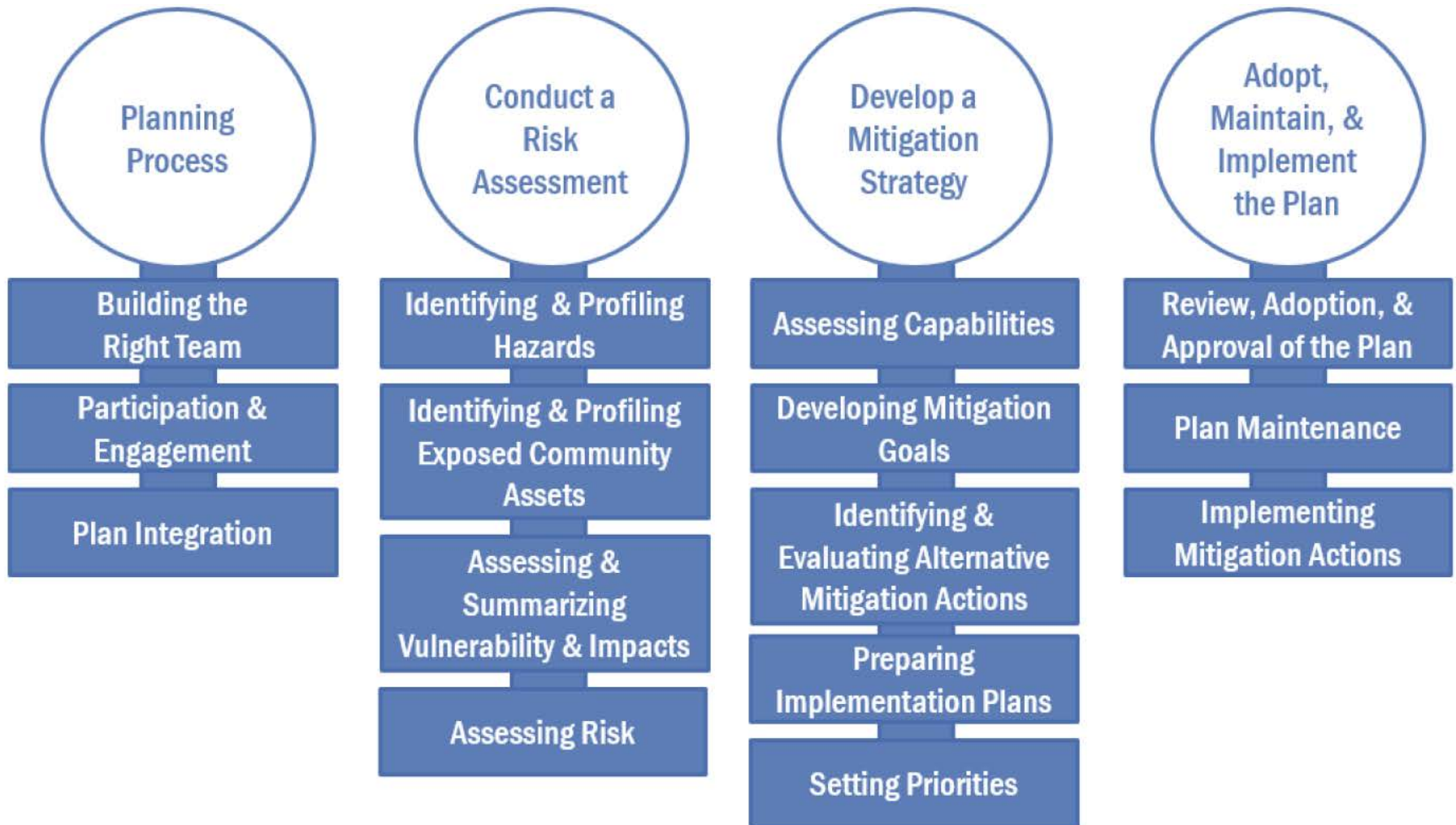


# The Planning Process





# The Planning Process



# Timeline

**CITY COUNCIL  
ADOPTS PLAN  
SPRING '22**

**PHASE 1:  
ORGANIZING  
THE RESOURCES  
TODAY**

**PHASE 2: RISK  
ASSESSMENT  
FALL '20**

**PHASE 3:  
DEVELOP THE  
MITIGATION PLAN  
WINTER/SPRING '21**

**PHASE 4:  
COMPLETE AND  
REVIEW THE  
PLAN  
SUMMER/FALL '21**

**SUBMIT TO  
PEMA & FEMA  
WINTER '22**





**“The mitigation plan belongs to the local community.”**



We want to hear  
from *you*!



Emma Giardina

Hazard Planning Coordinator

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Carolyn Caton

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[www.phila.gov/READY](http://www.phila.gov/READY)





# Philadelphia Hazard Mitigation Planning Workshop — *The Game of Extremes* “Train the Trainers”

Delaware Valley Regional Planning Commission — February 19, 2020

**SIGN IN FOR ALL PARTICIPANTS**

















| First    | Last         | Organization                                    | Title   | Signature |
|----------|--------------|---|---|-----------|
| Jose     | AGUIRRE      | PECO  | Government Affairs Manager - Philadelphia         |           |
| Manny    | ANASTASIADIS | PennDOT   | Traffic Operations Manager                        |           |
| Kelly    | ANDERSON     | Philadelphia Water Department                   | Watershed Protection Program Manager              |           |
| Kara     | ANGOTTI      | Amtrak  | Sr. Sustainability Manager                        |           |
| Kristin  | BAJA         | Urban Sustainability Directors Network          | Programs Director, Climate Resilience             |           |
| Kendall  | BANKS        | City of Philadelphia, Office of Risk Management | Director of Safety & Loss Prevention              |           |
| Brian    | BARTH        | Hospital & Healthsystem Association of PA       | Regional Manager, Emergency Preparedness (SE HCC) |           |
| Adam     | BEAM         | Delaware Valley Regional Planning Commission    | Research Analyst                                  |           |
| Al       | BEATTY       | Delaware Valley Regional Planning Commission    | Transportation Planner                            |           |
| Bill     | BRADFIELD    | PA Emergency Management Agency (PEMA)           | NFIP Coordinator                                  |           |
| Brett    | BROWN        | Delaware Valley Regional Planning Commission    | Associate Planner                                 |           |
| Valerie  | BROWN        | Camden County Office of Sustainability          | Program Coordinator                               |           |
| Danielle | BUHLER       | Philadelphia International Airport              | Sustainability Program Manager                    |           |
| Paul     | CARAFIDES    | DVRPC   | Manager, Traffic Management Program               |           |
| Carolyn  | CATON        | Philadelphia Office of Emergency Management     | Infrastructure Program Manager                    |           |
| Jessica  | CAUM         | Philadelphia Department of Public Health        | Program Manager, Public Health Preparedness       |           |
| Saleem   | CHAPMAN      | Philadelphia Office of Sustainability           | Deputy Director                                   |           |



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| First     | Last      | Organization                                     | Title   | Signature   |
|-----------|-----------|--|---|---|
| Nicole    | CHARLTON  | Philadelphia Water Department                    | Director of Emergency Services                    |  |
| James     | CLARKIN   | City of Philadelphia, Department of Aviation     | City Planner II                                   |  |
| Stephanie | CRAIGHEAD | Philadelphia Parks and Recreation                | Director of Planning, Preservation & Property Mgt |  |
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| Maggie    | DUNN      | FEMA RIII  | Mitigation Outreach Coordinator                   |  |
| Tom       | EDINGER   | Delaware Valley Regional Planning Commission     | Congestion Programs                               |  |
| Ann       | FAULDS    | Consultant                                       | Outreach Specialist                               |  |
| Paul      | FAWCETT   | United States Coast Guard, Sector Delaware Bay   | USCG Logistics Chief                              |  |
| Alyssa    | FICO      | Philadelphia OEM                                 | Senior Lead GIS Analyst                           |  |
| Elena     | FISHER    | Sustainable Endowments Institute                 | City Planner                                      |  |
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| John      | GARDOSIK  | Pennsylvania State Historic Preservation Office  | Disaster Planning Project Manager                 |  |
| Emma      | GIARDINA  | Philadelphia Office of Emergency Management      | Hazard Planning Coordinator                       |  |
| John      | GLASS     | City of Philadelphia, Philadelphia Int'l Airport | Airport Operations Superintendent                 |  |
| Robert    | GRAFF     | Delaware Valley Regional Planning Commission     | Manager, Energy and Climate Change Initiatives    |  |
| Charles   | GRAHAM    | SEPTA  | Chief Supervisor                                  |  |



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| First   | Last       | Organization                                   | Title   | Signature   |
|---------|------------|--|---|---|
| Sheila  | Baker      | Assoc. of NJ Environmental Commissions (ANJEC) | Municipal Environmental Specialist                      |  |
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| Mustafa | HAWEEJAH   | Philadelphia Water Department                  | Graduate Civil Engineer                                 |    |
| Ian     | HEGARTY    | Philadelphia Dept of Planning & Development    | City Planner  |   |
| Jack    | HEIDE      | FEMA   | Community Planner Supervisor                            |   |
| Tom     | HERRINGTON | Urban Coast Institute, Monmouth University     | Associate Director                                      |   |
| David   | HOLLINGER  | Drexel University                              | Director, Fire and Emergency Services                   |    |
| Nicole  | HOSTETTLER | Philadelphia Water Department                  | City Planner  |    |
| Thomas  | HUGHES     | PA Emergency Management Agency (PEMA)          | State Hazard Mitigation Officer                         |    |
| Chris   | KING       | Delaware Valley Regional Planning Commission   | Manager, Office of Transportation Operations Management |    |
| Jeff    | KOLAKOWSKI | Philadelphia OEM                               | Public Information Program Manager                      |    |
| Mark    | LEE        | Philadelphia Gas Works                         | Director Corporate Preparedness                         |    |
| Andrew  | LEVECCHIA  | Camden County                                  | Director of Planning                                    |    |
| Josh    | LIPPERT    | City of Philadelphia, L&I                      | Floodplain Manager                                      |    |
| Kacie   | LISS       | Philadelphia City Planning Commission          | City Planner II - Urban Design Division                 |    |






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| Andrew     | LLOYD     | Mercer County (NJ) Planning Department          | Planner   |  |
| Tricia     | LONDON    | School District of Philadelphia                 | Emergency Management Liaison                    |  |
| Steve      | LORENZ    | City of Philadelphia, Streets Department        | Chief Highway Engineer                          |  |
| terra      | LUKE      | City of Philadelphia, Dept of Public Property   | GIS Analyst                                     |  |
| Dr. Edward | MAHANEY   | Sustainable Jersey Board of Trustees            | Treasurer                                       |  |
| Kathleen   | MCCAIG    | Brandywine Conservancy                          | Planner   |  |
| Brian      | MCDONOUGH | Amtrak Police                                   | Regional Emergency Manager                      |  |
| Diane      | MERCER    | School District of Philadelphia                 | Fire Safety Operations Officer                  |  |
| Linwood    | MURRAY    | City of Philadelphia, Office of Risk Management | Manager   |  |
| Susan      | MYEROV    | Pennsylvania Environmental Council              | Watersheds Program Director                     |  |
| David      | NATALE    | Philadelphia OEM                                | Health and Human Services Program Manager       |  |
| Ngani      | NDIMBIE   | PennDOT   | Policy Specialist                               |  |
| Harold     | NEIL      | Delaware River Port Authority                   | Project Manager, HSEM Dept. Public Safety       |  |
| Steve      | NELSON    | Eastwick Solutions                              |   |  |
| Cassie     | O'CONNELL | Free Library of Philadelphia                    | Rebuild Design and Construction Project Manager |  |
| Anthony    | O'HARE    | City of Philadelphia, Office of Risk Management | Health & Safety specialist                      |  |
| Margaret   | OWENS     | Temple University                               | Emergency Preparedness Specialist               |  |



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|-----------|-------------|---|---|-----------|
| Sue       | PATERSON    | Philadelphia Water Department                       | Project Engineer                                |           |
| Valerie   | PECKHAM     | Audubon Pennsylvania                                | Field Organizer                                 |           |
| Kelly     | PFLICKE     | FEMA Region II                                      | Resiliency Specialist                           |           |
| Terry     | PLANK       | United States Coast Guard Sector Delaware Bay       | Emergency Management Specialist                 |           |
| Sarah     | POWELL      | Temple University                                   | Director of Emergency Management                |           |
| Richard   | QUODOMINE   | City of Philadelphia, Department of Public Property | Senior Lead GIS Analyst                         |           |
| Mari      | RADFORD     | FEMA R3   | Community Planning Lead                         |           |
| Kate      | RAMAN       | Natural Lands                                       | Conservation Project Manager                    |           |
| Gabby     | RATLIFF     | Chester County Department of Emergency Services     | Emergency Planning Coordinator                  |           |
| Cheryl    | REARDON     | ANIEC   | Project Director                                |           |
| Elizabeth | RITTER      | Assoc. of NJ Environmental Commissions (ANIEC)      | Deputy Director                                 |           |
| Julia     | ROCKWELL    | Philadelphia Water Department                       | Manager, Climate Change Adaptation Program      |           |
| Allison   | SCHAPKER    | Fairmount Park Conservancy                          | Capital Projects Director                       |           |
| Allison   | SCHAPKER    | Fairmount Park Conservancy                          | Director Capital Projects                       |           |
| Ray       | SCHIEINFELD | City of Phila Div of Aviation                       | Airport Planning and Environmental Services Mgr |           |
| Elizabeth | SEMPLE      | NJ Department of Environmental Protection           | Senior Planning Advisor                         |           |
| Alexandra | SKULA       | Philadelphia Department of Public Health            | Public Health Preparedness Analyst              |           |



# Philadelphia Hazard Mitigation Planning Workshop — *The Game of Extremes* “Train the Trainers”

Delaware Valley Regional Planning Commission — February 19, 2020

**SIGN IN FOR ALL PARTICIPANTS**



| First   | Last         | Organization   | Title                                     | Signature                   |
|---------|--------------|--|---|-----------------------------|
| Anne    | STAUFFER     | Delaware County Planning                                     | Senior Planner                            | <i>Anne Stauffer</i>        |
| Lucy    | STRACKHOUSE  | Fairmount Park Conservancy                                   | Senior Director Preservation and Property | <i>Lucy Strackhouse</i>     |
| Korin   | TANGTRAKUL   | Drexel U -- Sustainable Water Resource Engineering Lab       | Sustainability Manager                    | <i>Korin Tangtrakul</i>     |
| John    | THEILACKER   | Brandywine Conservancy                                       | Associate Director                        | <i>John Theilacker</i>      |
| Adam    | THIEL        | Philadelphia Fire Department, Office of Emergency Management | Fire Commissioner/OEM Director            |                             |
| Kaitlin | TUCKER       | Partnership for the Delaware Estuary                         | Watershed Planning Coordinator            | <i>Kaitlin Tucker</i>       |
| Ayse    | UNVER        | Philadelphia City Planning Commission                        | City Planner                              | <i>Ayse Unver</i>           |
| Melissa | WIEHENSTROER | FEMA Region III  | Private Sector Liaison                    | <i>Melissa Wiehenstroer</i> |
| Jason   | WILSON       | Montgomery County Dept of Public Safety                      | Deputy Director of Emergency Management   |                             |
| Derek   | ZIEGLER      | Philadelphia Office of Emergency Management                  | Deputy Director for Planning              | <i>Derek Ziegler</i>        |
| Theresa | ZIEGLER      | Gloucester County Planning Division                          | Principal Planner                         | <i>Theresa Ziegler</i>      |





# Philadelphia Hazard Mitigation Planning Workshop — *The Game of Extremes* “Train the Trainers”

Delaware Valley Regional Planning Commission — February 19, 2020

**SIGN IN FOR ALL PARTICIPANTS**



| First   | Last     | Organization        | Title                 | Signature   |
|---------|----------|---------------------|-----------------------|---|
| Bria    | Wimberly | Audelson            | Education Coordinator |  |
| Ann     | Faulds   | Retired             |                       | ANN M Faulds  |
| Rebecca | Rees     | Delco Planning Dept | Principal Planner     |  |
|         |          |                     |                       |   |
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## Emma Giardina

---

**From:** Emma Giardina  
**Sent:** Thursday, December 19, 2019 1:43 PM  
**Subject:** You're Invited: Philadelphia Hazard Mitigation Workshop

Good afternoon,

You are invited to join Philadelphia Office of Emergency Management (OEM), the Delaware Valley Regional Planning Commission (DVRPC) and FEMA Region III for an interactive workshop on **Philadelphia's All-Hazards Mitigation Plan on Wednesday, February 19<sup>th</sup> from 9AM to 4PM**. The Hazard Mitigation Plan outlines the city's strategy for mitigating the effects of both natural and human-caused hazards that pose the greatest risk to Philadelphia. We'd like your agency or organization's input and feedback as we begin the update process for this important plan!

The day will begin with a brief overview of the projected impacts of climate change on the City. This will be followed by the "Game of Extremes," an activity led by Kristin Baja of the Urban Sustainability Directors' Network where participants are assigned roles and work as part of a team to prepare a fictional community for weather extremes, including heat and flooding. This workshop will be a fun and interesting way to learn about risk associated with our changing climate and how we can prepare. Faced with climate impacts on a fictional community, participants will decide how to make community assets more resilient. This is a new and improved version of the "Game of Floods" hosted at the DVRPC about two years ago.

After lunch, Philadelphia OEM will lead a discussion applying concepts from the "Game of Extremes" to the 2022 update of [Philadelphia's All-Hazard Mitigation Plan](#). We'd like to hear what your organization has been doing to mitigate hazards since our 2017 update. How can your work inform Philadelphia's plan? How can Philadelphia's plan better inform your work? We'd like to learn more. Come prepared to participate!

**For more information and to register please visit <https://phillyhmp2022.eventbrite.com>. There are a limited number of seats available.**



# SAVE THE DATE

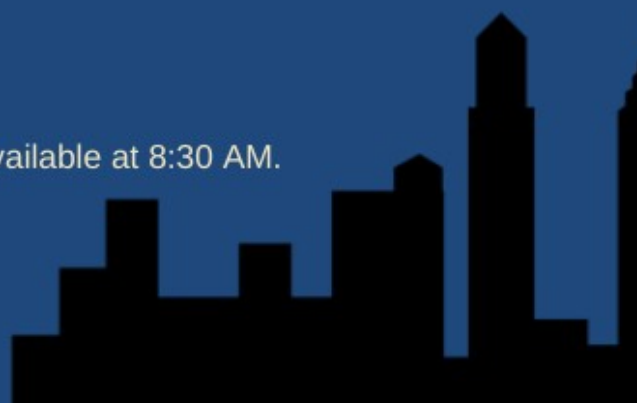
## Philadelphia Hazard Mitigation Workshop

**Wednesday, February 19**

**9:00AM - 4:00PM**

Delaware Valley Regional Planning Commission  
190 N Independence Mall West  
8th Floor Conference Center

Networking, coffee and a light breakfast will be available at 8:30 AM.  
Lunch will be provided.



This event has been submitted for APA, AICP, and CM credit. Attendance certificates for ASFPM Certified Floodplain Manager, CEC or other CE credit will be provided upon request.

If you are not the appropriate contact from your organization, please pass this invitation along to the representative from your organization best suited for this event. If you have any questions at all, please do not hesitate to reach out to me at the contact information below. We look forward to seeing you there!

Sincerely,

**Emma Giardina**  
Hazard Planning Coordinator  
Philadelphia Office of Emergency Management  
D: 215-683-3251  
C: 267-239-1564

Ready, or Not? Learn what to have in your home, hand and head.  
Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311





## 2022 Hazard Mitigation Plan Planning Workshop

Date/Time: February 23, 2021 from 1:00pm-2:30pm

Location: Virtual, Microsoft Teams

| <b>TIME</b> | <b>TOPIC</b>                                | <b>PRESENTOR</b>       |
|-------------|---|------------------------|
| 1:00-1:05   | Welcoming and Introductions                 | Emma Giardina, OEM     |
| 1:05-1:30   | HMP 2022 Updates                            | Emma Giardina, OEM     |
| 1:30– 1:50  | Working Groups & Next Steps                 | Emma Giardina, OEM     |
| 1:50-2:30   | Miami-Dade County Local Mitigation Strategy | Robin Yang, Miami-Dade |

# Reducing Risks 2022

## Philadelphia's All-Hazard Mitigation Plan

Tuesday, February 23

1:00pm - 2:30pm

Microsoft Teams



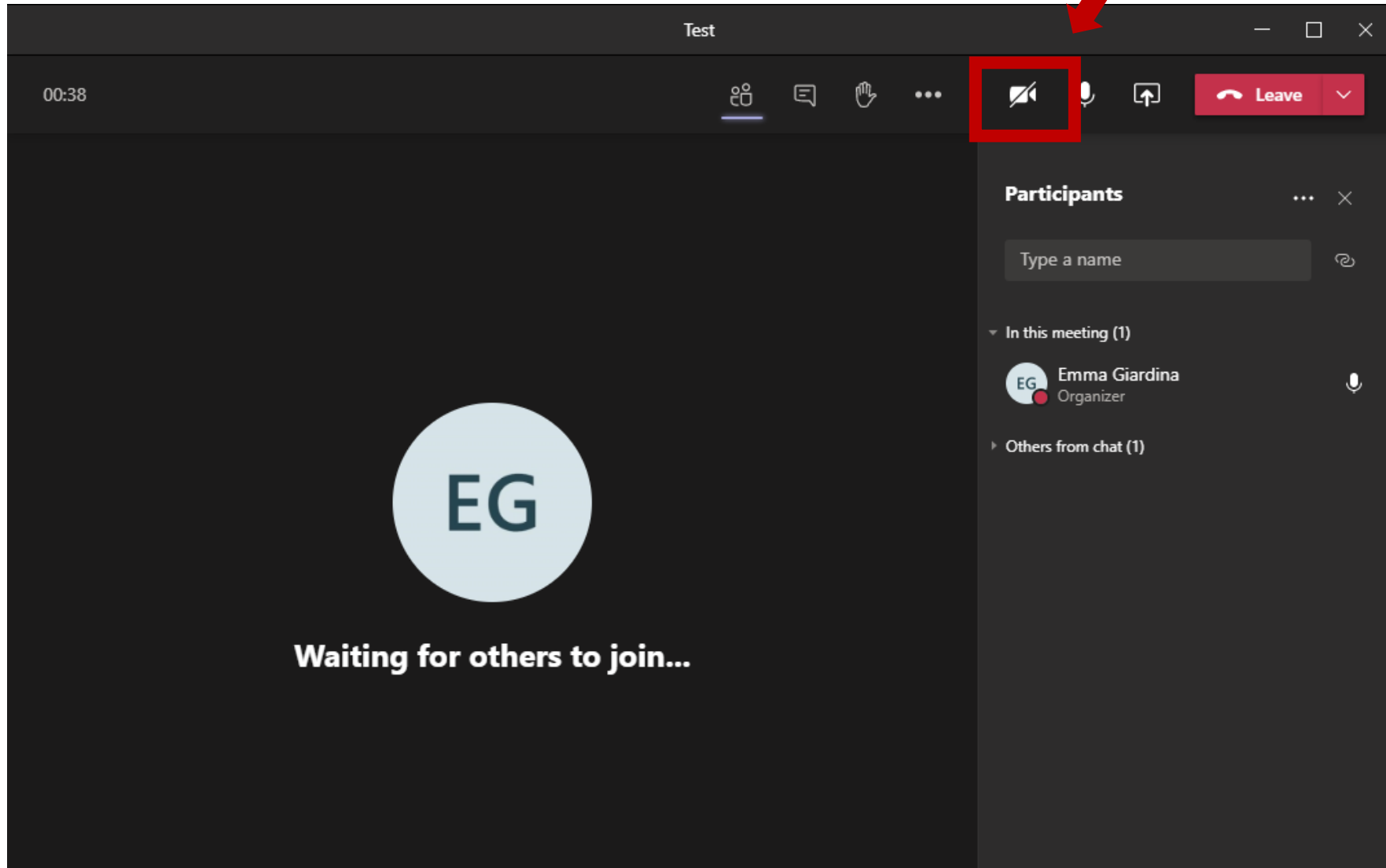
# Agenda

- 1:00pm-1:10 pm** Welcome and Introductions
- 1:10pm-1:30pm** Introductions & Updates
- 1:30pm-1:50pm** Workgroups & Next Steps
- 1:50pm-2:30pm** Miami-Dade County LMS



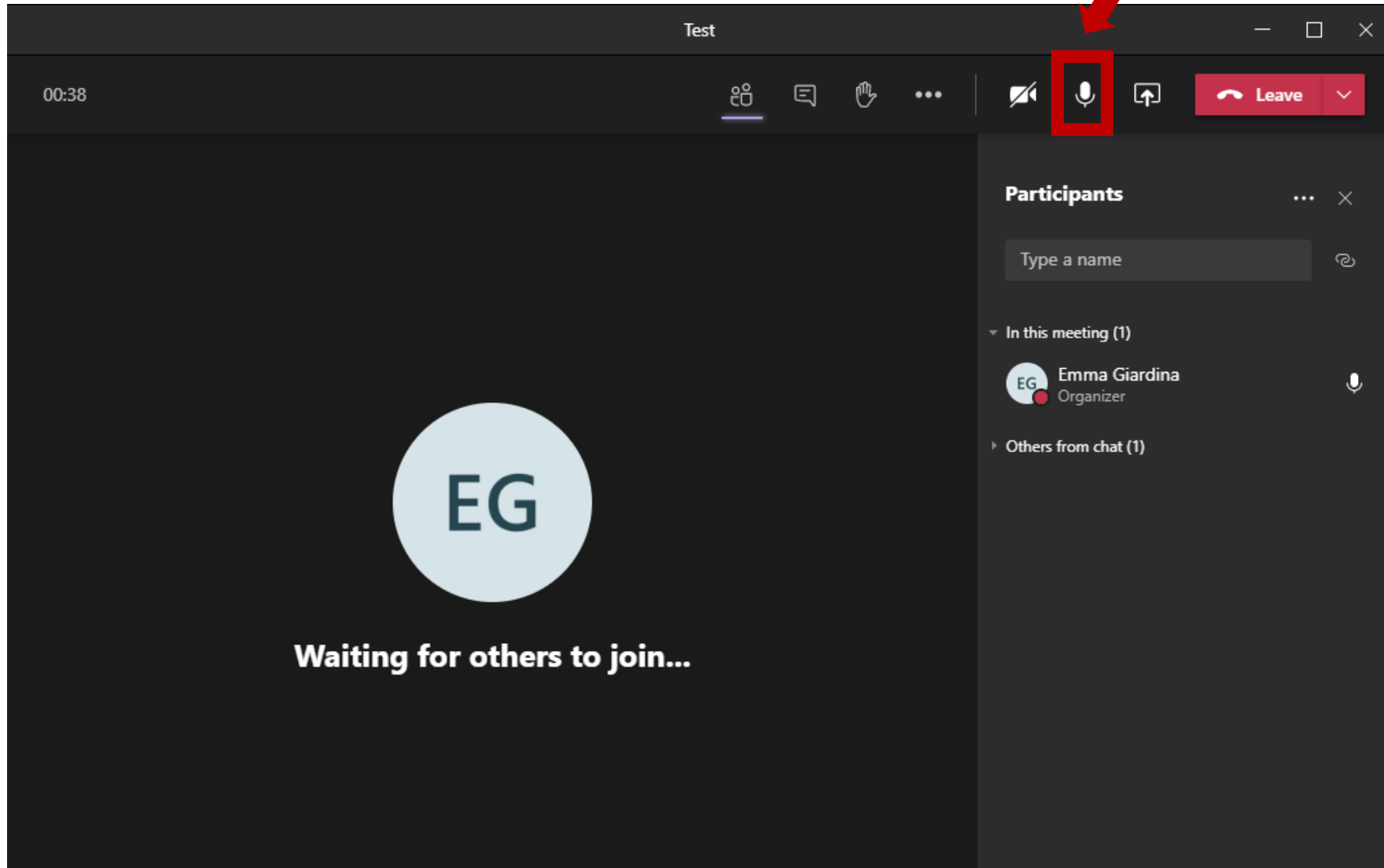
# Microsoft Teams

Video On/Off



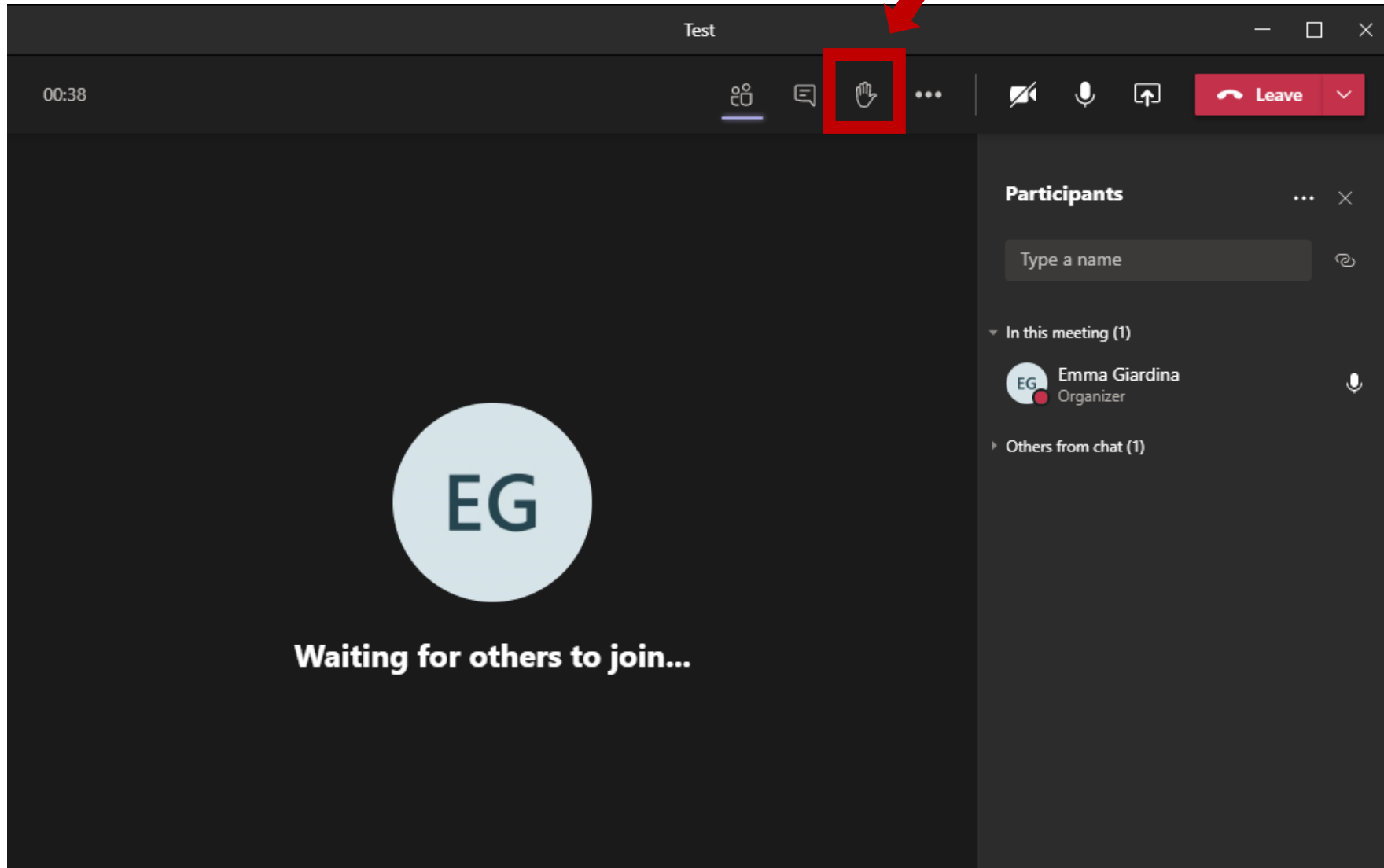
# Microsoft Teams

Microphone On/Off



# Microsoft Teams

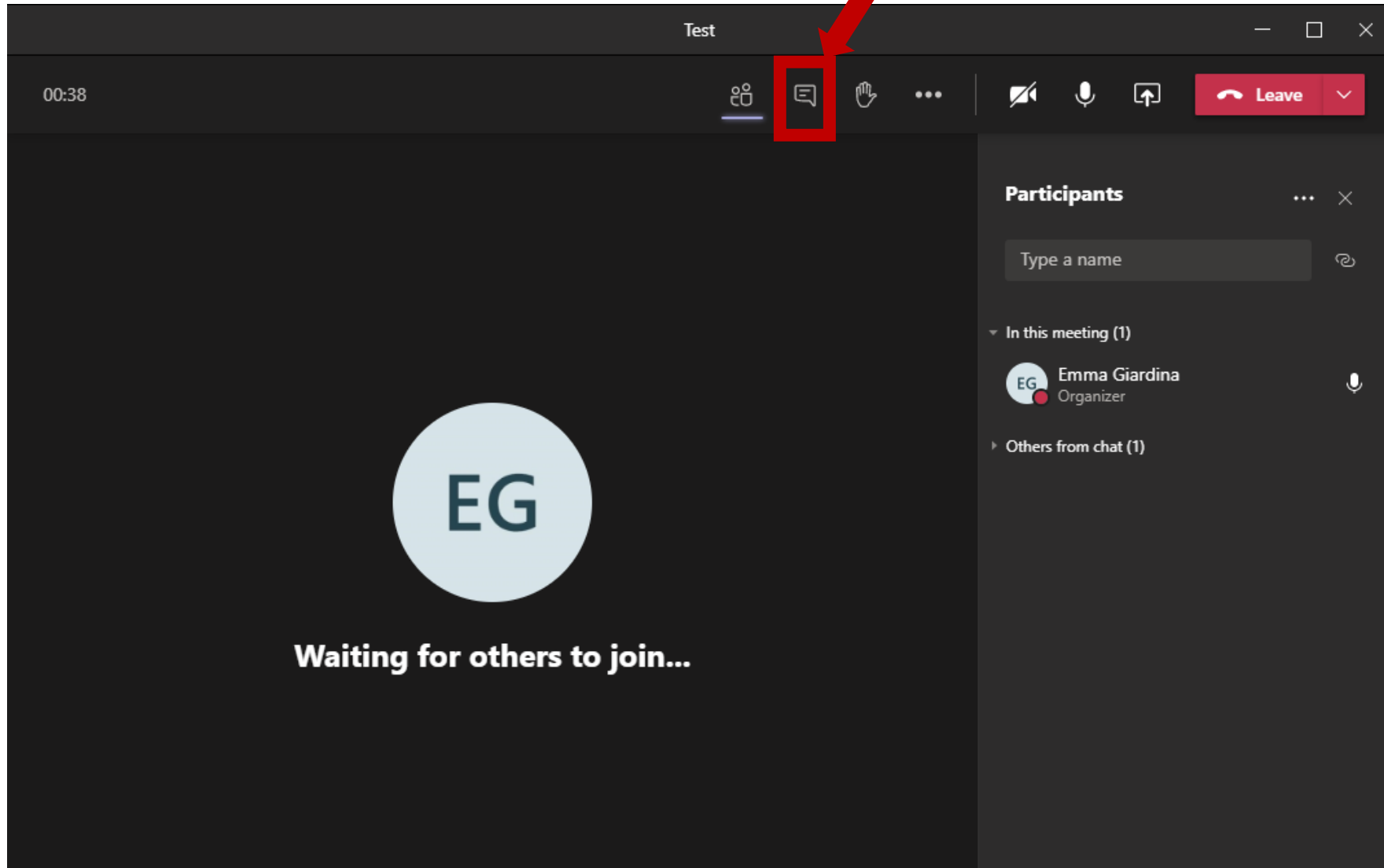
Raise Hand Feature





# Microsoft Teams

Chat Box Window



# The Hazard Mitigation Plan

- (1) Identifies which hazards Philadelphia is at risk for; and
- (2) Identifies the projects, plans and policies the city can implement to reduce our risk

The plan is available at: [www.phila.gov/ready](http://www.phila.gov/ready)



# More Mitigation Measures, More Savings



**One dollar invested in mitigation =  
six dollars U.S. saves in future costs**



# Hazards



**Active Shooter**



**Bridge and Dam Failure**



**Hazardous Materials Train Derailment**



**Improvised Explosive Devices**



**Urban Conflagration**



**Drought**



**Earthquake**



**Extreme Temperatures**



**Flooding**



**Hurricanes & Tropical Storms**



**Windstorms & Tornadoes**



**Winter Storms**

# Additional Areas of Focus

Climate Change

Equity

Plan Implementation



# Reflecting on 2020





# The Planning Process



NLT: May 25, 2022



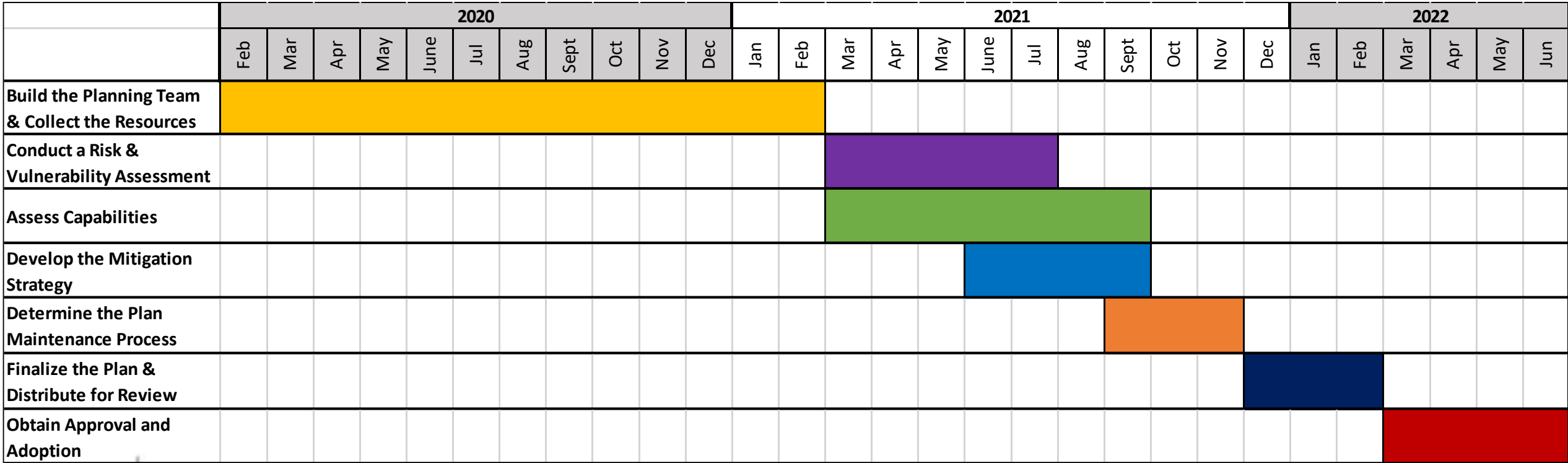
**We are here**

Date: 02/27/2021



**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to include more defined steps for planning and timing purposes. More details on each step are provided on the next slide.

# The Planning Process



NLT: May 25, 2022



**We are here**  
Date: 02/27/2021

**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to include more defined steps for planning and timing purposes. More details on each step are provided on the next slide.



# Progress made

- **Building the Planning Team**

- Steering Committee
- One-on-one partner outreach
- Hazard Mitigation Trainings through FEMA
- Posted a Request for Proposal (RPF) for a Hazard Mitigation Contractor
- Partnership with OOS and USDN

- **Public Engagement & Outreach**

- Public Survey
- Updated Website
- Social Media Toolkit
- WURD & KYW Radio shows
- Collaboration with other outreach entities

- **BRIC/FMA FY 2021**

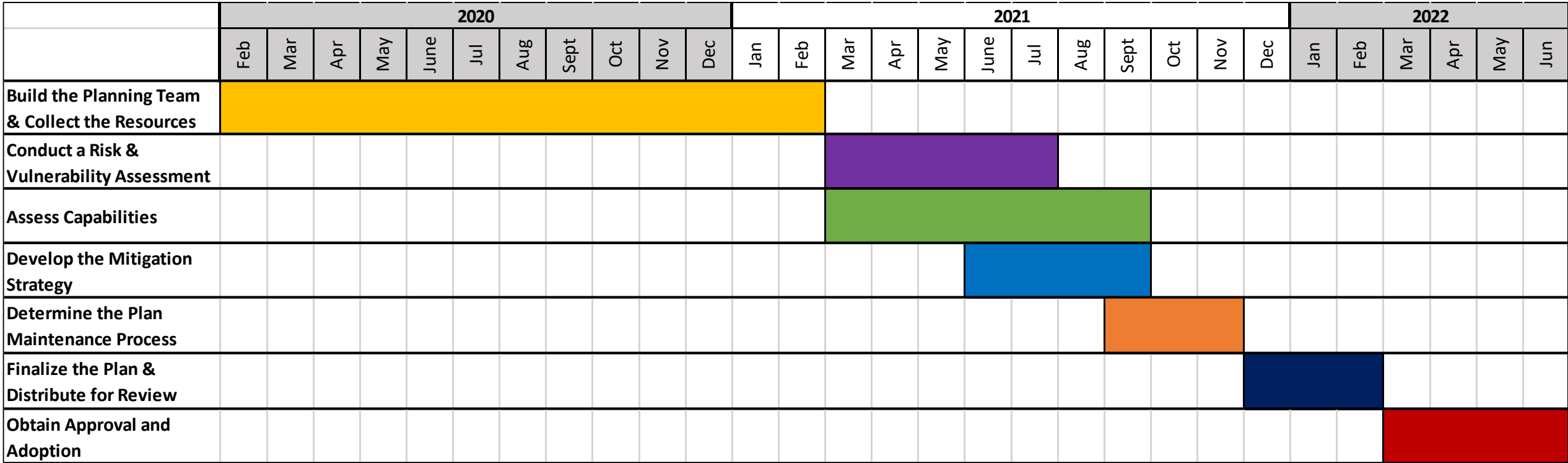
- **Community Profile**



# Questions?



# Next Steps



**We are here**  
Date: 02/27/2021

NLT: May 25, 2022

# The Steering Committee

## Goals and objectives of this group include:

- Guide the overall update of the plan;
- Identify areas for plan integration and cross collaboration;
- Help identify barriers to plan implementation and recommend solutions for overcoming barriers; and
- Decision making body for project identification, prioritization, project selection for grants, etc.





# The Steering Committee

- Office of Emergency Management (OEM)
- Licenses & Inspection (L&I)
- Commerce Department
- Mayor's Office of Grants
- Philadelphia Fire Department (PFD)
- Office of Sustainability (OOS)
- Office of Transportation, Infrastructure & Technology (OTIS)
- Philadelphia City Planning Commission (PCPC)



# Workgroups

- **Steering Committee**
- **Hazard Specific Workgroups**
  - Flooding
  - Health & Medical
  - Public Safety
  - Infrastructure
- **Other Advisory Groups, Cross-cutting**
  - Grants & Funding
  - Public Information and Outreach
  - Climate Resiliency Cabinet\*
  - Education
  - Regional
  - Social Equity



H13 

|    | A                     | B   | C                | D  | E   | F                                  | G |  |
|----|-----------------------|---|------------------|--|---|------------------------------------|---|--|
| 1  | <b>Infrastructure</b> |   |                  |  |   |                                    |   |  |
| 2  | <b>Purpose:</b>       | Gather data to inform risk assessment of hazards that impact transportation, utilities and communication lifelines. Identify mitigation actions to reduce risk to transportation, utilities and communication system. |                  |  |   |                                    |   |  |
| 3  | <b>Expertise in:</b>  | Transportation, Utilities, Communications, etc. Hazards include infrastructure failure, dam failure, cyber attack, and other hazards that could result in impacts to transportation, utilities and communications     |                  |  |   |                                    |   |  |
| 4  | <b>Other Groups:</b>  | Infrastructure Steering Committee   |                  |  |   |                                    |   |  |
| 5  | <b>Type</b>           | <b>First Name</b>   | <b>Last Name</b> | <b>Email</b>   | <b>Position</b>                               | <b>Agency or Organization</b>      |   |  |
| 6  | Private               | Michael   | Darmiento        | <a href="mailto:Michael.Darmiento@comcast.com">Michael.Darmiento@comcast.com</a> |   | Comcast                            |   |  |
| 7  | Private               | Michael   | Darmiento        | <a href="mailto:Michael.Darmiento@comcast.com">Michael.Darmiento@comcast.com</a> |   | Comcast                            |   |  |
| 8  | City                  | Joe   | Misko            | <a href="mailto:Joseph.Misko@phila.gov">Joseph.Misko@phila.gov</a>               |   | Department of Public Property      |   |  |
| 9  | City                  | Paige   | Kaspar           | <a href="mailto:Paige.Kaspar@phila.gov">Paige.Kaspar@phila.gov</a>               | Infrastructure Planning Coordinator           | Office of Emergency Management     |   |  |
| 10 | City                  | Mark  | Wheeler          | <a href="mailto:Mark.Wheeler@phila.gov">Mark.Wheeler@phila.gov</a>               | Chief Information Officer                     | OIT                                |   |  |
| 11 | City                  | Elizabeth   | Lankenau         | <a href="mailto:Elizabeth.lankenau@phila.gov">Elizabeth.lankenau@phila.gov</a>   | Director, Infrastructure Program Coordination | OTIS                               |   |  |
| 12 | Private               | Jose  | Aguirre          | <a href="mailto:jose.aguirre@exeloncorp.com">jose.aguirre@exeloncorp.com</a>     | External Affairs Manager                      | PECO                               |   |  |
| 13 | Quasi-City            | Morgan  | Fletcher         | <a href="mailto:Morgan.Fletcher@pgworks.com">Morgan.Fletcher@pgworks.com</a>     | Business Continuity Specialist                | PGW                                |   |  |
| 14 | Quasi-City            | Mark  | Lee              | <a href="mailto:Mark.Lee@pgworks.com">Mark.Lee@pgworks.com</a>                   | Director of Corporate Preparedness            | PGW                                |   |  |
| 15 | City                  | Danielle  | Buehler          | <a href="mailto:Danielle.buehler">Danielle.buehler</a>                           | Sustainability Program Manager                | Philadelphia International Airport |   |  |

# The Risk Assessment

April 2021

- Profile Hazards
- Assess Vulnerability
- Estimate Loss
- Calculate Risk Factor
- Consider Future Development & Vulnerability

**Data Needs:** impact/losses from past events, frequency of past events, impacts from climate change, development trends, public input, repetitive loss properties, critical facilities vulnerability



# The Capability Assessment

- Complete an inventory of planning tools
- Describe all local capabilities and limitations
- Document NFIP Participation
- Describe Plan Integration

**Data Needs:** List and summarize plans and policies that help achieve hazard mitigation goals, financial capabilities, community outreach capabilities, gaps in capabilities



# Immediate next steps

1. Help us spread the word about our [HMP public survey](#) by sharing this [Social Media Toolkit](#) with your communications team.
2. [Workgroup](#) meetings will begin in March. Identify additional participants.
3. Identify potential projects for [BRIC](#) & [FMA](#) FY 2021. More information to follow this Spring.
4. Stay in the loop by visiting our SharePoint page.





# SharePoint



Information & Resources   Meetings & Workarounds   Funding Resources   Documents

## Calendar

+ Add event

See all

|           |   |          |   |
|-----------|---|----------|---|
| FEB<br>23 | Philadelphia Hazard Mitigation Planning<br>Tue, Feb 23, 1:00 PM | MAR<br>4 | Mar Steering Committee Meeting<br>Thu, Mar 4, 1:00 PM |
|-----------|---|----------|---|



### What is a Hazard Mitigation Plan?

Philadelphia's [All-Hazard Mitigation Plan \(HMP\)](#) identifies natural and human-caused hazards that pose the most risk for Philadelphia and the projects, plans and policies the City can implement to reduce our risk. Recent events of 2020, including COVID-19 and Tropical Storm Isaias, highlight the importance of implementing projects that reduce our risk and minimize impact from potential disasters. In order to remain eligible for federal non-emergency disaster assistance and mitigation funds, The City of Philadelphia Office of Emergency Management (OEM) is required to update the HMP every five (5) years to maintain a current record of hazards, progress on mitigation projects, and mitigation accomplishments in Philadelphia. While the HMP is a federally required document, it should also serve as a tool and information resource for both the general public, the City and all of our partners.

The Philadelphia City Council adopted the first HMP in 2012 and an updated HMP in 2017. To

## News

+ Add



<https://phila.sharepoint.com/sites/AllHazardsMitigationPlan>



# SharePoint



Information & Resources   Meetings & Workarounds   Funding Resources   Documents

## Calendar

+ Add event

See all



Philadelphia Hazard Mitigation Planning  
Tue, Feb 23, 1:00 PM



Mar Steering Committee Meeting  
Thu, Mar 4, 1:00 PM



### What is a Hazard Mitigation Plan?

Philadelphia's [All-Hazard Mitigation Plan \(HMP\)](#) identifies natural and human-caused hazards that pose the most risk for Philadelphia and the projects, plans and policies the City can implement to reduce our risk. Recent events of 2020, including COVID-19 and Tropical Storm Isaias, highlight the importance of implementing projects that reduce our risk and minimize impact from potential disasters. In order to remain eligible for federal non-emergency disaster assistance and mitigation funds, The City of Philadelphia Office of Emergency Management (OEM) is required to update the HMP every five (5) years to maintain a current record of hazards, progress on mitigation projects, and mitigation accomplishments in Philadelphia. While the HMP is a federally required document, it should also serve as a tool and information resource for both the general public, the City and all of our partners.

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# SharePoint

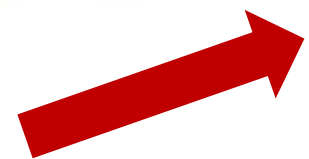


- Information & Resources
- Meetings & Workarounds
- Funding Resources
- Documents

## Calendar

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|           |   |          |   |
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|-----------|---|----------|---|



### What is a Hazard Mitigation Plan?

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<https://phila.sharepoint.com/sites/AllHazardsMitigationPlan>



**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

**Carolyn Caton**

Infrastructure Program Manager

[Carolyn.Caton@phila.gov](mailto:Carolyn.Caton@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# Miami-Dade County Local Mitigation Strategy

## **Delores Holley**

Assets Portfolio Manager  
Public Housing and Community Development (PHCD)

## **Katherine Hagemann**

Resilience Program Manager  
Office of Resilience (OOR)

## **Michelle Aleman**

Grants Analyst  
Miami-Dade County Office of Management and Budget

## **Jeffrey Rosenberg**

Administrative Officer  
Miami-Dade Public Library System

## **Robin Yang**

EM Planner, Office of Emergency Management  
Miami-Dade Fire Rescue



# Hazard Mitigation Virtual Workshop

**Date:** February 23, 2021 from 1pm-2:45pm

**Location:** Virtual, Microsoft Teams



**Agencies Present:** CBRE, Chester County Department of Emergency Services, Children’s Hospital of Pennsylvania (CHOP), Department of Public Property, Office of Risk Management, Planning Commission, Commerce Department, Drexel University, DCRPC, PA Historic Preservation Office, FEMA Region II, Friends of Wissahickon, L&I, Managing Director’s Office (MDO), Mayor’s Office of Civic Engagement and Volunteer Services (OCEVS), MDC-PHCD, Miami-Dade County, Philadelphia Office of Emergency Management, Office of Grants, Office of Sustainability (OOS), Office of Transportation, Infrastructure and Sustainability (OTIS), PEMA, PennDOT, Philadelphia Fire Department (PFD), Philadelphia Water Department (PWD), Philadelphia Gas Works (PGW), Philadelphia Housing Authority (PHA), Philadelphia International Airport, Philadelphia Police Department (PPD), PIDC, School District of Philadelphia, Streets Department, Temple University, Wharton Risk Center, University of the Sciences, Urban Sustainability Director’s Network (USDN), Vicinity Energy

## Event Summary:

The purpose of this meeting was to provide updates on progress made on the 2022 All-Hazard Mitigation Plan, introduce workgroups, and outline next steps in the planning process. Emma Giardina, Hazard Planning Coordinator for Philadelphia Office of Emergency Management, started out the meeting by providing a review of the purpose of the Hazard Mitigation Plan and areas of focus for the plan update which include climate change, equity, and plan implementation.

Next, participants were asked to reflect on the events of 2020. We are still in the middle of a global pandemic which has taxed our local City government, businesses, and the healthcare system. We experienced a Derecho event in May, a confirmed report of a tornado in the Northeast, and flooding in August after Tropical Storm Isaias. Philadelphia also experienced mass demonstrations and civil disturbance in early June of 2020. Participants were asked to discuss how these events have changed their perspective on hazard mitigation.

The following comments were made:

- After the flooding from Tropical Storm Isaias, we should continue to focus on joining the Community Rating System (CRS) to improve community resilience to flooding and offer reduced National Flood Insurance Protection (NFIP) insurance rates for Philadelphians.
- After Tropical Storm Isaias, there was limited funding and disaster assistance available to support residents who were affected. This shows us that we need to have a more people-focused approach, determine ways to help residents get insurance, and consider response and recovery efforts in our planning as well.
- Philadelphia experienced multiple disasters at the same time in 2020 (pandemic, tropical storm, economic recession, etc.). We should consider how compounding events impact the City in this plan.
- Our response to 2020 events highlights the importance of partnerships. One lesson learned from the COVID-19 pandemic is that we need to continue building partnerships so that we are equipped to respond at the local level with less reliance on the state and federal government. These partnerships, including partnerships with community organizations, were a crucial part of our response to the pandemic.
- This past year, we have seen how important it is for the City to be able to communicate with community-based organizations and populations without digital access. This is important for getting the word out about hazard risk and important so that we can spread the word about how to prepare and respond in a crisis.
- There are deep inequities in our City. We’ve seen this through lack of access to education, computer access for learning, and access to food security this year. How can we address these things to provide a better environment for our residents?



- We need to target populations that may be affected by hazards as we update this plan. In addition to analyzing how hazards impact the City as a whole, but also need to understand how they impact specific populations.
- The City’s response to several large snow events in February 2021 demonstrates our ability as a City to work together. We should continue to focus on building these partnerships.
- We should stay away from using the term “vulnerable” for the definition of all populations. This plan is an opportunity to be more specific and determine which targeted populations are most impacted, how they are impacted, and why they are more impacted.

Next, Emma reviewed progress made on the plan update since the plan’s kickoff meeting in February 2020. This includes the following:

- Building the Planning Team
  - Formation of a Steering Committee which meets monthly to guide the update of the plan
  - One-on-one partner outreach to key stakeholders
  - Planned and hosted FEMA Region III’s G-318: Hazard Mitigation Trainings for key planning partners
  - Posted a Request for Proposal (RFP) for a Hazard Mitigation Contractor to support technical aspects of the plan update
  - Formed a partnership with the City’s Office of Sustainability (OOS) and the Urban Sustainability Director’s Network (USDN) to better address climate change in the plan
- Public Engagement and Outreach
  - Developed a three-phase public outreach strategy
  - Created and distributed a public survey to gain community feedback on hazards
  - Updated Hazard Mitigation Plan website
  - Developed a social media toolkit to help spread the word about the plan update and public survey
  - Spoke about the hazard mitigation planning process and the importance of public input on WURD & KYW Radio shows
  - Collaborated with other entities in the City that specialize in community outreach including the Office of Community Engagement and Volunteer Service (OCEVS), Mayor’s Office of Policy, and the Equitable Engagement Collaborative
- Facilitated the submission of two city applications for FEMA’s Building Resilience Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) grant programs.
- Began updating written portions of the plan, including the Community Profile.

To complete the plan update over the next year, the following workgroups will be formed. Some workgroups have already started to meet. Participants were asked to review the goals and objectives of each workgroup and the identified participants in each workgroup and provide feedback to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) before their first workgroup meeting. Workgroups will meet in March.

- Hazard Specific Workgroups
  - Flooding
  - Health & Medical
  - Public Safety
  - Infrastructure
- Other Advisory groups, cross-cutting
  - Grants & Funding
  - Public Information and Outreach
  - Education
  - Regional
  - Social Equity

The next phase of the plan update is the Risk Assessment. This is the part of the plan where we profile hazards, assess vulnerability, estimate losses, and calculate a risk factor for each hazard. Partners should expect requests for data to help support this section of the plan update.

The meeting closed with a presentation from various Miami-Dade County representatives who discussed hazard mitigation projects in their jurisdiction and lessons learned in applying for various grants, including the Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA), and the Hazard Mitigation Grant Program (HMGP).

The meeting concluded at approximately **2:45pm**.

**Next Steps and Action Items:**

1. Help us spread the word about our [HMP public survey](#) by sharing this [Social Media Toolkit](#) with your communications teams.
2. Workgroups will meet starting in March. View the [workgroups here](#) and reach out to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) if you identify additional participants that should be included.
3. Begin identifying potential mitigation projects for [BRIC](#) & [FMA](#) FY 2021. More information to follow this Spring.
4. Stay in the loop by visiting our SharePoint page. For those of you that do not already have a Microsoft 365 account, you may need to create a free account to view this page.

# Hazard Mitigation Plan Virtual Workshop

Date: February 23, 2021 from 1:00pm-2:30pm

Location: Virtual, Microsoft Teams



| First Name | Last Name   | Title  | Organization   |
|------------|-------------|--|--|
| Joe        | Goldschmidt | Property Mgt, Navy Yard                        | CBRE   |
| Poe        | Leggette    | Property Mgt, Navy Yard                        | CBRE   |
| Kelly      | Tinsman     | Emergency Planning Coordinator                 | Chester County Department of Emergency Services          |
| Bill       | Turner      | Deputy Director for Emergency Management       | Chester County Emergency Management                      |
| Lawrence   | Gerardi     | Emergency Preparedness Fellow                  | Children's Hospital of Philadelphia                      |
| Nate       | Baird       | Philadelphia South Zone Chair - Hospitals      | CHOP   |
| Richard    | Quodomine   | Senior Lead GIS Analyst                        | City of Philadelphia                                     |
| Kendall    | Banks       | Director of Safety & Loss Prevention           | City of Philadelphia - Office of Risk Management         |
| Kacie      | Liss        | City Planner II - Urban Design Division        | City of Philadelphia, Planning Commission                |
| Nazaarah   | Sabree      | Senior Director of Business Services           | Commerce   |
| Steve      | Hartner     | Deputy Commissioner                            | Department of Public Property                            |
| David      | Hollinger   | Director, Fire and Emergency Services          | Drexel University  |
| Amy        | Verbofsky   |  | DVRPC  |
| Cory       | Kegerise    | Community Preservation Coordinator             | Eastern Region, PA Historic Preservation Office          |
| Mari       | Radford     | Region 3 Community Planning Lead               | FEMA   |
| Pauline    | Berkowitz   |  | Friends of Wissahickon                                   |
| Ruffian    | Tittmann    | Executive Director                             | Friends of Wissahickon                                   |
| Josh       | Lippert     | Floodplain Manager                             | L&I  |
| Aparna     | Palantino   | Deputy Commissioner for Capitol Infrastructure | Managing Director's Office                               |
| Anthony    | Procik      | Civic Engagement Manager                       | Mayor's Office of Civic Engagement and Volunteer Service |
| Delores    | Holley      | Special Projects Administrator 2               | MDC-PHCD   |
| Katherine  | Hagemann    |  | Miami-Dade County  |
| Jeffrey    | Rosenberg   |  | Miami-Dade County  |
| Yahiritza  | Alvarez     | Emergency Management Planner                   | Miami-Dade County Office of Emergency Management         |
| Robin      | Yang        | EM Planner                                     | Miami-Dade County Office of Emergency Management         |
| Michelle   | Aleman      | Grants Analyst                                 | Miami-Dade County OMB - Grants Coordination              |
| Nicola     | Mammes      | Regional Preparedness Program Manager          | OEM  |
| Joshua     | Nussbaum    | Community Resilience Coordinator               | OEM  |
| Carolyn    | Caton       | Infrastructure Planning Program Manager        | Office of Emergency Management                           |
| Alyssa     | Fico        | Senior Lead GIS Analyst                        | Office of Emergency Management                           |
| Emma       | Giardina    | Hazard Planning Coordinator                    | Office of Emergency Management                           |

|             |             |   |   |
|-------------|-------------|---|---|
| Paige       | Kaspar      | Infrastructure Planning Coordinator             | <b>Office of Emergency Management</b>                             |
| Dave        | Natale      | Health and Human Services Program Manager       | <b>Office of Emergency Management</b>                             |
| Ashley      | Del Bianco  | Chief Grants Officer                            | <b>Office of Recovery and Grants/Finance/City of Philadelphia</b> |
| Matina      | Granieri    | Policy and Program Coordinator                  | <b>Office of Sustainability</b>                                   |
| Liz         | Lankenau    | Director, Infrastructure Program Coordination   | <b>OTIS</b>   |
| Bill        | Bradfield   | NFIP Coordinator                                | <b>PEMA</b>   |
| Matthew     | Elliott     | Traffic Control Specialist                      | <b>PennDOT 6-0 RTMC</b>   |
| Gustav      | Baumann     | Battalion Chief                                 | <b>PFD/Fire Prevention Division</b>                               |
| Alex        | Vencius     | Staff Engineer 1                                | <b>Phila Water Dept</b>   |
| John        | Haak        | Policy & Analysis Director                      | <b>Philadelphia City Planning Commission</b>                      |
| Jametta     | Johnson     | City Planner                                    | <b>Philadelphia City Planning Commission</b>                      |
| Molly       | Mattes      | Public Health Preparedness Coordinator          | <b>Philadelphia Department of Public Health</b>                   |
| Lt. Michael | Kirby       | Planning  | <b>Philadelphia Fire Department</b>                               |
| Christopher | Lukens      | Firefighter/Planning                            | <b>Philadelphia Fire Department</b>                               |
| Morgan      | Fletcher    | Business Continuity Planning Specialist         | <b>Philadelphia Gas Works</b>                                     |
| Mark        | Lee         | Director Corporate Preparedness                 | <b>Philadelphia Gas Works</b>                                     |
| Emil        | Cozma       | Manager of Facility Engineering                 | <b>Philadelphia Housing Authority</b>                             |
| Cole        | Norgaarden  | Project Analyst                                 | <b>Philadelphia Housing Authority</b>                             |
| John        | Glass       | Airport Operations Superintendent               | <b>Philadelphia International Airport</b>                         |
| Dominick    | Mireles     | Deputy Director                                 | <b>Philadelphia Office of Emergency Management</b>                |
| Salvatore   | Fede        | Police Sergeant                                 | <b>Philadelphia Police Department</b>                             |
| Marthe      | Monasse     | Sergeant  | <b>Philadelphia Police Department</b>                             |
| Michael     | Cram        | Chief Inspector / Homeland Security Bureau      | <b>Philadelphia Police Department / Homeland Security Bureau</b>  |
| Kelly       | Anderson    | Watershed Protection Program Manager            | <b>Philadelphia Water Department</b>                              |
| Marc        | Cammarata   | Deputy Commissioner, Planning                   | <b>Philadelphia Water Department</b>                              |
| Nicole      | Charlton    | Emergency Manager                               | <b>Philadelphia Water Department</b>                              |
| Mustafa     | Haweejah    | Graduate Civil Engineer                         | <b>Philadelphia Water Department</b>                              |
| Susan       | Patterson   | Engineering Specialist                          | <b>Philadelphia Water Department</b>                              |
| Julia       | Rockwell    | Climate Change Adaptation Program Manager       | <b>Philadelphia Water Department</b>                              |
| Thomas      | Dalfo       |   | <b>PIDC</b>   |
| Monica      | Trudeau     | Senior Project Manager, Infrastructure Projects | <b>PIDC</b>   |
| Brian       | Gress       | Lieutenant                                      | <b>PPD</b>  |
| Winton      | Singleary   | Inspector/DPRD                                  | <b>PPD</b>  |
| Tom         | Fitzpatrick | Commanding Officer                              | <b>PPD Bomb Squad</b>   |
| Kimberly    | Flood       | Engineer  | <b>PWD</b>  |
| Pat         | Perhosky    | Engineering Supervisor 2                        | <b>PWD</b>  |
| Alec        | Bernstein   | Consultant                                      | <b>Sage Services</b>  |
| Diane       | Mercer      | Fire Safety Operations Officer                  | <b>School District of Philadelphia</b>                            |

|          |               |  |   |
|----------|---------------|--|---|
| John     | Mulligan      | Fire Marshall                            | <b>School District of Philadelphia</b>  |
| Steve    | Lorenz        | Chief Highway Engineer                   | <b>Streets Department</b>   |
| Margaret | Owens         | Emergency Preparedness Specialist        | <b>Temple University</b>  |
| Zoe      | Linder-Baptie | Communication and Engagement Coordinator | <b>University of Pennsylvania - Wharton Risk Management and Decision Processes Center</b> |
| Michael  | Lapotask      | Emergency Management Coordinator         | <b>University of the Sciences</b>   |
| K.       | Baja          | Program Director, Climate Resilience     | <b>USDN</b>   |
| Thomas   | Stammerjohann | Distribution Manager                     | <b>Vicinity</b>   |
| Vincent  | Voiro         | Distribution Supervisor                  | <b>Vicinity Energy</b>  |

**Agencies that were invited but were not able to attend:**

Amtrak, Audubon PA, BOMA, Office of Innovation and Technology, Comcast, Community College of Philadelphia, Delaware County Emergency Management, Delaware Valley Intelligence Center (DVIC), Delaware River Port Authority (DRPA), Fleet Management, Fairmount Park Conservancy, Free Library of Philadelphia, Jefferson Hospital, Mayor's Office of People with Disabilities, Mayor's Office of Diversity, Equity & Inclusion, Mayor's Office of Faith-Based Initiatives, Philadelphia Parks and Recreation, University of Pennsylvania, USACE, Verizon

## Emma Giardina

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**From:** Emma Giardina  
**Sent:** Friday, January 15, 2021 1:45 PM  
**Subject:** Save the Date: Hazard Mitigation Plan Workshop 2/23

Hello,

You are invited to attend Philadelphia Office of Emergency Management's **Hazard Mitigation Plan Virtual Workshop** taking place on **Tuesday, February 23** from **1:00pm-2:30pm**.

Philadelphia's [All-Hazard Mitigation Plan](#) identifies natural and human-caused hazards that pose the most risk for Philadelphia and the projects, plans and policies the City can implement to reduce our risk. Recent events of 2020, including COVID-19 and Tropical Storm Isaias, highlight the importance of implementing projects that reduce our risk and minimize impact from potential disasters. Updating this plan by Spring 2022 is mandatory in order for the City to remain eligible for certain non-disaster mitigation funding and you are a key part of this update!

During this workshop, we will review progress made on the plan update since our kickoff meeting in February 2020, hear from Miami-Dade County on their Local Mitigation Strategy, and we will introduce working groups to facilitate the update.

### AGENDA (Tentative)

- |  |   |
|--|---|
| 1. Welcome and Introductions                         |   |
| 2. Updates and Progress on 2022 Plan                 | Emma Giardina, Philadelphia OEM                           |
| 3. Miami-Dade County Local Mitigation Strategy (LMS) | Robin Yang, Emergency Management Planner, Miami-Dade Fire |
| 4. Working Groups & Next Steps                       | Emma Giardina, Philadelphia OEM                           |

I will be in touch with more details and a registration link as this date draws near. In the meantime, **please save this date and time on your calendar**. Please do not hesitate to reach out with any questions or concerns.

Thank you for your continued support throughout this plan update.

Sincerely,

**Emma Giardina**  
Hazard Planning Coordinator  
Philadelphia Office of Emergency Management  
D: 215-683-3251  
C: 267-239-1564

Ready, or Not? Learn what to have in your home, hand and head.  
Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311

## Hazard Mitigation Plan 2022 Update – Capability Assessment Workshop



**Date/Time:** October 4, 2021  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Sarah Bowen, AICP/PP

| Agenda Item |  | Notes/Actions   | Time Allocated |
|-------------|--|---|----------------|
| □ 1         | <b>Introductions &amp; Welcome</b>                               |   | 10 mins        |
| □ 2         | <b>Hazard Mitigation Plan 2022 Update Overview and Context</b>   | <ul style="list-style-type: none"> <li>• Overview and context of Hazard Mitigation Plan 2022 Update</li> <li>• Update on Hurricane Ida funding</li> </ul>   | 10 mins        |
| □ 3         | <b>Defining Capability and the Capability Assessment</b>         |   | 10 mins        |
| □ 4         | <b>Questions</b>   |   | 10 mins        |
| □ 5         | <b>MURAL – City of Philadelphia capabilities</b>                 |   | 10 mins        |
| □ 6         | <b>Break</b>   |   | 10 mins        |
| □ 7         | <b>MURAL – strengths, weaknesses, opportunities, and threats</b> | <ul style="list-style-type: none"> <li>• SWOT exercise for how Philadelphia’s strengths, weaknesses, opportunities, and threats shape the City’s “capability”</li> <li>• Summarize key themes: capabilities, gaps, opportunities</li> </ul> | 25 mins        |
| □ 9         | <b>Thinking ahead about mitigation actions</b>                   |   | 10 mins        |

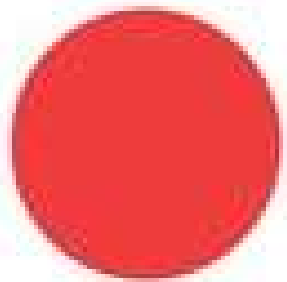


|      |                                       |   |        |
|------|---------------------------------------|---|--------|
| □ 10 | <b>Next steps and upcoming events</b> | <ul style="list-style-type: none"><li>• Upcoming Mitigation Strategy workshop on November 19<sup>th</sup></li><li>• Brainstorming sessions<ul style="list-style-type: none"><li>○ October 18 – natural-based solutions</li><li>○ October 21 – infrastructure and housing solutions</li></ul></li><li>• Fill out Capability Assessment Survey!</li></ul> | 5 mins |
|------|---------------------------------------|---|--------|

# **The Hazard Mitigation Plan 2022 Update** Capability Assessment Workshop

**October 4, 2021**



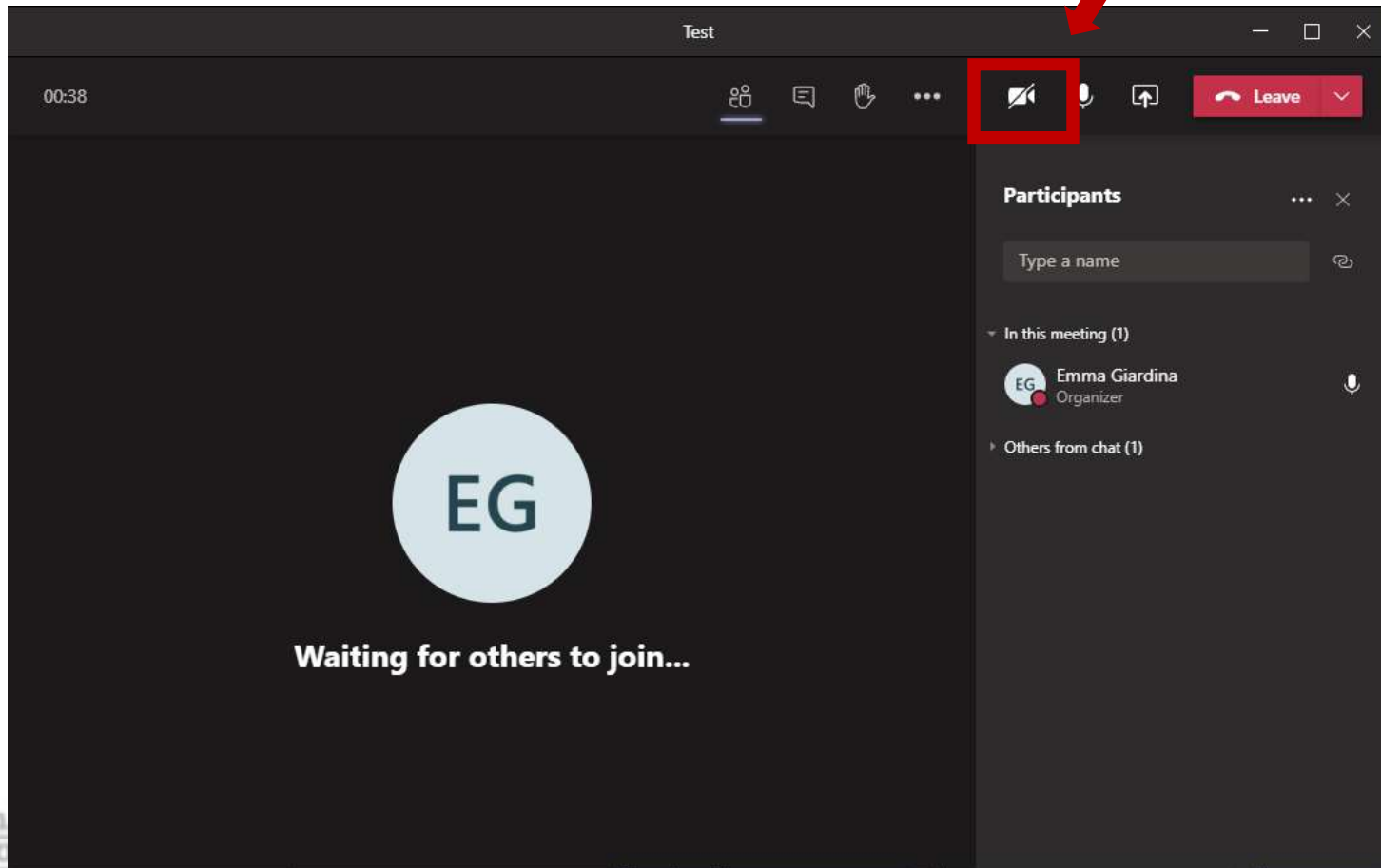
 **REC**



**We will be recording**

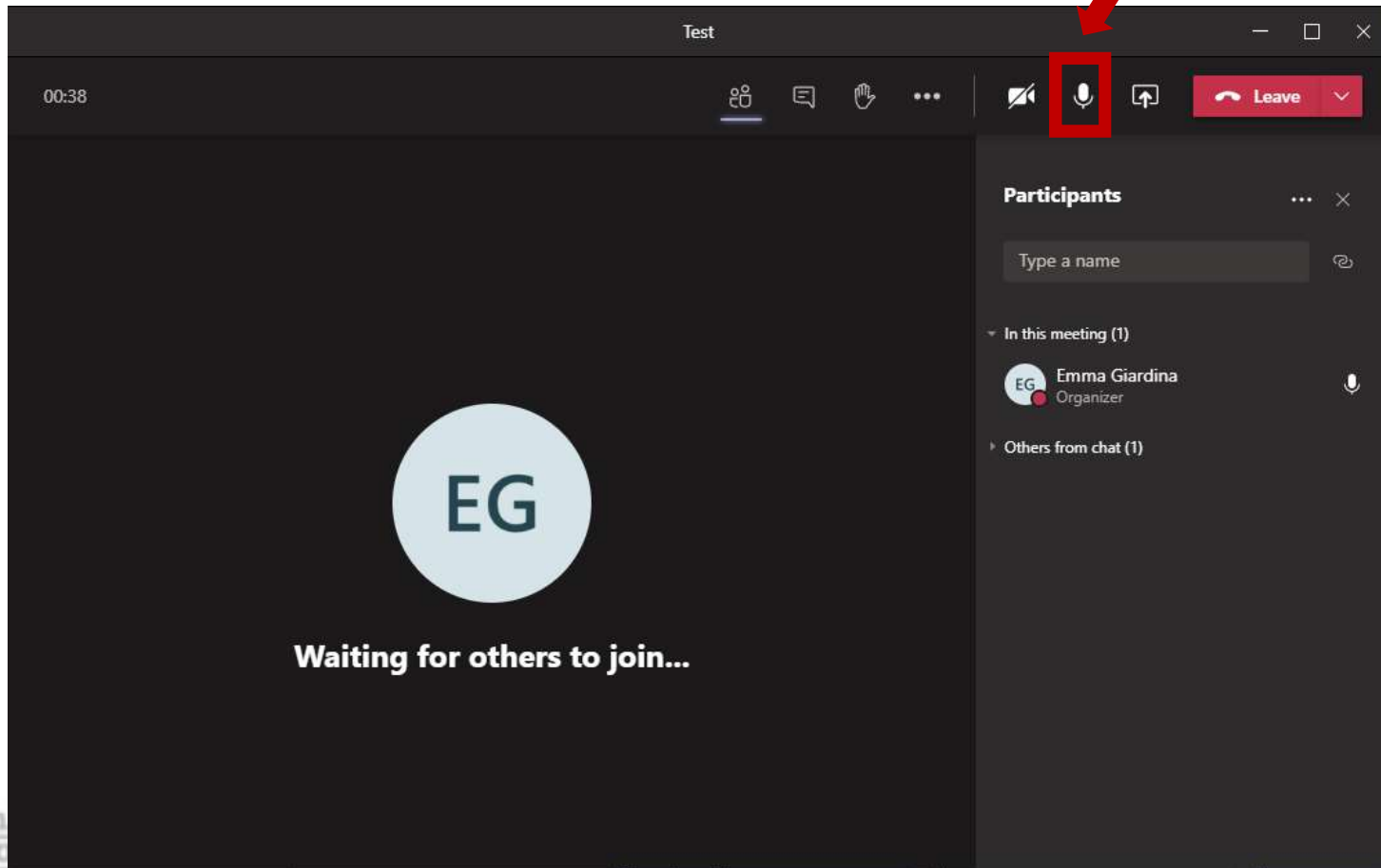
# Microsoft Teams

Video On/Off



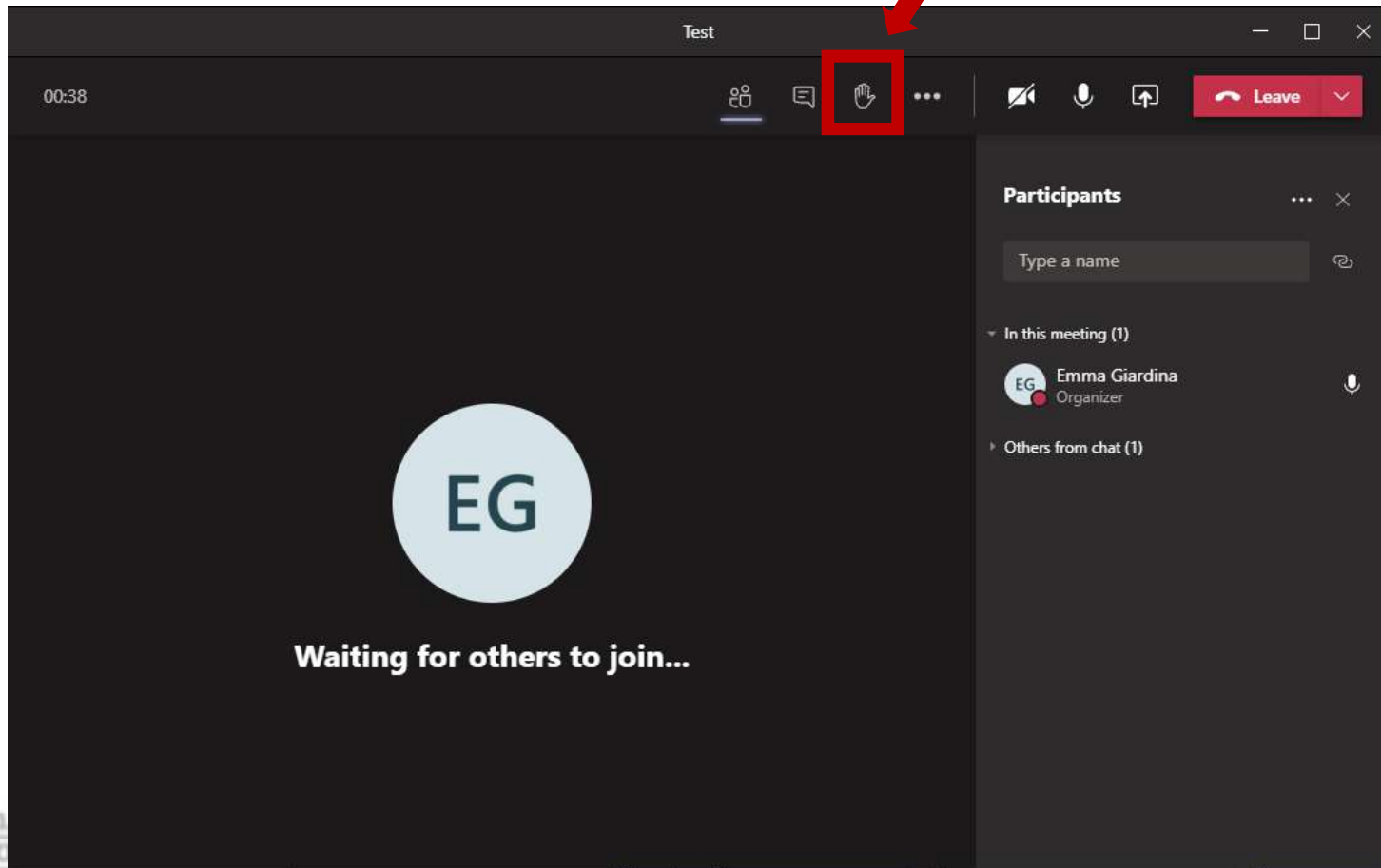
# Microsoft Teams

Microphone On/Off



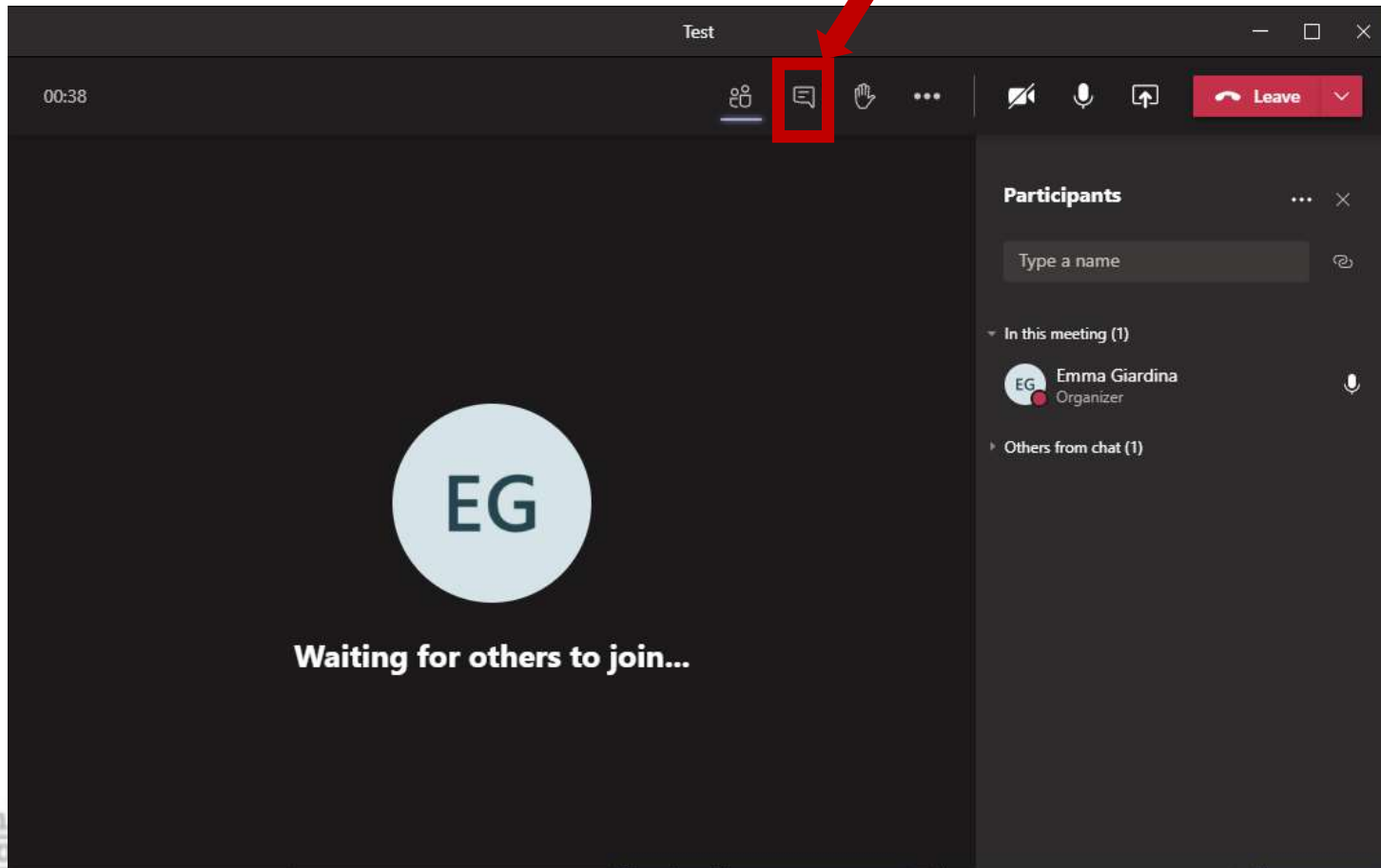
# Microsoft Teams

Raise Hand Feature



# Microsoft Teams

Chat Box Window





# Introductions



# The Hazard Mitigation Plan 2022 Update Capability Assessment Workshop

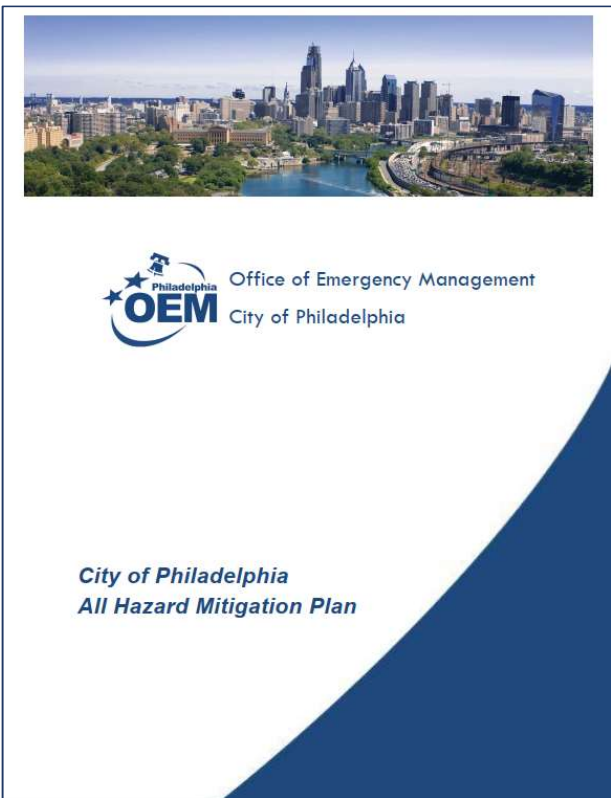
## Agenda, 10/4/2021

1. Introductions
2. Hazard Mitigation Plan – Overview and Context
3. Defining Capabilities and Capability Assessment
4. Questions
5. MURAL – City of Philadelphia capabilities
6. Break
7. MURAL – strengths, weaknesses, opportunities, and threats
8. Thinking ahead about mitigation actions
9. Next steps and upcoming events



# What is a hazard mitigation plan?

- **Hazard mitigation** is defined as sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards

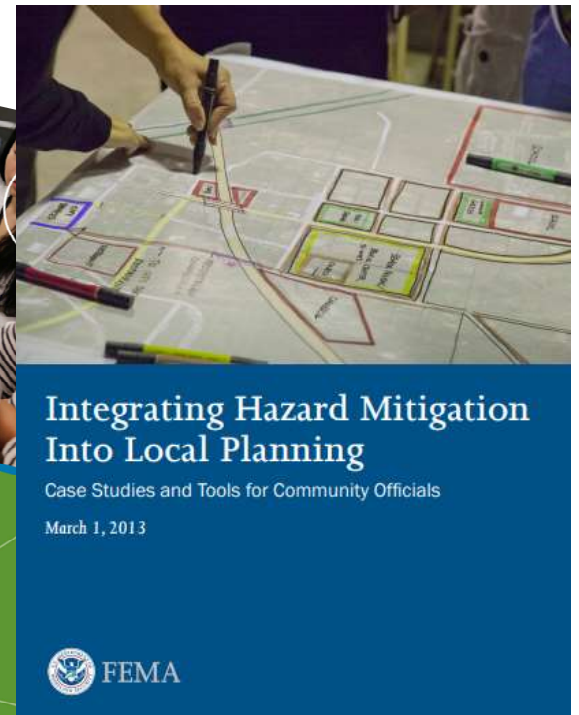
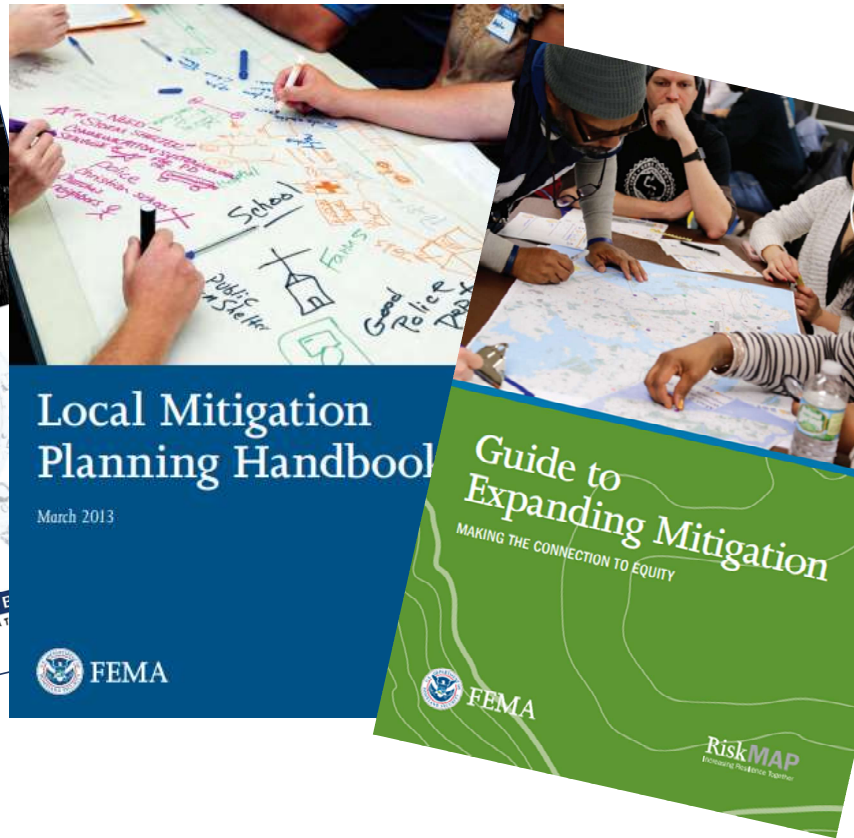
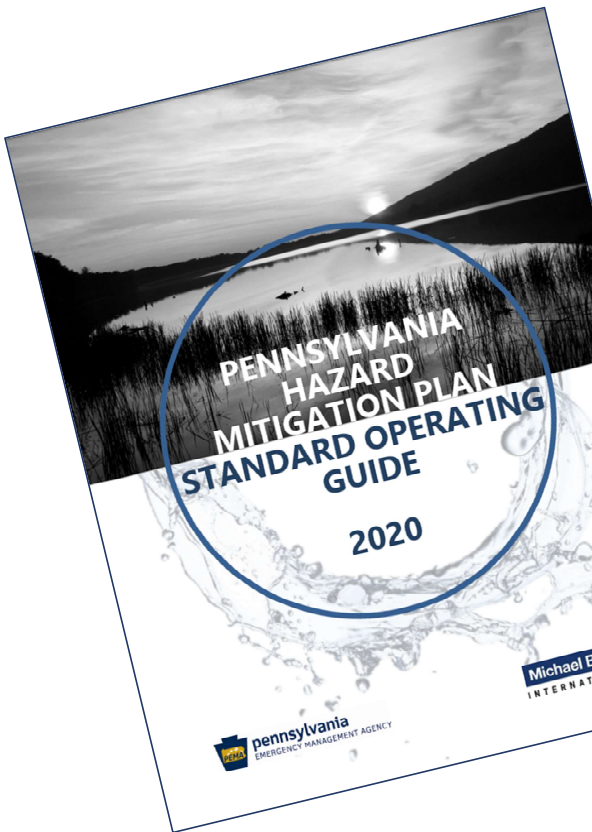


# Role of 2022 Update

- Consider what has changed.
- How have disasters impacted City?
- What has been accomplished?
- Where have there been challenges?
- What do we want to doing moving forward?

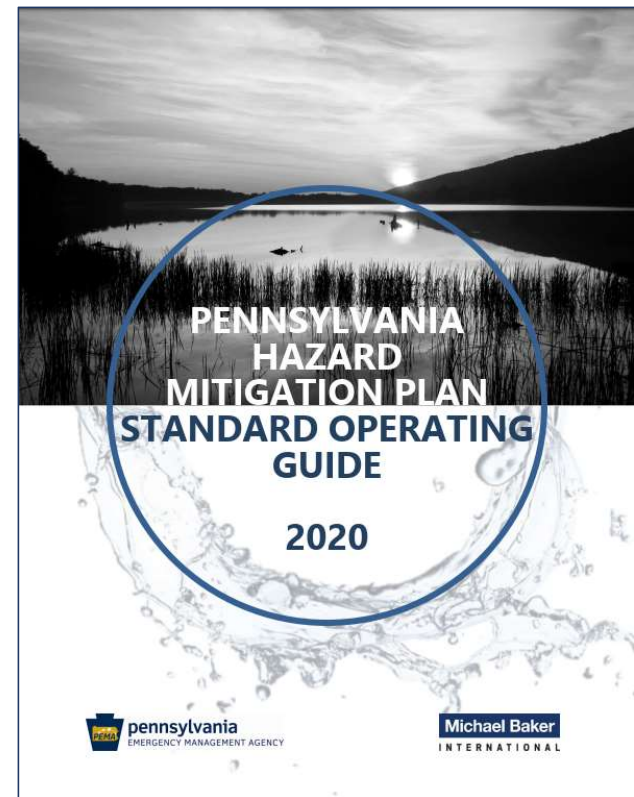


# Review Current Guidance



# Following PA HMP SOG

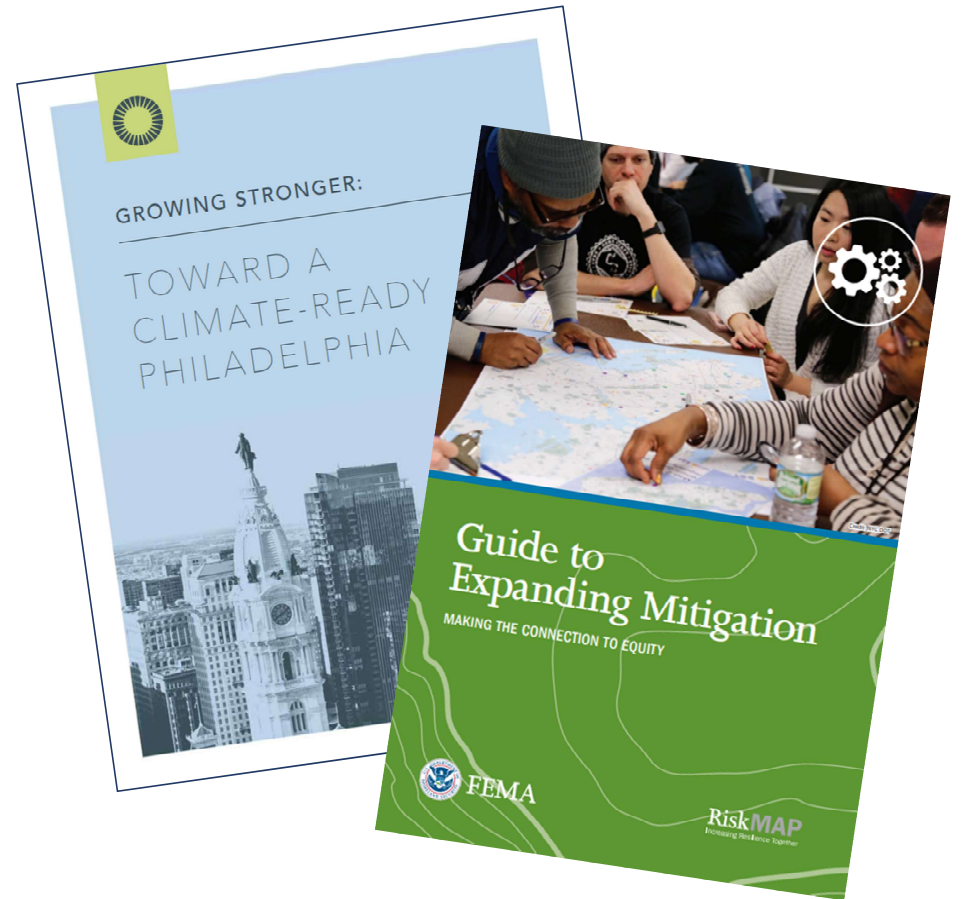
1. Introduction
2. Community Profile
3. Planning Process
4. Risk Assessment
5. Capability Assessment
6. Mitigation Strategy
7. Plan Maintenance
8. Plan Adoption





# 2022 Update Priorities

- Equity
- Climate Change
- Plan Integration





# The Planning Process



NLT: May 25, 2022

**We are here**  
Date: October 2021



# Final List of Hazards for 2022 Update

*Proposed new hazards in green*

## Natural Hazards

- Drought
- Earthquake
- Extreme Temperature
- Flood, Flash Flood, Ice Jam
- Hurricane, Tropical Storm, Nor'easter
- Pandemic and Infectious Disease
- Subsidence, Sinkhole
- Tornado, Windstorm
- Winter Storm

## Human-made Hazards

- Building and Structure Collapse
- Civil Disturbance
- Cyber Terrorism
- Dam Failure
- Hazardous Materials Release
- Opioid Addiction Response
- Urban Fire and Explosion
- Criminal Activity
  - Active Assailant
  - Gun Violence
  - Improvised Explosive Device (IED)



# What is the Capability Assessment?

- The Capability Assessment section of the Hazard Mitigation Plan is:
  - An **inventory** of the City's existing mitigation planning and regulatory tools
  - An **analysis of our capacity** to use those tools effectively
  - A summary of how the mitigation plan will be **integrated** into other planning mechanisms across the city.



# What is the Capability Assessment?



## Strengths

- Highlight in capability assessment

## Weaknesses or Gaps

- Identify as mitigation actions

City of Philadelphia  
All Hazard Mitigation Plan



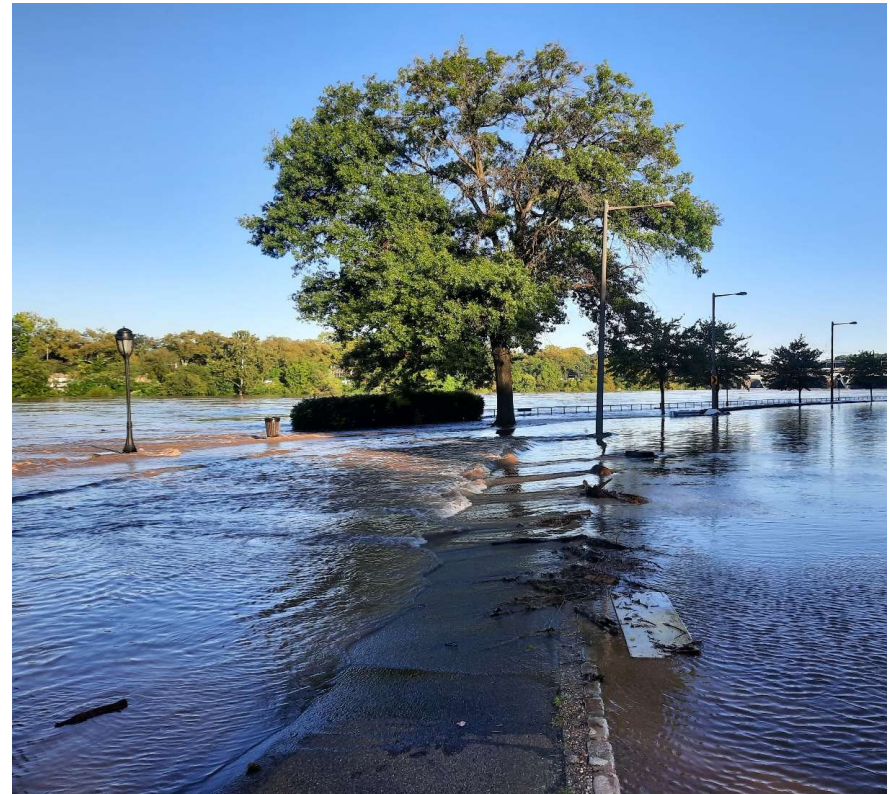
# Plan Integration

- Consideration of how the City's existing planning framework supports or hinders hazard mitigation
  - Planning framework: the collection of plans, policies, codes, and programs that guide development in your community



# Plan Integration

- Effective hazard mitigation plan integration occurs when Philadelphia's planning framework leads to development patterns that do not increase risks from known hazards or leads to redevelopment that reduces hazard risk





# Plan Integration

- Hazard mitigation planning is most effective when it is **integrated into existing plans**, regulations and programs
- By leveraging strengths and filling gaps through plan integration, the City can ensure hazard mitigation goals and actions are applied in comprehensive planning efforts to **improve the city's overall reduction of risk**



# Hurricane Ida Mitigation Funding

| Stafford Act Section<br><b>406</b>  | Stafford Act Section<br><b>404</b>  | National Flood<br>Insurance Act of 1968<br><b>NFIA</b>  | Stafford Act Section<br><b>203</b> |
|---|---|---|------------------------------------|
| <b>PA Program</b>   | <b>HMA Programs</b>   |   |                                    |
| <p><i>Disaster-related program</i></p>  <p><b>PA:</b> Mitigation of incident caused damage</p> <p>Funding: Available for disaster-damaged facilities only*</p> | <p><i>Disaster-related program</i></p>  <p><b>HMGP:</b> Multi-hazard, statewide mitigation</p> <p>Funding: Available for damaged and non-damaged facilities based on a percentage of dollars obligated to the PA and IA programs</p> | <p><i>Non-disaster-related programs</i></p>  <p><b>FMA:</b> Flood mitigation for insured properties</p>  <p><b>PDM:</b> Multi-hazard, project-specific</p> |                                    |
| <p>NOTE: PA = Public Assistance<br/>HMA = Hazard Mitigation Assistance<br/>HMGP = Hazard Mitigation Grant Program</p>   |   | <p>FMA = Flood Mitigation Assistance<br/>PDM = Pre-Disaster Mitigation<br/>IA = Individual Assistance</p>   |                                    |

\* See exception for Alternative Procedure Projects in Chapter 2, Section VII.G.4(c).

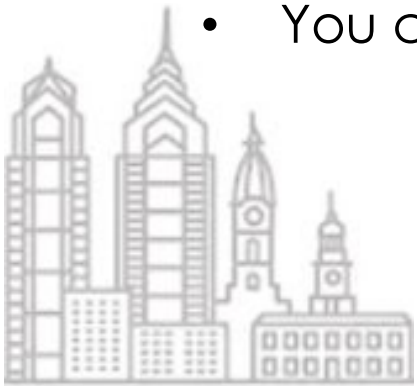


# Questions



# MURAL

- [Link](#)
- Follow the registration instructions so we can log who leaves which comment
  - If you want to view the MURAL, you can either view through the screenshare (not interactive)
  - You can always register during the 10-minute break (all you need to provide is your email and a password)
  - You can also leave comments/interact as a visitor



# Next Up: Mitigation Strategy

- Upcoming Mitigation Strategy Workshop on November 19<sup>th</sup> (register [here](#))
- Two brainstorming sessions between now and then:
  - Natural-based solutions – Monday, October 18<sup>th</sup> from 1-2 PM
  - Infrastructure and housing solutions – Thursday, October 21<sup>st</sup> from 11 AM-12 PM



## Capability Assessment Worksheet

|  |                                     |                              |
|--|-------------------------------------|------------------------------|
| <b>Please submit this worksheet and questions to</b> |                                     |                              |
| <b>Name:</b> Alyssa Curran                           | <b>Email:</b> Alyssa.Curran@wsp.com | <b>Phone:</b> 1-646-467-6227 |

### Contact Information

|               |                |                |
|---------------|----------------|----------------|
| <b>Name:</b>  | <b>Title:</b>  | <b>Entity:</b> |
| <b>Phone:</b> | <b>E-Mail:</b> |                |

### Consider hazard mitigation in the context of your entity’s mission and essential functions

Not all hazards impact your entity’s operations the same way and you may be **uniquely vulnerable** to certain hazards (e.g., facilities known to be in a hazard zone) or **uniquely prepared** for others (e.g., backup generators during a power disruption). You also might have **functions that are specific to a particular hazard** (e.g., public health’s responsibility during a disease outbreak, or the fire department’s role in fire prevention and suppression).

This analysis creates an important link between your entity’s approach to hazard mitigation (how we reduce our risk) and continuity of operations (how we maintain our essential functions during a disruption). Only one response from each participating agency is requested.

#### Please answer the following three questions:

1. **What hazards** (see Table 1) are you most concerned about that would impact your entity’s ability to provide your essential functions?

|  |
|--|
|  |
|  |
|  |

**Table 1 . Examples of Natural and Human-Made Hazards**

#### Natural Hazards

1. Drought
2. Earthquake
3. Extreme Temperature
4. Flood, Flash Flood, Ice Jam
5. Hurricane, Tropical Storm, Nor’easter
6. Pandemic and Infectious Disease
7. Subsidence, Sinkhole
8. Tornado, Windstorm
9. Winter Storm

#### Human-Made Hazards

10. Building & Structure Collapse
11. Civil Disturbance
12. Criminal Activity
13. Cyber Terrorism
14. Dam Failure
15. Hazardous Materials Release
16. Opioid Addiction Response
17. Urban Fire and Explosion



2. What would you consider are your entity's **biggest vulnerabilities**<sup>1</sup> to those hazards?

|  |
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3. What would you consider are your entity's **biggest strengths** in being resilient to hazards?

|  |
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**Consider what capabilities<sup>2</sup> your entity has to reduce vulnerability**

All stakeholders in the community hazard mitigation process have a role in reducing vulnerability to hazards. That may come in the form of *policies* (e.g., policies restricting development in hazard zones), *plans* (e.g., strategies or operational plans to address hazards and threats), specialized *staff* (e.g., engineers, geospatial professionals), specialized *equipment or systems* (e.g., damage assessment tool, sandbagging machine), and *fiscal mechanisms* (e.g., fees, grants) to support risk reduction.

*Table 2 (page 5) provides examples of “capabilities” or the plans and policies, staff and equipment, and fiscal mechanisms to support risk reduction. This list is not intended to be all-inclusive—please provide feedback on any asset or capability you think is appropriate.*

**Please answer the following questions:**

4. What **plans, policies, and/or programs** does your entity have in place to support community risk reduction?

| Plan/Policy/Program | Notes |
|---------------------|-------|
|                     |       |
|                     |       |
|                     |       |
|                     |       |
|                     |       |

<sup>1</sup> FEMA defines “vulnerability” as the susceptibility of people, property, industry, resources, ecosystems, or historical buildings and artefacts to the negative impact of a disaster.

<sup>2</sup> FEMA defines “capabilities” as planning and regulatory capabilities are plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

5. What **staff and equipment** does your entity have in place to support community risk reduction?

| Staff/Equipment | Notes |
|-----------------|-------|
|                 |       |
|                 |       |
|                 |       |
|                 |       |
|                 |       |

6. What **fiscal mechanisms** does your entity have in place to support risk reduction?

| Plan/Policy/Program | Notes |
|---------------------|-------|
|                     |       |
|                     |       |
|                     |       |
|                     |       |

7. What **actions has your entity taken in the last 5 years** (since the last plan update) to build these or create new capabilities?

|  |
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8. What **actions has your entity taken in the last 5 years** (since the last plan update) to build these or create new capabilities?

9. **Summary.** Please provide an approximate measure of your agency’s capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an “X” in the box marking the most appropriate degree of capability based on the best available information.

| Area and Description   | Degree of Capability |          |      |
|--|----------------------|----------|------|
|  | Limited              | Moderate | High |
| <p><b>Planning and Regulatory</b><br/>Based off of planning and regulatory tools and programs currently implemented, what is your agency’s estimated or anticipated capability in reducing hazard loss? (Example: Continuity of Operations Plan)</p>   |                      |          |      |
| <p><b>Administrative and Technical</b><br/>Based off the staffing of:</p> <ul style="list-style-type: none"> <li>• Planners (with land use/ land development knowledge)</li> <li>• Engineers or planners (with natural and/or human caused hazards knowledge)</li> <li>• Engineers or professionals trained in building and/or infrastructure construction</li> <li>• Flood plain manager</li> <li>• Land surveyor</li> <li>• Staff familiar with the hazards of the community</li> <li>• Personnel skilled in Geographic Information Systems</li> <li>• Grant writers</li> </ul>  |                      |          |      |
| <p><b>Financial</b><br/>Based off of your agency’s access or eligibility to use local financial resources <i>for hazard mitigation purposes</i> including the use of state and federal mitigation grant funds. This includes:</p> <ul style="list-style-type: none"> <li>• Capital Improvement Planning</li> <li>• Community Development Block Grants</li> <li>• Special purpose taxes</li> <li>• Utility fees</li> <li>• Water/sewer fees</li> <li>• Storm water fees</li> <li>• Development impact fees</li> <li>• General obligation, revenue, and/or special tax bonds</li> <li>• Partnering arrangements or intergovernmental agreements</li> </ul> |                      |          |      |
| <p><b>Education and Outreach</b><br/>Based off of the education and outreach programs and methods currently in place that could be used to implement mitigation activities and communicate hazard-related information.</p>   |                      |          |      |

Consider actions to build on your entity's existing capabilities and reduce vulnerability

A successful hazard mitigation strategy proposes actions that build on existing strengths and fill known gaps in capabilities.

**Please answer the following question:**

**10. What future investments** in any of the above program elements do you foresee in the next 5 years to support risk reduction?

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Table 2. *Capability Element Examples*<sup>3</sup>

| <b>Plans and Policies</b>   |   |
|---|---|
| <p><b>Plans</b></p> <ul style="list-style-type: none"> <li>▪ Department Hazard Mitigation Plan / Hazard Analysis, Risk / Vulnerability Assessment</li> <li>▪ Community Resilience Plans, e.g. Beat the Heat Hunting Park</li> <li>▪ Department Emergency Operations or Emergency Response Plan</li> <li>▪ Floodplain, Stormwater Management Plans</li> <li>▪ Land Use / Development Plan</li> <li>▪ Natural Resources Management Plan or Parks and Open Space Plan</li> <li>▪ Continuity of Operations Plan or Business Continuity Plan</li> <li>▪ Capital Improvements Plan</li> <li>▪ Sustainability, Social Equity, Engagement Plans</li> </ul>  | <p><b>Policies and Regulations</b></p> <ul style="list-style-type: none"> <li>▪ Zoning Ordinance</li> <li>▪ Subdivision Ordinance</li> <li>▪ Flood Damage Prevention Ordinance</li> <li>▪ Mutual Aid or Other Mutual Assistance Agreements</li> <li>▪ National Flood Insurance Program</li> <li>▪ Building Code Enforcement</li> <li>▪ Fire Code</li> <li>▪ Environmental, Health &amp; Safety, Security, Insurance Policies</li> <li>▪ Resilient Design Guidelines</li> </ul>  |
| <b>Staff and Equipment Capability</b>   |   |
| <p><b>Staff &amp; Governance Structures</b></p> <ul style="list-style-type: none"> <li>▪ Planners with knowledge of land development and land management practices</li> <li>▪ Engineers or professionals trained in construction practices related to buildings and/or infrastructure</li> <li>▪ Planners or engineers with an understanding of natural and/or human-caused hazards; Floodplain manager</li> <li>▪ Emergency manager</li> <li>▪ Scientist familiar with hazards of the area</li> <li>▪ Staff with education or expertise to assess vulnerability to hazards</li> <li>▪ Geographic Information Systems (GIS) personnel</li> <li>▪ Resource development staff or grant writers</li> <li>▪ Public Information Officer, community engagement &amp; communication specialists/liasons</li> <li>▪ Inter-agency coordinating committees</li> </ul> | <p><b>Equipment</b></p> <ul style="list-style-type: none"> <li>▪ Emergency generators and other backup power systems</li> <li>▪ Radio communications equipment and other emergency communications equipment</li> <li>▪ Personal protective equipment</li> <li>▪ Snow removal equipment (ex. plows, snow blowers, winter service vehicles)</li> <li>▪ Flood control pumps</li> <li>▪ Firefighting equipment</li> <li>▪ Solar panels, wind turbines, and other alternative energy facilities (e.g., Microgrids, battery storage, energy management systems)</li> <li>▪ Earthquake safety devices</li> </ul> |
| <b>Fiscal Capability</b>  |   |
| <ul style="list-style-type: none"> <li>▪ Capital Improvement Program</li> <li>▪ Community Development Block Grants (CDBG)</li> <li>▪ Special Purpose Taxes (or taxing districts), Utility / Service Fees, Development Impact Fees</li> <li>▪ General Obligation, Revenue, and/or Special Tax Bonds</li> <li>▪ Partnering arrangements or intergovernmental agreements</li> </ul>  |   |
| <b>Education and Outreach Capability</b>  |   |
| <ul style="list-style-type: none"> <li>▪ Certifications: StormReady, FireWise, anti-oppression, diversity &amp; inclusion, others</li> <li>▪ Hazard-related school safety programs</li> <li>▪ Ongoing public education or information program (e.g., CERT)</li> <li>▪ Public-private Partnership initiatives addressing disaster-related issues</li> </ul>  |   |

<sup>3</sup> Note: This is a mix of generic regulatory/policy tools (e.g., zoning) and more specific policies that actually improve capability (e.g., flood damage prevention ordinance). The former are tools that could be deployed to enhance capabilities, the latter are the actual policies that support capabilities.

# City of Philadelphia Hazard Mitigation Plan

## Capability Assessment Workshop



**Date:** October 4, 2021

**Location:** Microsoft Teams, Virtual

**Agencies Present:** OEM, WSP, DPP, Mayor's Office for People with Disabilities, PPD, PRF, The Nature Conservancy, PA DHS, PDPH, OOS, PA DOH, PHA, L&, PPR, PWD, DRPA, The ARC of Philadelphia, Office of Diversity, Equity, & Inclusion, Liberty Resources, PennDOT, PCPC, SEPTA, SDP, PIDC

### Notes:

#### 1. Welcome and Introductions

#### 2. Hazard Mitigation P2022 Update Overview and Context

- a. WSP, Inc reviewed the hazard mitigation plan, the planning process, and the final list of hazards for the 2022 update
- b. Q&A
  - i. Rich Quodomine, PWD – discussion about term “Active Shooter” vs. “Active Assailant,” and how the two relate to far-right domestic terrorism
  - ii. Josh Lippert, L&I (floodplain manager) – discussion about train derailment in Logan Square. Additional concern over how building/structural damage due to water infiltration and deferred infrastructure maintenance are covered by the hazards list. Project team plans to address these concerns in existing hazard profiles (such as Building/Structure Collapse, Flooding).
  - iii. Abby Sullivan, PWD – discussion about if sea level rise should be a separate item in natural hazards or if it is covered in the flood hazard profile, particularly given concerns over how sea level rise will affect drinking water quality. Project team plans to include sea level rise cross-referenced across existing hazard profiles.

#### 3. Defining Capability and the Capability Assessment

- a. WSP, Inc provided an overview of the capability assessment section of the plan including, what is a capability, what is the capability assessment and plan integration.
- b. OEM provided an update on COVID-19 and Tropical Storm Ida funding
- c. Q&A
  - i. Liam Dougherty, PDPH - discussion about people who require personal attendant services and how they might be affected adversely by hazards. Project team validated that that is likely a gap in the City's existing capability.

#### 4. MURAL - Identifying City of Philadelphia Capabilities

- a. WSP, Inc led the group through a series of interaction sessions using the online MURAL tool.
- b. *Interactive session 1: Hazards – Most concerning to your organization*
  - i. Pre-populated with a sample of survey responses
  - ii. Alyssa Curran, WSP read pre-populated sample responses (i.e Pandemic and Other Infectious disease) and outlined how participants could add additional hazards. Additional hazards included flood/flash flood/backflow flooding, criminal activity, utility disruptions/infrastructure failure, damage to park trails/street trees, and urban fire/conflagration.
  - iii. Alyssa ran a voting session for participants to choose the top three natural and human made hazards that concern their organization. The top three were:
    1. Flood, Flash Flood, Ice Jam
    2. Hurricane, Tropical Storm, Nor'easter
    3. Extreme Temperature
  - iv. Verbal discussion following the interactive session 1:

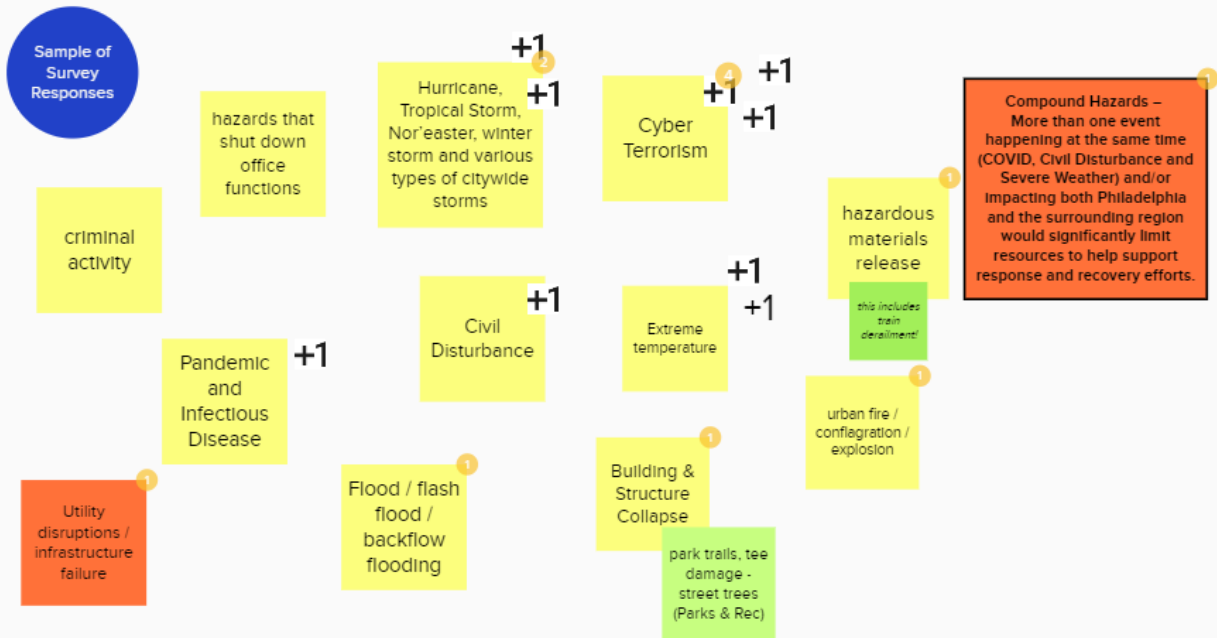


1. Rich Quodomine, PWD – pointed out that the top two hazards are linked and top of mind due to Ida.
  2. Pat Perhosky, PWD – clarification on the Capability Assessment Survey and whether organizations could choose only three or more than three (the project team confirmed the latter). Clarification on Building/Structure Collapse, which does include collapse due to the weight/structural defects in the building and due to hazards (such a windstorm).
  3. Josh Lippert, L&I – Fairmount Park is a great example of floodplain management/plan integration in Philadelphia – however, there is still a lot of development in the flood plain and future flood plains. In addition, some of the newer parks along the Delaware are not resilient to flooding. Additional funds are needed for preparedness.
  4. Roger Tenant Jr., Parks & Rec – expressed organizational concern for trail damage and damage to street trees from Hurricane Ida.
- c. *Interactive session 2: Biggest vulnerabilities for your organization*
    - i. Alyssa Curran, WSP facilitated an interactive exercise to list the biggest organizational vulnerabilities organized into four categories: Communication, People, Facilities/Functions, and Resources
    - ii. See attached screen shots below
  - d. *Interactive session 3: Biggest strengths for your organization*
    - i. Alyssa Curran, WSP facilitated an interactive exercise to list the biggest organizational strengths, organized into four categories: Preparedness, Adaptability/Agility, Resources & Partnerships, and People/Commitment.
    - ii. See attached screen shots below
5. Thinking ahead about mitigation actions
    - a. WSP, Inc led a discussion about the connection between capability and identifying the best mitigation actions for the 2022 Plan
      - i. Josh Lippert, L&I – discussion about stronger regulations and codes. Additional discussion about implementation of the hazard mitigation plan under a new mayor.
      - ii. Rich Quodomine, PWD – how flood affect buildings but also cars. Potential for creating parking lot evacuation plans so cars at risk of flooding can be moved to higher ground.
      - iii. Amy Millar, Mayor’s Office of People with Disabilities – discussion about ensuring people with disabilities are accounted for and included in the process at all stages.
      - iv. See attached screenshots
  6. Next steps and upcoming events
    - a. Upcoming Mitigation Strategy workshop on November 19th
      - i. Brainstorming sessions
        1. October 18 – natural-based solutions
        2. October 21 – infrastructure and housing solutions
    - b. Reminder to fill out Capability Assessment Survey

The meeting ended at 2:50pm.

## **Screen shots of the MURAL:**

# (1) HAZARDS - MOST CONCERNING TO YOUR ORGANIZATION



## Natural Hazards



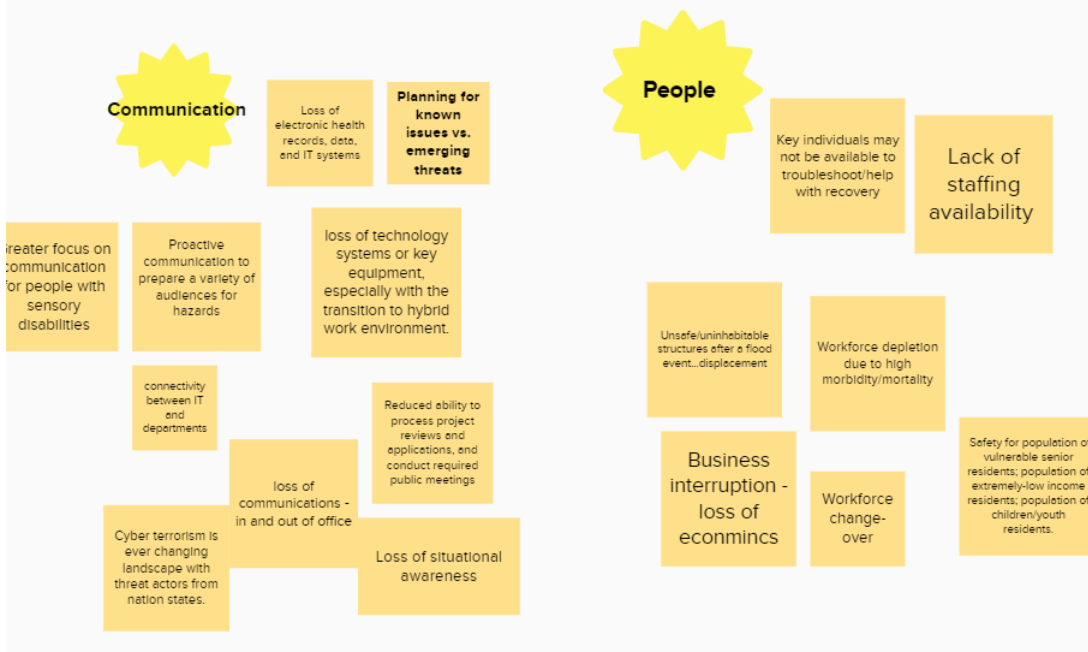
## Human-Made Hazards

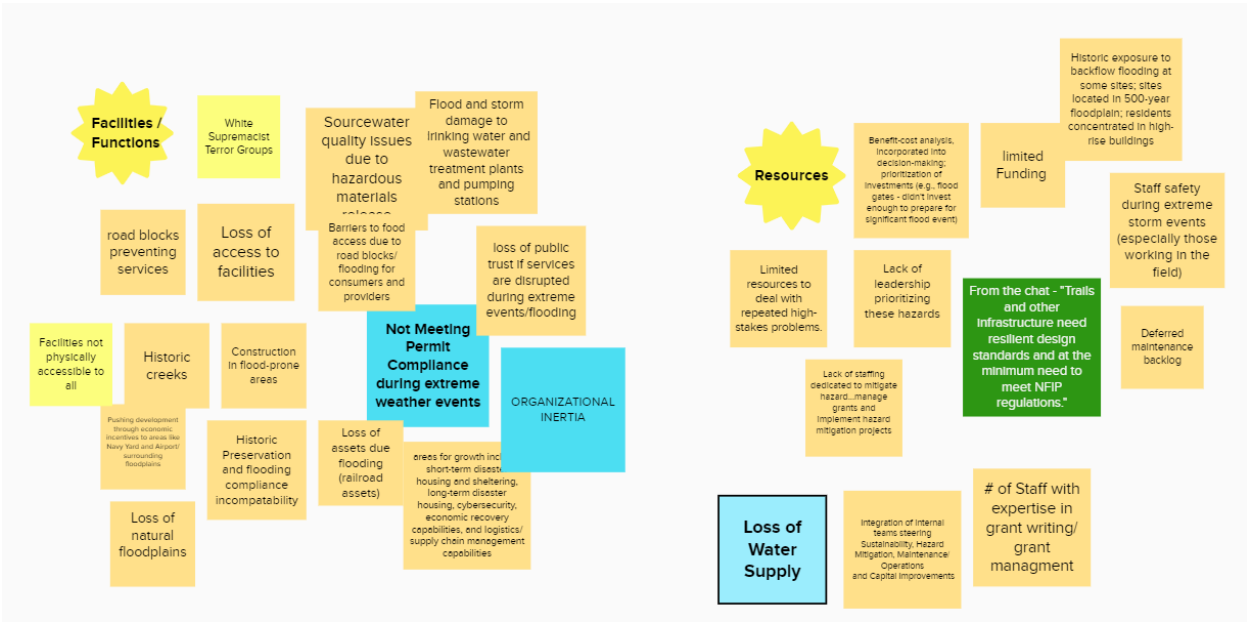


Poll:  
Table 1

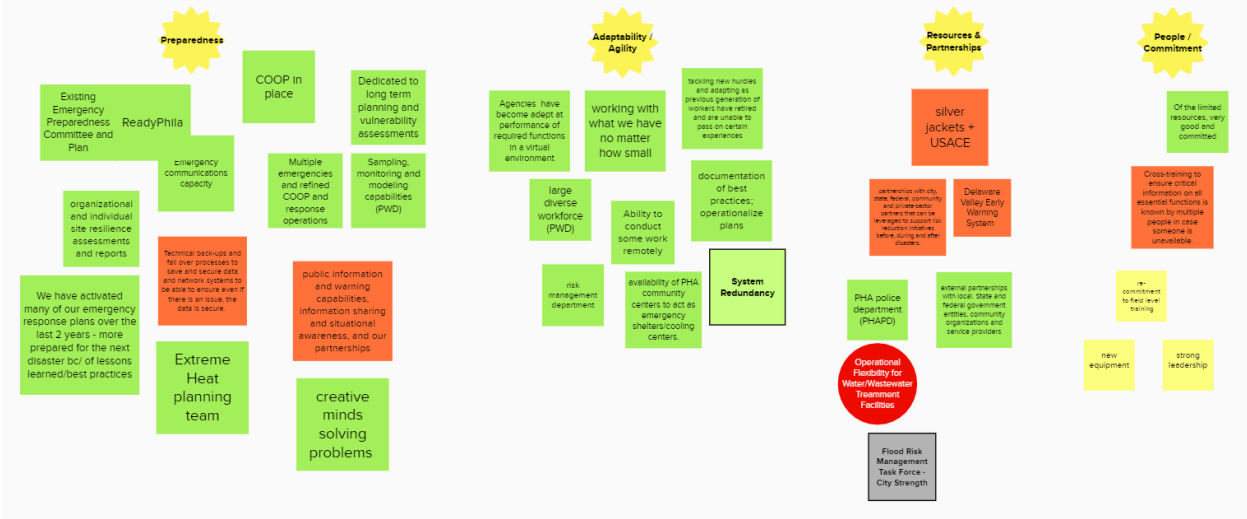
3 votes  
per  
person

## (2) BIGGEST VULNERABILITIES FOR YOUR ORGANIZATION





### (3) BIGGEST STRENGTHS



# OPPORTUNITIES! (MITIGATION ACTIONS)



## Future Investments

Planning and regulatory: 1) review and revision of the Department's entire portfolio of emergency response plans based on the lessons learned from the citywide response to COVID-19; 2) Update of the Department's COOP plan

Continued cyber liability insurance

Dedicated generators for mini data center operations at 1101 Market St, OPB and MSB

24/7 monitoring services for all endpoints and use of AI to interpret system and monitoring software logs for threat actor behaviors

With constrained local budgets and already existing demands, expansion of existing hazard mitigation capabilities would require a 1) significant policy refocus and/or 2) ability to obtain and manage outside funds

Administrative and technical: 1) build the administrative capacity of the Division of Disease Control through hiring and training of staff; 2) update administrative preparedness plans to reflect best practices and lessons learned from COVID-19 related to expedited hiring, emergency contracting, and emergency purchases

Expanded disaster recovery operations – engineering expertise, Cloud and on-prem redundancy, increased budget for expanded storage costs

Increased budgets for operations – currently understaffed on networking, security and Cloud and on-prem defend, compute and store infrastructure

Education and outreach: 1) hire additional staff to conduct ongoing community engagement; 2) revise the current community engagement plan to incorporate best practices and lessons learned from the COVID-19 response; build a sustainable network of community partners that can be mobilized in any emergency

Consolidated of mini data centers from 1101 Market and MSB into 1234 Market Street

Advanced threat detection, proxy, and network sensors using A/I

PFD and PPD radio will soon be in same building

PFD will be getting new CAD and fire reporting system with enhanced capabilities

## Capability Assessment Workshop

Date: October 4, 2021 from 1pm-3pm

Location: Microsoft Teams



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|                   |   |   |  |
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|                   |   |   |  |



## Emma Giardina

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**From:** Emma Giardina  
**Sent:** Monday, September 13, 2021 11:41 AM  
**Cc:** Curran, Alyssa A.; 'Siulagi, Alma'; Bowen, Sarah K.  
**Subject:** Philadelphia's 2022 Hazard Mitigation Plan - Fall Workshops  
**Attachments:** Capability Assessment\_Survey\_Philadelphia2022.docx

Good morning,

In support of the 2022 update of Philadelphia's [All-Hazard Mitigation Plan](#), the Philadelphia Office of Emergency Management (OEM) will be hosting two workshops this Fall focused on key sections of the plan: The *Capability Assessment* and the *Mitigation Strategy*. More details on each workshop are listed below. Recent flooding impacts from Ida highlight the importance of identifying and implementing projects that reduce our risk and minimize impact from potential disasters. You've been invited to these workshops because your input and expertise is extremely valuable to this process. To ensure our 2022 plan is comprehensive, we encourage all agencies and organizations on this invitation list to send **at least one representative from your agency** to these workshops. **To register, [please sign up here](#)**. Once registered, a confirmation email will be sent to you with calendar invitations attached.

To help us prepare for the update of the *Capability Assessment*, we are also asking you to fill out the attached **Capability Assessment Worksheet** and send it to [Alyssa.Curran@wsp.com](mailto:Alyssa.Curran@wsp.com) prior to **Friday, October 1st**. If possible, please consider filling out this survey as a team with other representatives from your agency. Answers will inform the update of the *Capability Assessment* chapter and identification of future mitigation actions.

### **Workshop #1: The Capability Assessment**

**When:** Monday, October 4<sup>th</sup> from 1pm-3pm

**Where:** Virtual, Microsoft Teams

The Capability Assessment section of the Hazard Mitigation Plan is an inventory of the City's existing mitigation planning and regulatory tools, an analysis of our capacity to use those tools effectively, and a summary of how the mitigation plan will be integrated into other planning mechanisms across the city. This is an important part of the plan because it helps identify gaps, conflicts and/or weaknesses in our ability to implement mitigation projects. These are gaps that we can address through future mitigation actions, goals and objectives. In this workshop, we will review the results of the attached Capability Assessment Survey and work as a group to identify any capabilities or capability gaps that were not captured through the survey.

### **Workshop #2: The Mitigation Strategy**

**When:** Friday, November 19<sup>th</sup> from 10:30am-12:30pm

**Where:** Virtual, Microsoft Teams

The Mitigation Strategy identifies a prioritized list of mitigation projects, plans and policies we can implement as a City to reduce our risk to hazards. In this workshop, we will finalize citywide mitigation goals and objectives and identify mitigation projects to include in the plan. Please note, projects must be included in the updated version of this plan to be eligible for FEMA's annual Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) grants, as well as post-disaster Hazard Mitigation Grant Program (HMGP) grant funding.

Please note, in addition to the natural and human-caused hazards identified in the 2017 plan, the 2022 Hazard Mitigation Plan will feature the following new hazards: Pandemic and Infectious Disease, Subsidence and Sinkholes, Civil Disturbance, Criminal Activity (including Gun Violence), Cyber Terrorism, and Opioid Addiction Response. Additional results from the *Risk & Vulnerability Assessment* will be shared in these workshops.

Please do not hesitate to reach out with any questions you may have. I will follow up with reminder emails in the weeks leading up to the event. Thank you all for your continued support with this plan update.

Sincerely,

**Emma Giardina**

Hazard Planning Coordinator

Philadelphia Office of Emergency Management

D: 215-683-3251

C: 267-239-1564

Ready, or Not? Learn what to have in your home, hand and head.

Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311

# City of Philadelphia Hazard Mitigation Plan

## Mitigation Brainstorming Session – Infrastructure & Housing Solutions



**Date:** October 18, 2021 from 1pm-2pm

**Location:** Microsoft Teams, Virtual

**Agencies Present:** OEM, WSP, OTIS, PDPH, PWD, DPP, Mayor’s Office of Recovery and Grants, PPR, the ARC of Philadelphia, PA DHS, OOS, SEPTA, The Nature Conservancy, L&I, Liberty Resources, PCPC, PPD, PIDC

### Notes:

#### 1. Background

- a. Sarah Bowen, WSP review background information on the hazard mitigation plan and the mitigation strategy with the group.
- b. Mitigation is an important part of the emergency management cycle
- c. Sarah reviewed some good examples of existing mitigation actions from the 2017 plan as well as example mitigation ideas

#### 2. Brainstorming Session

- a. Next, the group reviewed mitigation ideas that they have for the 2022 plan
- b. Ideas from the group ranged from green stormwater infrastructure projects to acquisition of undeveloped land in flood prone areas.

The meeting ended at 1:56pm.

# Mitigation Brainstorming Workshop –

## Nature Based Solutions



Date: October 18, 2021 from 1pm-2pm

Location: Microsoft Teams

| Name              | Title   | Organization                        | Email  |
|-------------------|---|-------------------------------------|--|
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| Ceena Jenkins     | Disability Integration                          | PA DHS                              | <a href="mailto:cejenkins@pa.gov">cejenkins@pa.gov</a>                                       |
| Joshua Lippert    | Floodplain Manager                              | L&I                                 | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>                       |
| Dominic McGraw    | Manager   | OOS – Energy Office                 | <a href="mailto:Dominic.McGraw@phila.gov">Dominic.McGraw@phila.gov</a>                       |
| Rodney Whitmore   |   | Liberty Resources                   | <a href="mailto:Rodneywhitmore@libertyresources.org">Rodneywhitmore@libertyresources.org</a> |



# **The Hazard Mitigation Plan 2022 Update**

## Infrastructure & Housing Solutions - Mitigation Brainstorming Session

**October 21, 2021**



# What is a hazard mitigation plan?

- **Hazard mitigation** is defined as sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards



Office of Emergency Management  
City of Philadelphia

*City of Philadelphia*  
*All Hazard Mitigation Plan*

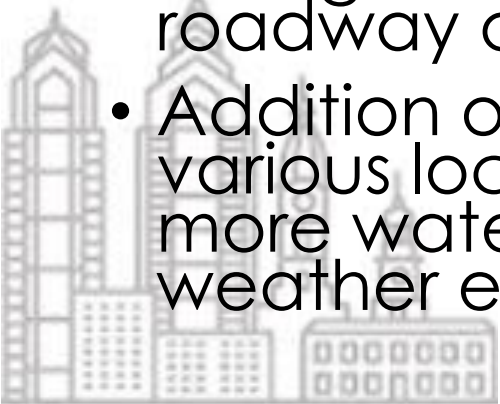


# Emergency Management Cycle



# Existing Actions in 2017 HMP

- Assess properties that may benefit from elevation, acquisition, relocation, or retrofitting; and where feasible, implement recommended mitigation activities
- Generators
- Construct ground water interceptors to capture water seeping from rock outcrops to prevent constant ice accumulation on Lincoln and Kelly Drives.
- Enlarge culverts of the Poquessing Creek tributaries to protect roadway and residences.
- Addition of wastewater and stormwater pumps and storage in various locations throughout the system and facilities to send more water to the water pollution control plants during wet weather events.



# Sample Actions from *Mitigation Ideas*

- Relocating or retrofitting endangered public housing units in high-hazard areas.
- Incorporating mitigation retrofits for public facilities into the annual capital improvements program.
- Engineering or retrofitting roads and bridges to withstand hazards.
- Relocating or undergrounding electrical infrastructure.



# City of Philadelphia Hazard Mitigation Plan

## Mitigation Brainstorming Session – Infrastructure & Housing Solutions



**Date:** October 21, 2021 from 11am-noon

**Location:** Microsoft Teams, Virtual

**Agencies Present:** OEM, WSP, Fairmount Park Conservancy, Philadelphia International Airport, OTIS, PHA, SEPTA, PFD, PDPH, PWD, DPP, Mayor’s Office of Recovery and Grants, Delaware County, the ARC of Philadelphia, PHA, PA DHS, OOS

### Notes:

#### 1. Background

- a. Sarah Bowen, WSP review background information on the hazard mitigation plan and the mitigation strategy with the group.
- b. Mitigation is an important part of the emergency management cycle
- c. Sarah reviewed some good examples of existing mitigation actions from the 2017 plan as well as example mitigation ideas

#### 2. Brainstorming Session

- a. Next, the group reviewed mitigation ideas that they have for the 2022 plan
- b. Ideas from the group ranged from mitigation of PHA properties to generators for critical facilities.

The meeting ended at 11:59pm.

# Mitigation Brainstorming Workshop – Infrastructure & Housing Solutions



Date: October 21, 2021 from 2pm-3pm  
Location: Microsoft Teams

| Name              | Title   | Organization                        | Email  |
|-------------------|---|-------------------------------------|--|
| Emma Giardina     | Hazard Planning Coordinator                     | Philadelphia OEM                    | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>             |
| Carolyn Caton     | Infrastructure Program Manager                  | Philadelphia OEM                    | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>             |
| Allison Schapker  | Chief Projects Officer                          | Fairmount Park Conservancy          | <a href="mailto:aschapker@myphillypark.org">aschapker@myphillypark.org</a>       |
| Dennis Stefanski  |   | SEPTA                               | <a href="mailto:dstefanski@septa.org">dstefanski@septa.org</a>                   |
| Cole Norgaarden   |   | PHA                                 | <a href="mailto:Cole.Norgaarden@pha.phila.gov">Cole.Norgaarden@pha.phila.gov</a> |
| Elena Fisher      | Sustainability                                  | Philadelphia International Airport  | <a href="mailto:Elena.Fisher@phila.gov">Elena.Fisher@phila.gov</a>               |
| Liz Lankenau      | Director, Infrastructure Program Coordination   | OTIS                                | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a>   |
| Kevin Roche       |   | Fairmount Park Conservancy          | <a href="mailto:kroche@myphillypark.org">kroche@myphillypark.org</a>             |
| Liam Dougherty    | AFN Coordinator                                 | PDPH                                | <a href="mailto:Liam.Dougherty@phila.gov">Liam.Dougherty@phila.gov</a>           |
| Lt. Michael Kirby | Planning  | PFD                                 | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>             |
| Nicola Mammes     | Regional Preparedness Program Manager           | Philadelphia OEM                    | <a href="mailto:Nicola.Mammes@phila.gov">Nicola.Mammes@phila.gov</a>             |
| Pat Perhosky      | Engineer  | PWD                                 | <a href="mailto:Patrick.Perhosky@phila.gov">Patrick.Perhosky@phila.gov</a>       |
| Sue Patterson     | Engineer  | PWD                                 | <a href="mailto:Susan.Patterson@phila.gov">Susan.Patterson@phila.gov</a>         |
| Terra Luke        | GIS Analyst                                     | DPP                                 | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                   |
| Richard Quodomine | Senior Lead GIS Analyst                         | DPP                                 | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>     |
| Sarah Bowen       | Planning & Environmental Manager                | WSP, Inc                            | <a href="mailto:Sarah.K.Bowen@wsp.com">Sarah.K.Bowen@wsp.com</a>                 |
| Alma Siulagi      | Senior Planner                                  | WSP, Inc                            | <a href="mailto:Alma.Siulagi@wsp.com">Alma.Siulagi@wsp.com</a>                   |
| Ashley DelBianco  |   | Mayor's Office of Recovery & Grants | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>       |
| Roger Tenant      | Park Manager 2                                  | PPR                                 | <a href="mailto:Roger.TenantJr@phila.gov">Roger.TenantJr@phila.gov</a>           |
| Sara Senkow       | Emergent Threats Analyst                        | Delaware County                     | <a href="mailto:SenkowS@co.delaware.pa.us">SenkowS@co.delaware.pa.us</a>         |
| Shane Janick      |   | The ARC of Philadelphia             | <a href="mailto:Sjanick@arcphiladelphia.org">Sjanick@arcphiladelphia.org</a>     |
| Tom Smith         |   | PHA                                 | <a href="mailto:Thomas.Smith@pha.phila.gov">Thomas.Smith@pha.phila.gov</a>       |
| Douglas Trahey    | Emergency Preparedness and Response Coordinator | PA DHS                              | <a href="mailto:Dtrahey@pa.gov">Dtrahey@pa.gov</a>                               |
| Joe Misko         |   | DPP                                 | <a href="mailto:Joseph.Misko@phila.gov">Joseph.Misko@phila.gov</a>               |



## Hazard Mitigation Plan 2022 Update – Mitigation Strategy Workshop



**Date/Time:** November 19, 2021, 10:30am-12:30pm  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Sarah Bowen, AICP/PP

| Agenda Item |  | Notes/Actions   | Time Allocated |
|-------------|--|---|----------------|
| □ 1         | <b>Introductions &amp; Welcome</b>   |   | 2-5 mins       |
| □ 2         | <b>Hazard Mitigation Plan 2022 Update Overview and Context</b>                                 | <ul style="list-style-type: none"> <li>• Overview and context of Hazard Mitigation Plan 2022 update</li> </ul>  | 5 mins         |
| □ 3         | <b>Defining Mitigation</b>   | <ul style="list-style-type: none"> <li>• Defining the Mitigation Strategy, Mitigation Actions, and Mitigation Action Prioritization</li> <li>• What FEMA funds</li> <li>• How to submit a mitigation action</li> </ul>  | 10 mins        |
| □ 4         | <b>Review and Discuss: Mitigation Goals and Objectives</b>                                     | <ul style="list-style-type: none"> <li>• Review and discuss mitigation goals</li> <li>• Review and discuss mitigation objectives</li> </ul>   | 30 mins        |
| □ 5         | <b>Break</b>   |   | 10 mins        |
| □ 6         | <b>Facilitated Group Question &amp; Answer: Priorities for the 2022 Hazard Mitigation Plan</b> | <ul style="list-style-type: none"> <li>• Interactive large group facilitated Q&amp;A:                             <ol style="list-style-type: none"> <li>1. What is your organization's top <b>new</b> mitigation action since the 2017 HMP?</li> <li>2. What is your organization's top <b>ongoing</b> mitigation actions? This mitigation action should have been included in the 2017 HMP.</li> <li>3. What mitigation action should be listed as a <b>top priority</b> in the HMP?</li> </ol> </li> </ul> | 50 mins        |
| □ 9         | <b>Overview of mitigation action prioritization</b>  |   | 5 mins         |



|      |                                       |  |        |
|------|---------------------------------------|--|--------|
| □ 10 | <b>Next steps and upcoming events</b> | <ul style="list-style-type: none"><li>• December Steering Committee</li><li>• Submit mitigation actions by <b>5pm, November 30<sup>th</sup></b>.</li></ul> | 5 mins |
|------|---------------------------------------|--|--------|

# **The Hazard Mitigation Plan 2022 Update**

## Mitigation Strategy Workshop

**November 19, 2021**





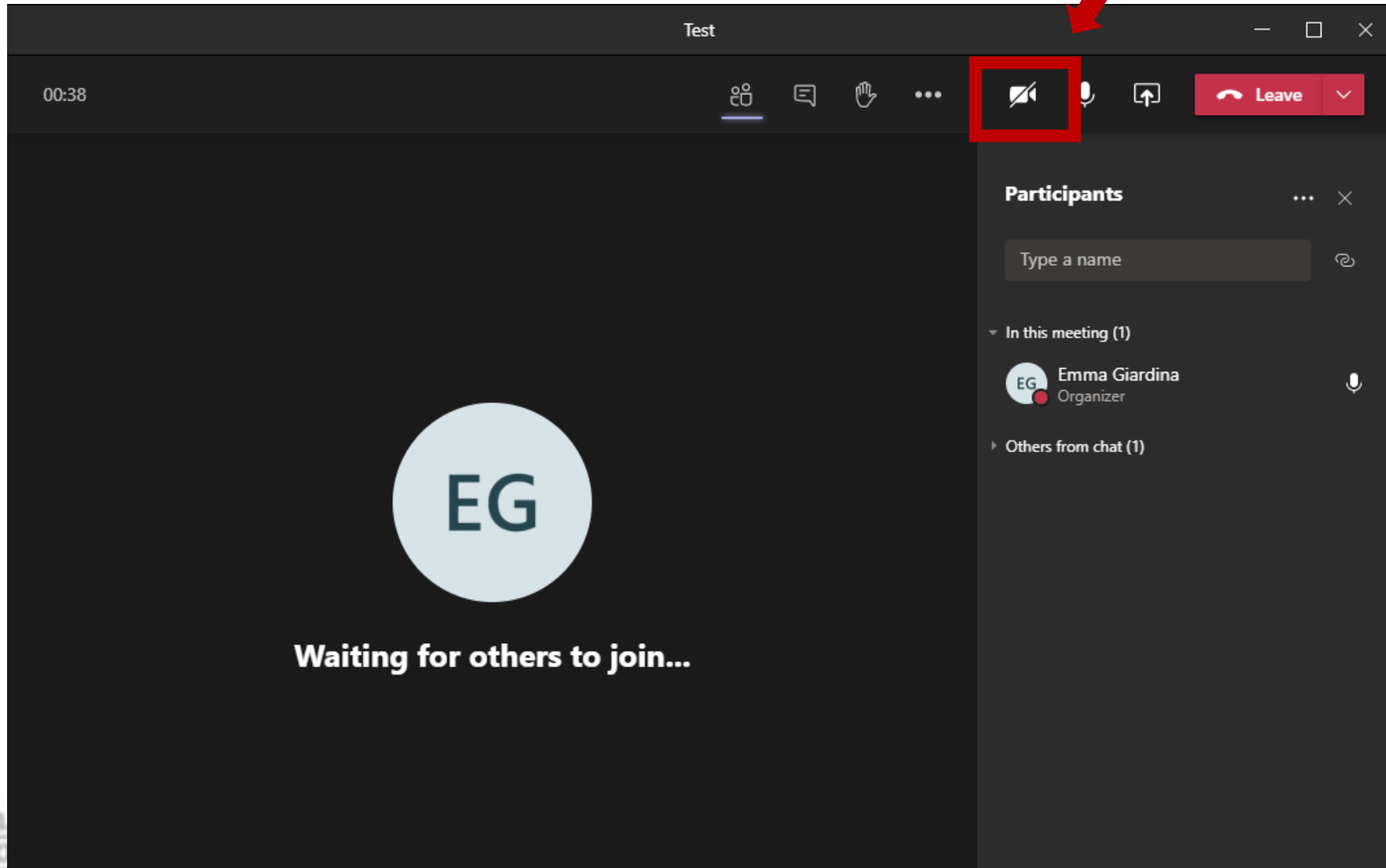
**REC**



**We will be recording**

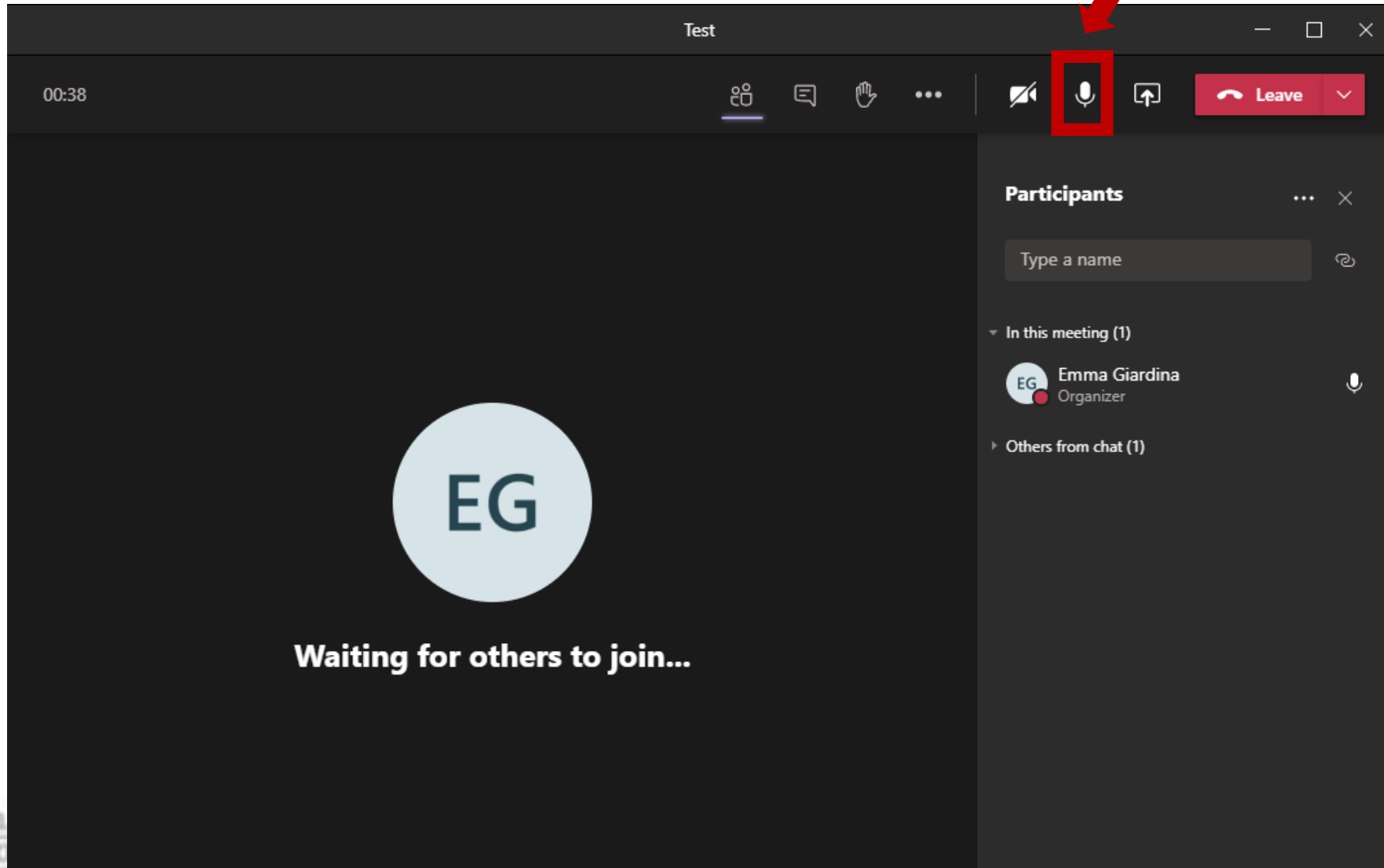
# Microsoft Teams

Video On/Off



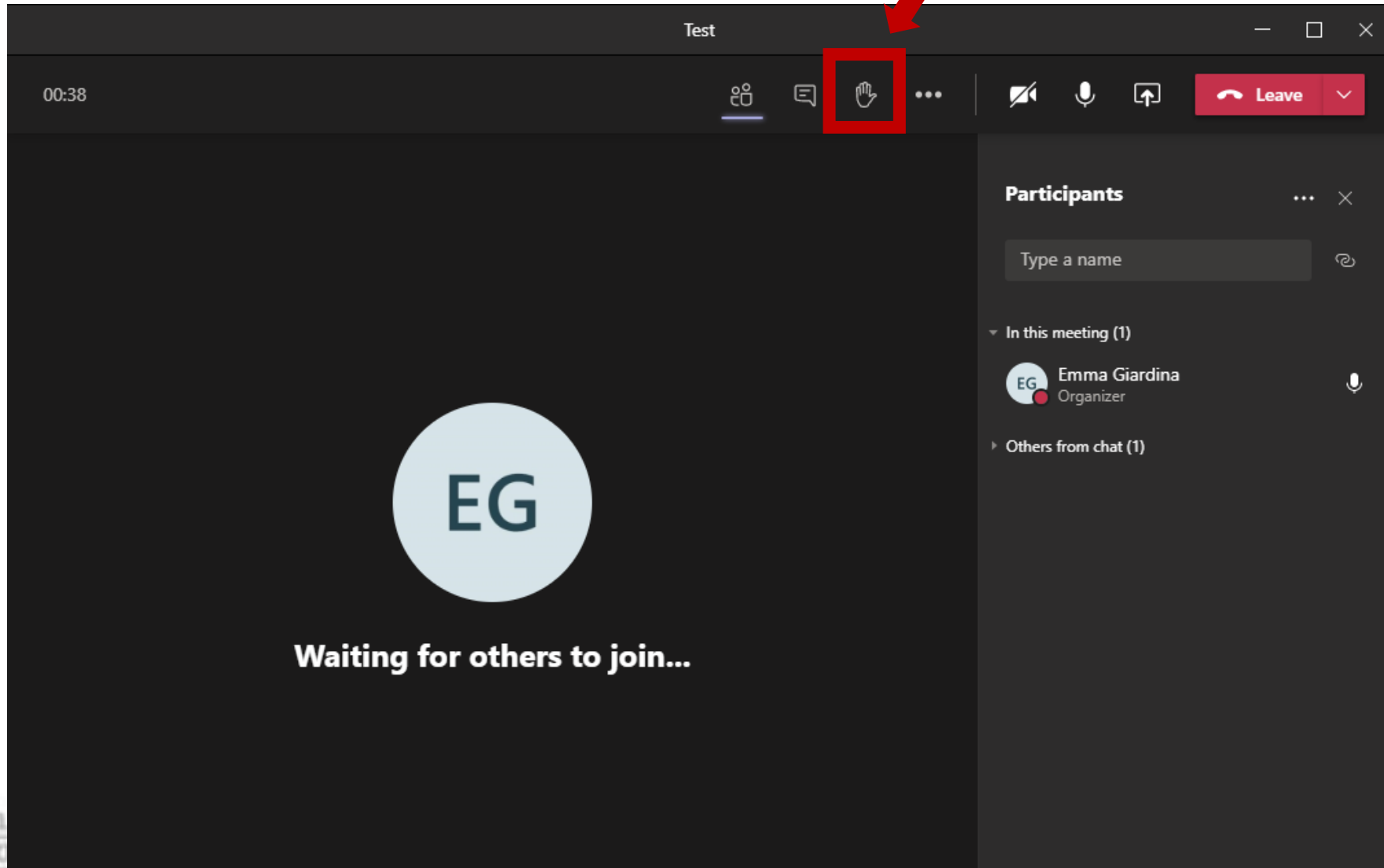
# Microsoft Teams

Microphone On/Off



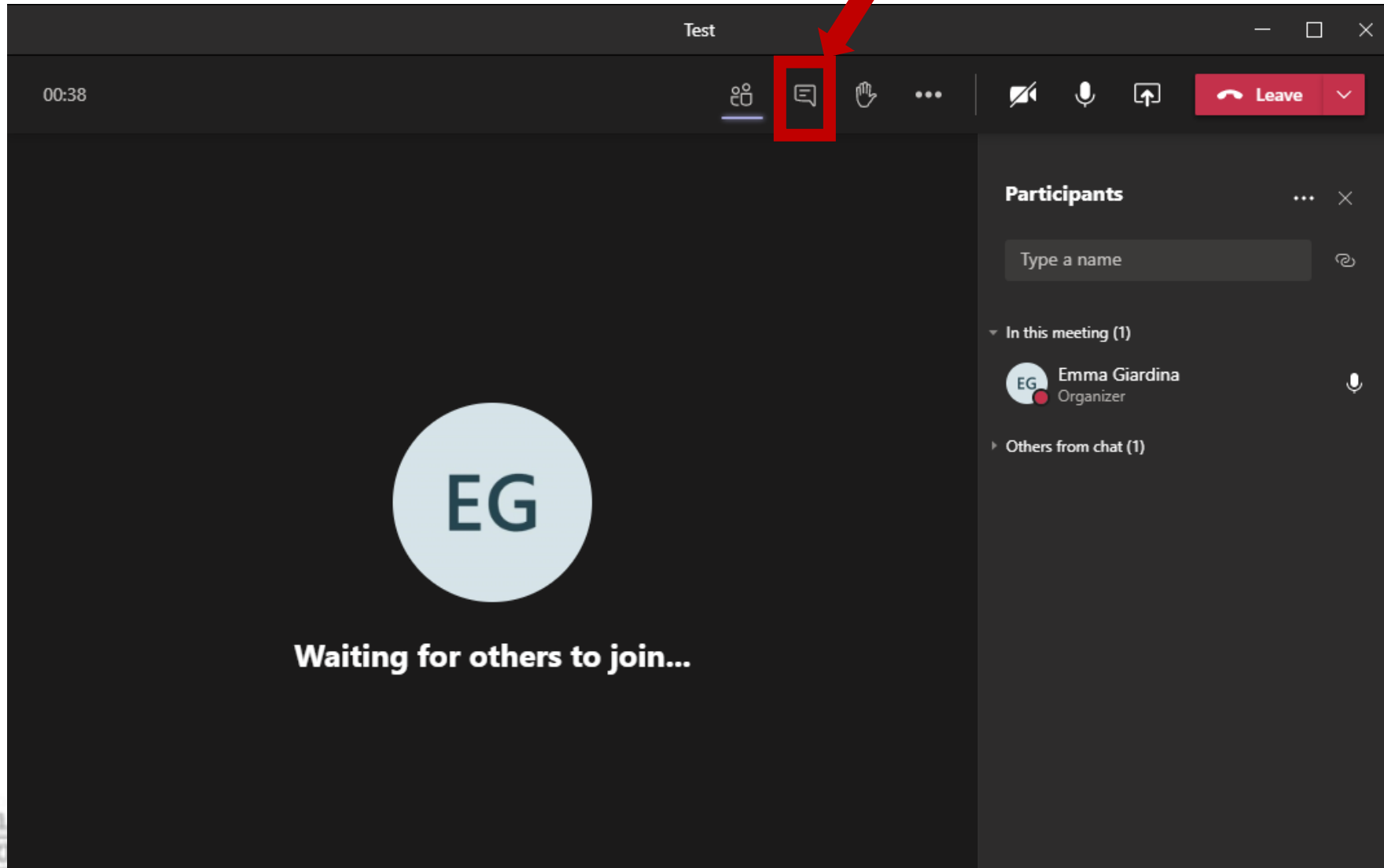
# Microsoft Teams

Raise Hand Feature



# Microsoft Teams

Chat Box Window





# Introductions



# The Hazard Mitigation Plan 2022 Update Mitigation Strategy Workshop

## Agenda, 11/19/2021

1. Introductions
2. Hazard Mitigation Plan – Overview and Context
3. Defining Mitigation
4. Review and Discuss: Mitigation Goals and Objectives
5. Break
6. Facilitated Group Q&A: Priorities for the 2022 Hazard Mitigation Plan
7. Overview of mitigation action prioritization
8. Next steps and upcoming events



# What is a hazard mitigation plan?

- **Hazard mitigation** is defined as sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards



Office of Emergency Management  
City of Philadelphia

*City of Philadelphia*  
*All Hazard Mitigation Plan*

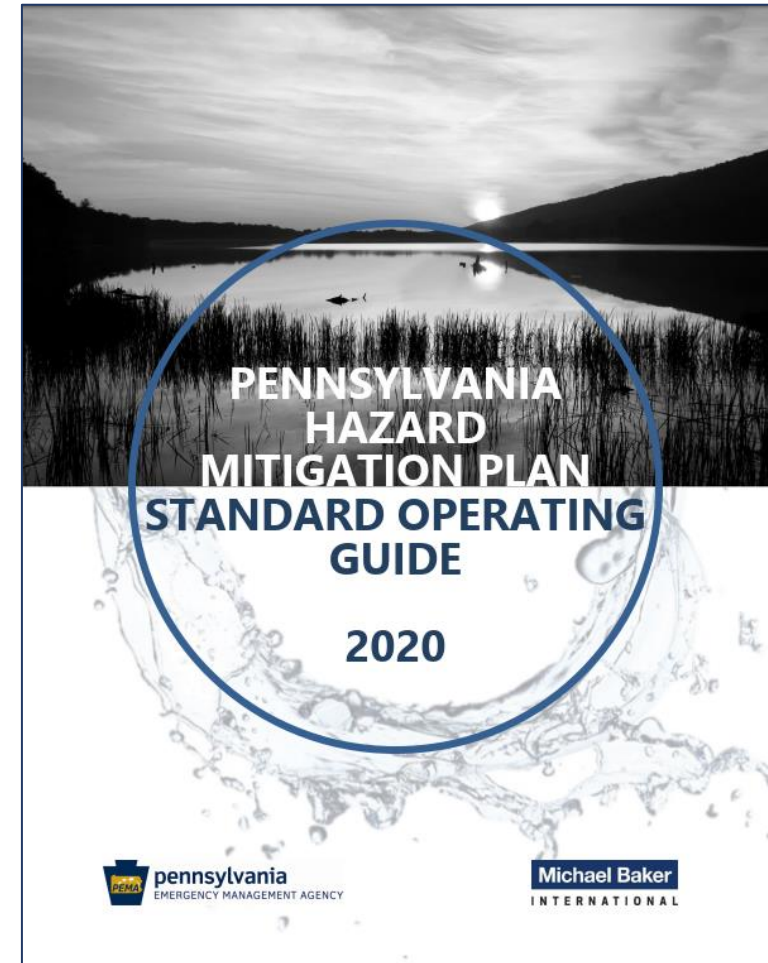
# Role of 2022 Update

- Consider what has changed.
- How have disasters impacted City?
- What has been accomplished?
- Where have there been challenges?
- What do we want to doing moving forward?



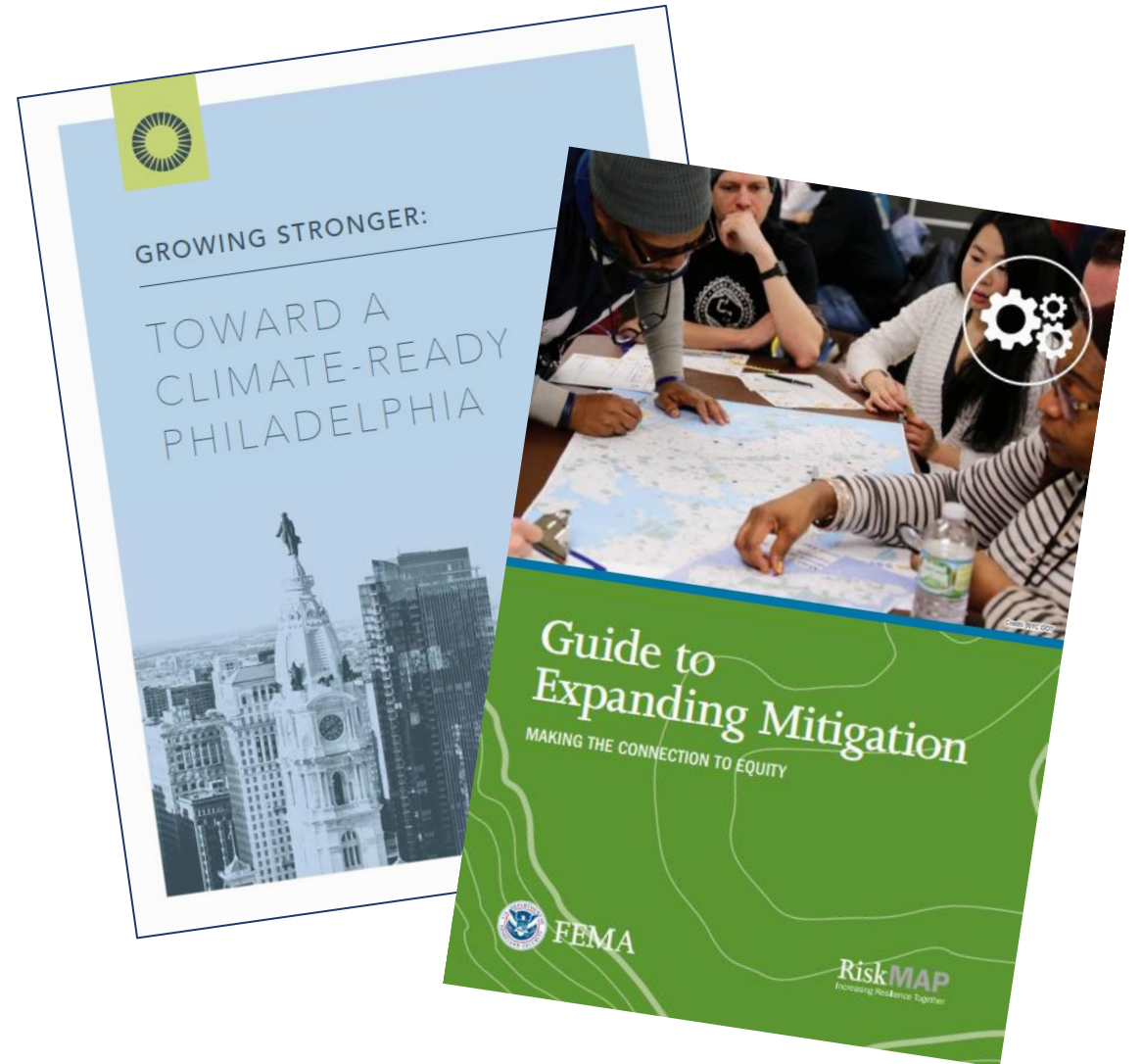
# Following PA HMP SOG

1. Introduction
2. Community Profile
3. Planning Process
4. Risk Assessment
5. Capability Assessment
6. **Mitigation Strategy**
7. Plan Maintenance
8. Plan Adoption



# 2022 Update Priorities

- Equity
- Climate Change
- Plan Integration



# The Planning Process



NLT: May 25, 2022



**We are here**

Date: November 2021





# Final List of Hazards for 2022 Update

*Proposed new hazards in green*

## Natural Hazards

- Drought
- Earthquake
- Extreme Temperature
- Flood, Flash Flood, Ice Jam
- Hurricane, Tropical Storm, Nor'easter
- **Pandemic and Infectious Disease**
- **Subsidence, Sinkhole**
- Tornado, Windstorm
- Winter Storm

## Human-made Hazards

- Building and Structure Collapse
- **Civil Disturbance**
- **Cyber Terrorism**
- Dam Failure
- Hazardous Materials Release
- **Opioid Addiction Response**
- Urban Fire and Explosion
- **Criminal Activity**
  - Active Assailant
  - **Gun Violence**
  - Improvised Explosive Device (IED)



# What is the Mitigation Strategy?

- **Mitigation Goals and Objectives:** “The hazard mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards”
  - **Goals** are general guidelines that describe what your community would live to achieve
  - **Objectives** define strategies that must be implemented to achieve the identified goals.



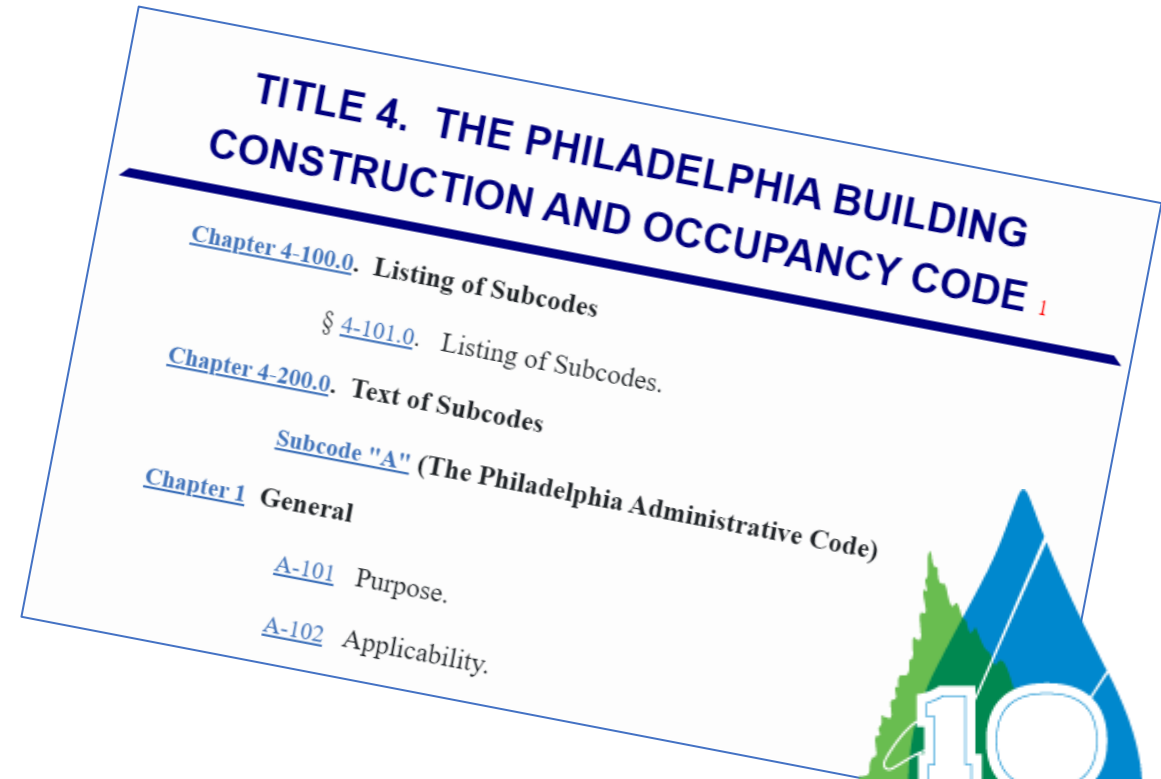
# What is the Mitigation Strategy?

- **Mitigation Actions:** “A mitigation strategy shall include a section that identifies a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.”
  - To be eligible for FEMA funding via the HMP, it should be included as a mitigation action



# Local plans and regulations

- These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built. Examples include comprehensive plans, land use ordinances, NFIP and CRS, building codes, stormwater management, capital improvement programs.



Green City Clean Waters



# Structure and infrastructure

- These actions include modifying existing structures and infrastructure or constructing new structures to reduce hazard vulnerability. Examples include acquisitions and elevations of flood prone structures, floodwalls and retaining walls, and bridges and culverts.





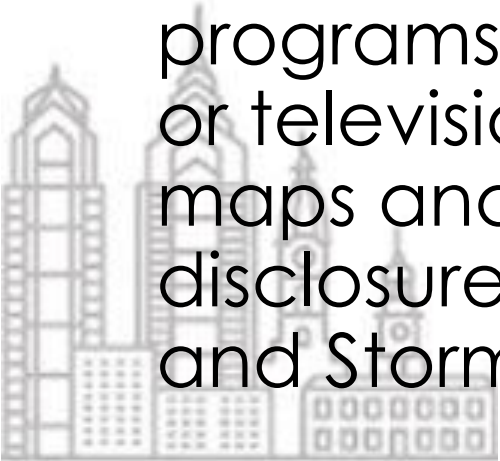
# Natural systems protections

- These actions minimize damage and losses and also preserve or restore the functions of natural systems. Examples include sediment and erosion control, stream corridor restoration, and wetland restoration and preservation.



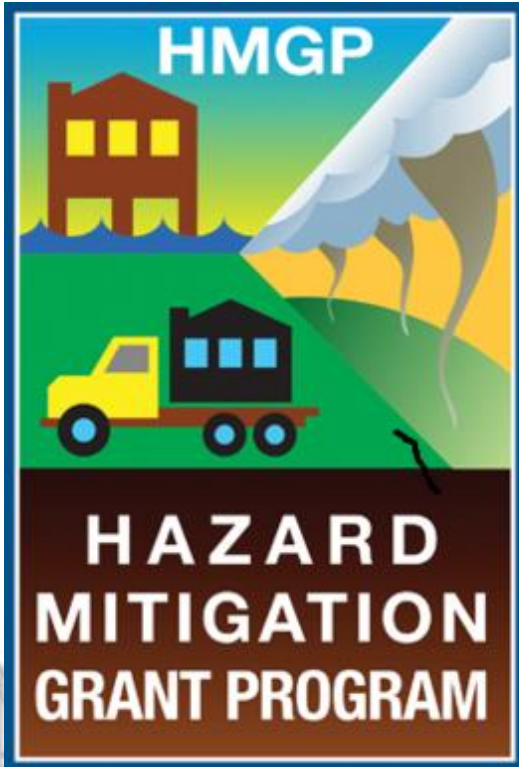
# Education and awareness

- These actions inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them and may also include participation in national programs. Examples include radio or television spots, websites with maps and information, real estate disclosure, training, NFIP outreach, and StormReady.





# What does FEMA fund?



# What does FEMA HMA fund?

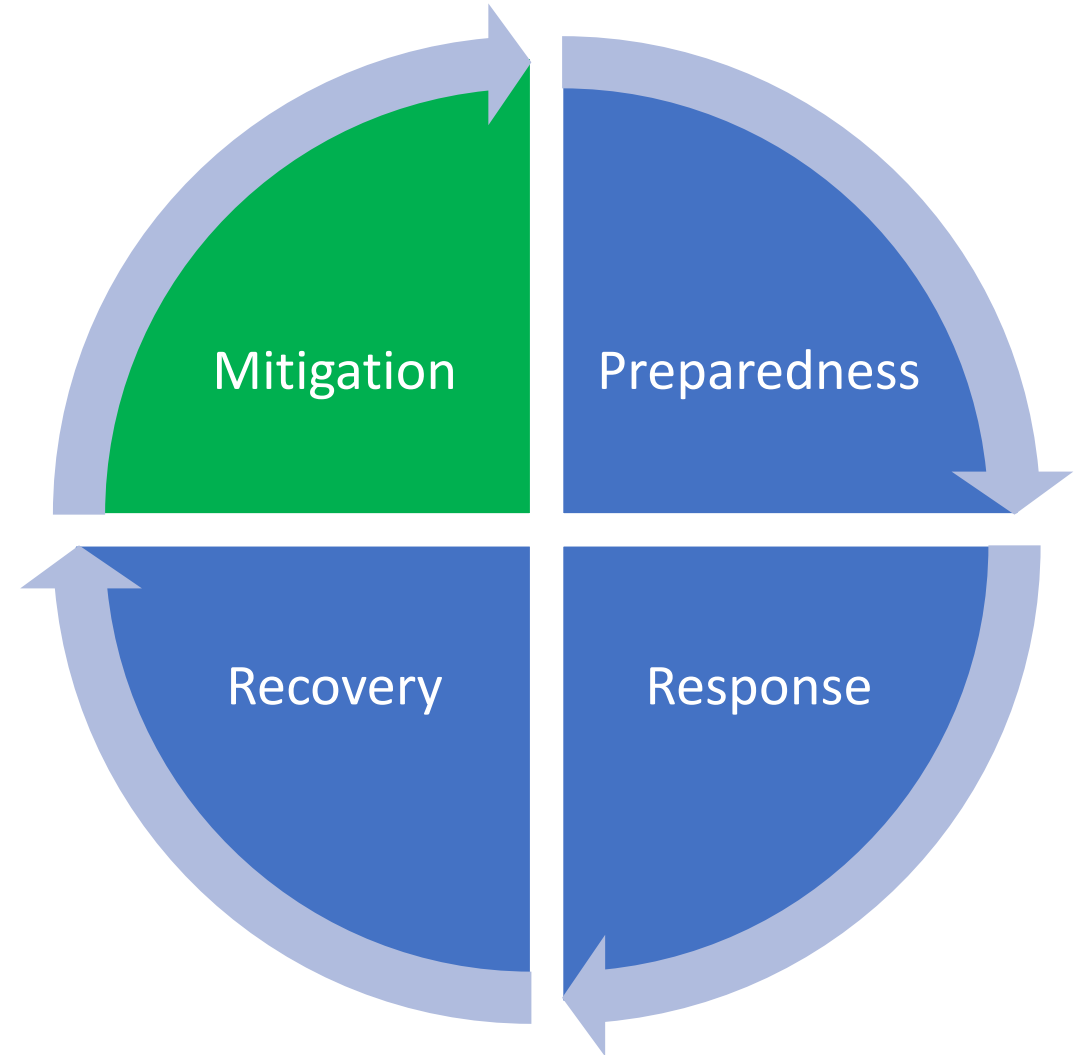
- Everything discussed so far...
- Generators
- Soil Stabilization
- Post-disaster code enforcement
- Advanced Assistance
- Planning



| Eligible Activities  | HMGP | PDM | FMA |
|--|------|-----|-----|
| <b>1. Mitigation Projects</b>                                    | ✓    | ✓   | ✓   |
| Property Acquisition and Structure Demolition                    | ✓    | ✓   | ✓   |
| Property Acquisition and Structure Relocation                    | ✓    | ✓   | ✓   |
| Structure Elevation  | ✓    | ✓   | ✓   |
| Mitigation Reconstruction  | ✓    | ✓   | ✓   |
| Dry Floodproofing of Historic Residential Structures             | ✓    | ✓   | ✓   |
| Dry Floodproofing of Non-residential Structures                  | ✓    | ✓   | ✓   |
| Generators   | ✓    | ✓   |     |
| Localized Flood Risk Reduction Projects                          | ✓    | ✓   | ✓   |
| Non-localized Flood Risk Reduction Projects                      | ✓    | ✓   |     |
| Structural Retrofitting of Existing Buildings                    | ✓    | ✓   | ✓   |
| Non-structural Retrofitting of Existing Buildings and Facilities | ✓    | ✓   | ✓   |
| Safe Room Construction   | ✓    | ✓   |     |
| Wind Retrofit for One- and Two-Family Residences                 | ✓    | ✓   |     |
| Infrastructure Retrofit  | ✓    | ✓   | ✓   |
| Soil Stabilization   | ✓    | ✓   | ✓   |
| Wildfire Mitigation  | ✓    | ✓   |     |
| Post-Disaster Code Enforcement                                   | ✓    |     |     |
| Advance Assistance   | ✓    |     |     |
| 5 Percent Initiative Projects                                    | ✓    |     |     |
| Miscellaneous/Other <sup>(1)</sup>                               | ✓    | ✓   | ✓   |
| <b>2. Hazard Mitigation Planning</b>                             | ✓    | ✓   | ✓   |
| Planning Related Activities                                      | ✓    |     |     |
| <b>3. Technical Assistance</b>                                   |      |     | ✓   |
| <b>4. Management Cost</b>  | ✓    | ✓   | ✓   |

# Focusing on mitigation actions

- **Hazard mitigation** is defined as sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards



# How to submit a mitigation action

- Return to form to Emma Giardina [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) at Philadelphia OEM and Alma Siulagi [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) at WSP.



## Philadelphia Mitigation Action Form

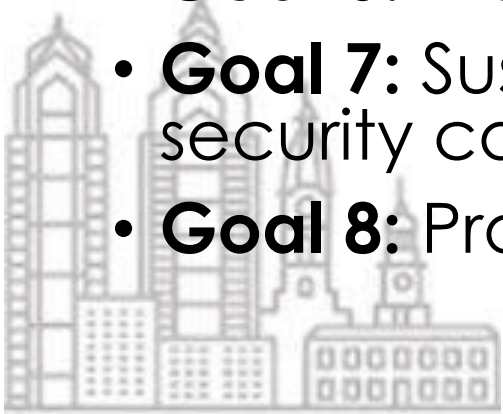
Please gather the following information to inform new mitigation actions in the 2022 plan update. Fill in what you know. It is OK not to have all the information available yet. Asterisks cells are required.

| Mitigation Action Form   |  |   |
|--------------------------|--|---|
| Name *                   |  |   |
| Title *                  |  |   |
| Organization *           |  |   |
| Email *                  |  |   |
| Action *                 |  |   |
| Mitigation Category      | <input type="checkbox"/> Local plans & regulations<br><input type="checkbox"/> Structure & infrastructure projects<br><input type="checkbox"/> Natural systems protection  | <input type="checkbox"/> Education & awareness programs<br><input type="checkbox"/> Human-caused hazard casualty reduction  |
| Hazard                   | <input type="checkbox"/> Drought<br><input type="checkbox"/> Earthquake<br><input type="checkbox"/> Extreme Temperature<br><input type="checkbox"/> Flood, Flash Flood, Ice Jam<br><input type="checkbox"/> Hurricane, Tropical Storm, Nor'easter<br><input type="checkbox"/> Pandemic and Infectious Disease<br><input type="checkbox"/> Subsidence, Sinkhole<br><input type="checkbox"/> Tornado, Windstorm<br><input type="checkbox"/> Winter Storm | <input type="checkbox"/> Building and Structure Collapse<br><input type="checkbox"/> Civil Disturbance<br><input type="checkbox"/> Criminal Activity<br><input type="checkbox"/> Cyber Terrorism<br><input type="checkbox"/> Dam Failure<br><input type="checkbox"/> Hazardous Materials Release<br><input type="checkbox"/> Opioid Addiction Response<br><input type="checkbox"/> Urban Fire and Explosion<br><input type="checkbox"/> All Hazards |
| Lead Agency *            |  |   |
| Champion                 |  |   |
| Implementation Schedule  |  |   |
| Key Implementation Steps |  |   |
| Estimated Project Cost   |  |   |
| Funding Source           |  |   |
| Priority                 |  |   |

Return to form to Emma Giardina [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) at Philadelphia OEM and Alma Siulagi [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) at WSP.

# Review & Discuss: 2017 Mitigation Goals

- **Goal 1:** Sustain and enhance public safety, health, and security capabilities.
- **Goal 2:** Protect property.
- **Goal 3:** Protect the natural environment.
- **Goal 4:** Promote a sustainable economy.
- **Goal 5:** Sustain and strengthen all hazards preparedness.
- **Goal 6:** Protect historical and cultural assets.
- **Goal 7:** Sustain and enhance communications and network security capabilities.
- **Goal 8:** Protect critical infrastructure.



# Review & Discuss: Proposed 2022 Mitigation Goals

- **Goal 1:** Protect all life and reduce risks that exacerbate inequities in health and safety.
- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
- **Goal 3:** Foster an economy that promotes mitigation and reduces impacts from hazards.
- **Goal 4:** Restore the natural ecology.
- **Goal 5:** Create awareness and demand for mitigation as a standard of practice.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 1:** Protect all life and reduce risks that exacerbate inequities in health and safety.
  - **Objective 1.1:** Develop and implement strategies to reduce public risk to natural hazards and human caused threats and hazards.
  - **Objective 1.2:** Prioritize mitigation actions that affect vulnerable populations.





# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
  - **Objective 2.1:** Implement projects and programs that property protection against flooding.
  - **Objective 2.2:** Assess vulnerability of infrastructure to identify where to prioritize mitigation actions.
  - **Objective 2.3:** Develop and implement mitigation programs and strategies that protect critical facilities and services.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
  - **Objective 2.4:** Integrate hazard and risk information into land use planning decisions.
  - **Objective 2.5:** Promote post-disaster mitigation as part of restoration, recovery, and resilience building.
  - **Objective 2.6:** Repair, restore, and maintain existing infrastructure.
  - **Objective 2.7:** Identify, plan for, and protect historic properties and cultural resources.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 3:** Foster an economy that promotes mitigation and reduces impacts from hazards.
  - **Objective 3.1:** Prioritize mitigation strategies that support the continuation of critical business operations during and following a disaster.
  - **Objective 3.2:** Sustain, promote, and enhance partnerships with external public and private entities to identify and share resources.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 4:** Restore the natural ecology.
  - **Objective 4.1:** Promote nature-based solutions to manage stormwater and reduce the impacts of flooding.
  - **Objective 4.2:** Support project that address water holistically including water quality, stormwater management, and flood mitigation.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 4:** Restore the natural ecology.
  - **Objective 4.3:** Restore tree canopy, wetlands, and other natural features native to Philadelphia prioritizing environmental justice communities.
  - **Objective 4.4:** Support the transition away from fossil fuels and other greenhouse gases that impact health and safety and exacerbate climate change.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 5:** Create awareness and demand for mitigation as a standard of practice.
  - **Objective 5.1:** Tailor mitigation training to public officials, business, organizations, and the public.
  - **Objective 5.2:** Improve existing and put in place necessary warning systems.



# Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 5:** Create awareness and demand for mitigation as a standard of practice.
  - **Objective 5.3:** Increase public's awareness of hazards, mitigations, and protective measures, including those related to the projected impacts of climate change.
  - **Objective 5.4:** Continue and expand coordination efforts to plan for cross-agency mitigation efforts.





**Break (10 mins)**



# Facilitated Group Q&A

## Mitigation Priorities for the 2022 HMP

- **Question 1:** What is your organization's top **new** mitigation priority since the 2017 HMP?
- **Question 2:** What is your organization's top **ongoing** mitigation action? This mitigation action would have been included in the 2017 HMP.
- **Question 3:** What mitigation actions should be the **top priority** in the HMP?



# Next Steps

- Submit your mitigation action by November 30<sup>th</sup>!



# City of Philadelphia Hazard Mitigation Plan

## Mitigation Strategy Workshop



**Date:** November 19<sup>th</sup> from 10:30-12:30pm

**Location:** Virtual, Microsoft Teams

### Notes:

#### 1. Hazard Mitigation Plan 2022 Update Overview and Context

- a. Hazard Mitigation is a sustained action taken to reduce or eliminate long-term risk to human life and property from hazards
- b. Priorities for the 2022 update include: Equity, climate change, and plan integration
- c. WSP reviewed progress made on the plan to date, and next steps in the planning process
- d. Mitigation goals and objectives
  - i. Goals: General guidelines that describe what your community would like to achieve
  - ii. Objectives: define strategies that must be implemented to achieve the identified goals
- e. The *Mitigation Strategy* identifies a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing building and infrastructure.
- f. Mitigation actions fall into 5 categories:
  - i. Local Plans and Regulations
  - ii. Structure and Infrastructure
  - iii. Natural Systems Protections
  - iv. Education and Awareness
  - v. Human-Caused Casualty Reduction

#### 2. Review and Discuss: Mitigation Goals and Objectives

- a. WSP reviewed each of the revised 2022 Mitigation Goals and Objectives.
- b. Feedback from the group included:
  - i. Populations vulnerability to disaster should be defined in the plan
  - ii. Climate adaptation should be specifically mentioned in the goals and objectives
  - iii. Language around accessibility should be included in the goals and objectives to ensure it remains a priority in project identification
  - iv. Preserving land that is not developed should be a priority
- c. WSP and OEM will meet with the Steering Committee in December to finalize goals and objectives based on the groups feedback today.

#### 3. Facilitated Group Question and Answer

- a. WSP, Inc led an interactive group discussion to on mitigation priorities for the 2022 Hazard Mitigation Plan

b. Discussion was recorded in real time using Mural Board. See screenshots of the Mural board below.

## Question 1

What is your organization's **top new mitigation priority** since the 2017 HMP?

### Local Plans & Regulations

- Disinvest from flood-prone areas where possible
- Align public incentives, subsidies with hazard assessment
- Transmission Main Master Planning for Resiliency and Redundancy
- Drought Contingency Plan
- Water & Wastewater Master Planning
- Plan for resiliency for trail development in floodplain
- How to build better with flood resiliency but still with a historic preservation view built in
- Development of a Regional Supply Chain Resiliency Plan
- Continue to build out OEM's emergency preparedness programming with a focus on reaching populations most at risk
- Ensure ADA access throughout mitigation strategies

### Structure and Infrastructure

- Hardening of public safety facilities where they must be in flood areas
- Flood mitigation to protect critical assets and ensure continuity of service
- Water and wastewater facility based on risk & resiliency assessments on Tidal Delaware
- Better protect PPR assets from future flooding damage
- Keep facilities up and running as long as possible
- Repair any damage as quickly as possible to those facilities
- Redesign facilities to prevent future flooding
- Building Automation Systems for greener buildings/energy reduction

### Natural Systems Protections

- Green stormwater infrastructure
- Protect our trails
- Existing and future trails

### Education and Awareness

- Regular, public briefings to elected officials and Commissions
- Continue to build out OEM's Alert and Warning Capabilities, including a robust public information campaign
- Coordinate city and state agencies on current flood risk measurements/forecasts
- Explore the role of City as convener for major landholders to coordinate development and mitigation efforts

## Question 2

What is your organization's **top ongoing mitigation priority**? This mitigation action would have been included in the 2017 HMP.

### Local Plans & Regulations

- Ongoing stormwater management programs
- Update zoning and land use plans
- Incorporating mitigation actions into capital planning and budgeting process

### Structure and Infrastructure

- Assess hardening efforts for public safety facilities in flood prone areas

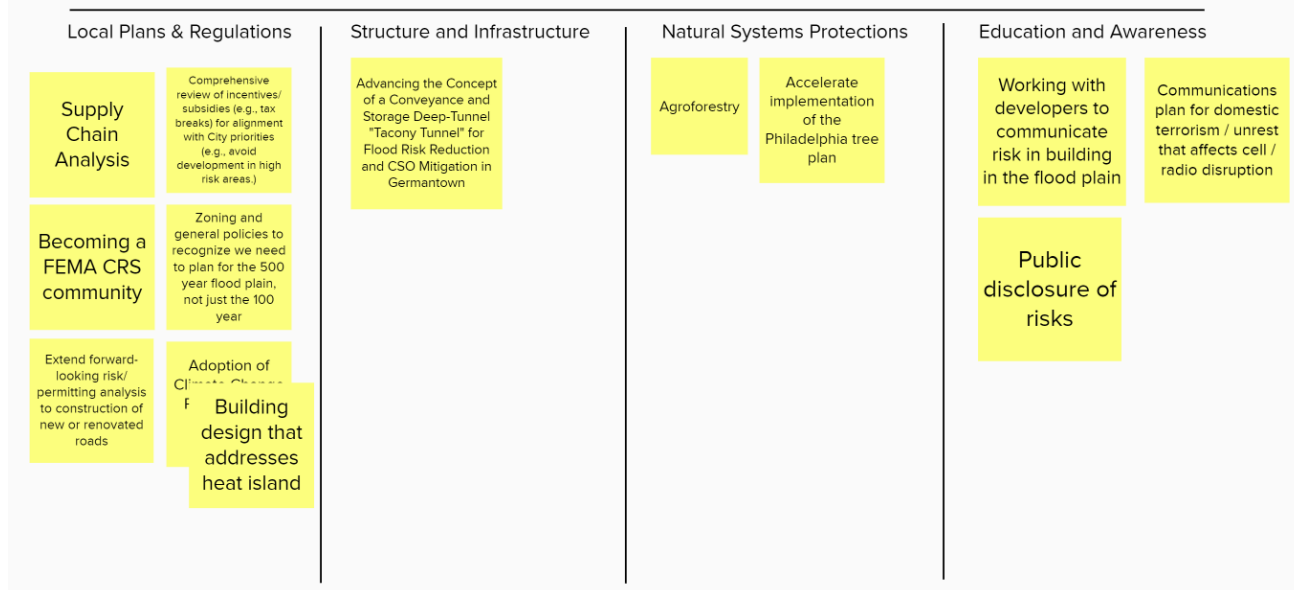
### Natural Systems Protections

### Education and Awareness

- Maintaining datasets that let us know what is in the flood zone
- Support work of the Flood Risk Management Task Force
- OEM's READYPhiladelphia emergency preparedness/mitigation workshop
- Public flood awareness efforts
- Reaching out consistently to citizens to encourage sign ups for email/text alerts
- Multi-county/multi-state Delaware/Schuylkill Valley hazards review
- Continue safe distancing policy and data review

### Question 3

What mitigation actions should be the **top priorities for the 2022 HMP?**



#### 4. Next steps

- The group was reminder to submit any new mitigation actions for their organization prior to November 30<sup>th</sup> via the Mitigation Action Form circulated prior to this meeting.
- The next meeting will occur in January/February 2022 to review the final draft of the plan.

The meeting concluded at 12:25pm.

## Mitigation Strategy Workshop

Date: November 19, 2021 from 10:30am-12:30pm

Location: Microsoft Teams



| Name              | Title                                      | Organization                          | Email  |
|-------------------|--|---------------------------------------|--|
| Emma Giardina     | Hazard Planning Coordinator                | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>         |
| Carolyn Caton     | Infrastructure Program Manager             | Philadelphia OEM                      | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>         |
| Zorina Morton     | Infrastructure Planning Coordinator        | Philadelphia OEM                      | <a href="mailto:Zorina.Morton@phila.gov">Zorina.Morton@phila.gov</a>         |
| David Natale      | Health and Human Services Program Manager  | Philadelphia OEM                      | <a href="mailto:David.Natale@phila.gov">David.Natale@phila.gov</a>           |
| Nicola Mammes     | Regional Preparedness Program Manager      | Philadelphia OEM                      | <a href="mailto:Nicola.Mammes@phila.gov">Nicola.Mammes@phila.gov</a>         |
| Alyssa Fico       | GIS Program Lead                           | Philadelphia OEM                      | <a href="mailto:Alyssa.Fico@phila.gov">Alyssa.Fico@phila.gov</a>             |
| Sarah Bowen       | Planning & Environmental Manager           | WSP, Inc                              | <a href="mailto:Sarah.K.Bowen@wsp.com">Sarah.K.Bowen@wsp.com</a>             |
| Alma Siulagi      | Senior Planner                             | WSP, Inc                              | <a href="mailto:Alma.Siulagi@wsp.com">Alma.Siulagi@wsp.com</a>               |
| Ariella Maron     |  | Lion Advisors                         | <a href="mailto:Ariella@lionadvisorsllc.com">Ariella@lionadvisorsllc.com</a> |
| Jessica Caum      | Public Health Preparedness Program Manager | PDPH                                  | <a href="mailto:Jessica.Caum@phila.gov">Jessica.Caum@phila.gov</a>           |
| Molly Mattes      | Public Health Preparedness Coordinator     | PDPH                                  | <a href="mailto:Molly.Mattes@phila.gov">Molly.Mattes@phila.gov</a>           |
| Liam Dougherty    | AFN Coordinator                            | PDPH                                  | <a href="mailto:Liam.Dougherty@phila.gov">Liam.Dougherty@phila.gov</a>       |
| Saleem Chapman    | Chief Resilience Officer                   | OOS                                   | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>       |
| Cheyenne Flores   | Climate Resiliency                         | OOS                                   | <a href="mailto:Cheyenne.Flores@phila.gov">Cheyenne.Flores@phila.gov</a>     |
| Ceena Jenkins     | Disability Integration                     | PA DHS                                | <a href="mailto:cejenkins@pa.gov">cejenkins@pa.gov</a>                       |
| Terra Luke        | GIS Analyst                                | DPP                                   | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>               |
| Richard Quodomine | Senior Lead GIS Analyst                    | DPP                                   | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a> |
| Joe Misko         |  | DPP                                   | <a href="mailto:Joseph.Misko@phila.gov">Joseph.Misko@phila.gov</a>           |
| Lt. Brian Gress   | Lieutenant                                 | PPD-CTO                               | <a href="mailto:Brian.Gress@phia.gov">Brian.Gress@phia.gov</a>               |
| Steve Lorenz      | Chief Highway Engineer                     | Street Department                     | <a href="mailto:Stephen.Lorenz@phila.gov">Stephen.Lorenz@phila.gov</a>       |
| Lt. Michael Kirby | Planning                                   | PFD                                   | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>         |
| Roger Tenant      | Park Manager 2                             | PPR                                   | <a href="mailto:Roger.TenantJr@phila.gov">Roger.TenantJr@phila.gov</a>       |
| Joshua Bell       | Operations & Landscape Management          | PPR                                   | <a href="mailto:Joshua.Bell@phila.gov">Joshua.Bell@phila.gov</a>             |
| Liz Johnson       | Urban Conservation Strategy Lead           | The Nature Conservancy                | <a href="mailto:Elizabeth_Johnson@tnc.org">Elizabeth_Johnson@tnc.org</a>     |
| Ellis Foley       | Environmental Planner                      | Montgomery County Planning Commission | <a href="mailto:Efoley@montcopa.org">Efoley@montcopa.org</a>                 |





## Emma Giardina

---

**From:** Emma Giardina  
**Sent:** Friday, October 22, 2021 11:59 AM  
**Cc:** Siulagi, Alma; sarah.k.bowen@wsp.com  
**Subject:** Hazard Mitigation Plan - Mitigation Strategy Update  
**Attachments:** Philadelphia Mitigation Action Form.docx; Fact Sheet\_Identifying Mitigation Actions.pdf; Hazards\_2022HMP.pdf

Good afternoon,

Thank you to everyone who attended our mitigation action brainstorming sessions this past week in support of the 2022 All-Hazard Mitigation Plan update! This November and December, we will be updating the **Mitigation Strategy** which includes identifying and prioritizing hazard mitigation actions to include in the plan. A **mitigation action** is a project, plan, or policy that reduces or eliminates long-term risk to people and property from hazards and their impacts. Attached to this email is a fact sheet with more information on how to identify GREAT mitigation actions and why it's important to make sure your projects are included in this plan.

### **Call for Mitigation Actions!**

If your agency or organization has NEW mitigation actions to include in Philadelphia's 2022 All-Hazard Mitigation Plan, please fill out the attached **Philadelphia Mitigation Action Form**.

- Please complete one form per mitigation action.
- Forms are not required for mitigation actions already included in the [2017 All-Hazard Mitigation Plan](#) (see page 293) or in recent plan amendments. There will be an opportunity to provide updates on those actions at a later date.
- Actions that you identify can be led by your agency/organization or actions that you are working on with other partners.
- Equipment purchases and emergency response actions are NOT considered mitigation actions and should not be included in your list of actions. Actions should focus on long-term risk reduction.
- Forms are due back to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) and [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) no later than **Tuesday, November 30<sup>th</sup>**.

### **What's Next?**

This is all leading up to our November 19<sup>th</sup> **Mitigation Strategy Workshop** which you can **register for [here](#)**.

### **Have more questions?**

If you are unsure whether a project qualifies as a good mitigation action or you need help brainstorming mitigation action ideas, please do not hesitate to reach out .

Thank you for your support throughout this plan update!

Sincerely,

**Emma Giardina**  
Hazard Planning Coordinator  
Philadelphia Office of Emergency Management  
D: 215-683-3251  
C: 267-239-1564

Ready, or Not? Learn what to have in your home, hand and head.  
Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311

# Identifying Mitigation Projects for the 2022 All-Hazard Mitigation Plan

## Q: What is a Mitigation Action?

**A:** A mitigation action is a project, plan or policy that reduces or eliminates long-term risk to people and property from hazards and their impacts. Actions that you identify can be led by your agency, or actions that you are working on in collaboration with other partners.

There are several types of mitigation actions identified in the Hazard Mitigation Plan:

**Local Plans and Regulations:** These actions include plans, ordinances, policies, and regulations that influence the way land and buildings are built and developed.

**Structure and Infrastructure Projects:** 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 crucial facilities and infrastructure. This type of action also includes the construction of manmade structures to reduce impacts to hazards.

**Natural Systems Protection:** These actions aim to minimize damage and losses by preserving or restoring the functions of natural systems.

**Education and Awareness Programs:** These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

**Human-Caused Hazard Casualty Reduction:** These actions aim to reduce injuries and loss of life resulting from human-caused hazards by increasing local protection and detection capabilities.

## Q: What makes a good mitigation action?

**A:** Some factors to think about when identifying good mitigation actions include:

- **Feasibility:** The action can be reasonably accomplished within the next 5-10 years.
- **Effectiveness:** The action has a proven ability to reduce risk to one or more hazards identified in the Hazard Mitigation Plan. The implementation of this action will not inadvertently increase hazard risk in other areas.
- **Equity:** Considers the whole community, with a focus on reducing risk to populations disproportionately impacted by disasters in Philadelphia.
- **Critical facilities, infrastructure & systems:** Mitigation actions that reduce risk to critical facilities, infrastructure or systems are prioritized for mitigation funding opportunities like BRIC, FMA and HMGP.



## **Q: Why include your mitigation actions in the plan?**

### **A: Raise awareness and generate buy-in**

The plan showcases what we are already doing as a City to reduce hazard risk, but it also provides us with the opportunity to feature “wish-list” items. These are mitigation projects that we’d like to implement as a City if we have the proper funding, buy-in and resources. Inclusion of your project in this plan raises awareness with City Council, City Leadership, State and Federal partners, and even private partners, which could potentially help generate more buy-in and open opportunities for collaboration.

### **Funding Opportunities**

Projects included in the hazard mitigation plan are potentially eligible for FEMA’s post-disaster and pre-disaster mitigation funding opportunities such as BRIC, FMA and HMGP. Through this plan update, we also hope to build out a menu of other available funding opportunities for the projects identified in our plan.

### **Partnership Opportunities**

The hazard mitigation planning process includes a wide array of stakeholders. Being involved in the planning process and identifying mitigation actions opens up opportunities for partnerships where goals and objectives align.

## **Q: What’s Next?**

**A:** This is all leading up to our November 19<sup>th</sup> Mitigation Strategy workshop which you can register for [here](#).

## **Other Available Resources**

[Mitigation Action Portfolio](#), FEMA, 2020

[Mitigation Ideas](#), FEMA, 2013

[Building Community Resilience with Nature-Based Solutions](#), June 2021

[FY 2020 BRIC Competitive Project Selections](#)

[Floodplain Management and Mitigation Success Stories in Pennsylvania](#)

**Questions?** If you are unsure whether a project qualifies as a good mitigation action, please do not hesitate to reach out to OEM’s Hazard Planning Coordinator at [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov).

# Philadelphia Mitigation Action Form

Please gather the following information to inform new mitigation actions in the 2022 plan update. Fill in what you know. It is OK not to have all the information available yet. Asterisks cells are required.

| Mitigation Action Form   |  |  |
|--------------------------|--|--|
| Name *                   |  |  |
| Title *                  |  |  |
| Organization *           |  |  |
| Email *                  |  |  |
| Action *                 |  |  |
| Mitigation Category      | <input type="checkbox"/> Local plans & regulations<br><input type="checkbox"/> Structure & infrastructure projects<br><input type="checkbox"/> Natural systems protection  | <input type="checkbox"/> Education & awareness programs<br><input type="checkbox"/> Human-caused hazard casualty reduction   |
| Hazard                   | <input type="checkbox"/> Drought<br><input type="checkbox"/> Earthquake<br><input type="checkbox"/> Extreme Temperature<br><input type="checkbox"/> Flood, Flash Flood, Ice Jam<br><input type="checkbox"/> Hurricane, Tropical Storm, Nor'easter<br><input type="checkbox"/> Pandemic and Infectious Disease<br><input type="checkbox"/> Subsidence, Sinkhole<br><input type="checkbox"/> Tornado, Windstorm<br><input type="checkbox"/> Winter Storm | <input type="checkbox"/> Building and Structure Collapse<br><input type="checkbox"/> Civil Disturbance<br><input type="checkbox"/> Criminal Activity<br><input type="checkbox"/> Cyber Terrorism<br><input type="checkbox"/> Dam Failure<br><input type="checkbox"/> Hazardous Materials Release<br><input type="checkbox"/> Opioid Addiction Response<br><input type="checkbox"/> Urban Fire and Explosion<br><input type="checkbox"/> <i>All Hazards</i> |
| Lead Agency *            |  |  |
| Champion                 |  |  |
| Implementation Schedule  |  |  |
| Key Implementation Steps |  |  |
| Estimated Project Cost   |  |  |
| Funding Source           |  |  |
| Priority                 |  |  |

Return to form to Emma Giardina [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) at Philadelphia OEM and Alma Siulagi [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) at WSP.

Due to extremely cold conditions, the City is implementing **special measures** to keep people who are homeless safe. If you see someone who needs shelter, call (215) 232-1984.

In effect: 3:00 p.m. on Friday, Jan. 14 until further notice

## COVID-19 vaccine

The vaccine is now available for everyone 5 and older! Get your children vaccinated today. Find a **City-run vaccine clinic** or **partner vaccine clinic** to protect yourself and your loved ones. If you have questions about vaccination, call (215) 685-5488.

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# 2022 Hazard Mitigation Plan Public Review to be Held January 31st

January 18, 2022 | Jeffrey Kolakowski  
**Office of Emergency Management**



The Philadelphia Office of Emergency Management will review the update draft of the City's 2022 Hazard Mitigation Plan (HMP) during an upcoming public meeting.

The HMP identifies natural and human-caused hazards that the city is or may be vulnerable to and outlines mitigation or risk reduction strategies for incidents and events. Every five years, FEMA requires OEM to update the plan. This update, the city's third, is due this year.

**The review meeting, to be held virtually on Zoom Monday, January 31st from 10:30 a.m. to 12 p.m., is open to all planning partners and the public. You can register to view and participate in the meeting by visiting <https://bit.ly/HMPmeeting> on Eventbrite.**

Public and city partner input is encouraged and incorporated in the revision process. The 2022 update has already solicited hundreds of responses from residents through an online survey as well as working with over 80 partners for comment.

Following this workshop, the draft plan will be published on OEM's website for a 30-day public review and comment period. Printed copies will also be available at several to-be-announced Free Library of Philadelphia locations.

Feedback will be documented in the plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then Philadelphia City Council for review prior to approval in the Spring.

More information on The City of Philadelphia's Hazard Mitigation Plan can be found on OEM's HMP [webpage](#) or [blog](#).



## Emma Giardina

---

**From:** Emma Giardina  
**Sent:** Wednesday, December 29, 2021 2:41 PM  
**Subject:** Draft Review Meeting: Philadelphia's 2022 Hazard Mitigation Plan

Good afternoon,

You are invited to attend **Philadelphia's 2022 All-Hazard Mitigation Plan: Final Draft Review Meeting** scheduled for **Monday, January 31<sup>st</sup>** from **10:30am-noon**. Register to attend [HERE](#).

In this meeting, Philadelphia Office of Emergency Management (OEM) will review the City's updated plan for mitigating or reducing risk to natural and human-caused hazards. There will be an opportunity for questions, answers, and feedback from the audience. This virtual meeting will be hosted via Zoom and is open to all planning partners and the public.

**Philadelphia's 2022 All-Hazard Mitigation Plan**  
**Draft Review Meeting**  
Monday, January 31<sup>st</sup>  
10:30am-12:00pm  
Hosted via Zoom  
**Register on Eventbrite [HERE](#)**  
<https://2022hmp.eventbrite.com>

Following this meeting, the plan will be published on [OEM's website](#) for a 30-day public review and comment period. Printed copies will also be available at several Free Library of Philadelphia locations. All questions, comments, and feedback can be directed to OEM's Hazard Mitigation Planner, Emma Giardina at [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) or to [oem@phila.gov](mailto:oem@phila.gov). Feedback will be documented in the plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then City Council for final review and approval.

If you require accommodations for this meeting, please reach out to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) or provide additional details on accommodations required in the Eventbrite registration form prior to Wednesday, January 26th.

Do not hesitate to reach out with any questions or concerns.

Sincerely,

**Emma Giardina**  
Hazard Planning Coordinator  
Philadelphia Office of Emergency Management  
D: 215-683-3251  
C: 267-239-1564

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Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311

# City of Philadelphia Hazard Mitigation Plan



## Draft Review Workshop

**Date:** January 31, 2022 from 10:30am-11:30am

**Location:** Virtual, Zoom

[Recording Available](#)

### Notes:

#### 1. Overview of the Plan and the Planning Process

- a. Emma Giardina, OEM review the purpose of the 2022 All-Hazard Mitigation Plan (HMP), key steps in the planning process and the timeline for the planning process.
  - i. Hazard mitigation planning saves lives, prevents property damage, saves money, establishes funding priorities, builds partnerships, and raises awareness about Philadelphia's greatest hazards.
  - ii. The HMP must be updated every 5 years for the City to remain eligible for FEMA mitigation funding including the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), and Building Resilient Infrastructure & Communities (BRIC).
  - iii. This meeting is the kickoff to the 30-day public review and comment period which will end on March 3, 2022. The Plan will be submitted to PEMA in early March.
  - iv. The Plan must be reviewed and approved by FEMA, and then adopted by City Council prior to the expiration of the 2017 plan on May 25, 2022.

#### 2. Summary of 2022 Updates

- a. Extensive Stakeholder Engagement
  - i. A Steering Committee made up of various subject matter experts throughout the City was formed to guide and facilitate the plan update.
  - ii. Over 80 agencies and organizations were engaged within the last two years of the planning process.
  - iii. OEM offered a variety of different ways for stakeholders to be engaged in a safe way during COVID-19, including virtual presentations, outdoor table events, and radio shows.
- b. Equity as a Grounding Principle
  - i. An accessible, inclusive, and equitable planning process was a priority throughout.
  - ii. This is reflected in updated goals and objectives.
  - iii. Additional information was included throughout the plan on populations disproportionately impacted by hazards in Philadelphia.
  - iv. Equity was added as a new prioritization factor for mitigation actions.
- c. Climate Change Integration
  - i. Updated temperature and precipitation projections were included in the plan.
  - ii. SLR was incorporated in the flooding HAZUS analysis.
  - iii. There was an increased focus on forward-looking mitigation and adaption actions that look at both current and future risk.
- d. Update Hazard List
  - i. Pandemic and Infectious Disease, Subsidence/Sinkhole, Civil Disturbance, Cyber Terrorism, Gun Violence, Opioid Crisis Response, and Terrorism were new hazards added to the 2022 plan.
  - ii. Hazards were chosen based on a review of the State HMP, input from stakeholders, and public survey responses.
  - iii. Recommendations for future development by planning districts was informed for the risk & vulnerability assessment.

- e. Updated Mitigation Strategy
  - i. The 2022 HMP contain 158 projects, plans and policies that will reduce the City's long-term risk to hazards.
  - ii. *Mitigation in Focus* actions are high priority projects the City can focus on implementing over the next 5 years.
- f. Plan Maintenance and Implementation
  - i. OEM is invested in plan implementation between now and the next plan update.

### 3. Next Steps

- a. Timeline:
  - i. 30-day public review period – Ends March 3, 2022
  - ii. Submit plan to PEMA – March 2022
  - iii. Submit plan to FEMA – April 2022
  - iv. Adoption by City Council – May 2022
  - v. 2017 Plan expires – May 25, 2022
- b. Submitting your Feedback
  - i. Comments will be accepted through March 3, 2022
  - ii. View the plan online at [www.phila.gov/ready](http://www.phila.gov/ready) OR in print at several Free Library of Philadelphia locations
  - iii. Submit feedback via the form on our website or by emailing [oem@phila.gov](mailto:oem@phila.gov).

### 4. Questions and Answers


- a. For questions and answered addressed at the workshop, please view our [workshop recording](#).



Philadelphia, PA

## 2022 Hazard Mitigation Plan Public Review to be Held January 31st

By Jeffrey Kolakowski

 Philadelphia, Pennsylvania 6 days ago



The Philadelphia Office of Emergency Management will review the update draft of the City's 2022 Hazard Mitigation Plan (HMP) during an upcoming public meeting.

The HMP identifies natural and human-caused hazards that the city is or may be vulnerable to and outlines mitigation or risk reduction strategies for incidents and events. Every five years, FEMA requires OEM to update the plan. This update, the city's third, is due this year.

**The review meeting, to be held virtually on Zoom Monday, January 31st from 10:30 a.m. to 12 p.m., is open to all planning partners and the public. You can register to view and participate in the meeting by visiting <https://bit.ly/HMPmeeting> on Eventbrite.**

Public and city partner input is encouraged and incorporated in the revision process. The 2022 update has already solicited hundreds of responses from residents through an online survey as well as working with over 80 partners for comment.

Following this workshop, the draft plan will be published on OEM's website for a 30-day public review and comment period. Printed copies will also be available at several to-be-announced Free Library of Philadelphia locations.

Feedback will be documented in the plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then Philadelphia City Council for review prior to approval in the Spring.

More information on The City of Philadelphia's Hazard Mitigation P'

Add comment



# Philadelphia 2022 Hazard Mitigation Plan Draft Review Workshop



**January 31, 2022**  
**10:30am-Noon**



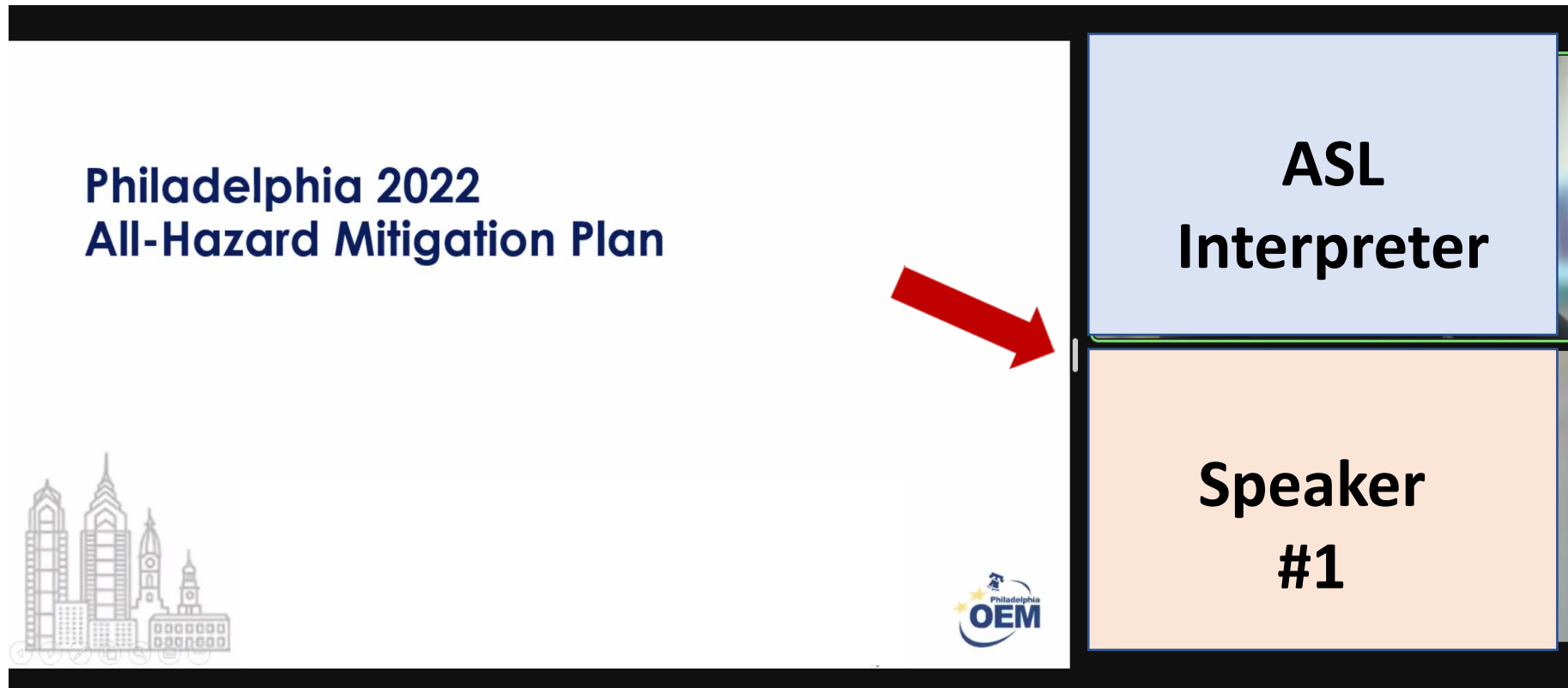


**We will be recording**



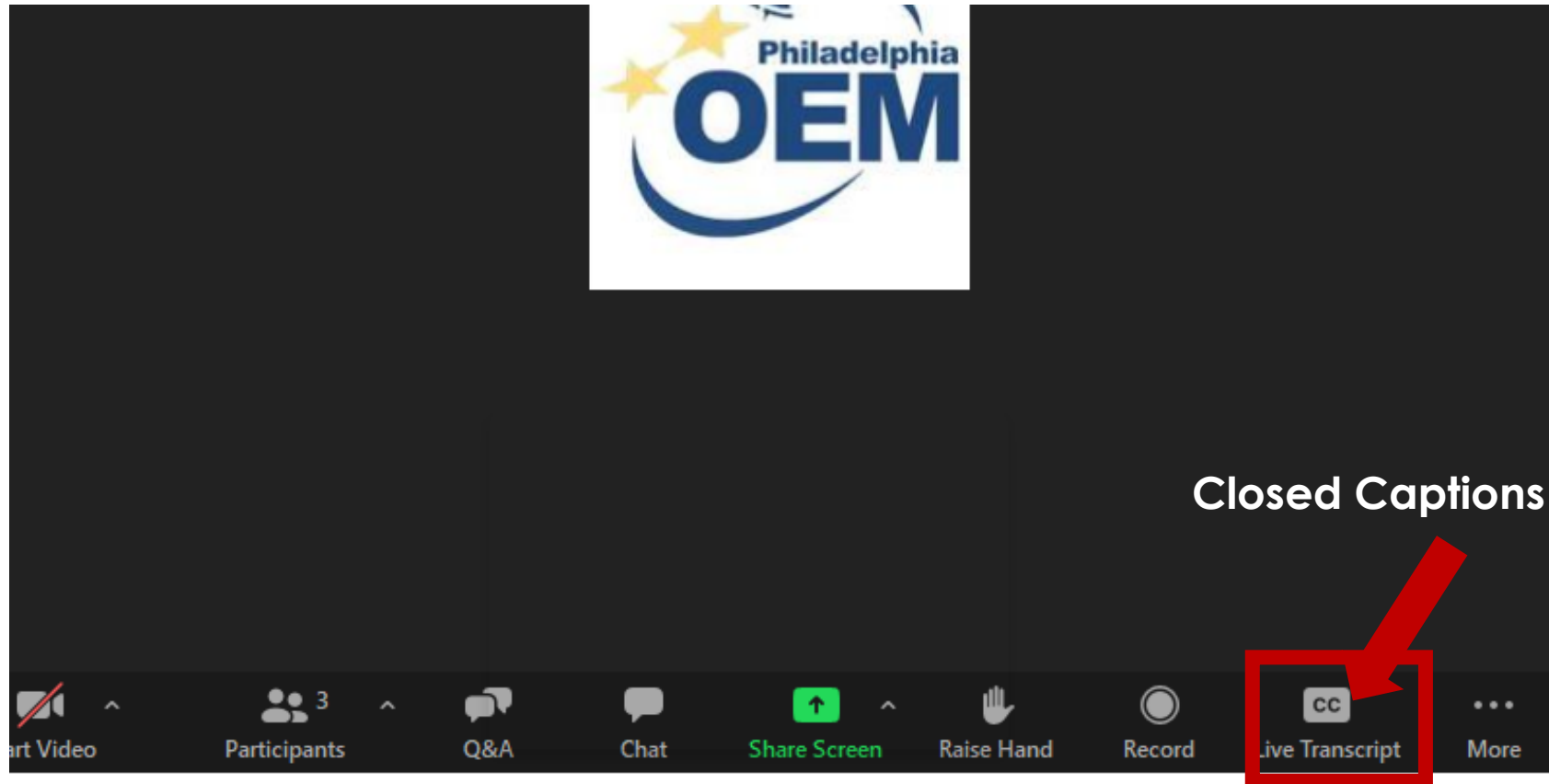
# American Sign Language (ASL) Interpreter


The ASL Interpreter has been put on a “spotlight” to be seen consistently by all viewers throughout today’s presentation. To enlarge the interpreter screen:





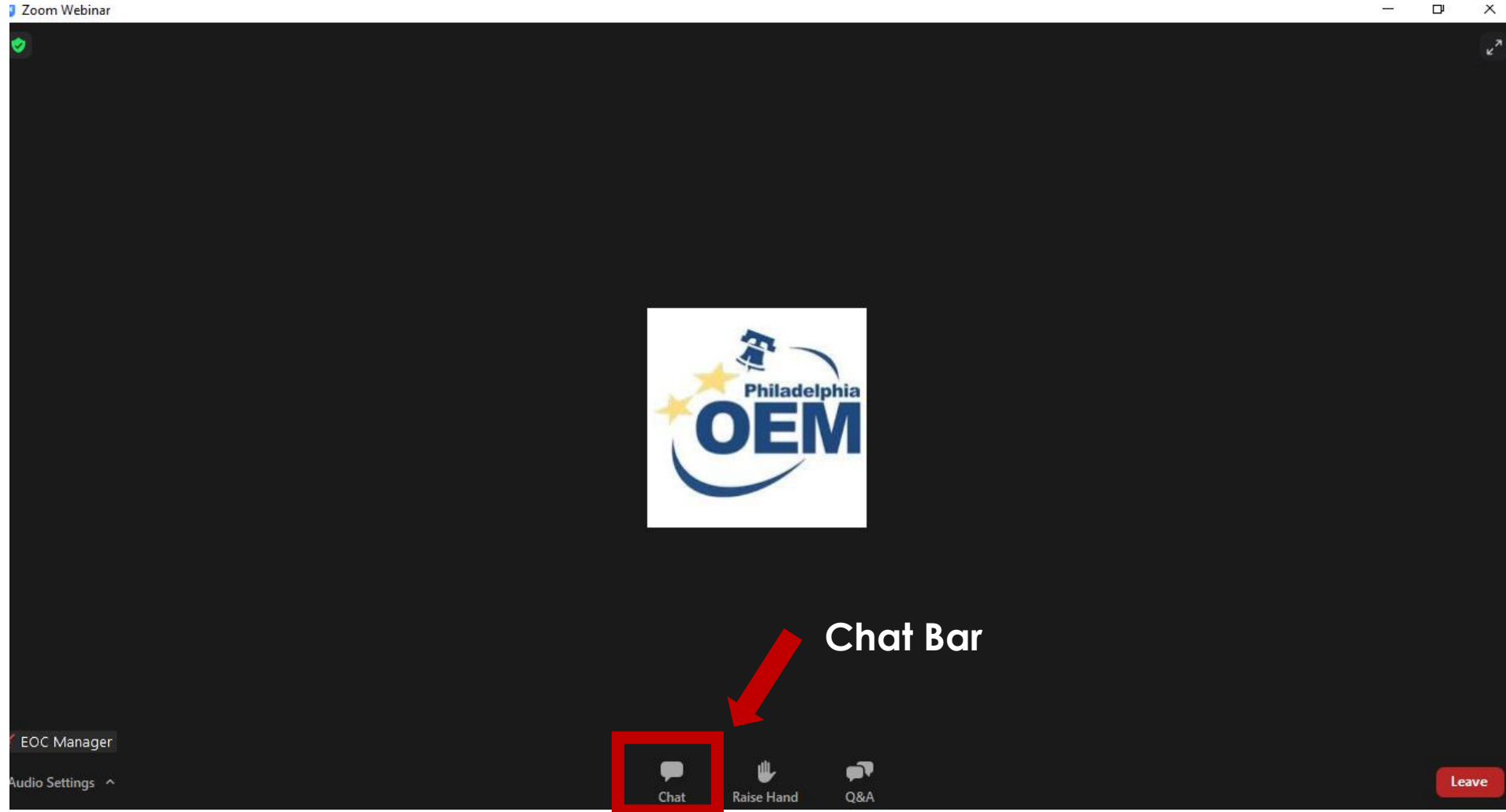
# Closed Captioning



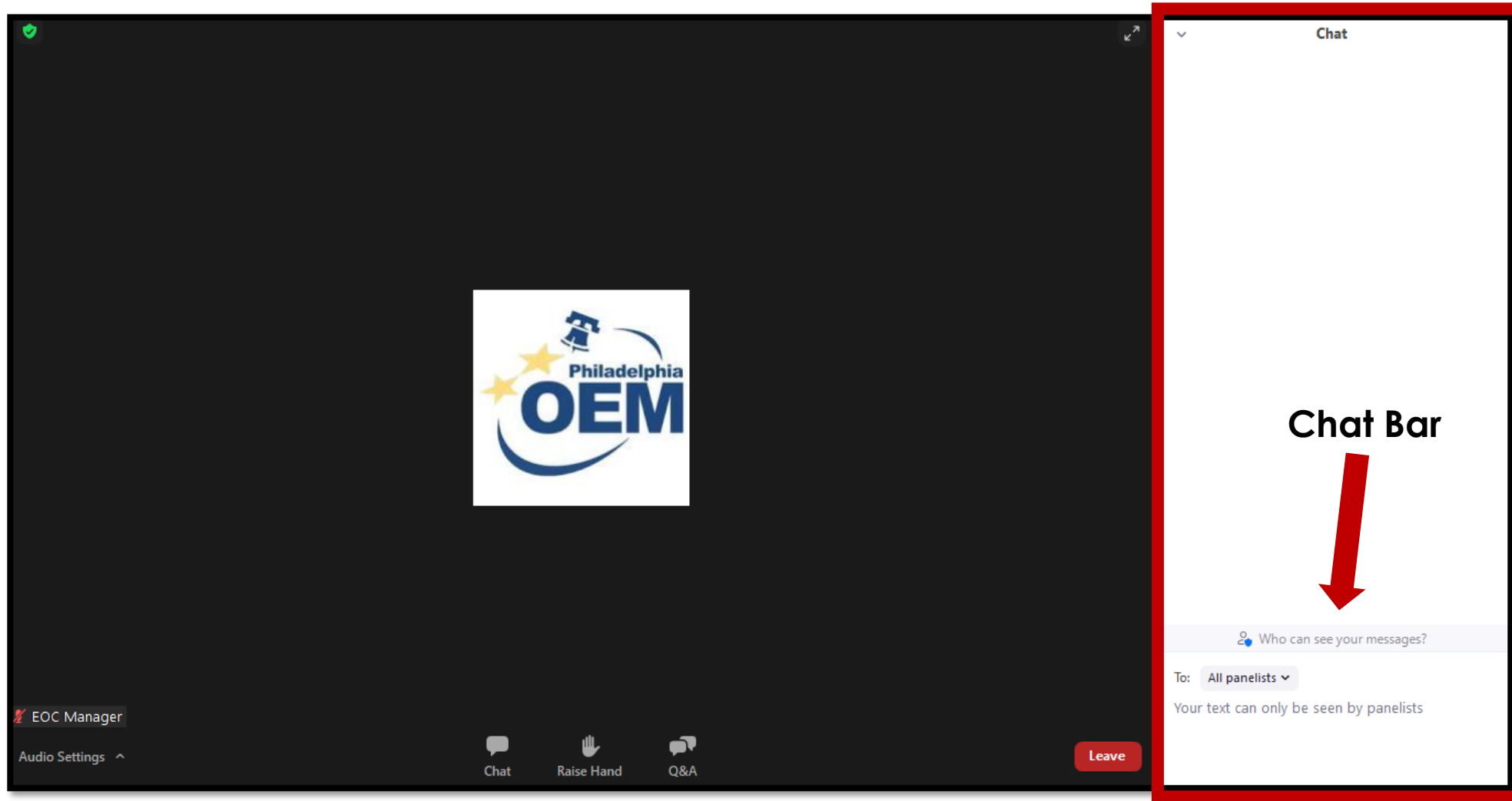
Click Live Transcript , then select Show Subtitle. If enabled, you can also click View Full Transcript to view the transcript in the side panel of the meeting.



# Zoom



# Zoom



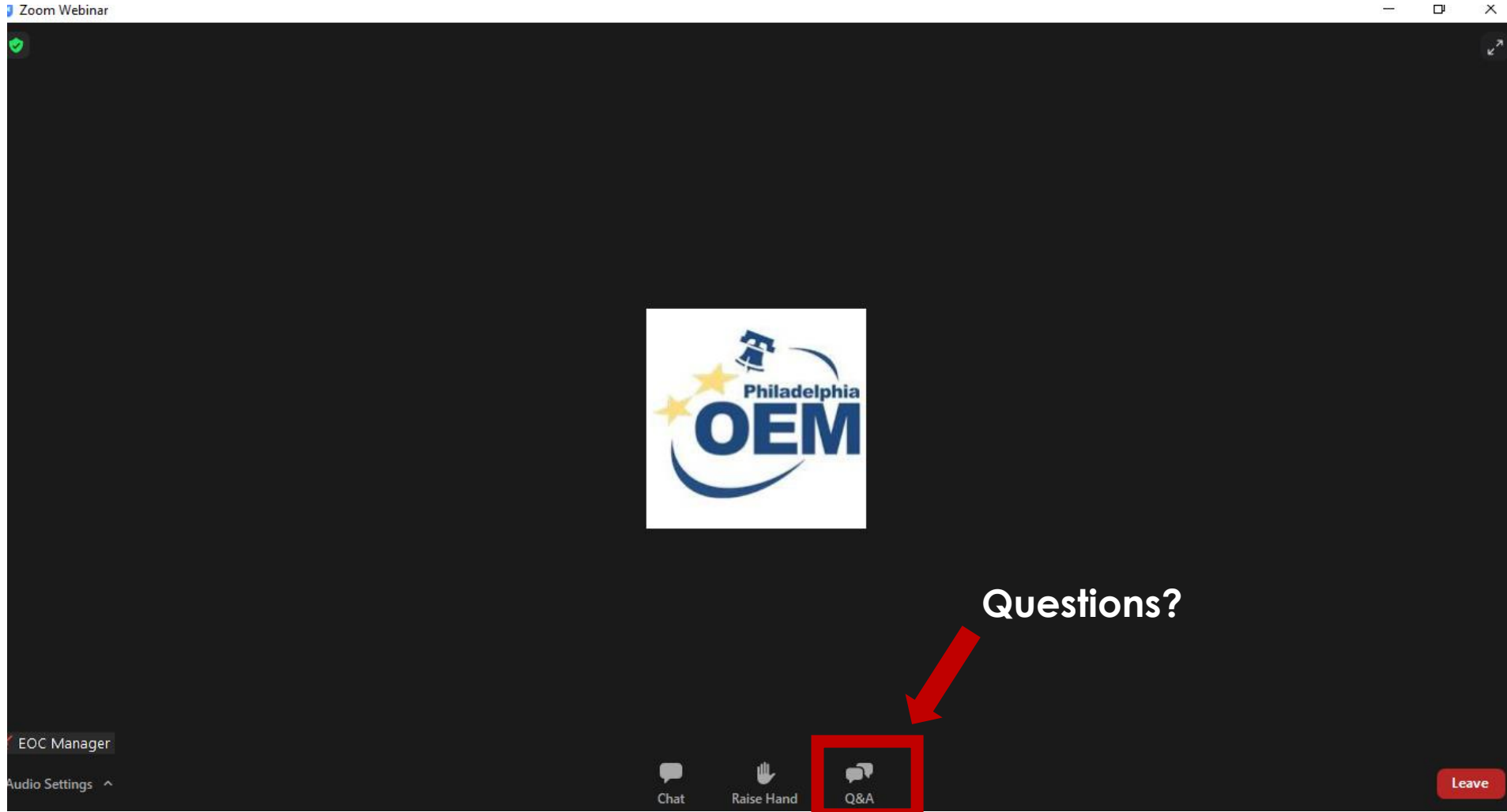
# Please let us know you're here!



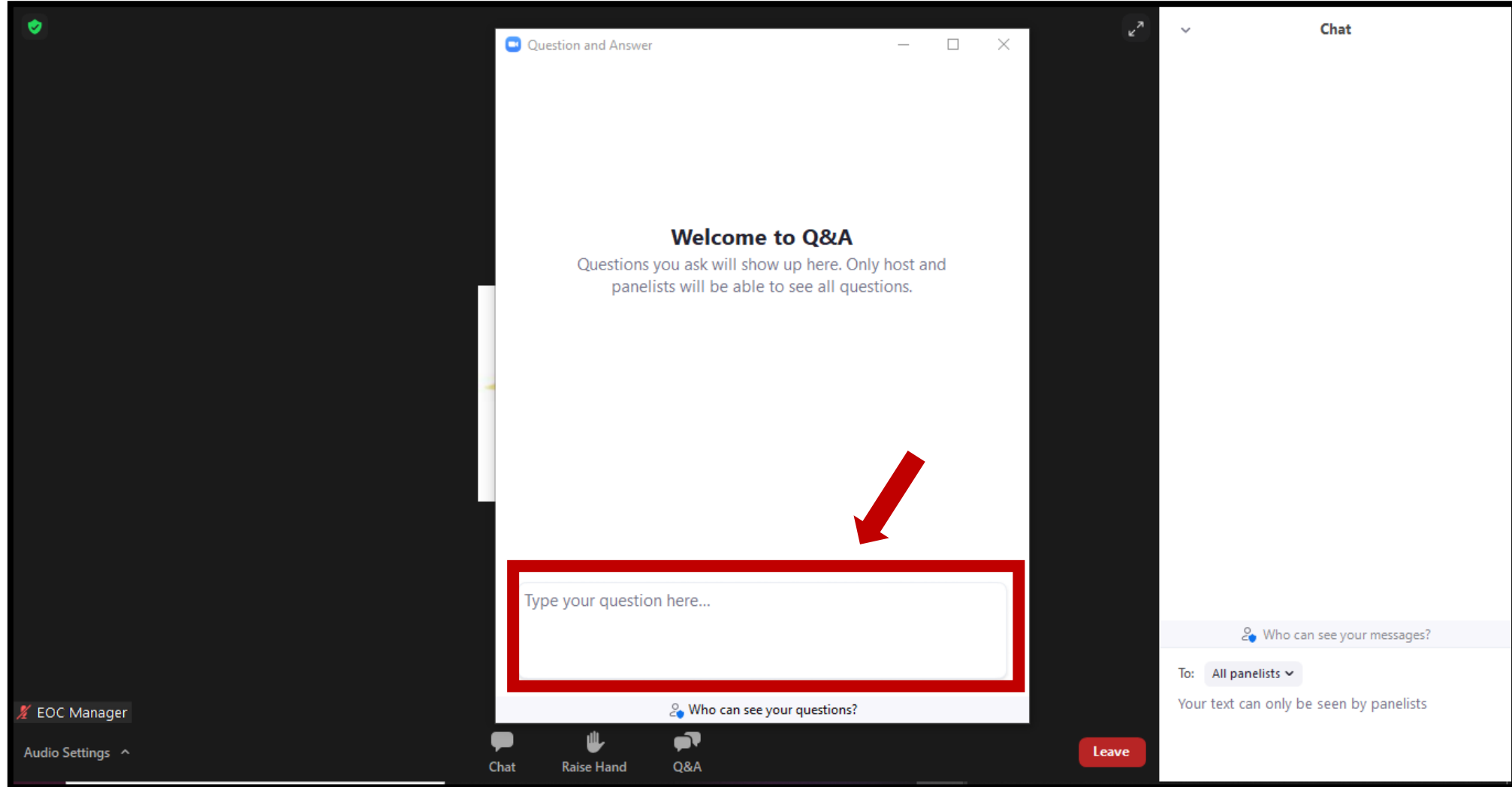
Please type your  
**Name, Title, and Agency or Organization**  
into the chat bar.



# Zoom



# Zoom



The screenshot displays the Zoom interface during a Q&A session. A central window titled "Question and Answer" contains the following text:

**Welcome to Q&A**  
Questions you ask will show up here. Only host and panelists will be able to see all questions.

Below this text is a text input field with the placeholder "Type your question here...". A red arrow points to this field, and it is highlighted with a red rectangular border.

At the bottom of the Q&A window, there is a dropdown menu labeled "Who can see your questions?".

On the right side of the interface is a "Chat" window. It shows a dropdown menu for "Who can see your messages?" set to "All panelists". Below this, it states "Your text can only be seen by panelists".

The bottom toolbar includes icons for "Chat", "Raise Hand", and "Q&A", along with a "Leave" button.



**We will be recording**





# Philadelphia 2022 Hazard Mitigation Plan Draft Review Workshop

## Agenda, 01/31/2022

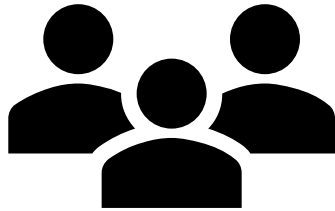
1. Opening Remarks
2. Overview of The Plan and the Planning Process
3. Summary of 2022 Updates
4. Next Steps
5. Questions and Answers

# What is a hazard mitigation plan?

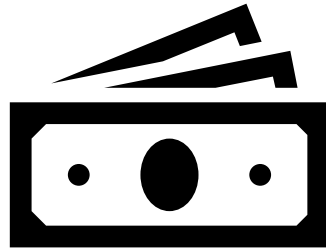
**Hazard mitigation** is defined as sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards



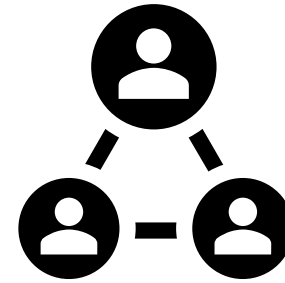
# Why Hazard Mitigation Planning?



**Saves lives &  
property**



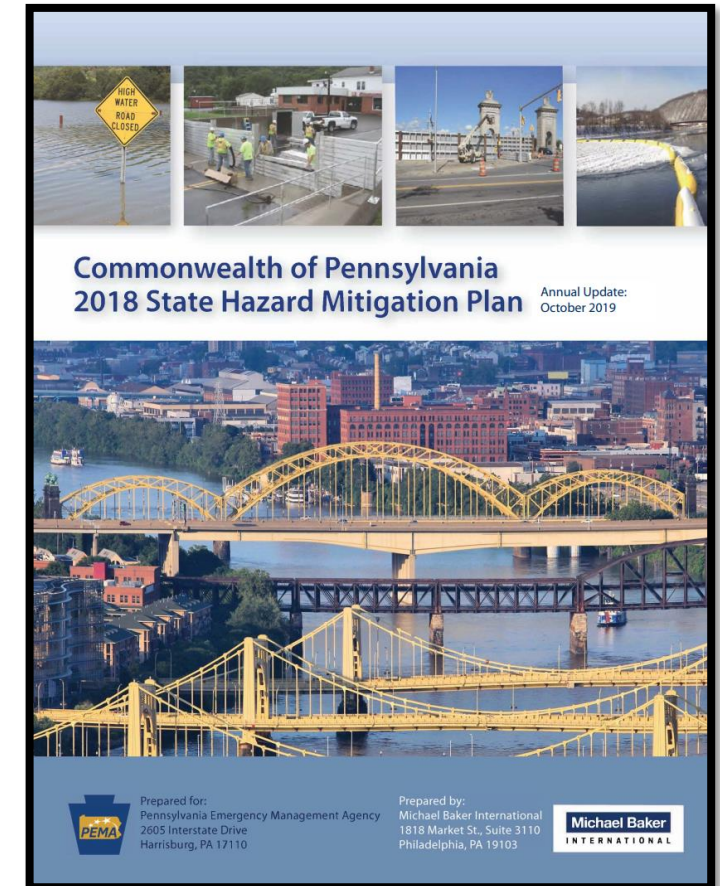
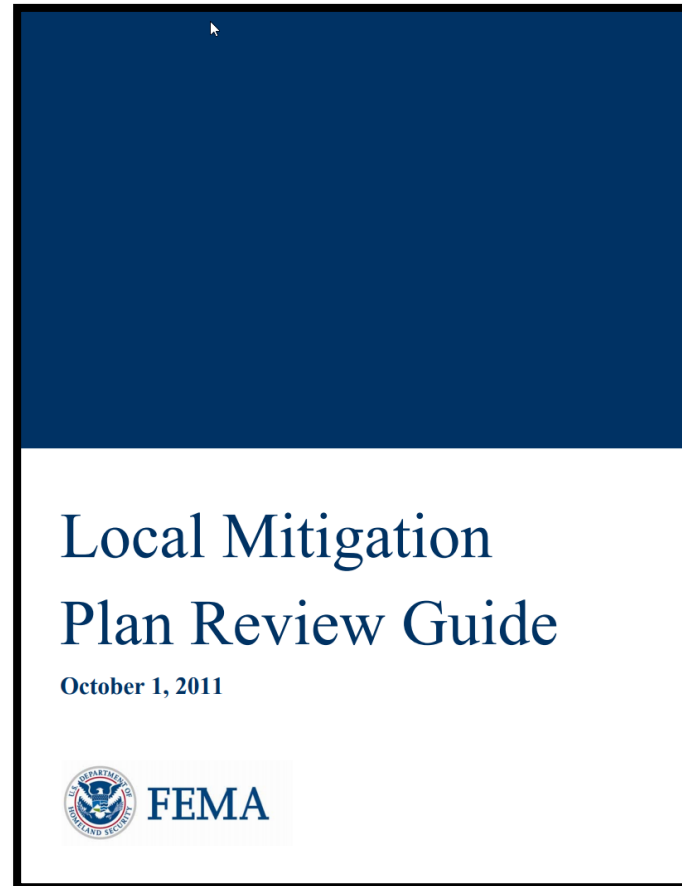
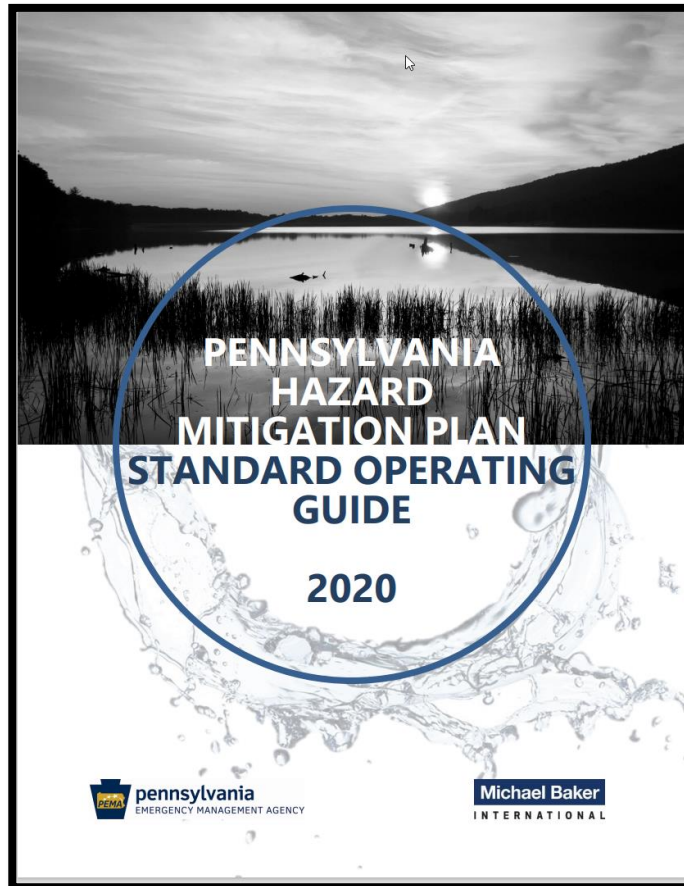
**Saves money &  
establishes  
funding priorities**



**Builds partnerships  
& raising  
awareness**

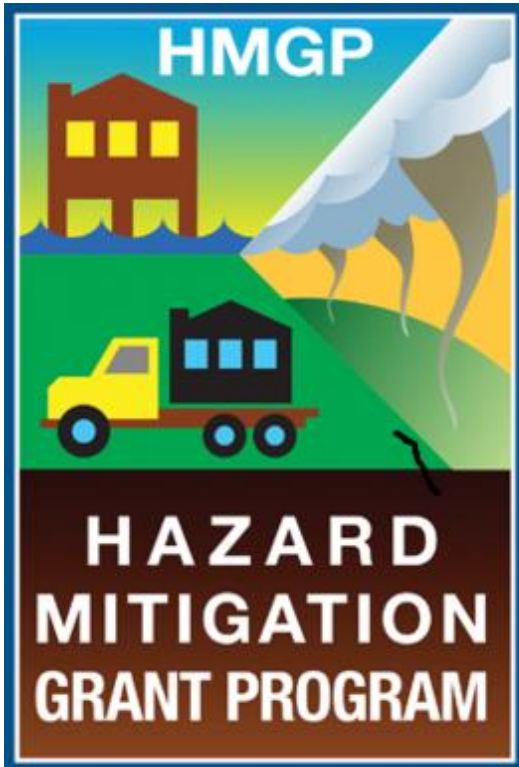


# Guidance and Regulations





# What does FEMA fund?



# The 2022 Planning Process



**We are here**  
Date: 01/2022



# Building the Planning Team

## The Hazard Mitigation Plan Steering Committee

Office of Emergency Management (Chair)

Office of Sustainability

Office of Transportation, Infrastructure and Sustainability

Department of Public Property

Mayor's Office of Recovery & Grants

Commerce Department

Philadelphia Fire Department

Philadelphia City Planning Commission

Licenses & Inspections FPM\*

Mayor's Office of Policy

Mayor's Office for People with Disabilities



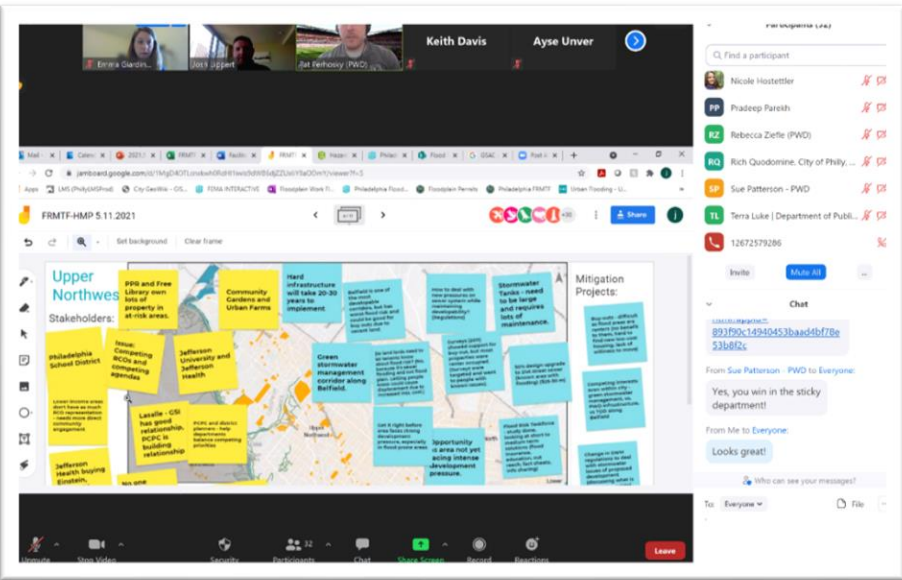


# Extensive Stakeholder Engagement

- **12** Steering Committee Mtgs
- **5** Stakeholder Workshops
- **10** Workgroup & Focus Group Mtgs
- **6** Community Workshops
- **2** Radio Shows
- **5** Hazard Mitigation Station Events
- **397** Public Survey Responses
- **80** Agencies and organizations engaged



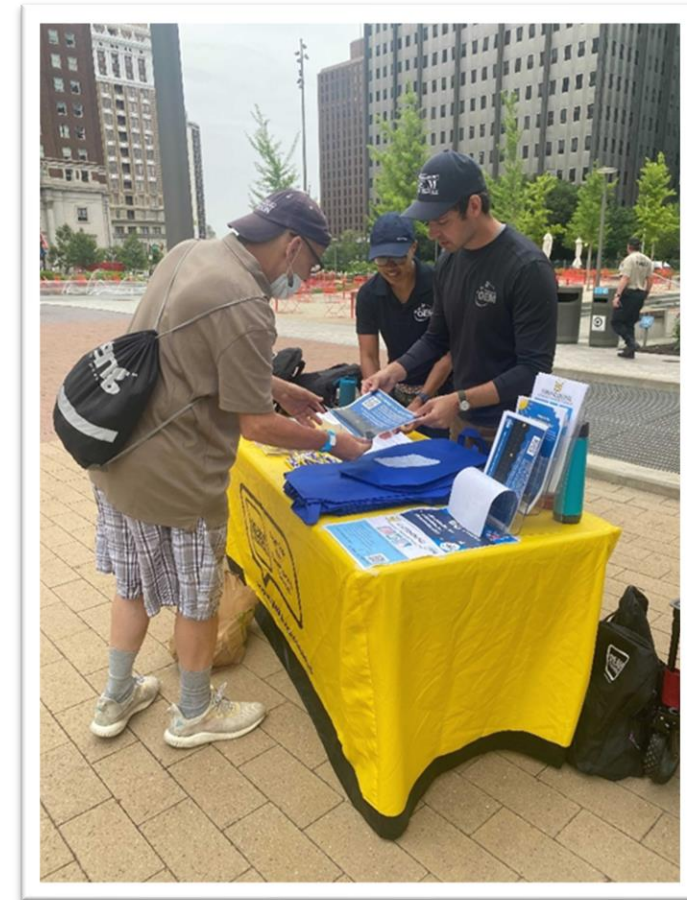
*Photo of 2020 Annual Review and Kickoff Event at the DVRPC.*



*(Above) Picture of virtual HMP Workshop with the City's Flood Risk Management Task Force.*



*(Above) Snapshot of WURD Radio's live post of their radio show on 11/14/2020 which features updates on the HMP.*



*(Above) Photo of Mitigation Station Event hosted in Love Park, Center City, Philadelphia.*



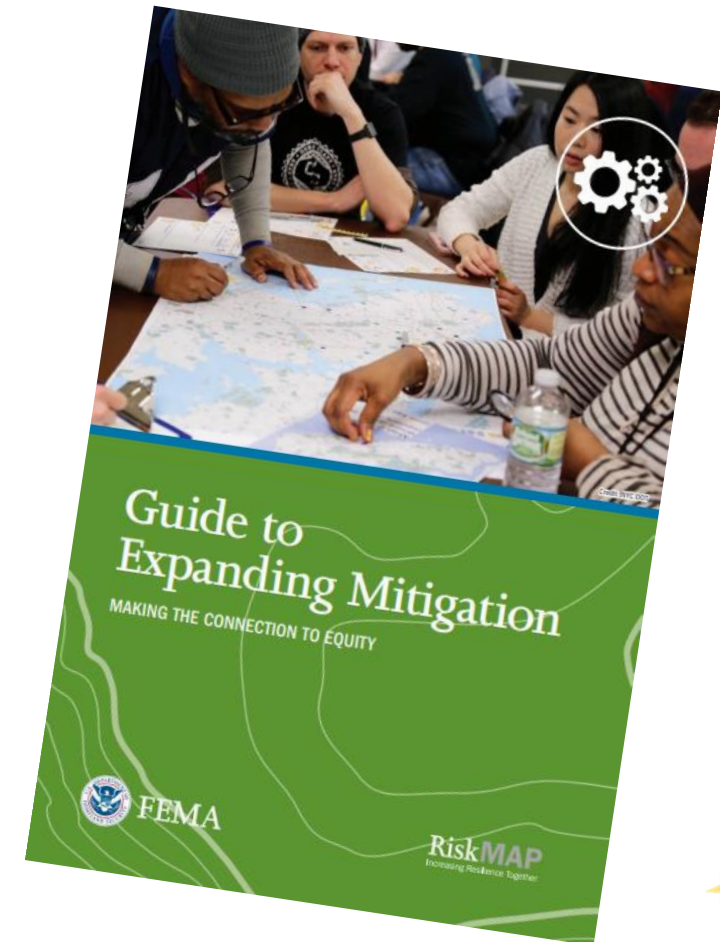
*(Left) OEM's Virtual Community Chat Session on the HMP*



# Equity as a Grounding Principle

An accessible, inclusive and equitable planning process

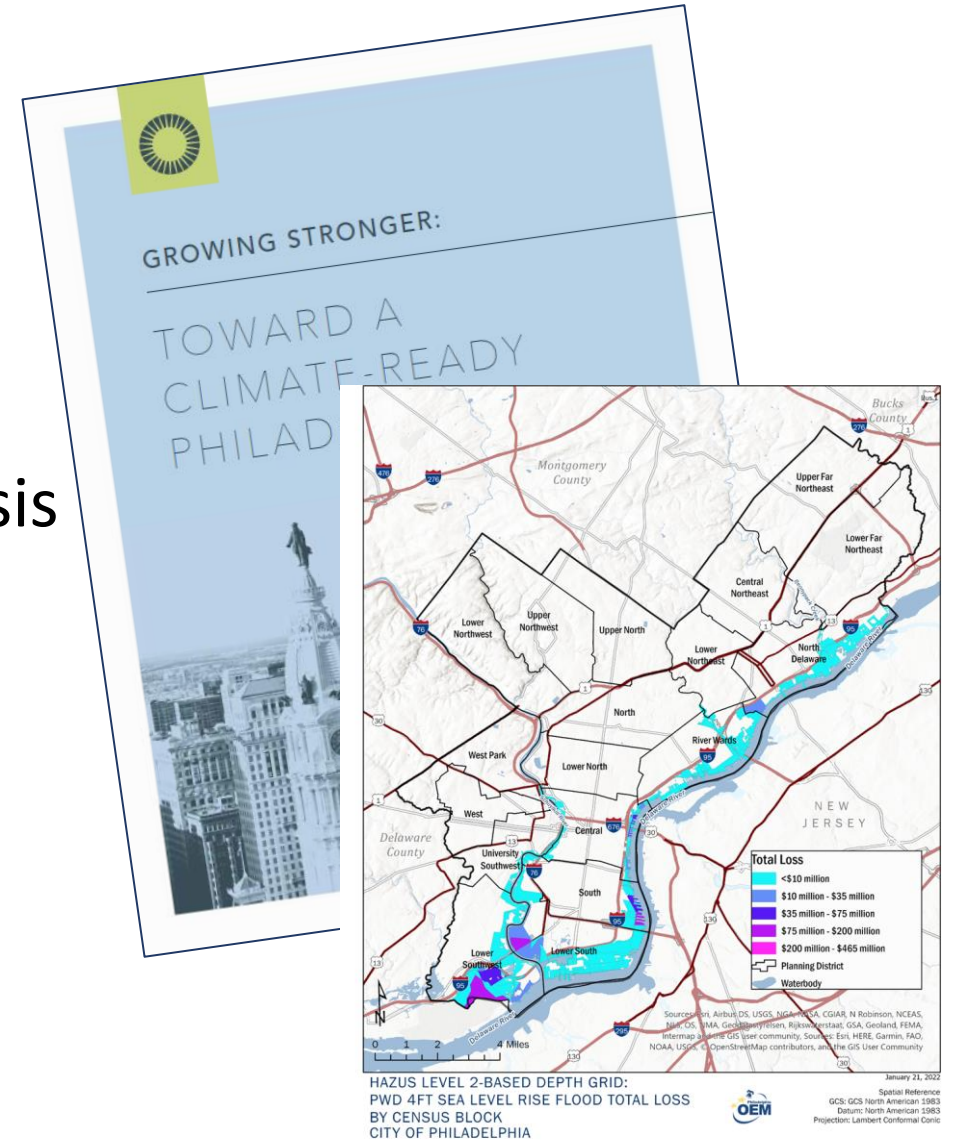
- Updated goals & objectives
- Intentional outreach and engagement
- Additional information & census data on populations disproportionately impacted
- Equity included as a prioritization factor for mitigation actions



# Climate Change Integration

## A forward-looking plan

- Updated goals & objectives
- Updated climate change temperature and precipitation projections
- SLR incorporated into Flooding HAZUS Analysis
- Forward-looking mitigation and adaptation actions



# The Risk Assessment

## Updated Hazard List

### Natural Hazards

- Drought
- Earthquake
- Extreme Temperature
- Flood, Flash Flood, Ice Jam
- Hurricane, Tropical Storm, Nor'easter
- Pandemic and Infectious Disease **(NEW!)**
- Subsidence, Sinkhole **(NEW!)**
- Tornado, Windstorm
- Winter Storm

### Human-made Hazards

- Active Assailant
- Building and Structure Collapse
- Civil Disturbance **(NEW!)**
- Cyber Terrorism **(NEW!)**
- Dam Failure
- Gun Violence **(NEW!)**
- Hazardous Materials Release
- Opioid Crisis Response **(NEW!)**
- Urban Fire and Explosion
- Terrorism **(NEW!)**



# The Risk Assessment

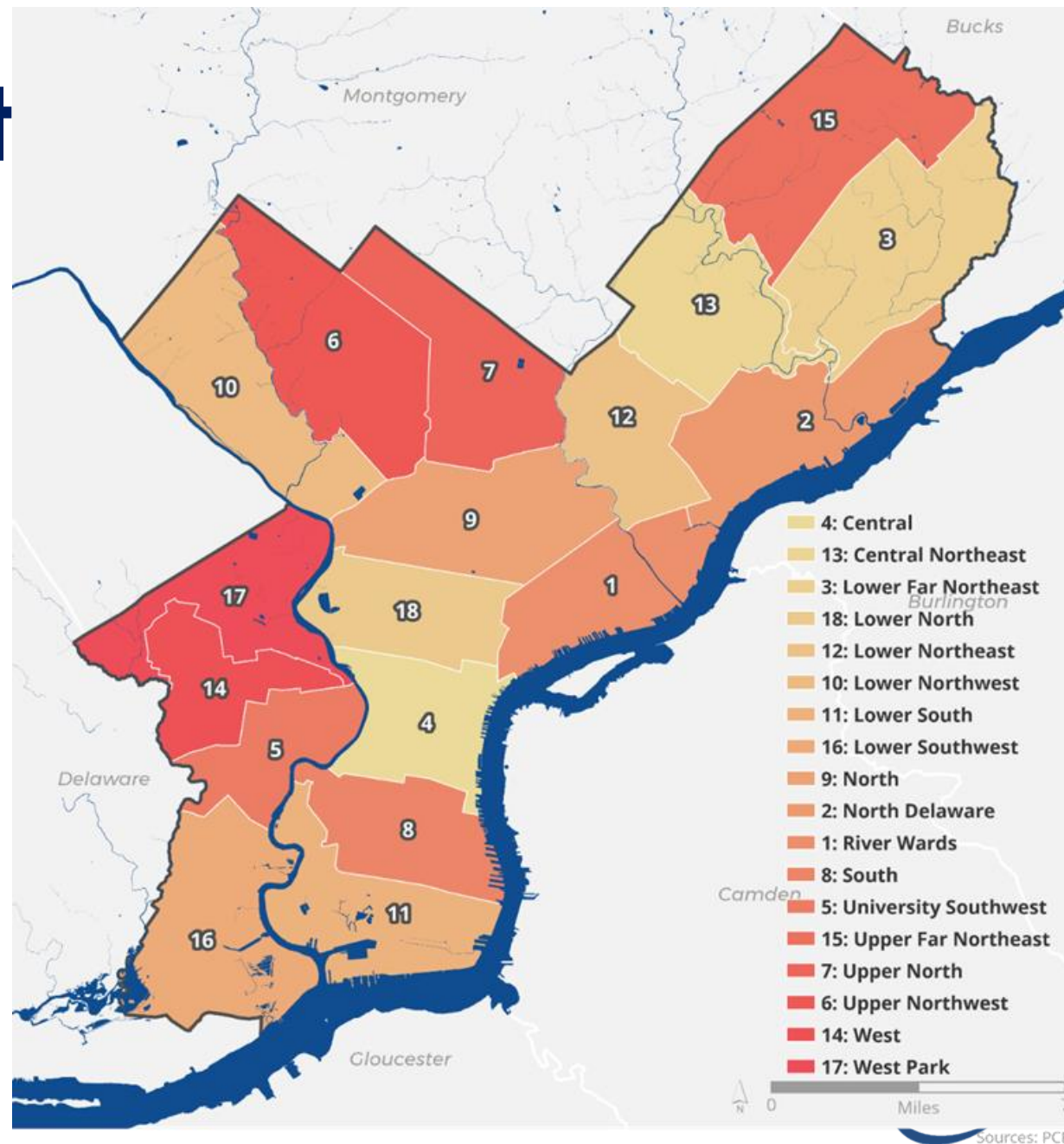
| Hazard                                | 0.3         | 0.3    | 0.2            | 0.1          | 0.1      | Overall Risk |
|---------------------------------------|-------------|--------|----------------|--------------|----------|--------------|
|                                       | Probability | Impact | Spatial Extent | Warning Time | Duration |              |
| Flood, Flash Flood, Ice Jam           | 4           | 4      | 3              | 2            | 4        | 3.6          |
| Gun Violence                          | 4           | 4      | 3              | 4            | 1        | 3.5          |
| Opioid Overdose Crisis                | 4           | 4      | 3              | 1            | 4        | 3.5          |
| Pandemic and Infectious Disease       | 3           | 4      | 4              | 1            | 4        | 3.4          |
| Extreme Temperature                   | 4           | 3      | 4              | 1            | 3        | 3.3          |
| Hurricane, Tropical Storm, Nor'easter | 3           | 4      | 4              | 1            | 3        | 3.3          |
| Urban Fire and Explosion              | 4           | 3      | 3              | 4            | 1        | 3.2          |
| Hazardous Materials Release           | 3           | 3      | 2              | 4            | 4        | 3.0          |
| Winter Storm                          | 4           | 2      | 4              | 1            | 3        | 3.0          |
| Tornado, Windstorm                    | 4           | 3      | 2              | 2            | 1        | 2.8          |
| Terrorism                             | 1           | 4      | 2              | 4            | 1        | 2.4          |
| Active Assailant                      | 2           | 3.5    | 1              | 4            | 1        | 2.4          |
| Drought                               | 2           | 1.5    | 4              | 1            | 4        | 2.4          |
| Cyber Terrorism                       | 3           | 1      | 2              | 4            | 3        | 2.3          |
| Building and Structure Collapse       | 2           | 2      | 2              | 4            | 1        | 2.1          |
| Dam Failure                           | 1           | 3      | 2              | 2            | 3        | 2.1          |
| Civil Disturbance                     | 2           | 2      | 2              | 2            | 1        | 1.9          |
| Earthquake                            | 1           | 1      | 4              | 4            | 1        | 1.9          |
| Subsidence, Sinkhole                  | 2           | 2      | 1              | 2            | 3        | 1.9          |





# The Risk Assessment

## Future Development & Hazard Risk



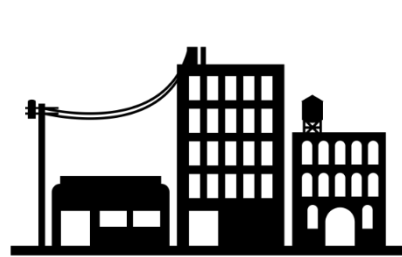


# Mitigation Actions

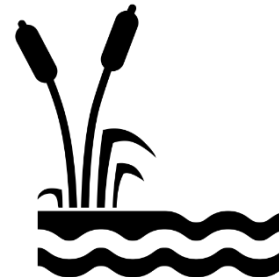
Prioritized list of 158 projects, plans and policies that will reduce the City's long-term risk to these hazards.



**Local Plans & Regulations**



**Structure & Infrastructure Projects**



**Natural Systems Protection**



**Education & Awareness Programs**



**Human-Caused Casualty Reduction**

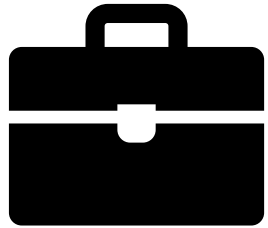
# The Mitigation Strategy

## Mitigation In Focus

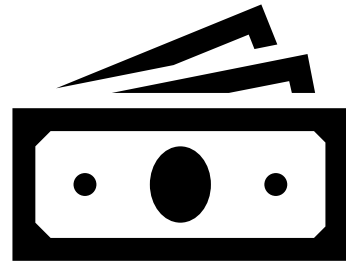
| Lead Agency     | Project Name   |
|-----------------|--|
| OOS/Multi-Dept. | Lower South Infrastructure Resilience Roadmap and Implementation                               |
| OOS/Multi-Dept. | Eastwick Place-Based Climate Risk, Adaption, and Resiliency Planning                           |
| OEM             | Continuity of Operations Program (COOP)  |
| PWD             | Tookany/Tacony-Frankford Watershed Flood Risk Reduction and Combined Sewer Overflow Mitigation |
| PWD             | Cohocksink Multi-Hazard Mitigation Project   |
| OEM             | Alert and Warning  |
| OTIS            | Trails Resiliency Plans and Implementation   |
| OEM/Commerce    | Business Risk and Vulnerability Assessment   |
| Multi-Dept.     | Community Environmental Conditions and Safety  |
| PDPH/ORU        | Opioid Community Support   |

# Plan Maintenance & Implementation

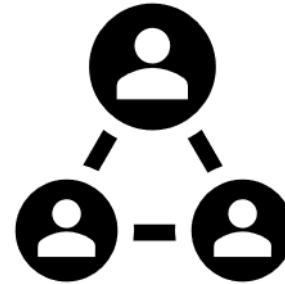
## Investing in Plan Implementation



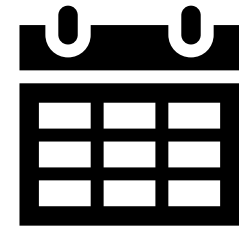
OEM Hazard  
Planning  
Coordinator



Coordination  
on grants &  
funding



Standing Steering  
Committee &  
Workgroups



Annual Plan  
Reviews

# Plan Review & Adoption

## Next Steps

- Public Draft Review Workshop
- 30-day public review period
- Submission to PEMA
- Submission to FEMA
- Adoption by City Council
- Plan Expires**

## Timeline

January 31st

Ends March 3rd

March 2022

April 2022

May 2022

**May 25, 2022**



# Submitting your Feedback

## Accepted through 3/3/2022



English (United States) ▾

 2022 Draft Hazard Mitigation Plan - Public Review

Philadelphia Office of Emergency Management (OEM) released the Philadelphia's 2022 All-Hazard Mitigation Plan on 1/31/2022 for public review and feedback on OEM's website. The review and comment period will be open for 30 days through 3/3/2022. Printed copies are also be available at several Free Library of Philadelphia locations listed on OEM's website.

Please use this form to submit comments and feedback on the plan.

Feedback obtained before 3/3/2022 will be documented in the 2022 Plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then City Council for final review and approval in Spring 2022. All feedback received after this review period will be reviewed by the Steering Committee and incorporated into future plan updates and annual reviews.

Please provide any feedback or comments below OR email us at [pem@phila.gov](mailto:pem@phila.gov). Providing your name and contact information is optional and does not obligate Philadelphia OEM to reply to your comments.

Thank you for providing your feedback on this plan!

\* Required

1. I would like to comment on:

Select your answer ▾

View our plan **online** at [www.phila.gov/ready](http://www.phila.gov/ready) OR **in print** at several Free Library of Philadelphia locations.

### Submit feedback:

1. On our website
2. Email [OEM@phila.gov](mailto:OEM@phila.gov)



# Thank you!



# Questions?

**Emma Giardina**

Infrastructure Program Manager

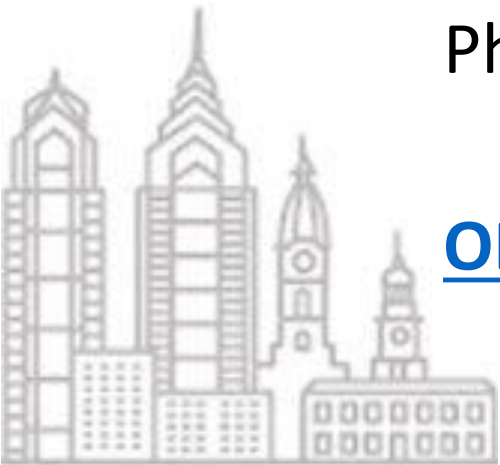
Philadelphia OEM

**Carolyn Caton**

Deputy Director

Philadelphia OEM

[OEM@phila.gov](mailto:OEM@phila.gov)





Office of Emergency Management updates City's Hazard Mitigation Plan. Virtual meeting seeking input from public to be held January 31st.

[View this email in your browser](#)



**CITY OF PHILADELPHIA  
OFFICE OF EMERGENCY MANAGEMENT**

**For Immediate Release:** January 18, 2022

**Contact:** Allison Miller, [allison.miller@phila.gov](mailto:allison.miller@phila.gov)

**Hazard Mitigation Plan Final Draft Review Meeting**

**PHILADELPHIA** - The Philadelphia Office of Emergency Management (OEM) will review the update draft of the City's 2022 Hazard Mitigation Plan (HMP) during an upcoming public meeting.

The HMP identifies natural and human-caused hazards that the city is or may be vulnerable to and outlines mitigation or risk reduction strategies for incidents and events. Every five years, FEMA requires OEM to update the plan. This update, the city's third, is due this year.

**The review meeting, to be held virtually on Zoom Monday, January 31st from 10:30 a.m. to 12 p.m., is open to all planning partners and the public. You can register to view and participate in the meeting by visiting <https://bit.ly/HMPmeeting> on Eventbrite.**

Public and city partner input is encouraged and incorporated in the revision process. The 2022 update has already solicited hundreds of responses from

Following this workshop, the draft plan will be published on OEM's website, [www.phila.gov/ready](http://www.phila.gov/ready), for a 30-day public review and comment period. Printed copies will also be available at several to-be-announced Free Library of Philadelphia locations.

Feedback will be documented in the plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then Philadelphia City Council for review prior to approval in the Spring.

More information on The City of Philadelphia's Hazard Mitigation Plan can be found on OEM's HMP [webpage](#) or [blog](#).

###



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**Emma Giardina**

---

**From:** OEM Community Engagement Team <oem@phila.gov>  
**Sent:** Wednesday, January 19, 2022 11:00 AM  
**To:** Emma Giardina  
**Subject:** 📢 Announcement: Philadelphia's 2022 All-Hazard Mitigation Meeting!!

**External Email Notice. This email comes from outside of City government. Do not click on links or open attachments unless you recognize the sender.**

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# READY PHILADELPHIA

A COMMUNITY PREPAREDNESS NEWSLETTER

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*Philadelphia's 2022 All-Hazard Mitigation Plan*

# Final Draft Review Meeting



In this meeting, Philadelphia Office of Emergency Management (OEM) will review the City's updated plan for mitigating or reducing risk to natural and human-caused hazards. There will be an opportunity for questions, answers, and feedback from the audience. This virtual meeting will be hosted via Zoom and is open to all planning partners and the public.

## Philadelphia's 2022 All-Hazard Mitigation Plan

### Draft Review Meeting

Monday, January 31<sup>st</sup>

10:30am-12:00pm

Hosted via Zoom

Register on Eventbrite [HERE](#)

<https://2022hmp.eventbrite.com>

---

### Following this meeting...

The plan will be published on [OEM's website](#) for a 30-day public review and comment period. Printed copies will also be available at several Free Library of Philadelphia locations. All questions, comments, and feedback can be directed to OEM's Hazard Mitigation Planner, Emma Giardina at [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) or to [oem@phila.gov](mailto:oem@phila.gov).

Feedback will be documented in the plan prior to submission to the Pennsylvania Emergency Management Agency (PEMA), the Federal Emergency Management Agency (FEMA), and then City Council for final review and approval.

If you require accommodations for this meeting, please reach out to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) or provide additional details on accommodations required in the Eventbrite registration form prior to **Wednesday, January 26th**.

Do not hesitate to reach out with any questions or concerns.

[Find Out More](#)



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## HMP Steering Committee Meeting



**Date/Time:** October 30, 2020 from 2 PM – 3 PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |  | Notes/Actions | Time Allocated |
|--------------------------|--|---------------|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b> <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Review Agenda</li> </ul>  |               | 5 mins         |
| <input type="checkbox"/> | <b>The Steering Committee's Role</b> <ul style="list-style-type: none"> <li>• SC Goals &amp; Objectives</li> <li>• Expected Time Commitment</li> <li>• HMP Structure &amp; Partners</li> <li>• Who are we missing?</li> </ul>  |               | 15 mins        |
| <input type="checkbox"/> | <b>Update Schedule &amp; Anticipated Changes or Improvements</b> <ul style="list-style-type: none"> <li>• Schedule</li> <li>• Anticipated Changes for 2022</li> <li>• How can this plan be a better tool for you, your organization and other entities in Philadelphia?</li> </ul> |               | 15 mins        |
| <input type="checkbox"/> | <b>Public Engagement</b> <ul style="list-style-type: none"> <li>• Requirements</li> <li>• Public survey feedback and input</li> <li>• How can this survey better inform your work?</li> </ul>  |               | 10 mins        |
| <input type="checkbox"/> | <b>PDM19 Grant &amp; RFP</b> <ul style="list-style-type: none"> <li>• SOW</li> <li>• What are some identified gaps in data or skills that we could fill?</li> </ul>  |               | 10 mins        |



|   |  |  |           |
|---|--|--|-----------|
| □ | <b>Next Steps</b> <ul style="list-style-type: none"><li>• <b>Next Mtg:</b> Tuesday, 12/1 from 11am-12pm</li><li>• <b>Focus/Topic:</b> Capability Assessment and Plan Integration</li></ul> |  | 5 minutes |
|---|--|--|-----------|

# Hazard Mitigation Plan Steering Committee #1

**Date:** October 30, 2020

**Location:** Virtual, Microsoft Teams



**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Ashley DelBianco (Mayor's Office of Grants), Josh Lippert (L&I), Rich Quodomine (DPP), Saleem Chapman (OOS), John Haak (PCPC)

## Notes:

1. Introductions and Welcome
2. The Steering Committee's Role
  - a. Why we selected you
    - i. Selected members to represent a cross-section of views and interests within the planning area
    - ii. Each has demonstrated an interest in the HMP and offers a subject matter expertise that is key to this plan update
  - b. Steering Committee will meet monthly to:
    - i. Guide the overall update of the plan
    - ii. Identify areas for plan integration and cross collaboration
    - iii. Help with identifying barriers to plan implementation and breaking down those barriers
    - iv. Decision making body for project identification, prioritization and selection for grants
  - c. In addition to the Steering Committee, OEM will be meeting with a variety of other partners through:
    - i. Large workshops (3)
    - ii. Working Groups
    - iii. Individual Outreach
  - d. Other partners that should be a part of the planning process and potentially the Steering Committee include:
    - i. Water Department, oTis, representative from Equitable Engagement Collaborative or Mayor's Office of Public Engagement, Streets, PPR
  - e. Other partners to engage throughout planning process:
    - i. Trust for Public Land (Regional workgroup?), Commerce, PIDC, Economy League, developers (DURST, PMC), Wharton Risk Center, the Census
3. Update Schedule and Anticipated Changes
  - a. Timeline
    - i. Risk Assessment – To start January 2021
    - ii. Mitigation Strategy – Spring of 2021
    - iii. First Draft for Review – Fall 2021
    - iv. Final Draft to PEMA & FEMA – late Winter 2022
    - v. Expires – May 2022
  - b. Anticipated Changes
    - i. Better integration of climate change – working closely with Saleem Chapman, OSS to align climate adaptation planning & HMP planning
      1. Partnership with the USDN
    - ii. Plan implementation and project identification
      1. Improve process for annual updates so that plan is up to date
      2. Identify barriers to project implementation and work to resolve them
      3. Identify funding opportunities
      4. Improved prioritization system that considers equity, high hazard risk, and feasibility of projects
    - iii. Plan Integration

- iv. Public Outreach & Increased Stakeholder Engagement
- c. Other suggestions from the group:
  - i. Identify groups to engage strategically at different points in the planning process (Ex: Policy Group) to avoid “over engaging” certain partners
  - ii. Release parts of the plan to the public and stakeholders for review over the course of the next year – will make this very large plan more palatable and generate better feedback
  - iii. Engage City Council early – Budget will be due right around the same time the plan will need to be approved by council
  - iv. Look at the compounding impacts of multiple hazards, overlapping risk (ex: climate change’s impact on flood and heat risk, OR COVID-19, severe weather and civil unrest all in 2020)
- 4. Public Engagement
  - a. Requirements
    - i. Input and feedback from the public is required throughout the planning process
    - ii. Minimum of 3 public workshops and 3 weeks for the public to review the plan
  - b. Partnering with Mayor’s Office of Civic Engagement and Volunteer Service and Mayor’s Office of Policy to develop public engagement strategy and public survey to gather input
    - i. Will use city’s new Equitable Engagement Toolkit (in development) as a guide
  - c. Public Survey
    - i. Goal is to gather data that can inform the planning process
    - ii. Will send out link to draft of public survey, please provide your feedback. Can this survey be useful to your work as well?
- 5. PDM19 Grant & RFP
  - a. RFP is in draft form
  - b. Will send out DRAFT RFP to Steering Committee for comments and feedback prior to finalizing for
- 6. Next Steps
  - a. Next Meeting – Tentatively scheduled for Tuesday, 12/1 from 11am-12pm
  - b. Draft RFP and draft public survey will be sent out for review and feedback from the group before our next meeting
  - c. Continue to send me any ideas, comments or suggestions that come to mind

**Other Resources Referenced:**

[Steering Committee OneDrive Folder](#)

[Stakeholder Engagement Strategy](#)

[Updated Plan Timeline](#)



## HMP Steering Committee Meeting



**Date/Time:** December 1, 2020 from 1 PM – 2PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |   | Notes/Actions   | Time Allocated |
|--------------------------|---|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b> <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Review Goals/Objectives of Steering Committee</li> <li>• Review Agenda</li> </ul>              |   | 5 mins         |
| <input type="checkbox"/> | <b>HMP Updates</b> <ul style="list-style-type: none"> <li>• Welcome new steering committee members</li> <li>• PDM-19 grant and RFP</li> <li>• Public Survey</li> <li>• Community Profile</li> </ul> |   | 15 mins        |
| <input type="checkbox"/> | <b>Capability Assessment &amp; Plan Integration</b> <ul style="list-style-type: none"> <li>• Purpose, Goals &amp; Objectives</li> <li>• All-stakeholder workshop mid-January</li> </ul>             | <ul style="list-style-type: none"> <li>• <b>What are some other things that measure our CAPABILITY to mitigate and reduce risk? (an individual agency's capability vs city capability)</b></li> </ul> | 20 mins        |
| <input type="checkbox"/> | <b>Discussion/ Questions</b> (Time permitting)  |   | 10 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b> <ul style="list-style-type: none"> <li>• Next G-318 Training Module</li> <li>• <b>Next Mtg:</b> Tuesday, 1/5 from 11am-12pm</li> </ul>                     |   | 5 minutes      |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #2

**Date:** December 1, 2020 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Ashley DelBianco (Mayor's Office of Grants), Josh Lippert (L&I), Rich Quodomine (DPP), Saleem Chapman (OOS), John Haak (PCPC), Capt. Devon Richio (PFD), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Liz Lankenau (OTIS)

### Notes:

#### 1. Introductions and Welcome

- a. Reminder of the goals and objectives of the Steering Committee:
  - i. Guide the overall update of the plan
  - ii. Identify areas for plan integration and cross collaboration
  - iii. Help with identifying barriers to plan implementation and breaking down those barriers
  - iv. Decision making body for project identification, prioritization and selection for grants

#### 2. Hazard Mitigation Plan Updates

- a. Welcome to our new Steering Committee Members Liz Lankenau (OTIS), Captain Richio (PFD), Lt. Kirby (PFD), and Ryan Ford (OEM)
- b. Additional representatives from the Commerce Department and The Office of Diversity, Equity and Inclusion will hopefully be joining us in January
- c. The RFP for the Pre-Disaster Mitigation (PDM) 2019 Grant is currently being drafted. The SOW draft will be distributed to the Steering Committee for feedback within the next week
- d. The City-wide general public survey to gather initial feedback on the plan update process is still in development with support from OCEVS and the Mayor's Office of Policy. The survey will be distributed for feedback from the Steering Committee by early January 2021.
- e. OEM has started to draft the Community Profile chapter of the HMP. OEM may be reaching out for more information and resources to support this part of the plan update.

#### 3. The Capability Assessment

- a. Background Information
  - i. **Capability Assessment:** Process that helps identify existing gaps, conflicts, and/or weaknesses in the City's ability to implement mitigation actions. These identified gaps can be addressed through future mitigation actions, goals and objectives.
  - ii. Baseline we can use to determine whether proposed mitigation actions are practical given our ability to implement them.
  - iii. Broken into three parts (1) Inventory of Philadelphia's existing planning and regulatory tools (2) Analysis of that City's capacity to use them effectively, and (3) Summary of how hazard mitigation goals and objectives will be integrated into other planning mechanisms across the City.
  - iv. Per the Pennsylvania Emergency Management Agency (PEMA), we must look at (1) Planning/Regulatory Capabilities (2) Administrative & Technical Capabilities (3) Financial Capabilities and (4) Education & Outreach Capabilities
  - v. For more information on the Capability Assessment, please see the [Powerpoint](#) (also linked below).
- b. Feedback – What are some other considerations or ways that we can measure Philadelphia's capacity to implement mitigation actions and reduce risk?

- i. Find ways to integrate hazard mitigation and risk considerations into day-to-day work to better operationalize the plan (Ex: Checklists for projects that include hazard risk considerations, both now and long-term)
- ii. Is there a way to measure political will, liability considerations, and opportunities for public-private partnerships as capabilities?
- iii. How can we ensure identified mitigation projects fit into our legal framework? Consider including Law or Risk Management in this conversation.
- iv. Conduct an analysis of which mitigation projects were completed from the 2017 plan, and why certain projects were not completed to better identify challenges and gaps in capabilities.
- v. How can we as a City begin to think more proactively about hazards rather than reactively? Engage City Council in these conversations when possible.
- vi. Challenges to implementation include financial costs associated with implementation and maintenance of projects, political will.
- vii. Group discussed connection to OOS climate adaptation planning efforts and the tension/balance between taking action to reduce our risk, while also adapting to our changing risk at the same time.

#### 4. Next Steps

- a. OEM to develop capability assessment survey for departments and will distribute to steering committee for feedback prior to distribution.
- b. January 2021 All-Stakeholders workshop to re-engage planning partners on plan update and capability assessment.
- c. Draft RFP and draft public survey will be sent out for review and feedback from the group before our next meeting.
- d. Module 2 of FEMA's Hazard Mitigation Training – **Tuesday, January 12** from **1pm-4pm**
- e. Next Steering Committee Meeting – **Tuesday, January 5** from **11am-noon**

#### Resources Referenced:

[HMP Steering Committee One Drive Folder](#)

[Capability Assessment PowerPoint Presentation](#)

[PEMA's Standard Operating Guide: Capability Assessment](#)

[FEMA Region III Capability Assessment Worksheet](#)



## Steering Committee #2

Date: December 1, 2020, 1:00PM-2:00PM

Location: Microsoft Teams



| Name               | Title   | Organization                          | Email  |
|--------------------|---|---------------------------------------|--|
| Emma Giardina      | Hazard Planning Coordinator                   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| Carolyn Caton      | Infrastructure Program Manager                | Philadelphia OEM                      | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>           |
| Josh Lippert       | Floodplain Manager                            | L&I                                   | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>         |
| John Haak          | Director, Policy & Analysis Division          | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Ashley DelBianco   | Chief Grants Officer                          | Mayor's Office of Grants              | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
| Richard Quodomine  | Lead GIS Analyst                              | Department of Public Property         | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>   |
| Saleem Chapman     | Chief Resiliency Officer                      | Office of Sustainability              | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>         |
| Capt. Devon Richio | Planning Division, Homeland Security Officer  | Philadelphia Fire Department          | <a href="mailto:Devon.Richio@phila.gov">Devon.Richio@phila.gov</a>             |
| Ryan Ford          | Homeland Security Program Manager             | Philadelphia OEM                      | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                   |
| Liz Lankenau       | Director, Infrastructure Program Coordination | OTIS                                  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Lt. Mike Kirby     | Planning Division                             | Philadelphia Fire Department          | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>           |
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# Capability Assessment

Process that helps identify gaps, conflicts and/or weaknesses that may need to be addressed through future mitigation actions, goals and objectives.



# The Planning Process



# Capability Assessment

Informs the Mitigation Strategy and Plan Integration

1

2

3



1. Partner Survey
2. All-Stakeholders Workshop



## Planning/Regulatory

- NFIP compliance, Zoning Regulations, Historic Preservation Plan, Climate Adaptation Plan, Fire Codes, Building Codes, Stormwater Mgt Plan, etc.

## Administrative/Technical

- Planners, Engineers, Emergency Management, Floodplain Manager, Land surveyor, GIS specialists, Grant writers, etc.

## Financial

- Capital Improvement Planning, Grants, Stormwater utility fees, intergovernmental agreements, etc.

## Education and Outreach

- Public outreach programs/staff, StormReady Certification, Firewise Communities Certification, etc.

## 14 Annex: Capability Assessment Survey

### Capability Assessment Survey

|                         |         |
|-------------------------|---------|
| Point of Contact Name:  | Agency: |
| Point of Contact Title: | Phone:  |
| E-mail:                 |         |

Please provide an approximate measure of your agency's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "X" in the box marking the most appropriate degree of capability based on the best available information. Only one response from each participating agency is required.

| Area and Description  | Degree of Capability |          |      |
|---|----------------------|----------|------|
|   | Limited              | Moderate | High |
| <p><b>Planning and Regulatory</b></p> <p>Based off of planning and regulatory tools and programs currently implemented, what is your agency's estimated or anticipated capability in reducing hazard loss? (Example: Continuity of Operations Plan.)</p>  |                      |          |      |
| <p><b>Administrative and Technical</b></p> <p>Based off the staffing of:</p> <ul style="list-style-type: none"> <li>• Planners (with land use/ land development knowledge)</li> <li>• Engineers or planners (with natural and/or human caused hazards knowledge)</li> <li>• Engineers or professionals trained in building and/or infrastructure construction</li> <li>• Flood plain manager</li> </ul> |                      |          |      |

| Agency                                  | Planning and Regulatory | Low (1) to High (3) | Administrative and Technical | Low (1) to High (3) | Financial | Low (1) to High (3) | Education and Outreach | Low (1) to High (3) |
|---|-------------------------|---------------------|------------------------------|---------------------|-----------|---------------------|------------------------|---------------------|
| Philadelphia Department of Health       | Moderate                | 2                   | Moderate                     | 2                   | Moderate  | 2                   | Moderate               | 2                   |
| Philadelphia Planning Commission        | High                    | 3                   | High                         | 3                   | High      | 3                   | High                   | 3                   |
| Philadelphia Licensing and Inspections  | Limited                 | 1                   | Moderate                     | 2                   | Limited   | 1                   | Limited                | 1                   |
| Philadelphia Parks and Recreation       | Limited                 | 1                   | Limited                      | 1                   | Limited   | 1                   | Limited                | 1                   |
| Philadelphia Streets                    | Limited                 | 1                   | Limited                      | 1                   | Limited   | 1                   | Limited                | 1                   |
| Philadelphia Office of Fleet Management | Moderate                | 2                   | Limited                      | 1                   | Limited   | 1                   | Limited                | 1                   |
| Philadelphia Water Department           | High                    | 3                   | High                         | 3                   | High      | 3                   | High                   | 3                   |
| Philadelphia Office of Sustainability   | Moderate                | 2                   | Moderate                     | 2                   | Moderate  | 2                   | High                   | 3                   |
|   |                         | 2                   |                              | 2                   |           | 2                   |                        | 2                   |



# Next Steps

1. Partner Survey to inventory capabilities
2. All-Stakeholder Workshop
3. Analysis of Capacity and Plan Integration (contractor)



# Discussion

What else can use to measure our capability to mitigate and reduce risk?



**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

**Carolyn Caton**

Infrastructure Program Manager

[Carolyn.Caton@phila.gov](mailto:Carolyn.Caton@phila.gov)

**[www.phila.gov/READY](http://www.phila.gov/READY)**



## HMP Steering Committee Meeting



**Date/Time:** January 5, 2020 from 11 AM – 12PM

**Location:** Microsoft Teams

**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |  | Notes/Actions                                  | Time Allocated |
|--------------------------|--|--|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b> <ul style="list-style-type: none"><li>• Introductions</li><li>• Review Agenda</li><li>• Review Steering Committee Goals/Objectives</li></ul>            |  | 10 mins        |
| <input type="checkbox"/> | <b>HMP Updates</b> <ul style="list-style-type: none"><li>• Review timeline &amp; progress</li></ul>  |  | 5 mins         |
| <input type="checkbox"/> | <b>Hazard Mitigation Planning Grant RFP</b> <ul style="list-style-type: none"><li>• Status update</li><li>• Feedback on RFP</li><li>• Feedback on selection criteria and process</li></ul> |  | 30 mins        |
| <input type="checkbox"/> | <b>Discussion/ Questions</b> (Time permitting)   | Time for open discussion, comments or feedback | 10 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b> <ul style="list-style-type: none"><li>• Next G-318 Training Module</li><li>• <b>Next Mtg:</b> Tuesday, 2/2 from 11am-12pm</li></ul>               |  | 5 minutes      |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #3

**Date:** January 5, 2021 from 11am-12pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Josh Lippert (L&I), Terra Luke (DPP), John Haak (PCPC), Capt. Devon Richio (PFD), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Liz Lankenau (OTIS), Nazaarah Sabree (Commerce)

### Notes:

#### 1. Introductions and Welcome

- a. Minutes from meeting on 12/1/2021 were approved by the group.
- b. Nazaarah Sabree, Senior Director of Business Services, joined the Steering Committee as of 1/6/2021.
- c. Reminder of the goals and objectives of the Steering Committee:
  - i. Guide the overall update of the plan
  - ii. Identify areas for plan integration and cross collaboration
  - iii. Help with identifying barriers to plan implementation and breaking down those barriers
  - iv. Decision making body for project identification, prioritization and selection for grants
- d. Emma Giardina, OEM opened the floor for any questions, comments or recommended changes to the goals and objectives of the Steering Committee. Committee had none.
- e. Emma Giardina, OEM suggested creation of co-chair for the committee. Any volunteers should reach out to Emma before the next meeting and the committee will vote on it.

#### 2. Hazard Mitigation Plan Updates

- a. In the News
  - i. "Safeguarding Tomorrow through Ongoing Risk Mitigation Act" allows FEMA to award grants to States to establish revolving funds to provide hazard mitigation assistance to reduce risks from disasters and natural hazards, and other related environmental harm [Bill Announcement | The White House](#)
  - ii. [FEMA's National Risk Index](#) was released. OEM is still investigating how risk factors were calculated, and how this data can be used in HMP and other planning efforts.
- b. Current timeline and status of the HMP planning process can be found [here](#).
- c. Public Survey
  - i. Developed by OEM in coordination with OCEVS and the Mayor's Office of Policy
  - ii. Data collected from this public survey will be used to inform the risk assessment and mitigation strategy in the HMP
  - iii. Please try out the survey and send any feedback that you have to OEM by **COB Thursday, January 7<sup>th</sup>**.
  - iv. The public survey can be found here: <https://www.surveymonkey.com/r/HMP-Survey>. This survey is in draft form, so please do not distribute beyond this group until the survey is finalized.

#### 3. Hazard Mitigation Planning Grant RFP

- a. Selection Committee
  - i. As is required, Philadelphia OEM will form a selection committee to rank proposals received
  - ii. We'll be asking some Steering Committee members to be a part of the selection committee
  - iii. Selection committee will attend pre-proposal meeting in January, review proposals, participate in candidate interviews, and meet to make final decisions in late February 2021.
  - iv. If you are interested in being a part of this selection committee, please email [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) by **COB, Friday 1/8**

#### 4. Open Discussion

- a. Comment that residents in Eastwick are still without working heaters due to Tropical Storm Isaias this past summer.
  - i. This is an example that shows the importance of this plan, which should address mitigation projects that can be implemented quickly in the recovery stages of a disaster.

#### **5. Next Steps & Action Items**

- a. Review and provide feedback on the public survey by **COB, Thursday January 7<sup>th</sup>**:  
<https://www.surveymonkey.com/r/HMP-Survey>.
- b. Indicate your interest in being a part of your selection committee for the HMP consultant by **COB, Friday, January 8<sup>th</sup>**
- c. Indicate if you have any interest in being a co-chair for the committee before the next meeting.
- d. Please complete this Doodle Poll by **COB Friday, January 8<sup>th</sup>** to indicate your availability for a standing monthly meeting: [https://doodle.com/poll/5bakn5dsaamwus5s?utm\\_source=poll&utm\\_medium=link](https://doodle.com/poll/5bakn5dsaamwus5s?utm_source=poll&utm_medium=link)
- e. Module 2 of FEMA's Hazard Mitigation Training – **Tuesday, January 12** from **1pm-4pm**

Meeting ended at 11:42am.

#### **Resources Referenced:**

[HMP Steering Committee One Drive Folder](#)

[DRAFT Public Survey](#)

[DRAFT Selection Criteria for RPF](#)

[Current Timeline & Status of HMP Planning Process](#)





## HMP Steering Committee Meeting



**Date/Time:** February 4, 2021 from 1PM-2PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |   | Notes/Actions   | Time Allocated |
|--------------------------|---|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>                | <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Review Agenda</li> <li>• Review Steering Committee Goals/Objectives</li> <li>• Vote on backup representatives</li> </ul>  | 10 mins        |
| <input type="checkbox"/> | <b>HMP Updates</b>                                | <ul style="list-style-type: none"> <li>• Review timeline &amp; progress</li> <li>• RFP Progress</li> <li>• February Workshop</li> <li>• Public Survey</li> </ul>  | 5 mins         |
| <input type="checkbox"/> | <b>Workgroups</b>                                 | What are we missing? Who are we missing? Are there tie-in's to other groups or committees?  | 25 mins        |
| <input type="checkbox"/> | <b>Discussion/ Questions</b><br>(Time permitting) | Time for open discussion, comments or feedback  | 15 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>          | <ul style="list-style-type: none"> <li>• <b>Workshop:</b> February 23<sup>rd</sup>, 1pm-2:30pm</li> <li>• <b>Next Meeting:</b> Thursday, 03/04 from 1pm-2pm                             <ul style="list-style-type: none"> <li>○ Presentation from the Office of Diversity, Equity and Inclusion</li> </ul> </li> </ul> | 5 minutes      |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #4

**Date:** February 4, 2021 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Richard Quodomine (DPP), John Haak (PCPC), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Liz Lankenau (OTIS), Nazaarah Sabree (Commerce), Ashley Del Bianco (Mayor's Office of Grants), Saleem Chapman (OOS)

**Absent:** Captain Devon Richio (PFD), Josh Lippert (L&I)

### Notes:

#### 1. Welcome and Committee Business

- a. Minutes from meeting on 1/5/2021 were approved by the group.
- b. Emma Giardina, OEM reviewed goals and objectives of the Steering Committee.
- c. Since the last meeting, there were no requests or nominations for a co-chair. All members present were in favor of leaving Emma Giardina, OEM as chair of the Steering Committee. This will be revisited regularly or upon request.
- d. Several members requested that they be able to identify a backup representative to attend Steering Committee Meetings when they are unavailable. All members present were in favor of identifying a primary and a secondary representative for voting purposes. When a vote is necessary, the primary representative from the agency will cast a vote. The secondary representative will only cast a vote when the primary is unavailable. Primary and secondary representatives should be identified by the next Steering Committee meeting.

#### 2. Hazard Mitigation Plan Updates

- a. Current timeline and status of the HMP planning process can be found [here](#).
- b. The Community profile continues to be drafted.
- c. Request for Proposal has been posted online [here](#). A selection will be made in March or April of this year.
- d. February Planning Partners Workshop
  - i. A workshop will be held with all planning partners on February 23<sup>rd</sup> from 1pm-2:30pm.
  - ii. The purpose of this workshop is to provide planning partners with an update on progress made over the last year, to establish working groups and to introduce next steps in the plan update.
  - iii. Please register if you have not done so already.
- e. Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA)
  - i. The City submitted two project applications for BRIC and FMA FY 2020.
  - ii. We will begin establishing a process, timeline and outreach strategy for next year's grant cycle with the Grants workgroup shortly. More information to follow.
- f. Public Survey – Open to the public
  - i. Developed by OEM in coordination with OCEVS and the Mayor's Office of Policy
  - ii. Data collected from this public survey will be used to inform the risk assessment and mitigation strategy in the HMP
  - iii. Please help spread the word about this survey. A Social Media toolkit has been developed that you can share with your Communications Team.
  - iv. Nazaarah Sabree, Commerce and John Haak, PCPC requested that OEM add their agencies to the list of partners identified in the Social Media Toolkit.

- v. Important Links:
  - 1. [Social Media Toolkit](#)
  - 2. [Survey English](#)  
[Survey Spanish](#)

### 3. Workgroups

- a. Emma Giardina, OEM reviewed the proposed workgroups for the plan update.
  - i. There will be several hazard-specific workgroups, sub-workgroups, and cross-cutting workgroups. The main workgroups include:
    - 1. Steering Committee
    - 2. Flood Workgroup
    - 3. Public Safety Workgroup
    - 4. Health & Medical Workgroup
    - 5. Infrastructure Workgroup
  - ii. Other workgroups and existing committees we will leverage include:
    - 1. Regional Workgroup
    - 2. Climate Resilience Cabinet
    - 3. Public Information & Community Outreach Workgroup
    - 4. Grants Workgroup
    - 5. Equity & Inclusion Workgroup (\*potential)
- b. Feedback from the Committee
  - i. Recommendation to remain flexible with our workgroups and potentially break each group down even further into sub-groups as needed.
  - ii. Groups should be further broken down depending on the hazard that is being discussed. For example, we may want to break the Infrastructure Workgroup down into underground incidents vs. surface incidents.
  - iii. We should be thinking strategically about the timing of when we gather workgroups. For example, leverage the release of plans and new funding priorities as a starting point for conversations.
  - iv. PFD agreed to review the Hazardous Materials sub-workgroup contact list with HMAU to determine if the appropriate contacts have been identified.
  - v. Commerce will help us spread the word to the business community and will help us make connection to Community Development Corporations, Business Improvement Districts and PA CDC.
  - vi. Recommendation to work through the Delaware Valley Regional Planning Commission (DVRPC) to convene conversations at a regional level.
  - vii. PCPC to connect OEM with the Philadelphia Historic Commission in order to better engage them in the plan update. Link to the Pennsylvania Historical & Museum Commission Phase I and Phase II Study of Floodprone historic buildings available here:  
<https://www.phmc.pa.gov/Preservation/Disaster-Planning/Pages/Mitigation-Projects.aspx>
  - viii. Suggestion to identify workgroups that are crosscutting, work across all hazard-specific workgroups.
  - ix. It was also recommended we consider how to include contractors and businesses involved in recovery and response efforts.

### 4. Open Discussion

- a. Committee had no comments, questions or concerns to raise.

### 5. Next Steps & Action Items

- a. Please help us spread the word about our [HMP public survey](#) which was just released by sharing this [Social Media Toolkit](#) with your communications teams.

- b. A workshop for planning partners will be hosted on **February 23<sup>rd</sup>** from **1pm-2:30pm**. If you have not done so already, please register for the workshop [HERE](#).
- c. Our next Steering Committee meeting will take place **March 4<sup>th</sup>** from **1pm-2pm**. The Mayor's Office of Diversity, Equity and Inclusion will be presenting.

Meeting ended at 1:39pm.

**Resources Referenced:**

[HMP Steering Committee One Drive Folder](#)

[Social Media Toolkit](#)

[Survey English](#)

[Survey Spanish](#)

## Steering Committee #4

Date: February 4, 2021, 1:00PM-2:00PM

Location: Microsoft Teams



| Name               | Title   | Organization                          | Email  |
|--------------------|---|---------------------------------------|--|
| Emma Giardina      | Hazard Planning Coordinator                   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| Carolyn Caton      | Infrastructure Program Manager                | Philadelphia OEM                      | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>           |
| John Haak          | City Planner                                  | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Terra Luke         | GIS Analyst                                   | Department of Public Property         | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                 |
| Capt. Devon Richio | Planning Division, Homeland Security Officer  | Philadelphia Fire Department          | <a href="mailto:Devon.Richio@phila.gov">Devon.Richio@phila.gov</a>             |
| Ryan Ford          | Homeland Security Program Manager             | Philadelphia OEM                      | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                   |
| Liz Lankenau       | Director, Infrastructure Program Coordination | OTIS                                  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Lt. Mike Kirby     | Planning Division                             | Philadelphia Fire Department          | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>           |
| Nazaarah Sabree    | Senior Director of Business Services          | Commerce                              | <a href="mailto:Nazaarah.Sabree@phila.gov">Nazaarah.Sabree@phila.gov</a>       |
| Rich Quodomine     | Senior Lead GIS Analyst                       | Department of Public Property         | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>   |
| Ashley Del Bianco  | Deputy Director of Finance                    | Mayor's Office of Grants              | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
| Saleem Chapman     | Chief Resilience Officer                      | Office of Sustainability              | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>         |
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## HMP Steering Committee Meeting



**Date/Time:** March 4, 2021 from 1PM-2PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |   | Notes/Actions   | Time Allocated |
|--------------------------|---|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>                                  | <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Review Agenda</li> <li>• Review Steering Committee Goals/Objectives</li> <li>• Approve meeting minutes</li> </ul>   | 5 - 10 mins    |
| <input type="checkbox"/> | <b>Office of Diversity, Equity, and Inclusion</b><br>Shanell Hagood | Presentation on the City's Racial Equity Strategy.  | 30-35 minutes  |
| <input type="checkbox"/> | <b>Discussion/ Questions (Time permitting)</b>                      | Reflections on the presentation <ul style="list-style-type: none"> <li>• In what ways can we apply this to the HMP process?</li> <li>• What other City Departments are doing this well? What best practices have you seen?</li> <li>• What are some next steps? Who should be at the table for these conversations?</li> </ul> Time for open discussion, comments, or feedback. | 10-15 mins     |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>                            | <ul style="list-style-type: none"> <li>• Brief HMP updates</li> <li>• Working Group meetings in March/April</li> <li>• <b>Public Workshop #1:</b> March 18<sup>th</sup>, 6pm. Registration available here: <a href="https://bit.ly/2M4kwI2">https://bit.ly/2M4kwI2</a></li> <li>• <b>Next Meeting:</b> Wednesday, April 7<sup>th</sup> from 1pm-2pm</li> </ul>                  | 5 minutes      |





# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #5

**Date:** March 4, 2021 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Richard Quodomine (DPP), John Haak (PCPC), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Ashley Del Bianco (Mayor's Office of Grants), Saleem Chapman (OOS), Josh Lippert (L&I), K. Baja (USDN), Martine DeCamp (PCPC), Dominick Mireles (OEM), Shanell Hagood (Office of Diversity, Equity & Inclusion), Nefertiri Sickout (Office of Diversity, Equity and Inclusion)

**Absent:** Captain Devon Richio (PFD)

### Notes:

#### 1. Welcome and Committee Business

- a. Minutes from meeting on 2/4/2021 were approved by the group.

#### 2. Presentation on the City's Racial Equity Strategy, Shanell Hagood & Nefertiri Sickout (Office of Diversity, Equity, and Inclusion)

- a. Background on the City's Racial Equity Strategy
  - i. Vision:
    1. Create a City where race is not a determinant of success
    2. Elevate diversity as one of Philadelphia's greatest assets
  - ii. ODEI is currently working with 10 City Departments to complete a Racial Equity Assessment and Racial Equity Action Plan by 2023. There will be three cohorts over the next 3 years.
  - iii. In addition to the cohorts, there is also a Racial Equity Executive Committee, Racial Equity Advisory Council and Racial Equity Working Group all supporting this effort by ODEI.
- b. Lessons learned and best practices include:
  - i. Engage a diverse group of stakeholders in the racial equity conversation and planning process, including key decision-makers
  - ii. Use data to inform your decisions and practices
  - iii. Identify and address root causes of identified disparities rather than addressing the symptoms of structural racism that exist
  - iv. Look to the recent participatory budgeting process, and the Budget Equity Committee for an example of a best practice
  - v. Keep racial equity as a priority
- c. Feedback and connection to the City's All-Hazard Mitigation Plan
  - i. Recommendation that we make racial equity an overarching goal across all working groups. Set up goals and metrics to measure success.
  - ii. Who is at the table during the planning process should reflect our priorities. We should also make sure that our mitigation efforts aren't creating more disparities, and work to identify mitigation actions that are helping to reverse inequities and disparities that currently exist.
  - iii. Definitions matter and redefining definitions also matters. We should approach a problem with both a racially and socially intelligent response.
  - iv. Determine who amongst our Steering Committee is involved in racial equity work within the City already so that we can coordinate when possible.

- v. Recommendation to co-design solutions with neighborhoods. Seek input from residents who have ideas for projects they would like to see in their neighborhoods, including earlier notification during hazardous events or severe weather.
- vi. Determine who is most at risk, and the populations we are targeting our outreach to. This will be very important as we develop our overall goals and vision for racial equity in the Hazard Mitigation Planning Process.
- vii. Find ways to connect with others doing racial equity work across the City and coordinate efforts.
- d. Framework & potential next steps that we can apply to the Hazard Mitigation Planning Process
  - i. (1) Identify a shared vision and goal for racial equity as it relates to the Hazard Mitigation Plan.
  - ii. (2) Use data and determine indicators that disparities exist. Use this data to inform your shared vision and to identify goals and metrics.
  - iii. (3) Determine the root causes of the disparities, and which root causes can be addressed through our work with the Hazard Mitigation Plan.
- e. Additional Resources:
  - i. [Racial Equity Strategy](#)
  - ii. [Racial Equity Cohort Roadmap](#)
  - iii. [OEDI PWPT Slides](#)

### 3. Hazard Mitigation Plan Updates

- a. We will be hosting a **mitigation grants workshop** this Spring focused on FEMA's Building Resilient Infrastructure & Communities (BRIC) and Flood Mitigation Assistance (FMA) grants. We would also like to identify additional funding opportunities and other potential partnerships to support project implementation. If you would like to be a part of this planning process, please reach out to Emma Giardina.
- b. The Selection Committee will be presenting our top choice for an HMP contractor to OEM/PFD leadership for final approval early next week. A contract with the chosen contractor may not be finalized until May 2021 due to some delays at the State level.
- c. Our first public HMP workshop will be hosted online on **March 18<sup>th</sup>, 2021** from **6pm-7pm**. Registration for this workshop is available here: <https://bit.ly/2M4kwl2>

### 4. Next Steps & Action Items

- a. Reach out if you would like to be a part of the planning efforts for a mitigation grants workshop this Spring.
- b. Please continue to help us spread the word about our [HMP public survey](#) by sharing this [Social Media Toolkit](#) with your communications teams.
- c. Workgroups will begin meeting in March and April with a focus on setting goals and objectives, and data collection for the Risk Assessment.
- d. Our next Steering Committee meeting will take place **April 7<sup>th</sup>** from **1pm-2pm**.

Meeting ended at 2:01 pm.

#### Resources Referenced:

[HMP Steering Committee One Drive Folder](#)

[Social Media Toolkit](#)

[Survey English](#)

[Survey Spanish](#)

## Steering Committee #5

Date: March 4, 2021, 1:00PM-2:00PM

Location: Microsoft Teams



| Name               | Title   | Organization                                      | Email  |
|--------------------|---|---|--|
| Emma Giardina      | Hazard Planning Coordinator                   | Philadelphia OEM                                  | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| Carolyn Caton      | Infrastructure Program Manager                | Philadelphia OEM                                  | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>           |
| John Haak          | City Planner                                  | Philadelphia City Planning Commission             | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Terra Luke         | GIS Analyst                                   | Department of Public Property                     | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                 |
| Capt. Devon Richio | Planning Division, Homeland Security Officer  | Philadelphia Fire Department                      | <a href="mailto:Devon.Richio@phila.gov">Devon.Richio@phila.gov</a>             |
| Ryan Ford          | Homeland Security Program Manager             | Philadelphia OEM                                  | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                   |
| Liz Lankenau       | Director, Infrastructure Program Coordination | OTIS  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Lt. Mike Kirby     | Planning Division                             | Philadelphia Fire Department                      | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>           |
| Nazaarah Sabree    | Senior Director of Business Services          | Commerce  | <a href="mailto:Nazaarah.Sabree@phila.gov">Nazaarah.Sabree@phila.gov</a>       |
| Rich Quodomine     | Senior Lead GIS Analyst                       | Department of Public Property                     | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>   |
| Ashley Del Bianco  | Deputy Director of Finance                    | Mayor's Office of Grants                          | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
| Saleem Chapman     | Chief Resilience Officer                      | Office of Sustainability                          | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>         |
| Josh Lippert       | Floodplain Manager                            | Licenses & Inspection                             | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>         |
| Dominick Mireles   | Deputy Director of Operations                 | Philadelphia OEM                                  | <a href="mailto:Dominick.Mireles@phila.gov">Dominick.Mireles@phila.gov</a>     |
| Nefertiri Sickout  | Deputy Diversity Officer                      | Mayor's Office of Diversity, Equity and Inclusion | <a href="mailto:Nefertiri.Sickout@phila.gov">Nefertiri.Sickout@phila.gov</a>   |
| Shanell Hagood     |   | Mayor's Office of Diversity, Equity and Inclusion | <a href="mailto:Shanell.Hagood@phila.gov">Shanell.Hagood@phila.gov</a>         |
| Martine DeCamp     | Deputy Director of City Planning              | Philadelphia City Planning Commissioner           | <a href="mailto:Martine.DeCamp@phila.gov">Martine.DeCamp@phila.gov</a>         |
| Kristin Baja       |   | Urban Sustainability Director's Network           | <a href="mailto:kristinbaja@usdn.org">kristinbaja@usdn.org</a>                 |
|                    |   |   |  |
|                    |   |   |  |

## HMP Steering Committee Meeting



**Date/Time:** April 7, 2021 from 1PM-2PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |  | Notes/Actions  | Time Allocated |
|--------------------------|--|--|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>               | <ul style="list-style-type: none"> <li>• Review Agenda</li> <li>• Review Steering Committee Goals/Objectives</li> <li>• Approve meeting minutes</li> </ul>   | 5 - 10 mins    |
| <input type="checkbox"/> | <b>HMP Updates and Progress</b>                  | <ul style="list-style-type: none"> <li>• Timeline &amp; update on contractor selection</li> <li>• Monthly newsletter to partners</li> <li>• Public engagement</li> <li>• Workgroup meetings</li> <li>• AmeriCorps VISTA Intern</li> <li>• BRIC/FMA Workshop this Spring</li> <li>• <b>Questions?</b></li> </ul>  | 5-10 mins      |
| <input type="checkbox"/> | <b>Follow up to February's Equity Discussion</b> | <ul style="list-style-type: none"> <li>• <a href="#">Recommendations for Addressing Hazard Mitigation Planning</a>, Draft, San Mateo County                             <ul style="list-style-type: none"> <li>○ What could be applied to Philadelphia?<br/>What is this framework missing?</li> </ul> </li> <li>• What are some concrete next steps to increase inclusion and incorporate more equitable approaches into our planning process?</li> <li>• What are our "asks" to the contractor in terms of social equity?</li> </ul> | 30-35 minutes  |
| <input type="checkbox"/> | <b>Open Discussion (Time permitting)</b>         |  | 10-15 mins     |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>         | <ul style="list-style-type: none"> <li>• Working group meetings starting in in March/April</li> <li>• BRIC/FMA Workshop this Spring, date TBD</li> <li>• <b>Next Meeting:</b> Monday, May 3rd from 1pm-2pm</li> </ul>  | 5 minutes      |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #6

**Date:** April 7, 2021 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Richard Quodomine (DPP), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Josh Lippert (L&I), Liz Lankenau (OTIS)

**Absent:** Captain Devon Richio (PFD), Saleem Chapman (OOS), John Haak (PCPC), Carolyn Caton (OEM), Ashley Del Bianco (Mayor's Office of Grants), Nazaarah Sabree (Commerce)

### Notes:

#### 1. Welcome and Committee Business

- a. Minutes from meeting on 3/4/2021 were approved by the group. DPP noted some changes sent via email which were made.

#### 2. Hazard Mitigation Plan Updates

- a. A Notice of Intent to Contract for the Philadelphia HMP has been published on econtract Philly and can be viewed [here](#) under the Notice of Intent to Contract tab on the left hand side. OEM is working to determine next steps.
- b. The Mitigation Grants & Funding Workgroup is planning a **mitigation grants workshop** on **May 19<sup>th</sup>** from **10am-1pm** focused on FEMA's Building Resilient Infrastructure & Communities (BRIC) and Flood Mitigation Assistance (FMA) grants. More information and a formal invitation to follow.
- c. Philadelphia OEM will be publishing a monthly newsletter with key updates on the planning process each month to planning partners. The first newsletter was released at the end of the March.
- d. OEM has been approved for an AmeriCorps VISTA Coordinator for 10 weeks between June and August to support the Hazard Mitigation Plan update. The VISTA intern will be focused specifically on equitable planning and outreach in the HMP update process. Applications are rolling through April 30<sup>th</sup>, 2021. Spread the word to potential applicants. The application can be found here: <http://bit.ly/summerapp21>
- e. Workgroups have started to meet. The following workgroups have already met or will meet in the months of March and April: Educational Institutions WG, Historic & Cultural Resources WG, Flooding WG, Infrastructure WG

#### 3. Follow up on Equity in Hazard Mitigation Planning

- a. Emma Giardina, OEM share the following example document with the Steering Committee for review: [Recommendations for Addressing Hazard Mitigation Planning](#)
- b. Feedback
  - i. OTIS offered to put OEM in touch with the individuals who recently updated the transportation plan to discuss how equity was addressed.
  - ii. Recommendation to consider equity at the project-level. A toolkit for project planners would be helpful.

#### 4. Open Discussion/Comments

- a. Josh Lippert, L&I provided a recap of a recent meeting with the Manayunk Business District. There is a need to have more conversations with property owners, developers and community development corporations around hazard risk, mitigation and the City's response to flooding.
  - i. Emma Giardina, OEM recommended that we consider working with Commerce to identify other business districts that could benefit from these conversations as well.
- b. Emma Giardina, OEM reminded participants that the BRIC/FMA mitigation grants workshop is coming up in May and that we need to begin identifying potential shovel ready projects to submit.

## 5. Next Steps & Action Items

- a. The Mitigation Grants & Funding Workgroup is planning a **mitigation grants workshop** on **May 19<sup>th</sup>** from **10am-1pm** focused on FEMA's Building Resilient Infrastructure & Communities (BRIC) and Flood Mitigation Assistance (FMA) grants. More information and a formal invitation will follow.
- b. Workgroups will begin meeting in March and April with a focus on setting goals and objectives, and data collection for the Risk Assessment.
- c. Our next Steering Committee meeting will take place **Monday, May 3rd** from **1pm-2pm**. This meeting is *tentatively* scheduled and the need for a meeting will be reassessed no later than 2 weeks out. Stay tuned.

Meeting ended at 1:44pm.

### Resources Referenced:

[HMP Steering Committee One Drive Folder](#)

[Social Media Toolkit](#)

[Survey English](#)

[Survey Spanish](#)





## HMP Steering Committee Meeting



**Date/Time:** June 21, 2021 from 10AM-11AM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>       | <ul style="list-style-type: none"> <li>• Review agenda</li> <li>• Approve meeting minutes from April</li> </ul>   | 2-3 mins       |
| <input type="checkbox"/> | <b>HMP Updates and Progress</b>          | <ul style="list-style-type: none"> <li>• Timeline &amp; update on contractor selection</li> <li>• AmeriCorps VISTA– Welcome Kyrillos Girgis</li> <li>• <b>Questions?</b></li> </ul>   | 10 mins        |
| <input type="checkbox"/> | <b>Report Outs</b>                       | <ul style="list-style-type: none"> <li>• OOS – Eastwick Coordination Work</li> <li>• Josh Lippert – FRMTF May Quarterly Meeting</li> <li>• Other Updates?</li> </ul>  | 10 mins        |
| <input type="checkbox"/> | <b>BRIC/FMA FY 2021</b>                  | <ul style="list-style-type: none"> <li>• One-on-one Agency Meetings</li> <li>• <a href="#">Application Process</a></li> <li>• <b>Decision Point: HMP Amendment Process and HMP Steering Committee</b></li> <li>• Looking Ahead</li> </ul> | 15-20 minutes  |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b> | <ul style="list-style-type: none"> <li>• Onboarding contractor</li> <li>• Plan Amendment Process</li> <li>• <b>Next Meeting:</b> TBD</li> </ul>   | 2-3 minutes    |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #7

**Date:** June 21, 2021 from 10AM-11AM

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Richard Quodomine (DPP), Ryan Ford (OEM), Josh Lippert (L&I), Liz Lankenau (OTIS), John Haak (PCPC), Ashley Del Bianco (Mayor's Office of Grants), Matina Granieri (OOS)

**Absent:** Captain Devon Richio (PFD), Saleem Chapman (OOS), Carolyn Caton (OEM), Nazaarah Sabree (Commerce), Lt. Mike Kirby (PFD)

### Notes:

#### 1. Welcome and Committee Business

- a. Minutes from the meeting on 4/7/2021 were approved by the group

#### 2. Hazard Mitigation Plan (HMP) Updates

- a. A contract between the City of Philadelphia and WSP, Inc. (subcontractors: T&M Associates, Lion Advisors) was finalized last week. A kickoff meeting between OEM and the WSP, Inc will take place next Monday, June 28<sup>th</sup>.
- b. Office of Emergency Management (OEM) welcomes Kyrillos (Cyril) Girgis, our new Community Disaster Planning VISTA Coordinator. Cyril will be working with us for 10 weeks this summer focused on diversity, equity, and inclusion in the planning process and in our HMP community outreach.
- c. OEM will be convening a **Land Use Workgroup** on July 1<sup>st</sup> to better understand how current and future land use and development impacts hazard risk in Philadelphia. We'd also like to use this group to explore potential mitigation options
- d. OEM will be convening an AFN Workgroup on June 24<sup>th</sup> to gather feedback and recommendations on an inclusive HMP planning process.

#### 3. Report Outs

- a. Josh Lippert, L&I reported out on the May Flood Risk Management Task Force (FRMTF) meeting which focused on identifying flood mitigation projects and key stakeholders in different geographic regions of the City.
  - i. Most projects identified during this workshop focused on updating policies, procedures, and codes as well as the need for more education and awareness around flood risk
  - ii. Buyouts and preserving natural space were also mentioned frequently
  - iii. More conversations are needed to further build out mitigation projects for the 2022 plan.
- b. Josh Lippert, L&I reported that the FRMTF developed a 2-page document designed to communicate flood risk in the Eastwick neighborhood. This educational tool was modeled after a similar resource created for the Germantown neighborhood last year. The FRMTF hopes to design similar handouts for other neighborhoods at risk for flooding. For more information and a copy of the handouts, visit the City's [Flood Management Program webpage](#).
- c. Matina Granieri, Office of Sustainability (OOS) reported out on recent work to coordinate City resiliency and mitigation efforts in the Eastwick neighborhood.

#### 4. Building Resilience Infrastructure and Communities (BRIC)/ Flood Mitigation Assistance (FMA) FY 2021

- a. The application process (draft) was updated this year with the following goals in mind:
  - i. Give City applicants more time to complete the application process and more resources to facilitate and guide the application process

- ii. Align BRIC/FMA application process with the Hazard Mitigation Plan update and annual review process
    - iii. Establish a more defined plan amendment process
  - b. 2021 Application Process and Timeline
    - i. Summer 2021 – one-on-one meetings with potential applicants
    - ii. Sept. 1 – Applicants submit project proposals
    - iii. Early Sept. - HMP Steering Committee reviews proposals and determines if projects should be added to the plan through an amendment
    - iv. Sept. 30 – Signed checklist due
    - v. End of Sept. - Applications open on FEMA GO
    - vi. Mid-November – Application due to PEMA
  - c. New updates to the application process this year
    - i. After consultation with the Mitigation Grants and Funding Workgroup, OEM is proposing that the HMP Steering Committee be used as the decision-making body for the plan amendment process. Projects will only be added to the HMP through a plan amendment after review and approval from the Steering Committee.
      - 1. Only projects included in the City’s HMP are eligible for BRIC/FMA (FEMA requirement)
      - 2. The plan amendment process and the rubric will be drafted by OEM for review and feedback by the Steering Committee
      - 3. OEM will schedule a meeting with the Steering Committee in September to review project proposals
    - ii. Applicants will be required to submit a project checklist signed by their City agency’s leadership that acknowledges the following:
      - 1. Leadership is aware that their agency is submitting a BRIC and/or FMA application
      - 2. The agency is aware of their roles and responsibilities in the application and grant management process
      - 3. The agency is committed to funding the 25% cost match
    - iii. **No attendees present at this meeting were opposed to the process for plan amendment outlined above. The following feedback from the group was recorded:**
      - 1. Steering Committee should consider removing themselves from voting on projects if they have a vested interest in the project.
      - 2. It was noted that the City’s Trail Master Plan used a prioritization process that could be referred to as an example when we redesign the project prioritization process for the 2022 HMP
      - 3. For the plan amendment process and project prioritization process, technical criteria should be further defined and outlined. This is an important consideration for BRIC/FMA projects.
  - d. Moving forward
    - i. The plan amendment process will be outlined in the new 2022 Hazard Mitigation Plan.
    - ii. Consider requiring that agencies participate in the annual review process to remain eligible for BRIC/FMA and have their projects included in the plan.

## 5. Next Steps

- a. The HMP plan amendment process and a rubric will be drafted by OEM for review and approval by the Steering Committee. A meeting with the Steering Committee to review project proposals will be scheduled for early September.
- b. OEM will host a kickoff meeting with the HMP contractor scheduled for Monday, 6/28/2021.
- c. The next Steering Committee Meeting date is TBD and will be communicated via email.

## Steering Committee #7

Date: June 21, 2021, 10AM-11AM

Location: Microsoft Teams



| Name              | Title   | Organization                          | Email  |
|-------------------|---|---------------------------------------|--|
| Emma Giardina     | Hazard Planning Coordinator                   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| John Haak         | City Planner                                  | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Ryan Ford         | Homeland Security Program Manager             | Philadelphia OEM                      | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                   |
| Liz Lankenau      | Director, Infrastructure Program Coordination | OTIS                                  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Matina Granieri   | Place-based Initiatives Manager               | OOS                                   | <a href="mailto:Matina.Granieri@phila.gov">Matina.Granieri@phila.gov</a>       |
| Rich Quodomine    | Senior Lead GIS Analyst                       | Department of Public Property         | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>   |
| Josh Lippert      | Floodplain Manager                            | Licenses & Inspection                 | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>         |
| Ashley Del Bianco | Chief Grants Officer                          | Mayor's Office of Recovery and Grants | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
|                   |   |                                       |  |
|                   |   |                                       |  |
|                   |   |                                       |  |
|                   |   |                                       |  |

## HMP Steering Committee Meeting



**Date/Time:** August 4, 2021 from 2pm-3pm  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina, OEM

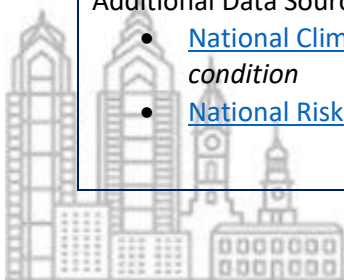
| Agenda Item |  | Notes/Actions  | Time Allocated |
|-------------|--|--|----------------|
| ☐           | <b>Introductions &amp; Welcome - OEM</b>                       | <ul style="list-style-type: none"> <li>• Introductions – Welcome WSP, T&amp;M and Lion Advisors</li> <li>• Review agenda</li> <li>• Approve meeting minutes from June 21</li> </ul>  | 5 mins         |
| ☐           | <b>Risk Assessment Overview and Hazard Selection - WSP</b>     | <ul style="list-style-type: none"> <li>• Risk Assessment Overview</li> <li>• Hazard selection process and data sources</li> </ul>  | 20 min         |
| ☐           | <b>Hazard Data Selection - WSP</b>                             | <ul style="list-style-type: none"> <li>• Introduce Data Handout</li> <li>• Discuss Overarching Data Climate Change and Equity</li> <li>• Review Sample Natural and Human-made Hazard</li> </ul>  | 20 mins        |
| ☐           | <b>Plan Amendment and Project Prioritization Process - OEM</b> | <ul style="list-style-type: none"> <li>• Prioritization Process used to facilitate selection of projects for BRIC/FMA moving forward</li> <li>• Quorum</li> </ul>  | 10 mins        |
| ☐           | <b>Next Steps for Steering Committee - OEM</b>                 | <ul style="list-style-type: none"> <li>• Provide feedback on data</li> <li>• Provide feedback on prioritization process</li> <li>• <b>Next Meeting:</b> Please complete the following <a href="#">Doodle</a> <a href="#">Poll</a> prior to the end of the day, Friday, August 6<sup>th</sup>.</li> </ul> | 2-3 minutes    |

# Philadelphia HMP Data Handout

## Data Review for Hazard Profiles

Often local data is the best data and has the most detailed information for analysis. We would like to collect the best data to complete the Risk and Vulnerability Assessment update. Please let us know if you manage local data or information that would be helpful or if you have a State or Federal resource that you recommend. The best answer here is using data that is verified and used by the people that know the City best. If you only have recommendations for one or a few hazards that is great and helpful. Please email the form or any recommendations to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) by August 13<sup>th</sup>.

| Known and Existing Resources   | City Recommended Resources |
|--|----------------------------|
| <b>Natural Hazards</b>   |                            |
| <p><b>Drought</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">DEP</a></li> <li>• <a href="#">NIDIS</a></li> <li>• <a href="#">USDA Census of Agriculture</a></li> <li>• <a href="#">DCNR PA Groundwater Information System</a></li> <li>• <a href="#">NOAA Storm Events database</a></li> </ul> <p>Additional sources</p> <ul style="list-style-type: none"> <li>• <a href="#">National Climate Assessment</a> – <i>for future condition</i></li> <li>• <a href="#">National Risk Index</a></li> </ul>   |                            |
| <p><b>Earthquake</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">DCNR</a></li> <li>• <a href="#">NOAA</a></li> <li>• <a href="#">USGS</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• <a href="#">National Risk Index</a></li> </ul>   |                            |
| <p><b>Extreme Temperature</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">FEMA Natural Hazards PDF</a></li> <li>• <a href="#">Pennsylvania State Climate Office Events Database</a></li> <li>• <a href="#">The Pennsylvania State Climatologist</a></li> <li>• <a href="#">NOAA Storm Events Database</a></li> <li>• <a href="#">NOAA Heat Forecast Tools</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• <a href="#">National Climate Assessment</a> – <i>for future condition</i></li> <li>• <a href="#">National Risk Index</a></li> </ul> |                            |



Email to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) by August 13<sup>th</sup>

# Philadelphia HMP Data Handout

## Data Review for Hazard Profiles

| Known and Existing Resources  | City Recommended Resources                               |
|---|--|
| <p><b>Flood</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">FEMA Flood Map Service Center</a></li> <li>• <a href="#">FEMA National Flood Insurance Program</a></li> <li>• <a href="#">NOAA Storm Events database</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• NOAA Sea Level Rise Model – <i>for future condition</i></li> </ul>   |  |
| <p><b>Hurricane, Tropical Storm, Nor’easter</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">NOAA Office for Coastal Management DIGITALCOAST</a></li> <li>• <a href="#">NOAA Storm Events database</a></li> <li>• <a href="#">NOAA Hurricane Resources</a></li> <li>• <a href="#">USGS</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• <a href="#">National Climate Assessment</a> – <i>for future condition</i></li> <li>• <a href="#">National Risk Index</a></li> </ul> |  |
| <p><b>Pandemic and Infectious Disease</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">CDC</a></li> <li>• <a href="#">PA DOH Pandemic Information</a></li> <li>• <a href="#">WHO</a></li> <li>• <a href="#">Global Health Security Index</a></li> </ul>  |  |
| <p><b>Subsidence, Sinkhole</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">DCNR Sinkholes</a></li> <li>• <a href="#">USGS Atlas</a></li> <li>• <a href="#">USGS Land Subsidence</a></li> <li>• <a href="#">PA DEP Mine Subsidence Insurance</a></li> </ul>  | <p>Is there local spatial data about filled streams?</p> |



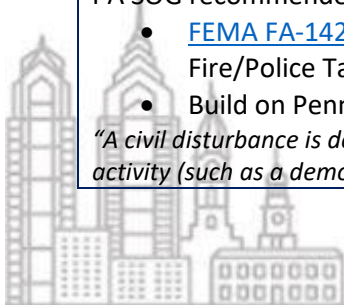
Email to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) by August 13<sup>th</sup>



# Philadelphia HMP Data Handout

## Data Review for Hazard Profiles

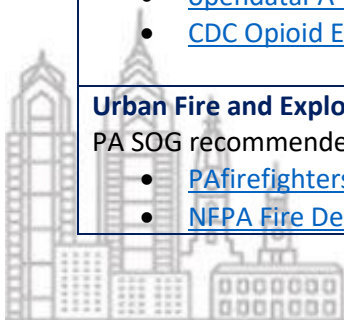
| Known and Existing Resources  | City Recommended Resources |
|---|----------------------------|
| <p><b>Tornado, Windstorm</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">NSSL Tornadoes</a></li> <li>• <a href="#">IIBEC Tornadoes</a></li> <li>• <a href="#">NOAA Storm Prediction Center</a></li> <li>• <a href="#">NOAA Storm Events database</a></li> <li>• <a href="#">FEMA Tornadoes PDF</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• <a href="#">National Risk Index</a></li> </ul>   |                            |
| <p><b>Winter Storm</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">Ready.gov Winter Weather</a></li> <li>• <a href="#">NSSL Severe Weather – Winter Weather</a></li> <li>• <a href="#">NOAA Storm Events database</a></li> <li>• <a href="#">NOAA National Weather Forecast Office</a></li> <li>• <a href="#">Pennsylvania State Climate Office Events Database</a></li> <li>• <a href="#">FEMA Winter Storm PDF</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• <a href="#">National Climate Assessment – for future condition</a></li> <li>• <a href="#">National Risk Index</a></li> </ul> |                            |
| <b>Human-made Hazards</b>   |                            |
| <p><b>Building and Structure Collapse</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">DHS Building and Infrastructure Protection Series</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> <li>• <a href="#">PennDOT Bridge data</a></li> <li>• <a href="#">City of Philadelphia Building Footprint data</a></li> </ul>  |                            |
| <p><b>Civil Disturbance</b></p> <p>PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">FEMA FA-142: Report of the Joint Fire/Police Task Force on Civil Unrest</a></li> <li>• <a href="#">Build on Pennsylvania 2018 SHMP</a></li> </ul> <p><i>“A civil disturbance is defined by FEMA as a civil unrest activity (such as a demonstration, riot, or strike) that</i></p>  |                            |



# Philadelphia HMP Data Handout

## Data Review for Hazard Profiles

| Known and Existing Resources  | City Recommended Resources |
|---|----------------------------|
| <p><i>disrupts a community and requires intervention to maintain public safety”</i></p>   |                            |
| <p><b>Criminal Activity –</b><br/> <b>Active Assailant, Gun Violence, IED</b><br/>           Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Build on data in existing 2017 HMP plan</li> <li>• Local PPD data</li> </ul>  |                            |
| <p><b>Cyber Terrorism</b><br/>           PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">PA GOHS Cyber Security</a></li> <li>• <a href="#">Ready.gov Cyber Security</a></li> <li>• <a href="#">FEMA Building a Culture of Cyber Preparedness</a></li> </ul>  |                            |
| <p><b>Dam Failure</b><br/>           PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">National Inventory of Dams</a></li> <li>• <a href="#">PA DEP Dam Safety</a></li> <li>• <a href="#">Association of Dam Safety</a></li> <li>• <a href="#">PA DEP Probable Maximum Precipitation Study</a></li> </ul> <p>Additional Data Sources</p> <ul style="list-style-type: none"> <li>• Hazus</li> </ul> <p>Often included as an Appendix (FOUO information)</p> |                            |
| <p><b>Hazardous Materials Release</b><br/>           PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">EPA Toxic Release Inventory</a></li> <li>• <a href="#">USDOT Pipeline and Hazardous Materials Safety Administration</a></li> <li>• <a href="#">PEMA Hazardous Material</a></li> </ul>   |                            |
| <p><b>Opioid Addiction Response</b><br/>           PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">NIH National Institute on Drug Abuse – PA</a></li> <li>• <a href="#">opendataPA – Opioid Data Dashboard</a></li> <li>• <a href="#">CDC Opioid Epidemic</a></li> </ul>   |                            |
| <p><b>Urban Fire and Explosion</b><br/>           PA SOG recommended data sources</p> <ul style="list-style-type: none"> <li>• <a href="#">PAfirefighters.com</a></li> <li>• <a href="#">NFPA Fire Department Calls Table</a></li> </ul>  |                            |



Email to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) by August 13<sup>th</sup>

# Philadelphia HMP Data Handout

Data Review for Hazard Profiles

| Known and Existing Resources | City Recommended Resources |
|------------------------------|----------------------------|
|                              |                            |



Email to [Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com) by August 13<sup>th</sup>

# The Hazard Mitigation Plan Steering Committee

## Agenda, 8/4/2021

1. Introductions
2. Risk & Vulnerability Assessment – Hazard Identification
3. Risk & Vulnerability Assessment - Data
4. Plan Amendment & Project Prioritization Process



# Introductions



# The Planning Process



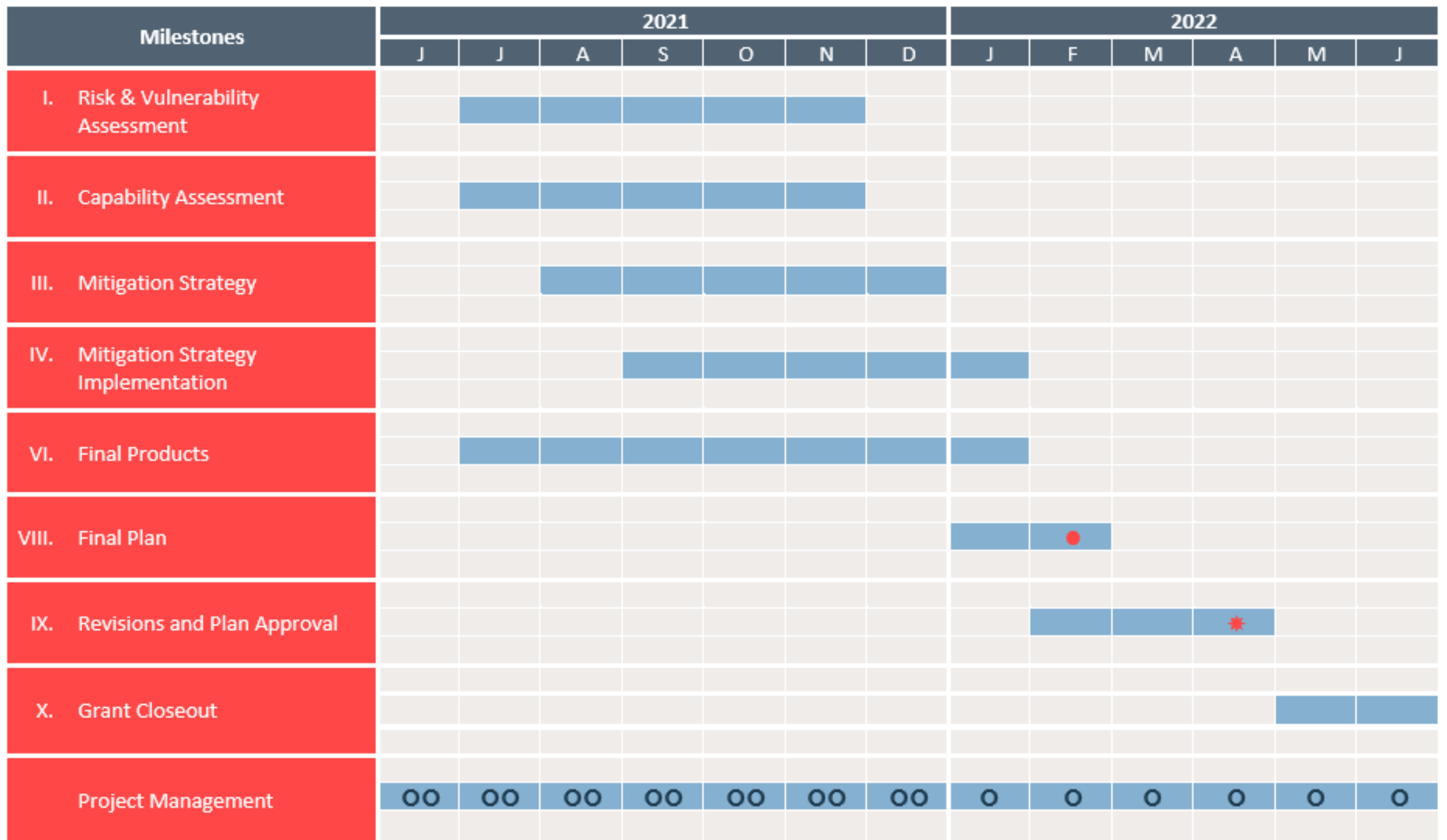
NLT: May 25, 2022

  
**We are here**  
Date: August 2021





**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to include more defined steps for planning and timing purposes. More details on each step are provided on the next slide.



Legend: Submit Plan for Review by PEMA & FEMA-●

Target for FEMA Approval Pending Adoption-\*

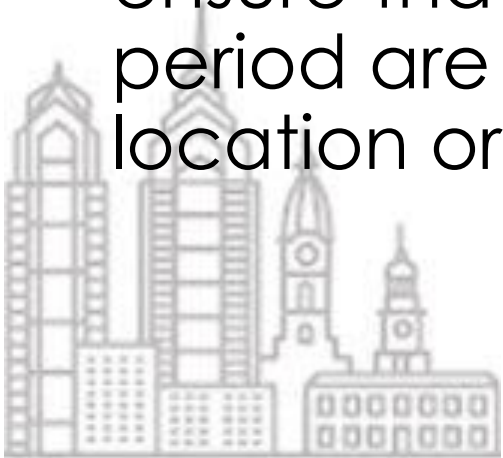
Monthly Project Management Meetings (half planned as calls)-○



# What is a risk & vulnerability assessment?

A key component of updating the City of Philadelphia 2022 All-Hazard Mitigation Plan will be a **comprehensive, up-to-date assessment of natural and human-made hazards affecting the City.**

The existing profiles need to be reviewed and updated to ensure that events that have happened in the last five-year period are documented and that any changes to the location or likely magnitude of each hazard are correct.

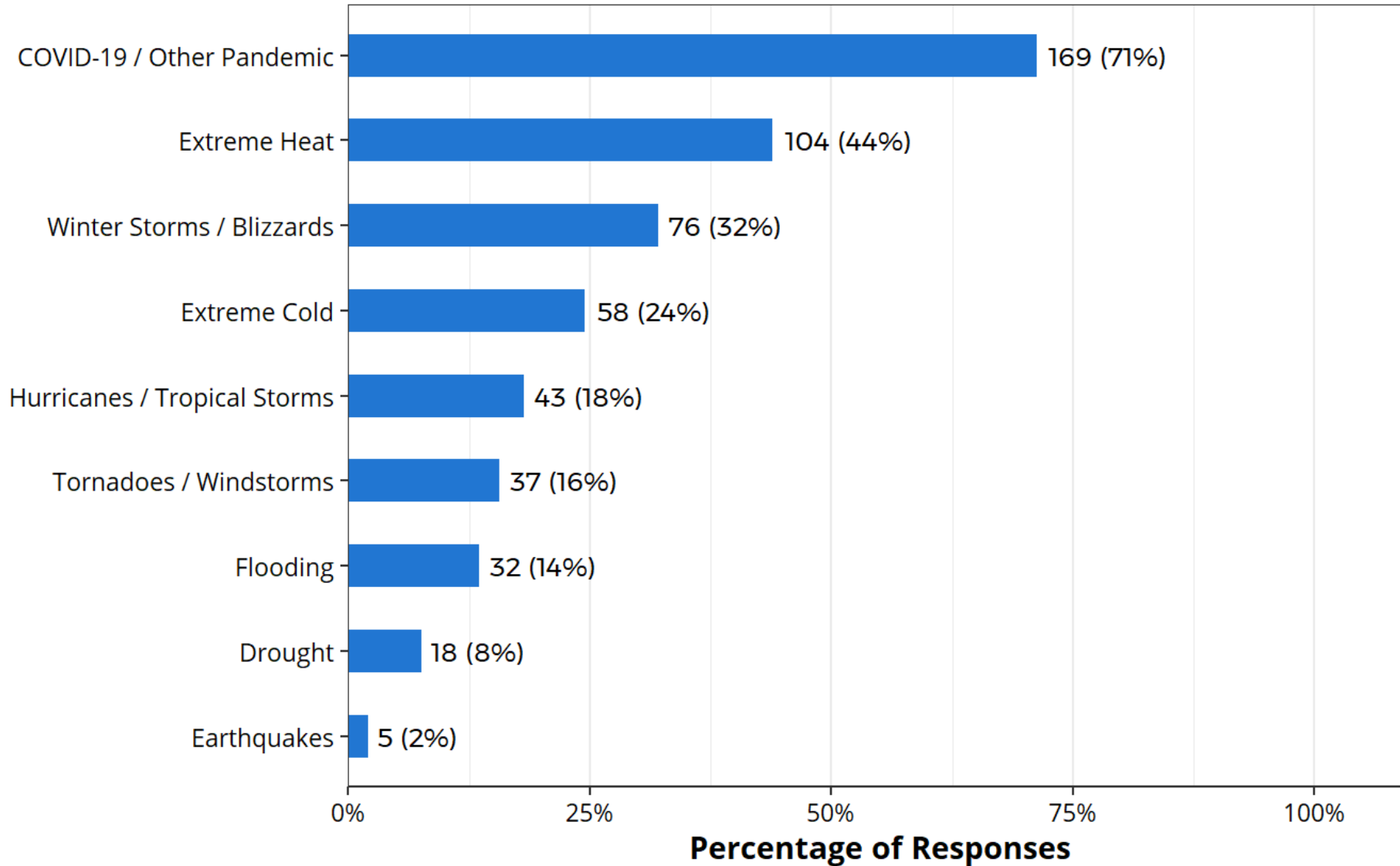


# Approach to Hazards

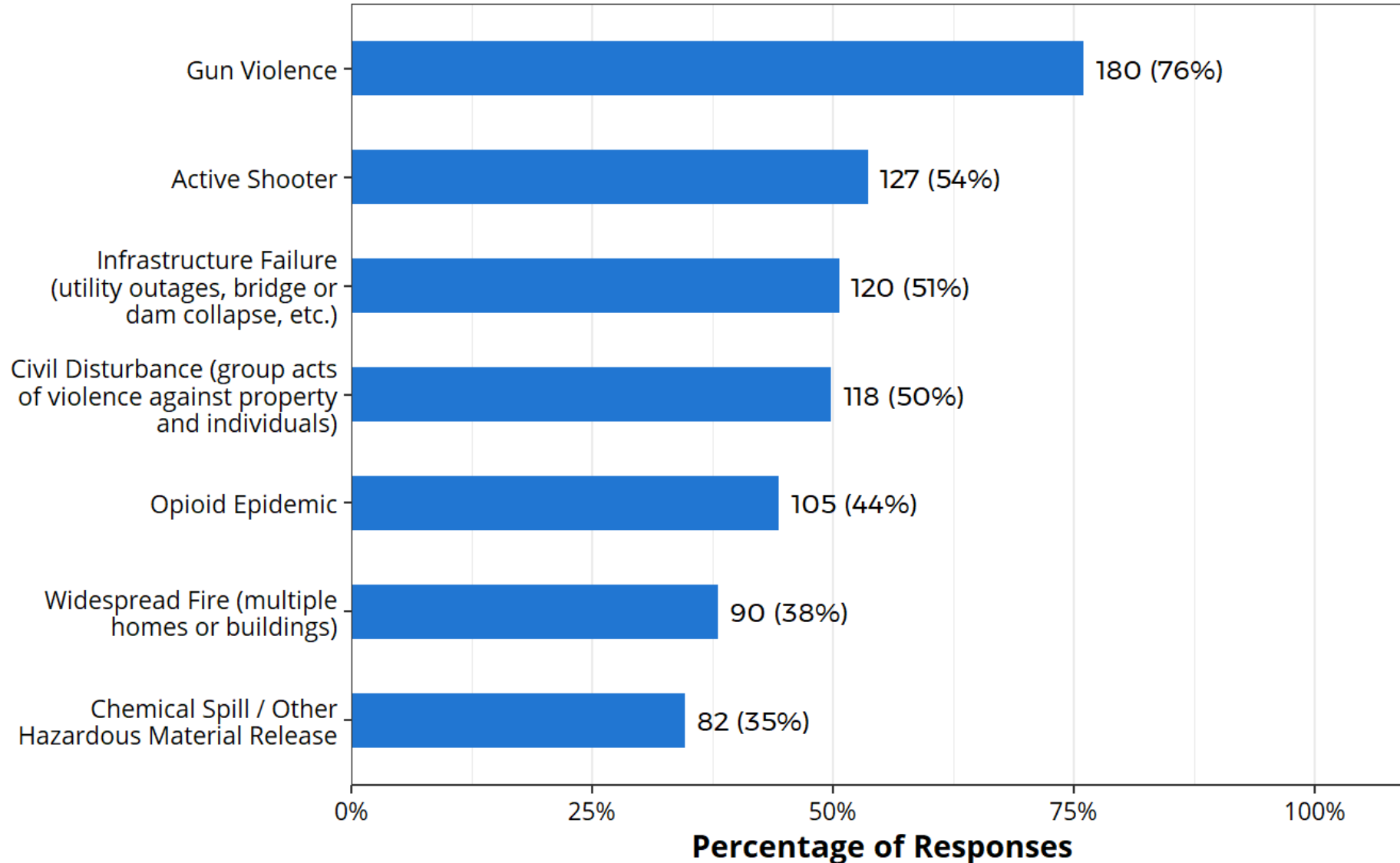
1. Compare 2017 HMP list of hazards to state-level guidance (PA SOG)
2. Consolidate, update and add hazards based on best practices and OEM survey/public outreach on hazards
3. Steering Committee discussion to finalize list of hazards for 2022 Update



Very or extremely concerned about each of the following natural disasters affecting the neighborhood in Philadelphia where they live and/or work.



Very or extremely concerned about each of the following human-caused disasters affecting the neighborhood in Philadelphia where they live and/or work.



# 2017 Hazards vs. PA SOG Hazards

*Natural hazards  
listed in the PA  
SOG*

- Coastal Erosion
- Drought
- Earthquake
- Expansive Soils
- Extreme Temperature (Cold/Heat)
- Flood, Flash Flood, Ice Jam
- Hailstorm
- Hurricane, Tropical Storm, Nor'easter
- Invasive Species
- Landslide
- Lightning Strike
- Pandemic and Infectious Disease
- Radon Exposure
- Subsidence, Sinkhole
- Tornado, Windstorm
- Wildfire
- Winter Storm



# 2017 Hazards vs. PA SOG Hazards

*Natural hazards included in the 2017 HMP*

- Coastal Erosion
- Drought
- Earthquake
- Expansive Soils
- Extreme Temperature (Cold/Heat)
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- Invasive Species
- Landslide
- Lightning Strike
- Pandemic and Infectious Disease
- Radon Exposure
- Subsidence, Sinkhole
- Tornado, Windstorm
- Wildfire
- Winter Storm



# 2017 Hazards vs. PA SOG Hazards

*Potential  
additional  
natural hazards  
for 2022 Update*

- Coastal Erosion
- Drought
- Earthquake
- Expansive Soils
- Extreme Temperature (Cold/Heat)
- Flood, Flash Flood, Ice Jam
- Hailstorm
- Hurricane, Tropical Storm, Nor'easter
- Invasive Species
- Landslide
- Lightning Strike
- Pandemic and Infectious Disease
- Radon Exposure
- Subsidence, Sinkhole
- Tornado, Windstorm
- Wildfire
- Winter Storm



# 2017 Hazards vs. PA SOG Hazards

*Human-made hazards listed in the PA SOG*

- Building and Structure Collapse
- Civil Disturbance
- Cyber Terrorism
- Dam Failure
- Disorientation
- Drowning
- Environmental Hazards
  - Coal Mining
  - Conventional Oil & Gas Wells
  - Gas & Liquid Pipelines
  - Hazardous Materials Release
  - Unconventional Wells
- Levee Failure
- Mass Food/Animal Feed Contamination
- Nuclear Incident
- Opioid Addiction Response
- Terrorism
- Transportation Accident
- Urban Fire and Explosion
- Utility Interruption
- War and Criminal Activity
  - Active Assailant
  - Gun Violence
  - Improvised Explosive Device (IED)





# 2017 Hazards vs. PA SOG Hazards

*Human-made hazards included in the 2017 HMP*

- Building and Structure Collapse (*Bridge Failure*)
- Civil Disturbance
- Cyber Terrorism
- Dam Failure
- Disorientation
- Drowning
- Environmental Hazards
  - Coal Mining
  - Conventional Oil & Gas Wells
  - Gas & Liquid Pipelines
  - Hazardous Materials Release (*Hazardous Train Derailment*)
  - Unconventional Wells
- Levee Failure

- Mass Food/Animal Feed Contamination
- Nuclear Incident
- Opioid Addiction Response
- Terrorism
- Transportation Accident
- Urban Fire and Explosion (*Urban Conflagration*)
- Utility Interruption
- War and Criminal Activity
  - Active Assailant (*Active Shooter*)
  - Gun Violence
  - Improvised Explosive Device (IED)



# 2017 Hazards vs. PA SOG Hazards

*Potential additional human-made hazards for 2021 Update*

- Building and Structure Collapse
- Civil Disturbance
- Cyber Terrorism
- Dam Failure
- Disorientation
- Drowning
- Environmental Hazards
  - Coal Mining
  - Conventional Oil & Gas Wells
  - Gas & Liquid Pipelines
  - Hazardous Materials Release
  - Unconventional Wells
- Levee Failure
- Mass Food/Animal Feed Contamination
- Nuclear Incident
- Opioid Addiction Response
- Terrorism
- Transportation Accident
- Urban Fire and Explosion
- Utility Interruption
- War and Criminal Activity
  - Active Assailant
  - Gun Violence
  - Improvised Explosive Device (IED)



# Proposed List of Hazards for 2022 Update

*Proposed new hazards in green*

## Natural Hazards

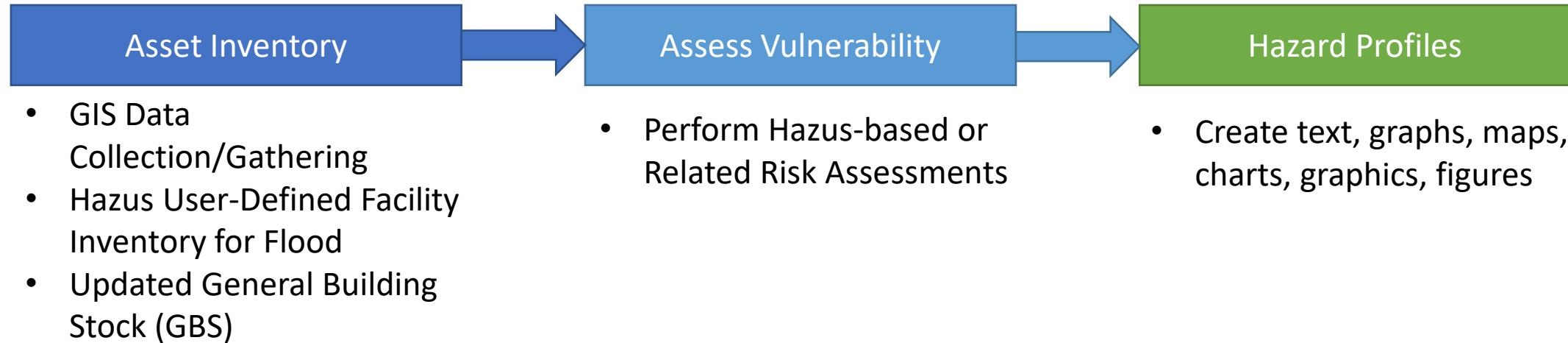
- Drought
- Earthquake
- Extreme Temperature
- Flood, Flash Flood, Ice Jam
- Hurricane, Tropical Storm, Nor'easter
- Pandemic and Infectious Disease
- Subsidence, Sinkhole
- Tornado, Windstorm
- Winter Storm

## Human-made Hazards

- Building and Structure Collapse
- Civil Disturbance
- Cyber Terrorism
- Dam Failure
- Hazardous Materials Release
- Opioid Addiction Response
- Urban Fire and Explosion
- Criminal Activity
  - Active Assailant
  - Gun Violence
  - Improvised Explosive Device (IED)



# Risk & Vulnerability Assessment: Hazard Profiles Process



# Risk & Vulnerability Assessment: Hazard Profile Outline

1. Description, Location, and Extent
2. Range of Magnitude
3. Past Occurrence
4. Future Occurrence
5. Vulnerability Assessment



# Risk & Vulnerability Assessment:

## Overarching Data

- Climate change
  - Future condition for Drought, Extreme Temperature, Flood, Hurricane, Winter Storm – National Climate Assessment, NOAA Sea Level Rise
- Equity
  - National Risk Index – social vulnerability at the County and Census Tract level
  - US Census Data



# Introduction to Data Handout

## Data Review for Hazard Profiles



# Drought

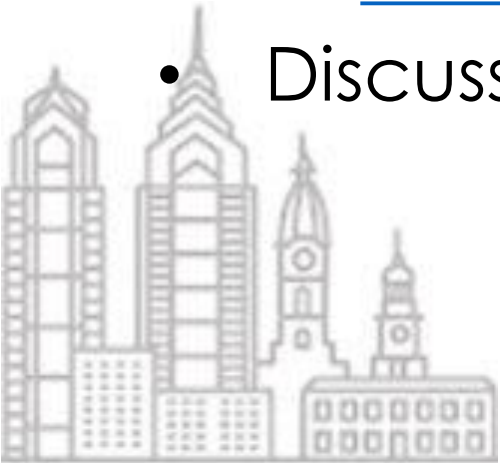
- PA SOG recommended data sources
  - [DEP](#)
  - [NIDIS](#)
  - [USDA Census of Agriculture](#)
  - [DCNR PA Groundwater Information System](#)
  - [NOAA Storm Events database](#)
- Additional sources
  - [National Climate Assessment](#) – *for future condition*
  - [National Risk Index](#)
- Discussion about additional local data sources





# Earthquake

- PA SOG recommended data sources
  - [DCNR](#)
  - [NOAA](#)
  - [USGS](#)
- Additional Data Sources
  - Hazus
  - [National Risk Index](#)
- Discussion about additional local data sources



# Extreme Temperature

- PA SOG recommended data sources
  - [FEMA Natural Hazards PDF](#)
  - [Pennsylvania State Climate Office Events Database](#)
  - [The Pennsylvania State Climatologist](#)
  - [NOAA Storm Events Database](#)
  - [NOAA Heat Forecast Tools](#)
- Additional Data Sources
  - [National Climate Assessment](#) – *for future condition*
  - [National Risk Index](#)
- Discussion about additional local data sources



# Flood

- PA SOG recommended data sources
  - [FEMA Flood Map Service Center](#)
  - [FEMA National Flood Insurance Program](#)
  - [NOAA Storm Events database](#)
- Additional Data Sources
  - Hazus
  - NOAA Sea Level Rise Model – *for future condition*
- Discussion about additional local data sources



# Hurricane, Tropical Storm, Nor'easter

- PA SOG recommended data sources
  - [NOAA Office for Coastal Management DIGITALCOAST](#)
  - [NOAA Storm Events database](#)
  - [NOAA Hurricane Resources](#)
  - [USGS](#)
- Additional Data Sources
  - Hazus
  - [National Climate Assessment](#) – *for future condition*
  - [National Risk Index](#)
- Discussion about additional local data sources



# Pandemic and Infectious Disease

- PA SOG recommended data sources
  - [CDC](#)
  - [PA DOH Pandemic Information](#)
  - [WHO](#)
  - [Global Health Security Index](#)
- Discussion about additional local data sources



# Subsidence, Sinkhole

- PA SOG recommended data sources
  - [DCNR Sinkholes](#)
  - [USGS Atlas](#)
  - [USGS Land Subsidence](#)
  - [PA DEP Mine Subsidence Insurance](#)
- Discussion about additional local data sources
  - Local spatial data about filled streams?



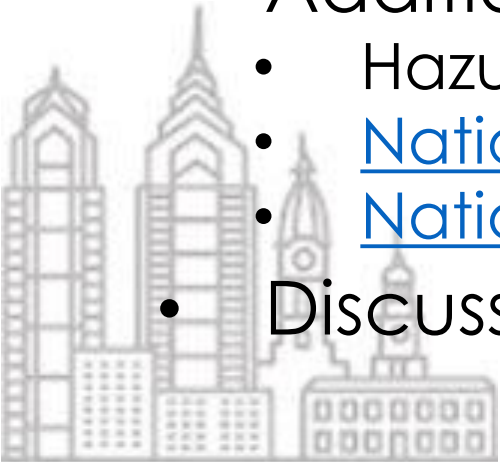
# Tornado, Windstorm

- PA SOG recommended data sources
  - [NSSL Tornadoes](#)
  - [IIBEC Tornadoes](#)
  - [NOAA Storm Prediction Center](#)
  - [NOAA Storm Events database](#)
  - [FEMA Tornadoes PDF](#)
- Additional Data Sources
  - Hazus
  - [National Risk Index](#)
- Discussion about additional local data sources



# Winter Storm

- PA SOG recommended data sources
  - [Ready.gov Winter Weather](#)
  - [NSSL Severe Weather – Winter Weather](#)
  - [NOAA Storm Events database](#)
  - [NOAA National Weather Forecast Office](#)
  - [Pennsylvania State Climate Office Events Database](#)
  - [FEMA Winter Storm PDF](#)
- Additional Data Sources
  - Hazus
  - [National Climate Assessment](#) – *for future condition*
  - [National Risk Index](#)
- Discussion about additional local data sources





# Building and Structure Collapse

- PA SOG recommended data sources
  - [DHS Building and Infrastructure Protection Series](#)
- Additional Data Sources
  - Hazus
  - [PennDOT Bridge data](#)
  - [City of Philadelphia Building Footprint data](#)
- Discussion about additional local data sources



# Civil Disturbance

- PA SOG recommended data sources
  - [FEMA FA-142](#): Report of the Joint Fire/Police Task Force on Civil Unrest
  - Build on Pennsylvania 2018 SHMP
- Discussion about additional local data sources



*“A civil disturbance is defined by FEMA as a civil unrest activity (such as a demonstration, riot, or strike) that disrupts a community and requires intervention to maintain public safety”*

# Cyber Terrorism

- PA SOG recommended data sources
  - [PA GOHS Cyber Security](#)
  - [Ready.gov Cyber Security](#)
  - [FEMA Building a Culture of Cyber Preparedness](#)
- Discussion about additional local data sources



# Dam Failure

- PA SOG recommended data sources
  - [National Inventory of Dams](#)
  - [PA DEP Dam Safety](#)
  - [Association of Dam Safety](#)
  - [PA DEP Probable Maximum Precipitation Study](#)
- Additional Data Sources
  - Hazus
- Discussion about additional local data sources
  - Often included as an Appendix (FOUO information)



# Hazardous Materials Release

- PA SOG recommended data sources
  - [EPA Toxic Release Inventory](#)
  - [USDOT Pipeline and Hazardous Materials Safety Administration](#)
  - [PEMA Hazardous Material](#)
- Discussion about additional local data sources



# Opioid Addiction Response

- PA SOG recommended data sources
  - [NIH National Institute on Drug Abuse – PA](#)
  - [opendataPA – Opioid Data Dashboard](#)
  - [CDC Opioid Epidemic](#)
- Discussion about additional local data sources



# Urban Fire and Explosion

- PA SOG recommended data sources
  - [PAfirefighters.com](http://PAfirefighters.com)
  - [NFPA Fire Department Calls Table](#)
- Discussion about additional local data sources



# Criminal Activity

Active Assailant, Gun Violence, IED

- Additional Data Sources
  - Build on data in existing 2017 HMP plan
- Discussion about additional local data sources





# Next Steps

- Risk & Vulnerability Assessment
  - Analysis for each hazard profile
  - Draft hazard profiles
- Beyond Risk & Vulnerability
  - Evaluation of Amendment Actions for 2021 Plan Review
  - Capability Assessment – upcoming stakeholder survey



# Question & Answer



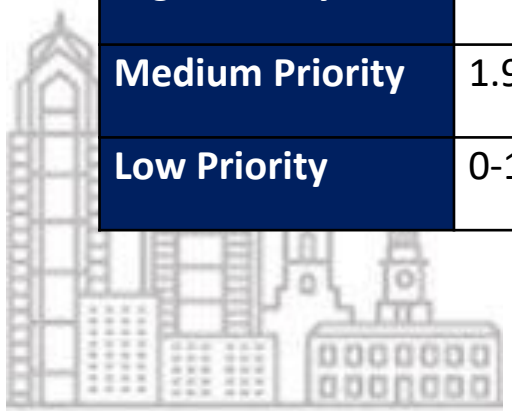
Sarah Bowen  
[Sarah.K.Bowen@wsp.com](mailto:Sarah.K.Bowen@wsp.com)

Alma Siulagi  
[Alma.Siulagi@wsp.com](mailto:Alma.Siulagi@wsp.com)

# Plan Amendment Process

Each project will receive a score between 0-3 for each of the following criteria. Cumulative, weighted scores will align with priority.

|                        |         |
|------------------------|---------|
| <b>High Priority</b>   | 2.5-3.0 |
| <b>Medium Priority</b> | 1.9-2.4 |
| <b>Low Priority</b>    | 0-1.8   |



| Mitigation Action Prioritization Criteria              |   |              |
|--|---|--------------|
| MITIGATION ACTION RANKING CRITERIA                     | CRITERIA DESCRIPTION  | WEIGHT VALUE |
| Effectiveness  | The extent to which an action reduces the vulnerability of people and properties.   | 20%          |
| Efficiency   | The extent to which time, effort, and cost is well used as a means of reducing vulnerability. Agency has demonstrated expertise and capacity to manage the project. | 25%          |
| Multi-Hazard Mitigation                                | The action reduces vulnerability for more than one hazard.  | 15%          |
| Addresses High Risk Hazard                             | The action reduces vulnerability for people and property from a hazard(s) identified as having the highest risk.  | 10%          |
| Addresses Critical Communications/ Critical Facilities | The action pertains to the maintenance of critical functions and structures such as transportation, supply chain management, data circuits, etc.                    | 15%          |
| Equity   | The action reduces risk to one or more populations disproportionately impacted by the hazard.   | 15%          |

# Hazard Risk Factor

## 2017 Plan



| Hazard                                    | Probability | Impact | Spatial Extent | Warning Time | Duration | Overall Risk |
|---|-------------|--------|----------------|--------------|----------|--------------|
| Flooding                                  | 4           | 3.3    | 4              | 2            | 4        | 3.6          |
| Extreme Cold                              | 4           | 3      | 4              | 1            | 3        | 3.3          |
| Extreme Heat                              | 4           | 3      | 4              | 1            | 3        | 3.3          |
| Winter Storm                              | 4           | 2.7    | 4              | 1            | 3        | 3.2          |
| Windstorm/<br>Tornado                     | 4           | 3      | 4              | 2            | 1        | 3.2          |
| Hazardous<br>Material Train<br>Derailment | 2           | 3.7    | 2              | 4            | 4        | 2.9          |
| Tropical Storm/<br>Hurricane              | 3           | 2.3    | 4              | 1            | 3        | 2.8          |
| Earthquake                                | 2           | 2.3    | 4              | 4            | 1        | 2.6          |
| Active Shooter                            | 2           | 3.3    | 2              | 4            | 1        | 2.5          |
| Drought                                   | 2           | 1.3    | 4              | 1            | 4        | 2.3          |
| Urban<br>Conflagration                    | 1           | 2.7    | 2              | 4            | 3        | 2.2          |
| IED                                       | 1           | 3      | 2              | 4            | 1        | 2.1          |
| Infrastructure<br>Failure                 | 2           | 1.9    | 2              | 4            | 1        | 1.6          |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #8

**Date:** August 4, 2021 from 2PM-3PM

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Liz Lankenau (OTIS), John Haak (PCPC), Ashley Del Bianco (Mayor's Office of Grants), Carolyn Caton (OEM), Terra Luke (DPP), Sarah Bowen (WSP), Alma Siulagi (WSP), Trevor Clifford (WSP), James Mawby (T&M Associates)

**Absent:** Captain Devon Richio (PFD), Saleem Chapman (OOS), Nazaarah Sabree (Commerce), Lt. Mike Kirby (PFD), Ryan Ford (OEM), Richard Quodomine (DPP), Josh Lippert (L&I)

### Notes:

#### 1. Welcome and Committee Business

- a. Representatives from WSP and T&M Associates were introduced to the Steering Committee.
- b. Emma Giardina, OEM reviewed the updated timeline and schedule (see PowerPoint slides for more detail).

#### 2. The Risk Assessment – Hazard Selection (WSP)

- a. WSP reviewed the Risk Assessment process and presented proposed 2022 hazards to the Steering Committee for feedback.
- b. A key component of the plan update is a comprehensive, up-to-date assessment of natural and human-caused hazards affecting the City.
- c. Existing profiles will be reviewed and updated by:
  - i. Comparing the 2017 HMP list of hazards to state-level guidance (PA SOG)
  - ii. Consolidating, updating, and adding hazards based on best practices and OEM public outreach results
  - iii. Steering Committee discussion to finalize the list of hazards
- d. Public survey results (As of July 2021)
  - i. Currently there are 237 responses to the survey. The survey is still open to the public.
  - ii. A great majority (71%) of respondents were either very concerned or extremely concerned with COVID-19 or other pandemics. The runner-up responses were extreme heat (44%) and winter storms (32%).
  - iii. For human-caused hazards and threats, the leading response was gun violence (75%). Runner ups were active shooter/assailant (54%) , infrastructure failure (51%) and civil disturbance (50%).
- e. Proposed 2022 list of natural hazards (red are new for 2022)
  - i. Drought
  - ii. Earthquake
  - iii. Extreme Temperature
  - iv. Flood, Flash Flood, Ice Jam
  - v. Hurricane, Tropical Storm, Nor'easter
  - vi. Pandemic and Infectious Disease
  - vii. Subsidence, Sinkhole
  - viii. Tornado, Windstorm
  - ix. Winter Storm

- f. Proposed 2022 list of human-caused hazards or threats (red are new for 2022 plan)
  - i. Building and Structure Collapse
  - ii. **Civil Disturbance**
  - iii. **Cyber Terrorism**
  - iv. Dam Failure
  - v. Hazardous Materials Release
  - vi. **Opioid Addiction Response**
  - vii. Urban Fire and Explosion
  - viii. **Criminal Activity**
    - 1. Active Assailant
    - 2. **Gun Violence**
    - 3. Improvised Explosive Device (IED)
- g. The Steering Committee recommended looking into the following hazards:
  - i. Transportation Accidents - past occurrence of a train derailment in Philadelphia
  - ii. Invasive Species – the Spotted Lantern Fly
  - iii. Pipelines
  - iv. Brush fires – perhaps captured until urban fires/explosions?
- h. While each of the hazards listed above does have the potential to impact Philadelphia, the Hazard Mitigation Plan features hazards that pose the greatest risk to Philadelphia. The city should consider existing capabilities and planning efforts, as well as potential mitigation actions we would like to highlight when prioritizing hazards to feature.
- i. OEM will work with WSP to finalize the list above and will report back out at our September Steering Committee meeting.

### 3. The Risk Assessment – Data Collection (WSP)

- a. Climate change and equity data will be incorporated throughout the Risk Assessment.
  - i. A follow up meeting with Office of Sustainability, OTIS, PWD, Planning and L&I is scheduled for next week to finalize which climate data and projections we will go with moving forward.
    - 1. The Steering Committee hopes that this plan update will help generate consensus across the city on climate projections.
  - ii. Equity is a priority across the City. However, no standardized methodology or data has been established at this time.
    - 1. The DVRPC released an [equity analysis](#) for the Greater Philadelphia Region
    - 2. FEMA’s [National Risk Index](#) incorporates social vulnerability
    - 3. Census Data could be another data source that we use.
  - iii. The HMP Steering Committee could help standardize how climate change and equity are included in the project prioritization across the City.

### 4. The Plan Amendment and Project Prioritization Process (OEM)

- a. The HMP Steering Committee will be used as the decision-making body for the plan amendment process. Mitigation actions will only be added to the HMP through a plan amendment after review and approval from the Steering Committee.
- b. OEM drafted a new [Plan Amendment and Project Prioritization Process](#) which is modeled after the State process. Please provide any feedback you have on this process prior to **Friday, August 13<sup>th</sup>**.
- c. The Steering Committee will review and prioritize BRIC and FMA project proposals at our September meeting. Quorum (50% or more) must be present at the meeting to decide if a project will be included in a plan amendment request.
- d. Once finalized by the Steering Committee, this process along with the project prioritization criteria will be shared with any City agencies interested in applying for BRIC or FMA this year.

## 5. Next Steps

- a. Review and complete [data handout](#) no later than **August 13<sup>th</sup>**.
- b. Review [Plan Amendment and Project Prioritization Process](#). Provide any feedback (directly on the document) by **Friday, August 13<sup>th</sup>**.
- c. Respond to this [Doodle Poll](#) with your availability for a September meeting no later than **Friday, August 6<sup>th</sup>**.
- d. **If you were unable to attend this meeting and would like to provide feedback on the hazards for the 2022 plan, please do not hesitate to reach out to me via email or phone!**

Meeting concluded at 2:59pm.

# Steering Committee #8

Date: August 4, 2021, 2:00PM-3:00PM

Location: Microsoft Teams



| Name             | Title   | Organization                          | Email  |
|------------------|---|---------------------------------------|--|
| Emma Giardina    | Hazard Planning Coordinator                   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| Carolyn Caton    | Infrastructure Program Manager                | Philadelphia OEM                      | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>           |
| Terra Luke       | GIS Analyst                                   | Department of Public Property         | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                 |
| John Haak        | Director, Policy & Analysis Division          | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Ashley DelBianco | Chief Grants Officer                          | Mayor's Office of Grants              | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
| Liz Lankenau     | Director, Infrastructure Program Coordination | OTIS                                  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Sarah Bowen      |   | WSP                                   | <a href="mailto:Sarah.K.Bowen@wsp.com">Sarah.K.Bowen@wsp.com</a>               |
| Alma Siulagi     |   | WSP                                   | <a href="mailto:Alma.Siulagi@wsp.com">Alma.Siulagi@wsp.com</a>                 |
| Trevor Clifford  |   | WSP                                   | <a href="mailto:Trevor.Clifford@wsp.com">Trevor.Clifford@wsp.com</a>           |
| James Mawby      |   | T&M Associates                        | <a href="mailto:JMawby@tandmassociates.com">JMawby@tandmassociates.com</a>     |
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## HMP Steering Committee Meeting



**Date/Time:** September 17, 2021 from 2 PM to 3 PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Emma Giardina

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>                   | <ul style="list-style-type: none"><li>• Review agenda</li><li>• Approve meeting minutes from August</li></ul>   | 2-3 mins       |
| <input type="checkbox"/> | <b>Hurricane Ida recap and funding opportunities</b> | <ul style="list-style-type: none"><li>• Discuss Hurricane Ida and its impacts in Philadelphia</li><li>• Review mitigation funding opportunities for Hurricane Ida</li></ul>   | 5 mins         |
| <input type="checkbox"/> | <b>BRIC/FEMA Project Prioritization</b>              | <ul style="list-style-type: none"><li>• Review proposals</li><li>• Prioritize as a group based on updated prioritization framework</li></ul>  | 35 mins        |
| <input type="checkbox"/> | <b>WSP Update</b>                                    | <ul style="list-style-type: none"><li>• Review final list of hazards</li><li>• Upcoming 10/4 Capability Assessment workshop</li><li>• Capability Survey</li><li>• Upcoming 11/19 Mitigation Strategy workshop</li></ul> | 15 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>             | <ul style="list-style-type: none"><li>• <b>Next Meeting: TBD</b></li></ul>  | 2-3 minutes    |

# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting #9

**Date:** September 14th from 2pm-3pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Richard Quodomine (DPP), Terra Luke (DPP), Ryan Ford (OEM), Josh Lippert (L&I), Liz Lankenau (OTIS), John Haak (PCPC), Ashley Del Bianco (Mayor's Office of Grants), Saleem Chapman (OOS), Nazaarah Sabree (Commerce), Lt. Mike Kirby (PFD)

**Absent:** Carolyn Caton (OEM)

### Notes:

#### 1. Welcome and Committee Business

- a. Minutes from the August meeting were approved by the group.

#### 2. Remnants of Hurricane Ida Response and Recovery Updates

- a. Pennsylvania received a Disaster Declaration for the Remnants of Hurricane Ida. Through that declaration, Philadelphia was approved for:
  - i. Individual Assistance – Assistance to eligible households impacted by the storm in the form of rental assistance, money for home repairs, or for other needs like replacing cars, moving and storage, medical, etc. This includes a Small Business Association (SBA) declaration, which allows SBA to offer low interest loans to disaster impacted businesses and individuals.
  - ii. Hazard Mitigation Grant Program Funding – Funding for structural and non-structural mitigation projects
    1. PEMA anticipates that the application for this funding will not be open until January 2022 (estimated)
    2. Eligible projects will need to be included in the City's All-Hazard Mitigation Plan
  - iii. Public Assistance (STILL PENDING REVIEW) - Money for assistance repairing disaster-impacts city facilities and assets

#### 3. BRIC and FMA Project Proposal – Plan Amendment Process

- a. After consultation with the Mitigation Grants and Funding Workgroup, OEM is proposed that the HMP Steering Committee be used as the decision-making body for the plan amendment process. Projects will only be added to the HMP through a plan amendment after review and approval from the Steering Committee.
  - i. For projects to be eligible for BRIC and FMA, they must be included in the Hazard Mitigation Plan
- b. Four project proposals were submitted by the Philadelphia Water Department (PWD) for the FY 2021 BRIC and FMA grant cycle. Project proposals were circulated amongst the group prior to the Steering Committee Meeting and follow-up questions from the group were addressed by PWD.
  - i. All projects were discussed at the Steering Committee meeting.
  - ii. **By majority vote, it was agreed that all projects aligned with Citywide mitigation goals and objectives as outlined in the 2017 Hazard Mitigation Plan and therefore, should be included in a plan amendment request to PEMA and FEMA.**

#### 4. Plan Update Process – Next Steps (WSP, Inc.)

- a. Final Hazard Selection
  - i. The following natural hazards will be added to the 2022 plan
    1. Pandemic and Infectious Disease

2. Subsidence, Sinkhole
  - ii. The following human-made hazards will be added to the 2022 plan
    1. Civil Disturbance
    2. Cyber Terrorism
    3. Opioid Addiction Response
    4. Gun Violence
  - iii. The group noted that we should consult with the Mayor's Office of Violence Prevention on the Gun Violence hazard profile. We should also make sure there is a clear difference between Gun Violence and Active Assailant.
- b. Fall Workshops
- i. A Capability Assessment Workshop is scheduled for October 4<sup>th</sup> from 1pm-3pm
  - ii. Two (optional) mitigation strategy brainstorming sessions are scheduled:
    1. Nature Based Solutions – October 18<sup>th</sup> from 1pm-2pm
    2. Infrastructure and Housing Solutions – October 21<sup>st</sup> from 11am-noon
  - iii. A Mitigation Strategy Workshop is scheduled for November 19<sup>th</sup> from 10:30am-12:30pm
- c. Next steps for the WSP Team include:
- i. Finish drafting the Risk and Vulnerability Assessment Chapter
  - ii. Finish drafting the Capability Assessment Chapter
  - iii. Dive into the mitigation strategy and actions

## 5. Next Steps

- a. If you have not done so already, please register for the Fall Hazard Mitigation Plan Workshops [HERE](#).
- b. If you have not done so already, please work with other representative in your agency to fill out the attached **Capability Assessment Survey** prior to the October 4<sup>th</sup> Workshop.
- c. Our **next meeting** will take place in November due to the large number of workshops already scheduled for October. A date and time will be distributed shortly.

## Steering Committee #9

Date: September 14th  
Location: Microsoft Teams



| Name              | Title   | Organization                          | Email  |
|-------------------|---|---------------------------------------|--|
| Emma Giardina     | Hazard Planning Coordinator                   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>           |
| Richard Quodomine | Senior Lead GIS Analyst                       | Department of Public Property         | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>   |
| Terra Luke        | GIS Analyst                                   | Department of Public Property         | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                 |
| John Haak         | Director, Policy & Analysis Division          | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                   |
| Ashley DelBianco  | Chief Grants Officer                          | Mayor's Office of Recovery & Grants   | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>     |
| Liz Lankenau      | Director, Infrastructure Program Coordination | OTIS                                  | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a> |
| Josh Lippert      | Floodplain Manager                            | L&I                                   | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>         |
| Sarah Bowen       |   | WSP                                   | <a href="mailto:Sarah.K.Bowen@wsp.com">Sarah.K.Bowen@wsp.com</a>               |
| Alma Siulagi      |   | WSP                                   | <a href="mailto:Alma.Siulagi@wsp.com">Alma.Siulagi@wsp.com</a>                 |
| Ryan Ford         | Homeland Security Program Manager             | OEM                                   | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                   |
| Saleem Chapman    | Chief Resilience Officer                      | OOS                                   | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>         |
| Lt. Michael Kirby | Planning                                      | Philadelphia Fire Department          | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>           |
| Nazaarah Sabree   | Senior Director of Business Services          | Commerce                              | <a href="mailto:Nazaarah.Sabree@phila.gov">Nazaarah.Sabree@phila.gov</a>       |
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## HMP Steering Committee Meeting



**Date/Time:** December 14, 2021 from 2:30 PM to 3:30 PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Sarah Bowen, AICP

| Agenda Item              |   | Notes/Actions   | Time Allocated |
|--------------------------|---|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>                      | <ul style="list-style-type: none"> <li>• Review agenda</li> <li>• Approve meeting minutes from August</li> <li>• Welcome two new Steering Committee Members</li> </ul>  | 2-3 mins       |
| <input type="checkbox"/> | <b>Review Revised Mitigation Goals &amp; Objectives</b> |   | 10 mins        |
| <input type="checkbox"/> | <b>Mitigation Strategy Update Process</b>               | <ul style="list-style-type: none"> <li>• Review status of mitigation strategy update</li> <li>• Process for selecting draft top 10 projects</li> <li>• Review of FMA, BRIC, and HMGP funded project trends</li> </ul>                             | 30 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>                | <ul style="list-style-type: none"> <li>• Expect final plan review to begin in February</li> <li>• Review draft list of top ten City mitigation actions before our next meeting</li> <li>• <b>Next Meeting:</b> January 7, 2022 12-1 PM</li> </ul> | 5 minutes      |

# The Hazard Mitigation Plan 2022 Update

## Mitigation Strategy Workshop

**December 14, 2021**




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# The Hazard Mitigation Plan 2022 Update

## December Steering Committee


### Agenda, 12/14/2021

1. Introductions & Welcome
2. Review Revised Goals & Objectives
3. Mitigation Strategy Update Process
4. Next Steps for Steering Committee




2

# The Planning Process



NLT: May 25, 2022

**We are here**  
Date: December 2021




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# Final List of Hazards for 2022 Update

*Proposed new hazards in green*

|   |  |
|---|--|
| <p><b>Natural Hazards</b></p> <ul style="list-style-type: none"> <li>• Drought</li> <li>• Earthquake</li> <li>• Extreme Temperature</li> <li>• Flood, Flash Flood, Ice Jam</li> <li>• Hurricane, Tropical Storm, Nor'easter</li> <li>• <b>Pandemic and Infectious Disease</b></li> <li>• <b>Subsidence, Sinkhole</b></li> <li>• Tornado, Windstorm</li> <li>• Winter Storm</li> </ul> | <p><b>Human-made Hazards</b></p> <ul style="list-style-type: none"> <li>• <b>Active Shooter/Assailant</b></li> <li>• Building and Structure Collapse</li> <li>• <b>Civil Disturbance</b></li> <li>• <b>Cyber Terrorism</b></li> <li>• Dam Failure</li> <li>• <b>Gun Violence</b></li> <li>• Hazardous Materials Release</li> <li>• <b>Opioid Addiction Response</b></li> <li>• <b>Terrorism</b></li> <li>• Urban Fire and Explosion</li> </ul> |
|---|--|



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## Review & Discuss: Proposed 2022 Mitigation Goals

- **Goal 1:** Protect all life and reduce risks that exacerbate inequities in health and safety.
- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
- **Goal 3:** Foster an economy that promotes mitigation and reduces impacts from hazards.
- **Goal 4:** Restore and enhance the natural ecology.
- **Goal 5:** Create awareness and demand for mitigation and adaptation as a standard of practice.



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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 1:** Protect all life and reduce risks that exacerbate inequities in health and safety.
  - **Objective 1.1:** Develop and implement strategies to reduce Philadelphians' risk to natural hazards.
  - **Objective 1.2:** Prioritize mitigation actions that affect vulnerable populations.



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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
  - **Objective 2.1:** Implement projects and programs that property protection against flooding.
  - **Objective 2.2:** Assess vulnerability of infrastructure to identify where to prioritize mitigation actions.
  - **Objective 2.3:** Develop and implement mitigation programs and strategies that protect critical facilities and services.
  - **Objective 2.4:** Integrate hazard and risk information into land use planning decisions.



*more objectives on the following page*

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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 2:** Build the resilience of community assets, including property, infrastructure, and cultural resources.
  - **Objective 2.5:** Promote post-disaster mitigation as part of restoration, recovery, and resilience building.
  - **Objective 2.6:** Repair, restore, and maintain existing infrastructure.
  - **Objective 2.7:** Identify, plan for, and protect historic properties and cultural resources.
  - **Objective 2.8:** Address historic drivers of vulnerability and invest in community assets.



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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 3:** Foster an economy that promotes mitigation and reduces impacts from hazards.
  - **Objective 3.1:** Prioritize mitigation strategies that support the continuation of critical business operations during and following a disaster.
  - **Objective 3.2:** Sustain, promote, and enhance partnerships with external public and private entities to identify and share resources.
  - **Objective 3.3:** Form partnerships to leverage and share resources to address hazards including those related to existing and project climate change.



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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 4:** Restore the natural ecology.
  - **Objective 4.1:** Promote nature-based solutions to manage stormwater and reduce the impacts of flooding.
  - **Objective 4.2:** Support project that address water holistically including water quality, stormwater management, and flood mitigation.
  - **Objective 4.3:** Restore tree canopy, wetlands, and other natural features native to Philadelphia prioritizing environmental justice communities.



*more objectives on the following page*

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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 4:** Restore the natural ecology.
  - **Objective 4.4:** Support the transition away from fossil fuels and other greenhouse gases that impact health and safety and exacerbate climate change.
  - **Objective 4.5:** Improve air, water, and soil quality across the City starting with environmental justice communities.



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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 5:** Create awareness and demand for mitigation as a standard of practice.
  - **Objective 5.1:** Tailor mitigation training to public officials, business, organizations, and the public.
  - **Objective 5.2:** Improve existing and put in place necessary warning systems.



*more objectives on the following page*

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## Review & Discuss: Proposed 2022 Mitigation Objectives

- **Goal 5:** Create awareness and demand for mitigation as a standard of practice.
  - **Objective 5.3:** Increase public's awareness of hazards, mitigations, and protective measures, including those related to the projected impacts of climate change.
  - **Objective 5.4:** Continue and expand coordination efforts to plan for cross-agency mitigation efforts.



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## Status of Mitigation Strategy Update

- Consolidating the new actions with continuing actions from 2017 into one table.
- Eliminating the 'existing' and 'potential' designation used in the 2017 plan. This was a confusing designation utilized in 2017 plan that led to a lot of duplication and 350+ actions.
- Documenting completed, removed, and combined actions for FEMA compliance.
- Filling in mitigation action details, such as hazards mitigated, mitigation type, and funding source.



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## Status of Mitigation Strategy Update

- Completing a draft prioritization of actions. The Steering Committee will have the opportunity to change scores, but it helps to have a draft to respond to rather than have a large group rank what will be 125+ final actions.
- Identifying a draft top ten list of mitigation actions. Similar to the above this will be a draft for the Steering Committee to review.
- Nesting the actions under goals and objectives to help organize and keep the list organized over time.



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## Top Ten

- Process for selecting "top ten" mitigation actions
- Review of FMA, BRIC, and HMGP funded project trends



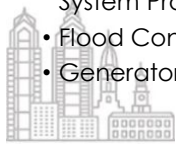
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### DEVELOP COUNTYWIDE TOOLS TO SUPPORT CRS PARTICIPATION

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| <p><b>PROJECT DESCRIPTION:</b><br/>The Community Rating System (CRS) is a voluntary program that provides reductions on flood insurance premiums of up to 45% for participating municipalities who go beyond minimum floodplain management requirements and provide extra protection from flooding. The CRS process is very involved, though, making it challenging for some municipalities to participate. In an effort to increase municipal participation and the associated flood insurance premium discounts, the County will develop tools to assist with CRS program implementation. These tools will provide guidance for municipalities to begin participation in the CRS program and advice on how to increase the level of participation to further decrease premiums. Tools will focus on providing examples and best practices in each of the four CRS activity-classes: public information, mapping and regulations, flood damage reduction, and flood preparedness. The County will identify CRS credits that municipalities can receive by participating in the HMR and OCEM planning processes.</p> <p><b>DESCRIPTION OF RECOVERY VALUE:</b><br/>Countywide tools to support CRS participation will have a moderate recovery value. This is a project with wide-ranging community support, and it supports all aspects of the community recovery vision. Developing CRS tools for municipal use will increase the community planning capability of participating municipalities and will have real financial benefits for residents in flood-prone communities.</p> <p><b>ACTION STEPS</b><br/>Step 1: Identify applicable activities that are already taking place.<br/>Step 2: Identify CRS activities that would benefit from county support tools.<br/>Step 3: Host joint CRS user groups with municipalities and interested parties in Monmouth and Ocean Counties to learn their lessons from the CRS application process.<br/>Step 4: Set up staffing to maintain support for municipal level participation from county.<br/>Step 5: Continue to maintain and improve participation through regular reporting.</p> <p><b>POTENTIAL RESOURCES</b></p> <ul style="list-style-type: none"> <li>• FEMA Region II CRS Coordinator - Technical</li> <li>• Getting to Resilience Program - Technical, Volunteer</li> <li>• Jacques Cousteau National Estuarine Research Reserve - Technical, Volunteer</li> <li>• Monmouth County Planning Department - Technical</li> </ul> | <p><b>PROJECT LOCATION:</b><br/>Countywide</p> <p><b>PROJECT CHAMPION(S):</b><br/>Baker, County Department of Planning, Ocean County Office of Emergency Management</p> <p><b>COST ESTIMATE:</b><br/>\$0.00</p> <p><b>RECOVERY VALUE:</b><br/>\$0.00</p> <p><b>RECOVERY AREAS SUPPORTED:</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> |
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## HMGP PA 1994-2019

- Acquisition, 264
- HMP, 45
- Stormwater Management, 20
- Management Costs, 20
- Water and Sanitary Sewer System Protective Measures, 8
- Flood Control, 8
- Generators, 7
- Other Equipment Purchase and Installation, 7
- Elevation, 4
- Roads and Bridges Protection, 4
- Relocation, 3
- Floodproofing, 3
- Warning Systems, 2



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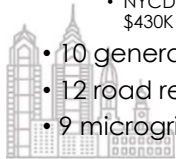
## FMA PA 2020

| Subapplication Title  | Total Project Costs |
|---|---------------------|
| PA FMA State Management Cost  | \$3,391,024         |
| Project Scoping: Luzerne Co Penn Lake Park Boro/DennisonTwp Community Flood Mit Project FMA 2020. | \$301,000           |
| Project Scoping: Saw Mill Run Boulevard/Provost Road City of Pittsburgh Allegheny County          | \$400,000           |
| Project Scoping: Haverford Twp Delaware Wynnefield Drive Flood Mitigation Study                   | \$65,000            |
| Project Scoping: Palmer Township Northampton Co Meadow/Seip Avenues FMA Flood Mitigation          | \$325,000           |
| Project Scoping: Bethlehem Twp, Northampton County Green Infrastructure & SWM Improvements        | \$182,739           |
| 2020 Flood Mitigation Technical Assistance  | \$133,333           |
| Lycoming County Nature-Based Solution FMA Plan  | \$25,000            |
| Flood Hazard Mitigation Plan Greene County PA   | \$65,000            |
| 1425 River Road Elevation   | \$208,000           |
| Solebury Acquisition Project  | \$420,000           |
| Upper Providence Township Montgomery County - 2020 Acquisition Project                            | \$552,000           |

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## BRIC 2020 Overview

- 406 or 994 projects selected
  - 22 of 568 competitive projects selected ranging from \$1M to 50M federal allocation
    - City of Menlo Park, Menlo Park SAFER Bay Project is the \$50 federal allocation for \$67M project
  - Allocations ranged from \$6K to \$600K with a lot of plans
    - NYCDOT - Cool Corridors - Model Urban Heat Island Streets Project Scoping \$430K project
- 10 generator projects (13K to 361K projects)
- 12 road related projects
- 9 microgrid projects, largest for \$25M project for DC hospital



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## BRIC 2020 Funding Planning

- 136 Plans, 124 Hazard Mitigation Plans
- Other plan types included:
  - Zoning code updates
  - Hazard specific plans (wildfire, flood)
  - Climate Adaptation and Resilience Planning (NM)
  - Plan Integration for Fairfax



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## BRIC 2020 Funding Water

- Plans: stormwater, inventory & mitigation assessment, scoping
  - Project Scoping for Stormwater Flood Mitigation in Resilience Focus Areas (RFA) in Washington, DC, \$150K project
- Blue/Green Storm Water Flood Mitigation in Southwest Washington, DC, \$24.8 million project
- 7 Pump projects
  - New Jersey Meadowlands East Riser Ditch Pumping Station and Channel Improvements, asked for \$36M of \$61M project



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## Next Steps

- Prioritized list of mitigation actions and “top ten” mitigation actions for review before January 7<sup>th</sup> Steering Committee meeting
- Discussion of “top ten” mitigation actions on January 7<sup>th</sup>
- Review of full HMP 2022 update in February 2022



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# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting

**Date:** December 14, 2021 from 2:30pm-3:30pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Sarah Bowen (WSP), Richard Quodomine (DPP), Carolyn Caton (OEM), Lt. Mike Kirby (PFD), Alma Siulagi (WSP), John Haak (PCPC), Orlando Almonte (Mayor's Office of Policy), Saleem Chapman (OSS), Ariella Marron (Lion Advisors), Elizabeth Lankenau (OTIS)

**Absent:** Ryan Ford (OEM), Nazaarah Sabree (Commerce), Amy Nieves (Mayor's Office for People with Disabilities)

### Notes:

#### 1. Introductions and Welcome

#### 2. Review Revised Goals and Objectives

- a. Some updates to the hazard list
  - i. Criminal Activity will be broken out into separate Gun Violence, Terrorism, and Active Shooter profiles
- b. Revised Mitigation Goals and Objectives
  - i. Changes to Goals:
    1. **Goal 1:** Revised language around hazard risk and inequities
    2. **Goal 2:** Included more language around adaption and resilience
    3. **Goal 4:** Added restore and enhance
    4. **Goal 5:** Adaptation was added
  - ii. Comments on the revised list of goals:
    1. No comments to the revised list of goals
  - iii. Changes to Objectives:
    1. **Objectives 1.2:** Populations who are vulnerable will be defined up front in Community Profile
    2. **Objective 2.8:** Added this objective
    3. **Objective 3.3:** Added objective around partnerships and shared resources
    4. **Objective 4.3:** added "other natural features" to capture more than just tree canopy and wetlands
    5. **Objective 4.5:** Updated to address more than flooding and water, including air, and soil quality
    6. **Objectives under goal 5:** Include more language about equity and inclusion in outreach process
  - iv. Comments on the revised list of goals:
    1. Recommendation to include geographic vulnerability and compounding impacts from multiple impacts over time in the discussion of populations who are more at risk
      - a. This will be addressed in hazard profiles and in the community profile
    2. Recommendation to change Objective 4.3 to "green spaces" – broader to capture managed park lands
      - a. 4.1 covers engineered green space while 4.3 covers more naturally occurring green/open space
    3. Recommendation to change Objective 4.3 "environmental justice communities" to "communities overburdened by environmental hazards" because there are no specific, defined environmental justice communities in Philadelphia
    4. Recommendation to change language around Objective 4.4, "moving away from fossil fuels and greenhouse gases"

v. **Next steps:**

1. Finalized goals and objectives will be sent out with final Mitigation Strategy chapter.
2. Some edits will be made based on this conversation and based on mitigation actions that continue to come in from agencies.

**3. Mitigation Strategy Update Process**

- a. Status update
  - i. Consolidating the new actions with continuing actions from 2017 into one table
  - ii. Eliminating the 'existing' and 'potential' designation used in the 2017 plan
  - iii. Documenting completed, removed, and combined actions for FEMA compliance
  - iv. Finalizing in mitigation action details, such as hazards mitigated, mitigation type, and funding source
- b. Next steps
  - i. WSP/OEM will complete a draft prioritization of actions (around 125 final actions). Steering Committee will review and provide feedback on prioritization.
  - ii. Identify a draft top ten list of mitigation actions for the City. Draft will be sent to Steering Committee for review and discussion before next meeting.
  - iii. Nesting actions under goals and objectives to help organize and keep the list organized over time.
- c. Top 10 Mitigation Actions
  - i. Actions prioritized as high priority
  - ii. Top ten list should display variety of different agencies, types of projects, and hazards
  - iii. Actions will be fleshed out more, and include more detail
  - iv. Goal is for many of them to be fundable by BRIC, FMA, or HMGP over the next 5 years
- d. Feedback:
  - i. Is part of the initial screening that the project is hitting multiple goals/objectives, timely/impactful?
    1. Projects that rank highly in prioritization process will be considered for top 10 list
  - ii. Include "runner up" project list?
    1. All projects will be listed in the full mitigation strategy, potentially by priority
    2. This will help line up these projects with other funding opportunities
- e. Hazard Mitigation Assistance (HMA) funded projects (see slides for more details)
  - i. Hazard Mitigation Grant Program (HMGP) funded projects (post-disaster)
    1. Acquisition remains top priority in Pennsylvania, 264 funded projects between 1994-2019
    2. Stormwater Management, 20 projects funded between 1994-2019
  - ii. Flood Mitigation Assistance (FMA) 2020
  - iii. Building Resilience Infrastructure and Communities (BRIC) 2020
    1. 406 of 994 projects selected
    2. 10 generator projects
    3. 12 road related projects
    4. 9 microgrid projects
    5. 136 plans, 124 hazard mitigation plans

**4. Next Steps for Steering Committee**

- a. Expect final plan review to begin February 2022
- b. Review draft list of top ten City mitigation actions prior to our next meeting
- c. **Next Meeting:** January 7, 2022 from 12pm-1pm
- d. **Plan Review Workshop:** January 31<sup>st</sup> from 10:30-noon (tentative)

Meeting ended at 3:40pm.





# City of Philadelphia Hazard Mitigation Plan



## Steering Committee Meeting

**Date:** January 7 from 12:00pm-1:00pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Sarah Bowen (WSP), Alma Siulagi (WSP), Ariella Marron (Lion Advisors), Richard Quodomine (DPP), Carolyn Caton (OEM), Lt. Mike Kirby (PFD), John Haak (PCPC), Orlando Almonte (Mayor's Office of Policy), Saleem Chapman (OOS), Elizabeth Lankenau (OTIS), Amy Nieves (Mayor's Office for People with Disabilities), Salley Stopher (Mayor's Office of Grants and Recovery), Ryan Ford (OEM)

**Absent:** Nazaarah Sabree (Commerce)

### Notes:

#### 1. Introductions and Welcome

- a. December Steering Committee Notes were approved by the group.
- b. Emma Giardina, OEM reviewed new project submitted by the Fairmount Water Works Fund for inclusion in a 2017 plan amendment. More information will be distributed to the Steering Committee for review, and a vote will take place online within the next week.

#### 2. Review Prioritization Method

- a. Sarah Bowen, WSP reviewed the prioritization method for projects listed in the plan which is modeled off of the State prioritization method, with equity added as a new criteria.
- b. Approximately 165 actions are proposed for the 2022 plan, down from close to 300 actions in the 2017 plan.
  - i. A spreadsheet of these actions will be distributed after the meeting for review and comment.
- c. Prioritization Process
  - i. For each project, scores of 0, 1, 2, or 3 are assigned for each of the criteria (0 – project does not meet criteria, 3- the project overwhelmingly meets criteria)
  - ii. Criteria considered include Effectiveness, Efficiency, Multi-hazard mitigation, addresses critical communications/crucial facilities, equity, addresses high risk hazard as identified in the 2022 plan
  - iii. Each project is given a priority based on the cumulative, weighted score:
    1. High priority – 2.5-3.0
    2. Medium Priority – 1.9-2.4
    3. Low Priority – 0-1.8
- d. Please provide feedback on any rankings that you do not agree with.

#### 3. Focus Mitigation Action Discussion

- a. Suggested focus mitigation actions were distributed to the Steering Committee prior to the meeting for review and discussion.
- b. All projects included in the focus actions list were ranked as high priority actions.
- c. They address different hazards, different neighborhoods, and different agency leads, and all align well with FEMA mitigation funding.
- d. The actions will each have a 1-page feature in the plan, which will further address equity considerations.
- e. Comments from the group:
  - i. Q: Is there an educational component to Action #1?
    1. A: Education and community capacity building is a key component of this action.

- ii. Q: Many of top projects align with IJA funding opportunities within the climate and resiliency bucket. Does the group feel that these projects align with some of those funding opportunities?
  - 1. A: WSP will be adding more information on funding opportunities to the spreadsheet within the next week and will call out some of the IJA funding.
- iii. Comment: Action #1 should address Eastwick specifically
- iv. Comment: Action #2 addresses development in the area surrounding Eastwick to ensure that future development does not further flooding in the area
- v. Q: There are not a lot of top 10 actions that address plans and policy-related actions. Can this be addressed?
  - 1. A: WSP and OEM will investigate possible plan/policy related projects to include in the top actions since this seems to be missing from our list.
- vi. Q: Are these actions in any order?
  - 1. A: We should consider not ranking each of these actions but listing them as a general list of top actions, explain that funding sources and projects are dynamic.
- vii. Comment: Consider more place-based approaches, especially given priorities in new fundings sources through IJA.
  - 1. A: We can investigate including a gun violence, place-based initiative, but need to do some additional research to choose the best one to include.
- viii. Q: How is Cyber-Security being addressed?
  - 1. A: It will be addressed in the COOP Action. OEM will follow up to make sure this is addressed.
- ix. Q: Can we represent some of these actions visually, in a map or Venn diagram, sorted by type of project?
  - 1. A: The top-ten action sheets will cover some of this information, and really highlight why each action is chosen, and the variety of different types of actions chosen for the top list.

#### 4. Next Steps for Steering Committee

- a. **Final Draft Review Workshop** – January 31<sup>st</sup> from 10:30am-12:00pm. Register [HERE](#).
  - i. Please share our [Social Media Toolkit](#) for workshop
  - ii. 30-day review and comment period in February
- b. **Questions and comments about the prioritization spreadsheet** to: Sarah Bowen ([sarah.k.bowen@wsp.com](mailto:sarah.k.bowen@wsp.com)) and Alma Siulagi ([alma.siulagi@wsp.com](mailto:alma.siulagi@wsp.com)), and CC: [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) by **NLT Friday, 1/14**
- c. **Please vote** on Fund for the Water Works Project Amendment by **Friday, 1/14**.

Meeting ended at 12:55pm.

## HMP Steering Committee Meeting



**Date/Time:** January 7, 2021 from 12 PM-1 PM  
**Location:** Microsoft Teams  
**Meeting Facilitator:** Sarah Bowen, AICP

| Agenda Item              |   | Notes/Actions   | Time Allocated |
|--------------------------|---|---|----------------|
| <input type="checkbox"/> | <b>Introductions &amp; Welcome</b>          | <ul style="list-style-type: none"> <li>• Review agenda</li> <li>• Approve meeting minutes from December</li> <li>• Plan Amendment – Fairmount Water Works Project</li> </ul>  | 2-3 mins       |
| <input type="checkbox"/> | <b>Review Prioritization Method</b>         |   | 10 mins        |
| <input type="checkbox"/> | <b>Top Ten Mitigation Action Discussion</b> |   | 30 mins        |
| <input type="checkbox"/> | <b>Next Steps for Steering Committee</b>    | <ul style="list-style-type: none"> <li>• <b>Final Draft Review Workshop</b> – January 31<sup>st</sup> from 10:30am-12:00pm. Register <a href="#">HERE</a>.</li> <li>• Please share our <a href="#">Social Media Toolkit</a> for workshop</li> <li>• 30-day review and comment period in February</li> <li>• Questions and comments about the prioritization spreadsheet to: Sarah Bowen (<a href="mailto:sarah.k.bowen@wsp.com">sarah.k.bowen@wsp.com</a>) and Alma Siulagi (<a href="mailto:alma.siulagi@wsp.com">alma.siulagi@wsp.com</a>), and CC: <a href="mailto:Emma.Giardina@phila.gov">Emma.Giardina@phila.gov</a> by <b>Friday, 01/14</b></li> </ul> | 5 minutes      |

## HMP Public Safety Workgroup Meeting #1



**Date/Time:** October 1, 2020 from 1pm-3pm  
**Location:** Microsoft Teams  
**Workgroup Facilitator:** Emma Giardina, Philadelphia OEM

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | Introductions  |   | 10 mins        |
| <input type="checkbox"/> | Review of 2017 Hazard Mitigation Plan and planned updates for 2022 |   | 10 mins        |
| <input type="checkbox"/> | 2022 Hazard Mitigation Planning Process and your involvement       |   | 40 minutes     |
| <input type="checkbox"/> | 2017 Mitigation Project Reviews                                    | Please be prepared to discuss the following mitigation actions identified in the 2017 plan: <a href="#">Public Safety 2020Review</a><br><br><i>Please note, updates will be due by October 22</i> | 30 mins        |

|                          |                               |  |            |
|--------------------------|-------------------------------|--|------------|
| <input type="checkbox"/> | <b>Group Discussion</b>       | <ul style="list-style-type: none"><li><input type="checkbox"/> What data, tools, plans and policies in your agencies could help as we update this plan?</li><li><input type="checkbox"/> Are the right people at the table today? Who should we include next time?</li><li><input type="checkbox"/> What are we missing? What should we be considering that we haven't mentioned during today's meeting?</li></ul> | 20 mins    |
| <input type="checkbox"/> | <b>Next Steps and Closing</b> |  | 10 minutes |

# Philadelphia's All-Hazard Mitigation Plan

## Public Safety Workgroup Meeting #1

1. Welcome & Introductions
2. A Review of the 2017 Hazard Mitigation Plan
3. 2022 Update Timeline & Next Steps
4. Mitigation Action Updates
5. Group Discussion



# Microsoft Teams

Please mute your line if you are not speaking.

Please don't put your phone on hold.

Use the chat feature when possible.

Questions? Use the raise hand feature.



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**





# Stakeholder Engagement



**Public**



**Businesses**



**City Agencies**



**Private Sector Partners**



**State Agencies**



**Federal Agencies**



**YOU!**

**THIRA /  
SPR**

**Hazard  
Mitigation  
Plan**



# Why Hazard Mitigation Planning?



# More Mitigation Measures, More Savings



**One dollar invested in mitigation =  
six dollars U.S. saves in future costs**



# The 2017 Plan

and planned 2022 updates



# The Hazards



# Natural Hazards



**Drought**



**Earthquake**



**Extreme Temperatures**



**Flooding**



**Hurricanes & Tropical Storms**



**Windstorms & Tornadoes**



**Winter Storms**

# Human Caused Hazards and Threats



**Active Shooter**



**Bridge and Dam Failure**



**Hazardous Materials Train Derailment**



**Improvised Explosive Devices**



**Urban Conflagration**



# The Hazards

## 2022 Update

- Pandemic
- Epidemic
- Climate Change
- Cyber Threats/Cyber Attack
- Civil Disturbance

**Additional changes in terminology are expected.**

# The Mitigation Strategy

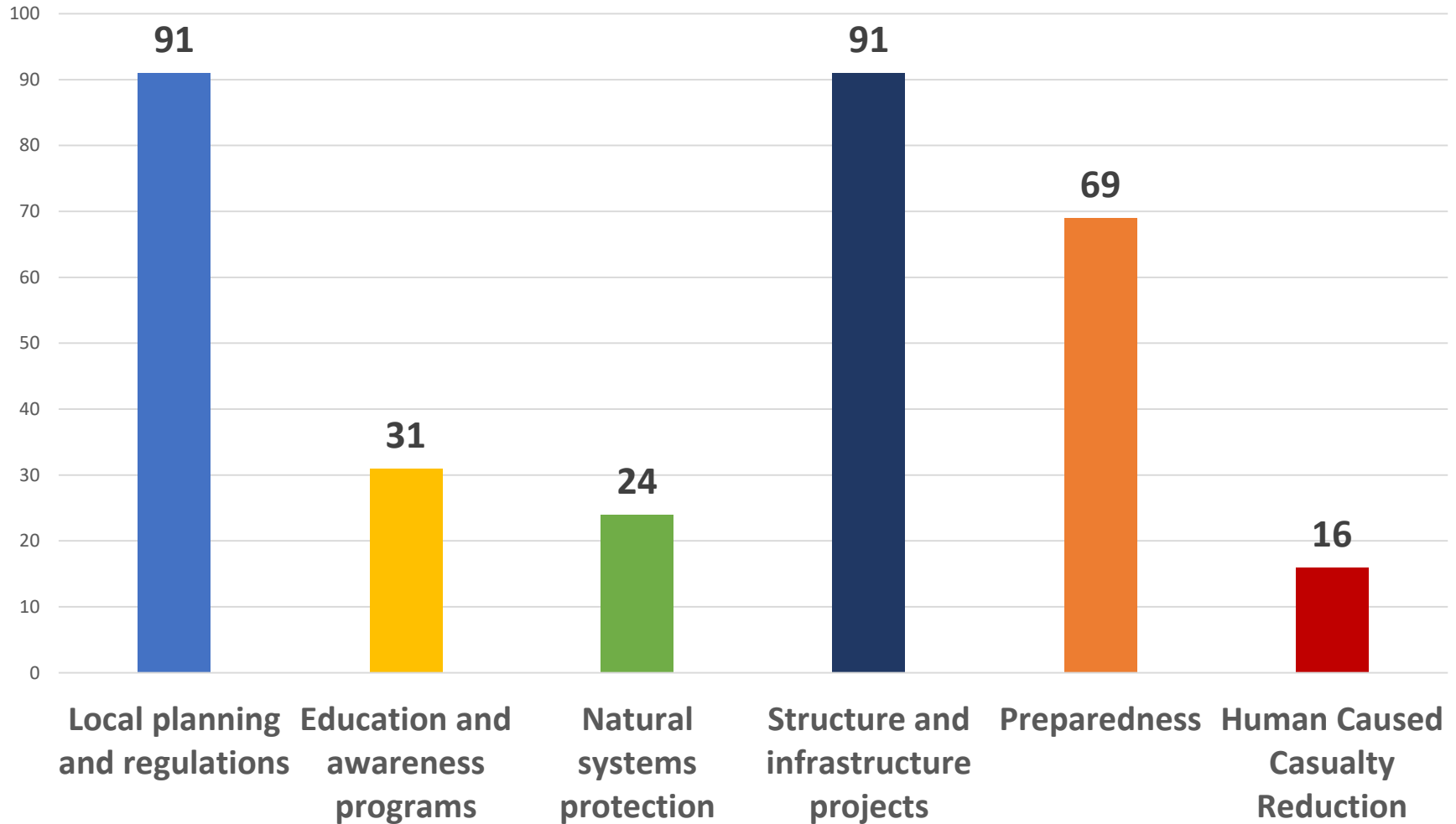


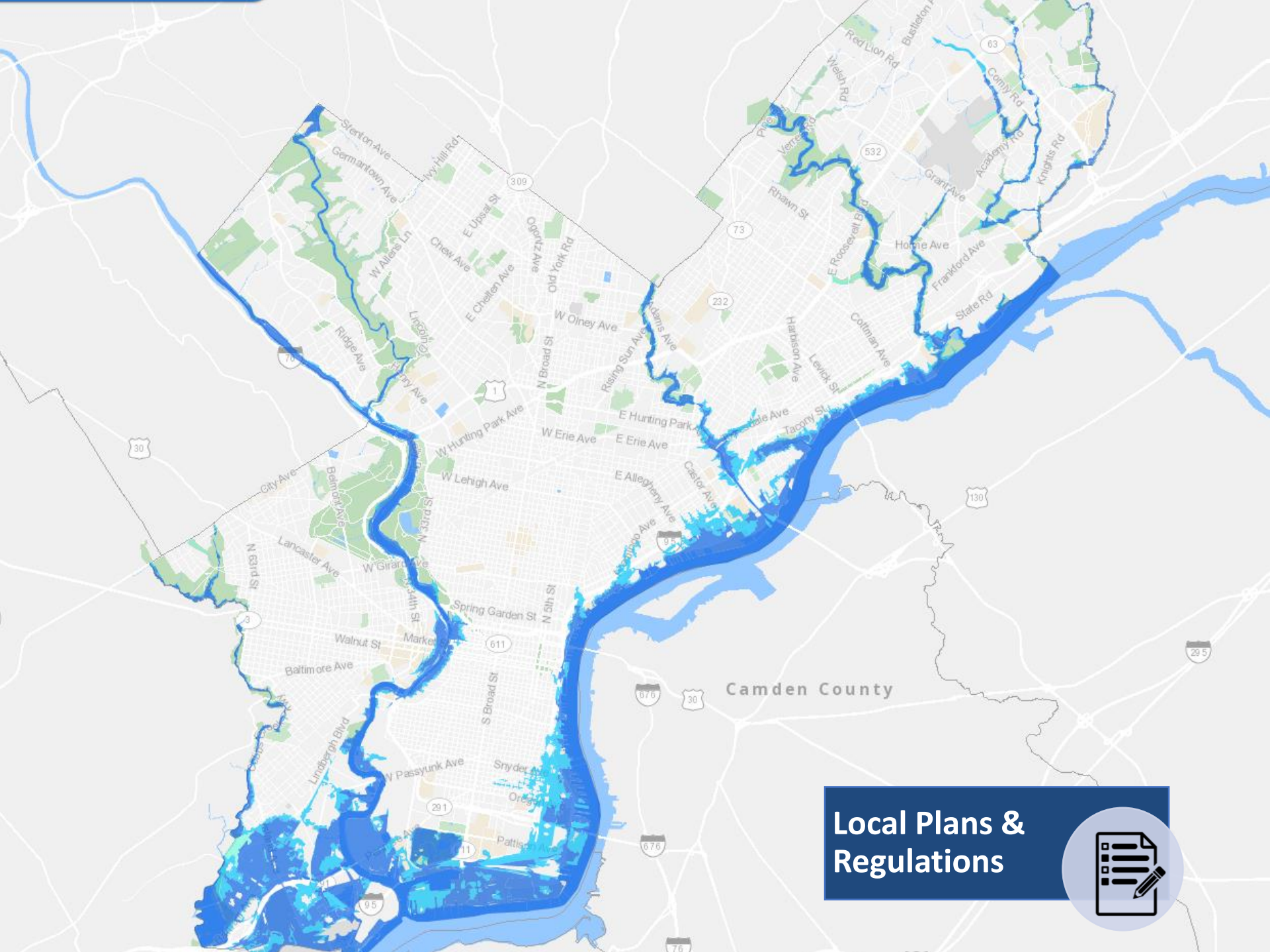
# The Mitigation Strategy



**Mitigation action:** project, plan or policy that reduces or eliminates risk to a hazard

# Mitigation Actions by Category





## Local Plans & Regulations







Structure &  
Infrastructure





**Text "READYPhila"  
to 888-777**

Education & Awareness 



# Bleeding control

Tourniquet and Bandage Training  
School District of Philadelphia

TEMPLE HEALTH  
TEMPLE UNIVERSITY HOSPITAL



Casualty  
Reduction





# Mitigation Strategy

## The 2022 Update

- Update and evaluate feasibility of the mitigation actions in the plan
- Determine changes in priorities
- Yearly updates



# Mitigation Action Example

## Arlington County, VA

ConnectArlington Communication Infrastructure Updates



Safety & Security



Communications



**What mitigation  
accomplishments  
would you highlight?**



# Public & Private Sector Outreach



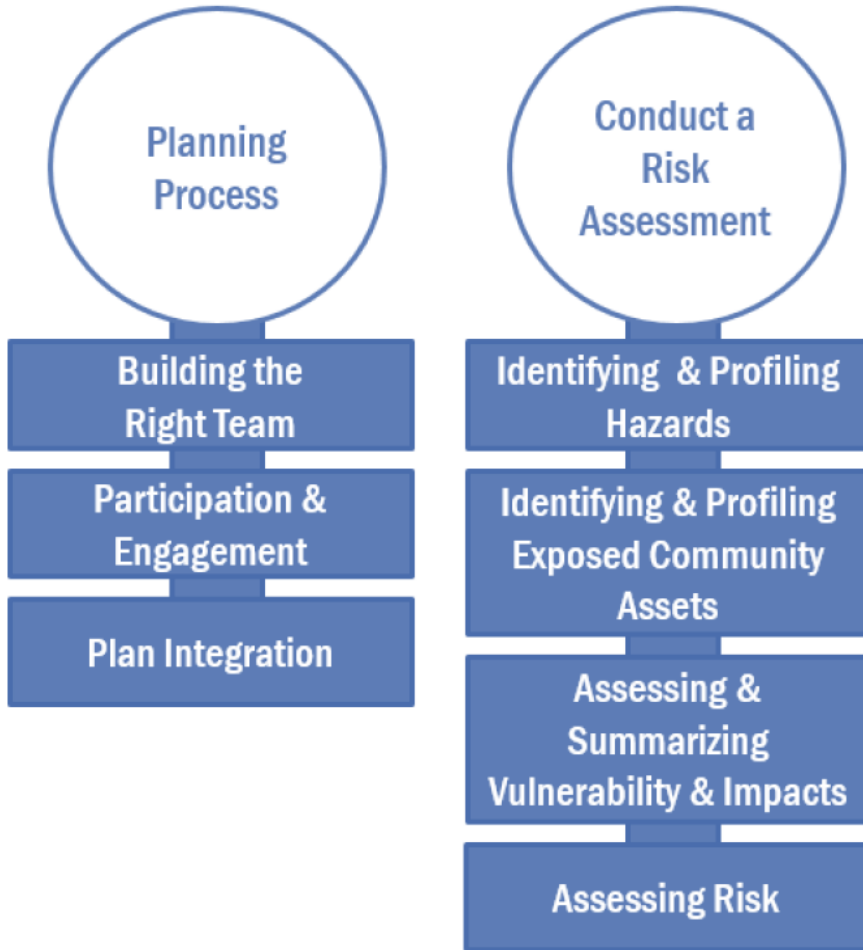
# 2022 Update & Timeline



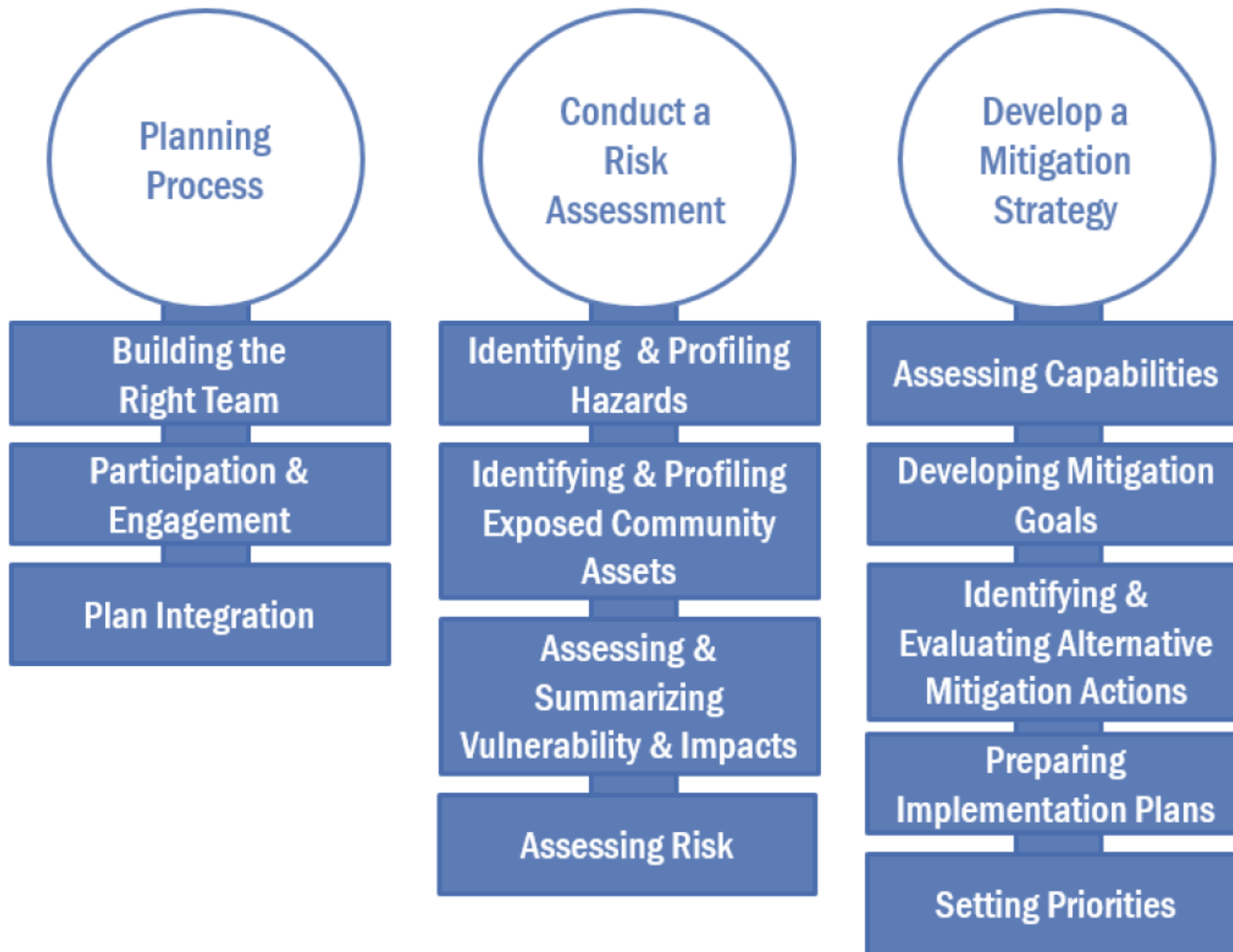
# The Planning Process



# The Planning Process



# The Planning Process





# The Planning Process



# Timeline

- Larger Workshops
- Smaller Workgroup Meetings
- Individual Outreach

**CITY COUNCIL  
ADOPTS PLAN  
SPRING '22**

**PHASE 1:  
ORGANIZING  
THE RESOURCES**  
FEBRUARY '20 -  
NOW

**PHASE 2: RISK  
ASSESSMENT**  
JANUARY '21

**PHASE 3:  
DEVELOP THE  
MITIGATION PLAN**  
APRIL '21

**PHASE 4:  
COMPLETE AND  
REVIEW THE  
PLAN**  
FALL '21

**SUBMIT TO  
PEMA & FEMA**  
WINTER '22

# Workgroups

Meet regularly to provide subject matter expertise on each phase of the plan update.

Steering Committee

Grants & Funding Workgroup

Flood Risk Management Task Force\*

Educational Institutions Workgroup

Climate Resilience Cabinet\*

Regional Workgroup

Public Safety Workgroup

Private Sector Workgroup

Health & Medical Group

City Engagement Groups\*

# Public Safety Workgroup

## Goals & Objectives

Meet at each stage of the planning process to consult and provide subject matter expertise on relevant human-caused hazards

# What's Next?

**November/December 2020:** Capability Assessment & Plan  
Integration Workshop

**December 2020:** G-318 Module #2

**February 2021:** Risk Assessment Workshop





# QUESTIONS?

**Emma Giardina**

**Hazard Planning Coordinator**

**[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)**

**Carolyn Caton**

**Infrastructure Program Manager**

**[Carolyn.Caton@phila.gov](mailto:Carolyn.Caton@phila.gov)**

**[www.phila.gov/READY](http://www.phila.gov/READY)**





# Public Safety Workgroup Meeting #1

Date: October 1, 2020

Location: Virtual Microsoft Teams



|                          | Name                  | Position   | Organization                                | Email  |
|--------------------------|-----------------------|--|---|--|
| ✓                        | Emma Giardina         | Hazard Planning Coordinator                      | Philadelphia OEM                            | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>             |
| ✓                        | Carolyn Caton         | Infrastructure Program Manager                   | Philadelphia OEM                            | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>             |
| <input type="checkbox"/> | Stacy Irving          | Senior Advisor                                   | Delaware Valley Intelligence Center (DVIC)  | <a href="mailto:stacy.irving@phila.gov">stacy.irving@phila.gov</a>               |
| <input type="checkbox"/> | Richard Turzanski     | Infrastructure Protection                        | Department of Homeland Security             | <a href="mailto:richard.turzanski@hq.dhs.gov">richard.turzanski@hq.dhs.gov</a>   |
| ✓                        | Jason Stevens         | Capital Projects Division                        | Department of Public Property               | <a href="mailto:jason.stevens@phila.gov">jason.stevens@phila.gov</a>             |
| <input type="checkbox"/> | Steve Hartner         | Deputy Commissioner                              | Department of Public Property               | <a href="mailto:steve.hartner@phila.gov">steve.hartner@phila.gov</a>             |
| <input type="checkbox"/> | Ken Heil              | Deputy Commissioner, Field Operations            | Department of Public Property               | <a href="mailto:ken.heil@phila.gov">ken.heil@phila.gov</a>                       |
| <input type="checkbox"/> | Rich Mariano          | Facility Manager for City Hall                   | Department of Public Property               | <a href="mailto:richard.a.mariano@phila.gov">richard.a.mariano@phila.gov</a>     |
| <input type="checkbox"/> | Jerry Merrigan        | Facility Manager for MSB, OPB, CJC               | Department of Public Property               | <a href="mailto:jerry.merrigan@phila.gov">jerry.merrigan@phila.gov</a>           |
| ✓                        | Ryan Ford             | Homeland Security Program Manager                | Office of Emergency Management              | <a href="mailto:ryan.ford@phila.gov">ryan.ford@phila.gov</a>                     |
| ✓                        | Kendal Banks          | Director of Safety & Loss Prevention             | Office of Risk Management                   | <a href="mailto:kendall.o.banks@phila.gov">kendall.o.banks@phila.gov</a>         |
| ✓                        | Linwood Murray        | Health and Safety Manager                        | Office of Risk Management                   | <a href="mailto:linwood.murray@phila.gov">linwood.murray@phila.gov</a>           |
| <input type="checkbox"/> | Barry Scott           | Deputy Finance Director                          | Office of Risk Management                   | <a href="mailto:barry.scott@phila.gov">barry.scott@phila.gov</a>                 |
| ✓                        | Lt. Michael Kirby     | Planning   | Philadelphia Fire Department                | <a href="mailto:michael.kirby@phila.gov">michael.kirby@phila.gov</a>             |
| ✓                        | FF Christopher Lukens | Planning   | Philadelphia Fire Department                | <a href="mailto:Christopher.lukens@phila.gov">Christopher.lukens@phila.gov</a>   |
| ✓                        | DC Craig Murphy       | Deputy Commissioner of Planning & Risk Reduction | Philadelphia Fire Department                | <a href="mailto:craig.murphy@phila.gov">craig.murphy@phila.gov</a>               |
| ✓                        | Chief Carl Randolph   | Special Operations Command Unit, HMAU            | Philadelphia Fire Department                | <a href="mailto:carl.randolph@phila.gov">carl.randolph@phila.gov</a>             |
| ✓                        | Capt. Devon Richio    | Planning   | Philadelphia Fire Department                | <a href="mailto:devon.richio@phila.gov">devon.richio@phila.gov</a>               |
| ✓                        | Chief Chris Baldini   | Fire Paramedic Services Chief                    | Philadelphia Fire- EMS                      | <a href="mailto:christopher.baldini@phila.gov">christopher.baldini@phila.gov</a> |
| <input type="checkbox"/> | Nicola Mammes         | Regional Preparedness Program Manager            | Philadelphia Office of Emergency Management | <a href="mailto:Nicola.Mammes@phila.gov">Nicola.Mammes@phila.gov</a>             |
| ✓                        | Lt. Fitzpatrick       | Bomb Disposal Unit                               | Philadelphia Police Department              | <a href="mailto:Thomas.Fitzpatrick@phila.gov">Thomas.Fitzpatrick@phila.gov</a>   |
| ✓                        | C/I Deborah Francis   | Commander for PPD Homeland Security Bureau       | Philadelphia Police Department              | <a href="mailto:Deborah.Francis@phila.gov">Deborah.Francis@phila.gov</a>         |







# Public Safety Workgroup #1

Date: 10/1/2020, 1pm

Location: Virtual, Microsoft Teams



**Agencies Present:** Philadelphia Office of Emergency Management (OEM), Department of Public Property (DPP), Office of Risk Management, Philadelphia Fire Department (PFD), PFD-EMS, Philadelphia Police Department (PPD), PPD-Homeland Security Unit, PPD-Traffic

## Notes:

1. Review of 2017 Hazard Mitigation Plan (HMP)
  - The Hazard Mitigation Plan (HMP) assesses natural and human-caused hazards & threats and identifies cost-effective policies and actions that reduce or eliminate the risks and impacts of those hazards.
  - This federally mandated plan must be updated, approved by FEMA and PEMA, and adopted by City Council by Spring 2022.
  - Stakeholder engagement, including outreach to the public and private sector is required to make this plan update successful.
  - Hazard mitigation saves money and prevents loss of life and property.
  - The HMP sets the city up for success after a disaster by pre-prioritizing projects.
  - The HMP showcases what the city is doing to become more resilient! This is becoming increasingly more important as we experience more disasters.
  - The HMP and THIRA have distinct purposes, requirements and outcomes, but share similar elements. **The HMP is public facing**, while the THIRA is not.
2. 2022 Hazard Mitigation Planning Process and updates
  - Hazards this working group would like to consider adding to the 2022 plan include:
    - Pandemic
    - Epidemic
    - Climate Change
    - Cyber Threats/Cyber Attack
    - Civil Disturbance
    - Complex Coordinated Attack
  - The Mitigation Strategy: Mitigation accomplishments to highlight since 2017
    - Risk: Development and implementation of infection control measures for City workers, facilities and operations during the pandemic.
    - PFD CAT: Recent partnership between PFD and OEM with the CATs and RIC.
    - DPP: Ongoing installations of emergency generators at Police, Fire & Health facilities.
    - OEM, PPD, PFD-EMS, SDP & Temple: Trauma kits deployed to 115 of 212 SDP facilities.
    - PPD: Increased the amount of trainings for PPD officers since 2017.
  - Public & Private Sector Outreach: OEM will be looking for ways to engage the public and private sector throughout this plan update.
    - PPD reported that OEM could work with local police districts to help spread the word about the plan update. PPD can also help spread the word via their Twitter and Facebook accounts.
    - PFD-CAT teams can help spread the word in the community about the plan update.
    - The DVIC has connections to some private sector partners that could help spread the word.
  - Timeline: The Public Safety Workgroup will meet at each stage of the plan update to consult and provide subject matter expertise on relevant human-caused hazards and threats
    - November/December 2020: Capability Assessment & Plan Integration
    - January-February 2021: Risk Assessment
    - April/May 2021: Mitigation Strategy Update

- Fall 2021: Final Plan Review
  - Winter 2021: Submit to PEMA & FEMA
- It was suggested that OEM meet with smaller groups of representatives at first, then review findings and decisions with the larger public safety workgroup.
- 3. 2017 Mitigation Project Reviews: [Public Safety 2020Review](#).
  - OEM will conduct an annual review of mitigation actions to make sure that this document is up to date and to facilitate easier 5-year plan updates.
  - Please see the document linked above for 2017 mitigation actions that still require updates.
  - Please provide a brief update on any actions that pertain to your agency. Updates could be as simple as “project not started” or “project no longer feasible.”
  - Please identify the best point of contact for that mitigation action moving forward in the box provided.
  - Questions about what a mitigation action means? Reach out to Emma Giardina, [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov), 215-683-3251.
  - The Public Safety Workgroup will identify additional mitigation actions to add to the 2022 Plan in a future workgroup meeting
- 4. Group Discussion
  - Data or plans that partners in the working group can provide to facilitate the plan update include:
    - PFD-Planning: data points for responses related to fire and EMS
  - The group identified the following agencies that were missing from today’s workshop, but should be included in this working group moving forward:
    - SEPTA Police
    - Amtrak Police
    - National Guard
    - Port Authority
    - Navy Yard
    - USACE
    - Local University Police and Fire Departments (Drexel, UPenn, Temple, etc.)

#### Next Steps and Action Items

1. **Provide updates for Mitigation Actions NLT October 22nd:** As part of our annual review process, we ask that you please provide a brief update for the 2017 mitigation actions identified in the attached document: [Public Safety 2020Review](#). This document is not representative of all mitigation actions, only those relating to the partners in this workgroup that have not yet been updated this year. For a full list of mitigation actions, please view the [2017 Hazard Mitigation Plan](#). Please reach out with any questions about the mitigation actions identified. If you need more time to review these actions, please let me know.
2. **Identify the right representatives from your agency:** Reach out with any suggestions for other representatives from your agency or another agency that may be a good fit for this workgroup. If you are not the right representative for this group, please let me know that too.
3. **Steering Committee:** We’re looking for 1 or 2 members of this workgroup to participate on the HMP Steering Committee. The Steering Committee will meet approximately once a month to help facilitate and guide the plan update over the next year. If you are interested or you would like to recommend someone else from this workgroup, please let me know.
4. **Next Meeting:** Capability and Plan Integration Workshop in late November, early December. More information on this to follow. Begin thinking about the plans, policies and data that could align or help inform the HMP 2022 plan update.

## Educational Institutions Workgroup Meeting



**Date/Time:** Thursday, April 1 from 11AM-Noon  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions  | Time Allocated |
|--------------------------|--|--|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                           | <ul style="list-style-type: none"> <li>• Welcome &amp; Introductions</li> <li>• Review Goals/Objectives of the Educational Institutions Working Group</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Brief Overview of HMP and Planning Process Timeline</b> | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>  | 10 minutes     |
| <input type="checkbox"/> | <b>Role of Educational Institution in HMPS</b>             | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>  | 10 minutes     |
| <input type="checkbox"/> | <b>Discussion Questions</b>                                | <ul style="list-style-type: none"> <li>• What hazards put your educational institution most at risk and why? Do you have data you can share to support this?</li> <li>• Does your institution have a Hazard Mitigation Plan in place already?</li> <li>• What other plans or policies are already in place that analyze hazard risk to your institution? Are you able to provide copies of those plans to OEM?</li> <li>• Does your institution conduct any type of outreach/education around hazard awareness and preparedness?</li> <li>• Does your institution have any capabilities to support implementation of hazard mitigation actions?</li> <li>• Is there anyone else that should be involved in this conversation?</li> </ul> | 20 minutes     |

|   |                   |  |           |
|---|-------------------|--|-----------|
| □ | <b>Next Steps</b> | <ul style="list-style-type: none"><li>• Help spread the word!</li><li>• Summer 2021: Mitigation Strategy</li><li>• One-on-one outreach may be needed for more data and information</li></ul> | 5 minutes |
|---|-------------------|--|-----------|

# Philadelphia's All-Hazard Mitigation Plan

Educational Institutions Workgroup Meeting #1

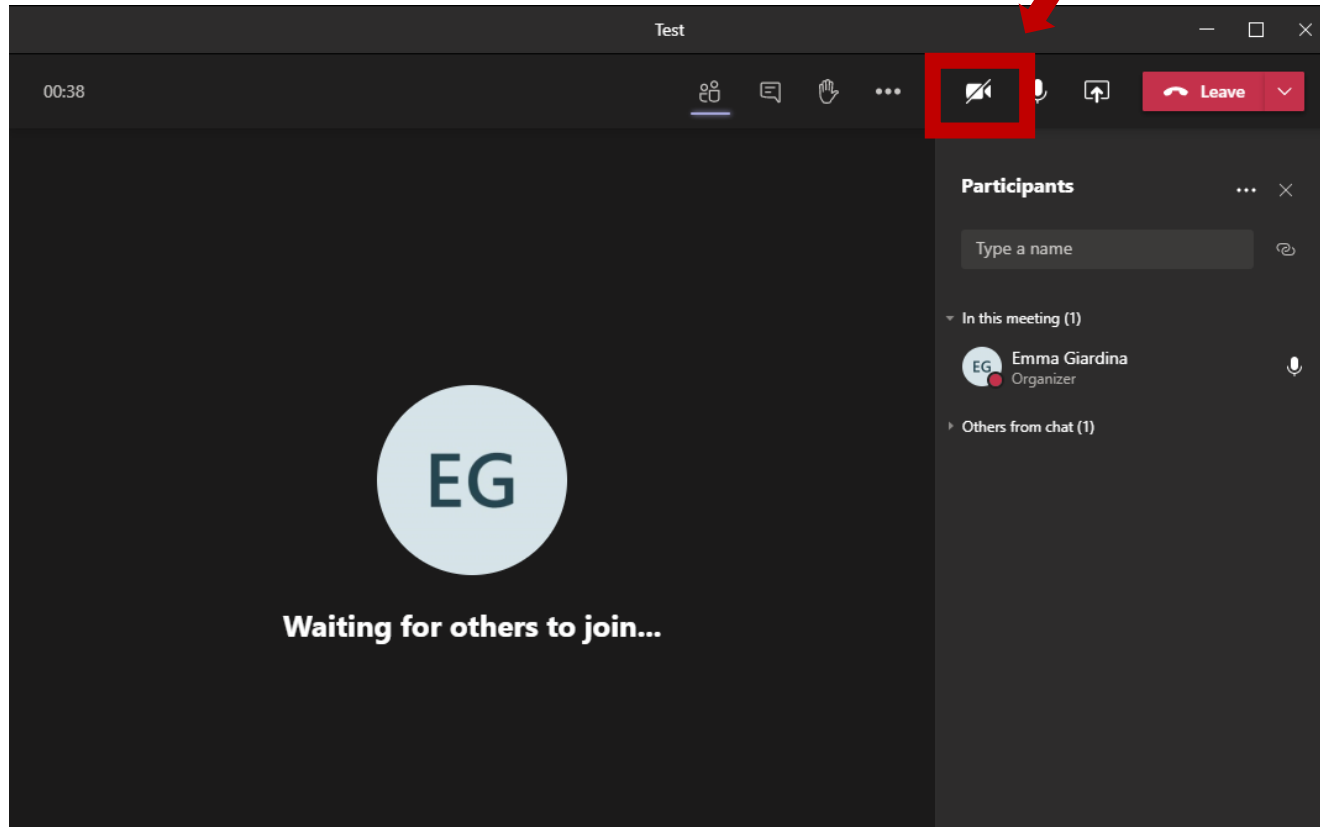
April 1, 2021

1. Welcome & Introductions
2. Background on Hazard Mitigation Plan
3. Role of Educational Institutions
4. Group Discussion



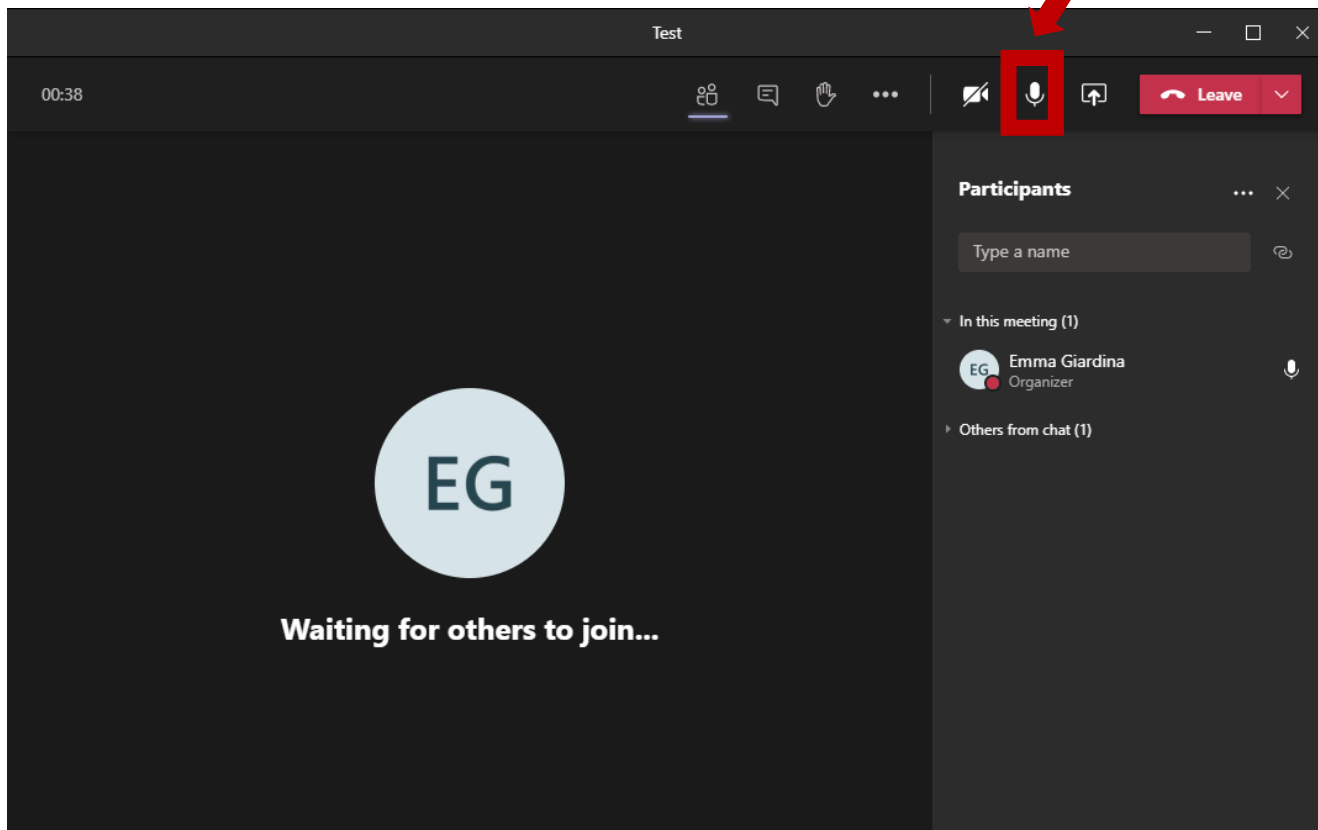
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# Microsoft Teams

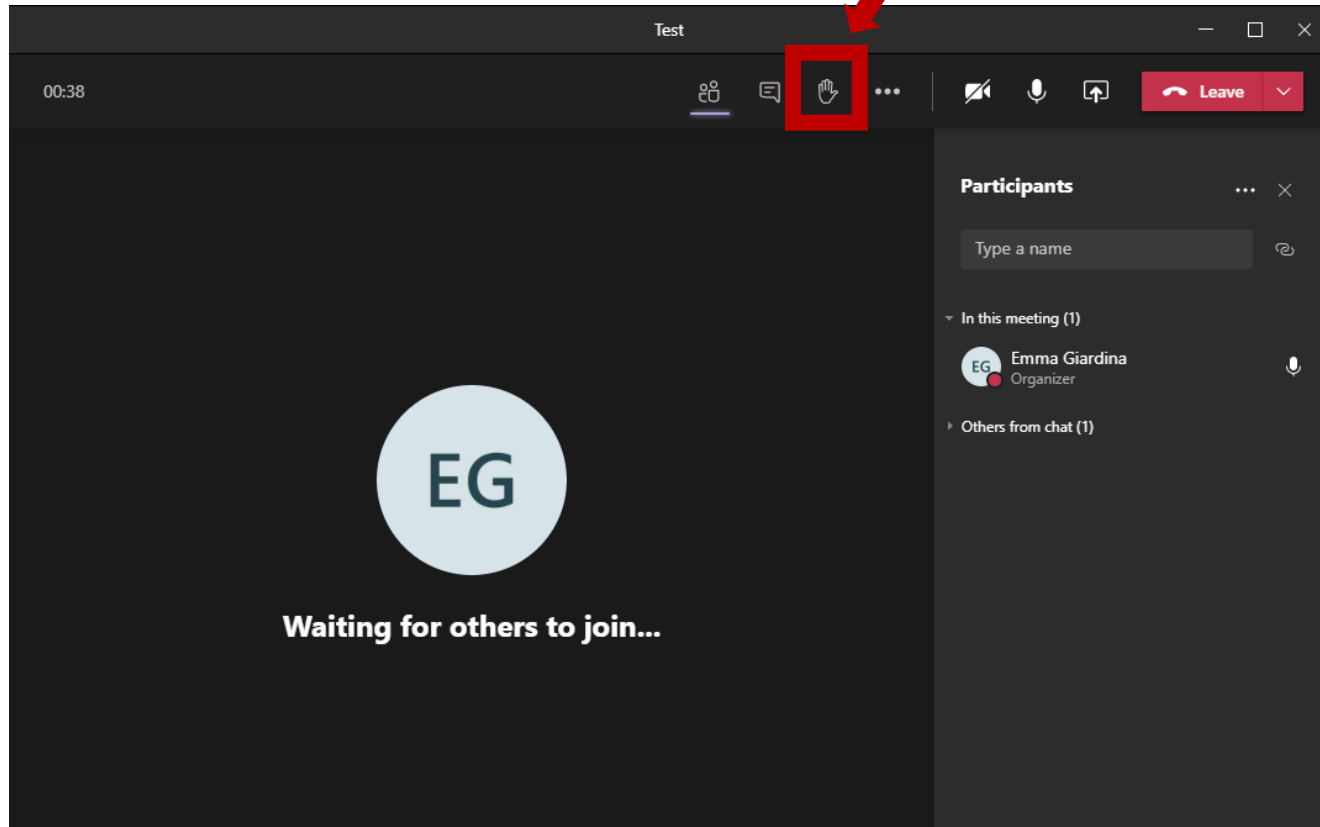
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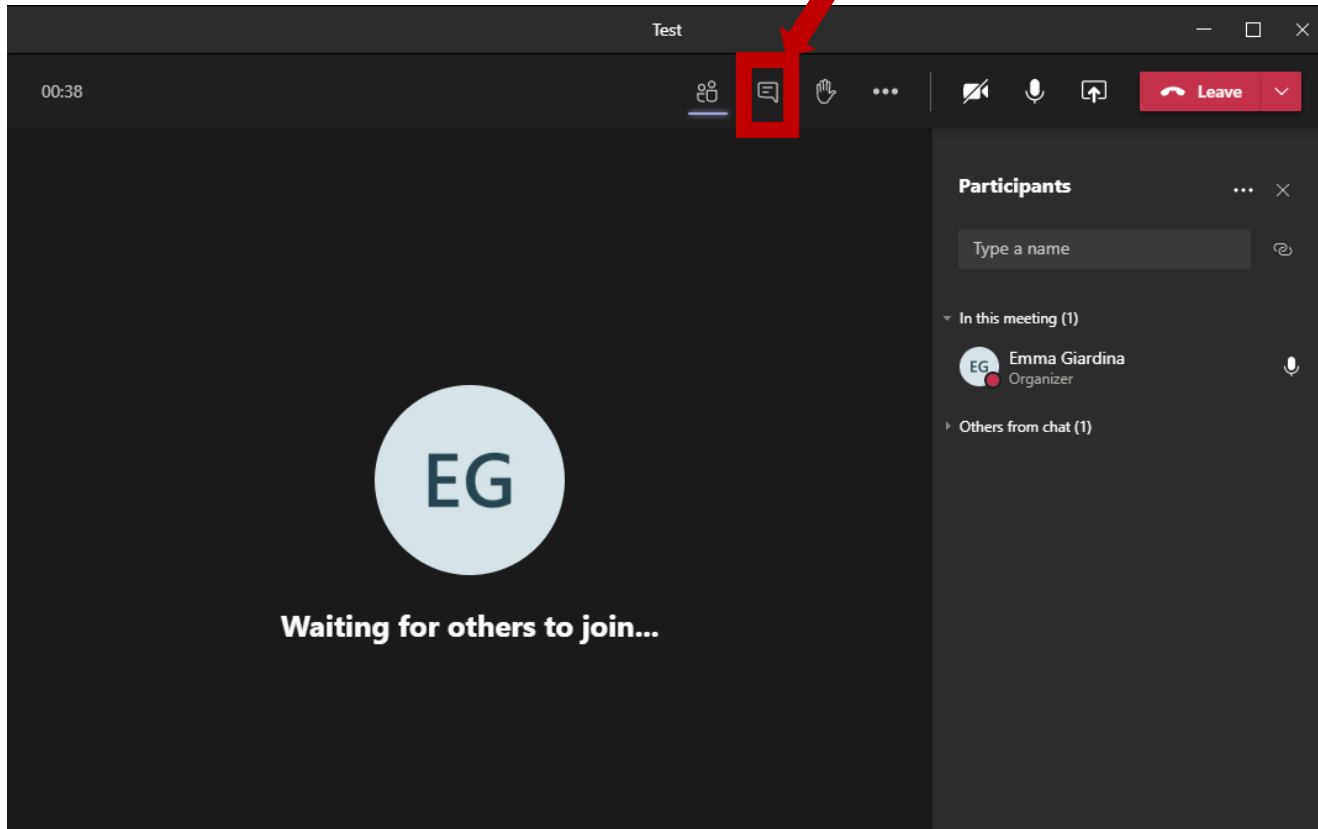
# Microsoft Teams

Raise Hand Feature



# Microsoft Teams

Chat Box Window



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**



# Natural Hazards



**Drought**



**Earthquake**



**Extreme Temperatures**



**Flooding**



**Hurricanes & Tropical Storms**



**Windstorms & Tornadoes**



**Winter Storms**

# Human Caused Hazards and Threats



**Active Shooter**



**Bridge and Dam Failure**



**Hazardous Materials Train Derailment**



**Improvised Explosive Devices**



**Urban Conflagration**

# Why Hazard Mitigation Planning?



# 2022 Priority Areas

**Climate Change**

**Equity**

**Plan integration and implementation**



# Timeline

- Larger Workshops
- Smaller Workgroup Meetings
- Individual Outreach

|   | 2020   |     |     |     |      |     |     |      |     |     |     |     | 2021   |     |     |     |      |     |      |      |     |     |     |     | 2022      |     |     |     |     |  |
|---|--------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|--------|-----|-----|-----|------|-----|------|------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|--|
|   | Feb    | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb    | Mar | Apr | May | June | Jul | Aug  | Sept | Oct | Nov | Dec | Jan | Feb       | Mar | Apr | May | Jun |  |
| Build the Planning Team & Collect the Resources | Yellow |     |     |     |      |     |     |      |     |     |     |     |        |     |     |     |      |     |      |      |     |     |     |     |           |     |     |     |     |  |
| Conduct a Risk & Vulnerability Assessment       |        |     |     |     |      |     |     |      |     |     |     |     | Purple |     |     |     |      |     |      |      |     |     |     |     |           |     |     |     |     |  |
| Assess Capabilities                             |        |     |     |     |      |     |     |      |     |     |     |     | Green  |     |     |     |      |     |      |      |     |     |     |     |           |     |     |     |     |  |
| Develop the Mitigation Strategy                 |        |     |     |     |      |     |     |      |     |     |     |     |        |     |     |     |      |     | Blue |      |     |     |     |     |           |     |     |     |     |  |
| Determine the Plan Maintenance Process          |        |     |     |     |      |     |     |      |     |     |     |     |        |     |     |     |      |     |      |      |     |     |     |     | Orange    |     |     |     |     |  |
| Finalize the Plan & Distribute for Review       |        |     |     |     |      |     |     |      |     |     |     |     |        |     |     |     |      |     |      |      |     |     |     |     | Dark Blue |     |     |     |     |  |
| Obtain Approval and Adoption                    |        |     |     |     |      |     |     |      |     |     |     |     |        |     |     |     |      |     |      |      |     |     |     |     | Red       |     |     |     |     |  |



**We are here**  
Date: 04/01/2021





# Stakeholder Engagement



**Public**



**Businesses**



**City Agencies**



**Private Sector Partners**



**State Agencies**



**Federal Agencies**



**YOU!**

# Educational Institutions

An important part of the City of Philadelphia.

- College and University students make up approximately 9% of the population.
- In 2017, Philadelphia had the fifth largest university student population when compared to other similar peer cities.

# Educational Institutions

**According to PEMA's HMP SOG (2020), educational institutions are encouraged to:**

- Participate in your county's HMP
- Identify vulnerabilities unique to your institution in the hazard profiles, including buildings or infrastructure vulnerable to the hazards in the plan
- Submit mitigation actions for the mitigation strategy

# Educational Institutions Workgroup

**Goal: Address hazard risk as it pertains to Philadelphia's educational institutions in the City's 2022 Hazard Mitigation Plan by:**

- Identifying hazards that are most likely to impact educational institutions in Philadelphia;
- Identifying projects, plans & policies that reduce risk to educational institutions in Philadelphia; and
- Integrating new hazard risk and vulnerability data into educational institutions planning processes.

# Group Discussion

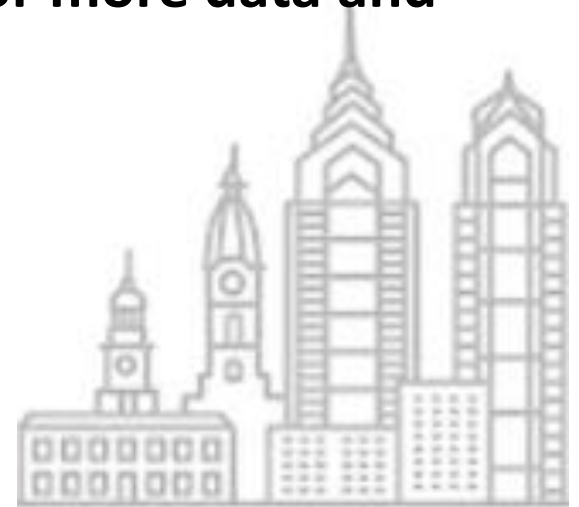
- From your perspective, which hazards put your educational institution most at risk and why? Do you have data you can share to support this?
- Does your institution have a Hazard Mitigation Plans in place already?
- What other plans or policies are already in place that analyze hazard risk to your institution? Are you able to provide copies of those plans to OEM?

# Group Discussion

- Does your institution conduct any type of outreach/education around hazard awareness and preparedness?
- Does your institution have any capabilities to support implementation of hazard mitigation actions? (financial, technical support, education/outreach, etc.)
- Is there anyone else that should be involved in this conversation?

# What's Next?

1. **Help spread the word**
2. **Summer 2021: Mitigation Strategy**
3. **One-on-one outreach may be needed for more data and information.**





# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# City of Philadelphia Hazard Mitigation Plan

## Educational Institutions Workgroup Meeting #1



**Date:** April 1, 2021 from 11am-noon

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Dan Gonzalez (UPenn), Matthew Poissant (UPenn), Randy Merced (Community College of Philadelphia), David Hollinger (Drexel), Michael Lapotasky (University of the Sciences)

**Absent:** Sarah Powell (Temple University), Carolyn Caton (OEM), Diana Mercer (School District of Philadelphia), John Mulligan (School District of Philadelphia), Tricia London (School District of Philadelphia), Gene Janda (UPenn)

### Notes:

#### 1. Welcome and Background Information

- a. Emma Giardina, OEM led introductions among the group then provided background on the Hazard Mitigation Planning Process including a review of the timeline and the purpose of the plan.
  - i. The [Hazard Mitigation Plan](#) outlines the natural and human-caused hazards and threats that pose the most risk to Philadelphia and identifies the policies, plans and projects the City and stakeholders can implement to reduce risk.
  - ii. The Hazard Mitigation Plan expires in May 2022 and must be submitted to the Pennsylvania Emergency Management Agency (PEMA) by March 2022.
  - iii. The plan is public facing and available on our website, [www.phila.gov/ready](http://www.phila.gov/ready)
  - iv. Hazard Mitigation saves lives, property and money. The plan is an opportunity to showcase what the City is already doing to mitigate risk, and what the City would like to do if we have the buy-in and funding needed. The ultimate goal is a more resilient Philadelphia.
- b. Areas of focus in the 2022 Plan update include climate change, equity and plan integration and implementation.
- c. OEM will host larger workshops with all stakeholders, smaller workgroup meetings and will also conduct individual outreach as needed.

#### 2. Review of Workgroup Goals and Objectives

- a. Educational Institutions are an important part of Philadelphia's HMP update.
  - i. In 2017, college and university students made up approximately 9% of the City's population.
  - ii. In 2017, Philadelphia had the fifth largest university student population when compared to other similar peer cities.
  - iii. Schools play a large role in recovery of a community after a disaster because they represent a return to "normalcy" post disaster.
- b. According to [PEMA's Standard Operating Guide](#) (2020), educational institutions are encouraged to:
  - i. Participate in their County HMP
  - ii. Identify vulnerabilities unique to their institutions to include in hazard profiles
  - iii. Submit mitigation actions for the mitigation strategy
- c. Goals and Objectives of this group include:
  - i. Goal: Address hazard risk as it pertains to Philadelphia's educational institutions in the City's 2022 HMP by:
    1. Identifying hazards likely to impact educational institutions in Philadelphia;
    2. Identifying projects, plans and policies that reduce risk to educational institutions in Philadelphia;
    3. Integrating new hazard risk and vulnerability data into educational institutions planning processes.

- ii. Emma, OEM asked the group if they had any feedback or recommended changes to the goals and objectives listed above. The group had no feedback.

### 3. Group Discussion

- a. Emma, OEM posed the following discussion questions to the group:
  - i. What hazards put your educational institution most at risk and why? Do you have data you can share to support this?
    - 1. Violence, active shooter incidents and criminal activity is a big concern
    - 2. Colleges and Universities would like to work with the City to better plan for response and recovery efforts related to gun violence and active shooter incidents.
    - 3. Civil Disturbance – ensuring First Amendment activity remains peaceful
    - 4. Hazardous material spills and releases and other technological hazards – plume modeling would be helpful
    - 5. Recommendation to look at regional risk, especially the Southern New Jersey region.
    - 6. Michael Lapotasky (U. Sciences) requested that we use common terminology in our plan. Recommendation to use term “Active Threat” instead of “Active Shooter”.
    - 7. Drexel, University of the Sciences and CCP reported that they follow guidance from Readiness and Emergency Management for Schools (REMS) Technical Assistance Center when determining which hazards to plan for.
  - ii. Does your institution have a Hazard Mitigation Plan (HMP) in place already?
    - 1. Emma Giardina, OEM reported that Temple University has a Hazard Mitigation Plan in place.
    - 2. Other colleges and universities on this call did not report having Hazard Mitigation Plans, but may look into this in the future.
  - iii. What other plans or policies are already in place that analyze hazard risk to your institution? Are you able to provide copies of those plans to OEM?
    - 1. Drexel just finished updating their Emergency Operations Plan (EOP).
    - 2. Recommendation that OEM work with the LEPC on the plan update.
  - iv. Does your institution conduct any type of outreach/education around hazard awareness and preparedness?
    - 1. UPenn hosts a live side-by-side burn to teach students fire preparedness.
    - 2. University of the Sciences hosts Active Threat training and other internal table tops
    - 3. Drexel hosts internal table tops
    - 4. CCP hosts 1 tabletop exercise per month on a variety of different hazards and emergency incidents
  - v. Does your institution have any capabilities to support implementation of hazard mitigation actions?
    - 1. No capabilities reported at this time beyond support from the participants on the call.
  - vi. Is there anyone else that should be involved in this conversation?
    - 1. Recommendation to include local high schools and elementary schools (public and private). Some colleges and universities partner up with local schools for evacuation and emergency planning.
    - 2. Recommendation to invite Hill College.
    - 3. Houses of Worship should be included in the planning process
    - 4. Consider a presentation to the Campus Security Director’s Association

### 4. Next Steps & Action Items

- a. Please help us spread the word about the Hazard Mitigation Plan (HMP) update with your colleagues and make recommendations for additional participants that should be added to this group.
- b. Stay updated on progress and next steps via our monthly newsletter. Everyone in this group has been added to the distribution list.

Meeting ended at 12:02pm.

**Resources Referenced:**

[Social Media Toolkit](#)

[Survey English](#)

[Survey Spanish](#)



## Historic & Cultural Resources Workgroup Meeting



**Date/Time:** Monday, April 12 from 11AM-Noon  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                               | <ul style="list-style-type: none"> <li>• Welcome &amp; Introductions</li> <li>• Review Goals/Objectives of the Historic and Cultural Resources Working Group</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Brief Overview of HMP and Planning Process Timeline</b>     | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Role of the Historic &amp; Cultural Resources Workgroup</b> | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Discussion Questions</b>                                    | <ul style="list-style-type: none"> <li>• From your perspective, which hazards put historical and cultural resources most at risk and why?</li> <li>• Is there any data that could support the update of this plan? (impacts to historic sites from storms, fires, etc.) What are the data gaps?</li> <li>• Do you know of any agencies that conduct outreach/education around hazard awareness and preparedness to these sites?</li> <li>• Does your agency have any capabilities to support implementation of hazard mitigation actions? (financial, technical support, education/outreach, etc.)</li> <li>• Is there anyone else that should be involved in this conversation? Who can we partner with to better communicate risk?</li> </ul> | 20 minutes     |

|   |                   |  |           |
|---|-------------------|--|-----------|
| □ | <b>Next Steps</b> | <ul style="list-style-type: none"><li>• Help spread the word!</li><li>• Summer 2021: Mitigation Strategy</li><li>• One-on-one outreach may be needed for more data and information for Risk &amp; Vulnerability Assessment</li></ul> | 5 minutes |
|---|-------------------|--|-----------|

# Philadelphia's All-Hazard Mitigation Plan

Historic & Cultural Resources Workgroup Meeting #1

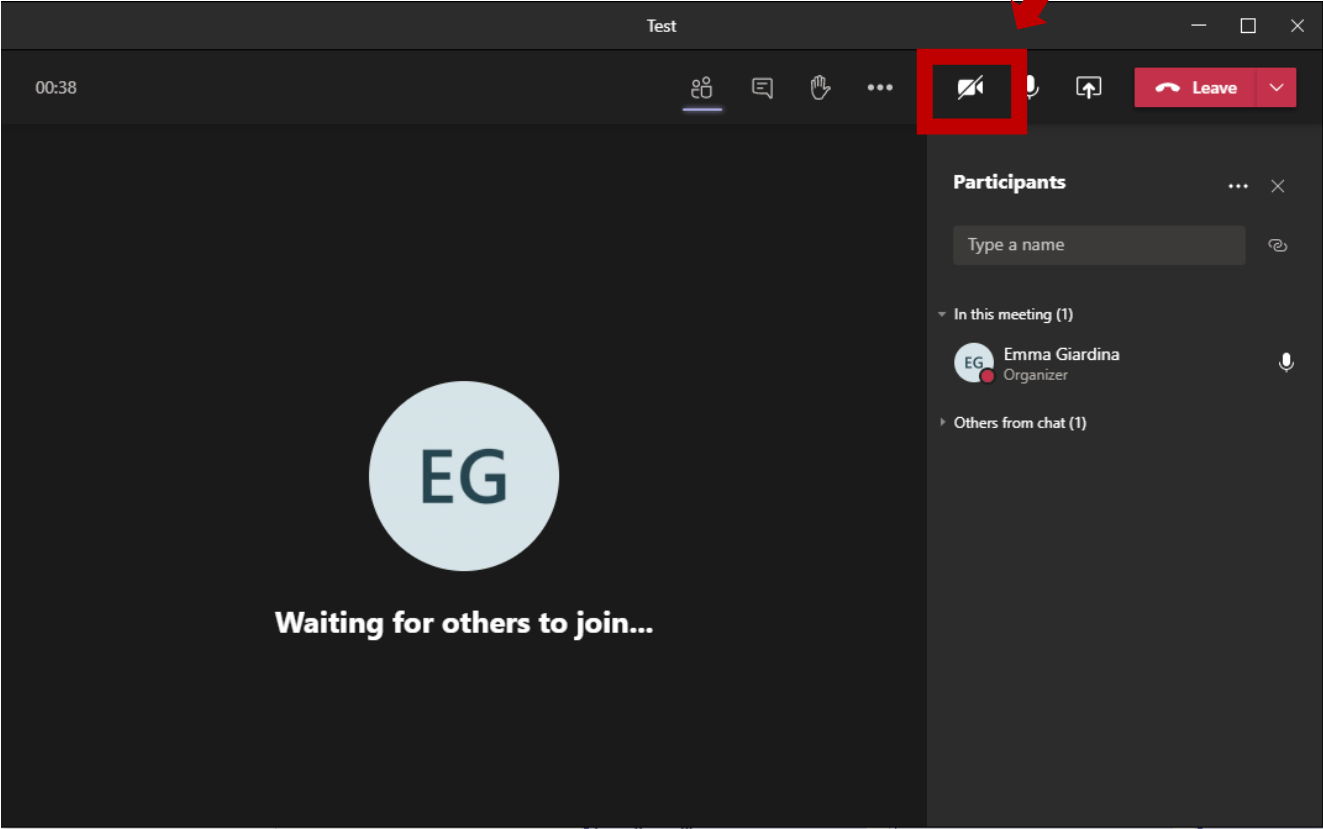
April 14, 2021

1. Welcome & Introductions
2. Background on Hazard Mitigation Plan
3. Role of this Workgroup
4. Group Discussion



# Microsoft Teams

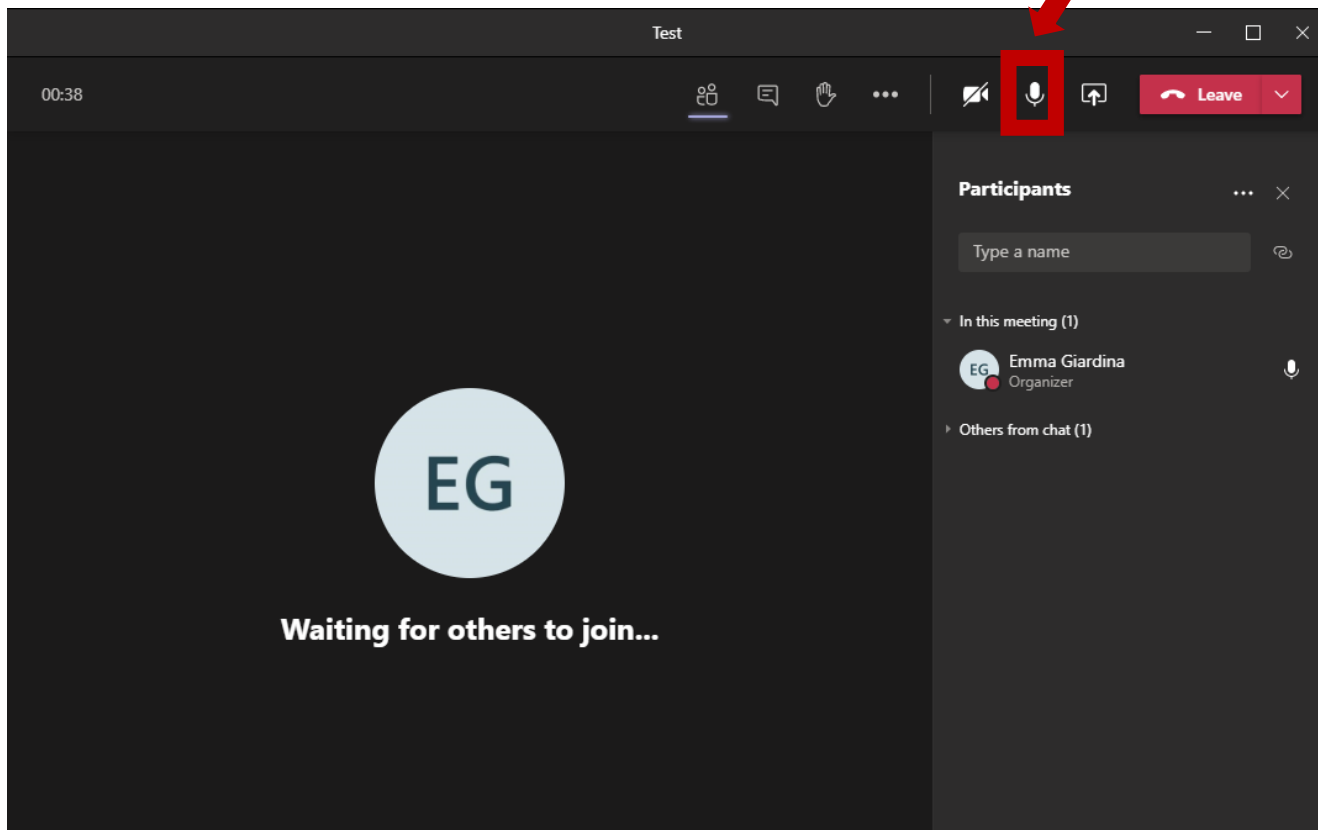
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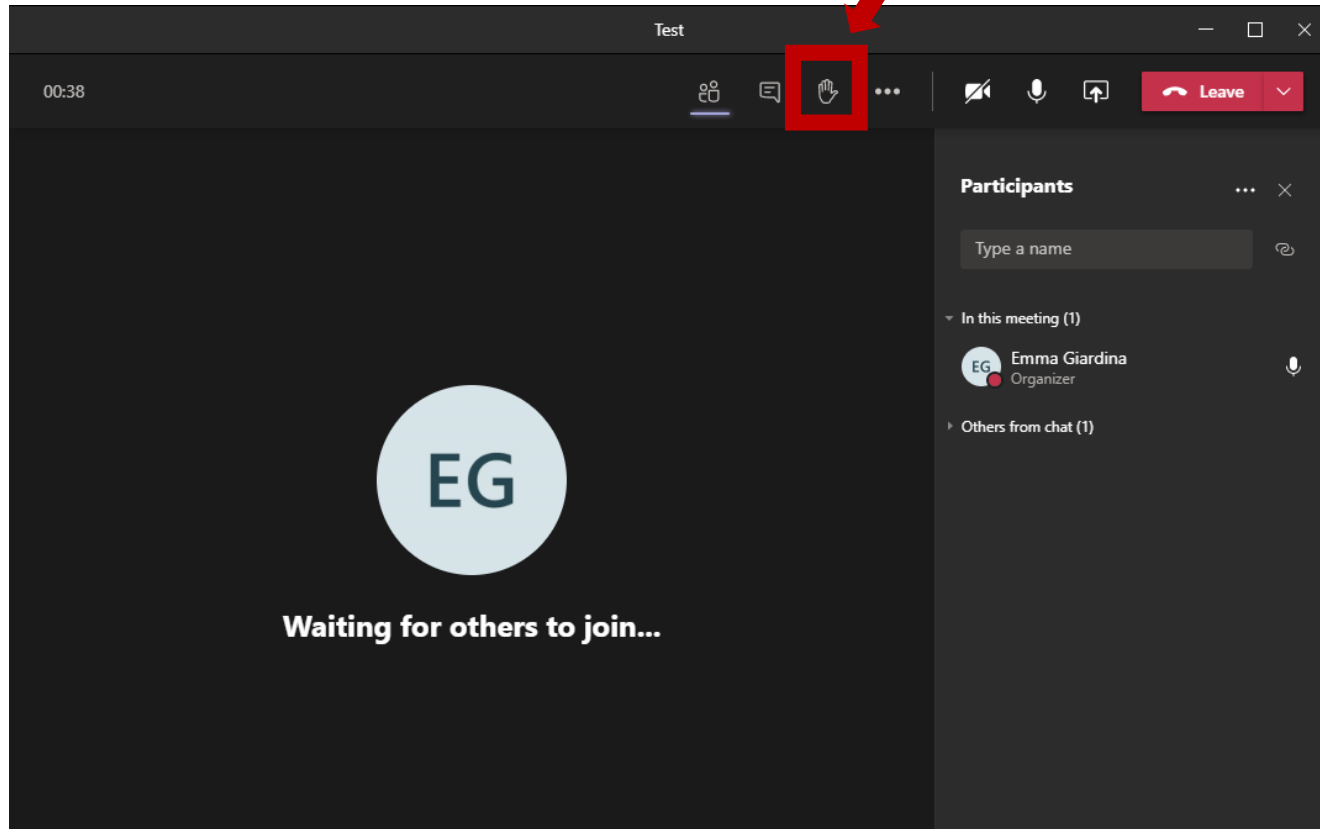
# Microsoft Teams

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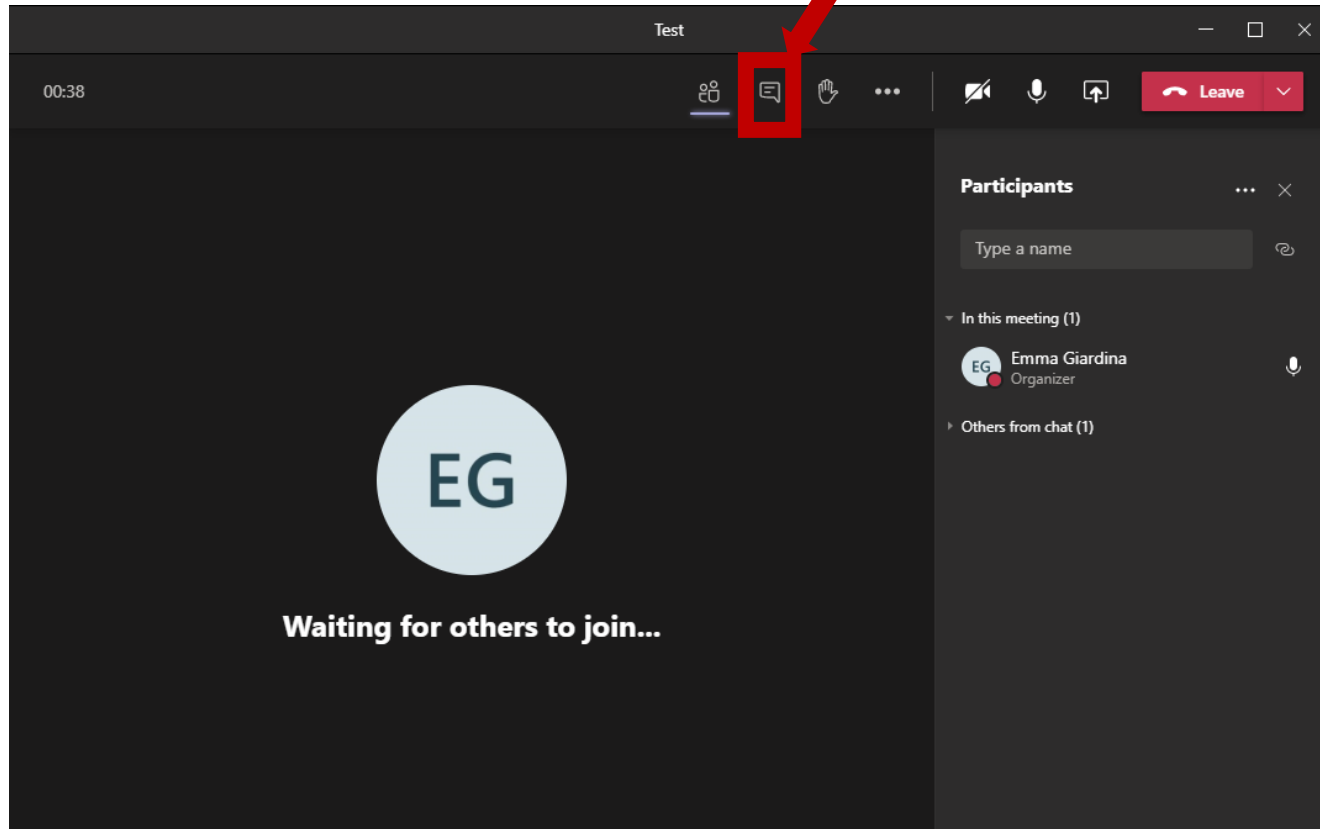
# Microsoft Teams

Raise Hand Feature



# Microsoft Teams

Chat Box Window



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**



# Natural Hazards



**Drought**



**Earthquake**



**Extreme Temperatures**



**Flooding**



**Hurricanes & Tropical Storms**



**Windstorms & Tornadoes**



**Winter Storms**

# Human Caused Hazards and Threats



**Active Shooter**



**Bridge and Dam Failure**



**Hazardous Materials Train Derailment**



**Improvised Explosive Devices**



**Urban Conflagration**

# Why Hazard Mitigation Planning?



# 2022 Priority Areas

**Climate Change**

**Equity**

**Plan integration and implementation**







# Stakeholder Engagement



**Public**



**Businesses**



**City Agencies**



**Private Sector Partners**



**State Agencies**



**Federal Agencies**



**YOU!**

# Historic & Cultural Resources

## An important part of the City of Philadelphia

- Philadelphia is one of the oldest cities in the nation
- Preserving community character & sense of place
- Philadelphia's numerous historic and cultural sites draw in tourists each year
- In PA, the arts contribute to 169,761 jobs and \$10.7 billion added to economy



## Fire destroys Brazil's National Museum

"I see the history of my country becoming ashes. It has no price. I'm devastated."





# Historic flood hits Venice — kills two, destroys historic landmarks

More than 85% of the city has been affected by the high tides which have been linked to climate change.



by **Fermin Koop** — November 14, 2019 in [Climate](#), [Environment](#), [News](#), [Science](#)







**WorldViews**

# ‘Notre Drame’: Newspapers around the world react to one of France’s darkest days

# Historic & Cultural Sites

According to PEMA's HMP SOG (2020):

- **Community Profile:** Impact of historic and cultural resources on a community's character and sense of place
- **Risk & Vulnerability Assessment:** Identify the location of known historic and cultural resources within the community that are vulnerable to natural hazards and identify areas that may need additional inventory
- **Mitigation Strategy:** Contribute mitigation projects specific to historic and cultural resources in Philadelphia.
- **Education & Outreach:** Use arts & culture to better communicate risk in unique and different ways
- **Plan maintenance:** Update regularly to include newly identified historic and cultural resources

# Appendix 18 | Historic Properties and Cultural Resources

## Preservation Potential Funding Sources

A list of federal, state and private historic and cultural preservation funding sources is included below:

| Funding Source Name                              | Funding Source Intentions and Considerations  |
|--|---|
| Federal Funding Sources                          |   |
| Flood Mitigation Assistance (FMA) Program        | Assists states, federally recognized Indian tribal governments, and communities with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). Flood mitigation projects to reduce or eliminate the long-term risk of flood damage to properties insured under the NFIP are eligible for the FMA program. Eligible project types include acquisition-demolition and acquisition-relocation; elevation of existing structures to the Base Flood Elevation (BFE) or an ABFE Advisory Base Flood Elevation (ABFE) or higher; minor localized flood risk reduction projects; and dry-flood proofing (historic properties and non-residential structures). |
| Hazard Mitigation Grant Program (HMGP)           | Provides funding support to states, Indian tribal governments, territories, communities, and other eligible applicants to reduce the risk of future damage, loss of life and property in any area affected by a major disaster.   |
| Pre-Disaster Mitigation (PDM)                    | Provides funding support for pre-disaster mitigation planning and projects primarily addressing natural hazards.  |
| Preparing for Emerging Treats and Hazards (PETH) | Provides assistance that will support communities prepare for new and emerging threats and hazards.   |
| 203(k) Rehab Mortgage Insurance                  | Assists borrowers and lenders, insuring a single, long term, fixed or adjustable rate loan that covers both the acquisition and rehabilitation of a property.   |
| Neighborhood Stabilization Program (NSP)         | Provides emergency assistance to stabilize communities with high rates of abandoned and foreclosed homes.   |
| National Center for                              |   |

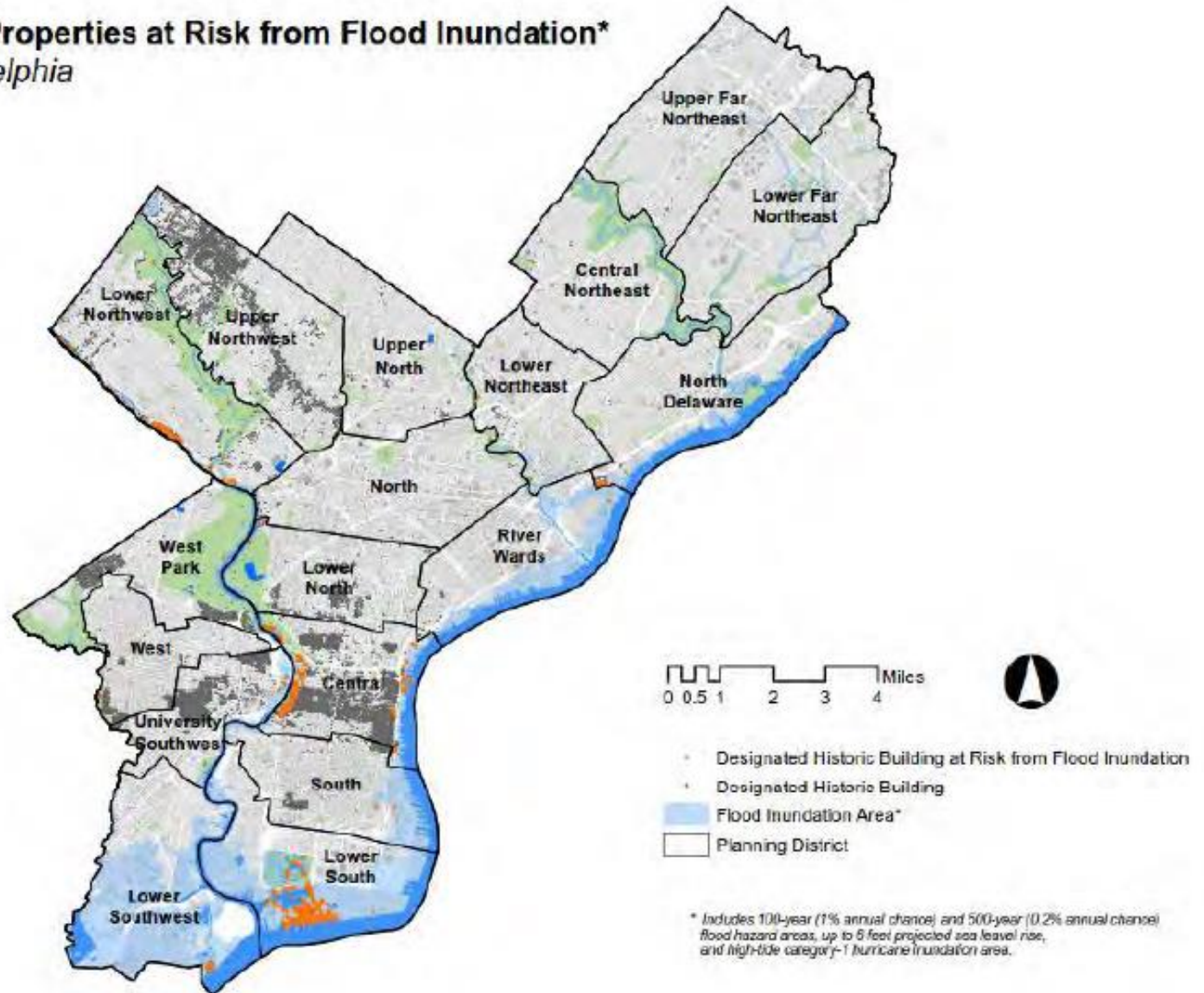


Source: [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020



Figure 2-2: Project Location Map/Designated Properties within Flood Inundation Areas

### Designated Properties at Risk from Flood Inundation\* City of Philadelphia



**Source:** Disaster Planning for Historic Properties Initiatives, Phase 1 Historic Building Flood Vulnerability Assessment Data Recordation, PHMC, June 2016

# Manayunk Main Street Historic District Flood Guide



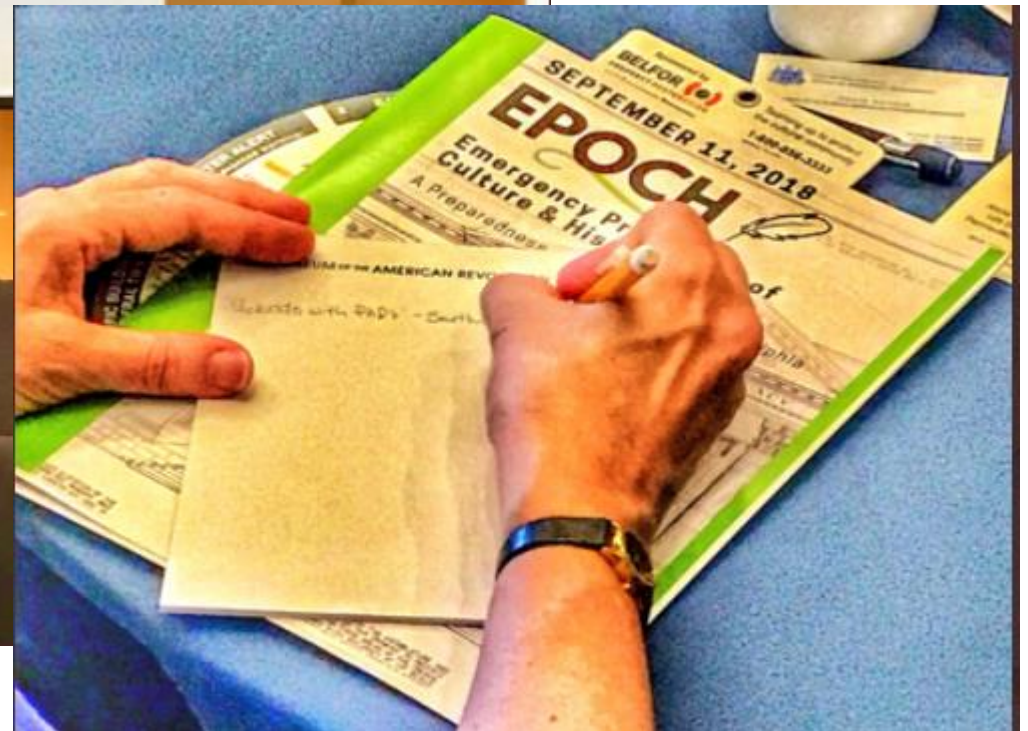
**Source:** <https://pahistoricpreservation.com/manayunk-main-street-historic-district-flood-guide/>







# EPOCH



# Historic & Cultural Resources Workgroup

**Goal: Address hazard risk as it pertains to Philadelphia's historic & cultural resources in the City's 2022 Hazard Mitigation Plan by:**

- Identifying historic & cultural resources that are vulnerable to hazards in Philadelphia;
- Identifying projects, plans & policies that reduce risk to historic & cultural resources in Philadelphia; and
- Integrating new hazard risk and vulnerability data into planning processes.

## DC Funds Public Art to Build Flood Resilience



*The Wharf on the Potomac River in Southwest DC, courtesy of DDOE.*

The DOEE will soon award its second High Water Mark Project grant to fund a public art project that communicates information about flood risk. The goal of the grant, which was released in January 2021, is to build resilience to future flooding by raising awareness of flood risk among DC residents.

# Questions?





# Group Discussion

- From your perspective, which hazards put historical and cultural resources most at risk and why?
- Is there any data that could support the update of this plan? (impacts to historic sites from storms, fires, etc.) What are the data gaps?
- Do you know of any agencies that conduct outreach/education around hazard awareness and preparedness to these sites?

# Group Discussion

- Does your agency have any capabilities to support implementation of hazard mitigation actions? (financial, technical support, education/outreach, etc.)
- Is there anyone else that should be involved in this conversation? Who can we partner with to better communicate risk?



# What's Next?

1. **Help spread the word**
2. **One-on-one outreach may be needed for more data and information to support Risk Assessment**
3. **Summer 2021: Mitigation Strategy**



# Resources

- [Integrating Historical and Cultural Resources into Hazard Mitigation Planning](#), FEMA, 2005
- [Guide to Expanding Mitigation; Making the Connection to Arts & Culture](#), FEMA, 2020
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020

# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# City of Philadelphia Hazard Mitigation Plan



## Historic & Cultural Resources Workgroup Meeting #1

**Date:** April 12, 2021 from 11am-noon

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), John Gardosik (PHMC), Kacie Liss (PCPC), Meredith Keller (Historical Commission), Laura Spina (PCPC), Laura Dipasquale (Historical Commission)

**Absent:** Carolyn Caton (OEM), Josh Lippert (L&I), Shannon Garrison (PCPC)

### Notes:

#### 1. Welcome and Background Information

- a. Emma Giardina, OEM led introductions among the group then provided background on the Hazard Mitigation Planning Process including a review of the timeline and the purpose of the plan.
  - i. The [Hazard Mitigation Plan](#) outlines the natural and human-caused hazards and threats that pose the most risk to Philadelphia and identifies the policies, plans and projects the City and stakeholders can implement to reduce risk.
  - ii. The Hazard Mitigation Plan expires in May 2022 and must be submitted to the Pennsylvania Emergency Management Agency (PEMA) by March 2022.
  - iii. The plan is public facing and available on our website, [www.phila.gov/ready](http://www.phila.gov/ready)
  - iv. Hazard Mitigation saves lives, property, and money. The plan is an opportunity to showcase what the City is already doing to mitigate risk, and what the City would like to do if we have the buy-in and funding needed. The goal is a more resilient Philadelphia.
- b. Areas of focus in the 2022 Plan update include climate change, equity and plan integration and implementation.
- c. OEM will host larger workshops with all stakeholders, smaller workgroup meetings and will also conduct individual outreach as needed.

#### 2. Review of Workgroup Goals and Objectives

- a. Historic and Cultural Resources are an important part of Philadelphia's HMP update.
  - i. Philadelphia joined the Organization of World Heritage Cities in November 2015, becoming the first World Heritage City in the United States .
  - ii. Historic and cultural resources are important to a community's sense of place, which becomes an important factor in a community's recovery after a disaster.
  - iii. Philadelphia's historic and cultural resources draw many tourists each year, and contribute to the City's economy.
- b. In [PEMA's Standard Operating Guide](#) (2020), the Pennsylvania Emergency Management Agency (PEMA) provides recommendations for how to integrate historic and cultural resources into almost every part of the HMP.
  - i. **Community Profile:** Impact of historic and cultural resources on a community's character and sense of place
  - ii. **Risk and Vulnerability Assessment:** Identify the location of known historic and cultural resources within the community that are vulnerable to natural hazards and identify areas that may need additional inventory
  - iii. **Mitigation Strategy:** Contribute mitigation actions specific to historic and cultural resources in Philadelphia.
  - iv. **Educational Outreach:** Use arts & culture to better communicate risk in unique and different ways

- v. **Plan maintenance:** Update regularly to include newly identified historic and cultural resources
- vi. **Funding & Implementation:** PEMA identified potential funding sources for historic property and cultural resources preservation projects
- c. Since the 2017 HMP, there have been several mitigation accomplishments related to historic and cultural resources:
  - i. [Disaster Planning for Historic Properties Initiatives](#), PHMC: Goal of this two phase study was to gather up-to-date and consistent information on designated historic buildings in various flood inundation areas citywide to facilitate protection of these properties before, during and in the aftermath of future flooding events.
    - 1. This study was based on the existing historic properties and building at the time of the study, and there is a need to identify new resources in these areas as well.
  - ii. [Manayunk Main Street Historic Flood Guide](#), PHMC and City's Flood Risk Management Task Force: "Guide was developed to provide local property owners, business owners, and residents an overview of flood risk in the neighborhood, the specific City agencies involved with flood preparation and response, basic improvements and maintenance efforts to mitigation flooding, and more permanent mitigation options."
  - iii. Emergency Preparedness of Cultural and Historic Institutions (EPOCH) Conference in September 2018
- d. Goals and Objectives of this group include:
  - i. Goal: Address hazard risk as it pertains to Philadelphia's historic & cultural resources in the City's 2022 Hazard Mitigation Plan by:
    - 1. Identifying historic and cultural resources that are vulnerable to hazards
    - 2. Identifying projects, plans and policies that reduce risk to historic & cultural resources in Philadelphia; and
    - 3. Integrating new hazard risk and vulnerability data into planning processes.
  - ii. Emma, OEM asked the group if they had any feedback or recommended changes to the goals and objectives listed above. The group had no feedback.

### 3. Group Discussion

- a. Emma, OEM posed the following discussion questions to the group:
  - i. What hazards put your educational institution most at risk and why? Do you have data you can share to support this?
    - 1. The Historical Commission is seeing an uptick in the number of building collapses
    - 2. The Historical Commission often reviews applications for updates to address damage from flooding and fires. There is not data available on the number of applications related to these hazards at this time and some applications do not indicate the cause of damage.
    - 3. Highway construction
  - ii. Is there any data that could support this plan update?
    - 1. The Historical Commission will be conducting a survey on historic and cultural assets. This survey is still in the beginning stages of development and goals/objectives are still being determined.
  - iii. Is there anyone else that should be involved in this conversation?
    - 1. The group recommended engaging contacts from the following agencies:
      - a. Parks and Recreation
      - b. Streets Department (historic streets)
      - c. National Parks Service
  - iv. Other comments and recommendations

1. The City does not have the staff needed to identify archeological resources and determine ways to protect them. This is a gap in City resources. There are Archeological forum's and groups the City works with.

#### **4. Next Steps & Action Items**

- a. Please help us spread the word about the Hazard Mitigation Plan (HMP) update with your colleagues and make recommendations for additional participants that should be added to this group.
- b. Our next workgroup meeting will take place this Summer and will be focused on identifying mitigation projects to include in the plan. One-on-one outreach may be needed before then
- c. Stay updated on progress and next steps via our monthly newsletter. Everyone in this group has been added to the distribution list.

Meeting ended at 12:02pm.

#### **Resources Referenced:**

[Integrating Historical and Cultural Resources into Hazard Mitigation Planning](#), FEMA, 2005

[Guide to Expanding Mitigation; Making the Connection to Arts & Culture](#), FEMA, 2020

[Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020



## Flooding Workgroup Meeting



**Date/Time:** Monday, April 19 from 10AM-11AM  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions  | Time Allocated |
|--------------------------|--|--|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>         | <ul style="list-style-type: none"> <li>• Welcome &amp; Introductions</li> <li>• Review Agenda</li> </ul>   | 5 minutes      |
| <input type="checkbox"/> | <b>Role of the Flooding Workgroup</b>    | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> <li>• Goals &amp; Objectives of this group</li> </ul>  | 10 minutes     |
| <input type="checkbox"/> | <b>Overview of 2017 Flooding Profile</b> | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>  | 5 minutes      |
| <input type="checkbox"/> | <b>Flooding Data</b>                     | View Excel Document <a href="#">here</a> . <ul style="list-style-type: none"> <li>• What other data do we have that could support a risk and vulnerability assessment?</li> <li>• What gaps in data do we have?</li> <li>• What gaps could the contractor potentially fulfill?</li> <li>• Who do we need to have more conversations with?</li> </ul> | 30 mins        |
| <input type="checkbox"/> | <b>Next Steps</b>                        | <ul style="list-style-type: none"> <li>• Complete spreadsheet by the end of April</li> <li>• Summer 2021: Mitigation Strategy</li> <li>• One-on-one outreach may be needed for more data and information for Risk &amp; Vulnerability Assessment</li> </ul>  | 5 minutes      |



# Philadelphia's All-Hazard Mitigation Plan

Flooding Workgroup Meeting #1

April 19, 2021

1. Welcome & Introductions
2. Brief overview & establish goals
3. Flooding in the 2017 Plan
4. Data for 2022 Plan
5. Next Steps



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**





# 2022 Areas of Focus

**Climate Change**

**Equity**

**Plan integration and implementation**



# Flooding Workgroup

**Goal: Develop an updated flood hazard profile and flood mitigation strategy for Philadelphia's 2022 All-Hazard Mitigation Plan by:**

- Providing subject-matter expertise on flooding in Philadelphia to inform an accurate, up-to-date hazard profile;
- Identifying and gathering all new and readily available data on flooding in Philadelphia; and
- Updating past mitigation actions and identifying new mitigation opportunities based on an updated risk and vulnerability assessment.

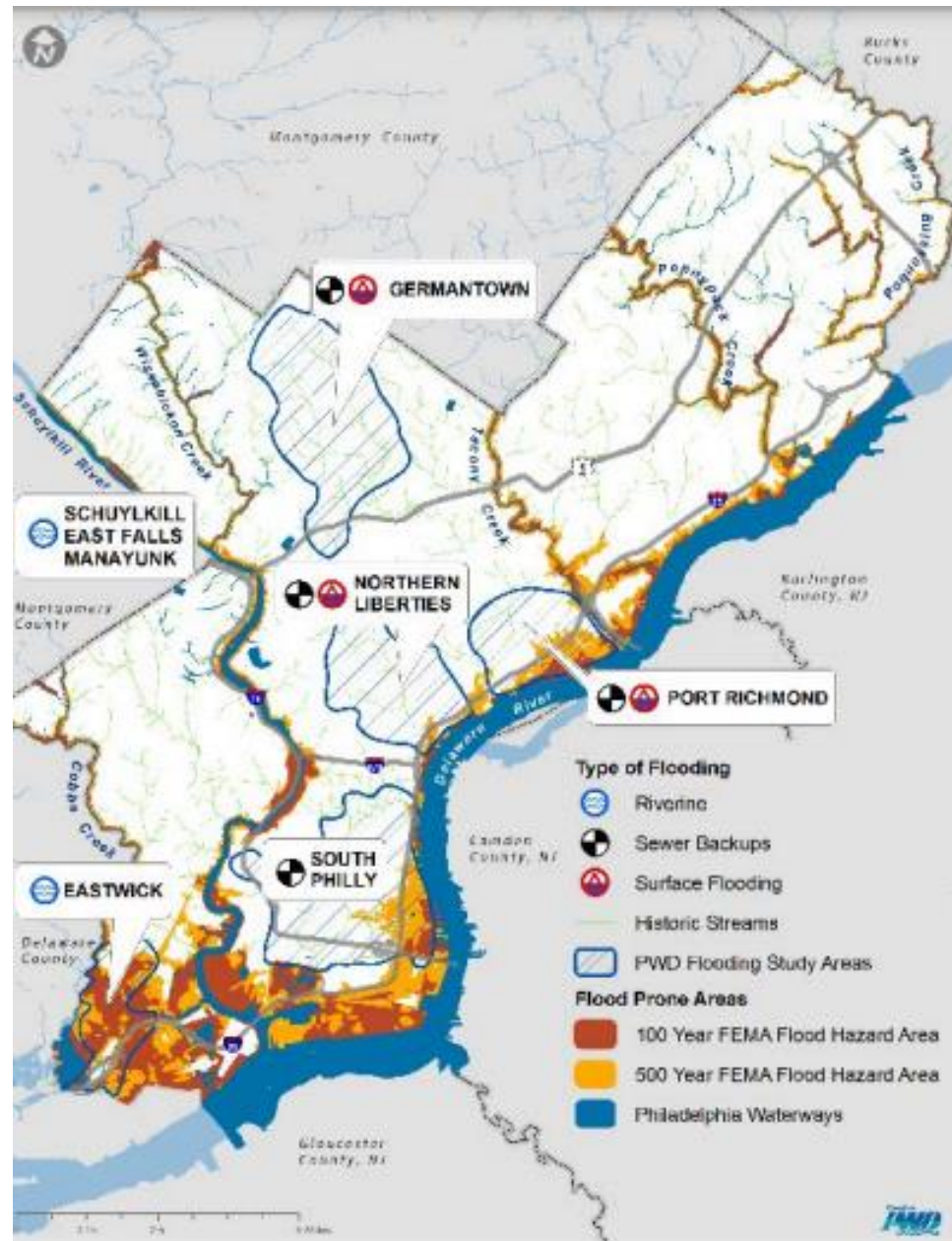
**What would you add or change?**



# The 2017 Plan

## Flooding Hazards:

- Riverine Flooding
- Surface Flooding
- Flash Flooding



# Potential areas for improvement

- Urban flooding & Coastal flooding
- Land use and development trends
- Past occurrences
- Climate projections
- Compounding impacts
- Revisit the worst-case scenario

**Are there other updates you'd like to see included?**

# Questions?





# HAZUS

**A nationally standardized risk modeling methodology using GIS-based technology.**

Can help quantify and map risk information such as:

- Physical damage
- Economic loss
- Social impacts
- Cost-effectiveness of mitigation strategies



# Data Collection

| Flooding Data - 2022 Hazard Mitigation Plan Update |                             |             |   |                    |                   |                    |
|--|-----------------------------|-------------|---|--------------------|-------------------|--------------------|
| Name   | Description of Data         | File Format | Location of Data File   | Datum used in data | Date Last Updated | How often updated? |
| <b>Hydrology/Hydrography</b>                       |                             |             |   |                    |                   |                    |
| Streams and Rivers                                 |                             | AGO Layer   | <a href="https://phl.maps.arcgis.com/home/">https://phl.maps.arcgis.com/home/</a>     |                    | 8-Mar-20          | Unknown            |
| Drainage Basins                                    |                             |             |   |                    |                   |                    |
| Reservoirs   |                             |             |   |                    |                   |                    |
| Dams   | This layer represents Dams. | AGO Layer   | <a href="https://services.arcgis.com/fLeGjb7">https://services.arcgis.com/fLeGjb7</a> |                    | Unknown           | Unknown            |
| Canals   |                             |             |   |                    |                   |                    |
| <b>Flood Inundation Areas</b>                      |                             |             |   |                    |                   |                    |
| Urban/Stormwater floodprone areas                  |                             |             |   |                    |                   |                    |
| Dam break inundation                               |                             |             |   |                    |                   |                    |
| Future Flood Inundation Projections                |                             |             |   |                    |                   |                    |
|  |                             |             |   |                    |                   |                    |
|  |                             |             |   |                    |                   |                    |
| <b>Past Events</b>                                 |                             |             |   |                    |                   |                    |

EG



[https://phila-my.sharepoint.com/:x:/g/person/emma\\_giardina\\_phila\\_gov/EeHitUpIGL9LtOm2b8AvXsMBS0sde-ziqJbj6uwW5jIVRw?e=a3Dyj1](https://phila-my.sharepoint.com/:x:/g/person/emma_giardina_phila_gov/EeHitUpIGL9LtOm2b8AvXsMBS0sde-ziqJbj6uwW5jIVRw?e=a3Dyj1)

# Group Discussion

## Flooding Data

- What other data do we have that could support the risk and vulnerability assessment?
- What gaps in data do we have?
- What gaps could the contractor potentially fill?
- Who do we need to have more conversations with?

# What's Next?

- 1. Complete spreadsheet by end of the month**
- 2. FRMTF Meeting on May 11th**
- 3. One-on-one outreach may be needed for more data and information to support Risk Assessment**
- 4. Summer 2021: Mitigation Strategy**



# Resources & Training

- PAFPM Webinar, [Hazard Mitigation Planning in Floodplain Management](#), April 24<sup>th</sup> from 12pm-1:30pm
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020
- [HAZUS in the PA Hazard Mitigation Plan](#)
- [Flood Mitigation Assistance \(FMA\) Grant](#)
- [Building Resilient Infrastructure and Communities Grant](#)



# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# City of Philadelphia Hazard Mitigation Plan



## Flooding Workgroup Meeting #1

**Date:** April 19<sup>th</sup>, 2021 from 10AM-11AM

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Paige Kaspar (OEM), Josh Lippert (L&I), Alec Bernstein (PWD), John Haak (PCPC), Ayse Unver (PCPC), Ian Hegarty (PCPC), Julia Rockwell (PWD), Kelly Anderson (PWD), Kimberly Flood (PWD), Zoe Linder Baptie (Wharton Risk Center), Mark Cammarata (PWD), Patrick Perhosky (PWD), Richard Quodomine (DPP), Terra Luke (DPP), Jason Miller (USACE), Abby Sullivan (PWD), Ronald Bednar (PCPC)

**Absent:** Bill Bradfield (PEMA)

### Notes:

#### 1. Welcome and Background Information

- a. Emma Giardina, OEM led introductions among the group then provided background on the Hazard Mitigation Planning Process including a review of the timeline and the purpose of the plan.
  - i. The [Hazard Mitigation Plan](#) outlines the natural and human-caused hazards and threats that pose the most risk to Philadelphia and identifies the policies, plans and projects the City and stakeholders can implement to reduce risk.
  - ii. The Hazard Mitigation Plan expires in May 2022 and must be submitted to the Pennsylvania Emergency Management Agency (PEMA) by March 2022.
  - iii. The plan is public facing and available on our website, [www.phila.gov/ready](http://www.phila.gov/ready)
  - iv. Hazard Mitigation saves lives, property, and money. The plan is an opportunity to showcase what the City is already doing to mitigate risk, and what the City would like to do if we have the buy-in and funding needed. The goal is a more resilient Philadelphia.
- b. Areas of focus in the 2022 Plan update include climate change, equity and plan integration and implementation.
- c. OEM will host larger workshops with all stakeholders, smaller workgroup meetings and will also conduct individual outreach as needed.

#### 2. Review of Workgroup Goals and Objectives

- a. Goals and Objectives of this group include:
  - i. Goal: Develop an updated flood hazard profile and flood mitigation strategy for Philadelphia's 2022 All-Hazard Mitigation plan by:
    1. Providing subject-matter expertise on flooding in Philadelphia to inform an accurate, up-to-date hazard profile;
    2. Identifying and gathering all new and readily available data on flooding in Philadelphia; and
    3. Updating past mitigation actions and identifying new mitigation opportunities based on an updated risk and vulnerability assessment.
  - ii. Emma, OEM asked the group if they had any feedback or recommended changes to the goals and objectives listed above. The group recommended the following:
    1. Looking at codes for rights of way in the City - potential mitigation action in the future
    2. Guiding capital investments and the location of investments

#### 3. Review of the 2017 Hazard Mitigation Plan

- a. The following are highlights from the flood hazard profile in the 2017 Hazard Mitigation Plan:
  - i. The 2017 plan addresses riverine flooding, surface flooding and flash flooding

- ii. The hazard profile includes a description of the factors that contribute to flooding in Philadelphia, along with a generalized description of climate change's impact on future flooding
    - iii. Past occurrences are described, including a list of declared disasters, the top ten highest historic crests on the Schuylkill River, common roadways impacted by flooding, and a summary of repetitive loss claims data by zip code
    - iv. A basic HAZUS risk analysis was conducted which estimated economic loss from a 100-year flood event. This included an analysis of critical facilities located within the 100-year floodplain.
  - b. With each plan update, we can build upon the last plan and improve based on new studies and data available. Some potential areas for improvement include:
    - i. Address urban and coastal flooding
    - ii. Address land use and development trends and how they impact flood risk
    - iii. Include more data on past occurrences, including those that were not declared disasters
    - iv. Incorporate the most recent climate projections
    - v. Address compounding impacts of hazards
    - vi. Revisit our worst-case scenario and determine if it needs to be updated
  - c. Emma Giardina, OEM opened it up to the group for additional recommendations:
    - i. Terminology and definitions should be standardized and match the City's definitions. For example, the City's definition of surface flooding is different from the definition in the 2017 plan.
    - ii. PWD can provide more data on past flooding events.
    - iii. Data on swift water rescues needs to be reviewed for accuracy and to confirm relationship to flooding events
    - iv. Ensure modeling is up to date and consistent. The 2017 HMP modeling differs from the 2015 modeling that occurred on the Delaware River
    - v. All data that is shared via this plan should have a clear explanation of how the data was gathered, what the data represents, and limitations in the data.
    - vi. The map of flooded areas can be improved for more accuracy
    - vii. What improvements to transparent public outreach and education are planned?

#### **4. Flooding Data**

- a. HAZUS: a nationally standardized risk modeling methodology using GIS-based technology.
  - i. HAZUS can help quantify and map risk information such as physical damage, economic loss, social impacts, and cost-effectiveness of mitigation strategies.
  - ii. The more local data we can provide the contractor, the more accurate our analysis will be.
- b. Emma, OEM shared a link to an excel document the group can use to gather and organize a list of data available on flooding in Philadelphia.

#### **5. Group Discussion**

- a. Emma, OEM posed the following discussion questions to the group:
  - i. What other data do we have that could support the risk and vulnerability assessment?
  - ii. What gaps in data do we have?
  - iii. What gaps could the contractor potentially fill?
  - iv. Who do we need to have more conversations with?
- b. The group suggested the following based on the proposed questions above:
  - i. PCPC can share land use data over the last 10 years, including right of ways and private development. Looking at future development trends could be more challenging, but zoning layers, OPA data, and L&I data on zoning and building permits could help with this.
  - ii. There is a need to use consistent vertical control datums across all flood data, and consistent conversion factors.
  - iii. USGS stream gauge data is available and should be included in this plan update.
  - iv. PWD may have more localized data on flood impacts that they can share.



- v. Data and analysis of land use from this plan can inform future development in flood prone planning districts.
- vi. It's important to note that not every data set is comprehensive, data limitations and disclaimers should be included when applicable. Data should be accessible to the public if included in this plan.
- vii. Other comments and recommendations
  1. PWD mentioned that they are updating plans for drought. They will connect with OEM offline to discuss potential inclusion in HMP update.
  2. Wharton Risk Center is studying innovative ways to promote and use insurance. This work can be incorporated into the Mitigation Strategy.
  3. Look to the damage assessment process for collecting local data on flood damage.

#### 6. Next Steps & Action Items

- a. Complete the [Flooding Data Spreadsheet](#) by the end of the month and add new data sources that are available. At a minimum, we're looking for the **NAME** of the data source, a brief **DESCRIPTION** of the data source, and a **CONTACT** to follow up with for more information.
- b. Our next workgroup meeting will take place this Summer and will be focused on identifying mitigation projects to include in the plan. One-on-one outreach may be needed before then.
- c. Stay updated on progress and next steps via our monthly newsletter. Everyone in this group has been added to the distribution list.

Meeting ended at 10:58am.

#### Resources Referenced:

PAFPM Webinar, [Hazard Mitigation Planning in Floodplain Management](#), April 21st from 12pm-1:30pm

[Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020

[HAZUS in the PA Hazard Mitigation Plan](#)

[Flood Mitigation Assistance \(FMA\) Grant](#)

[Building Resilient Infrastructure and Communities Grant](#)

# Flooding Meeting #1

Date: April 11, 2021

Location: Microsoft Teams, Virtual



| Name              | Title  | Organization        | Email  |
|-------------------|--|---------------------|--|
| Emma Giardina     | Hazard Planning Coordinator                          | Philadelphia OEM    | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>             |
| Carolyn Caton     | Infrastructure Program Manager                       | Philadelphia OEM    | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>             |
| Paige Kaspar      | Infrastructure Planning Coordinator                  | Philadelphia OEM    | <a href="mailto:Paige.Kaspar@phila.gov">Paige.Kaspar@phila.gov</a>               |
| Joshua Lippert    | Floodplain Manager                                   | Philadelphia OEM    | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>           |
| John Haak         | City Planner   | PCPC                | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                     |
| Ayse Unver        | City Planner   | PCPC                | <a href="mailto:Ayse.Unver@phila.gov">Ayse.Unver@phila.gov</a>                   |
| Ian Hegarty       | City Planner   | PCPC                | <a href="mailto:Ian.Hegarty@phila.gov">Ian.Hegarty@phila.gov</a>                 |
| Julia Rockwell    | Climate Change Adaptation Program Manager            | PWD                 | <a href="mailto:Julia.Rockwell@phila.gov">Julia.Rockwell@phila.gov</a>           |
| Kelly Anderson    | Watershed Protection Program Manager                 | PWD                 | <a href="mailto:Kelly.Anderson@phila.gov">Kelly.Anderson@phila.gov</a>           |
| Kimberly Flood    |  | PWD                 | <a href="mailto:Kimberly.Flood@phila.gov">Kimberly.Flood@phila.gov</a>           |
| Zoe Linder Baptie |  | Wharton Risk Center | <a href="mailto:zoelb@wharton.upenn.edu">zoelb@wharton.upenn.edu</a>             |
| Marc Cammarata    | Deputy Commissioner                                  | PWD                 | <a href="mailto:Marc.Cammarata@phila.gov">Marc.Cammarata@phila.gov</a>           |
| Patrick Perhosky  | Engineering Supervisor                               | PWD                 | <a href="mailto:Patrick.Perhosky@phila.gov">Patrick.Perhosky@phila.gov</a>       |
| Richard Quodomine | Senior Lead GIS Analyst                              | DPP                 | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a>     |
| Terra Luke        | GIS Analyst  | DPP                 | <a href="mailto:Terra.Luke@phila.gov">Terra.Luke@phila.gov</a>                   |
| Jason Miller      |  | USACE               | <a href="mailto:Jason.f.Miller@usace.army.mil">Jason.f.Miller@usace.army.mil</a> |
| Abby Sullivan     | Environmental Scientist – Climate Adaptation Program | PWD                 | <a href="mailto:Abby.Sullivan@phila.gov">Abby.Sullivan@phila.gov</a>             |
| Ronald Bednar     | City Planner   | PCPC                | <a href="mailto:Ronald.Bednard@phila.gov">Ronald.Bednard@phila.gov</a>           |
|                   |  |                     |  |
|                   |  |                     |  |
|                   |  |                     |  |

## Infrastructure Workgroup Meeting



**Date/Time:** Thursday, April 22 from 1PM-2PM  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                           | <ul style="list-style-type: none"> <li>• Welcome &amp; Introductions</li> <li>• Review Agenda</li> </ul>  | 5 minutes      |
| <input type="checkbox"/> | <b>Brief Overview of HMP and Planning Process Timeline</b> | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> <li>• Goals &amp; Objectives of this group</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Role of the Infrastructure Workgroup</b>                | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>   | 5 minutes      |
| <input type="checkbox"/> | <b>Discussion Questions</b>                                | <ul style="list-style-type: none"> <li>• From your perspective, which hazards pose the most risk to the infrastructure that your agency/organization is responsible for?</li> <li>• Is there any data your agency could provide that would support the update of this plan? What are the data gaps that would help in your planning?</li> <li>• What other plans or policies are already in place that analyze hazard risk to your infrastructure/systems? Are you able to provide copies of those plans to OEM?</li> <li>• Does your agency have any capabilities to support implementation of hazard mitigation actions or an interest in partnering with other entities to complete mitigation actions? (financial, technical support, education/outreach, etc.)</li> <li>• What mitigation actions are already under way that we should be aware of and document in this plan?</li> <li>• Is there anyone else that should be involved in this conversation?</li> </ul> | 30 mins        |

|   |                   |  |           |
|---|-------------------|--|-----------|
| □ | <b>Next Steps</b> | <ul style="list-style-type: none"><li>• Help spread the word!</li><li>• Summer 2021: Mitigation Strategy</li><li>• One-on-one outreach may be needed for more data and information for Risk &amp; Vulnerability Assessment</li></ul> | 5 minutes |
|---|-------------------|--|-----------|

# Philadelphia's All-Hazard Mitigation Plan

Infrastructure Workgroup Meeting #1

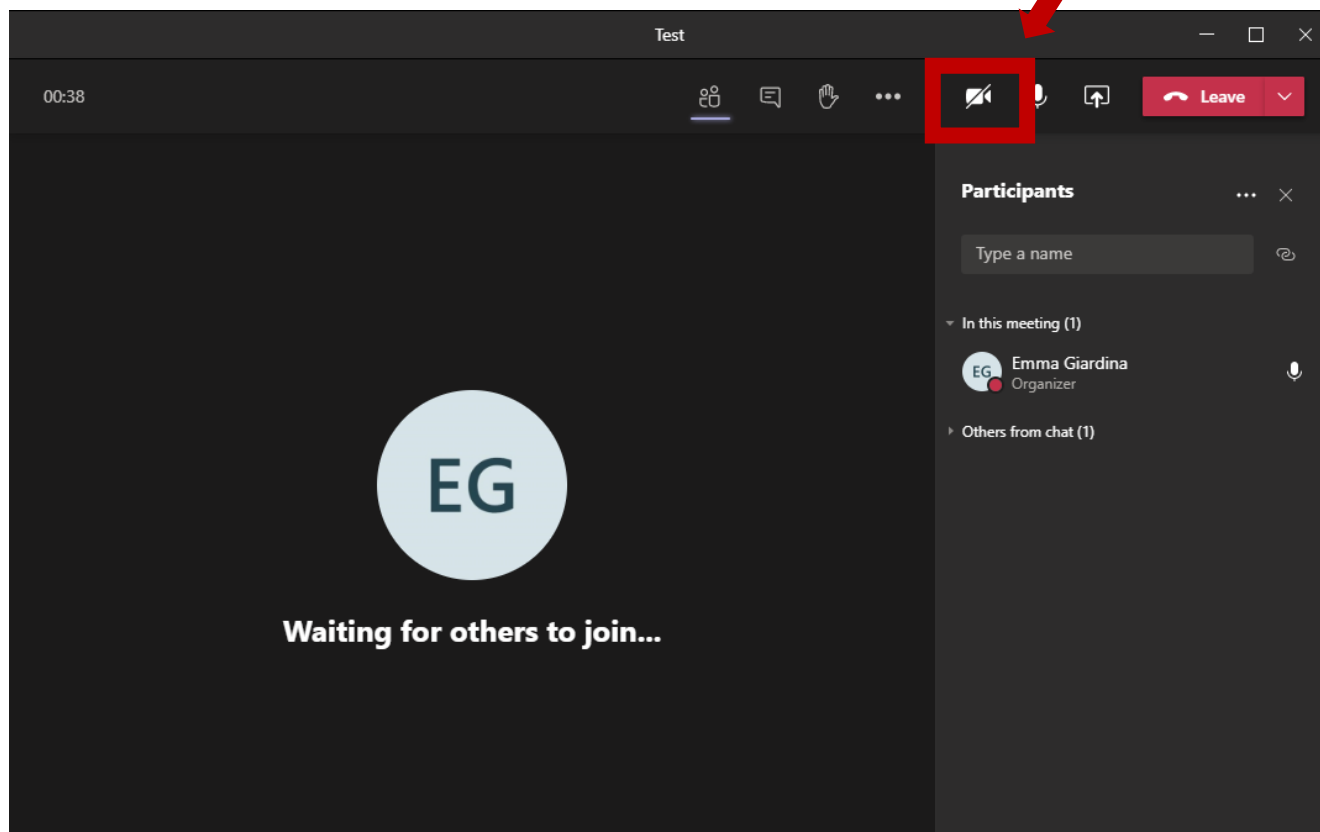
April 22, 2021

1. Welcome & Introductions
2. Background on Hazard Mitigation Plan
3. Role of this Workgroup
4. Group Discussion



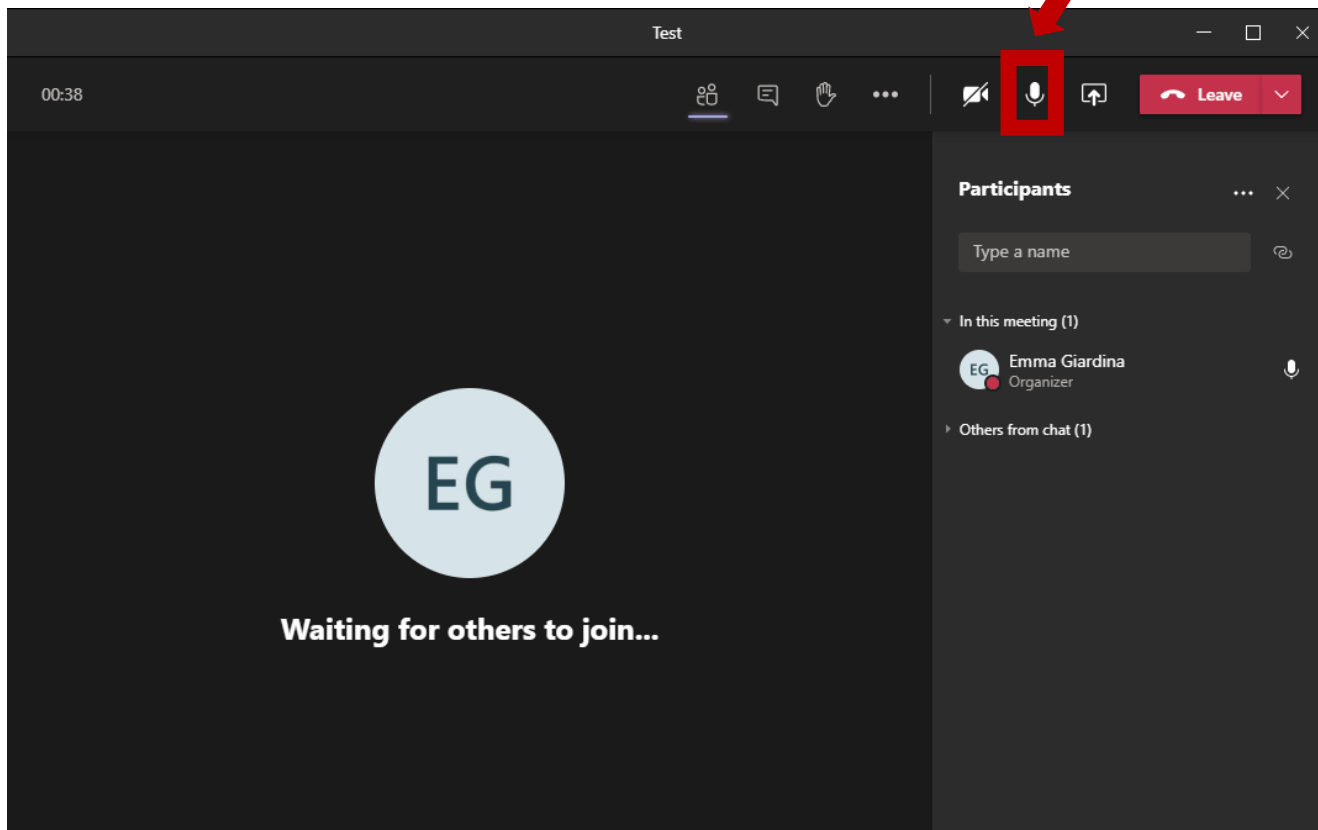
# Microsoft Teams

Video On/Off



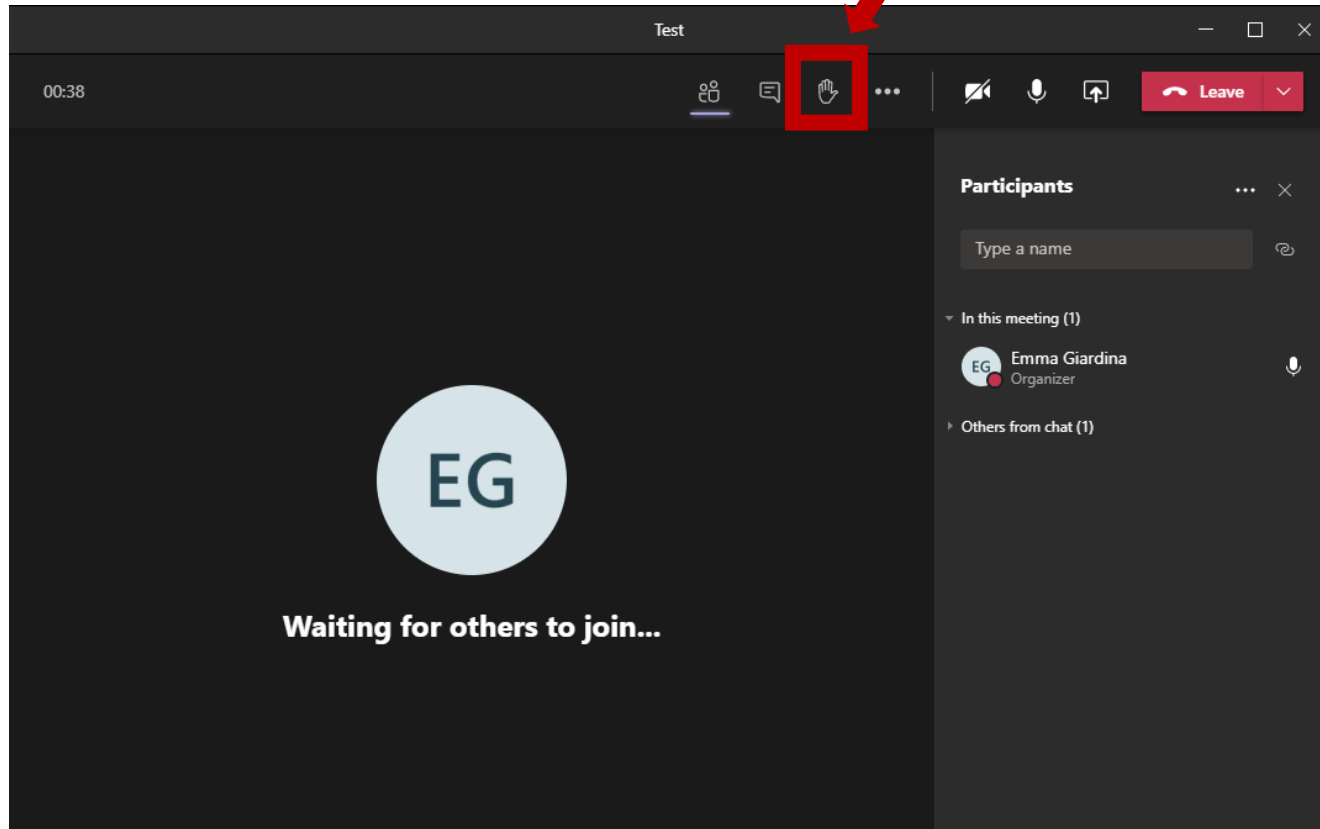
# Microsoft Teams

Microphone On/Off



# Microsoft Teams

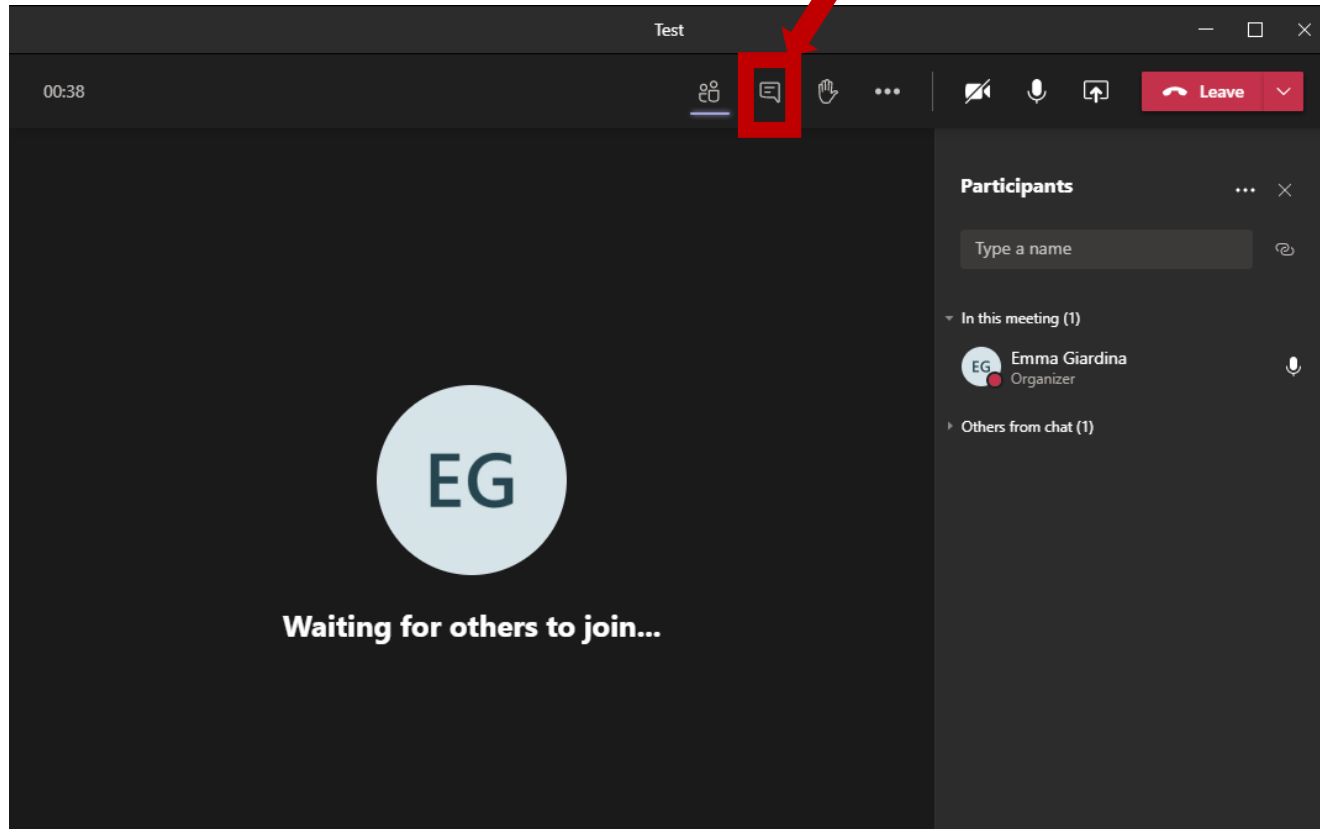
Raise Hand Feature





# Microsoft Teams

Chat Box Window



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**



# Natural Hazards



**Drought**



**Earthquake**



**Extreme Temperatures**



**Flooding**



**Hurricanes & Tropical Storms**



**Windstorms & Tornadoes**



**Winter Storms**

# Human Caused Hazards and Threats



**Active Shooter**



**Infrastructure Failure**



**Hazardous Materials Train Derailment**



**Improvised Explosive Devices**



**Urban Conflagration**

# Hazards Interrelationships

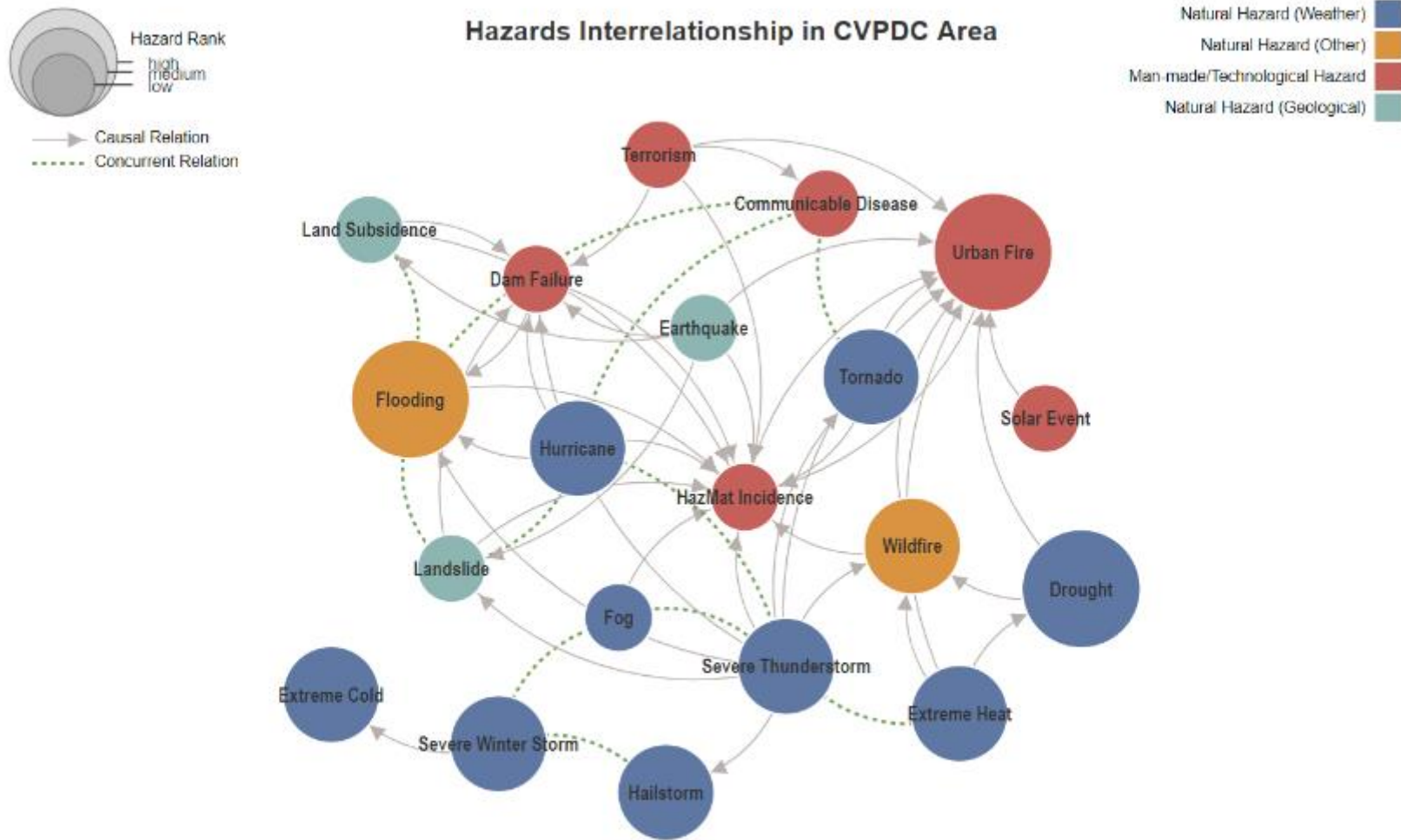


Figure 4-1 Interrelationship of Hazards for CVPDC area



# Why Hazard Mitigation Planning?



# 2022 Priority Areas

**Climate Change**

**Equity**

**Plan integration and implementation**



# Timeline

- Larger Workshops
- Smaller Workgroup Meetings
- Individual Outreach

|  | 2020         |     |     |     |      |     |     |      |     |     |     |     | 2021 |     |     |     |      |     |     |      |     |     |     |     | 2022 |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--------------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|
|  | Feb          | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb  | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb  | Mar | Apr | May | Jun |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Build the Planning Team &amp; Collect the Resources</b> | [Yellow bar] |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Conduct a Risk &amp; Vulnerability Assessment</b>       |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Assess Capabilities</b>                                 |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Develop the Mitigation Strategy</b>                     |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Determine the Plan Maintenance Process</b>              |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Finalize the Plan &amp; Distribute for Review</b>       |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Obtain Approval and Adoption</b>                        |              |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |      |     |     |      |     |     |     |     |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |



**We are here**  
Date: 04/22/2021





# Utilities, Communications & Transportation

An important part of the City of Philadelphia



**Energy** - Power Grid, Fuel



**Communications** - Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch



**Transportation** - Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime



More information on [FEMA's Community Lifelines](#)



# Guide to Expanding Mitigation

MAKING THE CONNECTION TO TRANSPORTATION



# Guide to Expanding Mitigation

MAKING THE CONNECTION TO ELECTRIC POWER



# Guide to Expanding Mitigation

MAKING THE CONNECTION TO COMMUNICATIONS SYSTEMS



RiskMAP

More information on [FEMA's Guides to Expanding Mitigation](#)

# Mitigation Action Example

## Arlington County, VA

ConnectArlington Communication Infrastructure Updates



Safety & Security



Communications



# Infrastructure Workgroup

**Goal: Address hazard risk as it pertains to Philadelphia's utilities, transportation and communications systems in the City's 2022 Hazard Mitigation Plan by:**

- Identifying hazards that pose the most risk to your systems;
- Identifying projects, plans & policies that reduce risk to utilities, transportation and communication systems in Philadelphia; and
- Integrating new hazard risk and vulnerability data into your agency/organization's planning processes.

# Questions?



# Group Discussion

- From your perspective, which hazards pose the most risk to the infrastructure that your agency/organization is responsible for?
- Is there any data your agency could provide that would support the update of this plan? What are the data gaps that would help in your planning?
- What other plans or policies are already in place that analyze hazard risk to your infrastructure/systems? Are you able to provide copies of those plans to OEM?

# Group Discussion

- Does your agency have any capabilities to support implementation of hazard mitigation actions or an interest in partnering with other entities to complete mitigation actions? (financial, technical support, education/outreach, etc.)
- What mitigation actions are already under way that we should be aware of and document in this plan?
- Is there anyone else that should be involved in this conversation?



# What's Next?

1. **Help spread the word**
2. **One-on-one outreach or smaller workgroup meeting may be needed for more data and information to support the Risk Assessment**
3. **Summer 2021: Mitigation Strategy**





# Resources

- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020
- [Guide to Expanding Mitigation: Transportation](#), FEMA, 2020
- [Guide to Expanding Mitigation: Electric Power](#), FEMA, 2020
- [Guide to Expanding Mitigation: Communications Systems](#), FEMA, 2021
- [FEMA's Community Lifelines](#)
- [Hazard Mitigation Assistance Mitigation Action Portfolio](#), FEMA

# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# City of Philadelphia Hazard Mitigation Plan



## Infrastructure Workgroup Meeting #1

**Date:** April 22, 2021 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Ryan Ford (OEM), Michael Giardina (OEM), John Glass (PIA), Liz Lanckenau (OTIS), Jose Aguirre (PECO), Morgan Fletcher (PGW), Mark Lee (PGW), Elena Fisher (PHL), Raymond Scheinfeld (PIA), Stephanie Craighead (PPR), Nicole Charlton (PWD), Aleta Evans (SEPTA), Steve Lorenz (Streets), Tom Stammerjohann (Vicinity Energy), David Kanthor (PCPC), Brian McDonough (Amtrak), Joshua Bell (PPR), Kristen Snuck (PWD)

**Absent:** Comcast, OIT, Verizon

### Notes:

#### 1. Welcome and Background Information

- a. Emma Giardina, OEM led introductions among the group then provided background on the Hazard Mitigation Planning Process including a review of the timeline and the purpose of the plan.
  - i. The [Hazard Mitigation Plan](#) outlines the natural and human-caused hazards and threats that pose the most risk to Philadelphia and identifies the policies, plans and projects the City and stakeholders can implement to reduce risk.
  - ii. The Hazard Mitigation Plan expires in May 2022 and must be submitted to the Pennsylvania Emergency Management Agency (PEMA) by March 2022.
  - iii. The plan is public facing and available on our website, [www.phila.gov/ready](http://www.phila.gov/ready)
  - iv. Hazard Mitigation saves lives, property, and money. The plan is an opportunity to showcase what the City is already doing to mitigate risk, and what the City would like to do if we have the buy-in and funding needed. The goal is a more resilient Philadelphia.
- b. Areas of focus in the 2022 Plan update include climate change, equity and plan integration and implementation.
- c. OEM will host larger workshops with all stakeholders, smaller workgroup meetings and will also conduct individual outreach as needed.

#### 2. Review of Workgroup Goals and Objectives

- a. Infrastructure partners are an important part of Philadelphia's HMP update.
  - i. This workgroup will focus on utilities, communications and transportation, three of FEMA's Community Lifelines.
  - ii. Per FEMA, "a **lifeline** enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. Lifelines are the most fundamental service in the community that, when stabilized in an emergency, enable all other aspects of society to function."
  - iii. Disasters such as the ones in our HMP can jeopardize these lifelines by compromising their infrastructure, which is why it's extremely important to consider these impacts in HMPS and identify projects that can strengthen our community's communication, energy and transportation systems.
  - iv. This larger working group may need to be broken down even further into utilities, communications, and transportation sub-groups.
- b. Goals and Objectives of this group include:
  - i. Goal: Address hazard risk as it pertains to Philadelphia's utilities, transportation, and communication systems in the City's 2022 Hazard Mitigation Plan by:

1. Identifying hazards that pose the most risk to these systems;
  2. Identifying projects, plans and policies that reduce risk to utilities, transportation, and communication systems in Philadelphia; and
  3. Integrating new hazard risk and vulnerability data into your agency/organization's planning processes.
- ii. Emma, OEM asked the group if they had any feedback or recommended changes to the goals and objectives listed above.
1. OEM hopes to use the data gathered from this plan to inform distribution management planning processes.
  2. Philadelphia International Airport (PIA) mentioned that the airport has its own police, fire, living facilities, and other infrastructure that support transportation. There are several hazard plans for the PIA in place, some of which include sensitive information.
  3. OEM mentioned that this is a great opportunity to make sure planning processes and mitigation goals are aligned across the City.

### 3. Group Discussion

a. Emma, OEM posed the following discussion questions to the group:

- i. From your perspective, which hazards pose the most risk to the infrastructure that your agency/organization is responsible for?
  1. Consensus from group that cyber threats should be addressed in the plan
  2. PCPC inquired about the inclusion of heat in the 2022 plan. Extreme heat is included in the 2017 plan and will be updated to reflect more recent data on the impacts of heat on Philadelphia's communities and infrastructure.
  3. Streets mentioned that extreme heat and extreme cold affects roadways and can cause buckled roadways. There have been few impacts reported recently. As infrastructure continues to age, we will begin to see more impacts.
  4. Streets also mentioned that we should consider including large brush fires in our hazard profile.
  5. PECO reported that PECO is continuously investing money into replacing old cables, old transformers, and creating new substations. They are also continuously pushing their energy saving program to minimize higher loads in the summertime when temperatures are higher.
  6. PIA mentioned that human-caused threats, natural hazards like flooding, winter storms and the impacts of a changing climate on these natural hazards should all be included in the plan.
- ii. Is there any data your agency could provide that would support the update of this plan? What are the data gaps that would help in your planning?
  1. Carolyn, OEM asked if agencies have been collecting data on the impacts of COVID-19 on their operations. This data could support the creation of a pandemic hazard profile.
  2. John, PIA reported that PIA's operating budget was impacted.
  3. Jose, PECO reported that aside from financial and staffing impacts, PECO has experienced impacts to their customer service operations and has had to change their processes as a result of COVID-19.
- iii. What other plans or policies are already in place that analyze hazard risk to your infrastructure/systems? Are you able to provide copies of those plans to OEM?
  1. PIA is creating a Climate Adaptation Plan for the airport, updating their Master Plan which will incorporate climate projections for 2035-2040, and also conducts a hazard vulnerability assessment which is required. Some plans contain sensitive information and cannot be shared.

2. OTIS mentioned that Capital Improvement Plans should be viewed through a hazard lens.
3. PWD conducted a 2020 Risk and Resilience Assessment. They also have an Emergency Response Plan.
4. PCPC reported that transportation plans address air quality and pollution and encourage a multi-modal system.

#### **4. Next Steps & Action Items**

- a. Please help us spread the word about the Hazard Mitigation Plan (HMP) update with your colleagues and make recommendations for additional participants that should be added to this group.
- b. Our next workgroup meeting will take place this Summer and will be focused on identifying mitigation projects to include in the plan. One-on-one outreach may be needed before then to collect needed data for the Risk and Vulnerability Assessment.
- c. Stay updated on progress and next steps via our monthly newsletter. Everyone in this group has been added to the distribution list.

Meeting ended at 1:59pm.

#### **Resources Referenced:**

[Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020

[Guide to Expanding Mitigation: Transportation](#), FEMA, 2020

[Guide to Expanding Mitigation: Electric Power](#), FEMA, 2020

[Guide to Expanding Mitigation: Communications Systems](#), FEMA, 2021

[FEMA's Community Lifelines](#)

[Hazard Mitigation Assistance Mitigation Action Portfolio](#), FEMA

## Infrastructure Workgroup Meeting #1

Date: April 22 from 1pm-2pm  
Location: Microsoft Teams, Virtual



| Name                  | Title  | Organization                       | Email  |
|-----------------------|--|------------------------------------|--|
| Emma Giardina         | Hazard Planning Coordinator                    | Philadelphia OEM                   | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>                             |
| Carolyn Caton         | Infrastructure Program Manager                 | Philadelphia OEM                   | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>                             |
| Ryan Ford             | Homeland Security Program Manager              | Philadelphia OEM                   | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>                                     |
| John Glass            | Airport Operations Superintendent              | Philadelphia International Airport | <a href="mailto:John.Glass@phl.org">John.Glass@phl.org</a>                                       |
| Elena Fisher          | Capital Development Group                      | Philadelphia International Airport | <a href="mailto:Elena.Fisher@phl.org">Elena.Fisher@phl.org</a>                                   |
| Raymond Scheinfeld    | Capital Development Group                      | Philadelphia International Airport | <a href="mailto:Raymond.scheinfeld@phl.org">Raymond.scheinfeld@phl.org</a>                       |
| Liz Lankenau          | Director, Infrastructure Program Coordination  | OTIS                               | <a href="mailto:Elizabeth.Lankenau@phila.gov">Elizabeth.Lankenau@phila.gov</a>                   |
| Jose Aguirre          | External Affairs Manager                       | PECO                               | <a href="mailto:Jose.Aguirre@exeloncorp.com">Jose.Aguirre@exeloncorp.com</a>                     |
| Morgan Fletcher       | Business Continuity Planning Specialist        | PGW                                | <a href="mailto:Morgan.Fletcher@pgworks.com">Morgan.Fletcher@pgworks.com</a>                     |
| Mark Lee              | Manager, Corporate Preparedness                | PGW                                | <a href="mailto:Mar.Lee@pgworks.com">Mar.Lee@pgworks.com</a>                                     |
| Stephanie Craighead   | Director of Planning, Preservation, and Policy | PPR                                | <a href="mailto:Stephanie.Craighead@phila.gov">Stephanie.Craighead@phila.gov</a>                 |
| Nicole Charlton       | Emergency Manager                              | PWD                                | <a href="mailto:Nicola.Charlton@phila.ov">Nicola.Charlton@phila.ov</a>                           |
| Aleta Evans           |  | SEPTA                              | <a href="mailto:aevans@septa.org">aevans@septa.org</a>   |
| Steve Lorenz          | Chief Highway Engineer                         | Streets Department                 | <a href="mailto:Stephen.Lorenz@phila.gov">Stephen.Lorenz@phila.gov</a>                           |
| Thomas Stammerjohaann | Distribution Metering Manager                  | Vicinity Energy                    | <a href="mailto:Thomas.Stamerjohann@vicinityenergy.us">Thomas.Stamerjohann@vicinityenergy.us</a> |
| David Kanthor         |  | OCOC                               | <a href="mailto:David.Kanthor@phila.gov">David.Kanthor@phila.gov</a>                             |
| Joshua Bell           |  | PPR                                | <a href="mailto:Joshua.Bell@phila.gov">Joshua.Bell@phila.gov</a>                                 |
| Kristen Snuck         |  | PWD                                | <a href="mailto:Kristen.Snuck@phila.gov">Kristen.Snuck@phila.gov</a>                             |
| Brian McDonough       | Regional Emergency Mangaer                     | Amtrak                             |  |
| Mike Giardina         | Regional Integration Center Program Manager    | Philadelphia OEM                   | <a href="mailto:Michael.Giardina@phila.gov">Michael.Giardina@phila.gov</a>                       |
|                       |  |                                    |  |

## Access and Functional Needs (AFN) Workgroup Meeting



**Date/Time:** Thursday, June 24<sup>th</sup> from 10AM-11AM  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                     | <ul style="list-style-type: none"> <li>• Welcome &amp; Introductions</li> <li>• Review Goals/Objectives of the AFN Workgroup</li> </ul>   | 10 minutes     |
| <input type="checkbox"/> | <b>Overview of HMP and Planning Process Timeline</b> | <ul style="list-style-type: none"> <li>• See PowerPoint Slides</li> </ul>   | 20 minutes     |
| <input type="checkbox"/> | <b>Discussion Questions</b>                          | <ul style="list-style-type: none"> <li>• What hazards keep you up at night?</li> <li>• What are best practices and recommendations for implementing a planning process that is accessible and inclusive of those with disabilities and other access and functional needs?</li> <li>• Is there anyone else that should be involved in this conversation? Are there other organizations or agencies that we should engage?</li> </ul> | 25 minutes     |
| <input type="checkbox"/> | <b>Next Steps</b>                                    |   | 5 minutes      |

# Philadelphia's All-Hazard Mitigation Plan

Access and Functional Needs Workgroup Meeting #1

June 24, 2021

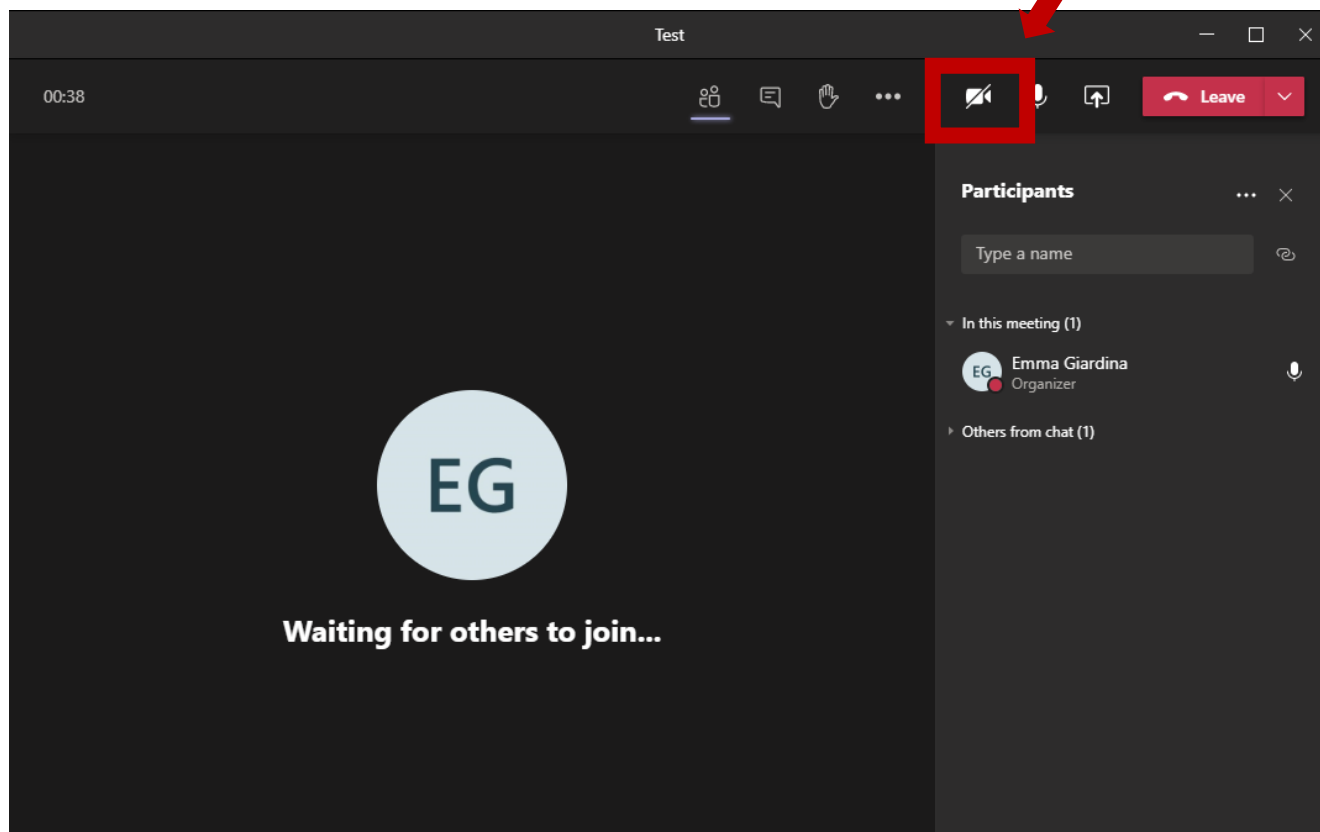
1. Welcome & Introductions
2. Background on Hazard Mitigation Plan
3. Role of this Workgroup
4. Group Discussion





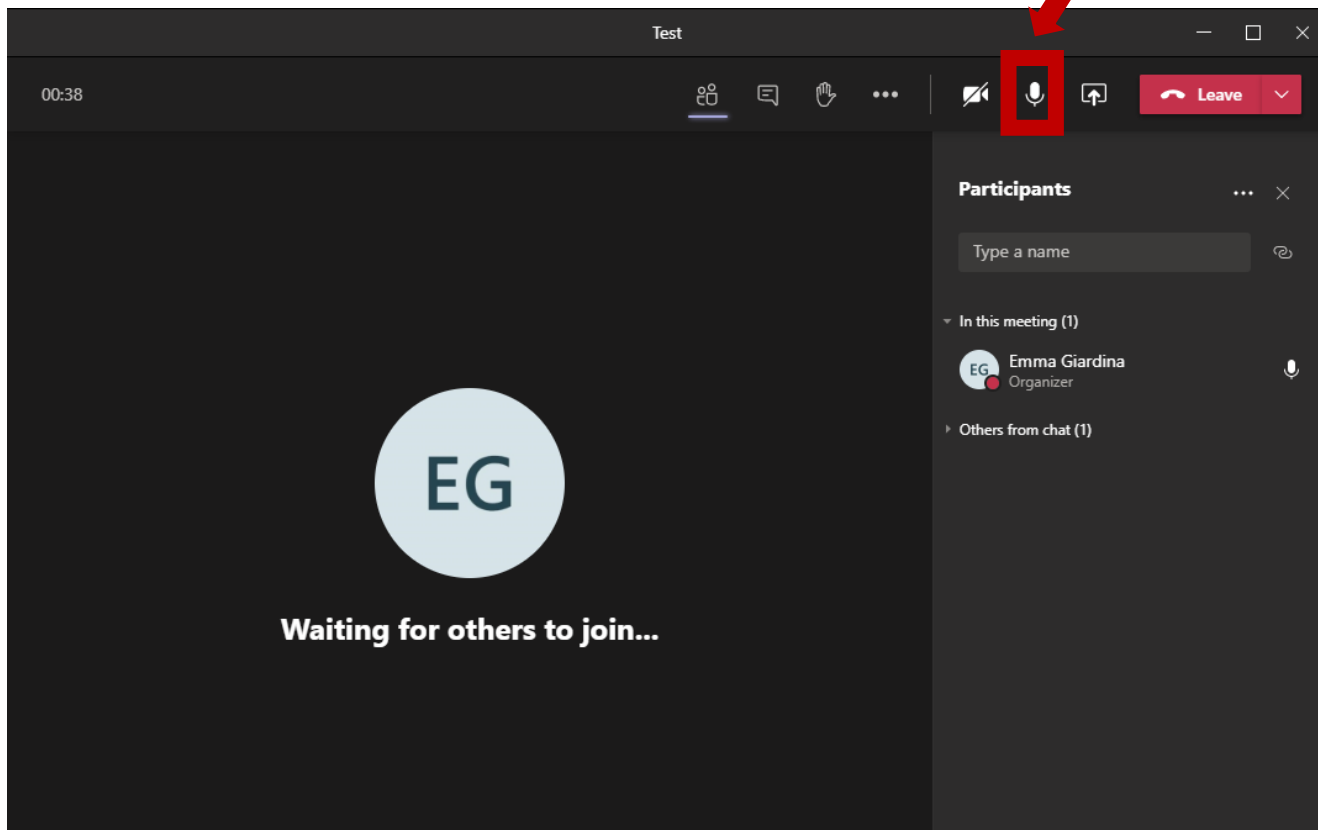
# Microsoft Teams

Video On/Off



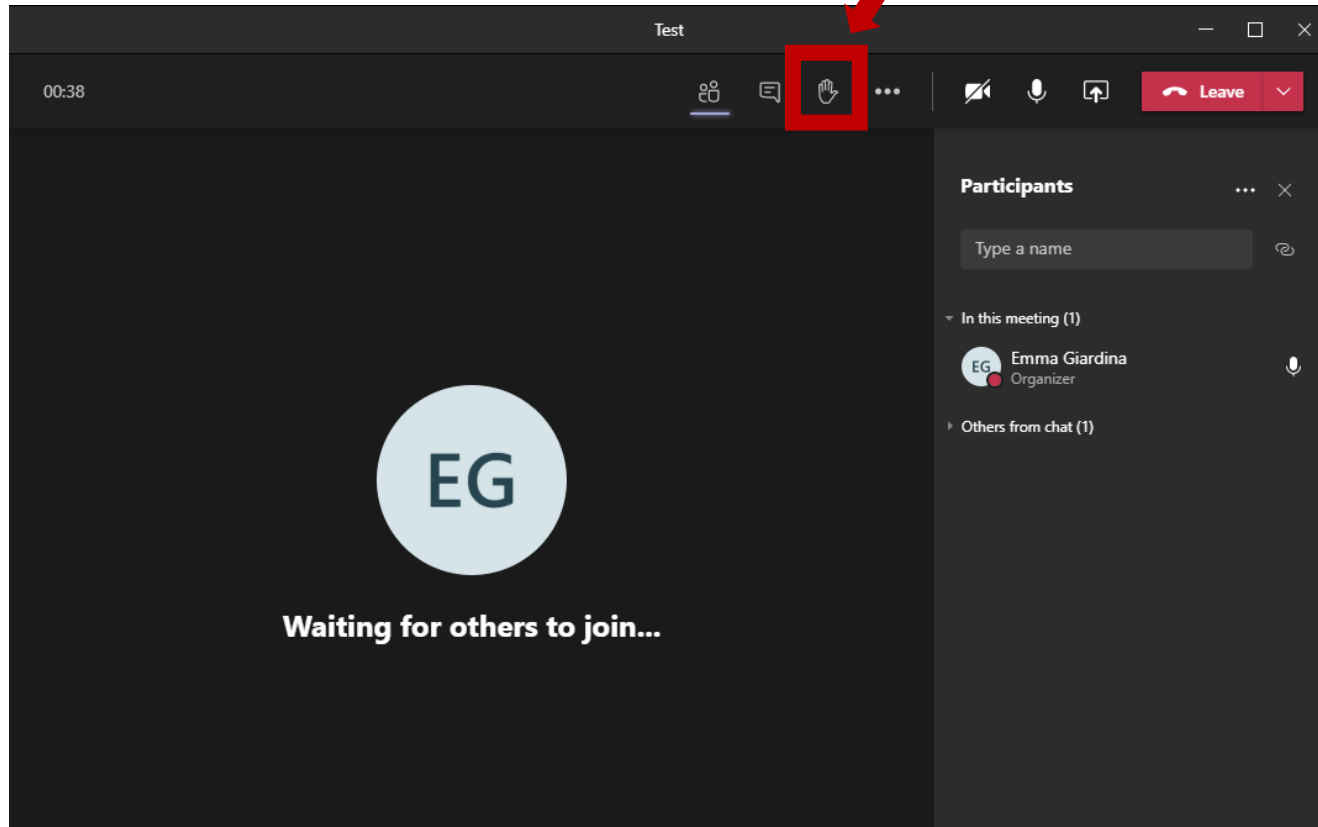
# Microsoft Teams

Microphone On/Off



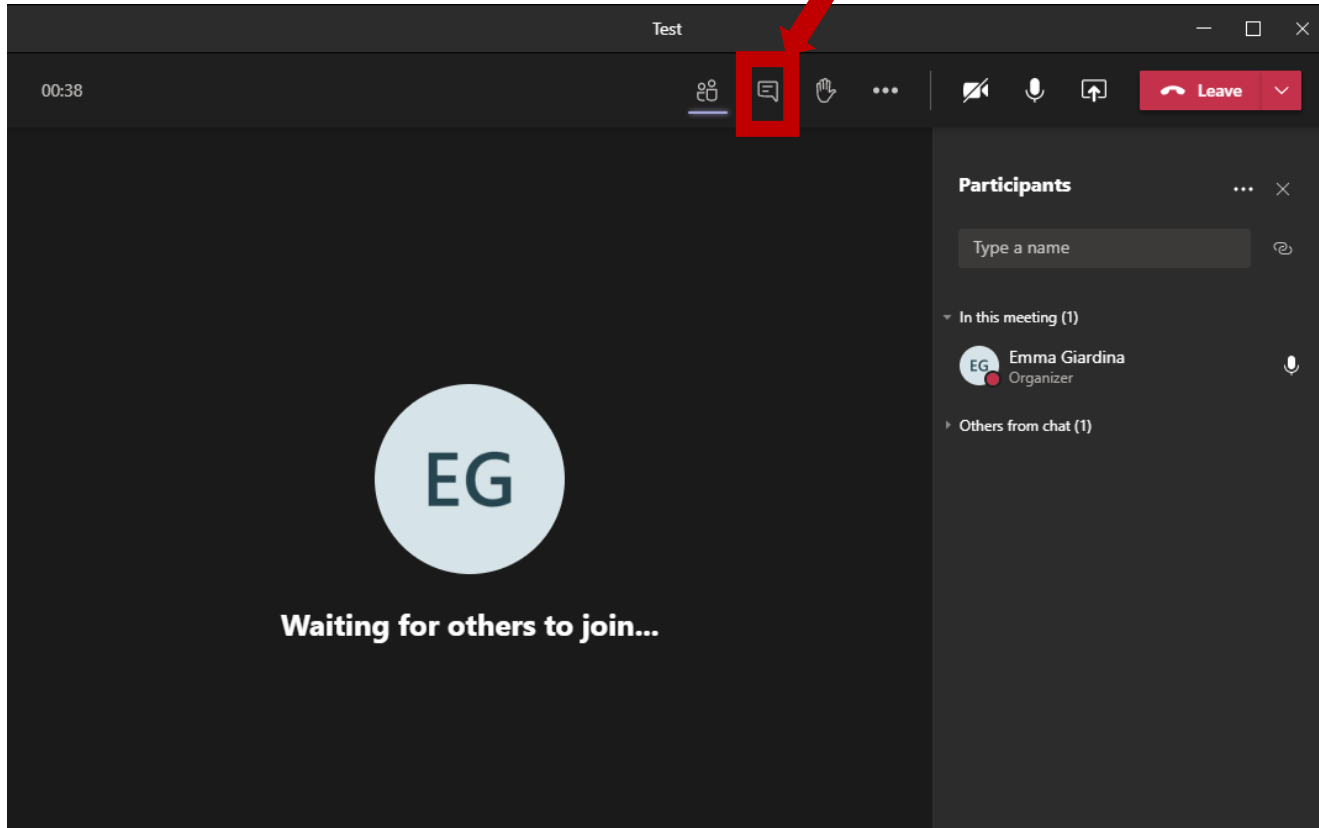
# Microsoft Teams

Raise Hand Feature

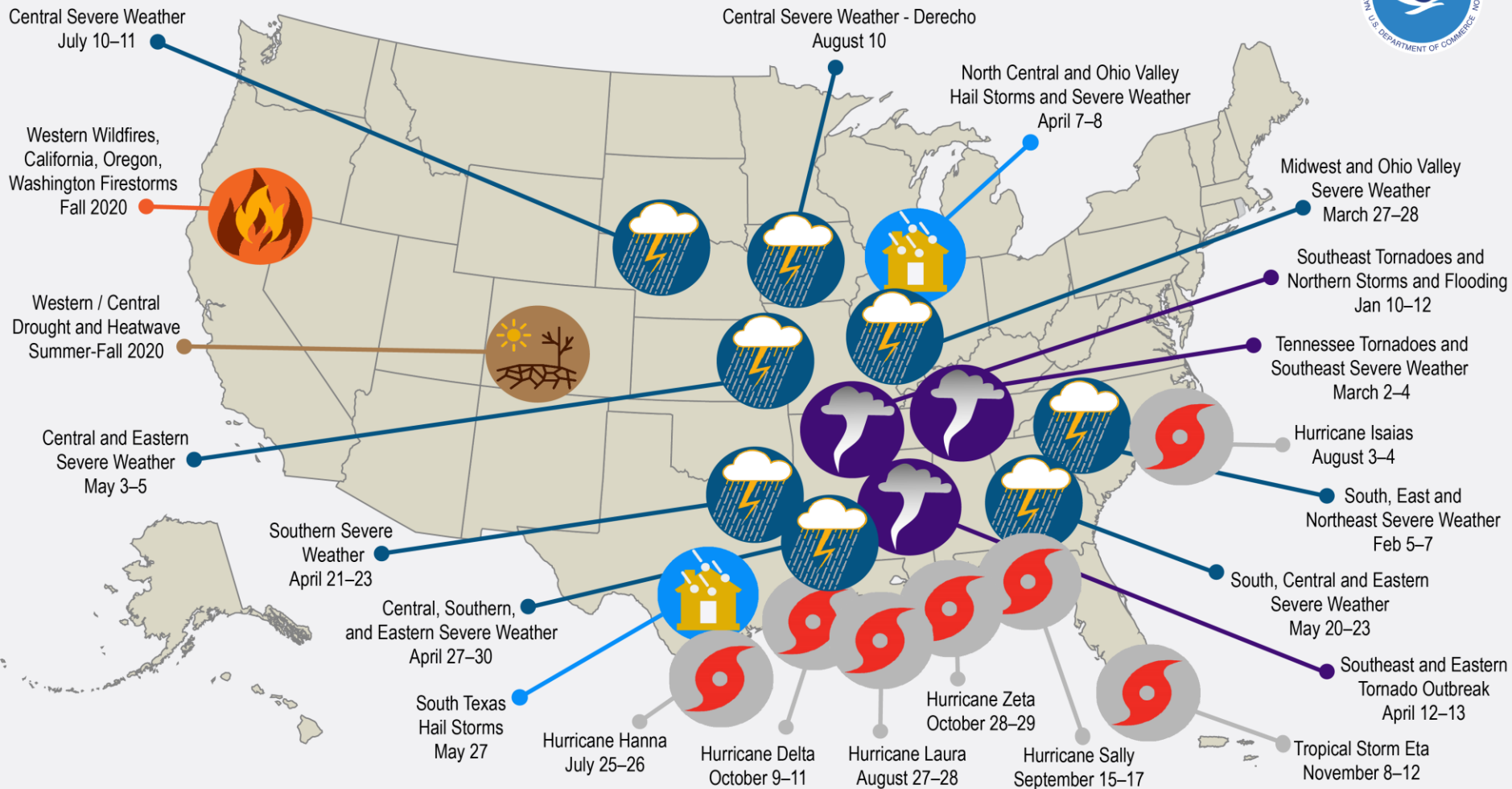


# Microsoft Teams

Chat Box Window



# U.S. 2020 Billion-Dollar Weather and Climate Disasters



*This map denotes the approximate location for each of the 22 separate billion-dollar weather and climate disasters that impacted the United States during 2020.*



Data gathered from US Department of Commerce and NOAA



**NOAA** NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

What is

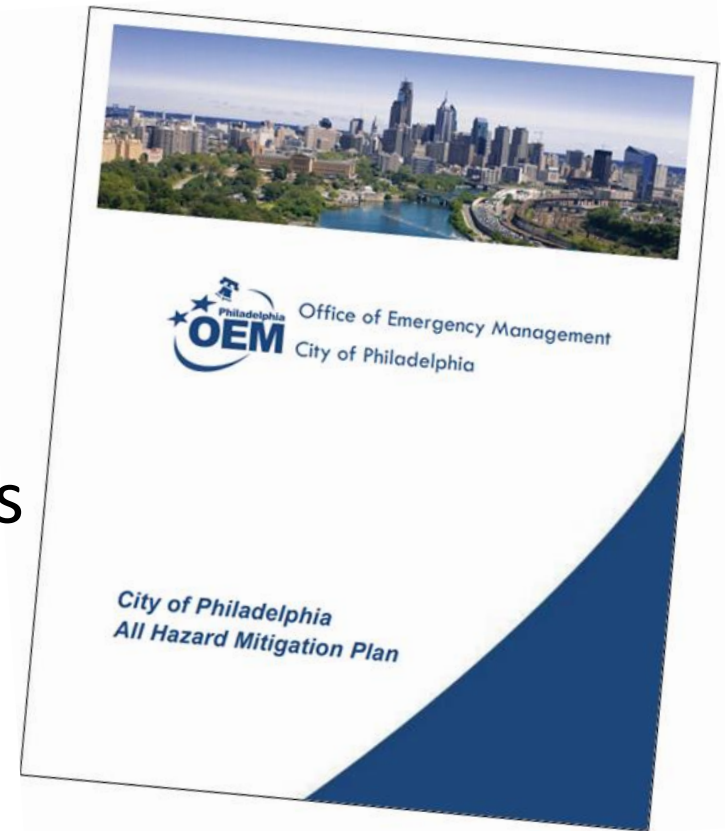
# Hazard Mitigation?

Reducing or eliminating risk of impact before  
disaster strikes



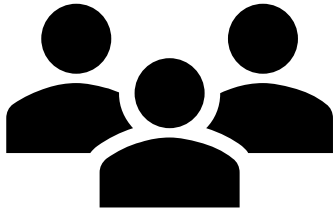
# What is a Hazard Mitigation Plan?

- (1) Identifies which hazards Philadelphia is most at risk for;  
and
- (2) Identifies the projects, plans and policies the City can implement to reduce our risk.

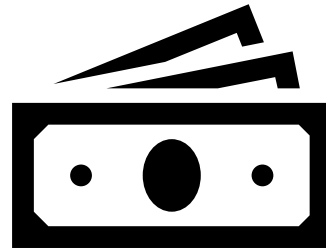


**Required Update: May 2022**

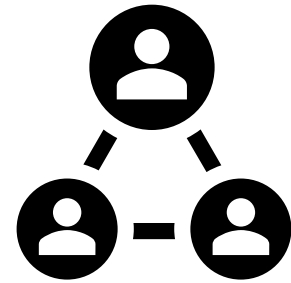
# Why Hazard Mitigation Planning?



**Saves lives**



**Saves money &  
establishes  
funding priorities**



**Builds partnerships  
& facilitates  
conversations**



# Hazards



Active Shooter



Bridge and Dam Failure



Hazardous Materials Train Derailment



Improvised Explosive Devices



Urban Conflagration



Drought



Earthquake



Extreme Temperatures



Flooding



Hurricanes & Tropical Storms



Windstorms & Tornadoes



Winter Storms







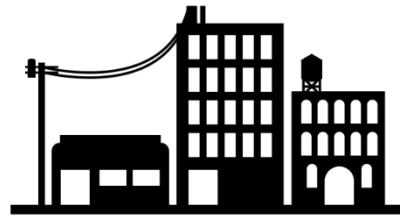
Picture | Philadelphia Streets Department

# Mitigation Projects

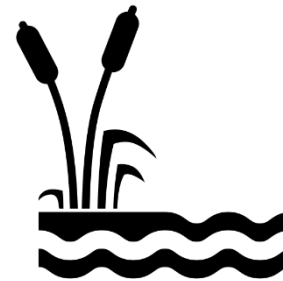
Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound



**Local Plans & Regulations**



**Structure & Infrastructure Projects**



**Natural Systems Protection**



**Education & Awareness Programs**

# Stakeholder Engagement



**Public**



**Businesses**



**City Agencies**



**Private Sector Partners**



**State Agencies**

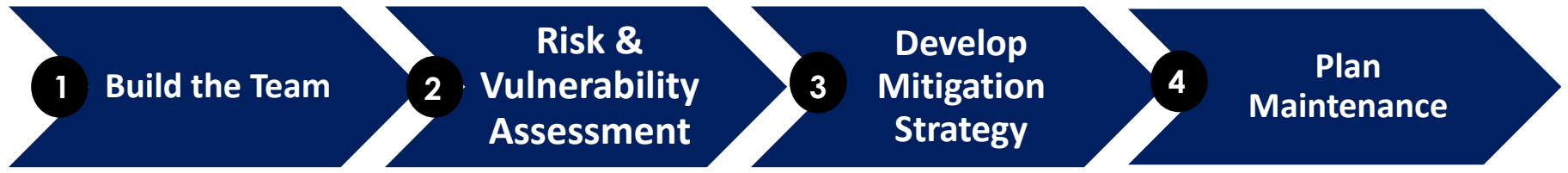


**Federal Agencies**



**YOU!**

# The Plan Update Process



**We are here**  
Date: 06/2021

Approval NLT: May 25, 2022



**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to outline the core steps in the process.

# Questions?



# AFN and Disasters

- **16.7%** of the population of Philadelphia identifies as having a disability. (**43.2%** of the population aged 65+)
- **23.2%** of the population 5+ speak a language other than English (**10.6%** speak English "less than very well")
- Individuals with disabilities or other access or functional needs disproportionately experience negative impacts from disasters, including an increased risk of death.
- Individuals with disabilities or other access or functional needs may take **2 to 4 times longer** to recover from disasters.



# AFN Workgroup

**Goal:** Integrate the needs of individuals with disabilities and other access and functional needs into the plan through an inclusive planning process.



*What would you add or change to this goal?*

# Group Discussion

**What hazards keep you up at night and why?**

**What are best practices and recommendations for implementing an accessible and inclusive planning process?**

**Is there anyone else that should be involved in this conversation? Are there other organizations or agencies that we should engage?**

# What's Next?

**Summer '21:** Risk & Vulnerability Assessment

**Fall '21:** Mitigation Strategy

**Winter '21- '22:** Plan Review





# What keeps you up at night?



Whether it be rising temperatures, flooding or the pandemic, we want to know what hazards make you worry. Your responses will help inform the update of the City's Hazard Mitigation Plan.★

# Resources

- [Guide to Expanding Mitigation: Making the Connection to the Whole Community](#), FEMA, 2020
- [Guide to Expanding Mitigation: Making the Connection to Equity](#), FEMA, 2020
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020



# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# City of Philadelphia Hazard Mitigation Plan



## Access and Functional Needs Workgroup

**Date:** June 24, 2021 from 10am-11am

**Location:** Microsoft Teams

**Attendees:** Emma Giardina (OEM), Sarah Bailey (OEM), Liam Dougherty (PDPH), Adrienne Ewing, Ceena Jenkins, Cecelia Thompson, David Natale (OEM), Doug Trahey, Shane Janick, Rodney Whitmore, Will Del Toro Vargas

### Notes:

#### 1. Welcome and Background Information

- a. Emma Giardina, OEM led introductions among the group then provided background on the Hazard Mitigation Planning Process including a review of the timeline and the purpose of the plan.
  - i. The [Hazard Mitigation Plan](#) outlines the natural and human-caused hazards and threats that pose the most risk to Philadelphia and identifies the policies, plans and projects the City and stakeholders can implement to reduce risk.
  - ii. The Hazard Mitigation Plan expires in May 2022 and must be submitted to the Pennsylvania Emergency Management Agency (PEMA) by March 2022.
  - iii. The plan is public facing and available on our website, [www.phila.gov/ready](http://www.phila.gov/ready)
  - iv. Hazard Mitigation saves lives, property, and money. The plan is an opportunity to showcase what the City is already doing to mitigate risk, and what the City would like to do if we have the buy-in and funding needed. The goal is a more resilient Philadelphia.
- b. OEM will host larger workshops with all stakeholders, smaller workgroup meetings and will also conduct individual outreach as needed.

#### 2. Review of Workgroup Goals and Objectives

- a. Research shows that individuals with disabilities or other access or functional needs disproportionately experience negative impacts from disasters, including an increased risk of death.
  - i. 16.7% of Philadelphia's population identifies as having a disability (43.2% of the population is aged 65+)
  - ii. 23.2% of the population 5+ speak a language other than English (10.6% speak English "less than very well")
  - iii. Individuals with disabilities or other access or functional needs may take 2 to 4 times longer to recover from disasters
- b. **Goal:** Integrate the needs of individuals with disabilities and other access and functional needs, **their families and caregivers, and the service providers they rely on**, into the plan through an inclusive planning process.
  - i. The group recommended we include the needs of individuals families, caregivers, and the service providers that they rely on in the planning process. This was added to the group's goal.
  - ii. Identify possible resources to address the gaps

#### 3. Group Discussion

- a. Emma, OEM posed the following discussion questions to the group:
  - i. What hazards keep you up at night and why?
    1. Anything that involves evacuations, displacements e.g. Fires, floods

2. The socio-economic barrier of being unable to plan for emergencies through procurement of recommended supplies and equipment exacerbates the effect of an emergency.
  3. Emergencies that result in power outages impact those with assisted devices that are reliant on power
- ii. What are best practices and recommendations for implementing an accessible and inclusive planning process?
    1. Reach out to other city's and counties to see what they are doing
    2. HHS empower Program Platform: Tool that "provides federal data, mapping and artificial intelligence tools, as well as training and resources, to help communities protect the health of at-risk Medicare beneficiaries and individuals who live independently and rely on electricity-dependent assistance equipment or health care services." <https://empowerprogram.hhs.gov/>
  - iii. Is there anyone else that should be involved in this conversation? Are there other organizations or agencies that we should engage?
    1. Private sector partners, those that support individuals with disabilities and access and functional needs
    2. Dialysis Centers
    3. The Mayor's Commission on People with Disabilities – a subgroup on disaster preparedness and response may be formed soon
    4. Mayor's Office of People with Disabilities
    5. Office of Development Programs (ODP), Department of Human Services

#### 4. Next Steps and Action Items

- a. August/September: The update of the Mitigation Strategy will begin
- b. OEM will follow up individually with agencies, organizations and representatives on this call as needed to gather more information and data
- c. The next workgroup meeting date is TBD. A date and more details will be distributed via email.

Meeting ended at 10:55am.

#### Resources Referenced

[HMP Public Survey, Online – English](#)\*

[HMP Public Survey, Online -Spanish](#)\*

[Guide to Expanding Mitigation: Making the Connection to the Whole Community](#), FEMA, 2020

[Guide to Expanding Mitigation: Making the Connection to Equity](#), FEMA, 2020

[Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), FEMA, 2020

\*Please Note: All survey results are anonymous. The survey is available in additional languages by calling 311.



# Individuals with Disabilities & Access and Functional Needs



## Workgroup Meeting #1

Date: June 24, 2021

Location: Virtual, Microsoft Teams

| Name                 | Title   | Organization                                   | Email  |
|----------------------|---|--|--|
| Emma Giardina        | Hazard Planning Coordinator                     | Philadelphia OEM                               | <a href="mailto:Emma.Giardina@phila.gov">Emma.Giardina@phila.gov</a>                           |
| Sarah Bailey         | Mass Care Planning Coordinator                  | Philadelphia OEM                               | <a href="mailto:Sarah.Bailey@phila.gov">Sarah.Bailey@phila.gov</a>                             |
| David Natale         | Health and Human Services Program Manager       | Philadelphia OEM                               | <a href="mailto:David.Natale@phila.gov">David.Natale@phila.gov</a>                             |
| Liam Doughty         | AFN Coordinator                                 | Philadelphia Department of Public Health       | <a href="mailto:Liam.Doughert@phila.gov">Liam.Doughert@phila.gov</a>                           |
| Adrienne Ewing       | ADA Coordinator                                 | Office of Diversity, Equity, and Inclusion     | <a href="mailto:Adrienne.Ewing@phila.gov">Adrienne.Ewing@phila.gov</a>                         |
| Cecelia Thompson     | Commissioner                                    | Mayor's Commission on People with Disabilities | <a href="mailto:CeceliaThompson1@gmail.com">CeceliaThompson1@gmail.com</a>                     |
| Doug Trahey          | Emergency Preparedness and Response Coordinator | PA Department of Human Services                | <a href="mailto:dtrahey@pa.gov">dtrahey@pa.gov</a>   |
| Shane Janick         |   | ARC Philadelphia                               | <a href="mailto:SJanick@arcphiladelphia.org">SJanick@arcphiladelphia.org</a>                   |
| Rodney Whitmore      | Independent Living Specialist                   | Liberty Resources, Inc                         | <a href="mailto:Rodney.Whitmore@libertyresources.org">Rodney.Whitmore@libertyresources.org</a> |
| Will Del Toro Vargas |   | Philadelphia Resident & Transition Consults    | <a href="mailto:will@transitionconsults.com">will@transitionconsults.com</a>                   |
| Kyrillos Girgis      | Community Disaster Planning VISTA Coordinator   | Philadelphia OEM                               | <a href="mailto:Kyrillos.Girgis@phila.gov">Kyrillos.Girgis@phila.gov</a>                       |
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**Mitigation Grants Workshop Planning Meeting**



**Date/Time:** March 12, 2021, 1:30pm-2:30pm  
**Location:** Microsoft Teams

| <b>Agenda Item</b>       |   | <b>Notes/Actions</b> | <b>Time Allocated</b> |
|--------------------------|---|----------------------|-----------------------|
| <input type="checkbox"/> | <b>Welcome and Updates</b>                          |                      |                       |
| <input type="checkbox"/> | <b>Review Lessons Learned from 2019 Grant Cycle</b> |                      |                       |
| <input type="checkbox"/> | <b>Next Steps and Action Items</b>                  |                      |                       |

## Grants Workgroup Notes



**March 12, 2021: 1:30pm-2:30pm**

**Present:** Ashley Del Bianco (Grants), Brandon Lapsley (OEM), Emma Giardina (OEM), Josh Lippert (L&I), John Haak (PCPC), Saleem Chapman (OOS), Kristen Snuck (PWD)

### Notes:

- Review of lessons learned from the last BRIC/FMA grant cycle including:
  - Timeline
  - Outreach
  - Project Selection & Prioritization Process
  - Leadership buy-in
  - Determining capacity of organizations to take on grant management
- Other potential mitigation funding/partnership opportunities
  - Silverjackets CPT funding (Mapping & Communications)
  - Community Conservation Partnership Program (C2P2) Funding
  - Redevelopment Assistance Capital Program (RACP)
  - CBDG-DR funding
  - Army Corps can fund some small projects
  - PA DEP Coastal Zone Projects
- **Action Items/Next Steps:**
  - Check-in with PEMA and determine dates they are available to present high-level overview of BRIC and FMA.
  - Work on invitation list with a focus on identifying the right agencies, and the right people within each agencies who should attend.
  - Update Project Selection and Prioritization Process to possibly include:
    - Mandatory check-in meetings to review potential project ideas with an agency
    - Method for engaging leadership in the project prioritization/selection process
    - Criteria that proves capacity of organization to take on grant management
  - Develop agenda for the workshop to include a stakeholder brainstorming session.



## Mitigation Grants Workgroup Meeting



**Date/Time:** Wednesday, March 31, 2021 at 2PM  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions  | Time Allocated |
|--------------------------|--|--|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                               | <ul style="list-style-type: none"> <li>• Introduce new members</li> <li>• Review Goals/Objectives of the Mitigation Grants Working Group (see below)</li> <li>• Brief background on BRIC, FMA and the Hazard Mitigation Plan</li> </ul>                                      | 10 minutes     |
| <input type="checkbox"/> | <b>Spring BRIC/FMA Workshop</b>                                | <ul style="list-style-type: none"> <li>• Update on dates - PEMA</li> <li>• Review and provide feedback on draft agenda</li> <li>• Review and provide feedback on list of participants</li> <li>• Open Discussion Portion – Questions? Structure?</li> </ul>                  | 20 minutes     |
| <input type="checkbox"/> | <b>BRIC/FMA Updated Process for Endorsement &amp; Timeline</b> | <ul style="list-style-type: none"> <li>• Review and provide feedback on updated process for endorsement and the timeline of the process</li> </ul>   | 15 minutes     |
| <input type="checkbox"/> | <b>Open Discussion &amp; Next Steps</b>                        | <ul style="list-style-type: none"> <li>• Time for open discussion on challenges, other mitigation funding opportunities, other contacts we should involve in this group, or other initiatives we can better align with</li> <li>• Determine and assign next steps</li> </ul> | 15 minutes     |

**Previous Goals & Objectives of this group for review:**

1. **Short-term:** Identify mitigation projects that would be a good fit for the Pre-Disaster Mitigation grant (PDM) and Flood Mitigation Assistance (FMA), including an Eastwick project.
2. **Short-term:** Identify the right city staff to train on the grant application process in time to submit for this year’s grant cycle and develop leadership buy-in
3. **Long-term:** Build capacity and a coordinated city approach to pursuing funding for mitigation/adaptation projects that make our city more resilient.
4. **Long-term:** Modeling other cities who have a “resilience budget” to fund projects.

# City of Philadelphia Hazard Mitigation Plan



## Mitigation Grants & Funding Workgroup Meeting

**Date:** March 31, 2021 from 1pm-2pm

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Josh Lippert (L&I), John Haak (PCPC), Sue Patterson (PWD), Kristen Snuck (PWD), Orlando Almonte (Office of the Mayor)

**Absent:** Ashley DelBianco (Mayor's Office of Grants), Carolyn Caton (OEM), Saleem Chapman (OOS), Brandon Lapsley (OEM)

### Notes:

#### 1. Welcome and Committee Business

- a. Emma Giardina, OEM began with introductions. Orlando Almonte, Mayor's Office of Policy was welcomed to the group.
- b. Background
  - i. The [Building Resilient Infrastructure and Communities \(BRIC\)](#) grant and [Flood Mitigation Assistance \(FMA\)](#) are two grant opportunities that could potentially fund mitigation projects in the City's Hazard Mitigation Plan (HMP). BRIC offered \$500 million nationwide during the last grant cycle and FMA offered \$200 million nationwide. More funding toward mitigation is anticipated at the state and federal level in the future.
  - ii. In the short-term, this workgroup can support the following:
    1. Identify shovel ready projects lined up for this year's BRIC/FMA grant cycle and the right partners that we need to engage in this process
    2. Help determine leadership mitigation priorities

#### 2. Goals and Objectives of the Workgroup

- a. Emma, OEM reviewed the goals and objectives of the group for new members:
  - i. **Short-term:** Identify mitigation projects that would be a good fit for the BRIC and FMA, including an Eastwick project (leadership priority)
  - ii. **Short-term:** Identify the right City staff to train on the grant application process in time to submit for this year's grant cycle and develop leadership buy-in
  - iii. **Long-term:** Build capacity and a coordinated City approach to pursuing funding for mitigation/adaptation projects that make our City more resilient
  - iv. **Long-term:** Modeling other cities who have a "resilience budget" to fund projects.
- b. The group had no recommendations for adding or modifying the above goals and objectives.

#### 3. Spring BRIC/FMA Workshop

- a. Emma Giardina, OEM is looking into dates that PEMA is available to present and will share these dates with the group once they are confirmed.
- b. Sue Patterson, PWD agreed to present on lessons learned and best practices from her experience submitting a BRIC and FMA application last year
- c. Emma Giardina, OEM requested that the group identify potential discussion questions for the BRIC/FMA workshop and potentially identify someone within this workgroup who could lead that conversation.
- d. Prior to the next meeting, the group should review the agenda, invitation list, and process for endorsement and provide feedback to Emma.

#### 4. Open Discussion

- a. Potential Projects
- b. Challenges

## 5. Next Steps & Action Items

- a. Confirm your availability on **May 19<sup>th</sup> or 20<sup>th</sup>** for a BRIC/FMA Workshop.
- b. Review and provide feedback to Emma via email on the [agenda](#) and [invitation list](#) before the next workgroup meeting if you have not done so already.
- c. Emma will look into whether or not we can get a training on FEMA's BCA tool prior to the Fall.
- d. Our next meeting is scheduled for **Wednesday, March 14** from **3pm-4pm**. Topics will include (1) identifying potential projects for this year AND (2) the process for City endorsement/project selection.

Meeting ended at 2:02pm.





## Mitigation Grants Workgroup Meeting



**Date/Time:** Wednesday, April 14, 2021 at 3PM  
**Location:** Microsoft Teams

| Agenda Item              |  | Notes/Actions   | Time Allocated |
|--------------------------|--|---|----------------|
| <input type="checkbox"/> | <b>Welcome and Introductions</b>                               | <ul style="list-style-type: none"><li>• Introductions</li></ul>   | 5 minutes      |
| <input type="checkbox"/> | <b>Spring BRIC/FMA Workshop</b>                                |   | 15 minutes     |
| <input type="checkbox"/> | <b>Potential Projects</b>                                      |   | 15 minutes     |
| <input type="checkbox"/> | <b>BRIC/FMA Updated Process for Endorsement &amp; Timeline</b> | <ul style="list-style-type: none"><li>• Review and provide feedback on updated process for endorsement and the timeline of the process</li></ul>  | 15 minutes     |
| <input type="checkbox"/> | <b>Open Discussion &amp; Next Steps</b>                        | <ul style="list-style-type: none"><li>• Time for open discussion on challenges, other mitigation funding opportunities, other contacts we should involve in this group, or other initiatives we can better align with</li><li>• Determine and assign next steps</li></ul> | 10 minutes     |

# City of Philadelphia Hazard Mitigation Plan



## Mitigation Grants & Funding Workgroup Meeting

**Date:** April 14, 2021 from 3PM-4PM

**Location:** Virtual, Microsoft Teams

**Attendees:** Emma Giardina (OEM), Carolyn Caton (OEM), Josh Lippert (L&I), John Haak (PCPC), Sue Patterson (PWD), Kristen Snuck (PWD)

**Absent:** Ashley DelBianco (Mayor's Office of Grants), Saleem Chapman (OOS), Brandon Lapsley (OEM), Orlando Almonte (Office of the Mayor)

### Notes:

#### 1. Welcome and Committee Business

- a. Emma Giardina, OEM began the meeting with introductions

#### 2. Goals and Objectives of the Workgroup

- a. Emma, OEM reviewed the goals and objectives of the group:
  - i. **Short-term:** Identify mitigation projects that would be a good fit for the BRIC and FMA, including an Eastwick project (leadership priority)
  - ii. **Short-term:** Identify the right City staff to train on the grant application process in time to submit for this year's grant cycle and develop leadership buy-in
  - iii. **Long-term:** Build capacity and a coordinated City approach to pursuing funding for mitigation/adaptation projects that make our City more resilient
  - iv. **Long-term:** Modeling other cities who have a "resilience budget" to fund projects.

#### 3. Spring BRIC/FMA Workshop

- a. Emma Giardina, OEM confirmed the date for the workshop as **May 19<sup>th</sup>** from **10am-1pm**. All Mitigation Grants Workgroup members have a hold on their calendar for this date/time.
- b. PEMA has agreed to present on the BRIC and FMA application process.
- c. Sue Patterson, PWD will present on lessons learned and best practices from the 2020 application process.
- d. The audience for the workshop will be city agencies.
- e. Based on feedback from the group, potential topics for breakout group discussions include:
  - i. How to best develop leadership buy-in for mitigation projects and priorities as a City
  - ii. Partnerships with community organizations, private sector partners, and non-profits
  - iii. Scoping Projects vs. Physical infrastructure projects
  - iv. Best practices and metrics required for Benefit-Cost Analysis (BCA) tool
  - v. Developing green infrastructure mitigation projects

#### 4. Potential Projects and key contacts

#### 5. Next Steps & Action Items

- a. OEM will distribute a formal invitation and agenda to partners shortly. Provide any additional recommendations for attendees (city) to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov).
- b. Save the date for **May 19<sup>th</sup>, 10am-1pm** for the workshop.
- c. The workgroup will reconvene as necessary leading up to the workshop.

Meeting ended at 2:55pm.



## Mitigation Grants and Funding Workgroup



**Date/Time:** June 8, 2021 from 3:30-4:30pm  
**Location:** Virtual, Microsoft Teams

| Agenda Item |   | Notes/Actions   | Time Allocated |
|-------------|---|---|----------------|
| ☐           | <b>Welcome</b><br><b>Review of Workgroup Goals &amp; Objectives</b><br><b>Miscellaneous Updates</b> | <ul style="list-style-type: none"> <li>• <a href="#">More funding available for BRIC!</a></li> </ul>  | 5 minutes      |
| ☐           | <b>Reflections on Grants Workshop</b>   | <ul style="list-style-type: none"> <li>• What big questions do you still have about BRIC and FMA after this workshop?</li> </ul>  | 10 minutes     |
| ☐           | <b>BRIC and FMA FY 2021 Next Steps</b>  | <ul style="list-style-type: none"> <li>• Review <a href="#">Application Process</a> as a group and provide recommendations for improvement.</li> </ul>  | 20 minutes     |
| ☐           | <b>Grants, Funding &amp; the Hazard Mitigation Plan</b>   | <ul style="list-style-type: none"> <li>• HMP Contractor Support                             <ul style="list-style-type: none"> <li>○ What are some ways the contractor can support our short- and long-term goals as a working group?</li> <li>○ What key questions do you have for them related to mitigation grants and funding?</li> </ul> </li> </ul> | 15 mins        |
| ☐           | <b>Next Steps and Action Items</b>  |   | 10 mins        |

# City of Philadelphia Hazard Mitigation Plan



## Mitigation Grants & Funding Workgroup Meeting

**Date:** June 8, 2021 from 3:30-4:30pm

**Location:** Virtual, Microsoft Teams

**Agencies Present:** Emma Giardina (OEM), Carolyn Caton (OEM), Josh Lippert (L&I), John Haak (PCPC), Sue Patterson (PWD), Kristen Snuck (PWD), Angie Dixon (OTIS), Ashley DelBianco (Mayor's Office of Grants), Orlando Almonte (Office of the Mayor)

**Absent:** Saleem Chapman (OOS)

### Notes:

#### 1. Welcome and Committee Business

- a. FEMA will provide \$1 billion towards the Building Resilient Infrastructure and Communities, or BRIC, program. See article [here](#).

#### 2. Reflections on the May Grants Workshop

- a. PWD has consolidated all criteria for BRIC and FMA into an excel document, which can be used to easily rank projects. Sue will share with the group when it has been finalized.
- b. PWD will be considering the following factors when prioritizing projects internally: the number of hazards the project addresses, whether or not the project reduces risk to the community, timeline, and impact on policy
- c. The following resources would be helpful for BRIC/FMA applicants:
  - i. A copy of the application from last year
  - ii. A guide with screenshots of FEMA GO steps
  - iii. Examples of applications for phased projects
  - iv. Checklist for application materials
- d. Questions that the group still has after the workshop:
  - i. How can we make sure the cost-match is still available by the time the grant is awarded? Agencies should be working this into their capital and budget planning, leadership and finance department should be looped in prior to the application submission.
  - ii. More details on the timeline for breaking ground on construction projects is needed. OEM will follow up on this with PEMA.

#### 3. BRIC and FMA FY 2021 Next Steps

- a. One-on-one meeting with City agencies before September 1 which will cover the following:
  - i. Review potential project ideas
  - ii. Identify potential barriers to applying to BRIC/FMA, help identify solutions
  - iii. Discuss application process
  - iv. Facilitate collaboration amongst agencies, draw connections
- b. The following are new updates to the FY 2021 [Application Process](#) (Draft)
  - i. One-on-one meeting with agencies to discuss potential projects.
  - ii. Agencies must submit brief executive summary for review by the Hazard Mitigation Plan Steering Committee to determine if project meets the criteria for inclusion in the Hazard Mitigation Plan. Projects will be prioritized using PEMA's standard process as outlined in the plan.
  - iii. Applicants will be required to submit a project checklist signed by their leadership.
- c. Feedback from the group:

- i. Group confirmed that they are okay with the HMP Steering Committee determining whether a project should be added to the Hazard Mitigation Plan.

**4. Grants, Funding & the Hazard Mitigation Plan Contractor**

- a. Some ways the HMP contractor may be able to support the goals of this group include:
  - i. Refine and clearly document the process for plan amendments, project selection and project prioritization in the plan
  - ii. Support creation of project checklists, guides, PowerPoint slides and other tools to support agencies as they apply for BRIC or FMA
  - iii. Potentially help support outreach to agencies and scheduling of information sessions with agencies if their timeline allows for it
  - iv. Incorporating key language into Hazard Mitigation Plan that can be used in grant applications

**5. Next Steps and Action Items**

- a. PWD will share their project criteria tool with the group when it is finalized
- b. OEM will continue to refine application process document and project checklist for distribution
- c. Begin scheduling one-on-one discussions with agencies to review potential projects
- d. Obtain feedback from Hazard Mitigation Plan Steering Committee on new process

DRAFT

1. PNY Smart Grid Stakeholder Updates
  - a. PIDC
    - i. BESS Kick off held (12/3) - Permitting underway
    - ii. Smart & Connected Community Plan – Contract/Q1 Schedule
    - iii. NSWC 20MW New Svc – 50% Engineering SOW Supplemented
    - iv. DTE – Extended Contract into Q3/2021 - New billing system
    - v. O&M Solicitation – Prospect ID & chats - Refine EOI/Q
    - vi. PEA sponsored NY tour-Accelerate Phila-Energy users/providersGE
  - b. ProtoGen
  - c. Ameresco
  - d. AEDG
  - e. IEMS
  - f. Penn State
  - g. PECO
  - h. Burns
2. Special Guest - Carolyn Caton. As the Infrastructure Program Manager for Philadelphia's Office of Emergency Management (OEM), Carolyn conducts emergency planning for critical infrastructure systems, disaster recovery, and hazard mitigation.

Next Meeting January 15<sup>th</sup>

***Wishing Everyone a Wonderful Holiday and Prosperous New Year.***



# Philadelphia's All-Hazard Mitigation Plan

Understanding hazard mitigation in Philadelphia

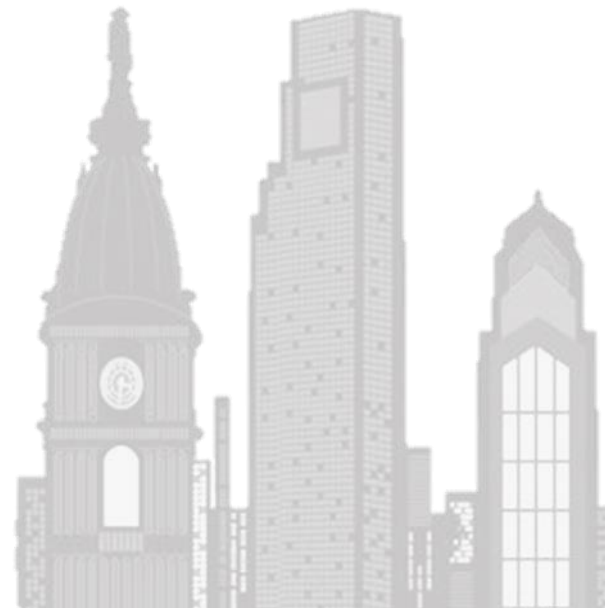
Philadelphia Navy Yard, 12.18.19





# Agenda

- Introduction to OEM
- The Hazard Mitigation Plan
- Hazard Profile
- Mitigation Strategy
- Moving Forward





# Office of Emergency Management

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# SEPA Task Force



# Top 5 costliest disasters

Between 1980-2019

|                                 |                        |
|---------------------------------|------------------------|
| <b>Hurricane Katrina – 2005</b> | <b>\$168.8 Billion</b> |
| <b>Hurricane Harvey – 2017</b>  | <b>\$130.0 Billion</b> |
| <b>Hurricane Maria – 2017</b>   | <b>\$93.6 Billion</b>  |
| <b>Hurricane Sandy – 2012</b>   | <b>\$73.5 Billion</b>  |
| <b>Hurricane Irma – 2017</b>    | <b>\$52.0 Billion</b>  |



Data gathered from US Department of Commerce and NOAA



**NOAA** NATIONAL CENTERS FOR  
ENVIRONMENTAL INFORMATION  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

# Hazard Mitigation

For every **\$1** spent on mitigation,  
on average **\$6** is saved.



## National Benefit-Cost Ratio (BCR) Per Peril

*\*BCR numbers in this study have been rounded*

### Overall Hazard Benefit-Cost Ratio

Beyond Code Requirements

**\$4:1**

Federally Funded

**\$6:1**



**Riverine Flood**

**\$5:1**

**\$7:1**



**Hurricane Surge**

**\$7:1**

Too few grants



**Wind**

**\$5:1**

**\$5:1**



**Earthquake**

**\$4:1**

**\$3:1**



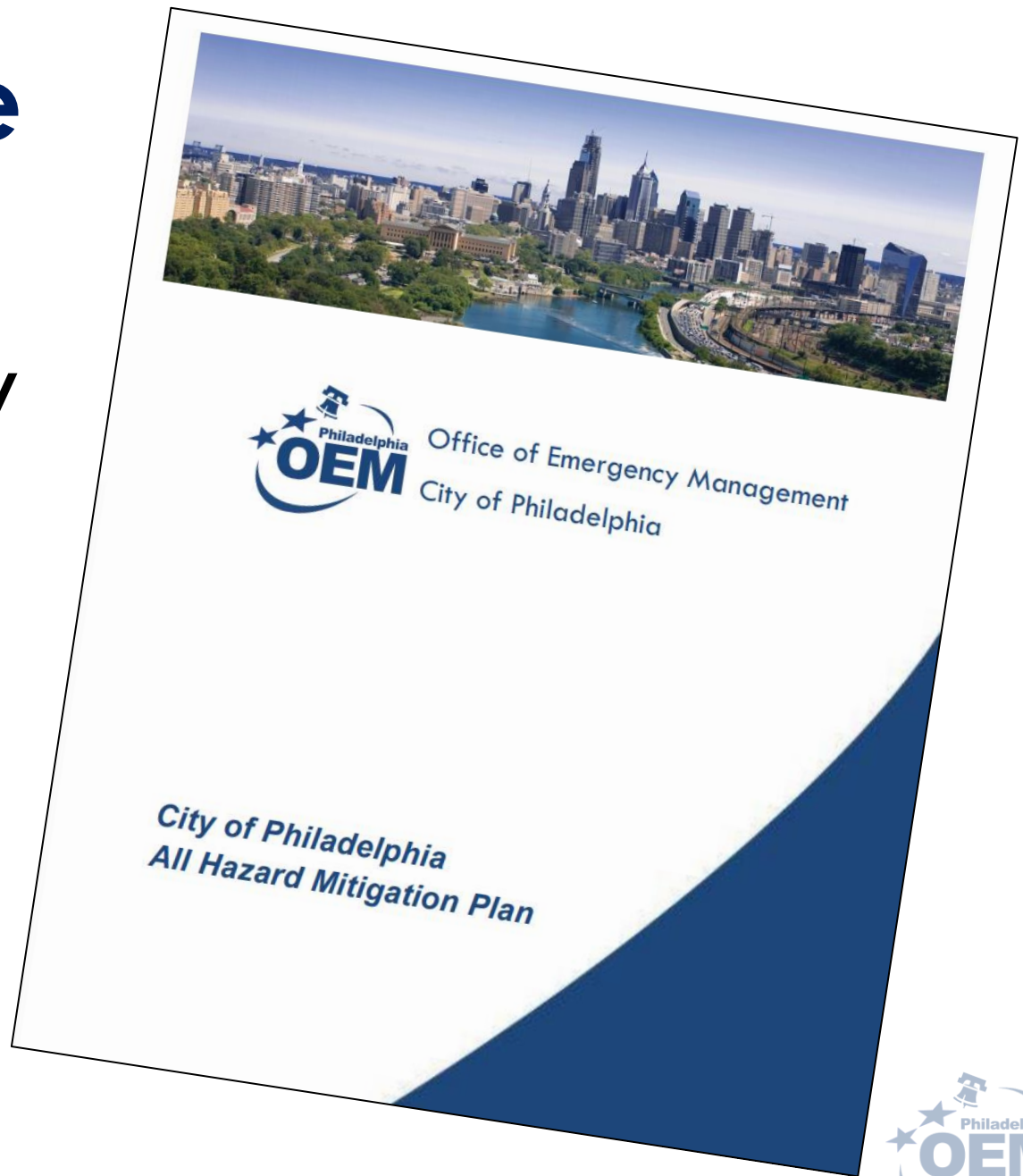
**Wildland-Urban Interface Fire**

**\$4:1**

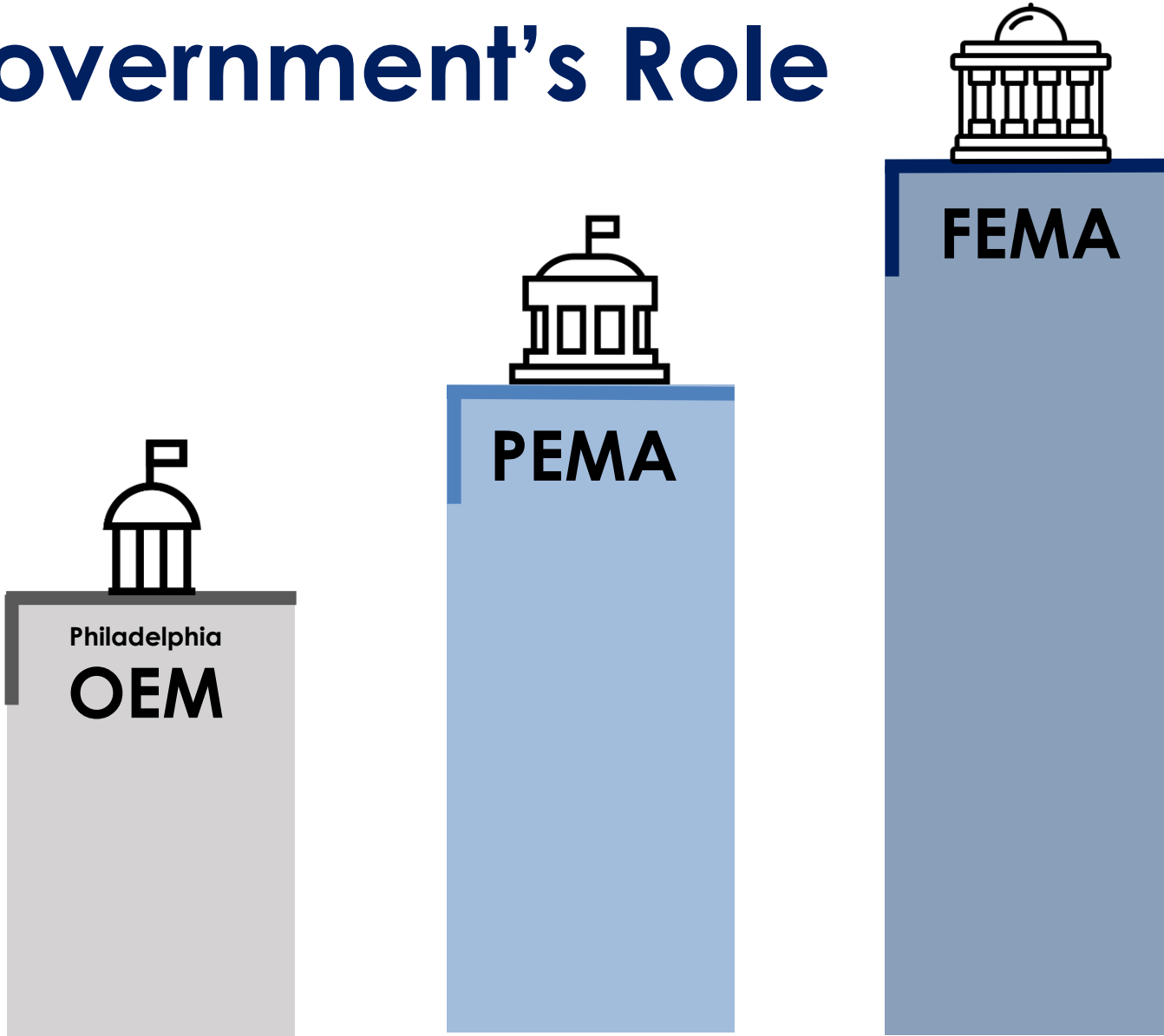
**\$3:1**

# Available Online

Updated every  
5 years



# Government's Role





# Hazard Mitigation Grants

An approved Hazard Mitigation Plan makes Philadelphia eligible for a variety of grants including:

- **Hazard Mitigation Grant Program (HMGP)**
- **Pre-Disaster Mitigation (PDM) Program**
- **Flood Mitigation Assistance (FMA) Program**

# Hazard Mitigation Planning

Process used to understand risks from hazards and develop long-term strategies to reduce their impact on people, property and the environment.

- **Community Profile**
- **Risk Assessment**
- **Mitigation Strategy**
- **Plan Implementation**

What keeps  
**YOU** up at night?



# Hazards

Improvised Explosive Device

Hurricane/Tropical Storm

Hazardous Train Derailment

Wind Storms/Tornadoes

Extreme Heat

Floods

Fire

Extreme Cold

Winter Storms

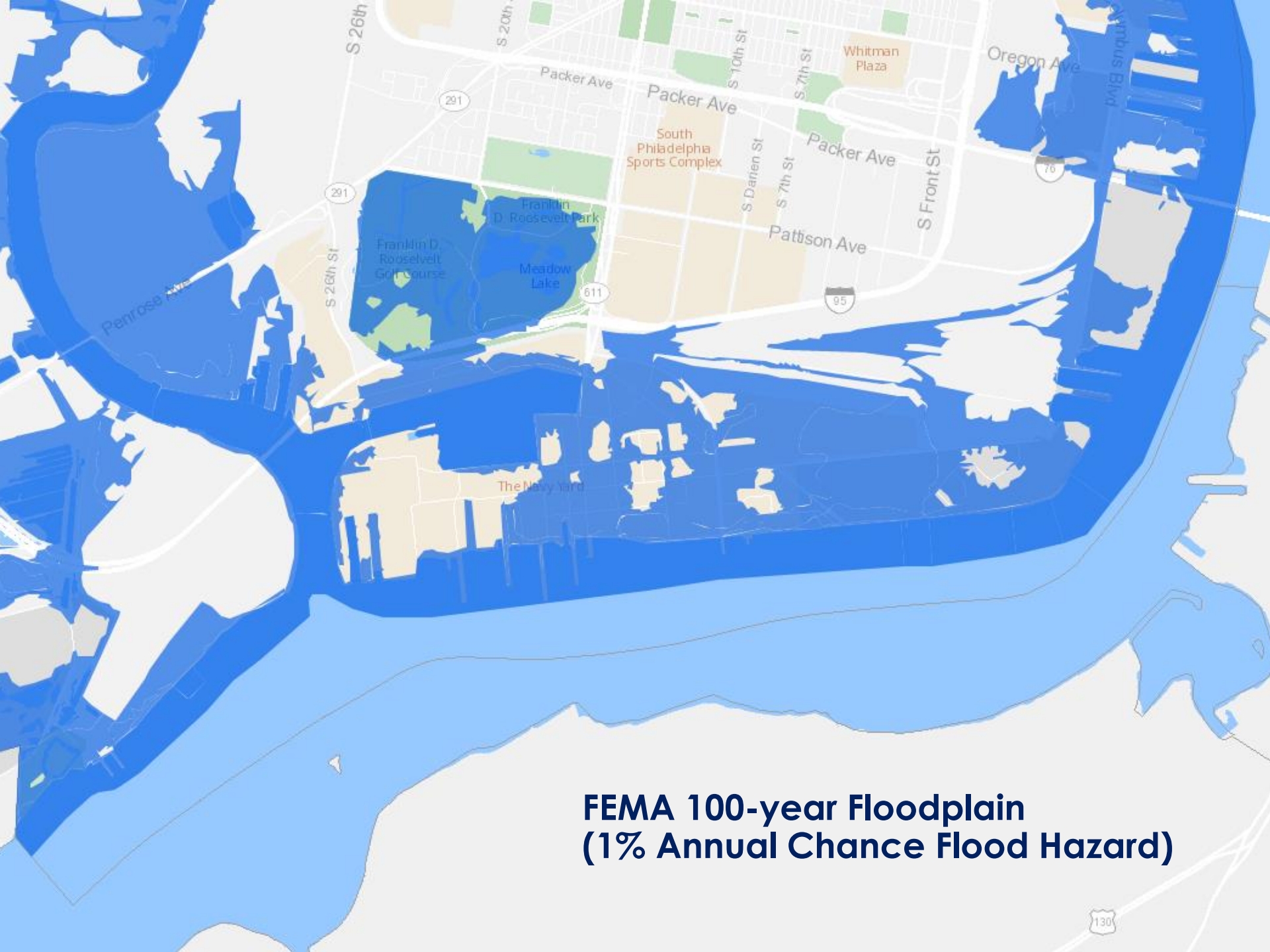
Earthquakes

Active Shooter

Infrastructure Failure

Drought





**FEMA 100-year Floodplain  
(1% Annual Chance Flood Hazard)**





# Mitigation Strategy

Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound

1. Sustain and enhance public safety, health, & security capabilities
2. Protect property
3. Protect the natural environment
4. Promote a sustainable economy
5. Sustain and strengthen all hazards preparedness
6. Protect cultural assets
7. Sustain and enhance communications and network security capabilities
8. Protect critical infrastructure

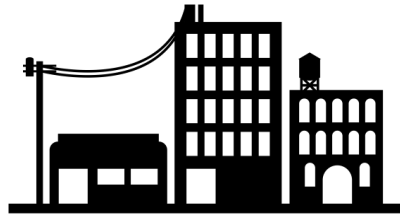


# Mitigation Strategy

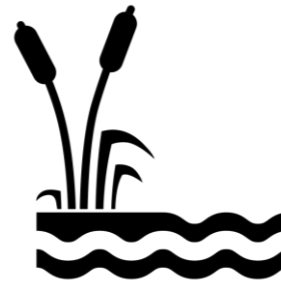
Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound



**Local Plans & Regulations**



**Structure & Infrastructure Projects**



**Natural Systems Protection**



**Education & Awareness Programs**



# Flood Risk Task Force

## Strategic Plan

### COMPONENTS + GOALS

#### PUBLIC INFORMATION

Create a variety of communication tools to promote education around flood hazards.

#### MAPPING + REGULATIONS

Develop higher standards and risk mapping for flood hazards.

#### FLOOD PREPAREDNESS

Prioritize the need to address a variety of flood concerns.

#### FLOOD DAMAGE REDUCTION

Enhance the City's resiliency to flooding through mitigation.

# Stakeholder Engagement



**Public**



**Businesses**



**City Agencies**



**Private Sector Partners**



**State Agencies**



**Federal Agencies**



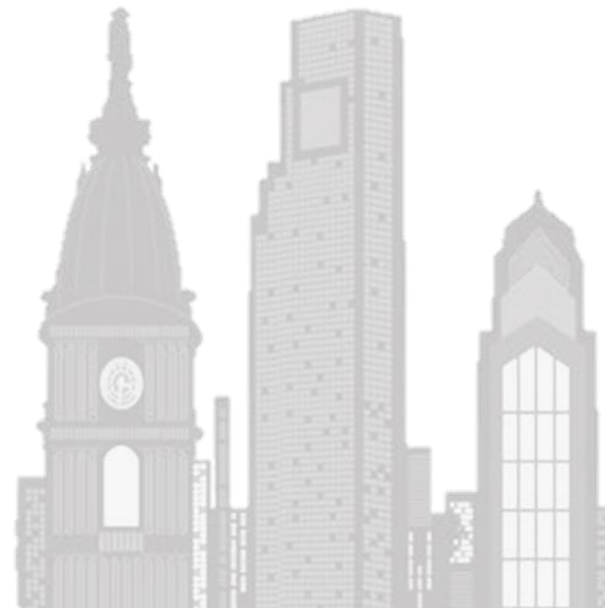
**YOU!**

# Moving Forward

Philadelphia's HMP is due for an update in 2022



**We want to hear from  
YOU**



**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

**Carolyn Caton**

Infrastructure Program Manager

[Carolyn.Caton@phila.gov](mailto:Carolyn.Caton@phila.gov)

**[www.phila.gov/READY](http://www.phila.gov/READY)**





# Philadelphia's All-Hazard Mitigation Plan

Equitable Engagement Collaborative 10/28/2020

1. Who is OEM?
2. Hazard Mitigation Plan & Engagement Strategy
3. Feedback
4. Connect with us



# Office of Emergency Management



We plan for the  
big and the bad





# What is Hazard Mitigation?

The act of **reducing** or **eliminating** the risk of natural, man made or technological disasters



# What is a Hazard Mitigation Plan?

Plan **that assesses natural and human caused hazards** and **identifies cost-effective policies and actions** that can reduce or eliminate the risks and impacts of those hazards.



**Required update: May 2022**

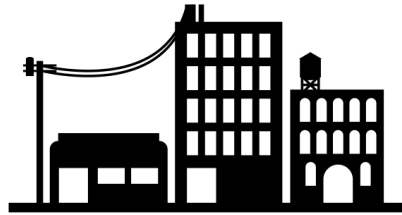


# Mitigation Projects

Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound



**Local Plans & Regulations**



**Structure & Infrastructure Projects**



**Natural Systems Protection**



**Education & Awareness Programs**

# Why Hazard Mitigation Planning?

1. Saves lives and protects property
2. Creates a more sustainable and disaster-resilient city by identifying how we can reduce our risk
3. Increases public awareness of hazards
4. Builds partnership among broad range of stakeholders
5. Establishes funding priorities
6. Facilitates conversations around thoughtful selection of mitigation projects

# Public Outreach



# The Engagement Plan

**CITY COUNCIL  
ADOPTS PLAN  
SPRING '22**

**PHASE 1:  
PUBLIC KICKOFF**  
NOW -  
DECEMBER '20

**PHASE 2: RISK  
AND HAZARD  
ASSESSMENT**  
JANUARY '21-  
APRIL '21

**PHASE 3: THE  
MITIGATION  
STRATEGY**  
APRIL '21- AUGUST  
'21

**PHASE 4: PLAN  
FEEDBACK**  
FALL '21

**SUBMIT TO  
PEMA & FEMA**  
WINTER '22

# FEMA Regulations

## Requirements:

- Must demonstrate that the general public had multiple and varied opportunities to engage in the plan update
- Minimum of **two** public workshops
- Must be open to the public to review for at least 30 days prior to plan adoption

# Philadelphia's Goals

Be very intentional about how we engage residents in this plan update so that we are gathering meaningful input from those communities most impacted by disasters.

- **Inform** the public about the plan and hazard risk
- **Consult** the community on hazard mitigation goals and objectives, and prioritization of those projects
- **Involve** the community in the identification of hazards and projects that will reduce risk
- **Empower & Collaborate**



# **The Engagement Plan**

**Public Survey**

**Townhalls & Workshops**

**Social Media Outreach**

**Website Update**

**Project Prioritization**



**Transparency  
is very important**



How can we  
incorporate equity into  
**mitigation project prioritization**  
and **other aspects** of the  
planning process?



What **tools**, **resources** and **partners** are available to help us better integrate equity considerations into the planning process?



How do we know that the feedback and input we are getting is **representative of Philadelphia?** Representative of **high-risk populations?**



How do we engage the public without **re-traumatizing** communities that have been impacted by disasters?



What does **equitable engagement** look like with COVID-19?



What are the **invisible barriers** to engaging with hard to reach members of the public?





# We'd like to hear from you!



# QUESTIONS or FEEDBACK?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

**Josh Nussbaum**

Community Resilience Coordinator

[Joshua.nussbaum@phila.gov](mailto:Joshua.nussbaum@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)

[OEM@phila.gov](mailto:OEM@phila.gov)





# Equitable Engagement Collaborative

**Date:** October 28, 2020, 11:00AM-11:30AM

**Location:** Microsoft Teams



## Agencies Present:

Philadelphia Office of Emergency Management (OEM), Mayor's Office of Diversity, Equity & Inclusion, Mayor's Office of Public Engagement, Managing Director's Office (MDO), Streets Department, Office of Chief Administrator, Philadelphia City Planning Commission (PCPC), Philadelphia Department of Public Health (PDPH), Office of Children and Families, Mayor's Office of Civic Engagement and Volunteers Service, Department of Behavioral Health and Intellectual disabilities (DBHIDS), Finance, Mayor's Office of Community Empowerment, Revenue Office, Philadelphia Fire Department

## Notes:

Philadelphia OEM met with the City's Equitable Engagement Collaborative on Thursday, October 28<sup>th</sup> with the purpose of informing partners about the update of the 2022 Hazard Mitigation Plan (HMP), identifying areas for collaboration with partner agencies, and gathering feedback on an equitable approach to public engagement and project prioritization in the HMP.

The City's Equitable Engagement Collaborative (ECC) is a group of subject matter experts in the city that meet weekly to discuss and collaborate on equitable public outreach strategies. OEM began the meeting by providing the group with background information on the HMP, the planning process, and current plans for community engagement. OEM then sought input and feedback from partners through a series of discussion questions.

- How can we incorporate equity into mitigation project prioritization and other aspects of the planning process?
- What tools, resources and partners are available to help us better integrate equity considerations into the planning process?
- How do we know that the feedback and input we are getting is representative of Philadelphia? Representative of high-risk populations?
- How do we engage the public without re-traumatizing communities that have been impacted by disasters?
- What does equitable engagement look like with COVID-19?
- What are the invisible barriers to engaging with hard to reach members of the public?

Feedback and advice provided by the ECC are as follows:

- Engage Sierra Club in the plan update process. Sierra Club has been working with communities recently impacted by flooding in Philadelphia.
- Ask people for stories about their histories and memories without preloading a framework.
- Invisible barriers to engaging "hard to reach" individuals include: implicit bias, technology, language, meeting times, and generational differences.
- Consider ways that you can reward or pay community leaders and stakeholder for engaging
- The Praxis Project has an organized toolkit and set of working principles for health justice and racial equity that helps guide their work when partnering with the community. Their work is available here: <https://www.thepraxisproject.org/our-principles#:~:text=The%20Praxis%20Project%20has%20organized,justice%20and%20racial%20equity%20for>
- Going directly to the community is the best way to get feedback.
- Consider scheduling listening sessions. Ask to be invited to community meetings and go to learn. Develop content of presentations alongside community members to ensure it's relevant and relatable.

In addition to the above feedback, OEM was also invited to attend a Planning Commission's Citizen's Planning Institute (CPI) meeting in Spring 2022 to present on the HMP and gather feedback. The CPI is introducing Philadelphians who

“lover where they live,” to the activities of city planning, zoning and development so they can help shape and preserve their neighborhoods.

All of the above feedback and recommendations will be used as we continue to develop and refine our public outreach and engagement strategy for the 2022 plan update.

## Equitable Engagement Collaborative

Date: October 27, 2020 from 11:00AM-11:30AM

Location: Microsoft Teams



| Name                             | Title                                      | Organization                                      | Email  |
|----------------------------------|--|---|--|
| Emma Giardina                    | Hazard Planning Coordinator                | Philadelphia OEM                                  | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>                     |
| Carolyn Caton                    | Infrastructure Program Manager             | Philadelphia OEM                                  | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>                     |
| Allison Miller                   | Public Information Coordinator             | Philadelphia OEM                                  | <a href="mailto:Allison.Miller@phila.gov">Allison.Miller@phila.gov</a>                   |
| Adrienne Ewing                   | ADA Coordinator                            | Mayor's Office of Diversity, Equity and Inclusion | <a href="mailto:Adrienne.Ewing@phila.gov">Adrienne.Ewing@phila.gov</a>                   |
| Amanda Gamble, Mayor's Office of | Chief Service Officer                      | Mayor's Office of Public Engagement               | <a href="mailto:Amanda.Gamble@phila.gov">Amanda.Gamble@phila.gov</a>                     |
| Amber Carter                     | Community Engagement & Outreach Specialist | MDO – MDO Community Service                       | <a href="mailto:Amber.Carter@phila.gov">Amber.Carter@phila.gov</a>                       |
| Ana Polanco                      | VISTA Program Coordinator                  | Mayor's Office of Public Engagement               | <a href="mailto:Ana.Polanco@phila.gov">Ana.Polanco@phila.gov</a>                         |
| Anthony Procik                   | Citywide Engagement Manager                | Mayor's Office of Public Engagement               | <a href="mailto:Anthony.Procik@phila.gov">Anthony.Procik@phila.gov</a>                   |
| Chelsea Reed                     |  | MDO   | <a href="mailto:Chelsea.Reed@phila.gov">Chelsea.Reed@phila.gov</a>                       |
| Claire Healy                     | VISTA Program Manager                      | MDO   | <a href="mailto:Claire.Healy@phila.gov">Claire.Healy@phila.gov</a>                       |
| Claudia Tasco                    | Constituent Services Coordinator           | Mayor's Office of Diversity, Equity and Inclusion | <a href="mailto:Claudia.Tasco@phila.gov">Claudia.Tasco@phila.gov</a>                     |
| Crystal Jacobs                   | Deputy Communications Director             | Streets Department                                | <a href="mailto:Crystal.Jacobs@phila.gov">Crystal.Jacobs@phila.gov</a>                   |
| Daiyon Kpou                      | Volunteer Engagement Coordinator           | Mayor's Office                                    | <a href="mailto:Daiyon.Kpou@phila.gov">Daiyon.Kpou@phila.gov</a>                         |
| Danita Reese                     |  | Office of Chief Administrator                     | <a href="mailto:Danita.Reese@phila.gov">Danita.Reese@phila.gov</a>                       |
| Donna Carney                     | Director, Citizens Planning Institute      | Philadelphia City Planning Commission             | <a href="mailto:Donna.Carney@phila.gov">Donna.Carney@phila.gov</a>                       |
| Elise Reynolds                   | Intern                                     | Office of Chief Administrator                     | <a href="mailto:Elise.reynolds@phila.gov">Elise.reynolds@phila.gov</a>                   |
| Elissa Martel                    |  | Philadelphia Department of Public Health          | <a href="mailto:Elissa.Martel@phila.gov">Elissa.Martel@phila.gov</a>                     |
| Erik Larson                      | Coordinator, Office of LGBT Affairs        | Mayor's Office of Diversity, Equity and Inclusion | <a href="mailto:Erik.Larson@phila.gov">Erik.Larson@phila.gov</a>                         |
| Fatoumata Makadji                | Foster Grandparents Program                | MDO   | <a href="mailto:Fatoumata.Makadji@phila.gov">Fatoumata.Makadji@phila.gov</a>             |
| Gabe Halperin-Goldstein          | Americorps VISTA                           | MDO   | <a href="mailto:Gabe.Halperin-Goldstein@phila.gov">Gabe.Halperin-Goldstein@phila.gov</a> |
| Gerolly Lorenzo                  | Service Year Expansion Manager             | Mayor's Office of Civic Engagement                | <a href="mailto:Gerolly.Lorenzo@phila.gov">Gerolly.Lorenzo@phila.gov</a>                 |
| Grace Park                       | VISTA                                      | Office of Children and Families                   | <a href="mailto:Grace.Park@phila.gov">Grace.Park@phila.gov</a>                           |
| Halena Martin                    | Reentry Workforce Development              | MDO   | <a href="mailto:Halena.Martin@phila.gov">Halena.Martin@phila.gov</a>                     |

|                      |  |  |  |
|----------------------|--|--|--|
| Hanna Kim            | VISTA Leader   | MDO  | <a href="mailto:Hanna.Kim@phila.gov">Hanna.Kim@phila.gov</a>                 |
| Jaclyn Boone         |  | Mayor's Office of Civic Engagement and Volunteer Service | <a href="mailto:Jaclyn.Boone@phila.gov">Jaclyn.Boone@phila.gov</a>           |
| Jillian Lopez        | Volunteer Engagement Manager                         | Mayor's Office   | <a href="mailto:Jillian.Lopez@phila.gov">Jillian.Lopez@phila.gov</a>         |
| John Ryan            |  | 311  | <a href="mailto:John.Ryan@phila.gov">John.Ryan@phila.gov</a>                 |
| Joshua Nussbaum      | Community Resilience Coordinator                     | Philadelphia OEM   | <a href="mailto:Joshua.Nussbaum@phila.gov">Joshua.Nussbaum@phila.gov</a>     |
| Karen Small          | Community Engagement Coordinator                     | Mayor's Office of Civic Engagement                       | <a href="mailto:Karen.Small@phila.gov">Karen.Small@phila.gov</a>             |
| Kenneth Luu          | Deputy Service Officer                               | Mayor's Office of Civic Engagement and Volunteer Service | <a href="mailto:Kenneth.Luu@phila.gov">Kenneth.Luu@phila.gov</a>             |
| Kiyona Dobson        | Foster Grandparents Program                          | Mayor's Office of Civic Engagement and Volunteer Service | <a href="mailto:Kiyona.Dobson@phila.gov">Kiyona.Dobson@phila.gov</a>         |
| Martine Decamp, PCPC | Deputy Director of City Planning                     | Philadelphia City Planning Commission                    | <a href="mailto:Martine.DeCamp@phila.gov">Martine.DeCamp@phila.gov</a>       |
| Mehra den Braven     | Reentry Housing VISTA                                | MDO  | <a href="mailto:Mehra.denBraven@phila.gov">Mehra.denBraven@phila.gov</a>     |
| Natalie Faragalli    | Communications Assistant                             | Philadelphia OEM   | <a href="mailto:Natalie.Faragalli@phila.gov">Natalie.Faragalli@phila.gov</a> |
| Nile Fossett         | Outreach Specialist                                  | Philadelphia Department of Public Health                 | <a href="mailto:Nile.Fossett@phila.gov">Nile.Fossett@phila.gov</a>           |
| Octavius Blount      | Coordinator, Black Male Engagement                   | Mayor's Office of Public Engagement                      | <a href="mailto:Octavius.Blount@phila.gov">Octavius.Blount@phila.gov</a>     |
| Olivia Gillison      | Community Preparedness Program Manager               | Philadelphia Office of Emergency Management              | <a href="mailto:Olivia.Gillison@phila.gov">Olivia.Gillison@phila.gov</a>     |
| Pilar Ocampo         |  | Philadelphia Department of Public Health                 | <a href="mailto:Pilar.Ocampo@phila.gov">Pilar.Ocampo@phila.gov</a>           |
| Qianna Nelson        |  | MDO  | <a href="mailto:Qianna.Nelson@phila.gov">Qianna.Nelson@phila.gov</a>         |
| Rebecca Piser        |  | Philadelphia Department of Public Health                 | <a href="mailto:Rebecca.Piser@phila.gov">Rebecca.Piser@phila.gov</a>         |
| Rebekah Hughston     | Administrative Services & Event Planning Coordinator | DBHIDS   | <a href="mailto:Rebekah.Hughston@phila.gov">Rebekah.Hughston@phila.gov</a>   |
| Sadia Sattar         | Deputy Budget Director                               | Finance  | <a href="mailto:Sadia.Sattar@phila.gov">Sadia.Sattar@phila.gov</a>           |
| Solomon Leach        | Communications Manager                               | Office of Community Empowerment                          | <a href="mailto:Solomon.Leach@phila.gov">Solomon.Leach@phila.gov</a>         |
| Thomas Stubbs        |  | MDO  | <a href="mailto:Thomas.Stubbs@phila.gov">Thomas.Stubbs@phila.gov</a>         |
| Tyler Galarneau      |  | MDO  | <a href="mailto:Tyler.Galarneau@phila.gov">Tyler.Galarneau@phila.gov</a>     |
| Vicki Riley          | Public Information Officer                           | Revenue  | <a href="mailto:Vicki.Riley@phila.gov">Vicki.Riley@phila.gov</a>             |
| Xavier Lofton        |  | Philadelphia Fire Department                             | <a href="mailto:Xavier.Lofton@phila.gov">Xavier.Lofton@phila.gov</a>         |
|                      |  |  |  |

**Notes below**

5/11/2021 9:30 AM | Call-in Only

Type of meeting            Q2 2021  
Facilitator                    Josh Lippert, Chair  
Note taker                    TBD

Please see SharePoint webpage for more details. Please click the link below to join the zoom webinar:  
<https://us02web.zoom.us/j/89401350677?pwd=cVZQbmtUSnRlVmpLbzZlYnNxanMzZz09>

## AGENDA ITEMS

| TOPIC                                 |  | PRESENTER     | TIME ALLOTTED                     |
|---------------------------------------|--|---------------|-----------------------------------|
| <input type="checkbox"/>              | Introductions  | Josh/All      | 5mins                             |
| <input type="checkbox"/>              | Floodplain Manager Update - General                      | Josh          | 10mins                            |
| <input type="checkbox"/>              | Office of Sustainability Updates                         | Matina/Saleem | 5mins                             |
| <input type="checkbox"/>              | Other updates  | Josh          | 5mins each                        |
| <input type="checkbox"/>              | Other Updates – “Flash Flood Round” (Department updates) | All           | 5mins                             |
| <b>Coffee/Restroom Break – 5mins.</b> |  |               |                                   |
| <input type="checkbox"/>              | Hazard Mitigation Plan + Flood Mitigation                | Emma/Josh     | <b>Starting @ 10:15</b><br>10mins |
| <input type="checkbox"/>              | Introduction to Flood Mitigation Activity                | Emma/Josh     | 5mins                             |
| <input type="checkbox"/>              | Break-out Groups   | All           | 30-40mins                         |
| <input type="checkbox"/>              | Group Report-outs  | All           | 15mins                            |
| <input type="checkbox"/>              | Next Steps for the HMP                                   | Emma          | 5mins                             |
| <input type="checkbox"/>              | FRMTF Questions/Wrap up                                  | All           | -                                 |

# Philadelphia's All-Hazard Mitigation Plan

Flood Risk Management Task Force, 2021 Q2 Meeting  
May 11, 2021

1. Background on Hazard Mitigation Plan
2. Introduction to the breakout group activity
3. Breakout Groups
4. Group Report Outs
5. Next Steps

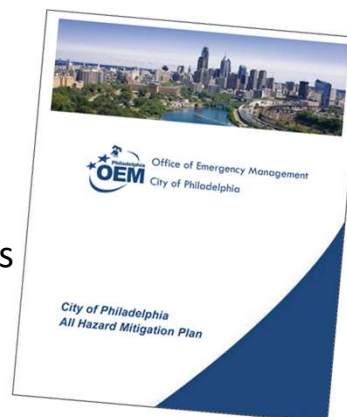


1

## What is a Hazard Mitigation Plan?

(1) Identifies which hazards Philadelphia is most at risk for; and

(2) Identifies the projects, plans and policies the City can implement to reduce our risk.



**Required Update: May 2022**



2



# The Planning Process



Approval NLT: May 25, 2022

**We are here**  
Date: 05/11/2021



**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to outline the core steps in the process.



3

# The Planning Process



Approval NLT: May 25, 2022

**We are here**  
Date: 05/19/2021



4

# The Planning Process



5

# The HMP Planning Process



6

# The Planning Process



Approval NLT: May 25, 2022

**We are here**  
Date: 05/19/2021



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# Timeline

- Larger Workshops
- Smaller Workgroup Meetings
- Individual Outreach

|   | 2020         |     |     |     |      |     |     |      |     |     |     |     | 2021         |     |     |     |      |     |              |      |     |     |     |     | 2022            |     |     |     |     |  |
|---|--------------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|--------------|-----|-----|-----|------|-----|--------------|------|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|--|
|   | Feb          | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb          | Mar | Apr | May | June | Jul | Aug          | Sept | Oct | Nov | Dec | Jan | Feb             | Mar | Apr | May | Jun |  |
| Build the Planning Team & Collect the Resources | [Yellow bar] |     |     |     |      |     |     |      |     |     |     |     |              |     |     |     |      |     |              |      |     |     |     |     |                 |     |     |     |     |  |
| Conduct a Risk & Vulnerability Assessment       |              |     |     |     |      |     |     |      |     |     |     |     | [Purple bar] |     |     |     |      |     |              |      |     |     |     |     |                 |     |     |     |     |  |
| Assess Capabilities                             |              |     |     |     |      |     |     |      |     |     |     |     | [Green bar]  |     |     |     |      |     |              |      |     |     |     |     |                 |     |     |     |     |  |
| Develop the Mitigation Strategy                 |              |     |     |     |      |     |     |      |     |     |     |     | [Blue bar]   |     |     |     |      |     |              |      |     |     |     |     |                 |     |     |     |     |  |
| Determine the Plan Maintenance Process          |              |     |     |     |      |     |     |      |     |     |     |     |              |     |     |     |      |     | [Orange bar] |      |     |     |     |     |                 |     |     |     |     |  |
| Finalize the Plan & Distribute for Review       |              |     |     |     |      |     |     |      |     |     |     |     |              |     |     |     |      |     |              |      |     |     |     |     | [Dark Blue bar] |     |     |     |     |  |
| Obtain Approval and Adoption                    |              |     |     |     |      |     |     |      |     |     |     |     |              |     |     |     |      |     |              |      |     |     |     |     | [Red bar]       |     |     |     |     |  |

**We are here**  
Date: 05/19/2021



8

# Questions?



9

## Flooding Philadelphia's #1 Natural Hazard



Source | USA Today (left), Philadelphia Office of Emergency Management (right)

10

# Flooding

Philadelphia's #1 Natural Hazard



Source | [Greater Philadelphia Bicycle Coalition](#)

11

# Flooding

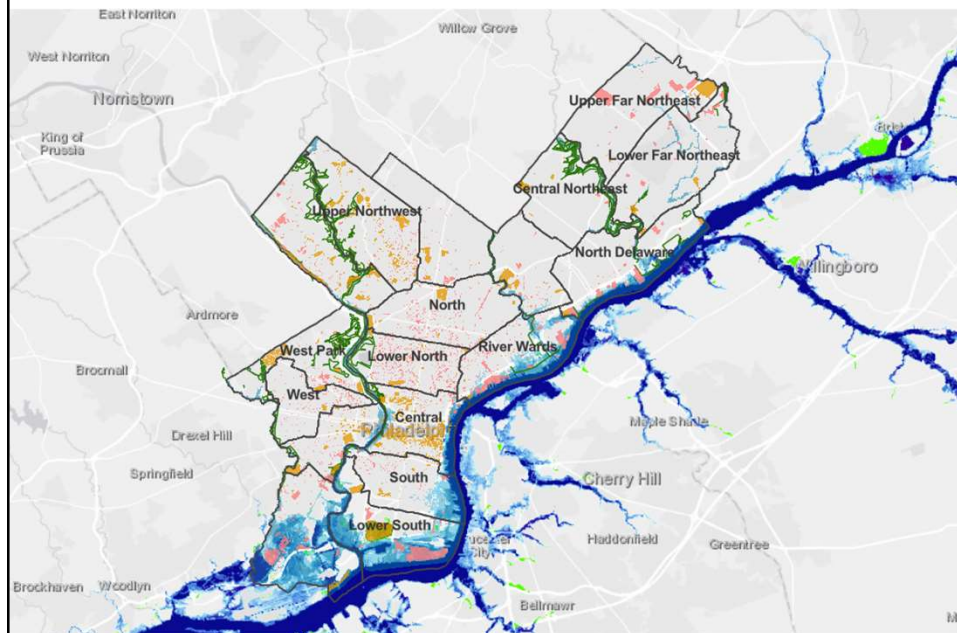
Philadelphia's #1 Natural Hazard



Source | [6 ABC News](#)

12

## Breakout Group Activity



13

## Breakout Group Activity

### Objective

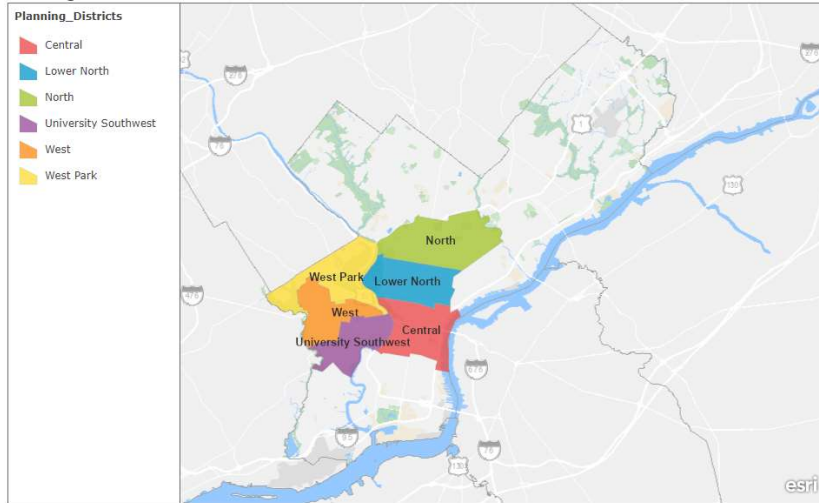
Through group conversation, participants will explore flood risk in their designated planning areas, identify key stakeholders in the mitigation planning process and collaborate on ideas for potential flood mitigation projects in their designated planning areas.

### Outputs

A list of stakeholders and mitigation projects for each planning area in the City.

14

# Schuylkill River



Facilitators: Emma Giardina, OEM and Rich Quodomine, DPP

15

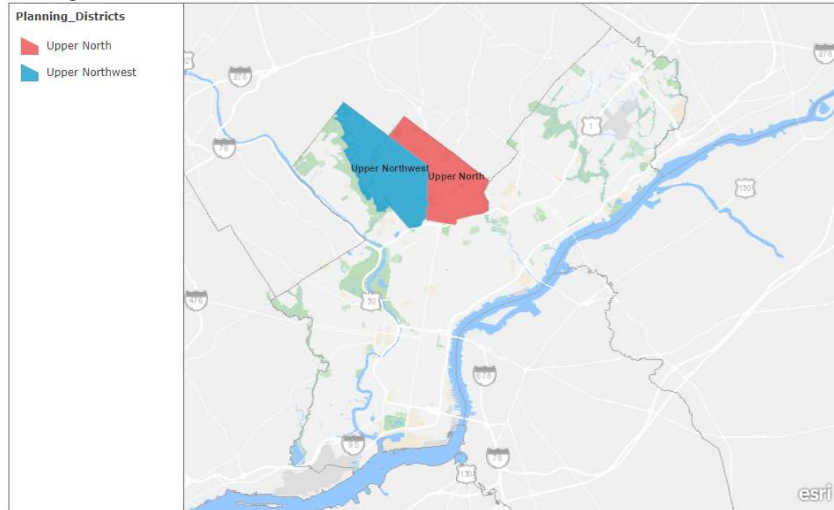
# Lower Northwest



Facilitators: Sue Patterson, PWD and Ron Bednar, PCPC

16

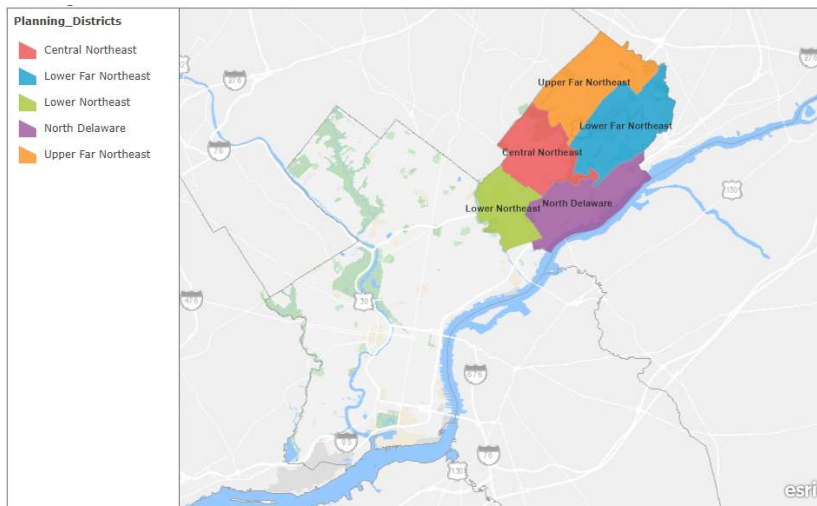
# Upper Northwest



Facilitators: Peter Barnard, PCPC & Terra Luke, DPP

17

# Northeast



Facilitators: Keith Davis, PCPC and Mason Austin, PCPC

18



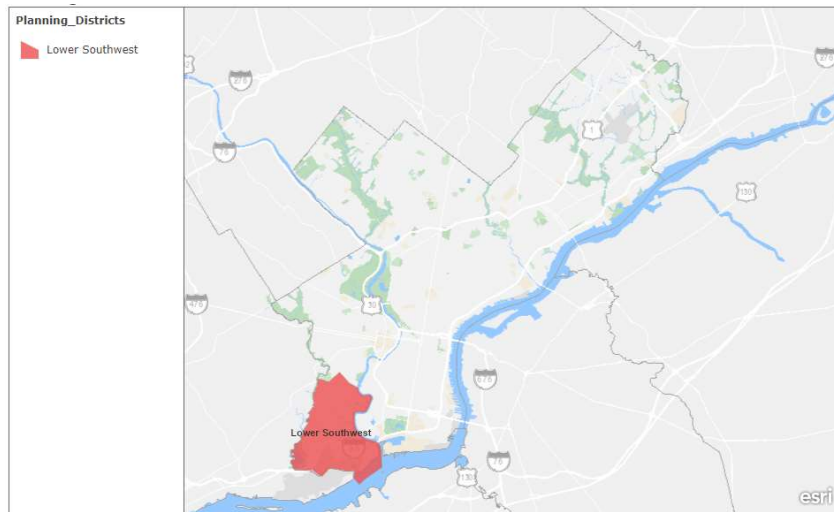
# Delaware River



**Facilitators:** Gregory Waldman, PCPC; John Haak, PCPC; and Jonathan Goins, PCPC

19

# Lower Southwest



**Facilitators:** Ayse Unver, PCPC and Carolyn Caton, OEM

20

## Step 1. Identify stakeholders

- Who are the **major landowners** in this planning area?
- Are there any opportunities for **public-private partnerships** on mitigation projects?
- Who has **technical** or **financial capabilities** to support mitigation project implementation?
- Are there active **community organizations** or **business associations** that should be engage?

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## Step 2. Mitigation Projects



Local Plans &  
Regulations



Structure &  
Infrastructure  
Projects



Natural  
Systems  
Protection



Education &  
Awareness  
Programs

Icons | The Noun Project

22

# Mitigation Projects

## Tips and Tricks

- Think outside the box!
- Not every mitigation action is bricks and mortar
- Address root causes, not symptoms
- Plan integration
- Consider opportunities to partner with other stakeholders with similar goals



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# Google Jamboard

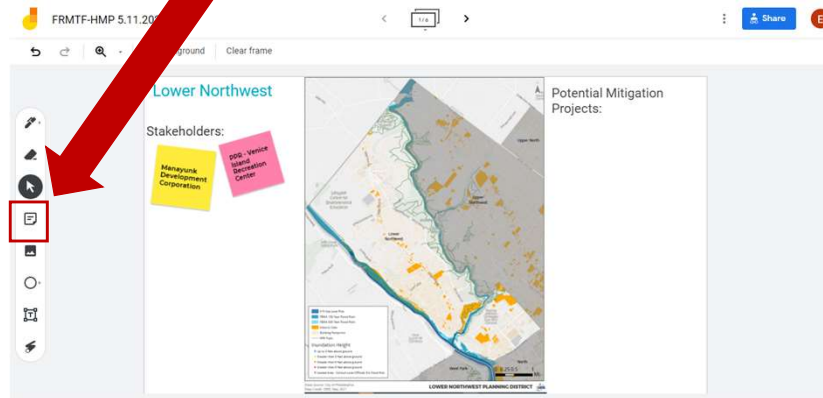
Toggle between slides to find your planning area.

Click [HERE](#) to access the Google Jamboard.

24

# Google Jamboard

To add a post it note, click on this icon

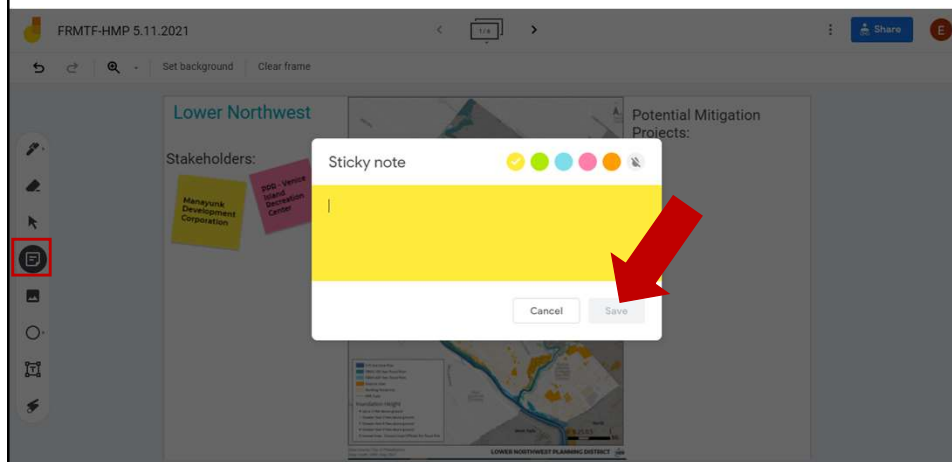


Click [HERE](#) to access the Google Jamboard.

25

# Google Jamboard

A sticky note will pop up. Type your comment and click SAVE. You can then click and drag your note.



Click [HERE](#) to access the Google Jamboard.

26

## Interactive Map

The screenshot shows a web-based interactive map interface. On the left, there is a 'Layers' panel with a list of map layers: Planning Districts, City Facilities, Building Footprints, Vacant Land, Historic Sites, PPR Trails, FEMA 100 Year Flood Plain, FEMA 500 Year Flood Plain, Sea Level Rise 6 Feet, and Cat 1 Hurricane Inundation. The map itself displays Philadelphia with various colored overlays representing these layers. A navigation toolbar is visible at the top left of the map area, including zoom in (+), zoom out (-), and home icons.

Click [HERE](#) to access the interactive map.

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## Interactive Map

This screenshot is similar to the one above but includes annotations. A red arrow points to the 'Layers' panel header. A white box with a black border contains the text 'Toggle layers on and off' and is positioned over the 'Planning Districts' layer, which has a red square around its eye icon. The map and navigation elements are the same as in the previous image.

Click [HERE](#) to access the interactive Map.

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# Interactive Map

Click [HERE](#) to access the interactive Map.

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# Facilitator Guide

**Group Discussion**

**1. Identifying Stakeholders**

Prompt: Identify the key stakeholders in your planning area. Think about the following:

- Who are the major land owners in this planning area?
- Are there any opportunities for public-private partnerships on mitigation projects in this planning area?
- Which stakeholders have local knowledge of current flood risk to community assets in this planning area?
- Who holds technical or financial capabilities to support mitigation project implementation in this planning area?
- Are their active community organizations or business associations that should be engaged?

| Stakeholder  | Type (non-profit, business owner, federal, state, local, etc.) | Point of Contact (if available) |
|--|--|---------------------------------|
| EXAMPLE: Manayunk Business Development Corporation | Local Business Development Corporation                         |                                 |
|  |  |                                 |
|  |  |                                 |
|  |  |                                 |
|  |  |                                 |

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## Group Facilitators

### Lower Northwest (*Manayunk*)

- Ronald Bednar, PCPC
- Sue Patterson, PWD

### Upper Northwest (Upper North, Upper Northwest) (*Germantown*)

- Peter Barnard, PCPC
- Terra Luke, DPP

### Northeast (Central Northeast, Upper Northeast, Lower Far Northeast, Lower Northeast, Upper Far Northeast)

- Keith Davis, PCPC
- Mason Austin, PCPC

### DE River (River Wards, Central, South, Lower South)

- Gregory Waldman, PCPC
- John Haak, PCPC
- Jonathan Goins, PCPC

### Schuylkill River (North, Lower North, University Southwest, West, West Park)

- Rich Quodomine, DPP
- Emma Giardina, OEM

### Lower Southwest (*Eastwick*)

- Ayse Unver, PCPC
- Carolyn Caton, OEM

31

## Questions?

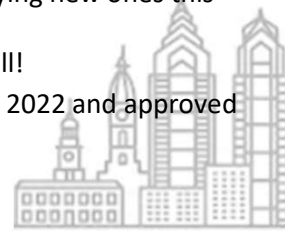


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# What's Next?

1. **Risk and Vulnerability Analysis:** One-on-one outreach may be needed for more data and information to support Risk Assessment.
2. **The Mitigation Strategy:** Building off the lists you've developed today to update existing actions and identifying new ones this Summer.
3. **BRIC and FMA NOFO:** Late summer, early fall!
4. **Final Plan:** Submitted to the State by March 2022 and approved by FEMA by May 2022.



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Hazard Mitigation Assistance

## Mitigation Action Portfolio

FEMA

Source | [FEMA's Mitigation Action Portfolio](#)

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## Resources

- [Mitigation Action Portfolio](#), FEMA, 2020
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020
- [HAZUS in the PA Hazard Mitigation Plan](#)
- [Flood Mitigation Assistance \(FMA\) Grant](#)
- [Building Resilient Infrastructure and Communities Grant](#)

35



**QUESTIONS  
about the  
Plan?**

Emma Giardina  
Hazard Planning Coordinator  
[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)



36

5/11/2021 9:30 AM | Conference Call

|                 |                     |
|-----------------|---------------------|
| Type of meeting | Q2 2021             |
| Facilitator     | Josh Lippert, Chair |
| Note taker      | [Note taker]        |

## ATTENDANCE

| MEMBER  | DEPARTMENT/AGENCY/OFFICE         |
|---|----------------------------------|
| <input checked="" type="checkbox"/> Josh Lippert, CFM | Floodplain Manager – FRMTF Chair |
| <b>Philadelphia Water Department</b>                  |                                  |
| <input type="checkbox"/> Erik Haniman                 |                                  |
| <input checked="" type="checkbox"/> Kelly Anderson    |                                  |
| <input checked="" type="checkbox"/> Julia Rockwell    |                                  |
| <input checked="" type="checkbox"/> Sue Patterson     |                                  |
| <input checked="" type="checkbox"/> Patrick Perhosky  |                                  |
| <input checked="" type="checkbox"/> Mustafa Haweejah  |                                  |
| <input type="checkbox"/> Phil Dazinski                |                                  |
| <input checked="" type="checkbox"/> Nicole Charlton   |                                  |
| <input type="checkbox"/> Tiffany Ledesma              |                                  |
| <input checked="" type="checkbox"/> Maura Jarvis      |                                  |
| <input checked="" type="checkbox"/> Marc Cammarata    |                                  |
| <input checked="" type="checkbox"/> Abby Sullivan     |                                  |
| <input type="checkbox"/> Glen Abrams                  |                                  |
| <input checked="" type="checkbox"/> Hailey Stern      |                                  |
| <input checked="" type="checkbox"/> Kimberly Flood    |                                  |
| <input checked="" type="checkbox"/> Mike Schramm      |                                  |
| <input checked="" type="checkbox"/> Connie Bird       |                                  |
| <input checked="" type="checkbox"/> Joe Nixon         |                                  |
| <input checked="" type="checkbox"/> Nicole Hostettler |                                  |
| <input checked="" type="checkbox"/> Rebecca Ziefle    |                                  |
| <input checked="" type="checkbox"/> William Dobbins   |                                  |

| <b>Department of Licenses and Inspections</b> |                       |
|---|-----------------------|
| <input checked="" type="checkbox"/>           | Pradeep Parek         |
| <input type="checkbox"/>                      |                       |
| <b>Office of Risk Management</b>              |                       |
| <input checked="" type="checkbox"/>           | Barry Scott           |
| <input type="checkbox"/>                      |                       |
| <input type="checkbox"/>                      |                       |
| <b>Planning Commission/PDP</b>                |                       |
| <input type="checkbox"/>                      | Eleanor Sharpe        |
| <input checked="" type="checkbox"/>           | Keith Davis           |
| <input checked="" type="checkbox"/>           | John Haak             |
| <input checked="" type="checkbox"/>           | Mason Austin          |
| <input checked="" type="checkbox"/>           | Peter Barnard         |
| <input checked="" type="checkbox"/>           | Ron Bednar            |
| <input checked="" type="checkbox"/>           | Greg Waldman          |
| <input checked="" type="checkbox"/>           | Ayse Unver            |
| <input checked="" type="checkbox"/>           | Jonathan Goins        |
| <b>Office of Sustainability</b>               |                       |
| <input type="checkbox"/>                      | Christine Knapp       |
| <input checked="" type="checkbox"/>           | Saleem Chapman        |
| <input checked="" type="checkbox"/>           | Matina Granieri       |
| <b>Department of Parks and Recreation</b>     |                       |
| <input checked="" type="checkbox"/>           | Stephanie Craighead   |
| <input type="checkbox"/>                      |                       |
| <b>Department of Public Property</b>          |                       |
| <input type="checkbox"/>                      | Bridget Greenwald     |
| <input type="checkbox"/>                      | Valerie Bergman       |
| <input type="checkbox"/>                      | Dominique Casmir      |
| <input type="checkbox"/>                      | Ken Heil              |
| <input checked="" type="checkbox"/>           | Richard Quodomine     |
| <input checked="" type="checkbox"/>           | Terra Luke            |
| <input type="checkbox"/>                      |                       |
| <b>Department of Law</b>                      |                       |
| <input type="checkbox"/>                      | Mary Josephine Markle |
| <input type="checkbox"/>                      |                       |
| <b>Office of Emergency Management</b>         |                       |

|   |                     |
|---|---------------------|
| <input checked="" type="checkbox"/>                                 | Carolyn Caton       |
| <input checked="" type="checkbox"/>                                 | Emma Giardina       |
| <input checked="" type="checkbox"/>                                 | Josh Nussbaum       |
| <input checked="" type="checkbox"/>                                 | Alyssa Fico         |
| <b>Department of Public Health</b>                                  |                     |
| <input checked="" type="checkbox"/>                                 | Leigh-Anne Rainford |
| <input type="checkbox"/>  | Jason Hammer        |
| <input type="checkbox"/>  | Alexandra Skula     |
| <input type="checkbox"/>  |                     |
| <input type="checkbox"/>  |                     |
| <b>Department of Streets</b>  |                     |
| <input type="checkbox"/>  | Stephen Lorenz      |
| <input checked="" type="checkbox"/>                                 | Kyle Brown          |
| <b>Office of Transportation, Infrastructure, and Sustainability</b> |                     |
| <input checked="" type="checkbox"/>                                 | Elizabeth Lankenau  |
| <input type="checkbox"/>  |                     |
| <input type="checkbox"/>  |                     |
| <b>Philadelphia Redevelopment Authority</b>                         |                     |
| <input checked="" type="checkbox"/>                                 | Karanja Slaughter   |
| <input type="checkbox"/>  | Gregory Heller      |
| <input checked="" type="checkbox"/>                                 | Dustin Kapson       |
| <b>Philadelphia International Airport</b>                           |                     |
| <input checked="" type="checkbox"/>                                 | Ray Schienfeld      |
| <input type="checkbox"/>  |                     |
| <b>Mayor's Office - Grants</b>                                      |                     |
| <input type="checkbox"/>  |                     |
| <input type="checkbox"/>  |                     |
| <b>Department of Commerce</b>                                       |                     |
| <input type="checkbox"/>  |                     |
| <input type="checkbox"/>  |                     |
| <b>PEMA</b>   |                     |
| <input type="checkbox"/>  | Tom Hughes          |
| <input checked="" type="checkbox"/>                                 | Ernie Szabo         |
| <input checked="" type="checkbox"/>                                 | Bill Bradfield      |
|   |                     |

| <b>FEMA – Region 3</b>                    |               |
|---|---------------|
| <input type="checkbox"/>                  | Sarah Wolfe   |
| <input checked="" type="checkbox"/>       | Bobby Cobelli |
| <input type="checkbox"/>                  | Zane Hadzick  |
| <b>USACE</b>                              |               |
| <input type="checkbox"/>                  | Jason Miller  |
| <input checked="" type="checkbox"/>       | Eric Majusiak |
| <b>State Historic Preservation Office</b> |               |
| <input type="checkbox"/>                  | John Gardosik |
| <input type="checkbox"/>                  |               |
| <b>Other</b>                              |               |
|   |               |
|   |               |
|   |               |
|   |               |
|   |               |

# City of Philadelphia Hazard Mitigation Plan



## Flood Risk Management Task Force

Date: May 11, 2021

Location: Zoom

### Notes:

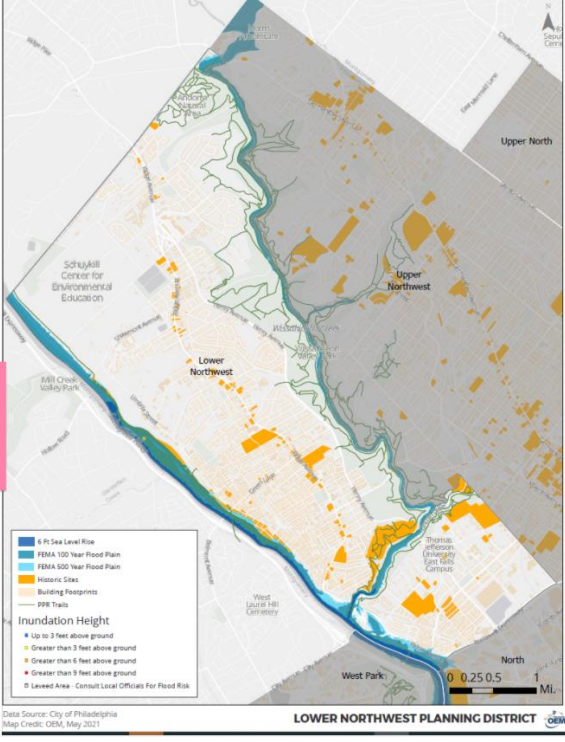
The FRMTF is a group of city subject matter experts convened to develop a coordinated approach to flood risk management across local government. In this meeting, participants were split into groups to look at a flood risk and flood mitigation strategies by planning district. Key stakeholders and mitigation project ideas for each planning district were recorded in a Google Jamboard for use in the Hazard Mitigation Plan.

The Google Jamboards below represent some of the ideas that were brainstormed by the group.

### Lower Northwest

#### Stakeholders:

- Manayunk Development Corporation - Jane Lipton - What w business owners in support of.
- PPR - Venice Island Recreation Center
- Natural Lands Trust - re Papermill <https://natlands.org/visit/> Can they help sponsor a fundraising & awareness campaign, and help negotiate with current owner?
- falls elopment - Carolyn
- Roxborough Manayunk Conservancy
- East Falls Forward - Community org - R
- Buy out partners
- Apartment managers along Main St
- Historical commission - for best practices nationwide in flood mitigation historic properties
- Many manayunk business owners/renters are from out of town.
- Schuykill Project - Trail project
- City council rep - Curtis Jones
- property owners across the river, near river road. (Another township)



#### Potential Mitigation Projects:

- Requirement for landlords to notify tenants - risk (safety & vehicles), and the possible need for flood insurance (rental suitability license requirement)
- prohibit parking below the BFE in all new construction in the 100 year floodplain
- Separate sewer area = limit to capacity for stormwater mgmt
- Bureau of Land Management - <https://fas.org/sgp/crs/misc/R41509.pdf>
- require building owners to supply flood insurance
- Papermill factory - Buy out opportunity
- River Road enforcement rules of the Gate on we should not locked. Post out covers with resident
- Education about the difference between stormwater impact vs flooding impact from the river. Venice Island handles the stormwater - the problem is the river overflowing.
- Develop strategy for buyouts, funding
- Have any Manayunk business owners every asked for a protective flood wall? Is that even possible with historic designation status? Exploratory committee? Can the USACE remodel of Schuykill do a test
- Any stormwater management opportunities on parking lots? Rite Aid? Something planned for Canoe Club.
- Have an emergency plan that everyone knows about.
- Different usage codes for flood impacted Manay properties? (rest types of usage)
- <http://www.biodiversityfinance.net/sites/default/files/content/publications/BIOFIN%20-%20Moving%20Mountains%20-%20Unlocking%20private%20capital%20for%20biodiversity%20and%20ecosystems%20-%20Web%20version%29.pdf>



# Delaware River

**Stadium Owners**

**DRBC** (Economic Development/Workforce agencies and organizations to connect mitigation work w equitable job creation)

**Insurance Companies**

**Parks and Rec**

**Delaware River Joint Toll Bridge Commission**

**OTIS Cluster: PWD, Streets, Office of Sustainability**

**UPS Hub**

**CDAG**

**Major developers like PREST**

**Center City District**

**Delaware River Waterfront Corporation**

**PRIDE and Richmond Corridor Association**

**Delaware River Port Authority**

**SEPTA**

**Existing large businesses**

**Conrail**

**PIDC**

**PHL**

**SRDC**

**PGW**

**Army Corps**

**residents**

**Streets Dept**

**DPP**

**Hilco**

**Residents and Community Groups**

**Riverwards CBOs**

**PennDOT**

**State and Federal Funders**

**CSX**

**Councilpeople**

**Business Associations and BIDS**

**Planning Commission**

**Riverfront North Partnership**

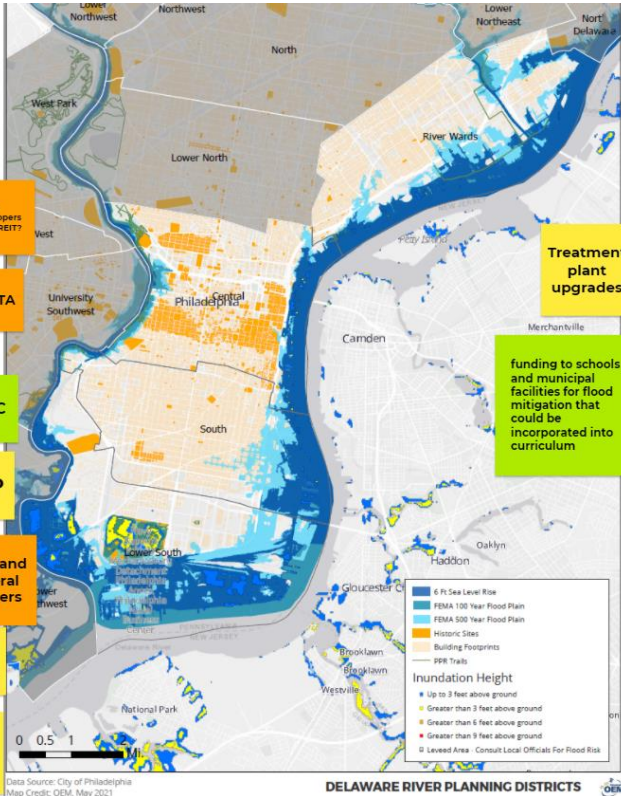
**PhilaPORT**

**private developers**

**Philadelphia Water Department**

**Navy Yard**

**Shipyard**



## Mitigation Projects:

- Linear connected park that acts as natural buffer to SLR and flooding
- Look at policies that could help prevent displacement for vulnerable populations
- requiring backflow preventers for buildings
- Promote park projects that "let water in" during flood events
- update parking lot landscaping requirements
- Policy to restrict basement build-outs in floodprone areas
- Add freeboard to the protective elevation required in the 100-year floodplain.
- restrict public subsidies to projects that minimize flood risk
- Policy to restrict first floor garage-living room conversions
- flood zoning overlay with greater restrictions
- Better fund/staff work of Chief Resiliency Officer to coordinate the multitudes of stakeholders and potential mitigation ideas
- Risk-based pool for private properties in at-risk areas, to take risk off City taxpayers
- promote wetland development
- Upgrade the PWD drainage system and apply for funding so it does not lead to a rate increase for residents
- Potentially increase the amount of stormwater that buildings must manage in flood zones -- part of PWD stormwater regs

# Lower Southwest

**Stakeholders**

**PHL**

**Delaware County**

**CSX/NS/Conrail/AMTRAK**

**PWD**

**PennDOT**

**PHL**

**Bartram's Gardens**

**Heinz**

**Eastwick Friends and Neighbors Coal**

**SEPTA**

**Southwest CDC**

**EPA and CAG**

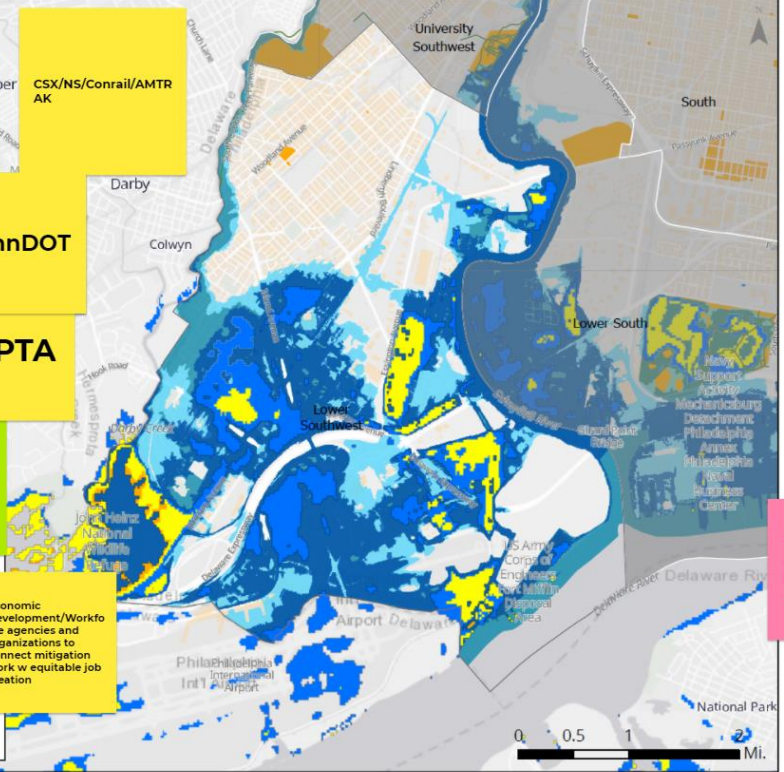
**Eastwick Unit**

**Faith Based Organizations**

**PHL**

**U.S. Army Corps**

**Economic Development/Workforce agencies and organizations to connect mitigation work w equitable job creation**



## Mitigation Projects

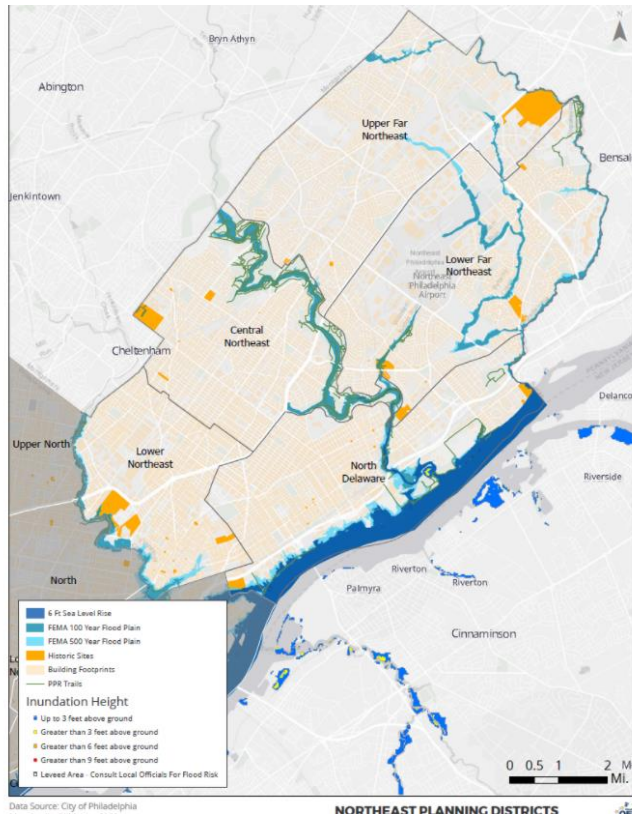
- USACE recommendations
- Mount Moriah
- preserve more open space
- Enhance natural levees/flood barriers
- Community engagement initiatives and tangible supports (city subsidized flood insurance, etc.)



# Northeast

Stakeholders:

- Northeast Airport - could mitigation result in expanding the airport operations?
- Riverview Snr Citizens Home
- Parks & Rec
- Tacony Creek-Torresdale Ave, Bridge St
- Port & Industrial Occupants
- Dept. of Prisons
- Holy Family U (Grant Ave)
- New Jersey?
- PGW Plant
- Solid Waste Facility



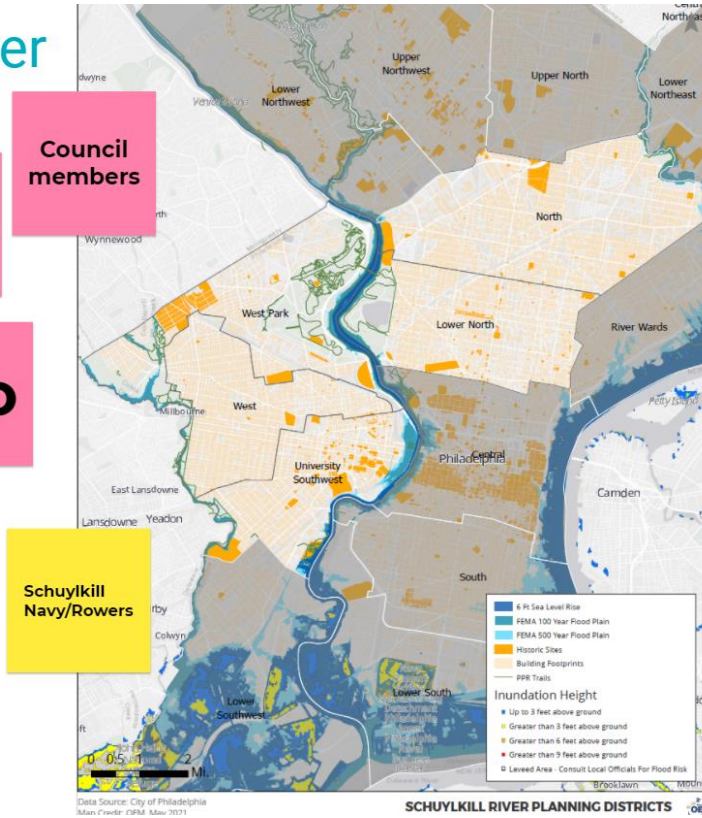
# Mitigation Projects

- Boat Launch
- Glen Foerd
- Juniata Golfcourse
- Pennypack Park
- Education & Better Signage
- Stewardship Programs
- Riparian preservation, setbacks and increase stormwater mitigation
- Decision point: Buyback or Reinforce current shore protection and structure

# Schuylkill River

Stakeholders:

- SEPTA/AMTRAK?
- Lower Schuylkill River Plan [https://www.pidcphila.com/images/uploads/resource\\_library/L\\_SMP\\_ExecSummary.pdf](https://www.pidcphila.com/images/uploads/resource_library/L_SMP_ExecSummary.pdf)
- East Fairmount Park Coalition (administered by Fairmount Park Conservancy)
- developers!
- ZOO
- Laurel Hill Cemetery (part of EFPC)
- Schuylkill River Development Corporation
- PWD\_Drinking Water Master Plan (2019) - [https://www.phila.gov/water/wu/Documents/PWD\\_DrinkingWaterMasterPlan.pdf](https://www.phila.gov/water/wu/Documents/PWD_DrinkingWaterMasterPlan.pdf)
- Fairmount Park Plan: <https://www.design.u-penn.edu/pennpraxis/work/new-fairmount-park-community-vision-plan-east-and-west-fairmount-park>



# Mitigation Projects:

- new MLK trail paving: <https://www.phila.gov/2021-02-10-new-year-new-trail-parks-rec-up-dates-martin-luther-king-trail/>
- utilize vacant land (largest amount in north) for stormwater management
- PWD Priority Sewershed - Girard College area
- Kelly Drive swales - expand projects?
- Buyouts near Bartram's Garden? Vacant Land



# Upper Northwest

## Stakeholders:

Philadelphia School District

Issue: Competing RCOs and competing agendas

Jefferson University and Jefferson Health

Lasalle - GSI has good relationship, PCPC is building relationship

PCPC and district planners - help departments balance competing priorities

Jefferson Health buying Einstein, leadership changes likely

No one reached out as part of the Germantown Flooding Analysis

Rebuild - Libraries and parks impacted by flooding

Not as many CDCs or RCOs in heavily impacted areas - some CDCs that do work are outside risk areas.

SEPTA



Community Gardens and Urban Farms

Hard infrastructure will take 20-30 years to implement

Belfield is one of the most developable corridors, but has worst flood risk and could be good for buy outs due to vacant land.

How to deal with new pressures on sewer system while maintaining developability? (Regulations)

Stormwater Tanks - need to be large and requires lots of maintenance.

Green stormwater management corridor along Belfield.

Do land lords need to let tenants know about flood risk? (No, because it's sewer flooding and not flood plain. Letting people know could cause displacement due to increased ins. cost.)

Surveys (2011) showed support for buy-out, but most properties were renter occupied. (Surveys were targeted and went to people with known issues).

50% design upgrade to 21st street sewer (known area with flooding) (\$25-30 m)

Get it right before area faces strong development pressure, especially in flood-prone areas.

Opportunity as area not yet facing intense development pressure.

Flood Risk Taskforce - study done, looking at short to medium term solutions (flood insurance, education, outreach, fact sheets, info sharing)

Competing interests even within city - green stormwater management, vs. PWD infrastructure, vs TOD along Belfield

Change in SWM regulations to deal with stormwater issues of proposed development (discussing what is most appropriate) (PWD)

Community Garden Preservation (prevent development in flood prone areas)

Lots of flips, subdivisions and MFU but not much new construction - could lead to a lack of awareness of flooding issues in the area.

Smaller GSI projects upstream of flood areas

Backwater valves for new construction (required), add community engagement to raise awareness (part of an existing campaign)

Preserving Community Gardens low-lying, flood one areas (tie-in with Urban ag plan)

## Mitigation Projects:

Buy-outs - difficult as flood areas are renters (no benefit to them, hard to find new low-cost housing, lack of willness to move)

## BRIC & FMA Grants Workshop



**Date/Time:** October 13, 2020 from 10am-12pm

**Location:** Zoom

|                          | <b>Agenda Item</b>                         | <b>Who</b>   | <b>Notes/Actions</b> | <b>Time Allocated</b> |
|--------------------------|--|--|----------------------|-----------------------|
| <input type="checkbox"/> | <b>Introduction &amp; Welcome</b>          | Emma Giardina, OEM                                     |                      | 5 mins                |
| <input type="checkbox"/> | <b>City Application Process Update</b>     | Emma Giardina, OEM                                     |                      | 5 mins                |
| <input type="checkbox"/> | <b>PEMA Presentation on BRIC &amp; FMA</b> | Ernie Szabo, PEMA                                      |                      | 45 mins- 1 hour       |
| <input type="checkbox"/> | <b>Q&amp;A for PEMA &amp; FEMA</b>         | Ernie Szabo, PEMA<br><br>Mari Radford, FEMA Region III |                      | 30 mins               |

## **Notes -Frequently Asked Questions (FAQ)**

### **BRIC & FMA 2020 Workshop**

#### **What are FEMA's priorities for BRIC and FMA?**

##### Building Resilient Infrastructure & Communities (BRIC) Priorities

- Incentivize public infrastructure projects;
- Incentivize projects that mitigate risk to one or more [community lifelines](#);
- Incentivize projects that incorporate nature-based solutions; and,
- Incentivize adoption and enforcement of modern building codes.

##### Flood Mitigation Assistance (FMA) Priorities

- Projects with lower federal funding needed;
- Structures that have been determined Substantially Damaged; and
- Primary residences over non-primary residences.

#### **How much funding is available?**

For BRIC, each State/Territory is allocated \$600,000. \$300,000 is reserved specifically for counties to update their Hazard Mitigation Plans. The remaining \$300,000 can be used for mitigation projects and project scoping. Any subapplications that go over \$300,000 cap will be considered by the state for submission into the National Competition for BRIC funding. No individual sub-application for the BRIC National Competition can exceed \$50 million.

For FMA, each State/Territory will be allocated \$600,000 for project scoping and a maximum \$30,000,000 cap per community flood mitigation project sub application.

#### **Is there a cost match required?**

Yes, there is a 25% cost match required.

#### **What is the period of performance?**

36 months from the date of the recipient's federal award.

#### **When will grant funds be received?**

Awards will be announced by FEMA no earlier than June 2021 but no later than December 31, 2021. Once awards are announced, FEMA must generate a formal grant agreement with the city which can take up to 3 months. Once a grant agreement is complete, sub-grantees can begin submitting reimbursement requests to FEMA.

#### **How will grant funds be received?**

Subgrantee's must submit reimbursement requests to FEMA.

### **What are examples of good mitigation projects?**

In 2020, FEMA released their [Mitigation Action Portfolio](#) document, which showcases exemplary mitigation projects to provide practitioners with examples of activities that align with FEMA's goals and objectives for BRIC.

### **Can I submit a project that is not featured in the City's [2017 Hazard Mitigation Plan](#)?**

All potential or existing mitigation projects should be featured in the city's hazard mitigation plan regardless of whether or not you are pursuing hazard mitigation grant funds. For a mitigation project to be eligible for BRIC or FMA, both PEMA and FEMA require that the project is included in the most current version of the city's Hazard Mitigation Plan. Projects that are not currently in the [2017 Hazard Mitigation Plan](#) must be formally adopted into the plan by FEMA Region III prior to November 18th. Once projects are selected, Philadelphia OEM will reach out to gather the information needed to formally add your project into the Hazard Mitigation Plan if it is not already in it.

### **Can a project be started prior to receiving the grant award?**

No. Costs associated with implementation of proposed projects in the submitted grant application or subapplication that are incurred prior to the date of the grant Award are not allowed. Construction activities for which ground disturbance has already been initiated or completed are not eligible for funding. Non-construction activities that have already started may not be considered for funding.

### **How can my agency or organization apply?**

Interested agencies or organizations should submit a project proposal to [Ashley.DelBianco@phila.gov](mailto:Ashley.DelBianco@phila.gov) at the Mayor's Office of Grants prior to noon on Thursday, October 8<sup>th</sup>. Projects will be reviewed and selected on a competitive basis.

If selected for project submission to the state, your agency or organization must submit a [Letter of Interest](#) to PEMA by October 15<sup>th</sup>. An application packet will be sent to you after submission of the Letter of Interest.

Agencies and organizations interested in submitting a project this year should start the process of creating an [FEMA Grant Outcomes \(GO\) account](#) ASAP. This process can take up to 4 weeks.

### **Are there any restrictions on using other funding sources to complete the project?**

You cannot use other federal grants to meet the cost share requirement, this includes staff time if the employee is funded by a federal grant. The exception to this is DCED, Community Block Development Grant (CBDG) money.

The project cannot not duplicate activities that another federal agency or program has more specific authority to conduct. The project cannot duplicate efforts of other project funded by another federal grant.

FEMA encourages innovative partnerships between the public and private sector including shared funding mechanisms.

**Who is eligible to submit subapplications to PEMA?**

Sub-applications must come from local governments or other eligible organizations; individuals cannot apply directly for the program. The state prefers local municipalities/government agencies apply to show that the project is integrated into other city plans and to show that the project is a priority for the community.

**Are there any restrictions on the land that will come into play if awarded this grant?**

Yes. For acquisition/demolition projects, the property must be restored to green space. Open space can be a park, a community garden, etc. Any work on the land should be cleared in writing by PEMA and FEMA in advance.

**For a stream restoration project, does the H&H study have to show large flood reduction?**

Projects must not cause adverse affects in the Special Flood Hazard Area (SFHA). Projects do not need to reduce, or minimize the SFHA, but they should improve impacts from flooding in that area at a minimum.

**What is the Benefit Cost Analysis (BCA)?**

The BCA is a method that determines the future risk reduction benefits of a hazard mitigation projects and compares those benefits to its costs. The result is a Benefit-Cost Ratio (BCR). A project is considered cost-effective when the BCR is 1.0 or greater. Data on cascading effects/impacts from a hazard and past occurrences can help make a case for your projects. For more information: <https://www.fema.gov/grants/guidance-tools/benefit-cost-analysis>

**Do projects get viewed more favorably if coordinated with or jointly managed with Commonwealth agencies (ex: PennDOT, DCNR)?**

Yes, projects that are managed in coordination with other Commonwealth agencies show that the project supports both city and state priorities and demonstrates plan integration at the state level, something PEMA likes to see in application.

**Will projects that reduce risk to hazards other than flooding, like heat, be considered for funding?**

Projects addressing hazards other than flooding will be considered for BRIC. Any project that is submitted must reduce risk to a hazard identified in the City's Hazard Mitigation Plan. Projects that address more than one hazard are great!

**Many example projects seem geared towards private homes and the commercial sector. Would a project that addresses flooding in a city park, along with an public education component, qualify for BRIC or FMA?**

It may qualify. Be sure to address how this mitigation project would also reduce risk to flooding in the communities downstream.

**What projects fall under planning vs. Project scoping vs. Technical assistance?**

Planning: City Hazard Mitigation Plan updates, or planning for specific hazards ( ex: stormwater flooding)

Project Scoping: Planning for specific projects (ex: H&H study)

Technical Assistance: typically for small, impoverished communities in need of assistance figuring out how to solve a major mitigation challenge

## BRIC/FMA Grants Workshop

Date: Tuesday, October 13, 2020

Location: Zoom Meeting, Virtual



|   | Name              | Title                                       | Organization             | Email  |
|---|-------------------|---|--------------------------|--|
| ✓ | Brandon Lapsley   | Homeland Security Grant Program Manager     | Philadelphia OEM         | <a href="mailto:Brandon.Lapsley@phila.gov">Brandon.Lapsley@phila.gov</a>     |
| ✓ | Emma Giardina     | Hazard Planning Coordinator                 | Philadelphia OEM         | <a href="mailto:Emma.Giardina@phila.gov">Emma.Giardina@phila.gov</a>         |
| ✓ | Carolyn Caton     | Infrastructure Planning Coordinator         | Philadelphia OEM         | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>         |
| ✓ | Ashley DelBianco  | Chief Grants Officer                        | Mayor's Office of Grants | <a href="mailto:Ashley.DelBianco@phila.gov">Ashley.DelBianco@phila.gov</a>   |
| ✓ | Josh Lippert      | Floodplain Manager                          | L&I                      | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>       |
| ✓ | Nicole Charlton   | Emergency Manager                           | PWD                      | <a href="mailto:Nicole.Charlton@phila.gov">Nicole.Charlton@phila.gov</a>     |
| ✓ | Susan Patterson   | Engineering Specialist                      | PWD                      | <a href="mailto:Susan.Patterson@phila.gov">Susan.Patterson@phila.gov</a>     |
| ✓ | Bill Dobbins      | Water Engineering                           | PWD                      | <a href="mailto:William.Dobbins@phila.gov">William.Dobbins@phila.gov</a>     |
| ✓ | Pat Perhosky      | Engineering Supervisor                      | PWD                      | <a href="mailto:Patrick.perhosky@phila.gov">Patrick.perhosky@phila.gov</a>   |
| ✓ | Mustafa Haweejah  | Graduate Civil Engineer                     | PWD                      | <a href="mailto:Mustafa.Haweejah@phila.gov">Mustafa.Haweejah@phila.gov</a>   |
| ✓ | Marc Cammarata    | Water Engineering Planning and Research     | PWD                      | <a href="mailto:Marc.Cammarata@phila.gov">Marc.Cammarata@phila.gov</a>       |
| ✓ | Julia Rockwell    | Climate Change Adaptation Program Manager   | PWD                      | <a href="mailto:Julia.Rockwell@phila.gov">Julia.Rockwell@phila.gov</a>       |
| ✓ | Angie E. Dixon    |   | MDO - Rebuild            | <a href="mailto:Angela.e.dixon@phila.gov">Angela.e.dixon@phila.gov</a>       |
| ✓ | John Burnes       |   | Cobbs Creek              | <a href="mailto:john@cobbscreek.org">john@cobbscreek.org</a>                 |
| ✓ | Steve Lorenz      | Chief Highway Engineer                      | Streets                  | <a href="mailto:Stephen.Lorenz@phila.gov">Stephen.Lorenz@phila.gov</a>       |
| ✓ | Darin Gatti       | Chief Engineer and Surveyor                 | Streets                  | <a href="mailto:Darin.Gatti@phila.gov">Darin.Gatti@phila.gov</a>             |
| ✓ | Richard Montanez  | Deputy Commissioner for Transportation      | Streets                  | <a href="mailto:Richard.Montanez@phila.gov">Richard.Montanez@phila.gov</a>   |
| ✓ | Patrick F. Clark  | Transportation Planner & Grants Coordinator | Streets                  | <a href="mailto:Patrick.F.Clark@phila.gov">Patrick.F.Clark@phila.gov</a>     |
| ✓ | Mari Radford      | Community Planning Lead                     | FEMA Region III          | <a href="mailto:Mari.Radford@fema.dhs.gov">Mari.Radford@fema.dhs.gov</a>     |
| ✓ | Ernie Szabo       | Hazard Mitigation Plan                      | FEMA                     | <a href="mailto:erszabo@pa.gov">erszabo@pa.gov</a>                           |
| ✓ | Richard Quodomine | Senior Lead GIS Analyst                     | DPP                      | <a href="mailto:Richard.Quodomine@phila.gov">Richard.Quodomine@phila.gov</a> |
| ✓ | Molly Mattes      | Public Health Preparedness Coordinator      | PDPH                     | <a href="mailto:Molly.Mattes@phila.gov">Molly.Mattes@phila.gov</a>           |
| ✓ | Derek Ziegler     | Deputy Director of Planning                 | OEM                      | <a href="mailto:Derek.Ziegler@phila.gov">Derek.Ziegler@phila.gov</a>         |
| ✓ | Alex Vencius      | Graduate Civil Engineer                     | PWD                      | <a href="mailto:Alex.Vencius@phila.gov">Alex.Vencius@phila.gov</a>           |
| ✓ | John Haak         | Director, Policy and Analysis Division      | PCPC                     | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>                 |

## 2021 BRIC & FMA Grants Workshop Agenda

**Date/Time:** May 19<sup>th</sup>, 10am-noon

**Location:** Virtual, Microsoft Teams

**Purpose:** The purpose of this workshop is to introduce Philadelphia partners to Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) grant programs which are made available by the Federal Emergency Management Agency (FEMA) annually each fall. Participants will learn about the priorities for BRIC and FMA and will participate in a discussion around identifying and overcoming challenges in the application process.

| <b><u>TIME</u></b> | <b><u>TOPIC</u></b>  | <b><u>PRESENTOR</u></b>   |
|--------------------|--|---------------------------|
| <b>10:00-10:05</b> | <b>Welcome and Introductions</b>   | <b>Emma Giardina, OEM</b> |
|                    | <i>Brief welcome and introduction to this workshop.</i>  |                           |
| <b>10:05-11:00</b> | <b>BRIC/FMA Presentation</b>   | <b>Tom Hughes, PEMA</b>   |
|                    | <i>Learn what makes a strong application. PEMA will provide an overview of BRIC and FMA requirements, eligible projects and PEMA's 2021 Priorities.</i>  |                           |
| <b>11:00-11:20</b> | <b>Lessons Learned from FY2020</b>   | <b>Sue Patterson, PWD</b> |
|                    | <i>Philadelphia Water Department (PWD) will review lessons learned and best practices from their 2020 application for both BRIC and FMA.</i>   |                           |
| <b>11:20-11:35</b> | <b>BRIC, FMA &amp; the HM Planning Process</b>   | <b>Emma Giardina, OEM</b> |
|                    | <i>Making the connection to the HMP update and plan implementation. Not ready to submit an application this year? Not sure if BRIC and FMA are their right funding source to pursue for your project? Learn how your project ideas fit into our planning process, and plans for identifying a diverse set of funding opportunities moving forward.</i> |                           |
| <b>11:35-11:50</b> | <b>Group Brainstorm/Discussion</b>   | <b>Carolyn Caton, OEM</b> |
|                    | <i>What mitigation projects is your agency hoping to implement in the next several years? What are the potential road blocks, beyond funding, that you anticipate? What support do you need to overcome those road blocks? What partners at the table today could potentially help?</i>  |                           |
| <b>11:50-12:00</b> | <b>Overview of Next Steps &amp; Timeline</b>   | <b>Emma Giardina, OEM</b> |
|                    | <i>Stay until the end to learn more about next steps in the application process, requirements and the timeline for potential applicants.</i>   |                           |



# Mitigation Grants Workshop

May 19, 2021

10:00am-12:00pm

**10:00-10:05**

Welcome

**10:05-11:00**

Hazard Mitigation Grants, BRIC & FMA

**11:00-11:20**

Lessons Learned from FY 2020

**11:20-11:35**

HMP Implementation & Project Support

**11:35-11:50**

Group Brainstorm/Discussion

**11:50-12:00**

Next Steps





# Pennsylvania Emergency Management Agency

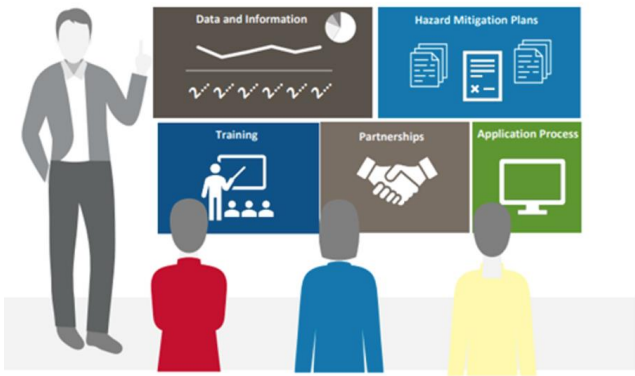
## HAZARD MITIGATION DIVISION

### City of Philadelphia

May 19, 2021  
10:05-10:45



Dickson City – 2 weeks ago, Lackawanna County 2021, *The Times Tribune*



### Topics:

*BRIC, BRIC and OMG More BRIC*

# Agenda Slide

- ❖ What FEMA Saw this year
- ❖ Provide Information on FEMA and Other Federal Disaster & Non-Disaster Grants for Mitigation Measures
- ❖ Applicant/Subapplicant Eligibility/Cycles
- ❖ Local Cost Share Requirements & Sources
- ❖ Importance of Hazard Mitigation Plan
- ❖ FEMA GO & Application Process
- ❖ Job Aids & Resources
- ❖ Questions



*Wyoming County, PA*



*City of Sunbury,  
Water Authority,  
Northumberland  
County*

# Future Conditions/DEI SJ & EJ

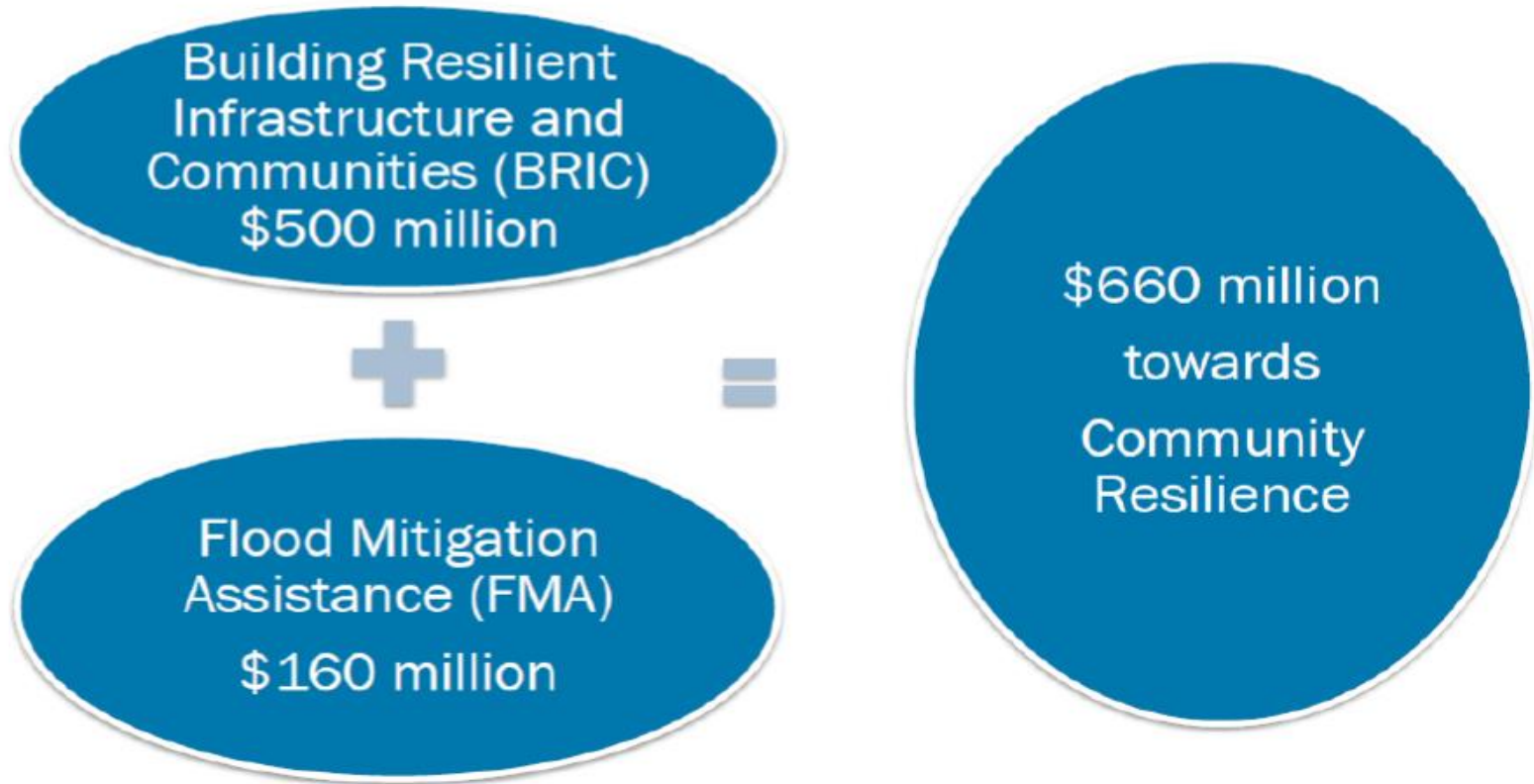
## Future Desired Impacts

The Federal Insurance and Mitigation Administration (FIMA) has two overarching principles that influence all goals and objectives:

- Deliver our programs with **equity**
- Incorporate **future conditions** in all of our work



# \*\*FEMA Non-Disaster Mitigation Grants FFY 2020



# What Did FEMA See this year?

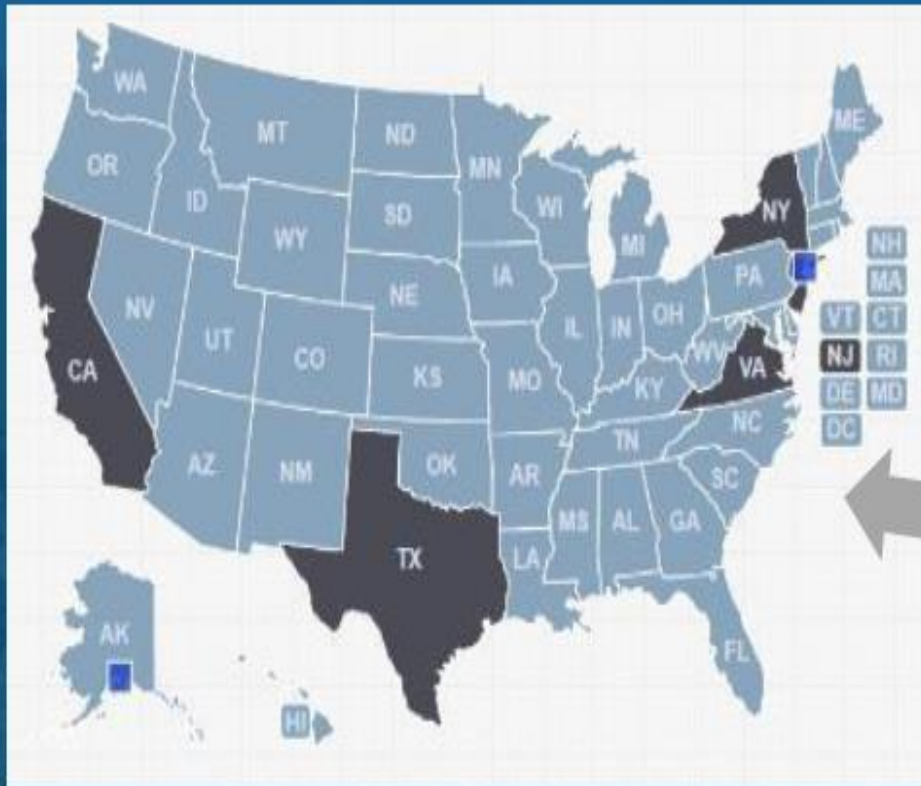
Approximately 750 project subapplications (excluding non-competitive allocations) for

**\$3.5 Billion** in funding across BRIC and FMA in FY2020

**\$700 Million total funding available**



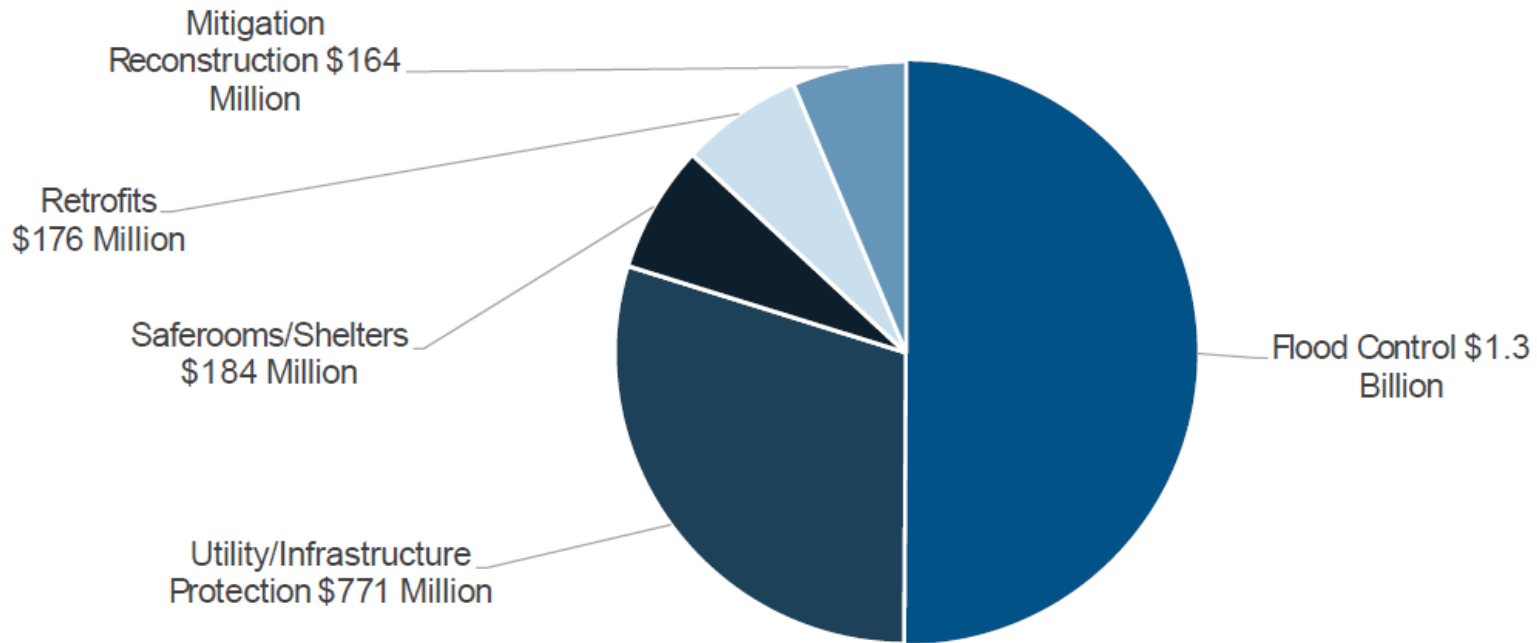
# BRIC Large-Scale Projects



- 25 different states and territories submitted projects with a combined Federal Share of \$50 million or greater
- 5 states submitted projects with over \$200 million Federal Share (California, New Jersey, New York, Texas, and Virginia)

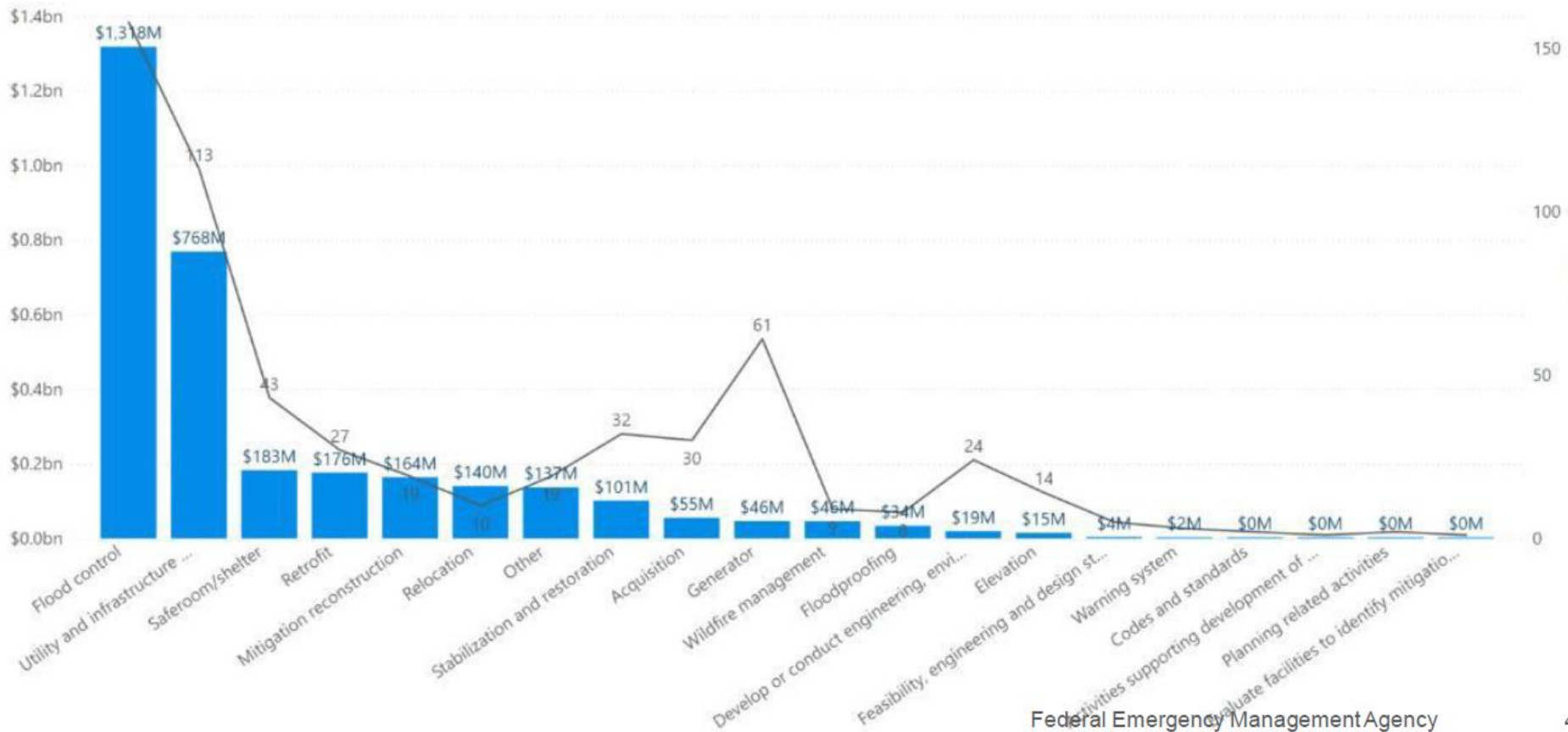
# BRIC FY2020: Top 5 Project Types

## By Federal Share Requested





# BRIC FY2020: Requested Federal Share by Project Type



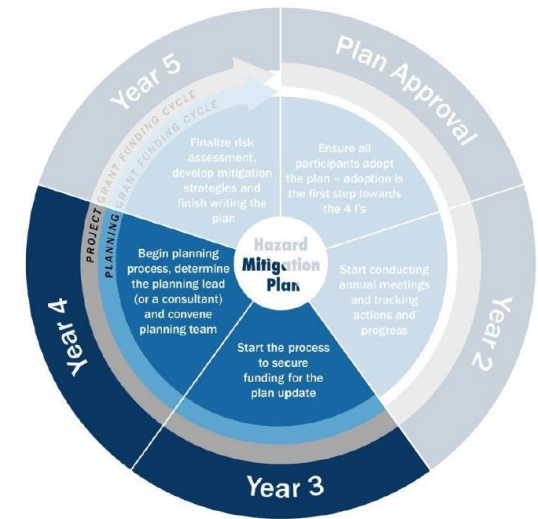
Federal Emergency Management Agency

# What is Mitigation & Planning Process

Mitigation is reducing or eliminating long-term risk to human life, property and “sense of place” from hazards.

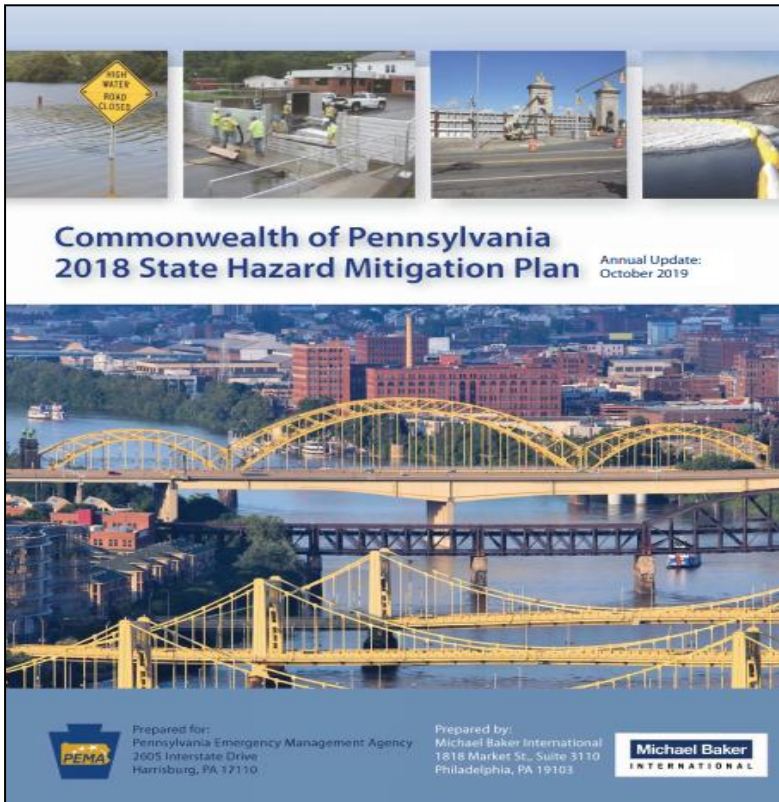
Hazard mitigation planning is the effort to identify a community’s risks and vulnerabilities associated with hazards and to develop and implement strategies to reduce or eliminate risk.

A Hazard Mitigation Plans are the living document used to strengthen and protect people and land..

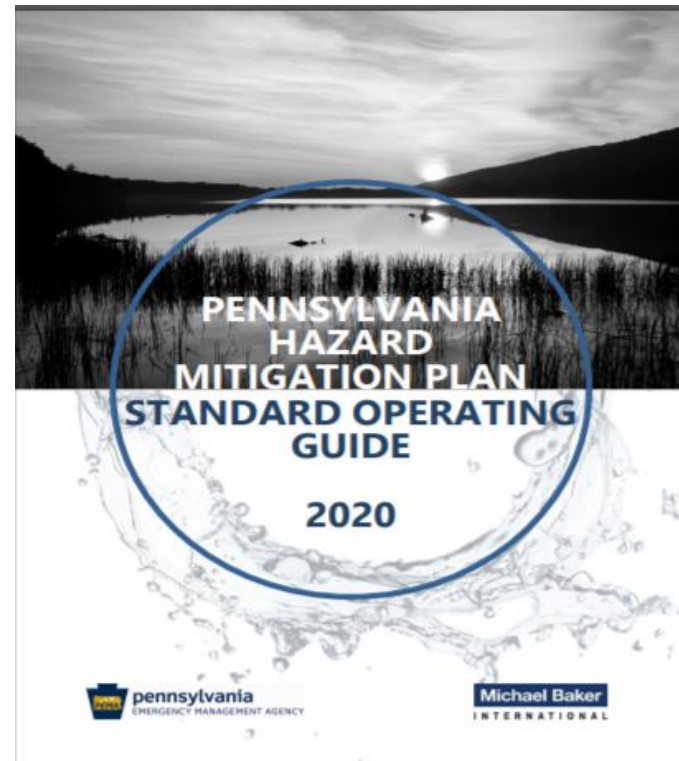


|              |                               |   |
|--------------|-------------------------------|---|
| Requirements | A                             | Planning Process                          |
|              | B                             | Hazard Identification and Risk Assessment |
|              | C1                            | Capabilities Assessment                   |
|              | C2                            | Mitigation Strategy                       |
|              | D1                            | Plan Maintenance                          |
|              | D2                            | Evaluation                                |
|              | E                             | Plan Adoption                             |
| F            | Additional State Requirements |   |

# Hazard Mitigation



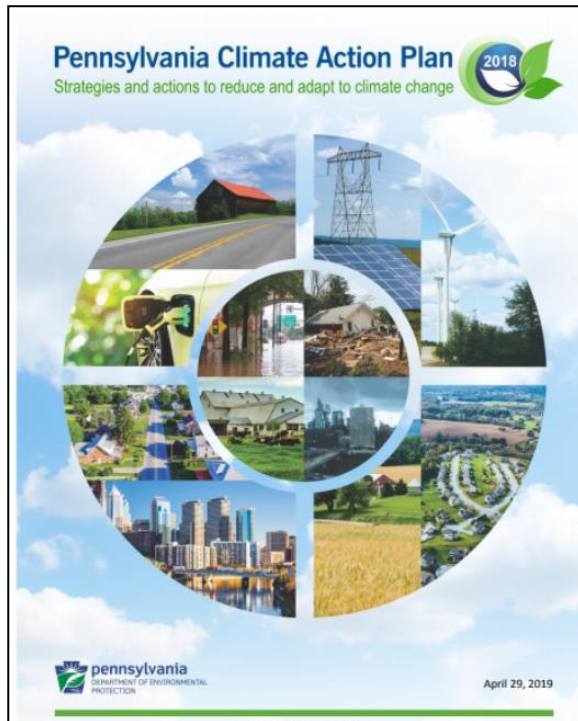
<https://pahmp.com/2020/01/10/3428/>



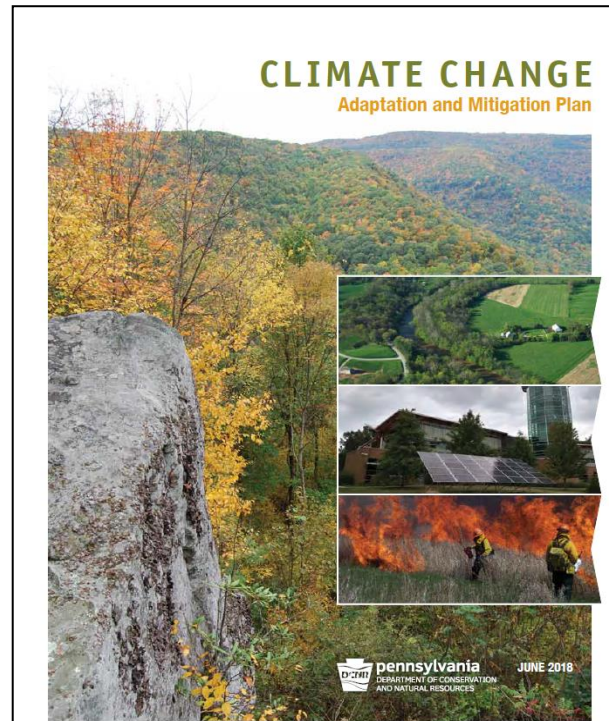
[https://pahmp.com/wp-content/uploads/2020/07/PA-HMP-Standard-Operating-Guide\\_2020.pdf](https://pahmp.com/wp-content/uploads/2020/07/PA-HMP-Standard-Operating-Guide_2020.pdf)



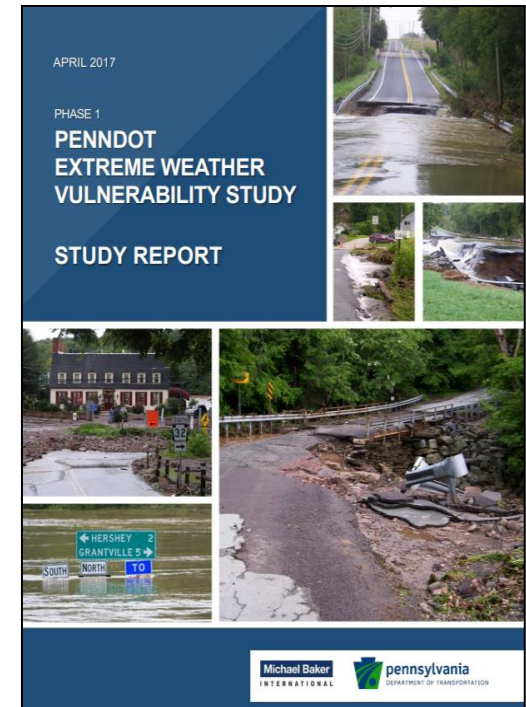
# Climate Adaptation/Future Conditions



<https://www.dep.pa.gov/Citizens/Climate/Pages/PA-Climate-Action-Plan.aspx>



<http://elibrary.dcnr.pa.gov/GetDocument?docId=1743769&DocName=Climate Change Adaptation Plan Final Aug2018.pdf>



<http://s3.amazonaws.com/tmp-map/climate/doc/StudyReport-PaVulnerabilityStudy-ver040317.pdf>

# Guides to Expanding Mitigation



## Guide to Expanding Mitigation

MAKING THE CONNECTION WITH PUBLIC HEALTH



## Guide to Expanding Mitigation

MAKING THE CONNECTION WITH ARTS & CULTURE

# Guides to Expanding Mitigation

<https://www.fema.gov/about/organization/region-2/guides-expanding-mitigation> 7 Guides that are out on the FEMA Region 2 page **\*\*NEW**

Connecting Mitigation & Electric Power

Connecting Mitigation & Equity

Connecting Mitigation & Municipal Financing

Connecting Mitigation & Transportation

Connecting Mitigation & Public Health

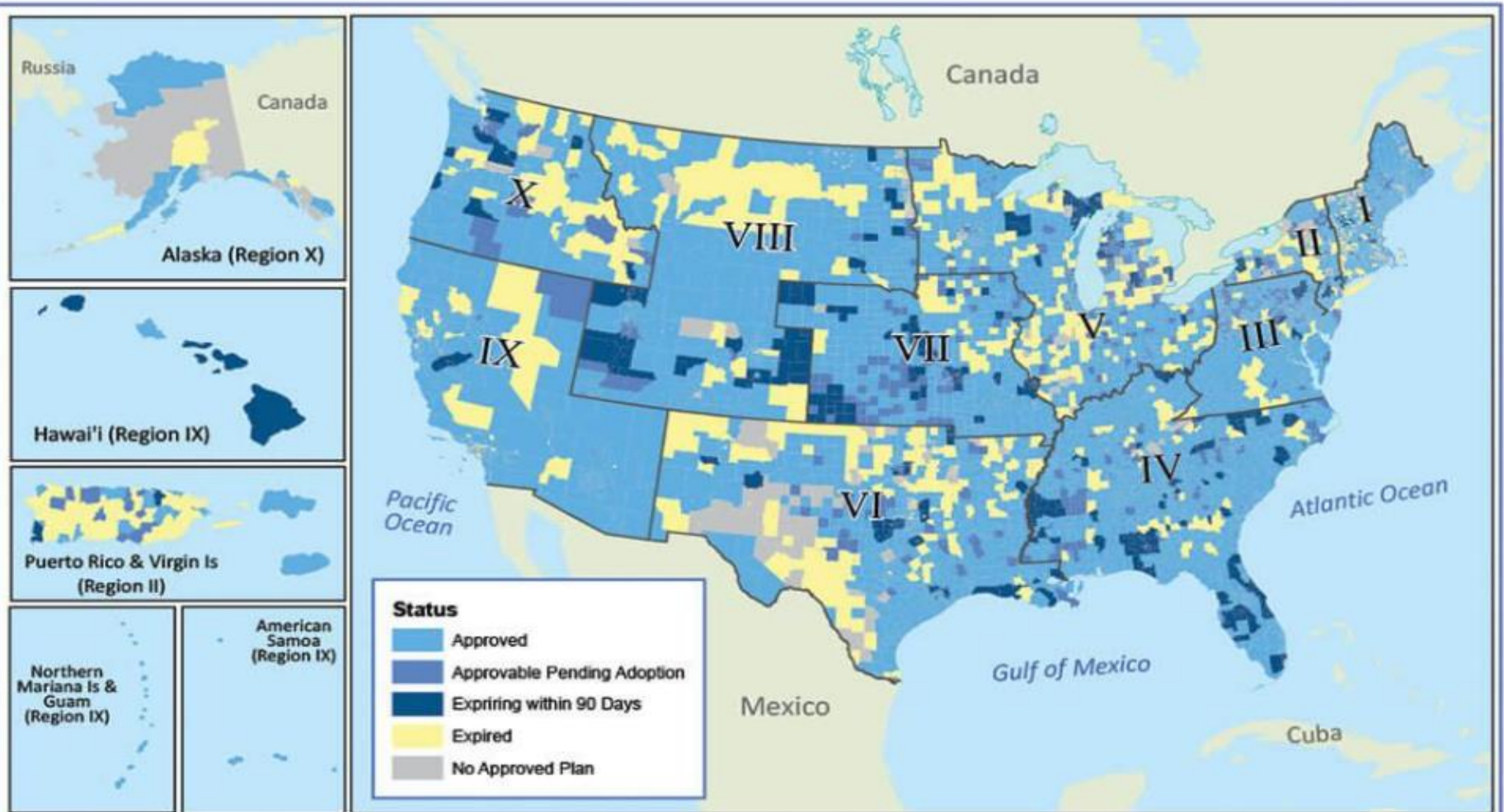
Connecting Mitigation & Agriculture

Connecting Mitigation & Arts and Culture





# FEMA HQ Tracking

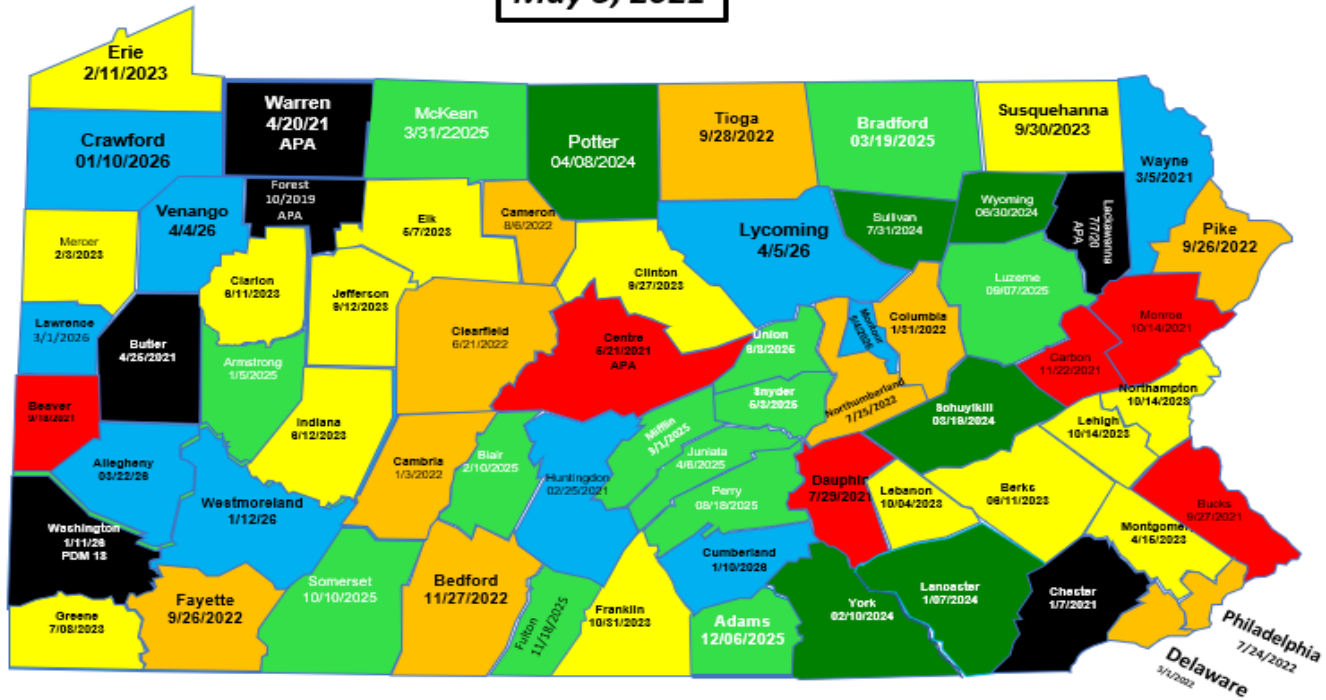


Local Hazard Mitigation Plan Status  
as of June 30, 2020



# PEMA/County HM Plan Tracking

May 5, 2021



- Current plan expires 2024
- Current plan expires 2023
- Current plan expires 2022
- Current plan expires 2021
- Current plan expired
- Current plan expires 2025
- Current plan expires 2026

# Mitigation Action Portfolio

[https://www.fema.gov/sites/default/files/2020-08/fema\\_mitigation-action-portfolio-support-document\\_08-01-2020\\_0.pdf](https://www.fema.gov/sites/default/files/2020-08/fema_mitigation-action-portfolio-support-document_08-01-2020_0.pdf) 107 Pages!



# Mitigation Success Stories Factsheets

The Pennsylvania Silver Jackets Team's  
**Mitigation Success Story  
 Factsheets**

October 2015

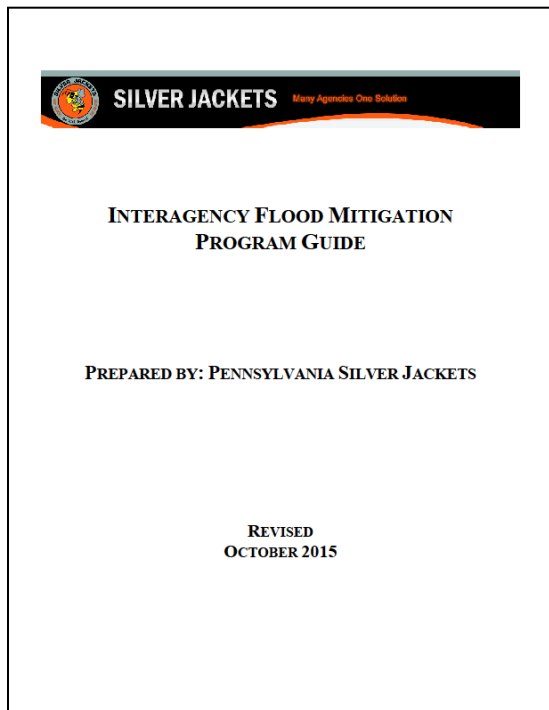


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# PA SJ Interagency Flood Mitigation Program Guide

- PA SJ Team developed a document that lists and describes many of the federal, state, and local flood related assistance programs available in PA
- Developed in 2011, updated in 2015



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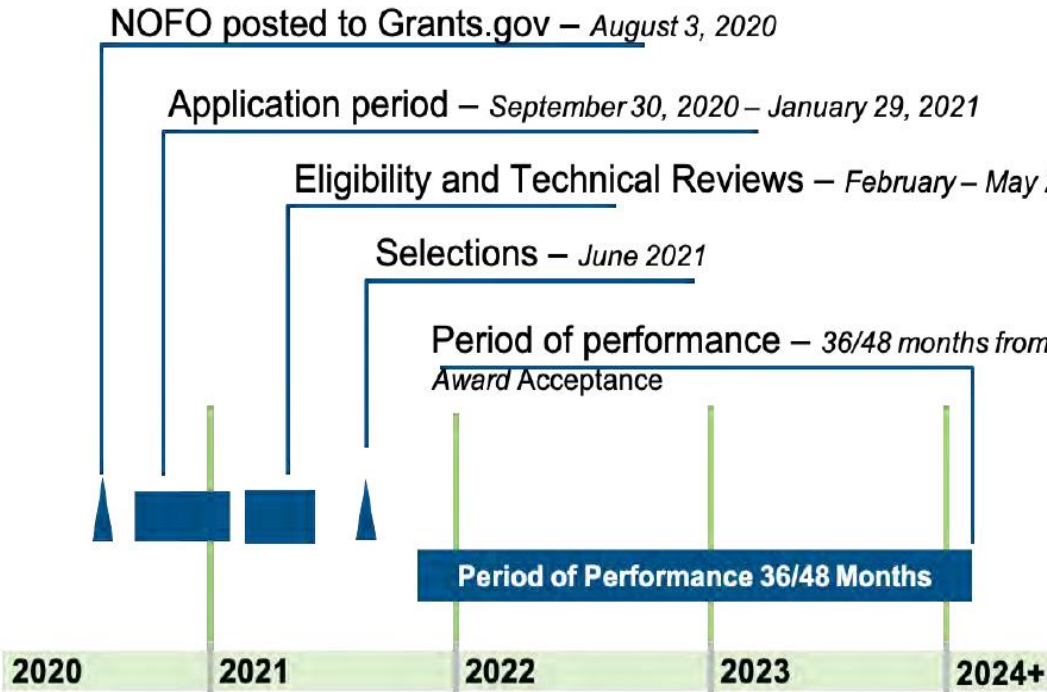
# Cost Share Requirements

- Generally, FEMA will pay 75% of all eligible costs
- Building Resilient Infrastructure & Communities (BRIC)
  - FEMA will pay 90% for small impoverished communities
  - FEMA will pay up to 100% for management costs
- Flood Mitigation Assistance
  - FEMA will pay up to 90% for Repetitive Loss Properties
  - FEMA will pay up to 100% for Severe Repetitive Lost Properties
- Hazard Mitigation Grant Program (HMGP)
  - The State will usually pick up the 25% non-federal share



# Non-Disaster **FEDERAL** GRANT TIMELINE

## Non-Disaster Mitigation Grants Application Cycle and Funding Deadlines



Application period opens on **September 30, 2020**.

Submission deadline for applications is **3:00 PM ET on January 29, 2021**.

System-related issues must be addressed by **3:00 PM ET on January 27, 2021**.

Pre-Award Selection Notice: **Anticipated in June 2021**

Period of Performance:

Start Date: **When the recipient accepts the Award**

End Date: All projects are **36 months** from the date of the Award EXCEPT for FMA Community Flood Mitigation Projects which are **48 months** from the Award date



# 2020 Commonwealth of PA Timelines

## Deadlines:

- Letter of Interest (one-pager) due by **October 15, 2020, 1600 hours EST**;
- Entry into the FEMA Grants Opportunity once Letter of Interest is approved by PEMA;
- Cut-off of Eligible and COMPLETE applications in the FEMA GO system is **November 18, 1700 hours EST**;
- State Hazard Mitigation Assistance Application Team will meet **December 7-18, 2020**; and
- Based on State Team points, prioritization of State Team and FEMA requirements, enter state FMA and BRIC applications in system by **Saturday, January 15, 2021**.
- FEMA Deadline for all applications by state is **January 29, 2021**.

## PEMA Letter of Interest found here:

<https://www.pema.pa.gov/Mitigation/Grants-Projects/Non-Disaster-Forms/Pages/default.aspx> Form 01 Non-Disaster Grant Letter of Interest

# State Mitigation Planning Team Actions Criteria

**Table 6.2-3 Multi-Objective Mitigation Action Prioritization Criteria**

| MITIGATION ACTION RANKING CRITERIA                    | CRITERIA DESCRIPTION   | WEIGHT VALUE |
|---|--|--------------|
| Effectiveness   | The extent to which an action reduces the vulnerability of people and property.  | 20%          |
| Efficiency  | The extent to which time, effort, and cost is well used as a means of reducing vulnerability.  | 30%          |
| Multi-Hazard Mitigation                               | The action reduces vulnerability for more than one hazard.   | 20%          |
| Addresses High Risk Hazard                            | The action reduces vulnerability for people and property from a hazard(s) identified as high risk.   | 15%          |
| Addresses Critical Communications/Critical Facilities | The action pertains to the maintenance of critical functions and structures such as transportation, supply chain management, data circuits, etc. | 15%          |

*HM State Goals updated in 2018 and covers 129 mitigation actions*



# Building Resilient Infrastructure & Communities (BRIC)

## BRIC Grant's Intent:

Building Resilient Infrastructure and Communities (BRIC) will support states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program.

The BRIC program guiding principles are supporting communities through capability and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency

# BRIC Capability- and Capacity-Building Activities



# BRIC Eligible Activities

## Expanded Eligibility Includes:

- Project Scoping
- Building Code Activities
- Pre-award costs
- Additional activities for wildfire and wind implementation (DRRA Section 1205)
- Earthquake early warning (DRRA Section 1233)

## Project Must:

- Be Cost Effective
- Reduce/Eliminate risk and damage from future natural hazards
- Meet latest 2 consensus codes (i.e., 2015 or 2018 international building code)
- Additional activities for wildfire and wind implementation (DRRA Section 1205)
- Align with Hazard Mitigation Plan
- Meet all environmental and historic preservation requirements

# Building Resilient Infrastructure & Communities (BRIC)

## Who is eligible for BRIC funding?

### Applicants:

- ✓ All 50 States
- ✓ U.S. territories
- ✓ Federally recognized Indian Tribal Governments
- ✓ District of Columbia



### Subapplicants:

- ✓ Local Governments
- ✓ Indian Tribal Governments
- ✓ State Agencies
- ✓ Tribal Agencies

# BRIC Guiding Principles

## Building Resilient Infrastructure and Communities (BRIC) grant program

### Guiding Principles

Support community capability and capacity building



Enable large infrastructure projects



Encourage and enable innovation



Maintain flexibility



Promote partnerships



Provide consistency



### BRIC Launch Timeline

Public Comment Period:  
Federal Register Notice  
Closed May 11, 2020

BRIC Rollout  
and Training  
Spring—Fall 2020

Notice of Funding  
Opportunity  
Summer/Fall 2020

Grant Application  
Period Opens  
Fall 2020

## Support's FEMA's Strategic Plan

- Build a Culture of Preparedness
- Ready the Nation for Catastrophic Disasters
- Reduce the Complexity of FEMA

# FEMA Community Lifelines

## Definition

A lifeline enables the continuous operation of **critical business** and **government functions** and is essential to **human health** and safety or economic security.

## Purpose

Root Cause Analysis

Interdependencies

Prioritization

Ease of Communication

## Assessing

Status → What?

Impact → So What?

Actions → Now What?

Limiting Factors → What's the Gap?

## Stabilization

Occurs when basic lifeline services or capabilities are provided to survivors (may be temporary solutions)

COMPONENTS of Lifelines



Safety and Security



Law Enforcement/ Security



Fire Services



Search and Rescue



Government Services



Community Safety



Food, Water, Shelter



Food



Water



Shelter



Agriculture



Health and Medical



Medical Care



Patient Movement



Public Health



Fatality Management



Medical Supply Chain



Energy (Power & Fuel)



Power (Grid)



Fuel



Communications



Infrastructure



Alerts, Warnings, and Messages



911 and Dispatch



Responder Communications



Finance



Transportation



Highway/Roadway



Mass Transit



Railway



Aviation



Maritime



Hazardous Materials



Facilities

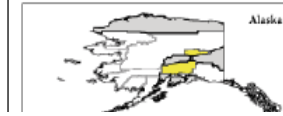


HAZMAT, Pollutants, Contaminants



# Local Building Codes and Enforcement

Building codes are the cornerstone of a resilient community, but less than 35 percent of communities have adopted the latest, most up-to-date hazard-resistant codes.



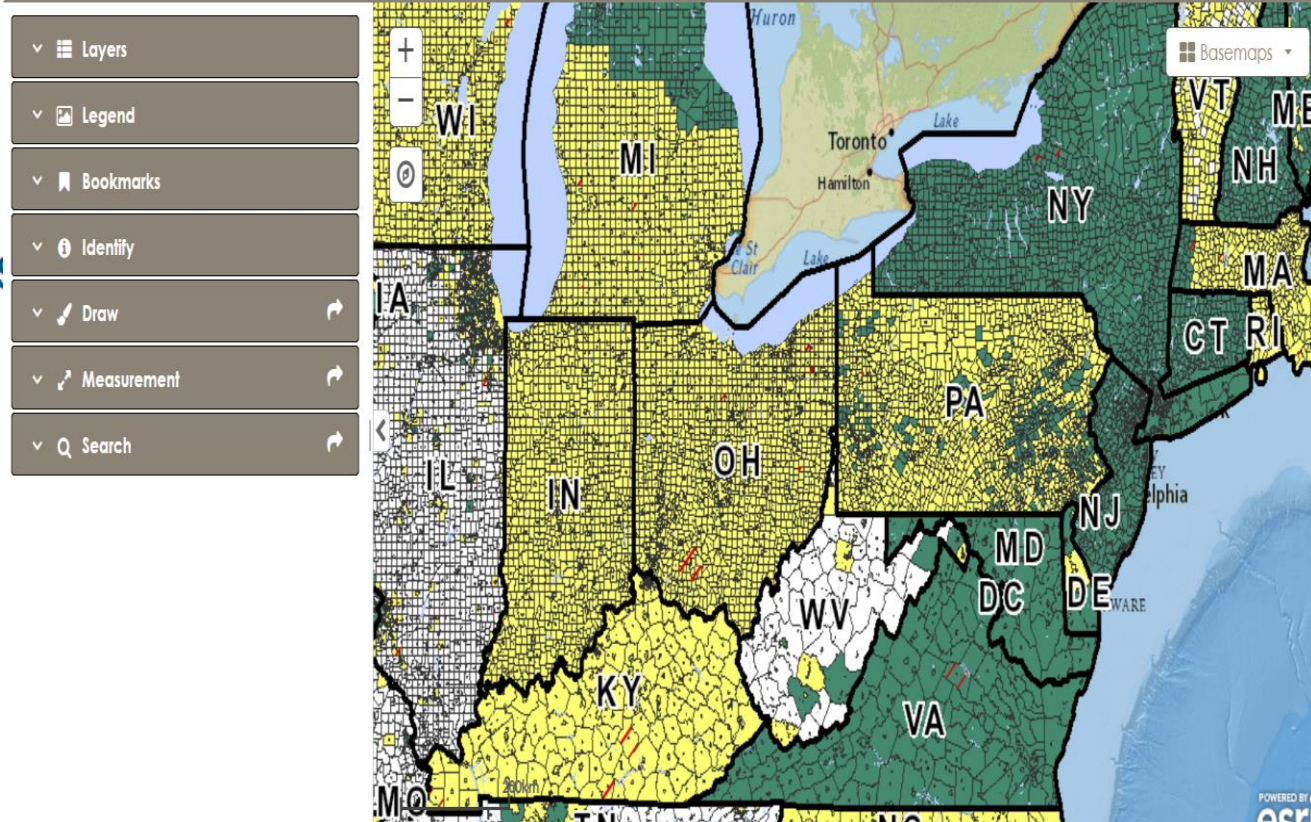
U.S. Hazard Risk  
Counties in the BCEGS Database that Have Adopted  
Hazard-Resistant Building Codes and Participate in the NFIP



National Building Code Adoption Tracking Portal

United States - English

Help Take the Tour



One way to check as a quick reference guide regarding local Mandatory building code adoption is to check out this online portal at:

[https://geo.stantec.com/National\\_BCATS\\_Portal/viewer/](https://geo.stantec.com/National_BCATS_Portal/viewer/)

# BRIC Capability- and Capacity-Building Activities

## Example Building Code Adoption and Enforcement Activities



Evaluate adoption and/or implementation of codes that reduce risk



Enhance existing adopted codes to incorporate more current requirements or higher standards



Develop professional workforce capabilities through technical assistance and training



# Pennsylvania BRIC Building Code Application

- ❑ PEMA, DCED, PADEP Energy Office, Labor & Industry
- ❑ Building Code BRIC Project – Duration 28 Months \$200k
- ❑ PA DEP Energy Efficiency Outreach (Adoption of the 2015 IECC)
- ❑ Develop/Review FPM & Energy Survey, Outreach Training, Delivery of Pilot Workshops, Revision of the Workshops for Future Deliveries, Identify Mitigation Opportunities and DRRA Section 1208 Opportunities and Project Closeout

FEMA PROGRAM SUPPORT MATERIAL

## BRIC Building Code Activities

The adoption and enforcement of building codes is an important mitigation activity that provides significant resilience benefits. This program support material provides Applicants and subapplicants of the Building Resilient Infrastructure and Communities (BRIC) program with information relative to eligible building code-related activities under the State/Territory Allocation and Tribal Set-Aside, as described in the BRIC Notice of Funding Opportunity (NOFO).



# BRIC – Phased Projects



- ❑ Phased projects are where FEMA provides funding for complex mitigation projects to Applicants to allow them to develop all the technical and environmental information, including design, engineering studies, and permitting, before issuing a full construction approval
- ❑ Phasing projects allow monies to flow and good mitigation projects to be developed and evaluated without a community assuming risk of not being funded, which can be especially helpful for smaller communities.

# BRIC – Go/No-Go Milestones

**New --- The applicant, in coordination with the Applicant, must identify a series of Go/No-Go milestones throughout the work schedule for mitigation activities that FEMA will review and approve**



# BRIC – Technical Criteria (100 points)



Infrastructure project



Mitigating risk to one or more lifelines



Incorporation of nature-based solutions



Applicant has mandatory building code adoption requirement (2015 or 2018 versions of International Building Code and International Residential Code)



Subapplicant has Building Code Effectiveness Grading Schedule Rating of 1 to 5



Application generated from a previous FEMA Hazard Mitigation Assistance Advance Assistance award



Increased non-federal cost share



Designation as a small impoverished community

**ALL OR NONE!**



# BRIC – Qualitative Criteria



***Note: Can Pick up points in each category, not all or none like the Technical Criteria – However, was in increments during this year’s review panel***

# BRIC – Direct Technical Assistance

- ❑ Non-Financial Direct Technical Assistance will be provided to up to 10 selected communities to support the mitigation outcomes listed below:



# BRIC – Direct Technical Assistance



## FEMA may prioritize Direct Technical Assistance for communities that:

- Have not received a project award under the PDM, FMA, or the HMGP within the past 5 years.
- Have not received an Advance Assistance award under the PDM, FMA, or HMGP within the past 5 years
- Are Tribal entities
- Are small impoverished communities
- Have demonstrated a compelling need (e.g., have significant social vulnerability, multiple major disaster declarations within the past 5 years, etc.)

# Challenges for Locals

Application Development: Translating your project vision into an HMA fundable subapplication and conveying the risk reduction.

Application Reviews: Reviewers are limited by the subapplication and attached materials submitted when seeking to review technical feasibility and cost effectiveness.

- BCANarrative – compiled documentation for all BCAinputs
- Consistent and Accurate data – scope (level of protection) matched BCAand data are correctly entered ( a BFE of 5.6 vs. 6.5 can make the difference)



# General Best Practices

- Provide detailed BCANarratives, separate SOWNarratives, and extensive use of Comment and Justification Boxes
  - This additional context on proposed projects that help organize your thoughts and allows the reviewers to understand your project.
  - Added details, explanations, and references also allow reviewers to provide more pointed and actionable guidance in RFIs.
- Attach Excel file and source data used to generate BCAs
  - Reviewers validate inputs and methodology used – and make corrections!
- Use clear and consistent naming conventions for attachment
  - Simple steps like providing easy-to-follow in-text references to additional materials help streamline the review process and allow reviewers to quickly establish a detailed understanding of proposed projects.

# Additional Best Practices

- If engineering / surveying documents are available, include stamped/sealed reports, figures or data (LFEs, pre- and post-mitigation BFEs)
- If preliminary design is not started, clearly describe performance-based design measures/level of protection desired (project ABC will be designed to IAW XYZ industry standard, upon completion of project ABC the benefiting area will be protect to XYZ)
- Consider project scoping or phasing for larger complex projects
- Program priorities and NOFO



# Infrastructure Projects – Common Challenges

Larger, more complex projects → more information needed and harder to organize

## Missing Information

- No H&H study or incomplete study details
- No description or documentation to support level of effectiveness
- No clear description of upstream/downstream impacts

## Inaccurate Information

- Recurrence intervals
- Lowest Floor Elevations

# Infrastructure Projects – Reviewer Notes

## Incorrect Application of Data

- Referencing NFIP Data
  - Interpretation and use of FIS data to determine water surface elevation, streambed elevation, lowest floor elevation and discharge amounts calculated incorrectly
  - Inaccurate or inexact use of claims data (e.g., using claims data from outside the project area)
- Determining Recurrence Intervals (RIs)
  - Conflating elapsed-years since last-known hazard occurrence with RI
  - Lack of familiarity with event-specific guidance that could be used to determine RI
  - Use the unknown frequency calculator if RIs are unknown
- Sea Level Rise (SLR)
  - Included in BCA, but not design elevations

# Infrastructure Projects – Reviewer Notes (cont)

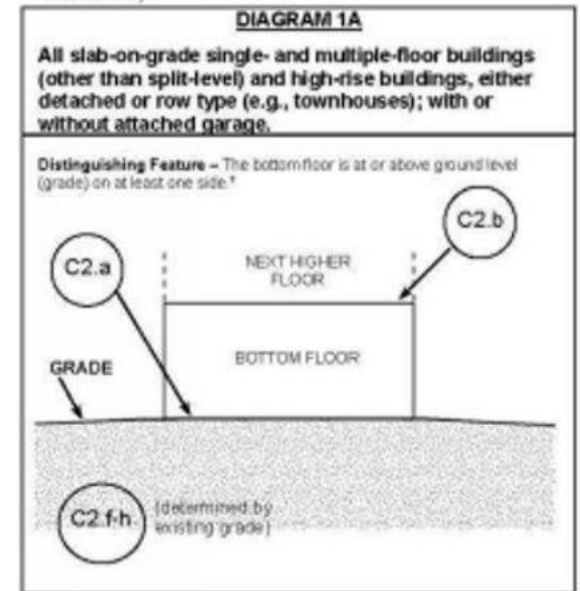
## Incorrect Application of Data

- Calculation of service populations, service benefits, or loss of function
  - Not accounting for other operational critical facilities.
  - Providing values without explanation or documentation.
  - Referencing district-wide operating budget for a single-facility retrofit.
  - Conflating loss of service benefit types (e.g., including wastewater loss of service benefits for stormwater system project)
- Unclear descriptions of the intended level of protection
- Connection between hazard and project not made (rainfall data for coastal protection)

# Acquisition, Elevation & Mitigation Reconstruction

## ***BCA & Technical Feasibility Challenges***

- Acquisitions
  - Fair market value not equal to building replacement value
- Elevations
  - Lack of documentation of elevation feasibility for older buildings
  - Incorrect, inconsistent, or incongruent calculation of feet to raise LFE
  - Incorrect LFE (frequently pulling wrong figure from Elevation Certificates)
- Mitigation Reconstruction
  - \$150,000 fed share cap for construction
  - Structure sizes more than 10% greater than the original structure

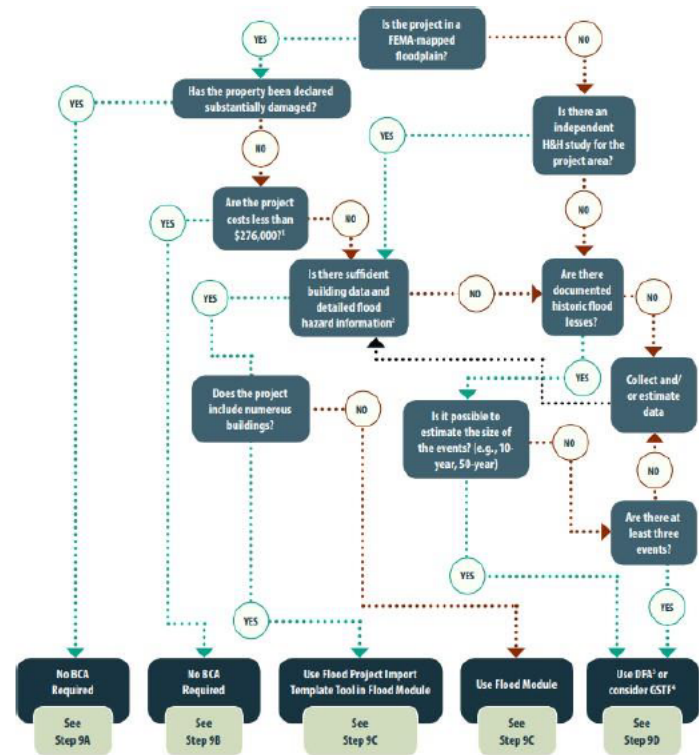




# Acquisition, Elevation & Mitigation Reconstruction

## Precalculated Benefit Challenges

- Structures outside the SFHA
- Substantial Damage not Substantiated
- Aggregating benefits
- Unsupported Location Factors
- Inflation
- Federal Share (Mitigation Reconstruction)



Federal Emergency Management Agency



FEMA

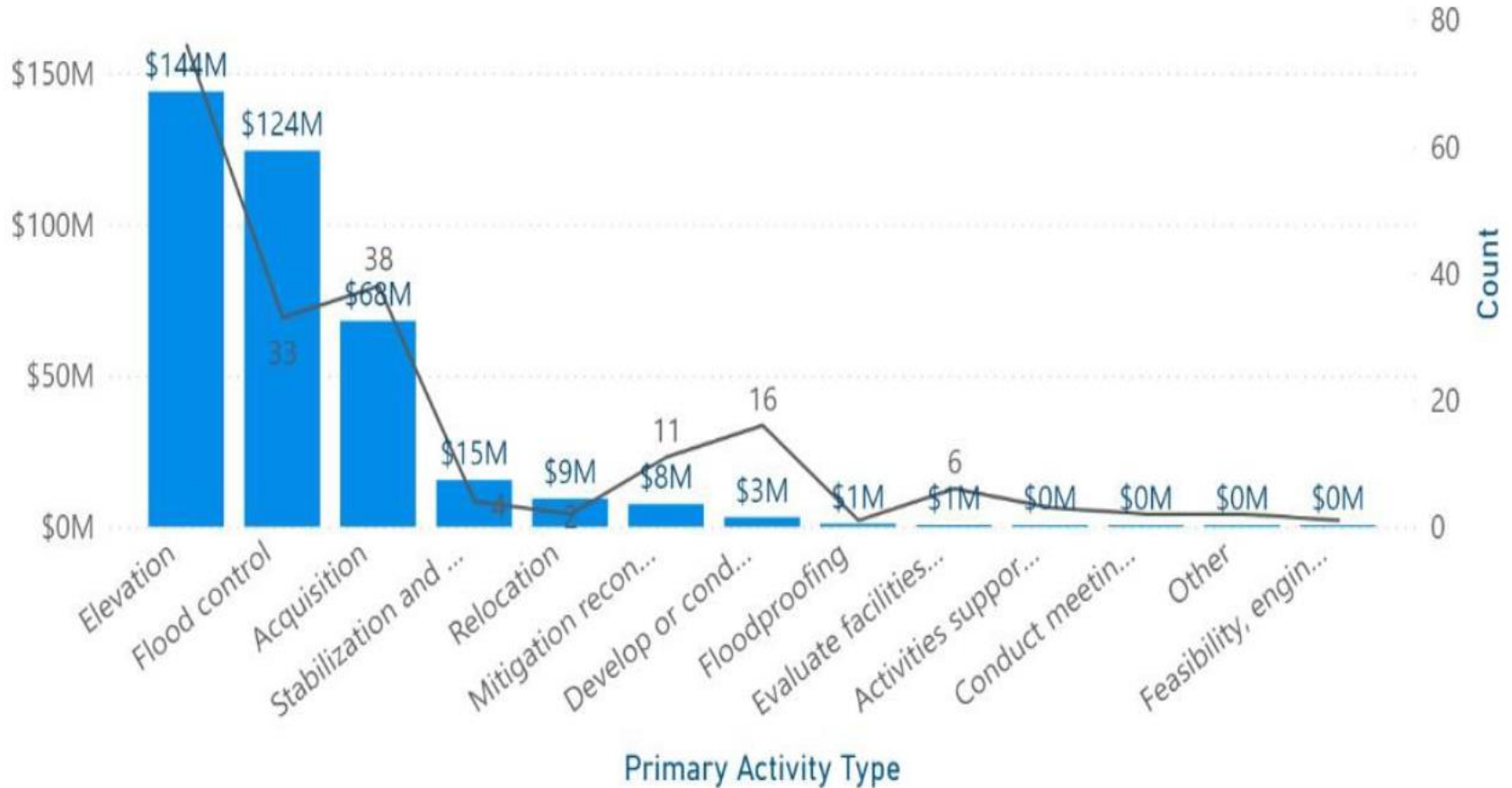


# \*\*FEMA Flood Mitigation Assistance FFY 2020

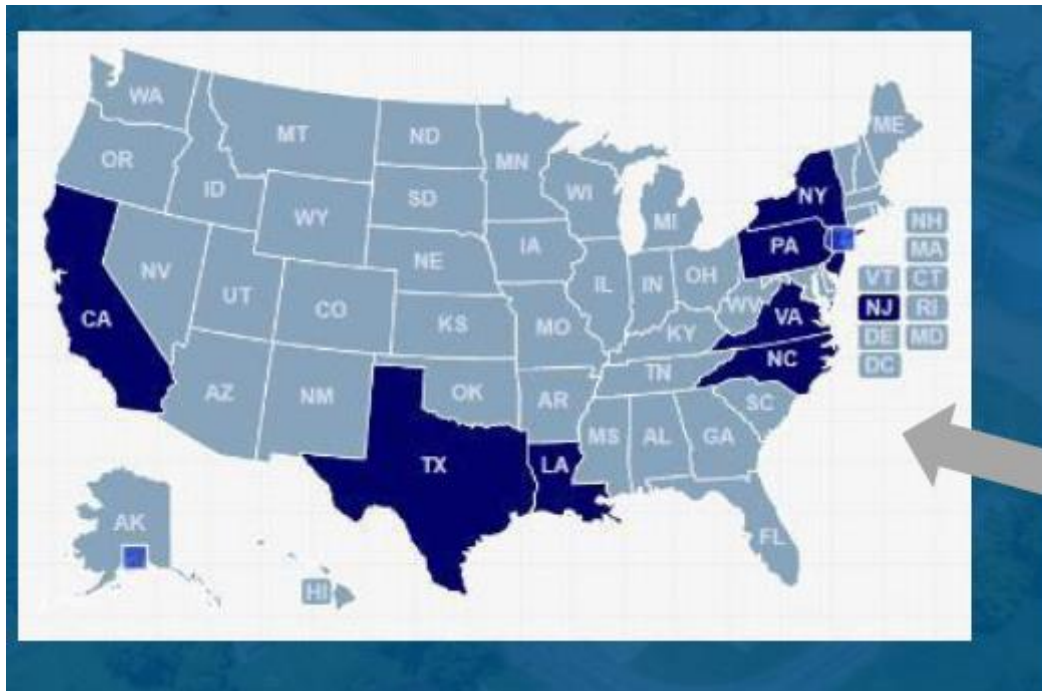




# FMA FY2020: Requested Federal Share by Project Type



# FMA Large-Scale Projects



- 30 different states and territories applied for FMA projects.

Two states submitted projects with \$50 million or more in federal share

Eight states submitted projects with over \$10 million federal share

# FEMA Eligible Projects under FMA

- Property Acquisition and Structure Demolition
- Property Acquisition and Structure Relocation
- Structure Elevation
- Mitigation Reconstruction
- Dry Floodproofing of Historic Residential Structures
- Dry Floodproofing of Non-residential Structures
- Localized Flood Reduction Projects
- Structural Retrofitting of Existing Buildings
- Non-Structural Retrofitting of Existing Buildings & Facilities
- Infrastructure Retrofit
- Soil Stabilization
- Project Scoping – Individual Home and Community Flood



# How to Apply to FEMA GO (Grants Outcomes)

- ❑ Eligible Applicants must apply for funding using the new FEMA Grants Outcomes (FEMA GO) at the FEMA GO portal:  
<https://go.fema.gov/login?redirect=%2F>
- ❑ Visit FEMA GO Guides and Resources to view the technical user manuals and support materials:  
<https://www.fema.gov/grants/guidance-tools/fema-go/assistance-firefighters-grants>
- ❑ FEMA FEMA GO Technical Support, contact the Help Desk by calling 1-877-611-4700 or by e-mail at:  
<https://www.fema.gov/grants/guidance-tools/fema-go/assistance-firefighters-grants>

**Welcome to FEMA Grants Outcomes!**  
Grants Outcomes (GO) is FEMA's new platform for submitting, approving, and managing FEMA grants.

**Log in**

Email

Password

[Forgot password?](#)

**Log in**

**Create an account**

**FEMA employees**

Insert your PIV card into your smart card reader

**Log in with your PIV card**

United States Government  
John Doe  
USA

**Department of Homeland Security (DHS) Consent**  
You are about to access a Department of Homeland Security computer system. This computer system and data therein are property of the U.S. Government and provided for official U.S. Government information and use. There is no expectation of privacy when you use this computer system. The use of a password or any other security measure does not establish an expectation of privacy. By using this system, you consent to the terms set forth in this notice. You may not process classified national security information on this computer system. Access to this system is restricted to authorized users only. Unauthorized access, use, or modification of this system or of data contained herein, or in transit to/from this system, may constitute a violation of section 1030 of title 18 of the U.S. Code and other criminal laws. Anyone who accesses a Federal computer system without authorization or exceeds access authority, or obtains, alters, damages, destroys, or discloses information, or prevents authorized use of information on the computer system, may be subject to penalties, fines or imprisonment. This computer system and any related equipment is subject to monitoring for administrative purposes, law enforcement, criminal investigative purposes, intelligence gathering.

# Program Support Material

## **BRIC**

- [Mitigation Action Portfolio](#)
- BRIC Building Codes Activities
- BRIC Partnership Activities
- BRIC Project Scoping Activities
- BRIC Mitigation Planning Activities
- BRIC Direct Technical Assistance
- BRIC Technical Criteria
- BRIC Qualitative Criteria
- HMA Cost Share Guide
- FY20 BRIC Notice of Funding Opportunity

## **FMA**

- [FMA Community Flood Mitigation Project Fact Sheet](#)
- [FMA Community Flood Mitigation Benefitting Area Map Development](#)
- [FMA Project Scoping Fact Sheet](#)
- [GEOSPATIAL FILE ELIGIBILITY CRITERIA IN FLOOD MITIGATION GRANT APPLICATIONS](#)
- [FY20 FMA Notice of Funding Opportunity](#)
- [Unified Hazard Mitigation Assistance Guidance & Addendum](#)
- [Property Elevation and Acquisition Job Aides:](#)
  - [Elevation Job Aid](#)
  - [Acquisition & Demolition Job Aid](#)
  - [Acquisition & Relocation](#)
- [HMA Cost Share Guide](#)



# HOW TO APPLY/FEMA GO

## **FEMA Program Website:**

FMA-

<https://www.fema.gov/grants/mitigation/floods>

BRIC- [www.fema.gov/bric](http://www.fema.gov/bric)

## **FEMA GO Helplines:**

[femago@fema.dhs.gov](mailto:femago@fema.dhs.gov)

1-877-611-4700

## **BCA Helpline:**

[BCHelpline@fema.dhs.gov](mailto:BCHelpline@fema.dhs.gov)

1-855-540-6744

## **Feasibility and Effectiveness Helpline:**

[FEMA-BuildingScienceHelp@fema.dhs.gov](mailto:FEMA-BuildingScienceHelp@fema.dhs.gov)

## **Environmental and Historic Preservation:**

[EHPHelpline@fema.dhs.gov](mailto:EHPHelpline@fema.dhs.gov)

1-866-222-3580

## **HMA Helpline:**

[HMAGrantsHelpline@fema.dhs.gov](mailto:HMAGrantsHelpline@fema.dhs.gov)

1-866-222-3580

## **FEMA Region III**

### **Non-Disaster HMA Team**

Dustin Brosius - HMA Branch Chief

Angel Gillette – Non-Disaster HMA  
Team Lead

Crystal Newman – Pennsylvania

Manan Vyas – Civil Eng. Team Lead

# Contact Information

Tom Hughes, State Hazard Mitigation Officer  
(717) 651-2726 or [thughes@pa.gov](mailto:thughes@pa.gov)

Julie Yu, Non-Disaster Project Officer  
(717) 651-2279 or [juyu@pa.gov](mailto:juyu@pa.gov)

## PEMA WEBSITE:

<http://www.pema.pa.gov>

**Resource Account**  
[RA-Shazmitoff@pa.gov](mailto:RA-Shazmitoff@pa.gov)

**PEMA, 1310 Elmerton  
Avenue, Harrisburg PA  
17110**

**Our best advice is to email your  
scanned Letters of Interest (LOI)  
directly to Julie Yu at [juyu@pa.gov](mailto:juyu@pa.gov)**

**PEMA Fax# is: 717-651-2150**

# Eligible HMGP Projects

- Property Acquisition and Structure Demolition
- Property Acquisition and Structure Relocation
- Structure Elevation
- Mitigation Reconstruction
- Dry Floodproofing of Historic Residential Structures
- Dry Floodproofing of Non-residential Structures
- Localized Flood Reduction Projects
- Structural Retrofitting of Existing Buildings
- Non-Structural Retrofitting of Existing Buildings & Facilities
- Infrastructure Retrofit
- Soil Stabilization
- Project Scoping – Individual Home and Community Flood
- 5% Mitigation Projects (State Initiative)
- 7% Hazard Mitigation Planning





# BRIC/FMA

Application Nuts & Bolts

May 2021



**PHILADELPHIA**  
**WATER**  
— DEPARTMENT —

# FEMA Go Account

# FEMA GO User Manual

## Subapplication Development for Hazard Mitigation Grants

- FEMA Go Account is already set up
- Designate grant applicant(s) who will submit will need to be added to the list of authorized users, by city grant office
- Submit FEMA HAZARD MITIGATION ASSISTANCE GRANT PROGRAM (Non-Disaster Grants) Letter of Interest

- Evaluation tools to determine project viability for grant application in advance

1. BRIC Technical Qualitative Evaluation of Criteria for National Competition
2. Form R27\_Job Aid\_Flood Risk\_April 2017\_web.pdf
3. Form R-30 T1.4\_Flood\_Risk\_Reduction\_June 2017.pdf
4. EIGHT STEP PROCESS FORM (REQUIRED FOR FLOODPLAINS & WETLANDS)
5. 17a-Watershed-Example-BCA-Narrative.pdf
6. NEW GEOSPATIAL FILE ELIGIBILITY CRITERIA IN FLOOD MITIGATION GRANT APPLICATIONS
7. Cost Benefit Analysis Tool -(download auxiliary tool) fema\_bca\_toolkit-6.0.xlsx
8. BCA-Data-Template-Flood-Hurricane.pdf

# • Submittal Documents

1. Designation of Agent
2. General Project Description and Outline.  
Relevant portions of Project Description will need to be broken down using FEMA Go submittal outline within the program
1. GIS file of project area, including relevant features
2. Project Plan set, complete, if it's a construction project
3. Cost Benefit Analysis
4. Documentation of historical and environmental impact reviews, if applicable
5. 12-HMGP- Addendum-1-Phased-Structural-Projects (if applicable)
6. Funding Commitment letter

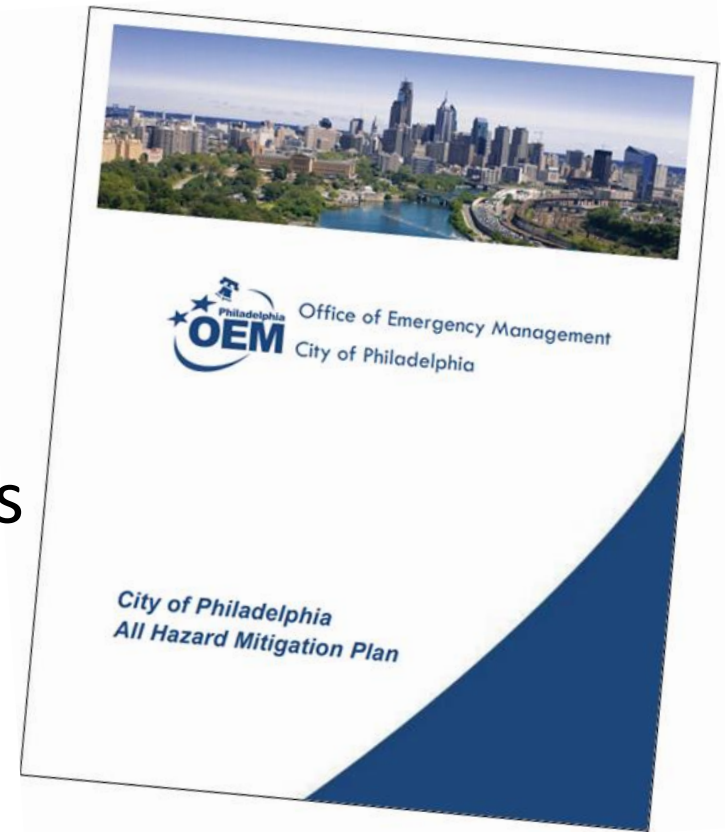
# The Hazard Mitigation Planning Process

Philadelphia's 2022 Plan Update & Implementation



# What is a Hazard Mitigation Plan?

- (1) Identifies which hazards Philadelphia is most at risk for;  
and
- (2) Identifies the projects, plans and policies the City can implement to reduce our risk.



**Required Update: May 2022**



# The Planning Process



Approval NLT: May 25, 2022

**We are here**  
Date: 05/19/2021



**PLEASE NOTE:** The chart above was adapted and expanded from earlier graphics outlining the planning process to outline the core steps in the process.



# The Planning Process



**We are here**  
Date: 05/19/2021



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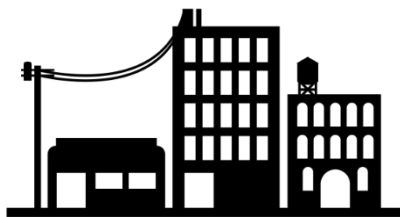


# Mitigation Projects

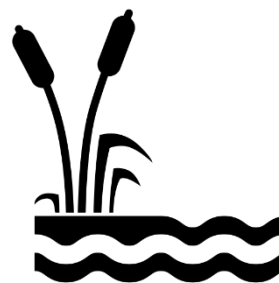
Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound.



**Local Plans & Regulations**



**Structure & Infrastructure Projects**



**Natural Systems Protection**



**Education & Awareness Programs**

# The Planning Process



Approval NLT: May 25, 2022

**We are here**  
Date: 05/19/2021



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# Plan Implementation

Plan Integration: A Citywide approach to mitigation

Comprehensive Plan

Capital Budget Plan

Emergency Operations Plans

Building Codes and Zoning Ordinances

Master Energy Plan

# Plan Implementation

## Supporting project implementation

- (1) Raise Awareness & Generate Buy-In
- (2) Identify Funding Opportunities
- (3) Increased Opportunities for Partnerships

# Plan Implementation

## Mitigation Grants and Funding Workgroup

**Goal:** Build capacity and a coordinated City approach to pursuing funding for mitigation/adaptation projects that make our City more resilient.

# BRIC and FMA

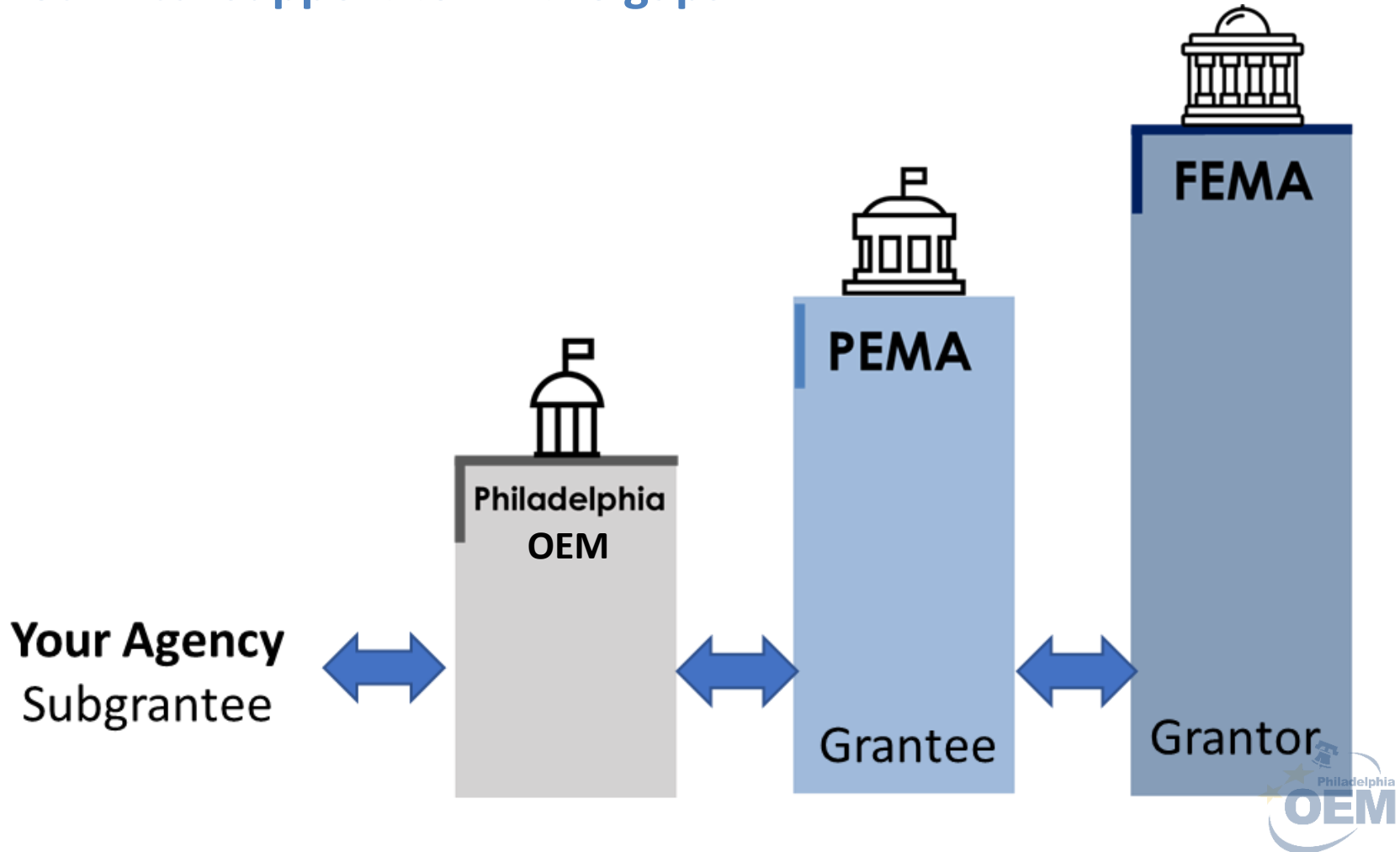
and the role of Office of Emergency Management





# Office of Emergency Management

Technical support to fill the gaps



# Office of Emergency Management

Technical support to fill the gaps

- One-on-one meetings
- Trainings & Information Sessions
- Identification of funding sources
- Coordination amongst agencies

**What would you like to learn more about?**



# Polling Question

**Which topics would you like to learn more about?**

- A. Training on Benefit Cost Analysis (BCA) tool
- B. Public-Private Partnerships
- C. Cost-match
- D. Information on other funding opportunities
- E. Case studies from other jurisdictions
- F. Other (type into chat bar)

# Questions?



# Group Discussion

- What mitigation projects does your agency want to implement in the next several years?
- What are the potential roadblocks beyond funding that you anticipate?
- What support do you need to overcome those roadblocks?
- What partners at the table today could potentially help?

# What's Next?

**Summer 2021** : One-on-one meetings with your agency

**August 2021**: NOFOs released by FEMA

**September 2021**: Project proposals due to the City for selection

**October 2021**: Letter of Intent due to PEMA

**November 2021**: Application due to PEMA

**PLEASE NOTE:** These are approximate timeframes. More information on City deadlines and priorities will be distributed this summer.



# Resources

- [Mitigation Action Portfolio](#), FEMA, 2020
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020
- [HAZUS in the PA Hazard Mitigation Plan](#)
- [Flood Mitigation Assistance \(FMA\) Grant](#)
- [Building Resilient Infrastructure and Communities Grant](#)



Hazard Mitigation Assistance

# Mitigation Action Portfolio



FEMA





# QUESTIONS?

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)





# Philadelphia Mitigation Grants Workshop 2021



**Date:** May 19, 2021 from 10am-11am

**Location:** Virtual, Microsoft Teams

**Agencies Present:** Philadelphia Office of Emergency Management (OEM), Pennsylvania Emergency Management Agency (PEMA), Philadelphia Water Department (PWD), Licenses and Inspection (L&I), Office of Sustainability (OOS), Mayor's Office of Policy, Philadelphia City Planning Commission (PCPC), Philadelphia International Airport (PIA), Philadelphia Department of Public Health (PDPH), Philadelphia Fire Department (PFD), Streets Department, Department of Public Property (DPP), Parks and Recreation (PPR), Commerce Department

**Purpose:** The purpose of this workshop was to introduce Philadelphia partners to the Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) grant programs which are made available by the Federal Emergency Management Agency (FEMA) annually each fall to fund projects in the City's All-Hazard Mitigation Plan. Participants learned about the priorities for BRIC and FMA and participated in a discussion around identifying and overcoming challenges in the application process.

## Notes:

**Building Resilient Infrastructure and Communities (BRIC) & Flood Mitigation Assistance (FMA),** Tom Hughes, Pennsylvania Emergency Management Agency (PEMA)

## Key Takeaways:

- Key definitions:
  - **Mitigation:** reducing or eliminating long-term risk to human life, property and "sense of place" from hazards
  - **Hazard Mitigation Planning:** the effort to identify a community's risks and vulnerabilities associated with hazards and to develop and implement strategies to reduce or eliminate risk.
  - **Hazard Mitigation Plans:** living documents used to strengthen and protect people and land
- BRIC and FMA
  - In FY2020, there was \$500 million available in BRIC funds and \$200 million available in FMA grant funds. It is anticipated that more funding will be available this year.
  - There is a 25% cost share required. Cost share cannot be federal dollars.
- 2020 Commonwealth of PA Timelines
  - NOFO posted to grants.gov – August 3, 2020
  - Application opened – September 30, 2020
  - Letter of Interest (one-page) was due to PEMA on October 15, 2020
  - PEMA required complete application in FEMA Go – November 18, 2020
  - State Hazard Mitigation Assistance Application Team met to review projects – December 7-18, 2020
  - State projects were selected and submitted to FEMA – January 15, 2021
  - FEMA Eligibility and Technical Review – February through March 2021
  - Selections – June 2021
  - Period of Performance – 36-48 months
- State Mitigation Planning Team Criteria, BRIC
  - Effectiveness, 20%
  - Efficiency, 30%
  - Multi-Hazard Mitigation, 20%
  - Addresses High Risk Hazard, 15%
  - Addresses Critical Communications/Critical Facilities, 15%
- Project should mitigate risk to [FEMA's Community Lifelines](#)

- Challenges for Local Jurisdictions, BRIC
  - Application development – translating your project vision into an HMA fundable subapplication and conveying risk reduction
  - Application Review: Reviewers are limited by subapplication and attached materials submitted when seeking to review technical feasibility and cost effectiveness
    - Consistent and accurate data is needed for BCA!
- Best Practices
  - Provide detailed BCA Narratives, separate SOW narratives, and extensive use of comment and justification boxes in the application
  - Attach an Excel file and source data used to generate BCAs
  - Use clear and consistent name conventions for attachments
  - If engineering/surveying documents are available, include stamped/sealed reports, figures or data
  - If preliminary design is not started, clearly describe performance-based design measures/level of protection desired
  - Consider project scoping or phasing for larger, complex projects
  - Review program priorities and the NOFO
- Common Challenges with Infrastructure Project Applications
  - Larger, more complex projects need more information and are harder to organize
  - Missing information (H&H studies, description, or document to support level of effectiveness, no clear description of upstream/downstream impacts)
  - Inaccurate information (recurrence intervals, lowest flood elevations)
  - Inaccurate or inexact use of NFIP claims data
  - Sea level rise included in BCA, but not design elevations
  - Inaccurate calculation of service populations, service benefits, or loss of function
  - Unclear descriptions of the intended level of protection
  - Connection between hazard and project is not made
- FEMA Go
  - [FEMA Go Portal](#)
  - [FEMA Go Guides and Resources](#)
  - FEMA GO Technical Support, 1-877-611-4700 or by [email](#)

#### **Lessons Learned and Best Practices from the 2020 BRIC/FMA Application Process, Sue Patterson, PWD**

- Set up your FEMA Go Account as soon as possible. This is a lengthy process and it helps to have the FEMA Go Application questions ahead of time to prepare.
- Download FEMA's Benefit Cost Analysis Tool early on. This tool is not easily downloaded onto City computers, and may require special permission and support from City IT.
- You will be required to submit a GIS File of the project area. Work to include as many relevant features on this map as possible to demonstrate the impact this project will have on reducing risk to the community.
- Review FEMA's Evaluation Tools prior to submission to determine project viability. They can be found [here](#).  
Some items needed include:
  - Designation of Agent Form (DOA)
  - General Project Description and Outline
  - GIS file of the project area, including all relevant features
  - Project plan
  - Benefit Cost Analysis (BCA)
  - Documentation of historical and environmental impact reviews (if applicable)
  - Funding commitment letter
  - Engineering Certificate

- Sue recommends taking additional Benefit Cost Analysis Trainings. OEM will work with PEMA and FEMA to explore live options. Some online options for training include:
  - [IS—277.A: Benefit-Cost Analysis \(BCA\): Entry-Level, Emergency Management Institute \(EMI\)](#), Online Training
  - [IS-276.A: Benefit-Cost Analysis Fundamentals](#), Emergency Management Institute (EMI), Online Training
  - [BRIC and FMA Technical Assistance Series: Maryland Emergency Management Agency](#), YouTube

#### **Hazard Mitigation Plan Implementation, Emma Giardina, OEM**

- The City's All-Hazard Mitigation Plan (HMP) identifies which hazards pose the most risk to Philadelphia and identifies the projects, plans and policies the City can implement to reduce risk to those hazards.
  - The plan must be updated by May 2022 for the City to remain eligible for mitigation funding.
  - For a project to be funded by BRIC or FMA, it must be included in the plan.
  - OEM can go through an amendment process to include any additional projects in the plan if needed.
- How can inclusion of your projects in the Hazard Mitigation Plan (HMP) support project implementation?
  - **Raise Awareness and Generate Buy-In:** Projects in this plan are vetted and fit within designated city-wide mitigation standards. Inclusion of your project in this plan raises awareness with City Council, City Leadership, State and Federal partners, and even private partners, and could potentially help generate more buy-in.
  - **Funding Opportunities:** The HMP is the gatekeeper to BRIC and FMA Funding. BRIC and FMA are not the only funding sources available for mitigation projects. We hope to create a menu of different funding options to support implementation of projects over the next year as we update the plan.
  - **Partnership Opportunities:** The HM Planning Process includes a wide array of stakeholders ranging from state and federal government agencies, to non-profits, to community partners. Through participation in this planning process, you may identify opportunities for partnerships where goals and objectives align.
- Mitigation Grants and Funding Workgroup
  - **Goal:** Build capacity and a coordinated City approach to pursuing funding for mitigation projects that make our City more resilient.
  - If you are interested in joining this workgroup, please reach out to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)
- Office of Emergency Management (OEM), in coordination with the Mitigation Grants and Funding Workgroup, can provide the following support for BRIC and FMA:
  - Liaison to PEMA
  - One-on-one meetings with agencies to discuss project ideas and the application process
  - Training and information sessions
  - Identification of additional funding sources
  - Coordination amongst agencies
- **Polling Question:** Which topics would you like to learn more about?
  - Training on Benefit Cost Analysis (BCA) tool (*9 responses*)
  - Public-Private Partnerships (*0 responses*)
  - Cost-match (*2 responses*)
  - Information on other funding opportunities (*3 responses*)
  - Case studies from other jurisdictions (*7 responses*)
  - Other (type into chat bar) (*1 response – scoping projects*)
  - All of the above (*1 response*)

#### **Group Discussion, Carolyn Caton, OEM**

- What projects does your agency have in mind? What are the potential roadblocks beyond funding that you anticipate? What support do you need?
  - Regional coordination on projects. How do we approach projects that involved multiple jurisdictions?

- There are several factors that need to be figured out prior to application submission including deciding who would take on fiduciary responsibilities, cost share, roles and responsibilities, etc. An MOU would need to be in place as well.
- Having a shared project prioritization process internally within City agencies, but also Citywide
- Streets Department has several bridges they maintain, as well as roadways in areas that flood.
  - PEMA recommends that we consider identifying 406 project opportunities in our 2022 Hazard Mitigation Plan. [The 406 grant](#) is funded under the Public Assistance program post-disaster. The 406 grant funds mitigation measures that directly reduce the potential of future, similar disaster damages to eligible facilities after a disaster.

## Questions and Answers

### Once awarded the grant, how is funding distributed?

FEMA notifies the state in July (approximately) when projects have been selected for funding. Funding is usually distributed to the State that fall (September-November). It then takes several months for PEMA to finalize a grant agreement with the City. PEMA will host a grants management meeting with the agency and determine if the project requires a funding advance or if it will be reimbursement based. If reimbursement is necessary, this can happen on a rolling basis throughout the Period of Performance.

### Do projects need to be located in the Special Flood Hazard Area and benefit NFIP insured properties?

Projects do not need to be in the Special Flood Hazard Area. Flood Mitigation Assistance (FMA) has stricter requirements about this than the Building Resilient Infrastructure and Communities (BRIC) grant program. The more NFIP properties that benefit from the project, the better. PEMA will work with agencies to determine if projects are a better fit for BRIC, FMA or both.

### What are some interesting partnerships for cost matches that you've seen in Pennsylvania?

Lycoming County is partnering with several non-profits including American Rivers to support development of a flood mitigation plan and identification of natural based solutions.

PEMA will not work directly with property owners on projects. The City must be the applicant. PEMA will offer a meeting with a group of property owners alongside the City if requested.

For additional questions and answers from the 2020 BRIC and FMA Grant workshop, click [HERE](#).

## Next Steps and Action Items

1. **Summer 2021:** If your agency has a project in mind for BRIC or FMA, please reach out to [Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov) to schedule a one-on-one meeting prior to September 2021 for your agency and any partners you will be working with. The purpose of this meeting is to review the application process, the City's process for endorsement and any project ideas that you have in mind. This meeting will ensure that you and your partners are well informed on the process and do not miss any steps.
2. **August 2021 (anticipated):** FEMA will release the BRIC and FMA Notice of Funding Opportunities.
3. **September 2021 (anticipated):** Project proposals due to the City for selection.
4. **October 2021 (anticipated):** Letter of Intent due to PEMA.
5. **November 2021 (anticipated):** Application due to PEMA in the FEMA GO Portal.

Meeting concluded at 12:01pm.

## Key Resources References

[2021 BRIC/FMA Grants SharePoint Drive](#)

[2020 BRIC Notice of Funding Opportunity](#)

[2020 FMA Notice of Funding Opportunity](#)

[Mitigation Action Portfolio](#), FEMA, 2020

[FEMA Go User Manual](#), FEMA, 2020

[Hazard Mitigation Assistance Guidance](#), FEMA, 2015 (Anything referencing PDM is now BRIC)

[Project Triage Worksheet](#)

### **Other Plans and Documents**

[Pennsylvania Hazard Mitigation Plan Standard Operating Guide](#), PEMA, 2020

[Commonwealth of Pennsylvania 2018 State HMP](#), PEMA, 2018

[Philadelphia All-Hazard Mitigation Plan](#), City of Philadelphia OEM, 2017

[Pennsylvania Climate Action Plan](#), Pennsylvania DEP, 2018

[Climate Change, Adaptation and Mitigation Plan](#), 2018

[PennDOT Extreme Weather Vulnerability Study](#), PennDOT, 2017

[FEMA's Guides to Expanding Mitigation](#)

# Mitigation Grants and Funding Workshop

Date: May 19, 2021 at 10am-noon

Location: Microsoft Teams



| Name              | Title   | Organization                          | Email  |
|-------------------|---|---------------------------------------|--|
| Emma Giardina     | Hazard Planning Coordinator   | Philadelphia OEM                      | <a href="mailto:Emma.giardina@phila.gov">Emma.giardina@phila.gov</a>       |
| Carolyn Caton     | Infrastructure Program Manager  | Philadelphia OEM                      | <a href="mailto:Carolyn.Caton@phila.gov">Carolyn.Caton@phila.gov</a>       |
| Brandon Lapsley   | Homeland Security Grant Program Manager   | Philadelphia OEM                      | <a href="mailto:Brandon.Lapsley@phila.gov">Brandon.Lapsley@phila.gov</a>   |
| Dominick Mireles  | Deputy Director, Operations   | Philadelphia OEM                      | <a href="mailto:Dominick.Mireles@phila.gov">Dominick.Mireles@phila.gov</a> |
| Elena Fisher      | Capital Development Group   | Philadelphia International Airport    |  |
| Thomas Hughes     | Director, Emergency Management Mitigation, Insurance and Resilient Communities Office | PEMA                                  | <a href="mailto:thughes@pa.gov">thughes@pa.gov</a>                         |
| Susan Patterson   | Engineering Specialist  | Philadelphia Water Department         | <a href="mailto:Susan.Patterson@phila.gov">Susan.Patterson@phila.gov</a>   |
| John Haak         | City Planner  | Philadelphia City Planning Commission | <a href="mailto:John.Haak@phila.gov">John.Haak@phila.gov</a>               |
| Joshua Lippert    | Floodplain Manager  | Licenses & Inspection                 | <a href="mailto:Joshua.Lippert@phila.gov">Joshua.Lippert@phila.gov</a>     |
| Julia Rockwell    | Climate Change Adaptation Program Manager   | Philadelphia Water Department         | <a href="mailto:Julia.Rockwell@phila.gov">Julia.Rockwell@phila.gov</a>     |
| Kimberly Flood    |   | Philadelphia Water Department         | <a href="mailto:Kimberly.Flood@phila.gov">Kimberly.Flood@phila.gov</a>     |
| Kristen Snuck     |   | Philadelphia Water Department         | <a href="mailto:Kristen.Snuck@phila.gov">Kristen.Snuck@phila.gov</a>       |
| Marc Cammarata    | Deputy Commissioner   | Philadelphia Water Department         | <a href="mailto:Marc.Cammarata@phila.gov">Marc.Cammarata@phila.gov</a>     |
| Mariel McGlazer   | Deputy Policy Director  | Mayor's Office of Policy              | Mariel <a href="mailto:McGlazer@phila.gov">McGlazer@phila.gov</a>          |
| Lt. Michael Kirby | Planning  | Philadelphia Fire Department          | <a href="mailto:Michael.Kirby@phila.gov">Michael.Kirby@phila.gov</a>       |
| Molly Mattes      | Public Health Preparedness Coordinator  | Philadelphia Public Health Department | <a href="mailto:Molly.Mattes@phila.gov">Molly.Mattes@phila.gov</a>         |
| Nazaarah Sabree   | Senior Director of Business Services  | Commerce Department                   | <a href="mailto:Nazaarah.Sabree@phila.gov">Nazaarah.Sabree@phila.gov</a>   |
| Nicole Charlton   | Emergency Manager   | Philadelphia Water Department         | <a href="mailto:Nicole.Charlton@phila.gov">Nicole.Charlton@phila.gov</a>   |
| Steve Lorenz      | Chief Highway Engineer  | Streets Department                    | <a href="mailto:Stephen.Lorenz@phila.gov">Stephen.Lorenz@phila.gov</a>     |
| Saleem Chapman    | Chief Resilience Officer  | Office of Sustainability              | <a href="mailto:Saleem.Chapman@phila.gov">Saleem.Chapman@phila.gov</a>     |
| Ryan Ford         | Homeland Security Program Manager   | Philadelphia OEM                      | <a href="mailto:Ryan.Ford@phila.gov">Ryan.Ford@phila.gov</a>               |

|                     |  |                                      |  |
|---------------------|--|--------------------------------------|--|
| Stephanie Craighead | Director, Planning,<br>Preservation & Property<br>Management | Philadelphia Parks and<br>Recreation | <a href="mailto:Stephanie.Craighead@phila.gov">Stephanie.Craighead@phila.gov</a> |
| Richard Montanez    | Deputy Commissioner for<br>Transportation                    | Philadelphia Parks and<br>Recreation | <a href="mailto:Richard.Montanez@phila.gov">Richard.Montanez@phila.gov</a>       |
|                     |  |                                      |  |
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|                     |  |                                      |  |
|                     |  |                                      |  |



# City of Philadelphia Hazard Mitigation Plan



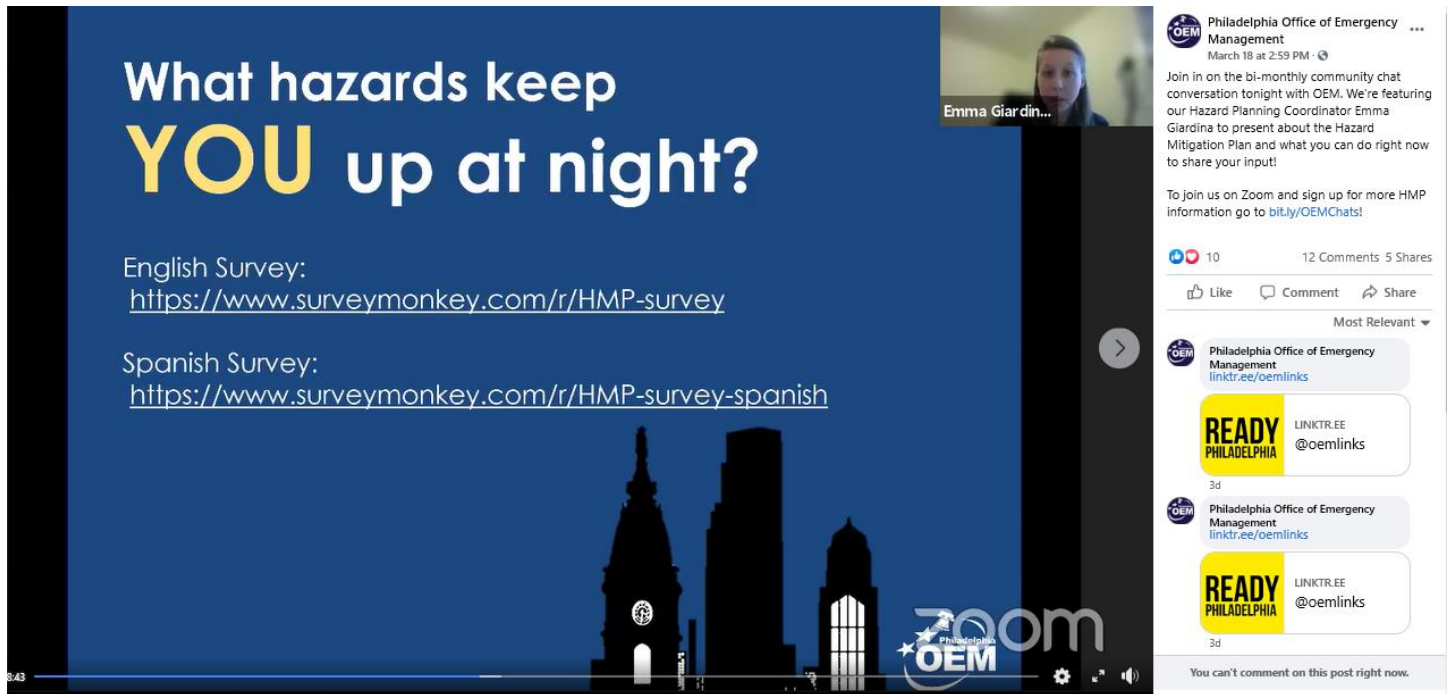
## Community Chat – Public Workshop

**Date:** March 18, 2021 from 6pm-7pm

**Location:** Zoom and Facebook Live

### Notes:

Philadelphia Office of Emergency Management (OEM) hosted its first public workshop on Thursday, March 18<sup>th</sup>, 2021 at 6pm. Due to the COVID-19 pandemic, OEM decided that the workshop would be hosted virtually on both Zoom and Facebook Live to ensure the safety of all participants.



Emma Giardina, Philadelphia OEM’s Hazard Planning Coordinator, reviewed the purpose of the plan and the hazards featured in the 2017 plan. Next, Emma asked participants for feedback on what hazards make them most concerned. Feedback was captured via comments on Facebook live and via a Google Jamboard, an interactive tool that allows members of the public to post comments on virtual notes anonymously. The results of the Google Jamboard can be seen below. Participants were also asked to complete the public survey. Common concerns that came up between the Google Jamboard and the Facebook and zoom comments included gun violence, infrastructure failure, building collapse and excessive heat. Community members also expressed a desire for more community programming around emergency preparedness and response.

The feedback from both the public survey, and this conversation with the public were reviewed by planning partners. Feedback informed the selection of hazards featured in the 2022 plan.

In total, there were 27 live participants. However, this video was recorded on Facebook Live still remains open for views and comments today. As of 3/22/2021, there were a total of 336 views, 8 likes, 12 comments and 5 shares on the Facebook post. This indicates that this community session reached more than the 27 participants who participated live.

**Total number of views as of 3/22/2021:** 336 views, 8 likes, 12 comments, 5 shares

**Total number of live attendees:** 27

**Link to Recording:** <https://fb.watch/4jAZzGsqs/>

Link to Google Jamboard: [https://jamboard.google.com/d/1a\\_3l\\_kkBeb4GhKBoztcFDY7uNAJZeB40J-U\\_etEnmVQ/edit?usp=sharing](https://jamboard.google.com/d/1a_3l_kkBeb4GhKBoztcFDY7uNAJZeB40J-U_etEnmVQ/edit?usp=sharing)

Google Jamboard Responses:

# What hazards make you worry?

A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

**Hazards:**

- drinking water quality (lead)
- cyber attacks
- Large events and crowds and potential for active shooter situations.
- Transportation
- natural gas odors
- Noise
- Community policing
- extreme heat and flooding
- Excessive heat. I have older grandparents and I always worry for them during summer.
- large potholes and sinkholes
- Building collapse
- abandoned buildings
- House Fires
- Dangerous/downed trees
- This, and the next, pandemic
- Community Education
- OEM in the community
- OEM education and training in the community

## Advertisements:

The workshop was advertised heavily on social media, OEM conducted individual outreach to several community leaders and community organization about the workshops, and information was distribution via newsletters and distribution lists such as the City's Equitable Engagement Collaborative, a group of City outreach specialists. Flyers were also available at Philadelphia's Community Vaccination Site at the Philadelphia Convention Center, which saw over 6000 people from the City of Philadelphia each day.

**Philadelphia OEM** @PhilaOEM · 40m

What hazards keep you up at night? Philadelphia OEM wants to know! Join us on 3/18 at 6pm to learn more and provide your feedback which will inform the update of Philadelphia's Hazard Mitigation Plan. Register here: [bit.ly/2M4kwl2](https://bit.ly/2M4kwl2)

**Come Chat**  
about hazards in your neighborhood  
with Philadelphia OEM's Hazard Mitigation Planner

Thursday, March 18th  
6:00-7:00 pm  
Zoom & Facebook Live

Facebook.com/PhilaOEM

You and Olivia N. Gillison



3/9 **EEC** Follow Up



Anthony Procik

To

Reply Reply All Forward ...

Wed 3/10/2021 8:41 AM

If there are problems with how this message is displayed, click here to view it in a web browser.

- Philadelphia Office of Emergency Management (OEM) will be hosting our first public workshop to gather feedback on the update of the City's Hazard Mitigation Plan.** This plan identifies which hazards, like flooding or high heat, the City is most prone to and looks at what the City can do to reduce our risk before disaster strikes. We want to know, what hazards keep YOU up at night? Please join us, and help spread the word, next Thursday 3/18 at 6 pm on Facebook Live ([Facebook.com/PhilaOEM](https://Facebook.com/PhilaOEM)) or register to join on Zoom here: <https://bit.ly/2M4kwI2>. And here's [the social media toolkit](#) to share this invite.

Philadelphia's All Hazard Mitigation Plan

EE Emma Giardina  
 To [Redacted]  
 Cc Office of Emergency Management  
 Graphic\_Community Chat 2020.3.18.png  
 .png File

Reply Reply All Forward ...  
 Wed 3/10/2021 12:56 PM

I am reaching out to you because you previously expressed interest in the City's [Hazard Mitigation Plan](#). This plan identifies which hazards (like flooding and high heat) the City is most prone to and looks at what the City can do to reduce our risk before disaster strikes.

In addition to completing a public survey about hazards and emergency preparedness (linked here in [English](#) and [Spanish](#)), we're also encouraging residents and community leaders to join us for our **first public meeting** about this plan update next **Thursday, 3/18 at 6pm**. Residents can join via Facebook Live at [Facebook.com/PhilaOEM](https://Facebook.com/PhilaOEM) or they can register to attend the meeting via Zoom here: <https://bit.ly/2M4kwI2>. Can you help us spread the word?



# OEM Community Chat, Hazard Mitigatoin Plan



**Date:** March 18, 2021

**Location:** Facebook Live and Zoom

**Total number of views as of 3/22/2021:** 336 views, 8 likes, 12 comments, 5 shares

**Total number of live attendees:** 27

**Link to Recording:** <https://fb.watch/4jAZzGsqsA/>

**Link to Google Jamboard:** [https://jamboard.google.com/d/1a\\_3l\\_kkBeb4GhKBoztcFDY7uNAJZeB40J-U\\_etEnmVQ/edit?usp=sharing](https://jamboard.google.com/d/1a_3l_kkBeb4GhKBoztcFDY7uNAJZeB40J-U_etEnmVQ/edit?usp=sharing)

| First Name, Last Initial |
|--------------------------|
| Emma Giardina            |
| Carolyn C.               |
| Olivia G.                |
| Joshua N.                |
| Allison M.               |
| Allison L.               |
| Elaine G.                |
| Bekah N.                 |
| Carla J.                 |
| Natalie T.               |
| Natalie F.               |
| Jeff K.                  |
| Alicia B.                |
| Ginny D.                 |
| Tori M.                  |
| Bob B.                   |
| Gina H.                  |
| Andrew T.                |
| Jacqui D.                |
| John R.                  |
| A.J. F.                  |
| Zoitan L.                |
| Becky R.                 |
| Ruth W.                  |

|            |
|------------|
| Molly D.   |
| Fadia I.   |
| Majorie M. |

**Reducing Risks 2022**  
Philadelphia's All-Hazard Mitigation Plan

OEM Community Chat, 3.18.2021



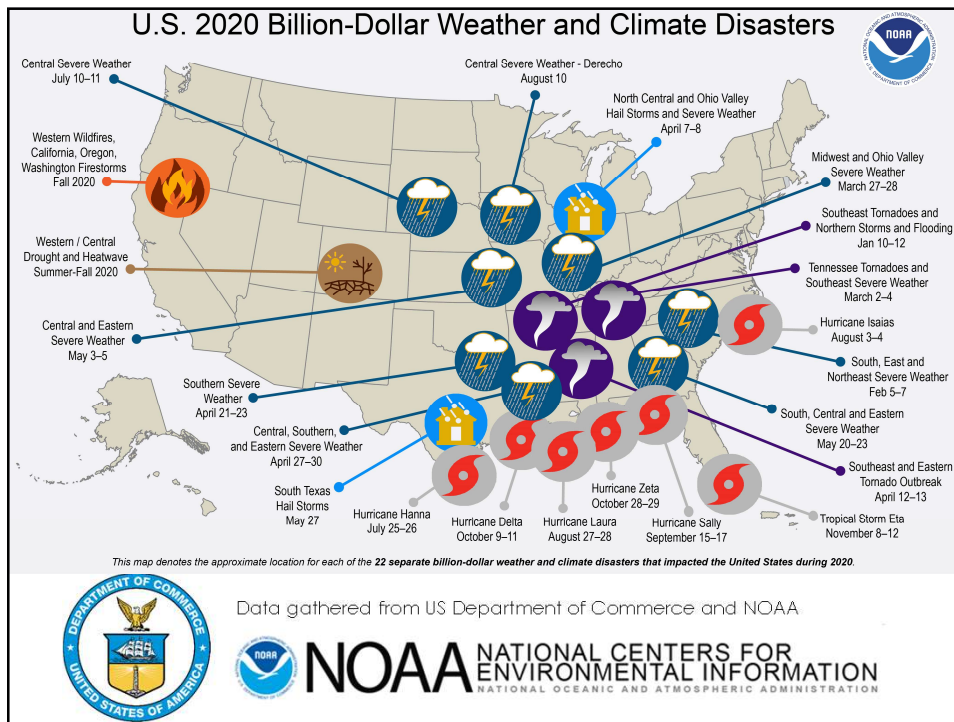
1

**REC**

**We will be recording**



2



3

# What is Hazard Mitigation?

Philadelphia OEM

4



# What is Hazard Mitigation?

Reducing or eliminating risk of impact before disaster strikes



The slide features a dark blue background. At the bottom, there is a white silhouette of the Philadelphia skyline, including the Independence Hall clock tower and the Comcast Center. To the right of the skyline is the Philadelphia OEM logo, which consists of a white circle containing a star and the letters 'OEM' in a bold, sans-serif font.

5

## The Plan

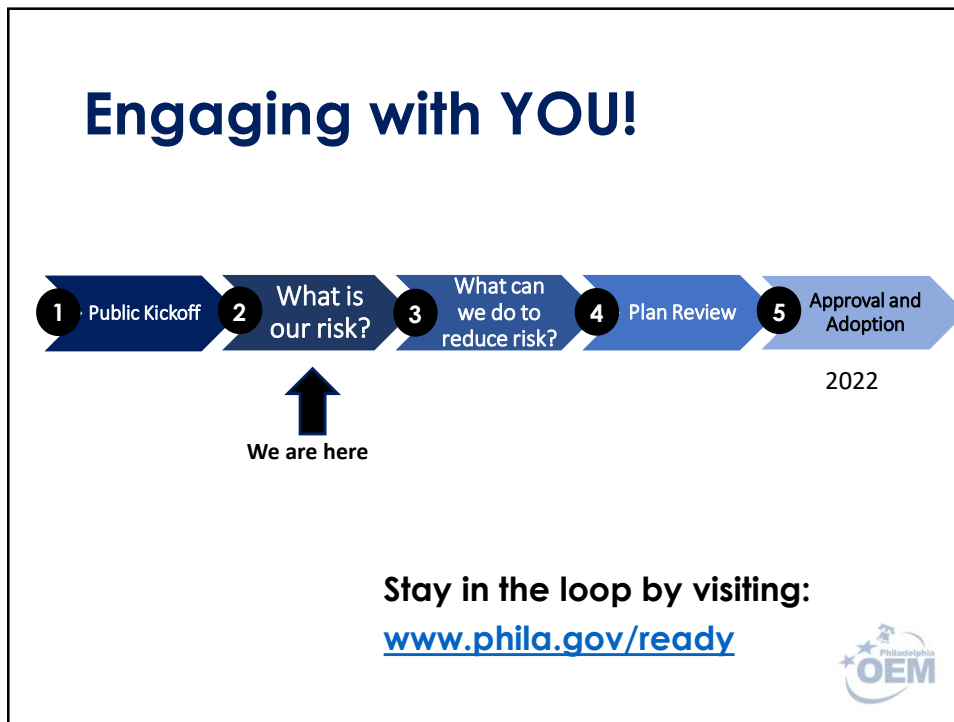
(1) What hazards or disasters is Philadelphia at risk for?

(2) What can we do to reduce our risk before a disaster strikes?

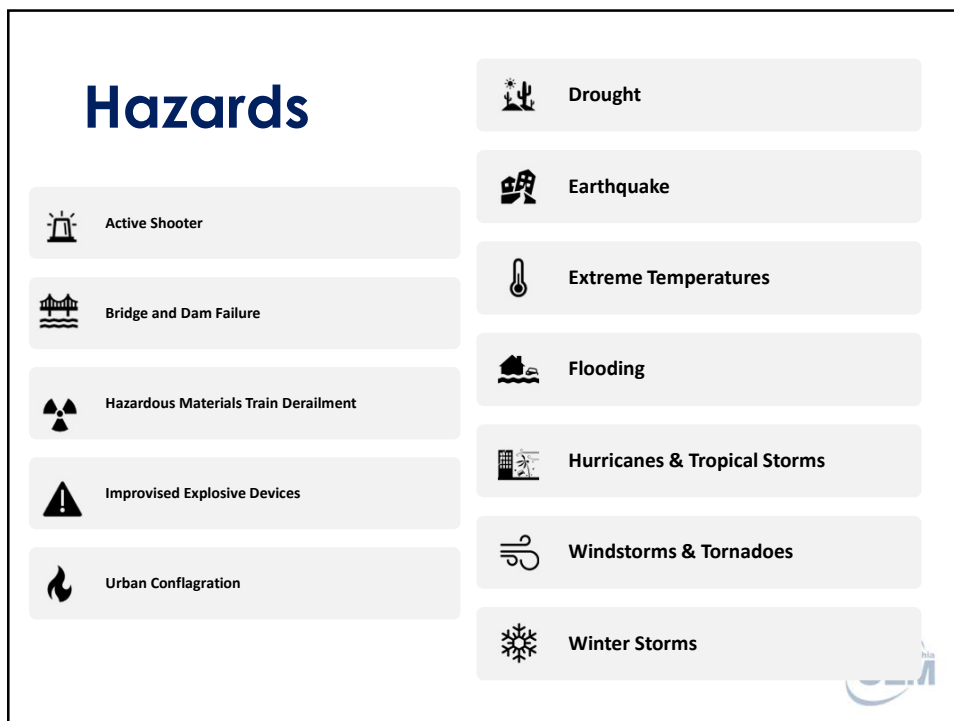


6





7



8

# What hazards keep **YOU** up at night?

English Survey:  
<https://www.surveymonkey.com/r/HMP-survey>

Spanish Survey:  
<https://www.surveymonkey.com/r/HMP-survey-spanish>

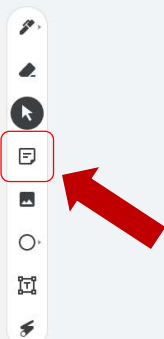


9


03.18.2021 - Reducing Risks 2022 Public Meeting

What hazards make you worry?  
A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

Example

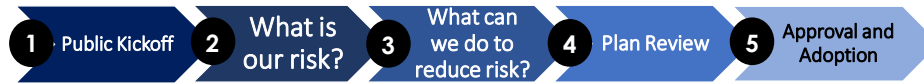


[https://jamboard.google.com/d/1a\\_3l\\_kkBeb4GhKBoztcFDY7uNAJZeB40J-U\\_etEnmVQ/edit?usp=sharing](https://jamboard.google.com/d/1a_3l_kkBeb4GhKBoztcFDY7uNAJZeB40J-U_etEnmVQ/edit?usp=sharing)



10

## Engaging with YOU!



2022

**What other ways would you like to see us engage with you around the plan?**



11

## What can you do?

**Know your Risk.**

**Plan and prepare.**

**Sign up for Emergency Alerts by texting READYPhila to 888 777.**



12

## How can you help?

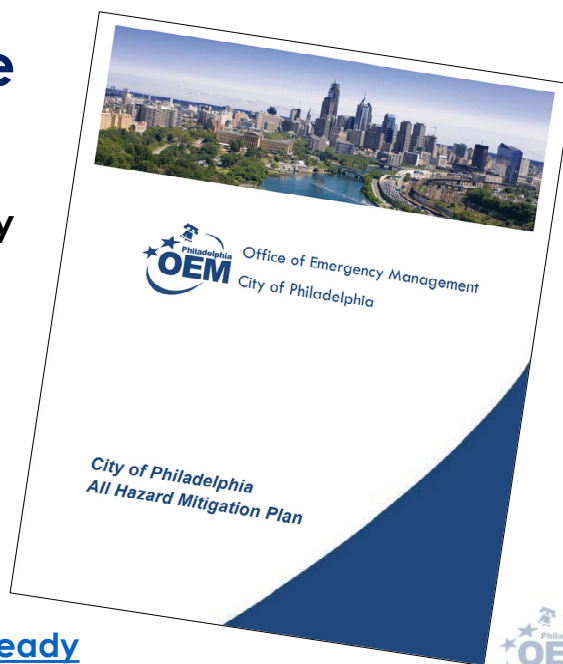
1. **Learn more** and **remain updated** on the planning process at [www.phila.gov/ready](http://www.phila.gov/ready) or by following us on social media.
2. Take our **public survey**.
3. **Participate** in upcoming workshops by signing up here: <https://bit.ly/2M4kwl2>
4. **Help** us spread the word!



13

## Available Online

Updated every 5 years



[www.phila.gov/ready](http://www.phila.gov/ready)

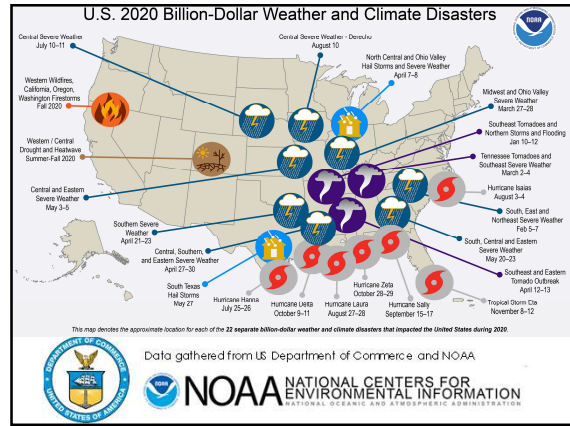
14



15



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4

**The Plan**

(1) What hazards or disasters is Philadelphia at risk for?

(2) What can we do to reduce our risk before a disaster strikes?

5

**Hazards**

- Active Shooter
- Bridge and Dam Failure
- Hazardous Materials Train Derailment
- Improvised Explosive Devices
- Urban Conflagration
- Drought
- Earthquake
- Extreme Temperatures
- Flooding
- Hurricanes & Tropical Storms
- Windstorms & Tornadoes
- Winter Storms

6

## Engaging with YOU!

1 Public Kickoff 2 What is our risk? 3 What can we do to reduce risk? 4 Plan Review 5 Approval and Adoption

2022

We are here

Stay in the loop by visiting:  
[www.phila.gov/ready](http://www.phila.gov/ready)

7

## What hazards keep YOU up at night?

English Survey:  
<https://www.surveymonkey.com/r/HMP-survey>

Spanish Survey:  
<https://www.surveymonkey.com/r/HMP-survey-spanish>

8

03.18.2021 - Reducing Risks 2022 Public Meeting

What hazards make you worry?  
A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

Example

[https://jamboard.google.com/d/1a\\_3l\\_kk8eb4GhKBoztcFDY7uNAJzeB40-U\\_etEnmVQ/edit?usp=sharing](https://jamboard.google.com/d/1a_3l_kk8eb4GhKBoztcFDY7uNAJzeB40-U_etEnmVQ/edit?usp=sharing)

9

## Engaging with YOU!

1 Public Kickoff 2 What is our risk? 3 What can we do to reduce risk? 4 Plan Review 5 Approval and Adoption

2022

Next Up!

10

## What can you do?

1. Know your Risk.
2. Plan and prepare.
3. Sign up for Emergency Alerts by texting READYPhila to 888 777.

11

## How can you help?

1. Learn more and remain updated on the planning process at [www.phila.gov/ready](http://www.phila.gov/ready) or by following us on social media.
2. Take our public survey.
3. Participate in upcoming workshops by signing up here: <https://bit.ly/2M4kw12>
4. Help us spread the word!

12



13



14



# City of Philadelphia Hazard Mitigation Plan

## AKA-DST Sorority Community Meeting



Date: April 6th

Location: Virtual, Zoom

### Notes:

Community members provided feedback via Google Jamboard.

**What hazards make you worry?**

A hazard is an event or condition that has the potential to cause significant loss, injuries, property damage, interruption of business, or other types of harm and loss.

The Jamboard contains the following hazard-related sticky notes:

- aging water pipes/floods
- Row home fires
- Cyber-attack and Disruption
- Fire
- Riots and looting
- street/gang wars
- increase abandoned homes
- Excessive Heat
- Social Unrest
- Housing conditions
- active shooter and gun violence
- Gas Leaks
- With the present emotional and societal outbursts and as a Nurse I worry about active shooters.
- inclement weather preparedness
- Over developed trees that can fall onto homes
- Lead
- collapsing buildings/ho
- Power outages
- Hazardous Material Incidents
- illegal dumping locations being vulnerable to
- Potholes/terrible roads
- Power Outages and Infrastructure
- Neighborhood specific carcinogens

# OEM Community Presentation, AKA-DST

Date: April 6, 2021

Location: Zoom



Total number of live attendees: 31 attendees

Link to Google Jamboard: [https://jamboard.google.com/d/1lLgFlchM8OI3oCSwdnN\\_cwR5AqeRZ-CyM7T0clRxsus/edit?usp=sharing](https://jamboard.google.com/d/1lLgFlchM8OI3oCSwdnN_cwR5AqeRZ-CyM7T0clRxsus/edit?usp=sharing)

| First Name, Last Initial |
|--------------------------|
| Emma Giardina            |
| Olivia G.                |
| Joshua N.                |
| Alma P                   |
| Rachel G.                |
| Floria C                 |
| JoAnne R                 |
| Shawn A.                 |
| Charlene C.              |
| Rylanda W.               |
| Tracy S.                 |
| Sherrie L.               |
| Shawn A.                 |
| Phyllis H.               |
| Patricia A.              |
| Mark A.                  |
| Latosha P.               |
| Kimberly W.              |
| JoAnna R.                |
| Jeanette G.              |
| Ina T.                   |
| Ethiopia G.              |
| Ellaine G.               |
| Dorothy D.               |
| Denice B.                |

|             |
|-------------|
| Cheryl C.   |
| Princess W. |
| Carolyn K.  |
| Annie W.    |
| Ashli S.    |
| Betty S.    |
| Carla L.    |
| Audrey T.   |

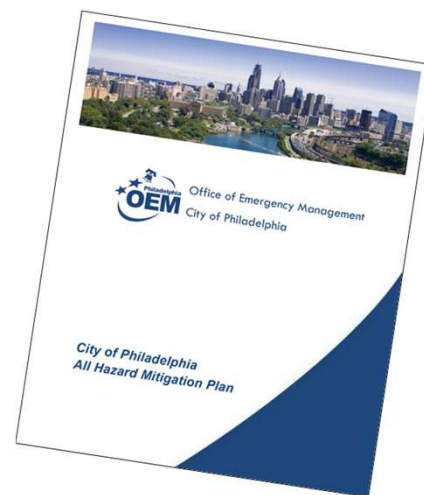
## OFFICE OF EMERGENCY MANAGEMENT



1

## OFFICE OF EMERGENCY MANAGEMENT 2022 Hazard Mitigation Plan

- (1) Identifies which hazards Philadelphia is most at risk for; and
- (2) Identifies the projects, plans and policies the City can implement to reduce our risk.



The 2017 plan is available at: [www.phila.gov/ready](http://www.phila.gov/ready)



2

## OFFICE OF EMERGENCY MANAGEMENT

### 2022 Hazard Mitigation Plan



### What keeps you up at night?



Whether it be rising temperatures, flooding or the pandemic, we want to know what hazards make you worry. Your responses will help inform the update of the City's Hazard Mitigation Plan.



<https://www.surveymonkey.com/r/HMP-survey-spanish>

3

## OFFICE OF EMERGENCY MANAGEMENT

### Emergency Preparedness



**What do you need in your  
HOME, HAND, and HEAD?**

4

**OFFICE OF EMERGENCY MANAGEMENT**  
Emergency Preparedness

**Go Bag**



**Items you need in case of an emergency**

5

**OFFICE OF EMERGENCY MANAGEMENT**  
Emergency Preparedness

**Go Bag**



Extra car +  
house keys



Cash



Batteries  
Back-up  
power



Important  
Documents

6

# OFFICE OF EMERGENCY MANAGEMENT

Emergency Preparedness

## Go Bag



List of medications



Water



Flashlight



Paper & Pen

7

# OFFICE OF EMERGENCY MANAGEMENT

Emergency Preparedness



Follow us  
[@PhilaOEM](#)

Text **READYPhila** to **888 777**

8

# Esperanza Community Vaccination Center



4261 N 5th St. Philadelphia, PA 19140

Philadelphia residents can get a Covid-19 vaccine appointment by visiting the Information Tent at the Esperanza CVC during the following hours:

Monday and Tuesday: 7 AM - 3 PM  
 Wednesday and Thursday: 12 PM - 8 PM  
 Friday: Closed  
 Saturday and Sunday: 9 AM - 5 PM

Ask the Information Desk about walk-up hours!

For more information: 215-685-5488 or visit [phila.gov/ecvc](http://phila.gov/ecvc)

9

## OFFICE OF EMERGENCY MANAGEMENT

### READYHome Emergency Preparedness

**Emma Giardina**  
 Hazard Planning  
 Coordinator

**Joshua Nussbaum, M.S.**  
 Community Resilience  
 Coordinator

**Email: [oem@phila.gov](mailto:oem@phila.gov)**

**Website: [www.phila.gov/ready](http://www.phila.gov/ready)**

10



# Block Captain's Community Meeting

## 25<sup>th</sup> and 26<sup>th</sup> Police District

Date: April 15<sup>th</sup>, 2021

Location: Zoom



| First Name, Last Initial |
|--------------------------|
| Emma Giardina            |
| Olivia Gillison          |
| Arletha J.               |
| Intron D                 |
| Clarice B.               |
| Elliott S.               |
| Daniel                   |
| Gilbert                  |
| Talia                    |
| Icare                    |
| Raymond P.               |
| Sonia M.                 |
| Tifany                   |
| Yuli                     |
| Yari                     |
| Maribel G.               |
| Dawn W.                  |
| Sandra M.                |
| Cesar M.                 |
| Jhaisac C                |
| Josh N                   |
| Keith W                  |
|                          |
|                          |
|                          |
|                          |

## CPI Spring 2021 Course Syllabus

**Session:** Special Topic 3: Reducing Risk in Philadelphia  
**Date:** Wednesday, May 19, 6:00-8:00pm  
**Faculty:** Emma Giardina, Hazard Planning Coordinator, Office of Emergency Management (OEM)  
Olivia Gillison, Community Preparedness Program Manager, OEM

What hazards keep you up at night? Whether it is rising temperatures, flooding, or pandemic, the Office of Emergency Management (OEM) wants to know what hazards make you worry.

In this class, you will learn about Philadelphia's Hazard Mitigation Plan from the Office of Emergency Management. This plan looks at ways the City can reduce risks caused by nature or by humans. Participants will break into teams and use a game-based exercise to look at how to protect community assets from hazards. Finally, you will learn how to reduce risk in your neighborhood and help neighbors bounce back after disaster. Your feedback in this class will help them as they update the City's Hazard Mitigation Plan for 2022.

### Learning Objectives:

Thorough participation in this class, you will:

- Learn about Philadelphia's Hazard Mitigation Plan and the 2022 plan update;
- Brainstorm ideas and contribute feedback that will be used to update the City's 2022 plan; and
- Understand what you can do in your own homes and neighborhoods to reduce risk and prepare for emergencies.

### References & Supplementary Materials:

[Philadelphia's 2017 Hazard Mitigation Plan](#)  
[What is the Hazard Mitigation Plan? Flyer](#)  
[Hazard Mitigation and How it Affects You Blog Post](#)  
[Hazard Mitigation Public Survey Flyer](#)  
[HMP Public Survey, Online – English\\*](#)  
[HMP Public Survey, Online -Spanish\\*](#)

### Other Preparedness Resources

[What Goes in a Go Bag? Flyer](#)  
[Family Emergency Plan](#)  
[Family Emergency Plan \(Spanish\)](#)  
[Health Information Form](#)  
[Health Information Form \(Spanish\)](#)

\*Please Note: All survey results are anonymous. The survey is available in additional languages by calling 311.

## **Instructor Bios:**

### **Emma Giardina, Hazard Planning Coordinator, Philadelphia Office of Emergency Management**

As the Hazard Planning Coordinator for the Philadelphia Office of Emergency Management (OEM), Emma is responsible for working with a variety of city, state and federal partners to update and maintain the Philadelphia's Hazard Mitigation Plan. She works with other City partners to identify and implement projects that reduce the City's risk to hazards. Emma also serves as a Response Team Leader, supporting interagency coordination in the field and in Philadelphia's Emergency Operation Center (EOC) during large incidents and disasters.

Emma was previously the Community Resilience Coordinator for OEM, focusing her efforts on building Philadelphia's resilience to disasters at the neighborhood level and planning for community long term recovery. She worked with local organizations, faith-based organizations, businesses, and schools to build a network of resources for communities to prepare for and recover from emergencies. Prior to joining OEM, Emma was a middle school science teacher and spent a considerable amount of time working at environmental education centers in the eastern Pennsylvania and southern New Jersey region. She holds a BS in Environmental Science and a BA in Education from Stockton University.

### **Olivia N. Gillison (she/her), Community Preparedness Program Manager, Philadelphia Office of Emergency Management**

Olivia is the Community Preparedness Program Manager for the Office of Emergency Management (OEM). She focuses on the ways in which communities foster relationships with the local City government and plan for potential disasters in their homes and neighborhoods. In this position she is responsible for coordinating a variety of special events and exhibits; developing and maintaining working relationships with the media, corporate sponsors, the public, and other key stakeholders. Olivia also represents OEM at conferences, community meetings, civic associations, other public meetings, and professional associations.

Prior to joining OEM, Olivia was the Director of Constituent Services and Social Media in the City's Office of Special Events (OSE). While in this role she facilitated the coordination and logistics for street festivals and community block parties; built and maintained the public information strategy and social media outreach program; and supported upper level supervisors with onsite event management before and during major events such as the 2015 World Meeting of Families, 2016 Democratic National Convention, 2017 NFL Draft, 2018 NFL Kickoff, and 2019 Kappa Conclave Philly Fest.

Olivia received her undergraduate degree in Geography, Environmental Studies and Urban Planning from Ohio Wesleyan University, and received the Event Leadership Executive Certificate from Temple University School of Sport, Tourism and Hospitality Management. As a Philadelphia native, she resides in the Overbrook Hills (West Philadelphia) neighborhood.

# Philadelphia's All-Hazard Mitigation Plan

Citizens Planning Institute, 5.19.2021

1. Guided Activity
2. Introduction to Hazard Mitigation Planning
3. In your Neighborhood



1

# Meet your Instructors



**Emma Giardina**  
Hazard Planning Coordinator



**Olivia Gillison**  
Community Preparedness Program Manager



2

# Office of Emergency Management



We plan for the big and the bad



3

# What is Hazard Mitigation?

The act of **reducing** or **eliminating** the risk of natural, manmade or technological disasters



4

# PART 1: Group Exercise



5

# The Game of Extremes

The Urban Sustainability Director's Network



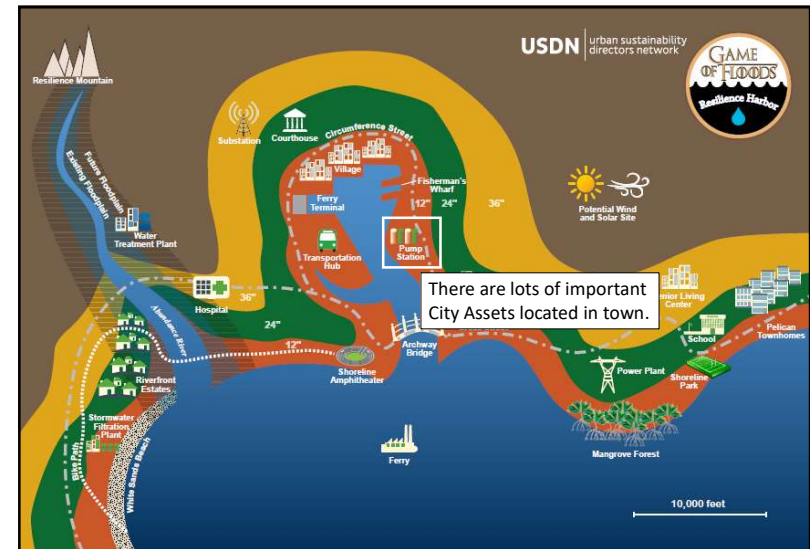
Source | Adapted from the USDN's [Game of Floods](#)

6



Source | Adapted from the USDN's [Game of Floods](#)

7



There are lots of important City Assets located in town.

Source | Adapted from the USDN's [Game of Floods](#)

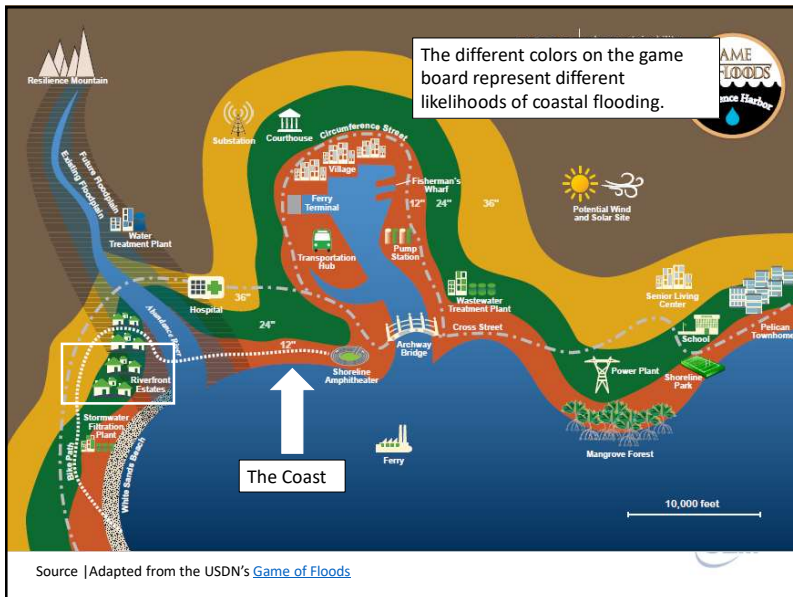
8



9



10



11




12



# The Game of Floods

Breakout #1 – 20 minutes

1. Assign Fictional Roles.
2. Determine 5 out of the 8 City Assets you want to protect from flooding as a group. Consider the following factors:
  - How likely is it that this asset will flood? Is it in a flood zone?
  - What will happen to Resilience Harbor and its citizens if this asset is destroyed in a flood?




Source | Adapted from the USDN's [Game of Floods](#)

13

# Google Jamboard

CPI 5/19/2021

Toggle between slides




14

# Google Jamboard

Breakout Group #1 (20 minutes total)

Step 1: Assign Roles (5 mins)

Directions: Assign one role per person in the group. Once you are assigned a role, you must stay in character! Try to choose a role that does not describe you in real life.



| Role  | Description  | Name of Group Member     |
|---|--|--------------------------|
| City Planner & Sustainability Director      | You represent the interests of the Resilience Harbor Planning Department. It is your role to ensure the recommendations and decisions made ensure a safe, healthy, and sustainable path for Resilience Harbor to continue to grow and function in the face of future climate change.               | Type Group Member's Name |
| Homeowners Association President            | You represent the quality residents of the Harbor 1 estate. You have served as president of the Homeowners Association for the past two years and you have successfully lobbied for many community improvements in your neighborhood over the years.   | Type Group Member's Name |
| Power Plant Enterprise General Manager      | You represent the interests of the Energy Enterprise. It is your role to ensure that the energy enterprise achieves long-term sustainability while also remaining locally responsible.   | Type Group Member's Name |
| Deputy Mayor                                | You represent the Mayor who was elected by the residents of Resilience Harbor for your harbor area of the town's future, with high-level consideration of social, economic, and environmental values.  | Type Group Member's Name |
| Water/Wastewater Enterprise General Manager | You represent the interests of the Water Enterprise. It is your role to ensure that the water enterprise achieves long-term sustainability while also remaining locally responsible.   | Type Group Member's Name |
| Director of Public Works                    | You represent the interests of the Public Works Commission, formed by the Water, Wastewater, and Energy Enterprises and Flood Control District. Your role is to recognize the interdependencies of all agencies and balance their needs accordingly.   | Type Group Member's Name |
| Community Advocate                          | You represent the underrepresented residents of the Harbor 1 neighborhood community. The neighborhood has historically felt that their needs have been neglected by the town's government and tourism industry and you provide a trusted voice for their concerns. Every citizen deserves a voice! | Type Group Member's Name |

● 12" - most likely to flood during even minor coastal flooding events
 ● 24" - can flood during coastal flooding events
 ● 36" - can flood during larger coastal flooding events

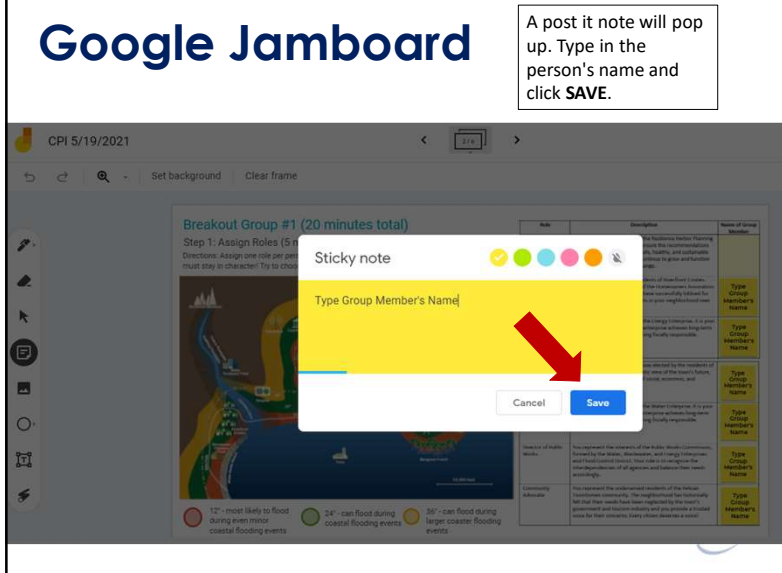
Double Click on the post-it note to change the text and assign roles

15

# Google Jamboard

CPI 5/19/2021

A post it note will pop up. Type in the person's name and click SAVE.




16

# Google Jamboard

CPI 5/19/2021

Click and drag the YES or NO post it note next to each City resource.

**Breakout Group #1 (20 minutes total)**  
 Step 2: Choose 5 City Assets to Protect from flooding. (15 mins)  
 Directions: Resilience Harbor has a limited budget and must prioritize which City assets, or resources, it will protect from flooding. As a group, decide which 5 City assets listed below you will protect. Click and drag a YES or NO post it note next to each City asset. Refer to the map and remember to stay in character!




| Asset                 | Description  | Will you protect this asset? (Yes or No) |
|-----------------------|--|--|
| Water Treatment Plant | This town's main water treatment plant supplies drinking water to residents. If this resource is lost, the surrounding area would be without water for several days, leading to health and economic damage.        | Yes                                      |
| Ferry Boat            | The town's main ferry carries goods and people across the bay. This resource is important for the town's economy. If this resource is lost, the town would be unable to transport goods and people across the bay. | No                                       |
| Transportation Hub    | This transportation hub was built to support the town's growing local economy. It is a key resource for the town's economy. If this resource is lost, the town's economy would be severely impacted.               |  |
| Emergency Shelter     | This facility is used by the town's residents in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                   |  |
| Healthcare Center     | This facility is used by the town's residents in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                   |  |
| Police Station        | This facility is used by the town's police in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                      |  |
| Fire Station          | This facility is used by the town's fire department in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.             |  |
| City Hall             | This facility is used by the town's government in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                  |  |
| Public Library        | This facility is used by the town's residents in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                   |  |
| Community Center      | This facility is used by the town's residents in the event of a natural disaster. It is a key resource for the town's safety. If this resource is lost, the town's residents would be in danger.                   |  |

● 12" - most likely to flood during even minor coastal flooding events  
● 24" - can flood during coastal flooding events  
● 36" - can flood during larger coastal flooding events

17

# Google Jamboard

- **Group 1** (Facilitator Olivia)  
[https://jamboard.google.com/d/1Z2-IPtIdXZZARJWggEy36cQqR5\\_u56KG8hUrmue\\_xpA/edit?usp=sharing](https://jamboard.google.com/d/1Z2-IPtIdXZZARJWggEy36cQqR5_u56KG8hUrmue_xpA/edit?usp=sharing)
- **Group 2** (Facilitator Emma G )  
<https://jamboard.google.com/d/1Y4aaMzJVLU3Xv-2auXONdPirO4y9Zp9v5303CW2GSp0/edit?usp=sharing>
- **Group 3** (Facilitator Mike):  
<https://jamboard.google.com/d/1Te4nUaeqRUU-Mede7O8uVeIMGhizHWgKpZxE5RLAn8/edit?usp=sharing>
- **Group 4** (Facilitator Emma E):  
<https://jamboard.google.com/d/1uQ1InRFLrZXUIHHYgvhEBUhmeCtcWIOVIJbsCnzGGk/edit?usp=sharing>
- **Group 5** (Facilitator Scott):  
<https://jamboard.google.com/d/1PP-3R9C7yq5Xxr7ap8KR5FdmfWSbkGbyuqkxAePLjdg/edit?usp=sharing>



18

# Questions?



19



**Resilience Harbor**

● 12" - most likely to flood during even minor coastal flooding events  
● 24" - can flood during coastal flooding events  
● 36" - can flood during larger coastal flooding events

Source: Fictional town adapted from the USDN's Game of Floods



20



## Breakout Groups

### Group Report Outs

1. Which assets did you choose to protect? Which did you not protect?
2. Did you have any disagreements in your group? Why do you believe that was?
3. How did you make your decision? What factors did you consider when making your decision?

Source | Adapted from the USDN's [Game of Floods](#)



21

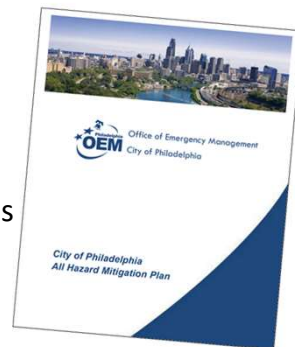
## PART 2: Hazard Mitigation Planning



22

## What is a Hazard Mitigation Plan?

- (1) Identifies which hazards Philadelphia is most at risk for; and
- (2) Identifies the projects, plans and policies the City can implement to reduce our risk.



**Required Update: May 2022**



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## Why Hazard Mitigation Planning?



Saves lives



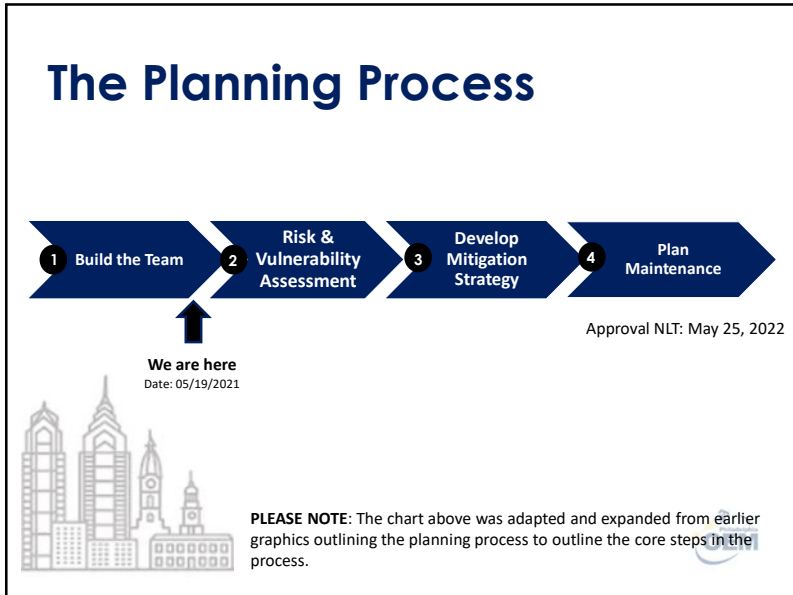
Saves money & establishes funding priorities



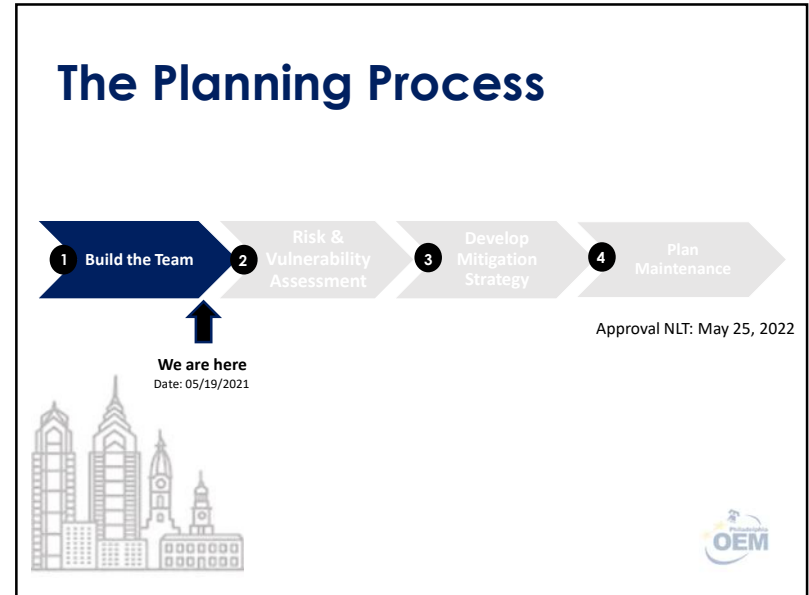
Builds partnerships & facilitates conversations



24



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26

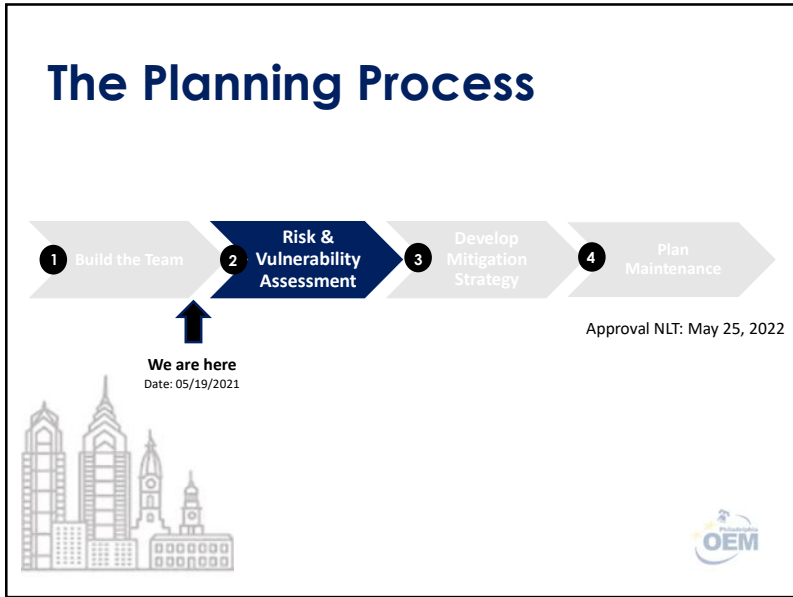
## Philadelphia's HMP

27

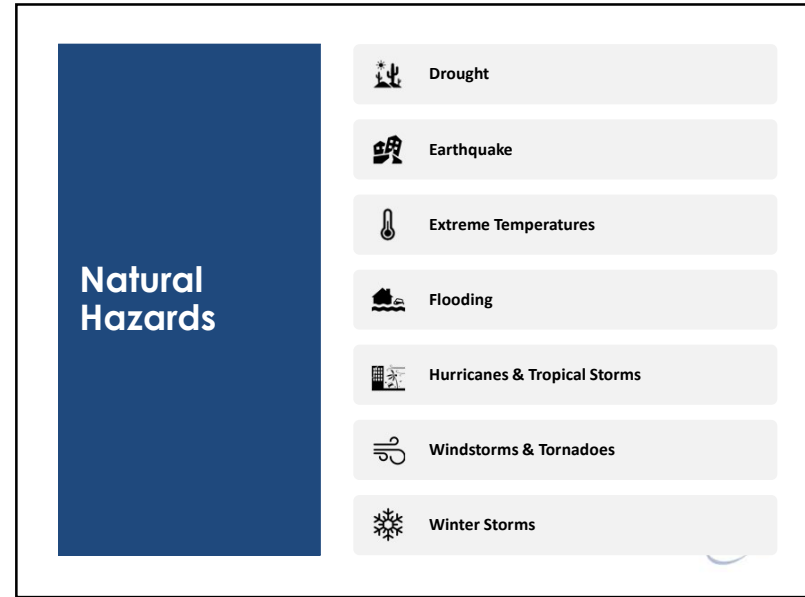
## Stakeholder Engagement

- Public
- Businesses
- City Agencies
- Private Sector Partners
- State Agencies
- Federal Agencies
- YOU!

28



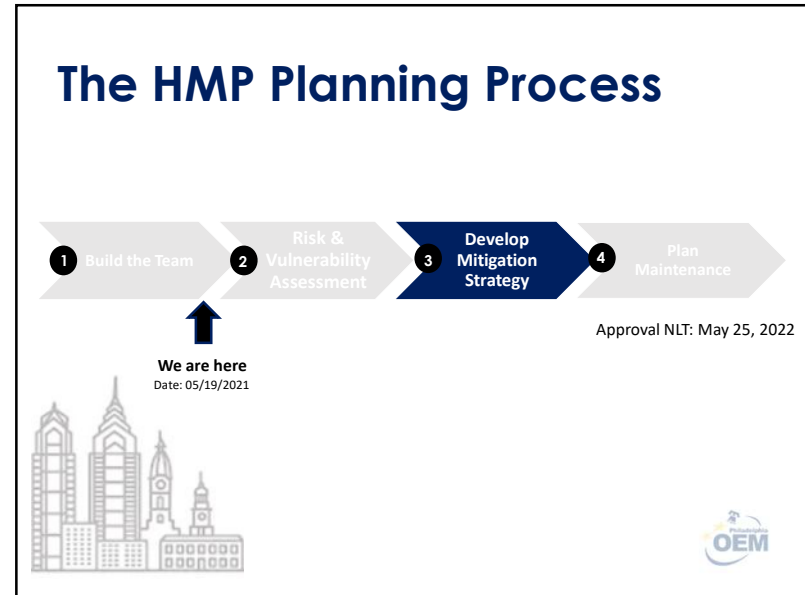
29



30




31




32

## Mitigation Projects


Philadelphia's approach for implementing mitigation activities that are cost-effective, technically feasible, and environmentally sound




**Local Plans & Regulations**



**Structure & Infrastructure Projects**




**Natural Systems Protection**




**Education & Awareness Programs**

Icons | The Noun Project





33

## The Planning Process



Approval NLT: May 25, 2022

We are here  
Date: 05/19/2021

34

# Questions?





35

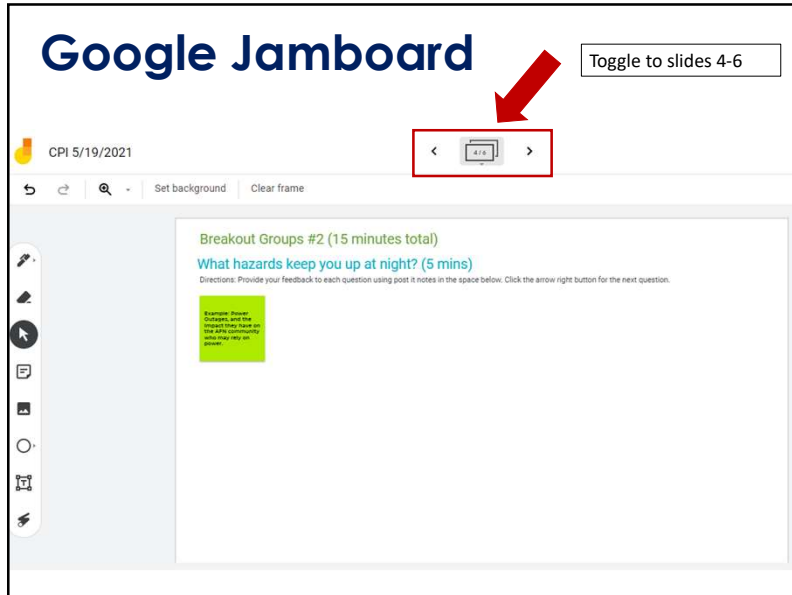
## Group Discussion

15 minutes

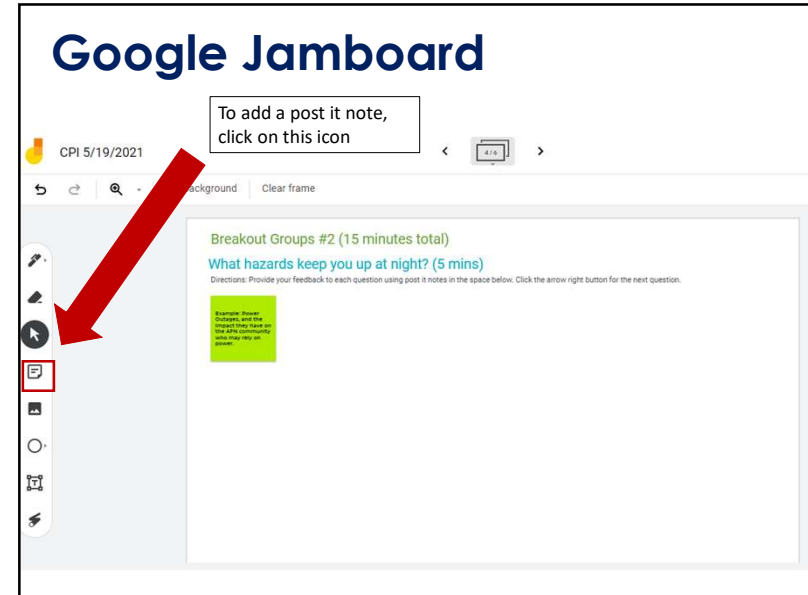
1. What hazards keep you up at night?
2. Who should be engaged in this planning process?
3. What resources, facilities and assets are most important to your community?



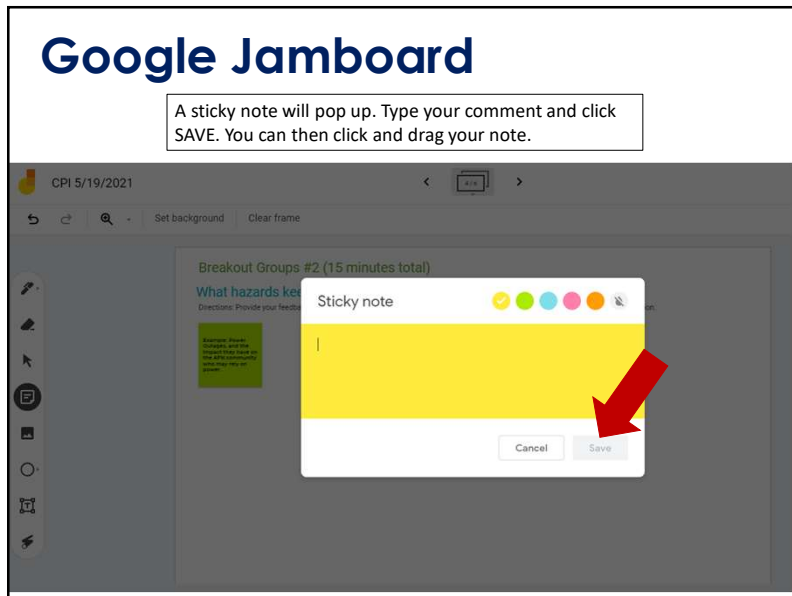
36



37



38



39



40

## Group Discussion

1. What hazards keep you up at night?
2. Who should be engaged in this planning process?
3. What resources, facilities and assets are most important to your community?



41



## What keeps you up at night?



Whether it be rising temperatures, flooding or the pandemic, we want to know what hazards make you worry. Your responses will help inform the update of the City's Hazard Mitigation Plan.

<https://www.surveymonkey.com/r/HMP-survey>  
<https://www.surveymonkey.com/r/HMP-survey-spanish>



42

## PART 3: In your neighborhood



43

## What Should You Know?



- Know what's in your go bag!
- Know who your neighbors are!
- Know your emergency contact phone numbers!



44

## 10 Preparedness Tips

1. Emergency Contacts
2. Emergency Documents
3. Emergency Plan
4. Pack A Go-Bag
5. Sign Up for READY Philadelphia Content
  - Newsletter
  - Alerts
  - Social Media
6. Introduce Yourself to a Neighbor or two
7. Take Household Inventory
8. Gather shelf stable food and water supplies
9. Pets Need a Plan too!
10. Practice and Review your Plans



45

## READYWorkshops

- What are they and how can people sign up?
  - READY Community
  - READY Business
  - READY Home
- Sign Up via email ([oem@phila.gov](mailto:oem@phila.gov)) or through our Community Chat [registration](#)



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# We'd like to hear from you!



47

## How you can be involved in the plan update.

- (1) Fill out our **Public Survey**.
- (2) Host a **workshop**. Email [oem@phila.gov](mailto:oem@phila.gov).
- (3) Tell your family, friends and relatives.
- (4) Stay up to date on the plan update by visiting [www.phila.gov/ready](http://www.phila.gov/ready)



48

**References & Supplementary Materials:**

[Philadelphia's 2017 Hazard Mitigation Plan](#)

[What is the Hazard Mitigation Plan? Flyer](#)

[Hazard Mitigation and How it Affects You Blog Post](#)

[Hazard Mitigation Public Survey Flyer](#)

[HMP Public Survey, Online – English](#)

[HMP Public Survey, Online -Spanish](#)

**Other Preparedness Resources**

[What Goes in a Go Bag? Flyer](#)

[Family Emergency Plan](#)

[Family Emergency Plan \(Spanish\)](#)

[Health Information Form](#)

[Health Information Form \(Spanish\)](#)



49

**QUESTIONS?**

**Emma Giardina**

Hazard Planning Coordinator

[Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)

**Olivia Gillison**

Community Preparedness Program  
Manager

[Olivia.Gillison@phila.gov](mailto:Olivia.Gillison@phila.gov)

[www.phila.gov/READY](http://www.phila.gov/READY)



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# City of Philadelphia Hazard Mitigation Plan



## Citizen's Planning Institute Notes

Date: May 19<sup>th</sup>, 2021 from 6pm-8pm

Location: Virtual, Zoom

### Notes:

Citizen's Planning Institute members provided feedback via Google Jamboard.

**Breakout Groups #2 (15 minutes total)**

**What hazards keep you up at night? (5 mins)**

Directions: Provide your feedback to each question using post it notes in the space below. Click the arrow right button for the next question.

|  |                                 |                                 |                          |              |                              |   |  |
|--|---------------------------------|---------------------------------|--------------------------|--------------|------------------------------|---|--|
| Example: Power Outages, and the impact they have on the AFN community who may rely on power. | fires in large vacant buildings | construction waste, toxic waste | demo & lead paint        | homelessness | gun epidemic                 | over building/ construction in the city       | New build quality Home construct materials not be sufficient for sto to come |
| civil unrest   | brownfield sites, contamination | heat islands                    | street lighting          | extreme heat | privatization of public land | air quality and greening                      |  |
| soil generation  | climate change and extreme heat | ransomware attacks              | safety of public transit | air quality  | urban power surges           | crime prevention through environmental design |  |

## Breakout Groups #2 (15 minutes total)

### Who should be engaged in the planning process? (5 mins)

Directions: Provide your feedback to each question using post it notes in the space below. Click the arrow right button for the next question.

Example: The Citizen's Planning Institute

anyone affected!

schools

Jabari Jones, West Philly Collaborative

Block Captains

Lancaster Ave 21st Century Business Association, CDC

Police Departments

Non profits that work with youths (Jack & Jill, PAL)

Rec Center Leaders

mutual aid groups

Town Watches

Overbrook Civic Association

Design Advocacy Group

City Council Members

Mutual Aid Groups/Orgs

PACDC

## Breakout Groups #2 (15 minutes total)

### What resources, facilities, and assets are important to your community? (5 mins)

Directions: Provide your feedback to each question using post it notes in the space below. Click the arrow right button for the next question.

Example: The park trails in our neighborhood.

commuter rail lines

access to emergency facilities

community centers

rec centers, playgrounds

public internet companies

brewerytown garden, fairmount park, girard ave access to 76, -- public transit

bodegas

social services

Libraries

institutions, high ed, business related

libraries, churches/mosques

social service centers, philanthropic orgs, art service centers

# Citizen's Planning Institute (CPI)



## Community Meeting

Date: May 19, 2021 from 6pm-8pm

Location: Zoom

| First Name, Last Initial | Planning District    |
|--------------------------|----------------------|
| Emma Giardina            | Philadelphia OEM     |
| Olivia Gillison          | Philadelphia OEM     |
| Donna Carney             | Planning Commission  |
| Carla B                  | Upper North West     |
| Sonja B                  | River Wards          |
| Brendan B                | River Wards          |
| Marques B                | West                 |
| Dolores C                | Upper Far Northwest  |
| Danielle C               | Central              |
| James M                  | Central              |
| Beth G.                  | Lower Northwest      |
| Dallas H                 | Lower Northeast      |
| Kaitlyn L                | Lower North          |
| Todd M                   | Lower Southwest      |
| Drew M                   | River Wards          |
| Indrayudh S              | University Southwest |
| Odessa T                 | Lower North          |
| Silke T                  | West                 |
| Onyeka U                 | Upper Northwest      |
| Ken M                    | Upper North          |
| Mary M                   | University Southwest |
| Jacqueline W             | University Southwest |
| Leah S.                  | Upper Northwest      |
| Eva H                    | West                 |
| Michael M                | Central              |
|                          |                      |

# City of Philadelphia Hazard Mitigation Plan



## OWN Community Meeting

**Date:** June 1<sup>st</sup> from 6:30pm-7:30pm

**Location:** Virtual, Zoom

### Notes:

Community members provided feedback via Google Jamboard.

## What hazards make you worry?

A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

Example!

Interior  
row house  
fires

fire

floods

extreme  
heat

Car collisions,  
with buildings  
due speed

**Overbrook West Neighbors (OWN)**

**Community Meeting**

Date: June 1<sup>st</sup>, 2021 from 6:30pm-7:30pm

Location: Zoom



| <b>First Name, Last Initial</b> |
|---------------------------------|
| Emma Giardina, OEM              |
| Olivia Gillison, OEM            |
| Gregory A.                      |
| Deidre S.                       |
| Shawn A.                        |
| Mr. Robinson                    |
| Elaine G.                       |
| Brian Y.                        |
| George M.                       |

# Reducing Risks 2022

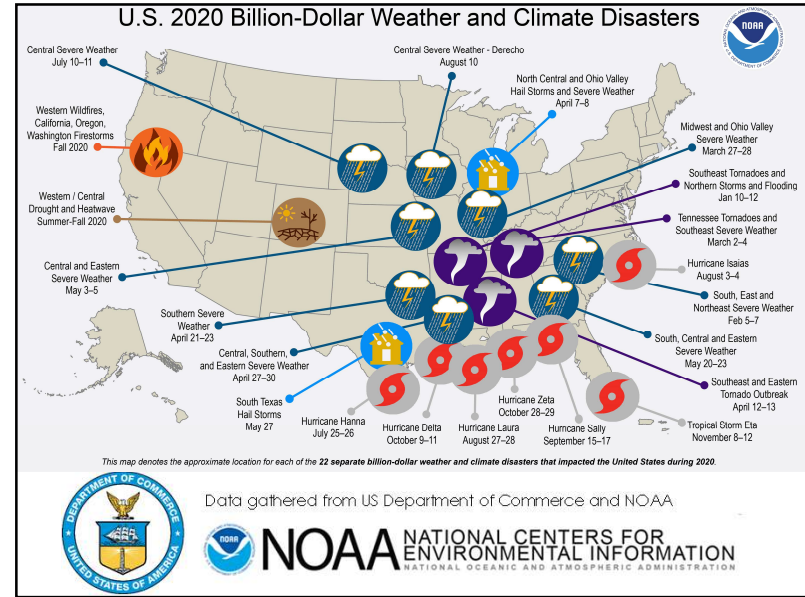
## Philadelphia's All-Hazard Mitigation Plan



6.1.2021



1



2

# What is Hazard Mitigation?




3

# What is Hazard Mitigation?

Reducing or eliminating risk of impact before disaster strikes

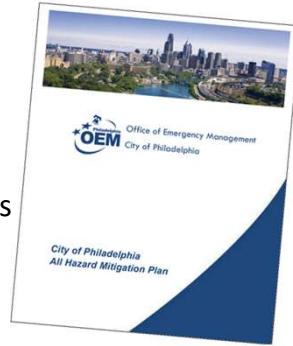



4

## The Plan

(1) Identifies which hazards Philadelphia is most at risk for; and

(2) Identifies the projects, plans and policies the City can implement to reduce our risk.



Required Update: May 2022



5

## Why Hazard Mitigation Planning?



Saves lives



Saves money & establishes funding priorities



Builds partnerships & facilitates conversations



6

## Hazards



Active Shooter



Bridge and Dam Failure



Hazardous Materials Train Derailment



Improvised Explosive Devices



Urban Conflagration



Drought



Earthquake



Extreme Temperatures



Flooding



Hurricanes & Tropical Storms



Windstorms & Tornadoes



Winter Storms

Icons | The Noun Project



7



8





9



Picture | Philadelphia Streets Department



10

## Stakeholder Engagement

-  Public
-  Businesses
-  City Agencies
-  Private Sector Partners
-  State Agencies
-  Federal Agencies
-  YOU!



11

## Engaging with YOU!

We are here

2022

Stay in the loop by visiting:  
[www.phila.gov/ready](http://www.phila.gov/ready)




12



# What hazards keep YOU up at night?

English Survey:  
<https://www.surveymonkey.com/r/HMP-survey>

Spanish Survey:  
<https://www.surveymonkey.com/r/HMP-survey-spanish>

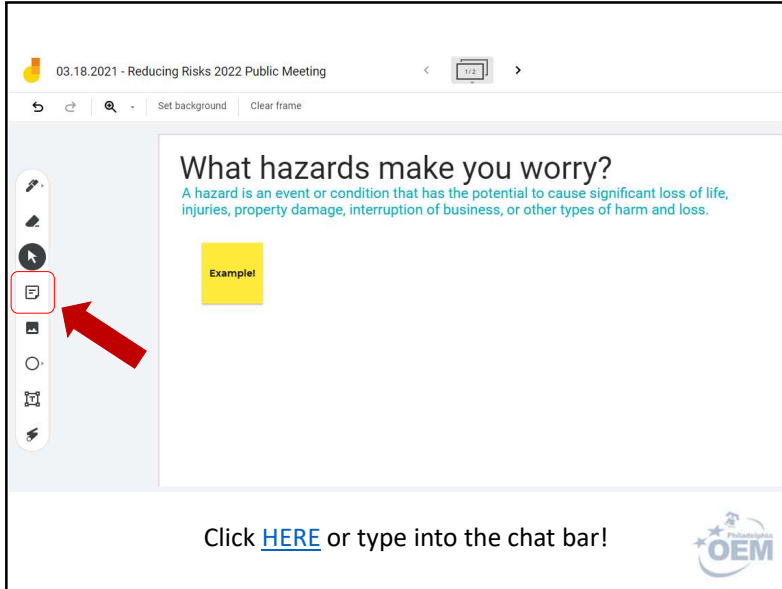


13


03.18.2021 - Reducing Risks 2022 Public Meeting

What hazards make you worry?  
 A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

Example!



Click [HERE](#) or type into the chat bar!



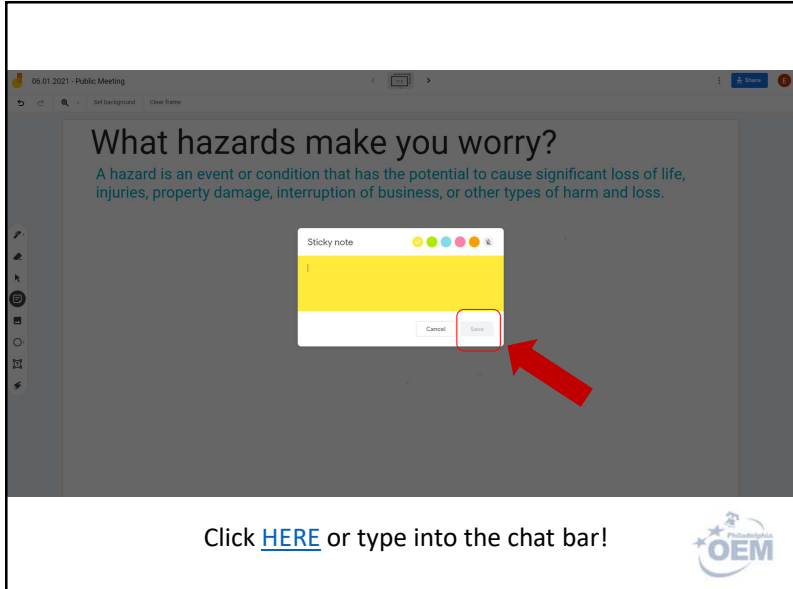
14

06.01.2021 - Public Meeting


What hazards make you worry?  
 A hazard is an event or condition that has the potential to cause significant loss of life, injuries, property damage, interruption of business, or other types of harm and loss.

Sticky note

Cancel Save



Click [HERE](#) or type into the chat bar!



15

# What hazards keep YOU up at night?

English Survey:  
<https://www.surveymonkey.com/r/HMP-survey>

Spanish Survey:  
<https://www.surveymonkey.com/r/HMP-survey-spanish>



16

# Engaging with YOU!



Stay in the loop by visiting:  
[www.phila.gov/ready](http://www.phila.gov/ready)



17

# How can you help?

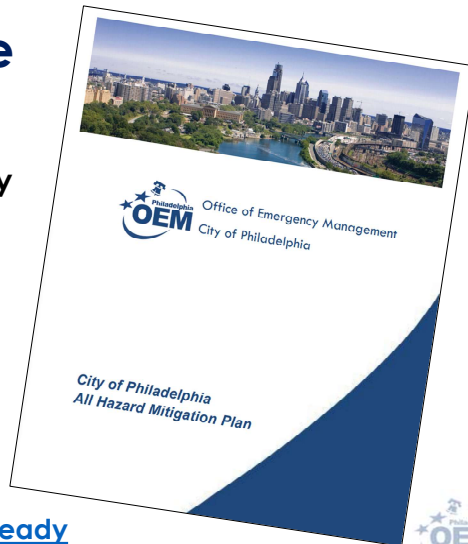
1. **Learn more** and **remain updated** on the planning process at [www.phila.gov/ready](http://www.phila.gov/ready) or by following us on social media.
2. Take our **public survey**.
3. **Participate** in upcoming workshops by signing up here: <https://bit.ly/2M4kwI2>
4. **Help** us spread the word!



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# Available Online

Updated every  
5 years



[www.phila.gov/ready](http://www.phila.gov/ready)



19

Emma Giardina  
 Hazard Planning Coordinator

[www.phila.gov/READY](http://www.phila.gov/READY)



20



21



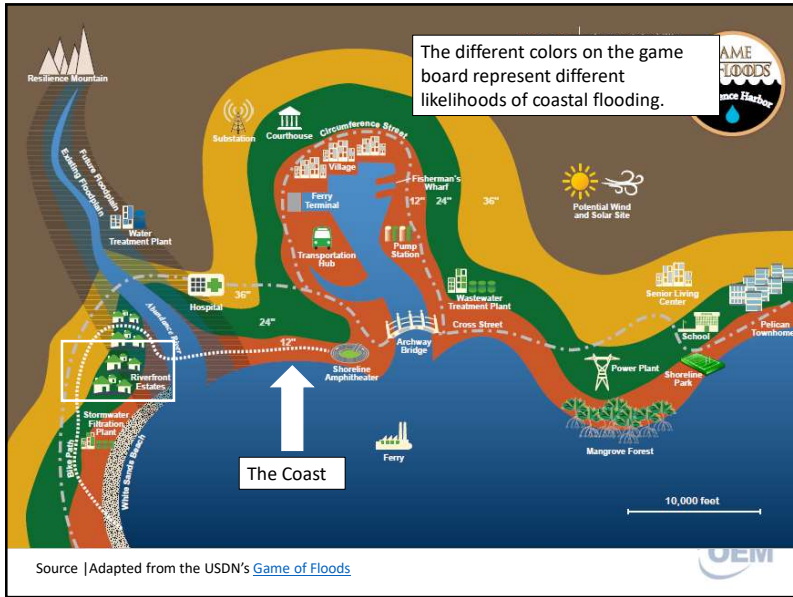
22



23



24



25



26



1



2





3



4



## What should you have in your HOME?

5

## What to have in your HOME

### Are you ready?

- flashlights?
- extra batteries?
- extra water bottles?
- **non-perishable** food?
- first aid kit?

### Are you set?

- extra copies of your photo ID?
- Copies of lease, mortgage, or insurance info?
- portable am/fm radio?
- Is your assistive equipment charged before a big storm?

6

When might you need these items?




7



Local Hazards

8

# Flooding



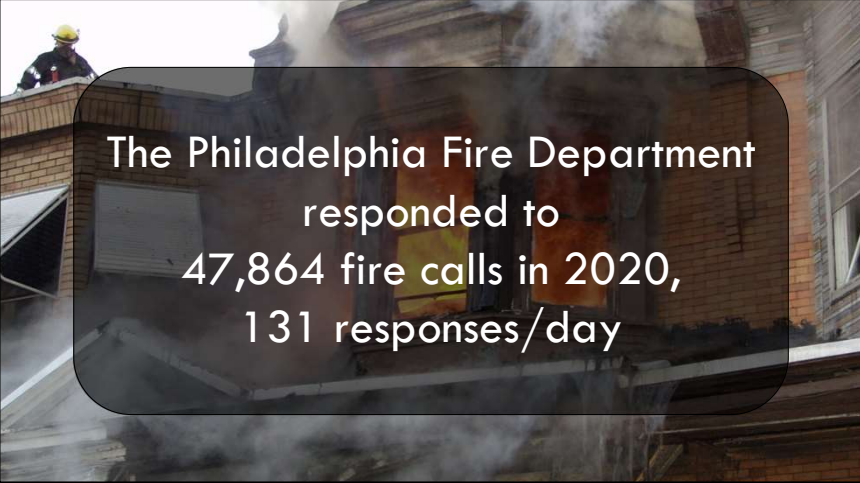
TUESDAY

Flooding is the most common hazard in Philadelphia.



Eastwick section of Philadelphia, August 2020

9



The Philadelphia Fire Department responded to 47,864 fire calls in 2020, 131 responses/day

10



# Why do we ask you to be prepared with THREE days worth of supplies?




11

11

# What should you have in your hand?

12

12

Go Bag




Items you will need in case of an emergency




13

13


Go Bag




Extra car + house keys




Cash



Batteries Back-up power




Important Documents




14

14


Go Bag




List of medications




Water



Flashlight



Paper & Pen



15

15

Don't Forget!



Children's supplies



Pets and supplies



AM/FM Radio



Hygiene Items



Mobility devices




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## Emergency Shelters




**First choice**

- Family or Friends (You may be the most comfortable).

**Second choice**


- City Emergency Evacuation Shelters, designated public schools.



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## Emergency Shelters





Shelters are assessed based on incident type, power supply, and flooding hazards.

**All shelters are ADA accessible**

Portable Generators Prioritized for Assistive Devices

- Communication Kits
- Mobility Technology
- Special Medical Needs
- Portable Ramps

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## Who do I call?




- 2-1-1** for FREE support accessing health and human services in your community (like childcare, emergency food, or housing services)
- 3-1-1** for FREE Philadelphia municipal services info
- 9-1-1** in case of medical, police, or fire emergencies
- 4-1-1** for PAID information services (like the phone # for a business)
- 5-1-1** for FREE traffic, airport, and public transportation info
- 6-1-1** for FREE telephone company customer service and repair
- 7-1-1** for FREE TDD relay for the deaf and hard of hearing
- 8-1-1** for FREE digging site assistance


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## Family Emergency Plan



1. Prepare a plan
2. Share your plan
3. Practice your plan
4. Update your plan



**Family Emergency Plan**  
Fill out this form and save to a flash drive, computer or the cloud. You can also print and put a copy in your Go Bag.

Local Emergency Contact or anyone in your personal network.

| Name | Phone | Email | Address |
|------|-------|-------|---------|
|      |       |       |         |
|      |       |       |         |
|      |       |       |         |

**Important Numbers**

|                         |  |
|-------------------------|--|
| Renter/Home Insurance # |  |
| Veterinarian/Kennel #   |  |
| Drivers License #       |  |

**Medical Information**

|                         |  |
|-------------------------|--|
| Primary Physician Name  |  |
| Primary Physician Phone |  |

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**Family Emergency Plan**  
 Fill out this form and save to a flash drive, computer or the cloud. You can also print and put a copy in your home.

**Local Emergency Contact** or anyone in your household

| Name | Phone | Email |
|------|-------|-------|
|      |       |       |
|      |       |       |
|      |       |       |

**Important Numbers**

|                         |  |
|-------------------------|--|
| Center/Home Insurance # |  |
|                         |  |
|                         |  |

**Family Emergency Plan**  
 Fill out this form and save to a flash drive, computer or the cloud. You can also print and put a copy in your home.

**Local Emergency Contact** or anyone in your household

| Name | Phone | Email | Address |
|------|-------|-------|---------|
|      |       |       |         |
|      |       |       |         |
|      |       |       |         |

**Important Numbers**

|                         |  |
|-------------------------|--|
| Center/Home Insurance # |  |
| Veteran/Service #       |  |
| Disability #            |  |

**Medical Information**

|                         |  |
|-------------------------|--|
| Primary Physician Name  |  |
| Primary Physician Phone |  |
| Health Insurance #      |  |
| Pharmacy Name           |  |
| Pharmacy Phone          |  |
| Home Health Care Phone  |  |
| Medical ID              |  |
| Medical Equipment Used  |  |
| Medical Devices         |  |
| Personal Care Items     |  |
|                         |  |

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What are you going to start thinking about tonight? Do you have any concerns?

**Philadelphia OEM**

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**What keeps you up at night?**

Whether it be rising temperatures, flooding or the pandemic, we want to know what hazards make you worry. Your responses will help inform the update of the City's Hazard Mitigation Plan.

Take the Survey!

Questions? Email [OEM@phila.gov](mailto:OEM@phila.gov) or visit [www.phila.gov/ready](http://www.phila.gov/ready)

**Philadelphia OEM**

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Follow us @PhilaOEM

Text **ReadyPhila** to **888777** to sign up

**Philadelphia OEM**

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## Contact Us



**Olivia Gillison**

Community Preparedness Program  
Manager

**Joshua Nussbaum, M.S.**

Community Resilience Coordinator

**Email: [oem@phila.gov](mailto:oem@phila.gov)**

**Website: [www.phila.gov/ready](http://www.phila.gov/ready)**

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## Emma Giardina

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**From:** Emma Giardina  
**Sent:** Friday, October 1, 2021 9:25 AM  
**Subject:** Philadelphia's 2022 Hazard Mitigation Plan Update: Monthly Newsletter


Good afternoon,

This monthly newsletter provides updates on Philadelphia's 2022 [All-Hazard Mitigation Plan](#) (HMP) update process and highlights upcoming meetings and trainings. Please feel free to reach out to me if you have any questions or feedback on this newsletter. If there are additional updates you would like to see included in the newsletter next month, please don't hesitate to reach out.

### General Updates

- This fall, OEM will be hosting two stakeholder meetings focused on the update of the *Capability Assessment* and the *Mitigation Strategy*.
  - The Capability Assessment Workshop will take place on **Monday, October 4<sup>th</sup>** from **1pm-3pm**.
  - The Mitigation Strategy Workshop will take place on **Friday, November 19<sup>th</sup>** from **10:30am-12:30pm**.
  - You can register to attend one or both workshops [here](#).
  - We strongly encourage all agencies or organizations involved in the plan update to send at least one representative to each of these workshops.
- In preparation for the *Mitigation Strategy* update, check out FEMA's [Mitigation Action Portfolio](#), which showcases an array of different mitigation actions implemented across the United States. These case studies may spur ideas for projects we can implement here in Philadelphia. The portfolio is periodically updated to showcase new and innovative ideas.
- You can find more resources on the Hazard Mitigation Plan update by visiting our [SharePoint page](#). This is just one way we will share information with all of you. If you are having trouble accessing this site, please let us know.

### Mitigation Funding (NEW Section!)

- The application period for FEMA's [Building Resilient Infrastructure & Communities \(BRIC\)](#) and [Flood Mitigation Assistance \(FMA\)](#) grants opened yesterday, 9/30 in FEMA GO!
  - While several city deadlines for this application process have already passed, it is not too early to begin planning for BRIC and FMA in 2022! For more information, view the  [City Application Process](#) and attend the Mitigation Strategy Workshop to make sure your projects are included in the 2022 plan.
  - FEMA released more information on projects that were selected for FY2022 BRIC and FMA funding. Learn more about the competitive projects that were chosen [here](#).
- Philadelphia received a disaster declaration for Hurricane Ida, which has the potential to open up post-disaster mitigation funding opportunities for Philadelphia.
  - Details and more information on mitigation funding opportunities that may become available will be shared with HMP stakeholders as they become available.
  - Projects must be included in the City's HMP to be eligible for post-disaster mitigation funding through the Hazard Mitigation Grant Program (HMGP).
- Additional mitigation funding may become available through the Hazard Mitigation Grant Program (HMGP) as a result of the COVID-19 disaster declaration. Learn more [here](#).
  - Details and more information on mitigation funding opportunities that may become available will be shared with HMP stakeholders as they become available.
  - Projects must be included in the City's HMP to be eligible for post-disaster mitigation funding through the Hazard Mitigation Grant Program (HMGP).

## Upcoming Meetings

Please reach out to Emma Giardina ([Emma.Giardina@phila.gov](mailto:Emma.Giardina@phila.gov)) if you would like to attend one of the meetings listed below.

- **Capability Assessment Workshop**, October 4<sup>th</sup> from 1pm-3pm, [sign up here](#)
- **Natural-Based Solutions – Mitigation Project Brainstorming Session**, October 18<sup>th</sup> from 1pm-2pm
- **Infrastructure and Housing Solutions – Mitigation Project Brainstorming Session**, October 21<sup>st</sup> from 11am-12pm
- **Mitigation Strategy Workshop**, November 19<sup>th</sup> from 10:30am-12:30pm, [sign up here](#)

## Public Engagement

- The Hazard Mitigation Plan Public Survey is still open to the public (available in [English](#), [Spanish](#), and in other languages by calling 311). Help us spread the word by sharing this [Social Media Toolkit](#) with your communications team.
- OEM continues to host public workshops about the Hazard Mitigation Plan with community organizations upon request. Please reach out to [oem@phila.gov](mailto:oem@phila.gov) with questions or requests.

## Upcoming HMP-Related Training Opportunities

- FEMA Region II Webinar, [Exploring Guides to Mitigation: Agriculture](#), September 1<sup>st</sup> from noon-12:30pm
- FEMA's BRIC and FMA Grant Program Trainings and Webinars
  - [Federal Agency Roundtable and Partnerships](#), October 14<sup>th</sup> from 2pm-3pm
  - For more information on FEMA's 2021 BRIC and FMA Webinar Series, and for recordings of past webinars, click [here](#).
- Emergency Management Institute, [Hazard Mitigation Assistance: Developing Quality Application Elements](#), 5 days course, various dates available
- Online Benefit-Cost Analysis Trainings:
  - Emergency Management Institute (EMI), [IS—277.A: Benefit-Cost Analysis \(BCA\): Entry-Level](#), Online Training
  - Emergency Management Institute (EMI), [IS-276.A: Benefit-Cost Analysis Fundamentals](#), Online Training

## Other HMP Resources

- Link to the public facing website and 2017 Hazard Mitigation Plan (HMP): <https://www.phila.gov/departments/oem/programs/hazard-mitigation-plan/>
- PA Hazard Mitigation Plan: <https://pahmp.com/>
- [Hazard Mitigation Planning Standard Operating Guide \(SOG\)](#), PEMA, 2020
- [Flood Mitigation Assistance \(FMA\) Grant](#)
- [Building Resilient Infrastructure and Communities \(BRIC\) Grant](#)

## Emma Giardina

Hazard Planning Coordinator  
Philadelphia Office of Emergency Management  
D: 215-683-3251  
C: 267-239-1564

Ready, or Not? Learn what to have in your home, hand and head.  
Visit [www.phila.gov/ready](http://www.phila.gov/ready) or call 311



## HAZARDS IN PHILADELPHIA: 2021 PUBLIC SURVEY

### SECTION 1: Introduction

**Description:** Every 5 years, the Philadelphia Office of Emergency Management (OEM) updates the City's Hazard Mitigation Plan (HMP). This plan identifies the natural and human-caused hazards that pose the most risk for Philadelphia and the projects, plans, and policies the City can work on to reduce impacts from these hazards.



We want to hear from you! Responses from this survey will be used to inform the 2022 update of this plan. All responses will remain anonymous. Personally identifiable information will not be attached to your responses to this survey.

To fill out this survey online, please visit [www.phila.gov/ready](http://www.phila.gov/ready), scan the QR code, OR complete this form and mail it to: Office of Emergency Management, 240 Spring Garden Street, Philadelphia, PA 19123

**Directions:** You must be 18 or older and live or work in Philadelphia to complete the following survey. Please only submit one response per person.

1. Are you 18 or older?

Yes

2. Do you live or work in Philadelphia?

I **live** in Philadelphia

I **work** in Philadelphia

I **live and work** in Philadelphia

### SECTION 2: Preparedness

3. How did you hear about this survey? *(Please select all that apply.)*

- City of Philadelphia (website, social media, press release, etc.)
- Online or Social Media
- Philadelphia Office of Emergency Management (OEM) Workshop or Training
- READYCommunity Newsletter
- Other \_\_\_\_\_

4. Prior to this survey, had you heard of the City's Hazard Mitigation Plan?

Yes

No

Unsure

5. **If you live in Philadelphia**, what is your zip code of residence?

*(Please enter 5 digits.)* \_\_\_\_\_

6. **If you work in Philadelphia**, what is the zip code of your workplace?

*(Please enter 5 digits.)* \_\_\_\_\_

**SKIP TO QUESTION #13 IF YOU WORK IN PHILADELPHIA BUT DO NOT LIVE IN PHILADELPHIA.**

7. Which of the following best describes the type of home you currently live in?

- Owned free and clear
- Owned with a mortgage or loan (home equity loans)
- Rented
- Occupied without payment of rent
- Other \_\_\_\_\_

8. Do you have homeowner's insurance or renter's insurance?

- Yes
- No
- Unsure

9. To the best of your knowledge, do you live in a Special Flood Hazard Area (SFHA)?

- Yes
- No
- Unsure

10. Do you have flood insurance? (*Flood insurance is not included in a standard homeowner's or renter's insurance policy and must be purchased separately.*)

- Yes
- No
- Unsure

11. **If you answered "no" to question #10 above**, what is the reason you do not have flood insurance? (*Please select all that apply.*)

- Flood insurance is too expensive
- I do not know how to purchase flood insurance
- I previously tried to purchase flood insurance, but was not successful
- I do not believe that I need flood insurance
- Other \_\_\_\_\_

12. What actions have you taken to better prepare you and members of your household for emergencies or disasters? (*Please select all that apply.*)

- Have working smoke detectors** installed inside your home
- Talked with members of your household** about what to do in case of a disaster or emergency
- Developed a written household emergency plan** which describes what members of your household would do in case of a disaster or emergency
- Prepared a "shelter-in-place" emergency kit** with supplies (food, water, medicine, etc.) for you, members of your household, and your pets
- Prepared an emergency "go kit"** with supplies (medications, flashlight, water bottles, etc.) you, members of your household, and your pets will need if you need to leave your home quickly in case of a disaster or emergency
- Attended a workshop or training** related to disaster or emergency preparedness (CPR class, first aid training, or READYHome workshop, etc.)
- Other** \_\_\_\_\_
- None** of the above

13. Where are you most likely to go to get trusted information about hazards and preparedness information in Philadelphia? (*Please select all that apply.*)

- City of Philadelphia (website, social media, press release, etc.)
- Online or Social Media
- READYPhiladelphia Alerts
- Family, Friend, or Neighbor
- Community or Faith-Based Locations (fire stations, non-profits, churches, etc.)
- TV News
- Radio
- Other \_\_\_\_\_

### SECTION 3: Mitigation and Resilience Strategy

14. Please rate how concerned you are about each of the following **natural disasters** affecting the neighborhood in Philadelphia where you live and/or work. *(Please select one answer per row.)*

|                              | Not At All Concerned  | Slightly Concerned    | Moderately Concerned  | Very Concerned        | Extremely Concerned   |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| COVID-19 / Other Pandemic    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drought                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Earthquakes                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extreme Cold                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Extreme Heat                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Flooding                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Hurricanes / Tropical Storms | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tornadoes / Windstorms       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Winter Storms / Blizzards    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there **other natural disasters** that you are **extremely concerned** about?

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15. Please rate how concerned you are about each of the following **human-caused disasters or threats** affecting the neighborhood in Philadelphia where you live and/or work. *(Please select one answer per row.)*

|   | Not At All Concerned  | Slightly Concerned    | Moderately Concerned  | Very Concerned        | Extremely Concerned   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Active Shooter  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Chemical Spill / Other Hazardous Material Release                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Civil Disturbance (group acts of violence against property and individuals) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gun Violence  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Infrastructure Failure (utility outages, bridge or dam collapse, etc.)      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Opioid Epidemic   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Widespread Fire (multiple homes or buildings)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Are there **other human-caused disasters or threats** that you are **extremely concerned** about?

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### SECTION 4: Demographics

The following demographic questions are optional.

16. *Optional:* What is your gender?

- Female
- Male
- Non-Binary or Third Gender
- Other or I prefer to self describe
- I prefer not to answer



17. *Optional:* What is your race? (Please select all that apply.)

- Asian or South Asian or Pacific Islander
- Black or African American
- Middle Eastern
- Native American or American Indian
- White or Caucasian
- Other or I prefer to self-describe
- \_\_\_\_\_
- I prefer not to answer

18. *Optional:* Do you identify as Hispanic or Latinx?

- Yes, I consider myself to be Hispanic or Latinx
- No, not Hispanic or Latinx
- I prefer not to answer

19. *Optional:* What category is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or older
- I prefer not to answer

20. *Optional:* What is the highest degree or level of school you have completed?

- Less than 9th Grade
- 9th to 12th Grade
- High School Diploma or GED
- Vocational or Trade School
- Some College - no degree
- Associate's Degree
- Bachelor's Degree
- Graduate or Professional Degree
- I prefer not to answer

21. *Optional:* What is your annual household income?

- Less than \$15,000
- \$15,000 to \$29,999
- \$30,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 or more
- I prefer not to answer

22. *Optional:* Do you have a mental or physical disability?

- Yes, I am a person with a disability
- No, I am not a person with a disability
- I prefer not to answer

## SECTION 5: Closing

23. *Optional:* Please provide any additional feedback you would like to share to help inform the City's Hazard Mitigation Plan 2022 update.

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24. *Optional:* If you are interested in receiving more information on Philadelphia Office of Emergency Management's emergency preparedness workshops, please provide your name and contact information or email OEM@phila.gov.

*(Personally identifiable information will not be attached to your responses to this survey.)*

Name \_\_\_\_\_

Email Address \_\_\_\_\_

Phone Number \_\_\_\_\_

Thank you for completing our survey! For more information on hazards in your neighborhood and how you can prepare your home and neighborhood, please visit [www.phila.gov/ready](http://www.phila.gov/ready).

## PELIGROS EN FILADELFIA ENCUESTA PARA EL PÚBLICO 2021

### SECCIÓN 1: Introducción

**Descripción:** Cada 5 años, la Oficina de Manejo de Emergencias (Office of Emergency Management, OEM) de Filadelfia actualiza el Plan de Mitigación de Peligros (Hazard Mitigation Plan, HMP) de la Ciudad. Este plan identifica los peligros naturales y causados por el hombre que representan el mayor riesgo para Filadelfia y los proyectos, planes y políticas que la Ciudad puede elaborar para reducir los impactos de estos peligros.



¡Queremos saber de usted! Las respuestas de esta encuesta se utilizarán para informar la actualización en 2022 de este plan. Todas las respuestas serán anónimas. No se adjuntará información de identificación personal a sus respuestas a esta encuesta.

Para más información sobre la planificación de mitigación de peligros y por qué es importante para usted, lea nuestra publicación en el blog <https://www.phila.gov/2020-10-28-hazard-mitigation-planning-why-it-matters-to-you/>.

**Direcciones:** Debe tener 18 años o más y vivir o trabajar en Filadelfia para completar la siguiente encuesta. Por favor, envíe solo una respuesta por persona.

1. ¿Tiene 18 años o más?

Sí

2. ¿Vive o trabaja en Filadelfia?

**Vivo** en Filadelfia

**Trabajo** en Filadelfia

**Vivo y trabajo** en Filadelfia

### SECCIÓN 2: Preparación

3. ¿Cómo se enteró de esta encuesta? *(Marcar todas las opciones que correspondan.)*

Ciudad de Filadelfia (sitio web, red social, comunicado de prensa, etc.)

En línea o redes sociales

Taller o capacitación de la Oficina de Manejo de Emergencias (OEM) de Filadelfia

Boletín de noticias READYCommunity

Otro \_\_\_\_\_

4. Antes de esta encuesta, ¿había escuchado sobre el Plan de Mitigación de Peligros de la Ciudad?

Sí

No

No está seguro

5. Si vive en Filadelfia, ¿cuál es el código postal de su residencia?

*(Ingrese 5 dígitos.)* \_\_\_\_\_

6. Si trabaja en Filadelfia, ¿cuál es el código postal de su lugar de trabajo?

*(Ingrese 5 dígitos.)* \_\_\_\_\_

**PASE A LA PREGUNTA #13 SI TRABAJA EN FILADELFIA PERO NO VIVE EN FILADELFIA.**

7. ¿Cuál de los siguientes describe mejor el tipo de vivienda donde vive actualmente?

- Propiedad libre y sin deuda
- Propiedad con hipoteca o préstamos (préstamos hipotecarios)
- Alquila
- Ocupado con pago de alquiler
- Otro \_\_\_\_\_

8. ¿Tiene seguro de propietario o seguro de inquilino?

- Sí
- No
- No está seguro

9. A su leal saber y entender, ¿vive en un Área Especial de Peligro de Inundación (Special Flood Hazard Area, SFHA)?

- Sí
- No
- No está seguro

10. ¿Tiene seguro por inundación? (El seguro por inundación no se incluye en una póliza de seguro del propietario o inquilino estándar y se debe adquirir por separado.)

- Sí
- No
- No está seguro

11. Si respondió "no" a la pregunta #10 de arriba, ¿cuál es la razón por la cual no tiene seguro por inundación? (Marcar todas las opciones que correspondan.)

- El seguro por inundación es muy costoso
- No sé cómo adquirir seguro por inundación
- He tratado previamente de adquirir seguro por inundación, pero no tuve éxito
- No creo que necesite seguro por inundación
- Otro \_\_\_\_\_

12. ¿Qué medidas ha tomado para estar mejor preparado usted y los miembros de su hogar para emergencias o desastres? (Marcar todas las opciones que correspondan.)

- Ha instalado detectores de humo que funcionan** en su hogar
- Ha hablado con los miembros de su hogar** sobre qué hacer en caso de un desastre o emergencia
- Ha desarrollado un plan escrito para emergencias en el hogar** que describe qué deben hacer los miembros de su hogar en caso de un desastre o emergencia
- Ha preparado un kit para emergencias en caso de "refugio en el lugar"** con suministros (comida, agua, medicamentos, etc.) para usted, los miembros de su hogar y sus mascotas
- Ha preparado un "kit para llevar" de emergencias** con suministros (medicamentos, linterna, botellas de agua, etc.) que usted, los miembros de su hogar y sus mascotas necesitarán si deben abandonar su vivienda rápidamente en caso de un desastre o emergencia
- Ha asistido a un taller o capacitación** en relación con preparación para desastres o emergencia (clase de RCP, capacitación en primeros auxilios o talleres READYHome, etc.)
- Otro** \_\_\_\_\_
- Ninguna** de las anteriores

13. ¿Dónde es más probable que acuda para obtener información de confianza sobre peligros e información de preparación en Filadelfia? (Marcar todas las opciones que correspondan.)

- Ciudad de Filadelfia (sitio web, red social, comunicado de prensa, etc.)
- En línea o redes sociales
- Alertas de READYPhiladelphia
- Familia, amigo o vecino
- Lugares comunitarios o religiosos (estaciones de bomberos, organizaciones sin fines de lucro, iglesias, etc.)
- Noticias de televisión
- Radio
- Otro \_\_\_\_\_

### SECCIÓN 3: Estrategia de mitigación y resiliencia

14. Por favor, califique qué tan preocupado está sobre cada uno de los siguientes **desastres naturales** que afectan el barrio en Filadelfia donde usted vive o trabaja. *(Seleccione una respuesta por fila.)*

|  | Para nada preocupado  | Un poco preocupado    | Moderadamente preocupado | Muy preocupado        | Extremadamente preocupado |
|--|-----------------------|-----------------------|--------------------------|-----------------------|---------------------------|
| COVID-19 / otra pandemia                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Sequía                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Terremotos                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Frío extremo                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Calor extremo                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Inundaciones                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Huracanes / tormentas tropicales           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Tornados / vendavales                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Tormentas de invierno / tormentas de nieve | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |

¿Hay **otro desastre natural** por el cual está **extremadamente preocupado**?

---

15. Por favor, califique qué tan preocupado está sobre cada uno de los siguientes **desastres o amenazas causadas por el hombre** que afectan el barrio en Filadelfia donde usted vive o trabaja. *(Seleccione una respuesta por fila.)*

|   | Para nada preocupado  | Un poco preocupado    | Moderadamente preocupado | Muy preocupado        | Extremadamente preocupado |
|---|-----------------------|-----------------------|--------------------------|-----------------------|---------------------------|
| Tirador activo  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Derrame químico / otras liberaciones de materiales peligrosos                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Disturbio civil (actos de violencia en grupo contra la propiedad y personas)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Violencia con armas   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Fallas de infraestructura (cortes de servicios públicos, colapso de puentes o diques, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Epidemia de opioides  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |
| Incendio extendido (varias viviendas o edificios)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>     |

¿Hay **otro desastre o amenaza causada por el hombre** por la cual está **extremadamente preocupado**?

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## SECCIÓN 4: Datos demográficos

Las siguientes preguntas demográficas son opcionales.

16. *Opcional:* ¿Cuál es su sexo?

- Femenino
- Masculino
- No binario o tercer género
- Otro o prefiero auto describirme
- Prefiero no responder

17. *Opcional:* ¿Cuál es su raza? (Marcar todas las opciones que correspondan.)

- Asiático o asiático del sur o de la Isla del Pacífico
- Negro o afroamericano
- De Medio Oriente
- Nativo americano o indígena americano
- Blanco o caucásico
- Otro o prefiero auto describirme
- Prefiero no responder

18. *Opcional:* ¿Se identifica como hispano o latino?

- Sí, me considero hispano o latino
- No, no soy hispano ni latino
- Prefiero no responder

19. *Opcional:* What category is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 o más
- Prefiero no responder

20. *Opcional:* ¿Cuál es el título o nivel de educación más alto que ha completado?

- Menos que 9.º grado
- 9.º a 12.º grado
- Diploma de escuela secundaria o GED
- Escuela vocacional o de oficio
- Algo de universidad - sin terminar
- Título técnico
- Licenciatura
- Graduado o título profesional
- Prefiero no responder

21. *Opcional:* ¿Cuál es su ingreso familiar anual?

- Menos de \$15,000
- Entre \$15,000 y \$29,999
- Entre \$30,000 y \$49,999
- Entre \$50,000 y \$74,999
- Entre \$75,000 y \$99,999
- \$100,000 o más
- Prefiero no responder

22. *Opcional:* ¿Tiene una discapacidad mental o física?

- Sí, soy una persona con una discapacidad
- No, no soy una persona con una discapacidad
- Prefiero no responder

## SECCIÓN 5: Cierre

23. *Opcional:* Por favor, brinde cualquier comentario adicional que le gustaría compartir para ayudar a informar la actualización de 2022 del Plan de Mitigación de Peligros de la Ciudad.

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24. *Opcional:* Si desea recibir más información sobre los talleres de preparación para emergencias de la Oficina de Manejo de Emergencias de Filadelfia, envíe su nombre e información de contacto o correo electrónico a OEM@phila.gov.

*(No se adjuntará información de identificación personal a sus respuestas a esta encuesta.)*

Nombre \_\_\_\_\_

Dirección de correo electrónico \_\_\_\_\_

Número de teléfono \_\_\_\_\_

¡Gracias por completar nuestra encuesta! Para más información sobre los peligros en su barrio y cómo puede preparar su hogar y barrio, visite [www.phila.gov/ready](http://www.phila.gov/ready).

# City of Philadelphia Hazard Mitigation Plan



## Public Survey Results

### Background

On January 27, 2021, Philadelphia Office of Emergency Management (OEM) released a public survey to gather information on general emergency preparedness and community concerns for the update of the 2022 Hazard Mitigation Plan. The survey was created and advertised in both English and Spanish. Members of the public without digital access or who required the survey in a different language were able to call Philly311 for support filling out the survey. This survey was open until December 13<sup>th</sup>, 2021 and feedback received from the survey directly informed the update of the plan.

### Summary of Findings and Next Steps:

Key findings from this survey that informed the Hazard Mitigation Plan mitigation strategy include:

- The majority (73%) of survey respondents did not know about the Hazard Mitigation Plan prior to taking this survey. This indicates that additional community outreach and education around this planning process is needed between now and the next plan update.
- 40% of survey respondents did not know if they lived in a Special Flood Hazard Area (SFHA) indicating the need for additional education and outreach around how residents can find out about their own flood risk.
- Although flooding is Philadelphia's number one natural hazard and flooding can also occur in areas outside of the SFHA, 80% of respondents who reported not having flood insurance said they did not think that they needed it. This indicates that more work is needed to better communicate Philadelphia's flood risk and promote the importance of flood insurance.
- Only 11% of survey respondents have a written emergency plan, and about half have talked with members of their household about what to do in case of a disaster or emergency. Additional outreach and education around general household preparedness is needed.
- The natural disaster of highest concern among respondents is COVID-19 or other pandemics. The human-caused disaster of highest concern among respondents is gun violence. Both hazards were not included in the 2017 HMP, but are included as new hazards in the 2022 HMP.
- Other natural and human-caused disasters of high concern included: High heat, active shooter, civil disturbance, and infrastructure failure. All of these hazards are included in the 2022 HMP.

### Survey Limitations

Based on a comparison of the completed survey demographic questions and U.S. Census Data, these survey results alone are not representative of Philadelphia's diverse community. The skewed results of this survey align with historical trends of survey non-response among communities that are either harder for government to reach, less able to commit time to respond to a survey, or less likely to trust the government to represent their interests. These challenges are likely exacerbated because of challenges with survey distribution and lack of in-person outreach during the COVID-19 Pandemic. Based on responses from those that filled out the optional demographic questions, populations underrepresented in our survey results include men, individuals who are black or African American, individuals who are Hispanic and Latinx, individuals with education at or below a High School Degree, and individuals reporting less than \$49,000 in annual household income. Survey responses came primarily from individuals who work and/or live in the Center City/University City region.

For future updates, there will be a continued focus placed on partnering with community organizations and community leaders throughout Philadelphia to gather survey results from populations underrepresented in the 2022 public survey process. If COVID-19 conditions safely allow us to, there will also be an increased number of in-person opportunities for residents to respond to the survey.

Please note, these survey results were not the only means for collecting community feedback throughout this planning process. A variety of options for participation in the planning process were available including one-on-one workshops for community organizations upon request, pop-up table events, and direct outreach to community leaders and organizations. Please see **Chapter 2: The Planning Process** for more information on the variety of different ways that Philadelphia OEM engaged the community throughout the plan update.

## Results:

The below analysis of survey results and graphics were compiled by the Mayor’s Office of Policy between December 2021 and January 2022.

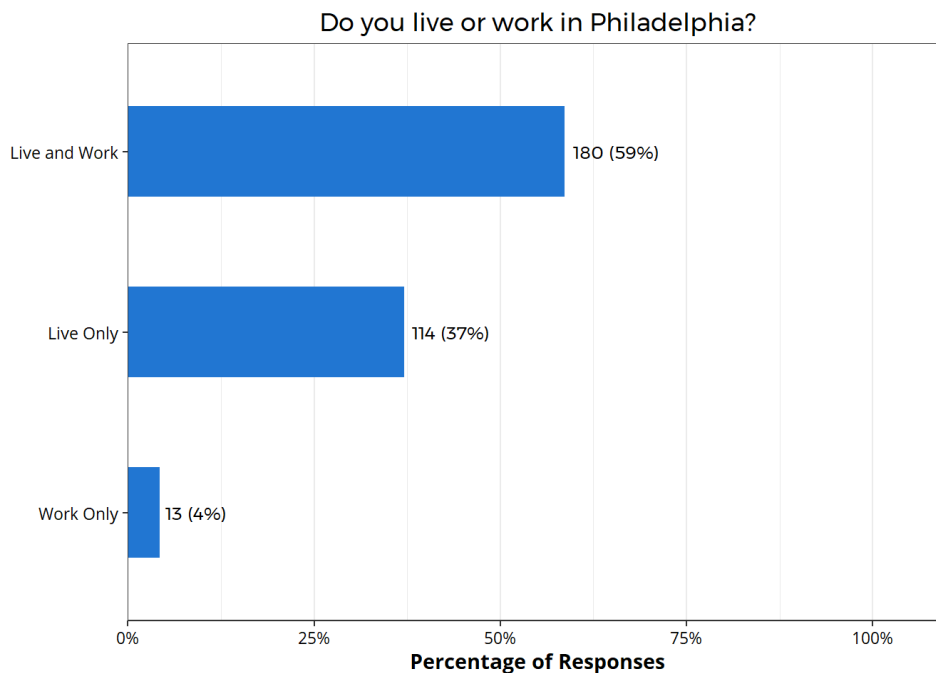
### Overview

A total of 394 responses were collected, with 307 completed responses included in the analysis below.

Almost 60 percent of respondents live and work in Philadelphia.

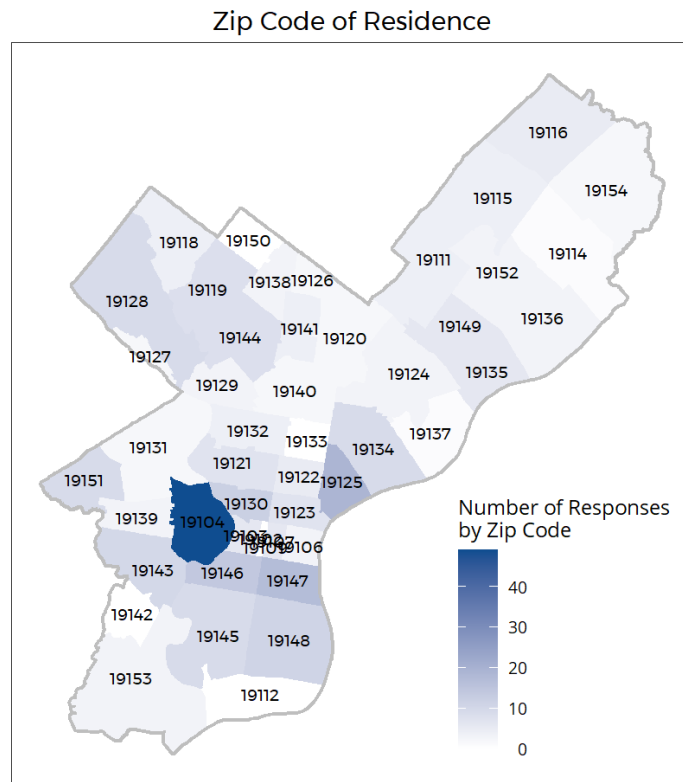
Over a third only live in Philadelphia.

A few only work in Philadelphia.





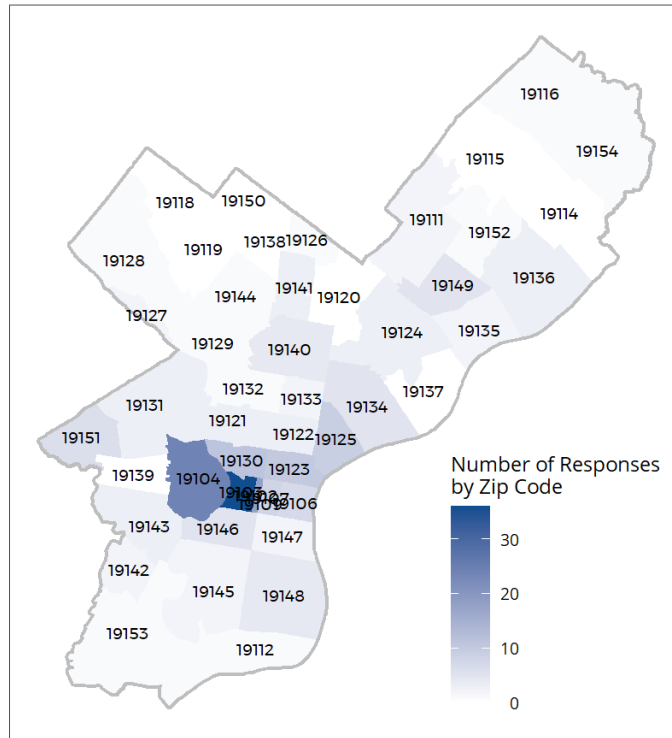
Respondents live all over the city, although there is a concentration of responses from the University City/Powelton neighborhoods.



4% of the respondents only work in Philadelphia (13 of 307).

Many respondents work in Center City and University City.

### Zip Code of Work

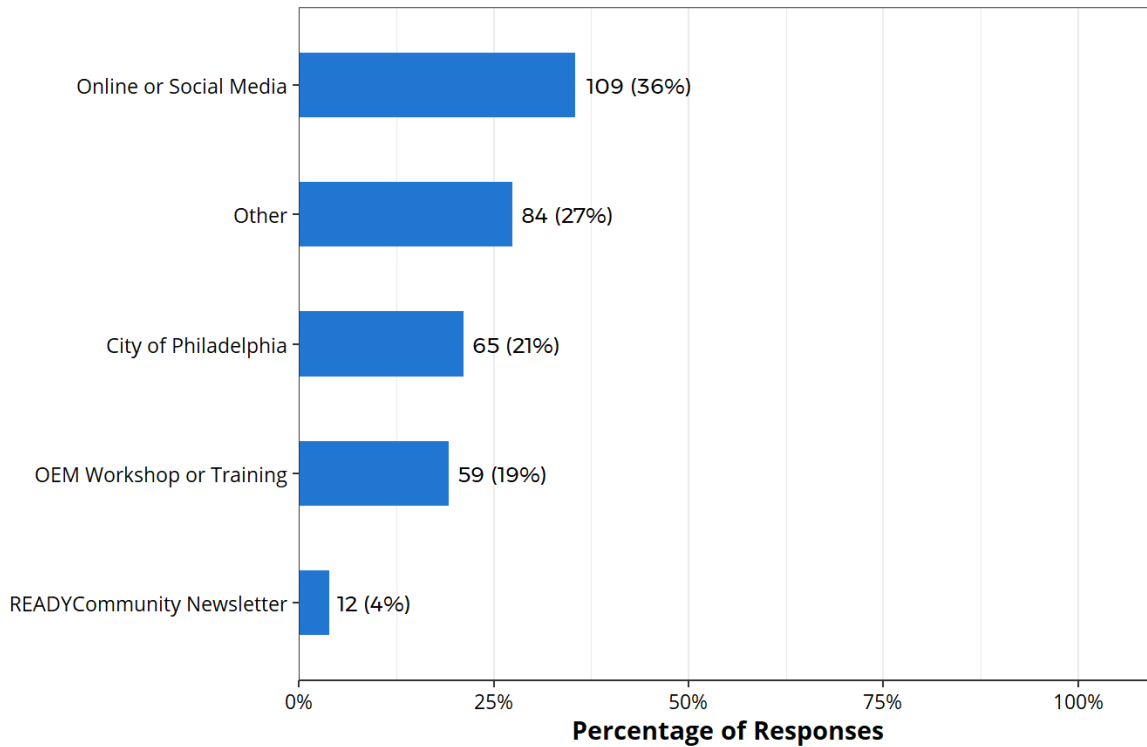


34% of the respondents only live in Philadelphia (103 of 307).

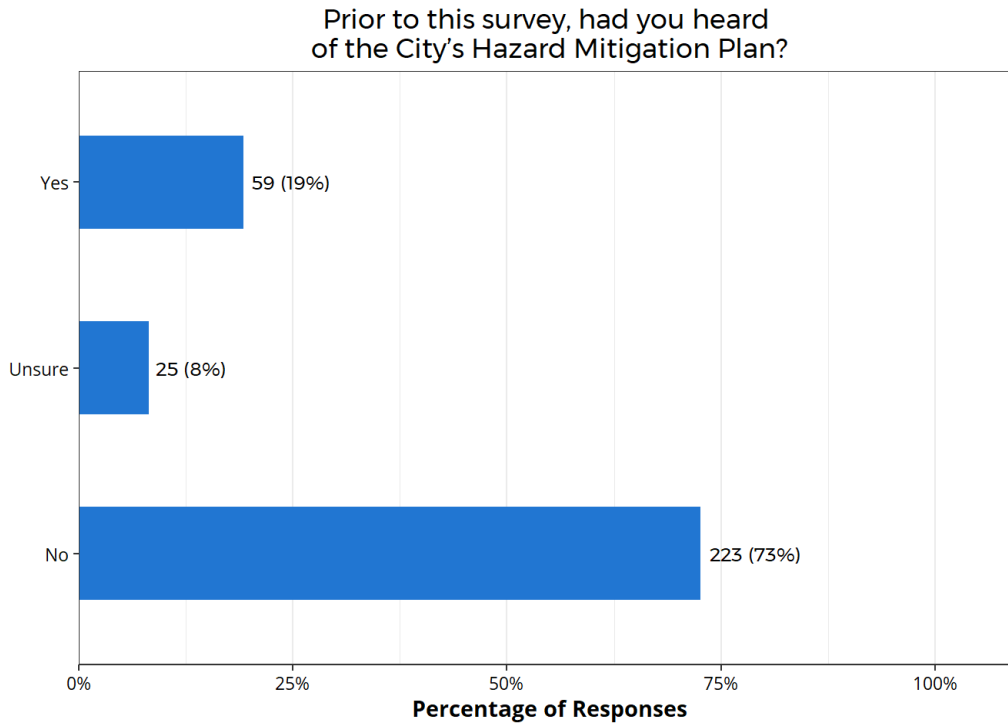
### Preparedness

About a third heard about survey online or through social media.

### How did you hear about this survey? (Please select all that apply.)



About three quarters had not heard of the Hazard Mitigation Plan prior to this survey.

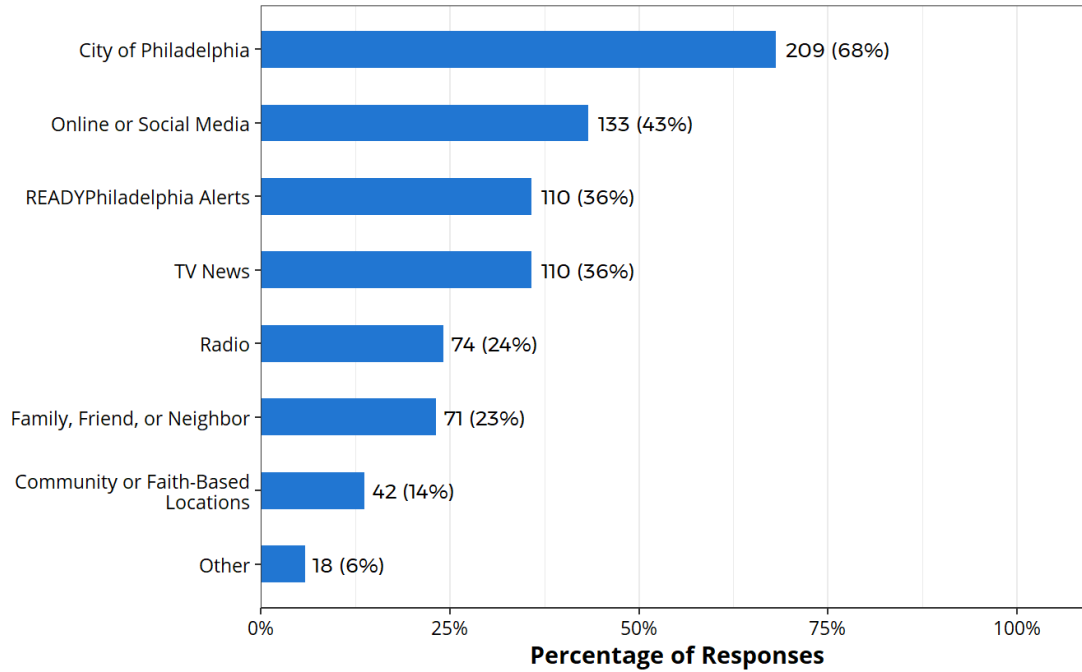


About two-thirds are most likely to go to the City of Philadelphia to get trusted information about hazards and preparedness.

Under half are most likely to go online or to social media.

About a third are most likely to watch TV news or receive READYPhiladelphia alerts.

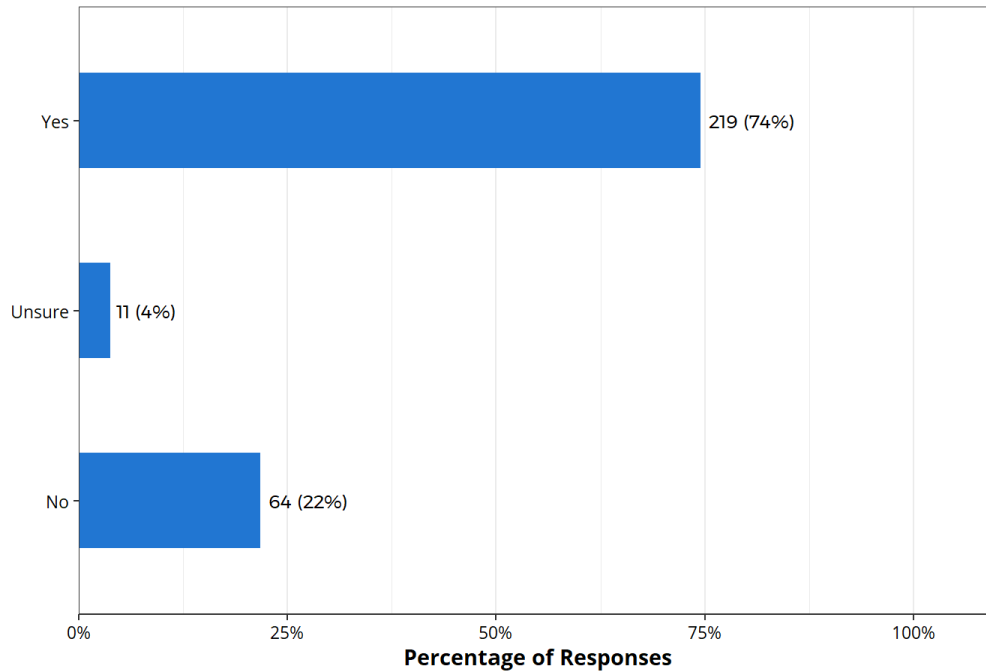
Where are you most likely to go to get trusted information about hazards and preparedness information in Philadelphia? (Please select all that apply.)



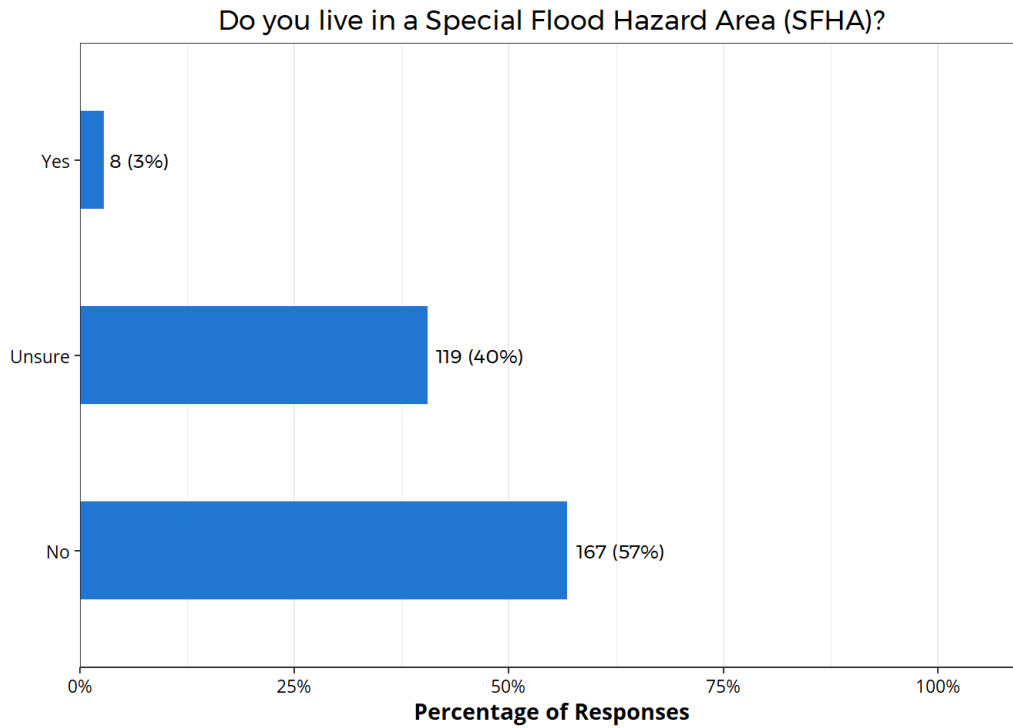
### Household Preparedness

Three quarters have homeowner or renter's insurance.

Do you have homeowner's insurance or renter's insurance?

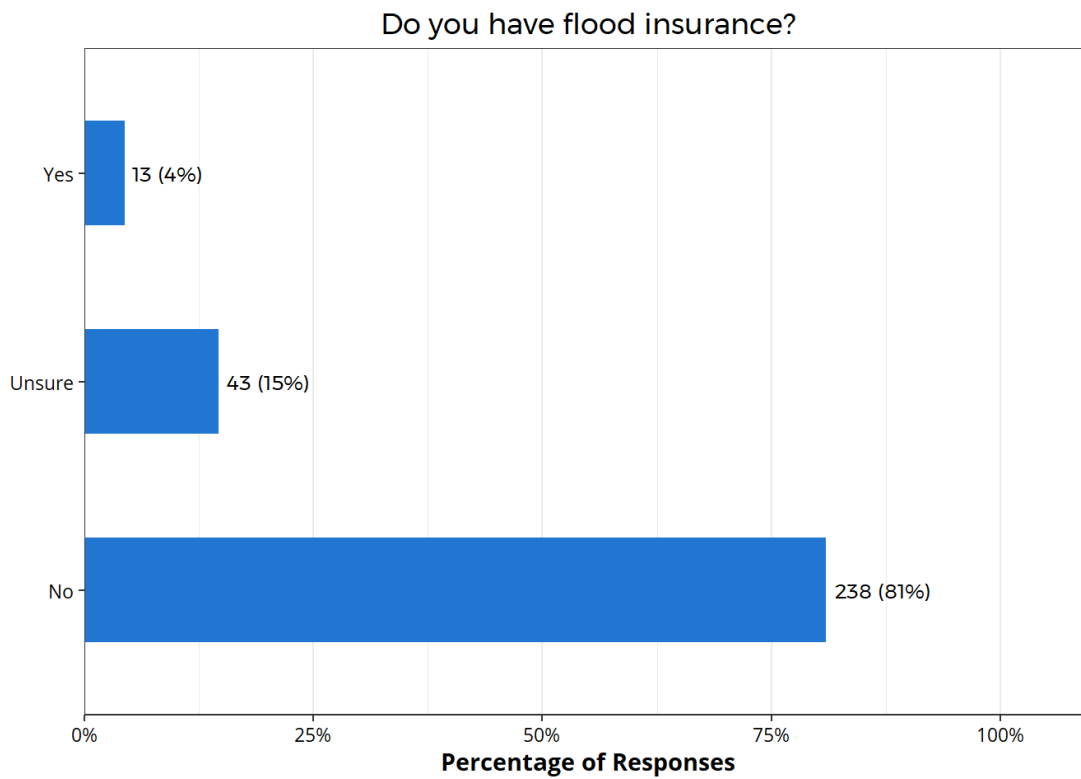


Very few respondents say that they live in a SFHA, although 40% are unsure.

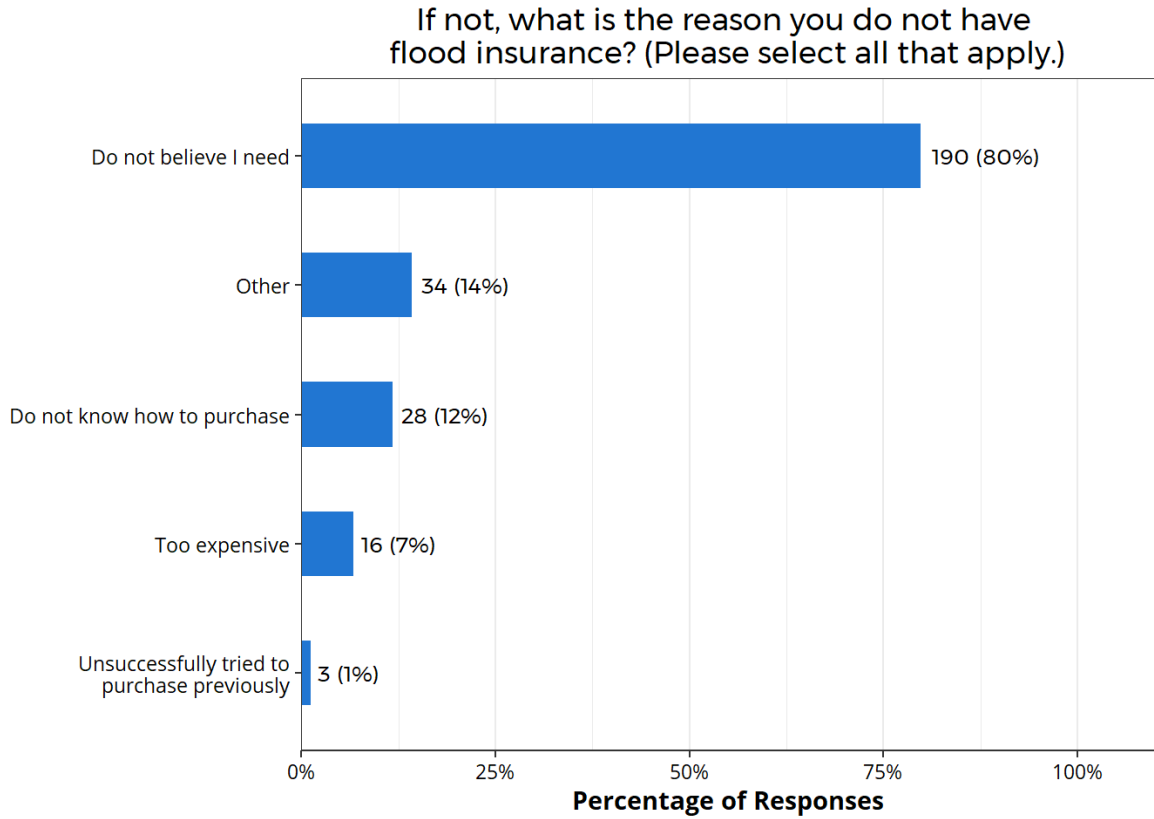


Over 80% do not have flood insurance.

15% are unsure.



Of respondents who do not have flood insurance, 80% do not believe they need it.

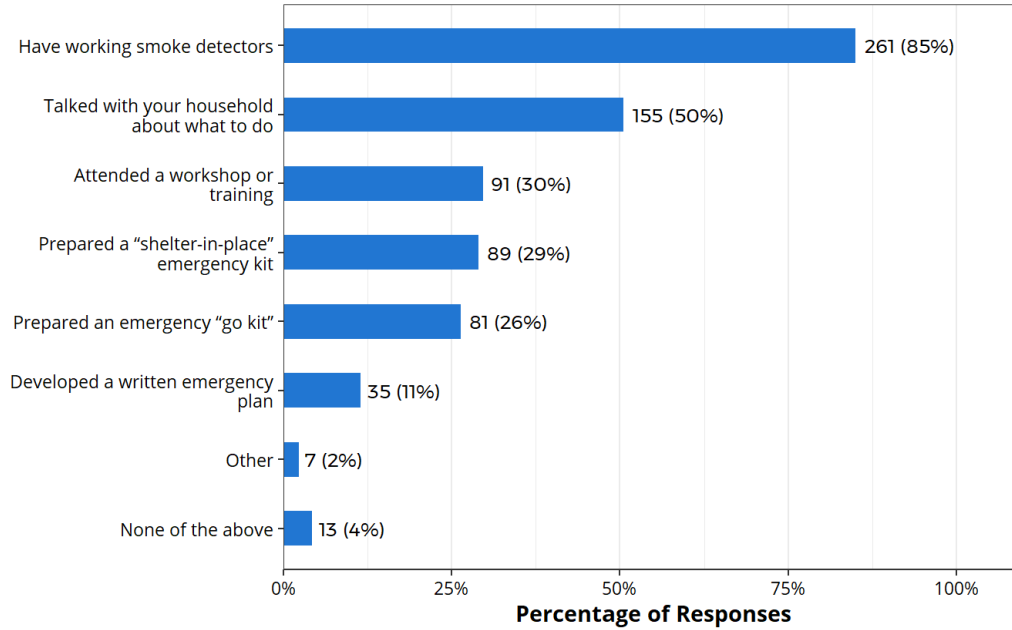


85% have working smoke detectors installed inside their homes.

About half have talked with members of their household about what to do in case of a disaster or emergency.

Other actions included:

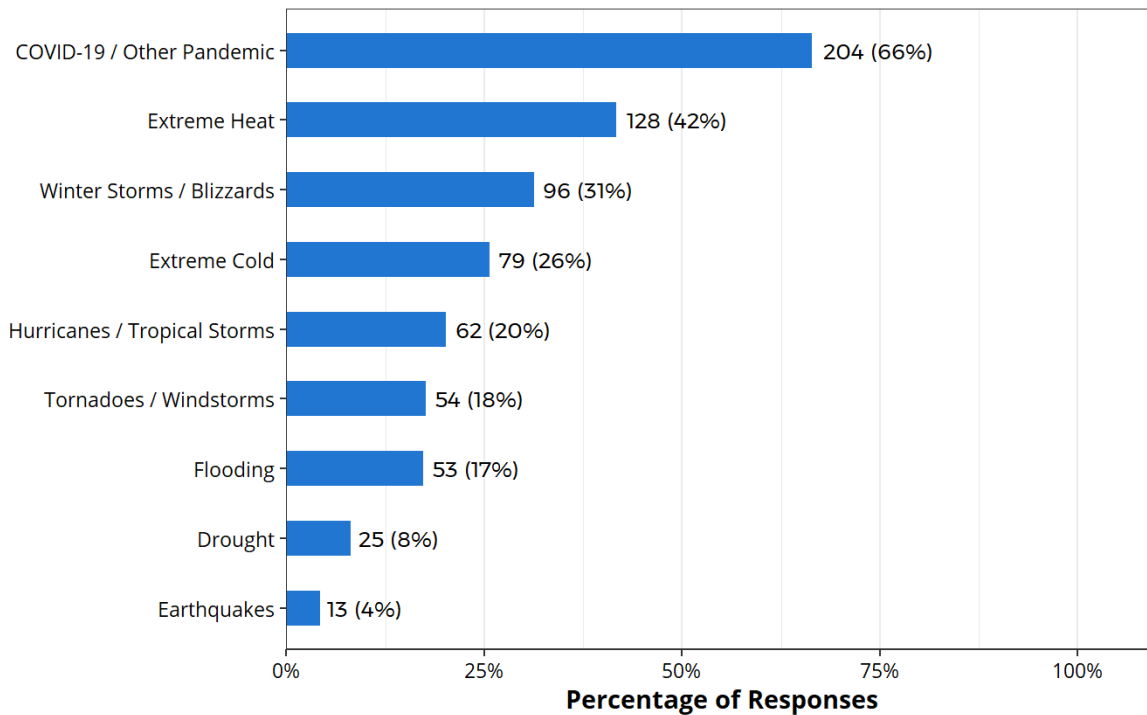
What actions have you taken to better prepare you and members of your household for emergencies or disasters? (Please select all that apply.)



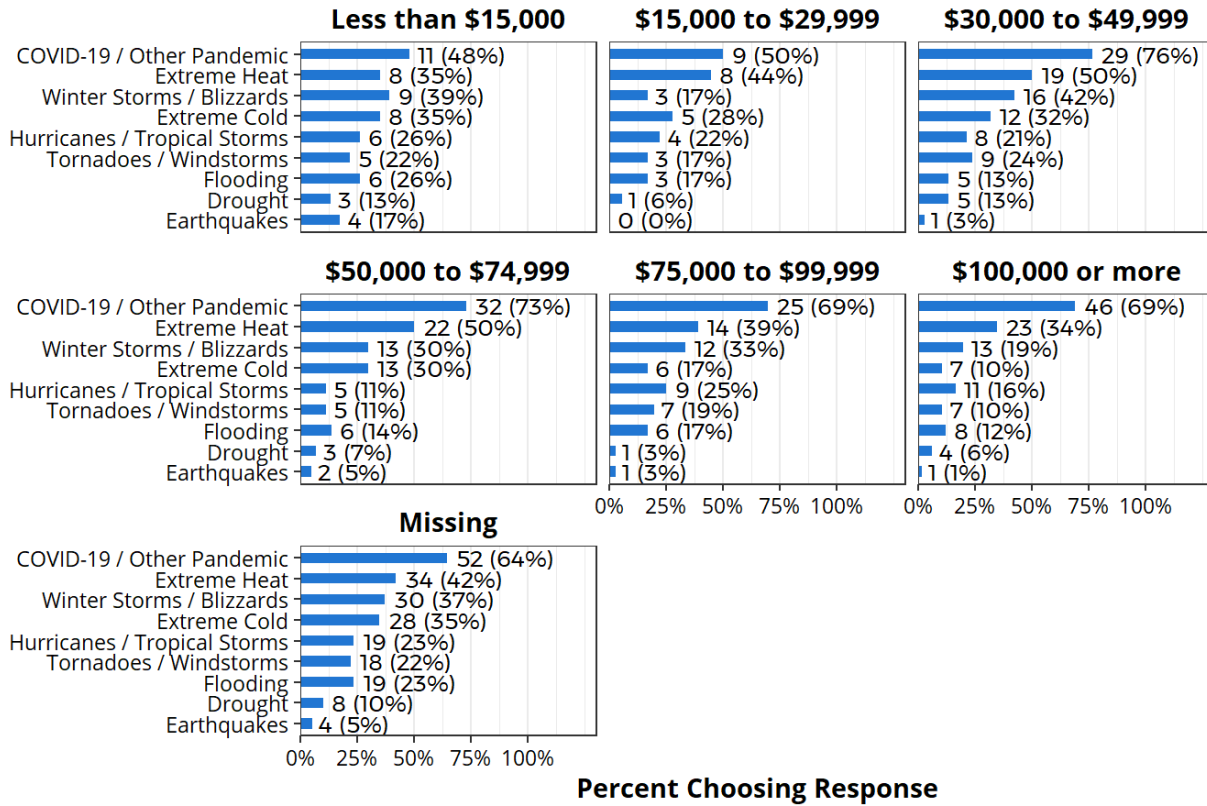
**Mitigation and Resilience Strategy: Natural Disasters**

The natural disaster of highest concern among residents is COVID-19 or other pandemics.

Very or extremely concerned about each of the following natural disasters affecting the neighborhood in Philadelphia where they live and/or work.



## Natural Disasters of Greatest Concern by Income

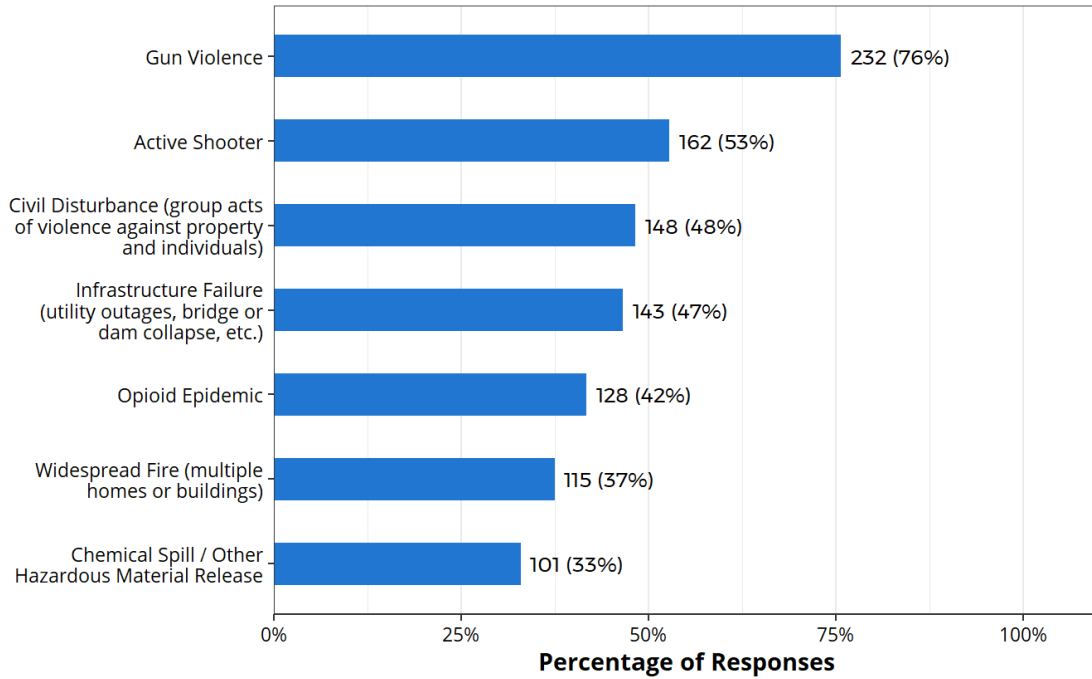


## Mitigation and Resilience Strategy: Human-Caused Disasters or Threats

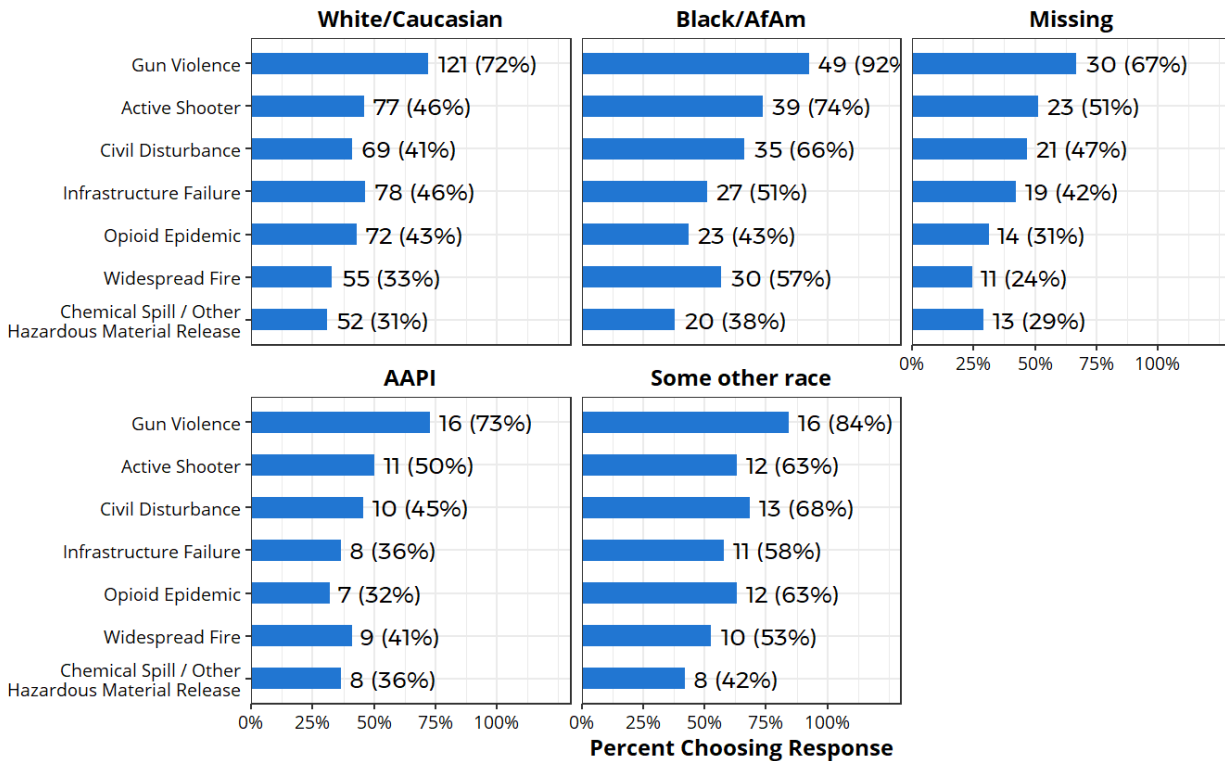
The human-caused disaster of highest concern among residents is gun violence.



Very or extremely concerned about each of the following human-caused disasters affecting the neighborhood in Philadelphia where they live and/or work.



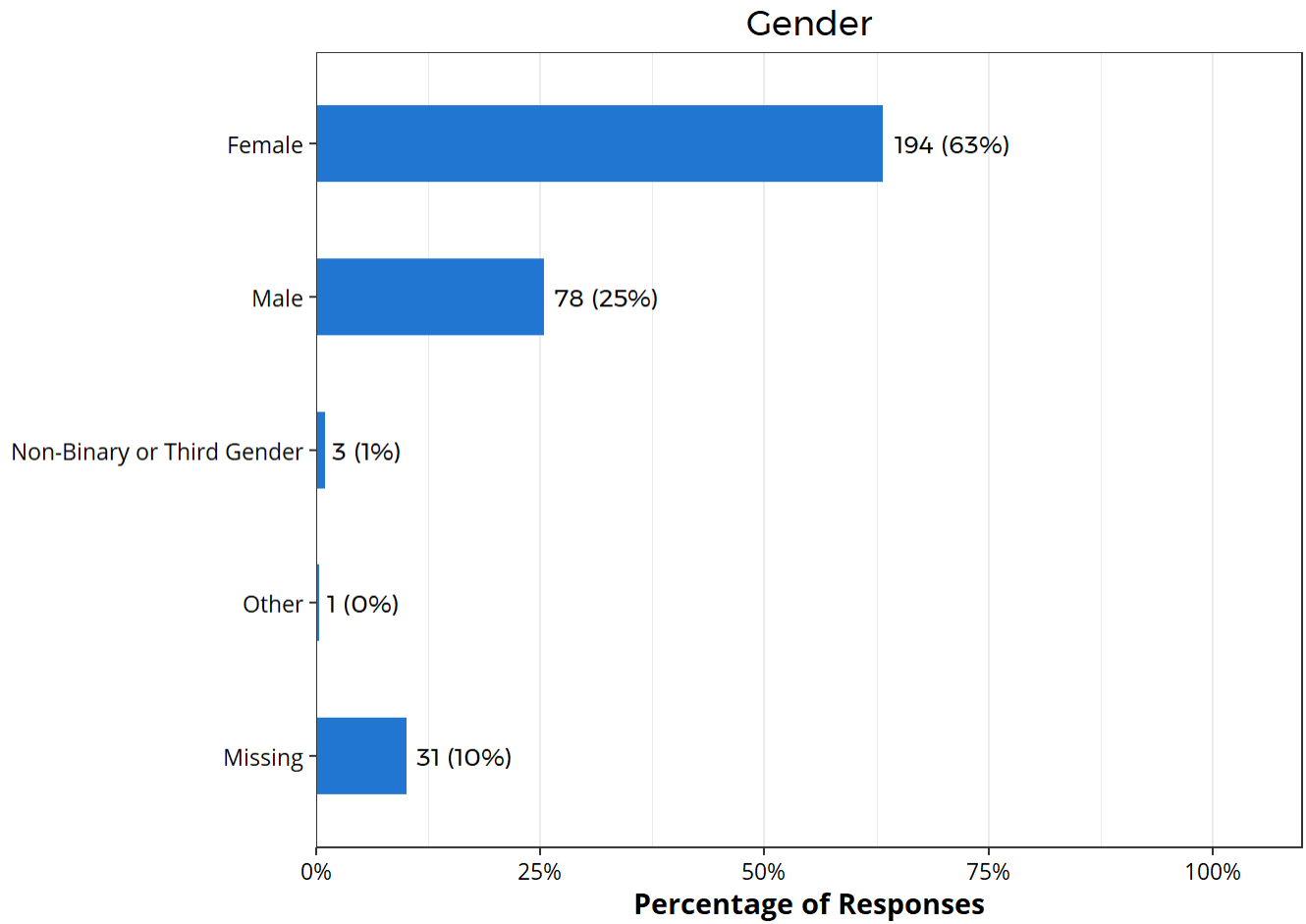
Human-Caused Disasters of Greatest Concern by Race



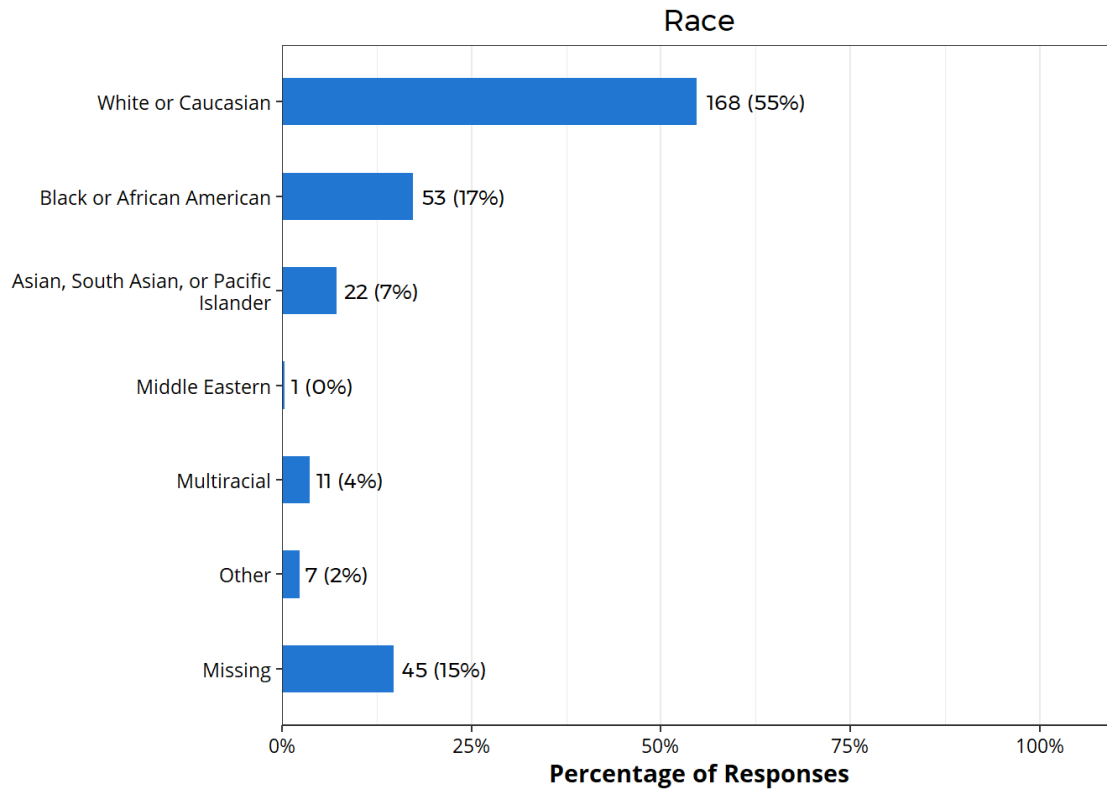
Some other race includes Middle Eastern, Multiracial, and Other, combined for privacy concerns due to small sample sizes

## Demographic Questions

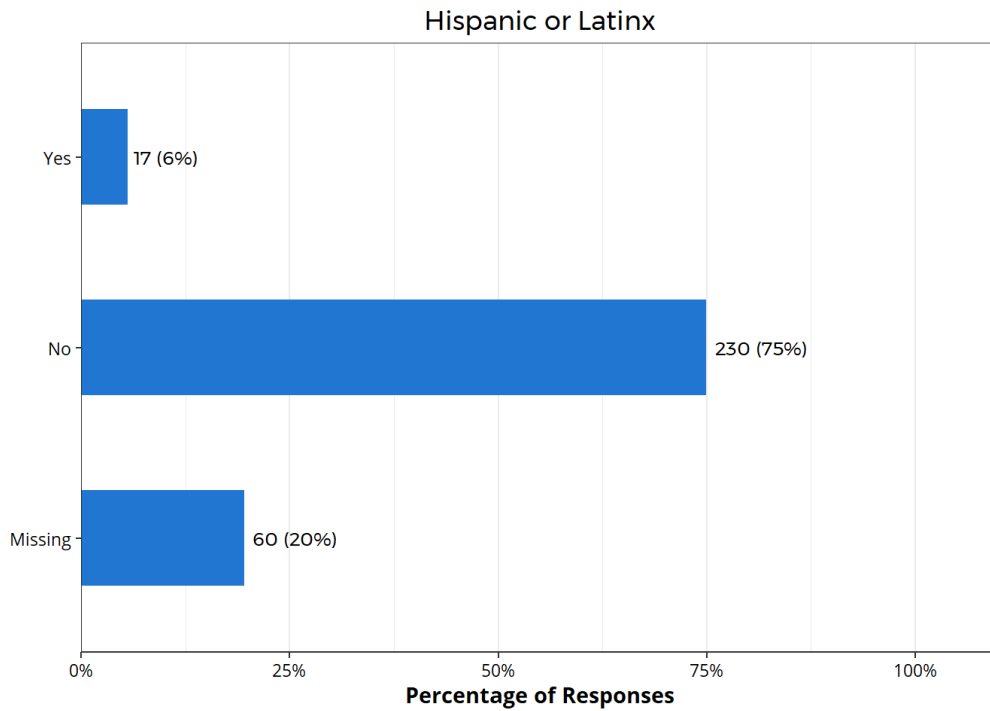
Almost two thirds of survey responses were from female respondents.



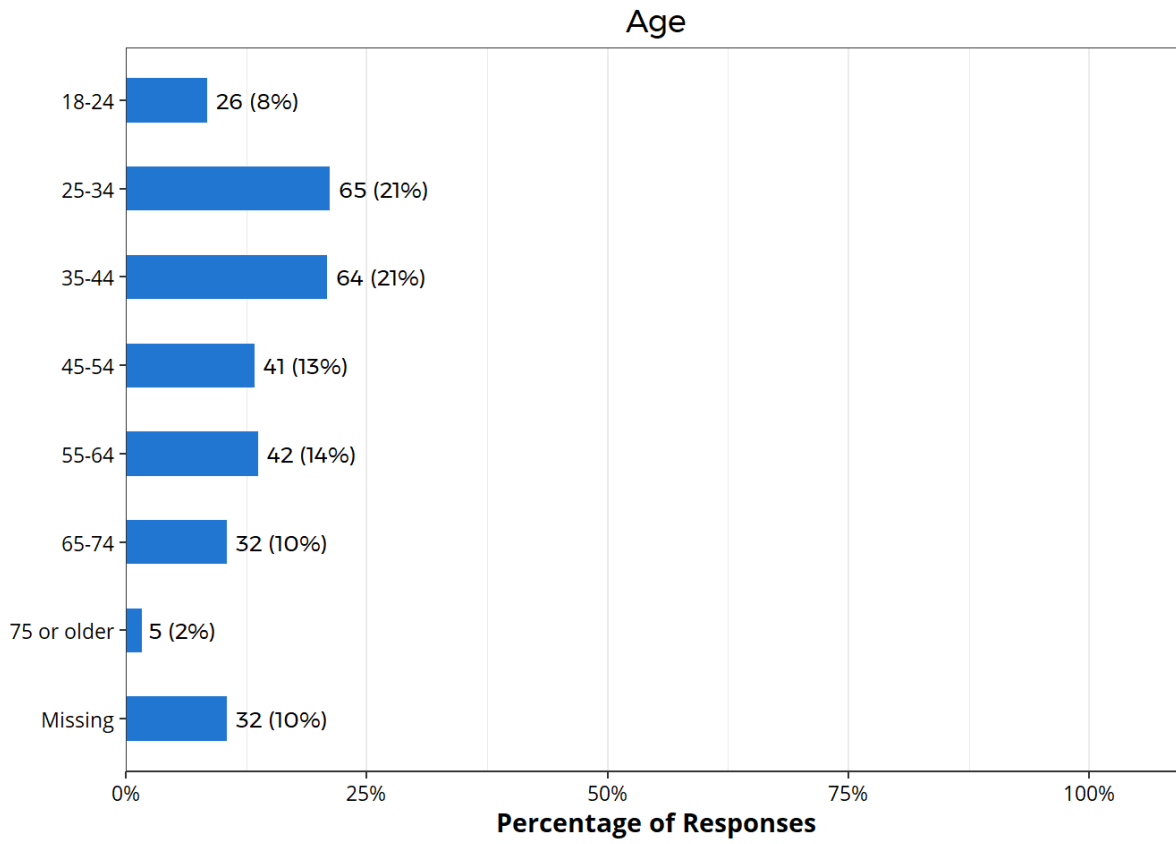
Over half are White or Caucasian. Less than 20% are Black or African American, and 15% of people did not answer.



About 6% are Hispanic or Latinx.

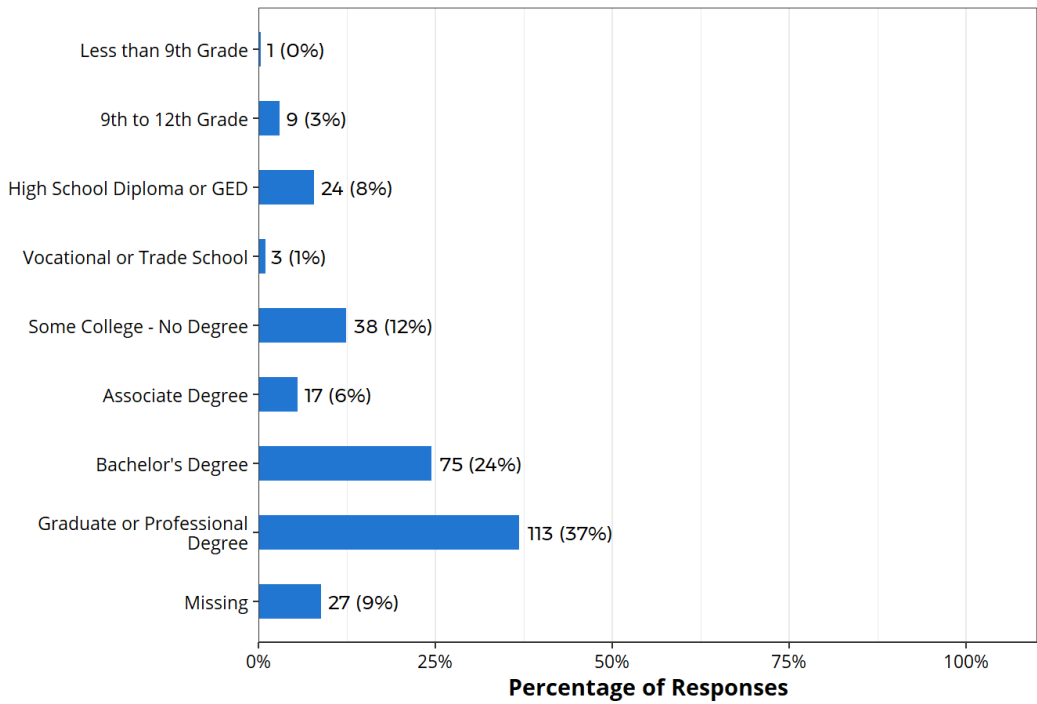


About half are 18 to 45.



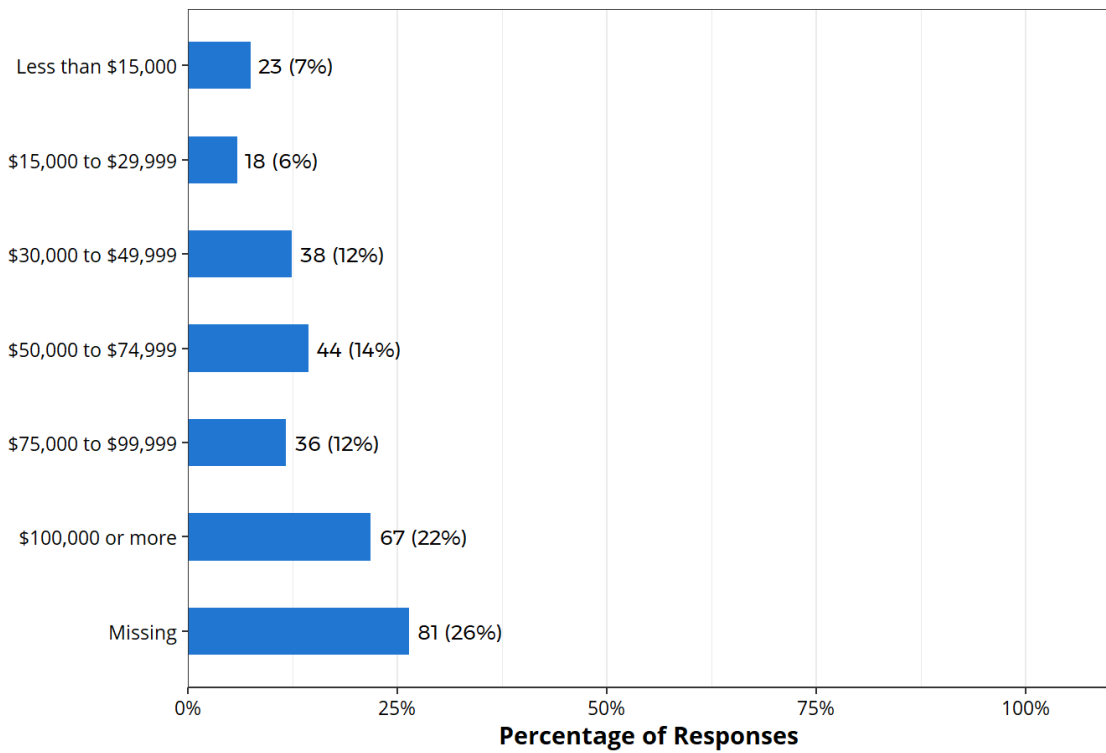
About 60% have a Bachelor's degree or higher.

### Education Level



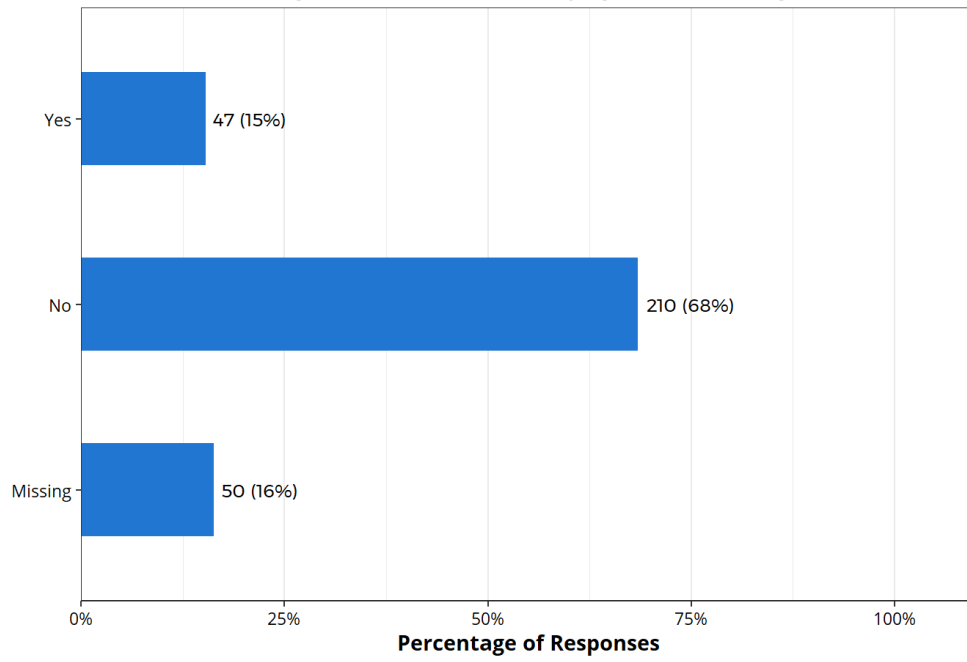
Almost half have an annual household income of \$50,000 or more.

### Annual Household Income



15% have a mental or physical disability.

### Do you have a mental or physical disability?





## Hazard Mitigation Plan Blog Toolkit: Reducing Risks 2022

### Overview:

Every five years, FEMA requires the Office of Emergency Management to update the City of Philadelphia's Hazard Mitigation Plan (HMP). The HMP helps the city, state, and federal government understand to what degree hazards, like flooding or a blizzard, may affect Philadelphia. The plan also looks at what City projects can help reduce damage from a disaster before it happens. Philadelphia is a city of neighborhoods, and our goal is to engage meaningfully with each part of the City during this process. Our hope is the community will take ownership of the many ways they can help make Philadelphia safer and more resilient. By presenting this information in a way that is both accessible and understandable, the community can provide us with their input about their most concerning hazards. An assertive engagement strategy will help us listen to and learn from a diverse representation of residents, creating a plan that accurately reflects the goals and objectives of community members, local business owners and local officials.

**Hashtags:** #ReducingRisks2022

**Photos:** [HMP Photos](#)

**Link to blog post:** <http://bit.ly/HMP2022>

### Relevant accounts to tag

- Philadelphia OEM [@philaoem](#)
- Philadelphia Water Department (PWD) [@PhillyH2O](#)
- Philadelphia International Airport (PHL) [@PHLairport](#)
- Streets Department [@philastreet](#)
- Parks & Recreation (PPR) [@philaparkandrec](#)
- Department of Public Property (DPP)
- Philadelphia Fire Department [@phillyfiredept](#)
- Philadelphia Police Department (PPD) [@phillypolice](#)
- Philadelphia Department of Public Health (PDPH) [@PHLpublichealth](#)

### Sample Posts:

Every five years, Philly updates its Hazard Mitigation Plan, a plan aimed to decrease the risk of natural, human-caused, or technological disasters. Read on to learn how @philaoem are creating the City's 2022 mitigation plan #ReducingRisks2022 → <http://bit.ly/HMP2022> (use HMP defined graphic)

- 🧊 Freezing temperatures
- 🌊 Flooding
- 🔥 Extreme Heat
- ⚡ Thunderstorms

These are some of Philadelphia's greatest hazards that we tackle in our Hazard Mitigation Plan. Read on to learn more. → <http://bit.ly/HMP2022>

🔗 It's time to update the City of Philadelphia's Hazard Mitigation Plan. #ReducingRisks2022 will look at what projects, plans, and policies can help reduce damage from hazards before they occur. Read on to learn more → <http://bit.ly/HMP2022>

We believe the local community plays an important role in hazard mitigation. That's why we want to involve you! Your feedback will help create the #ReducingRisks2022 Hazard Mitigation Plan for years to come. Learn more here. → <http://bit.ly/HMP2022>

@PhilaOEM is creating a plan to help reduce risks from a disaster before it happens by:

- 📄 Obtaining feedback on community concerns
- 🤝 Partnering with communities to identify solutions
- 💪 Empowering communities with risk reduction projects


Learn more → <http://bit.ly/HMP2022>


How does the hazard mitigation planning process benefit Philly?


- 💪 Creates a more sustainable and resilient city
- ⚠️ Increases public awareness of hazards
- 📄 Sets up funding priorities before disaster strikes


And much more! Read on to find out → <http://bit.ly/HMP2022>



Over the next year, @philaOEM will work closely with other city partners, regional partners, the private sector, businesses, and the public to update the city's Hazard Mitigation Plan. Find out how you can get involved here  <http://bit.ly/HMP2022>

Why is the Hazard Mitigation Plan important? It helps identify and reduce the unique risks each community faces. Learn more here  <http://bit.ly/HMP2022>  
**(use Mitigation Matters infographic)**

 Every five years, @philaoem updates the City of Philadelphia's Hazard Mitigation Plan. The HMP will identify current hazards, evaluate mitigation projects and highlight risk reduction accomplishments in Philadelphia. #ReducingRisks2022 **(use What is a HMP infographic)**

Why is hazard mitigation important? Although we can't change mother nature, we can change the impacts that weather disasters have on Philadelphia. Learn more #ReducingRisks2022  <http://bit.ly/HMP2022> **(use why HMP graphic)**

Get the latest [\*\*COVID-19 guidance and updates\*\*](#). Check the [\*\*status of City services and facilities\*\*](#).

[!\[\]\(3dfb8d66e81160ad61421a3452093d1b\_img.jpg\)](#) / [\*\*The latest news + events\*\*](#) / [\*\*Posts\*\*](#) / Hazard Mitigation Planning and How it Affects You

# Hazard Mitigation Planning and How it Affects You

October 28, 2020 | Jeffrey Kolakowski  
**Office of Emergency Management**



Every five years, the Philadelphia Office of Emergency Management (OEM) is required by the Federal Emergency management Agency (FEMA) to outline a variety of hazards that most affect the City of Philadelphia.

The Hazard Mitigation Plan (HMP) identifies these hazards and details plans, policies, and projects that will help reduce our risk. This tool also allows the City to remain eligible for federal disaster funding.

The HMP was last updated in 2017 and OEM is starting the process to update the next plan, which must be adopted by City Council prior to June 2022.

### **What is Hazard Mitigation?**

Hazard mitigation is the act of reducing or eliminating the risk of natural, man-made, or technological disasters. The goal of the plan is to help us understand the hazards we are most at risk for and where our vulnerabilities are. This process helps us identify the needs of our residents and prioritizes potential policies, actions, and measures that can reduce our risk and vulnerability.

### **How does the planning process benefit Philadelphia?**

There are numerous benefits to hazard mitigation planning. An aware and knowledgeable community member contributes to the overall safety, preparedness, and response to emergencies of all shapes and sizes.

### **What are some hazards facing Philadelphia?**

Philadelphia is very prone to flooding. We are an urban environment surrounded by multiple rivers, creeks and streams. Many non-permeable surfaces like sidewalks, roads, and buildings make our City more prone to flooding. There is not one solution that fits all types of flooding in different areas, and the HMP will examine unique issues facing all neighborhoods.

Another hazard Philadelphia faces is heat. Philadelphia experiences the urban heat island effect, meaning it is hotter in the City than it is in surrounding rural counties. Introducing green space in the right way can help reduce heat and mitigate other hazards as well. **See** how the Office of Sustainability is finding ways to “Beat the Heat” in Philadelphia’s Hunting Park neighborhood.

During the 2022 Hazard Mitigation Plan update, OEM will work closely with many partners, including the Office of Sustainability and the City's Flood Risk Management Task Force, to consider ways we can all work together to reduce our risk to these hazards both now and in the future.

### **How does the Hazard Mitigation Plan result in meaningful change?**

An important part of the planning process is finding ways to implement the plan. Some projects will be conducted and funded by the City, while others may qualify for grant opportunities, or be supported through public/private partnerships. The City's READYPhiladelphia program is one example of a hazard mitigation project that improved public safety. In the City's 2012 HMP we identified a need for a more robust alert and warning system that could be used to notify City staff and the public before, during and after severe weather. In the summer of 2015, the City launched its READYPhiladelphia program along with a public campaign to advertise this new resource. Today, READYPhiladelphia has close to 28,000 subscribers, 68 different types of notifications that the public can sign up for, and seven different partner agencies that can send out alerts. You can sign up for basic emergency alerts by texting READYPhila to 888 777.

It takes more than the city to reduce our risk. Hazard Mitigation is a whole community effort. Projects to alleviate any dangers require a collaboration between city agencies, the private sector, and the public to make improvements. Everyone needs to work together to make this happen. Some projects will be conducted and funded by the city staff. Other grant opportunities are available through FEMA, PEMA, public/private partnerships, and other organizations that fund projects and do studies.

### **What will be new in the 2022 plan?**

While climate change is included in the 2017 HMP, Philadelphia OEM hopes to add even more information on how it impacts our risk to natural hazards like flooding and heat. We now have more data and studies available that we will use to determine our risk both now and in the future. We will also include new hazards, like a health pandemic, in the 2022 plan based on lessons we learned from 2020.

OEM will also identify new projects that reduce our risk in the 2022 plan, and will seek ideas from the public on what to include. What would you change or add to the 2022 HMP?

### **How can the public be involved?**

Philadelphia is a city of neighborhoods, and our goal is to engage meaningfully with each part of the City during this process. Our hope is the community will take ownership of the many ways they can help make Philadelphia safer and more resilient. OEM will invite the public to participate through public surveys, town hall meetings, workshops, social media outreach, and an updated Hazard Mitigation webpage that will include more visuals, graphs, maps, and charts to increase the accessibility of the plan to the whole community. OEM's Public Engagement team will consult with other City departments to develop a realistic, but effective plan for engaging more residents and community organizations.

### **How will the 2022 HMP process work?**

Over the next year, OEM will work closely with other City partners, regional partners, the private sector, businesses, and, of course, the public to update the plan so that it reflects our current risks and mitigation goals. In the fall of 2022, a draft of the plan will be released for public review. Residents will then have ample opportunities to review the full plan draft and formulate comments and feedback. After incorporating

suggestions from all of our planning partners and the public the tool will be presented to City Council in spring of 2022 and, if adopted, sent to PEMA and FEMA for final approval.

### **Where can I view the current plan?**

The 2012 and 2017 plans can be found on the Hazard Mitigation Plan [webpage](#).

Residents can view hazard profiles of their neighborhoods, read about hazards in the City, and learn about mitigation projects. Updates for the 2022 plan will be posted on the website.

### **How can I get involved?**

If you live, work, or play in Philadelphia, this process impacts you! Please see the City's Hazard Mitigation Plan webpage for more information on how you can get involved and provide your feedback on the [plan](#).

Follow us on Social Media @PhilaOEM

For questions or to help us spread the word contact us at [oem@phila.gov](mailto:oem@phila.gov)

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## Related content



 POST

### **National Preparedness Month: Disasters Don't Wait, Plan Today**

August 31, 2020

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 POST



## City Responds to Damage from Tropical Storm Isaias

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POST

## Preparing for Emergencies during COVID-19

July 29, 2020

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This content was last updated on October 28, 2020, by [Office of Emergency Management](#).

# City of Philadelphia Hazard Mitigation Plan



## Feedback Received

**Public Review & Comment Period:** Monday, January 31<sup>st</sup> through Thursday, March 3<sup>rd</sup>

Below is a summary of feedback received during the plan draft public review and comment period. All feedback was reviewed, evaluated for feasibility, and documented below. Taking into account the feasibility of each recommended update, some feedback was marked for further review and implementation during the annual review process and the next 5-year plan update.

| Method | Section                          | Comment  | Response or Description of How Comment was Addressed          |
|--------|----------------------------------|--|---|
| Email  | Mitigation Strategy              | Mitigation action regarding historic properties should identify all historic properties in Philadelphia.   | Revised action.   |
| Email  | Mitigation Strategy              | Double check to make sure PHL H&H study is included in the mitigation strategy.  | Yes, study is in mitigation strategy as action 2.6.3          |
| Email  | Questions about Workshop         | Question about how many Eastwick residents attended.   | Question answered directly via email by OEM on 2/1/22.        |
| Email  | Community Profile, p10           | The MSA is 11 counties, not 12.  | Fact was updated.   |
| Email  | Community Profile, p10           | Is the 24,170 linear miles of streams for Philly or the entire Delaware River watershed?   | Fact could not be verified, so it was removed from the draft. |
| Email  | Community Profile, p17           | Secondary watersheds – the western part of West Philadelphia is not shown as being in any of the illustrated watersheds. This includes the upper reaches of Cobbs Creek.   | Map was updated.  |
| Email  | Community Profile, Section 2.2.1 | The section on migration should mention more than just German and Irish immigration in the mid-19th Century. Consider noting foreign immigration also from eastern and southern Europe and especially the Great Migration of Black residents from southern states. | Additional details were added to address this comment.        |
| Email  | Community profile, p26           | Illustration appears to show registered historic sites <u>and</u> districts. It would be helpful to clarify if these are local, national, or both.   | The Figure heading was updated.                               |



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| Email | Community profile, table 2.5      | Consider adding the following: Woodmere Art Museum (Chestnut Hill), Historic Germantown, The Dell Music Center – East Fairmount Park, Rittenhouse Village – historic mill site along Lincoln Drive, Hagan Arena – St Joe’s basketball field house, Schuylkill River rowing course – home to dozens of rowing events throughout the year | Relevant sites were updated.  |
| Email | Community Profile, Figure 2-44    | Map is labeled as Major Rail Lines but only shows passenger lines. The freight lines are missing. The base map from P185 would actually be better for this page, as P185 shows the regional highway network and bridges important for response and for evacuation.  | Freight rail lines are not publicly available, so map was removed.  |
| Email | Community Profile, Table 2-8      | The Cancer Treatment Center is now closed and has been sold to Temple Health, St Joseph’s Hospital is also closed and has been converted to apartments  | Updates were made to the table to reflect these changes.  |
| Email | Planning Process, Table 3-4       | Duplicate entries in Table 3-4. One person missing from the Planning Commission.  | Updates were made to the table to reflect these changes.  |
| Email | Community Profile, 2.2.4, pg 26   | The Constitution Center is not a historic site. Also, Figure 2-14 shows the northern half of the former PES refinery site as designated.  | Constitution Center was added as a cultural institution. Figure 2-14 was updated.                             |
| Email | Risk Assessment, pg 105           | Spell out SOG means when it is first used in a chapter.   | Spelled out PA SOG first use in applicable chapters.  |
| Email | Risk Assessment, pg 119           | I’d suggest a ‘callout box’ or other way to explain what HAZUS is, what “annualized losses” means, and how that differs from total “economic losses”. These terms appear without explanation in many of the Hazard Profiles   | Added information on Hazus to 4.1 for an overview, added definitions, and improved titles in hazard profiles. |
| Email | Risk Assessment, Flooding, pg 130 | The tidal Schuylkill should also be mentioned, along with the Delaware, in discussion of tidal impacts of Riverine Flooding   | Added additional information on the Schuylkill River.   |
| Email | Risk Assessment, Flooding, pg 131 | in the last paragraph, it just mentions South Philadelphia as being potentially impacted. Shouldn’t this also mention parts of the Central part of the City impacted by Ida?  | Added information on remnants of Hurricane Ida impacts in Central Philadelphia.                               |
| Email | Risk Assessment, Flooding, pg     | Some clarification of time scale is needed in the supporting narrative and title/legend. =  | Added table with NOAA projections and explanation in text.  |

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|       | 145, Figure 4-12                               |  |  |
| Email | Risk Assessment, Flooding, pg 145, Figure 4-12 | This is described in the narrative as including depth, but that's not apparent from the map. Map is missing some key areas that are prone to flooding.   | Updated descriptions and added Figure 4-13 which matches what one would expect to see for flood loss in Philadelphia. Demonstrates value of using local OPA data as well.  |
| Email | Risk Assessment, Flooding, p146, table 4-21    | Can there be a description of what the "Occupancy" categories refer to here? I'm not clear what the table is saying.   | Deleted table since it was related how Hazus calculates damage levels and added information to Table 4.21 that would be more clear.  |
| Email | Risk Assessment, Flooding, p146, table 4-22    | Can there be a brief explanation for why the \$\$ estimates jump so much from 2012 and 2017 to 2022?   | Added information on data sources.   |
| Email | Risk Assessment, Hurricane, p155, Table 4-29   | Can there be a better description in the narrative or table title about what these numbers refer to? Annualized? In thousands or millions of dollars?  | Revised title and data values to be more clear   |
| Form  | Executive Summary, Page 17                     | Externally, it may be confusing to list OOS and OTIS separately, and technically OOS is part of the OTIS cluster.  | Office of Sustainability lives under the Office of Transportation, Infrastructure, and Sustainability. For the purposes of this plan, we will call out OOS separately, while recognizing that is a subset of OTIS. |
| Form  | Community Profile, Page 42                     | p. 42 - Figures 2-14, 2-15 and narrative: Clarify if the purple are resources listed in the Philadelphia Register of Historic Places or the National Register of Historic Places. Did the PHMC study look at National and or Philadelphia Register sites? Being on the local register carries more owner responsibility than with the National Register. | Clarifying language was added to this section.   |
| Form  | Page 45  | Who made the "iconic" determination?   | Retitled this section to "Historic and Cultural Sites".  |
| Form  | Risk Assessment, Building and Structure        | p. 201 - Structurally deficient bridges narrative - Should there be further explanation of what this means? Are they closed? Are they open but inspected more regularly? Is this comprehensive of all bridges, or just those that PennDOT inspects? Being clear on terminology may be particularly important after the bridge collapse in Pittsburgh.    | Added more clear definition at first use of structurally deficient.  |

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|       | Collapse, page 201  |  |   |
| Form  | Capability Assessment, page 205                             | p. 250 - Consider consulting with PWD to add additional information on the MS4 areas of the City.  | Added information on MS4 areas to 5.2.1.13.   |
| Form  | Capability Assessment, page 259                             | p. 259 - Did PWD concur that W/S Fees and Stormwater Utility Fees could be used for mitigation activities? Overall, the graphics are a little fuzzy. Is this due to the quality of the upload?   | Confirmed that PWD projects, programs, and potential grant matches are mitigation activities. |
| Email | Risk Assessment, Building and Structure Collapse, p 179-180 | For Figure 4-23 and accompanying narrative, it should refer to Residential Structures Built 1939 or Earlier (not "prior to 1939").   | Revised text.   |
| Email | Risk Assessment, Building and Structure Collapse, p 177-179 | The narrative says the map on the next page is about imminently dangerous properties, but the map on 4-24 depicts ACS estimates of vacant housing.   | Revised text.   |
| Email | Risk Assessment, Civil Disturbance, 188-189                 | There was no mention of arson and looting in this section.   | Revised text.   |
| Email | Risk Assessment, Civil Disturbance, 4.3.12.1                | Location and Extent should mention commercial areas.   | Revised text.   |
| Email | Risk Assessment, Civil Disturbance, 4.3.12.4                | Range of Magnitude should mention that worst case scenarios can involve deployment of law enforcement and emergency services from neighboring jurisdictions, and the National Guard (e.g. 2020). | Revised text in Range of Magnitude.   |

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| Email | Risk Assessment, Civil Disturbance, 4.3.12.3                | Future Occurrence should include commercial areas in the list of places likely to see disturbances, and should note that law enforcement should be prepared to handle a crowd or mob. (as included in 4.3.12.2) | Revised text.  |
| Email | Risk Assessment, Haz Mat, pg 195                            | Understand if sensitive, but clearer to say “No nuclear power facilities or nuclear-equipped military bases are in Philadelphia County”?  | Revised text.  |
| Email | Risk Assessment, Urban Fire, pg 207                         | The narrative should introduce both Figure 4-33 Open fire Code Violations and 4-34 Housing Unit Density on pp 208 and 208   | Added figure references.   |
| Email | Risk Assessment, Section 4.4.3.5                            | The discussion about 4.4.3.5 Level-1 Failed Reaches is very important but could use a plain-language review.  | This section documents Hazus analysis for technical readers and team members in the next plan update. Added some acronyms and explanations, but text does remain for mostly technical audiences. |
| Email | Risk Assessment, Table 4-48                                 | Table 4-48 Flooding Concerns by Planning District - Excellent!  | Thank you.   |
| Email | Risk Assessment, Building and Structure Collapse, p 177-179 | Somewhere in this section there should be mention of lack of funding that contributes to deferred maintenance of both private and public assets.  | Added to Building and Structure Collapse introduction.   |
| Email | Risk Assessment, Civil Disturbance                          | It might also be relevant to note the risk of stampedes incited by various factors.   | Included information in past occurrence.   |
| Email | risk Assessment, pg 216 and p 229                           | Coordination between/plain language review of 4.4.3.4 Hazus Modeling Challenges & Issues -and- 5.2.1.7 Participation in the NFIP and Floodplain Management Plan/Floodplain Regulations                          | Added information to 5.2.1.7.  |

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| Email         | Risk Assessment, pg 216 and p 230           | The Hazus modeling section identifies important, timely reasons for the City to update and coordinate its flood insurance studies. The section on participation in the NFIP speaks to challenges/barriers in Table 5-2, but these do not seem to be in the same language or perhaps not even speaking about the same challenges as in 4.4.3.4. Can these be reviewed for clarity/consistency? What studies are FEMA and/or USACE <i>currently</i> working on, or slated to be working on?   | Added information to 5.2.1.7.                               |
| Email         | Community Profile, pg 55, figure 2-39       | the base map from P185 would actually be better for this page, as P185 shows the regional highway network and bridges important for response and for evacuation   | This suggestion will be considered for future plan updates. |
| Email         | Planning Process, pg71, table 3-4           | Add David Kanthor, Transportation Planner, Philadelphia City Planning Commission  | Individual was added as a planning participant.             |
| Email         | Mitigation Strategy                         | Action 2.4.2 - Resilient Design Guidelines. Please add Streets and PPR as supporting agencies.  | Revised action.   |
| Email         | Risk Assessments, Civil Disturbance, pg 189 | The language describes "minor" injuries to first responders and "minimal" damage to property. I think it is important to at least mention the potential damage to property and risks to first responders civil unrest has had recently and could potentially have on the future in the city.  | Included information in past occurrence.                    |
| Email         | Risk Assessment, Urban Fire, page 207       | 4.3.19.1 Location and Extent - NFPA is the National Fire Protection Association, not "Agency."  | Revised text.   |
| Email         | Capability Assessment?                      | Also, would it be worth mentioning that in 2019, the PFD re-opened 4 companies to increase our fire suppression capabilities?   | Added information to 5.2.2.1.                               |
| Feedback Form | Mitigation Strategy                         | Under objective 1.1: Develop and implement strategies to reduce Philadelphians' risk to natural and human-made hazards (pgs 266-268); I suggest adding a mitigation action of providing short-term flood proofing tools to flood-risk communities such as Eastwick. Tools could include flexible and portable flood barriers for example ones shown on this website: <a href="https://www.floodproofing.com/dry-floodproofing">https://www.floodproofing.com/dry-floodproofing</a> . The strategies proposed in Eastwick are long term and there need to be interim solutions deployed before the next storm. | Added as 1.1.9.   |

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| Feedback Form | Mitigation Strategy                                 | Under objective 2.8: Address historic drivers of vulnerability and invest in community assets (pgs 279-283); I suggest looking into the Community Resilience Hub model currently implemented in Baltimore and gaining traction in other cities across the US. Under Baltimore's model (more info here: <a href="https://www.baltimoresustainability.org/baltimore-resiliency-hub-program/">https://www.baltimoresustainability.org/baltimore-resiliency-hub-program/</a> ), already existing community centers (such as faith based institutions, non-profit neighborhood centers, etc) can partner with the city to become a community resilience hub to provide resources and support to the surrounding neighborhood during times of crisis. The city of Baltimore is working on making the buildings themselves more resilient by installing solar panels and/or battery backup (generally via grant funding). We hosted a seminar on this recently at Drexel through the Consortium for Climate Risk in the Urban Northeast (CCRUN): <a href="http://www.ccrun.org/past-seminars/">www.ccrun.org/past-seminars/</a> | Added as 2.8.12   |
| Email         | Executive Summary                                   | Should updating Growing Stronger numbers be under 'Climate Change' and not 'Integration' priority?   | It is a great example of both but included here, since it is a great example of 'FEMA plan integration' |
| Email         | Community Profile, 2.5 Data Sources and Limitations | Suggested edits to revise language around PWD's depth raster.  | Revised text including reference to the Growing Stronger report.  |
| Email         | Risk Assessment, 4.2 Hazard Identification          | Recommendation to call out that Philadelphia relies on surface water supplies that can be impacted by Drought.   | Added text.   |
| Email         | Risk Assessment, 4.3.1 Drought                      | Suggested rewording for under Vulnerability Assessment for Drought.  | Revised text.   |
| Email         | Risk Assessment, 4.3.3 Extreme Temperatures         | Suggested edits to language around the impacts of climate change and extreme temperatures based on local research on extreme cold and climate change.  | Revised text.   |
| Email         | Risk Assessment, 4.3.3 Extreme Temperatures         | Table 4-13: Would suggest including the emissions scenario behind the projections (RCP4.5 and 8.5? or just refer to 'high and low scenarios' as future graphs indicate)  | Added text.   |

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| Email | Risk Assessment, 4.3.4 Flood                                 | Suggest revising language around 3 types of flooding experienced in Philadelphia.   | Language was revised to reflect other City definitions of flooding.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | Suggest rewording of language on page 131.  | Revised text.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | Change 'rain event' to 'storm event' to indicate that sea level rise/storm surge can also lead to higher receiving water levels making it difficult for outfalls to drain effectively by gravity. | Revised text.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | The worst case scenario could include compound flooding effects – suggest wording edits (pg. 135).  | Revised text.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | Suggest adding additional context in terms of the latest NOAA SLR Projections for Philadelphia.   | Merged the spirit of this edit with recommendation by PCPC to add scenario table. Cited NOAA Local Scenario Sea Level Rise Viewer 2017 Projections.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | The report states on pg. 141 that under 4 ft. of SLR, no damage is expected to critical facilities. This doesn't seem to be aligned with what is included in Growing Stronger.                    | Statement addresses Hazus critical facility analysis. Removed reference since does not clearly illustrate the risk to all critical facilities.  |
| Email | Risk Assessment, 4.3.4 Flood                                 | Edits to language on page 141.  | Revised text.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | Last paragraph on pg. 144 – confirm that these estimates are based on the 'present-day' 100-year flood event (which will be /already is more frequent an occurrence due to climate change)        | Added text.   |
| Email | Risk Assessment, 4.3.4 Flood                                 | Figure 4-13: is depth of flooding in feet? (include in legend)  | Confirmed that maps are labeled Hazus Based Depth Grid. Added explanation in preceding paragraph about methodology that the depths in the grid vary across the City based on ground elevation and Base Flood Elevation. |
| Email | Risk Assessment, 4.3.5 Hurricane, Tropical Storm, Nor'easter | Table 4-26 - Unclear what is being shown by 'seasonal range' Table 4-29 – are these numbers in millions of \$s?   | Revised text.   |

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| Email         | Risk Assessment, 4.3.16 Hazardous Materials Release | Information on Early Warning System (EWS) could be added to this section if appropriate  | Added text.   |
| Email         | Capability Assessment, Section 5.2.1.13             | Suggest updated language to clarify PWD's stormwater management planning efforts.  | Added text.   |
| Email         | Mitigation Strategy, Table 6-4                      | Various, minor updates to mitigation actions.  | Revised 2.1.3, 'Private funding sources' refers to organizations like William Penn Foundation or Pew Charitable Trust, revised 4.2.4 to high, revised 4.2.22, confirmed 4.4.1 is under suitable goal and objective.   |
| Feedback Form | Chapter 4: The Risk Assessment                      | <p>Consider adding a phrase or sentence on potential for natural infrastructure and adaptation measures to protect areas from SLR, particularly if done in a coordinated effort that extends beyond individual property owners. I agree that there is a limit, but also think that the plan should highlight potential for nature-based solutions (natural infrastructure, elevated berm/park space, living shoreline, etc.) to assist in adapting to flooding impacts from SLR (and riverine flooding in non-tidal areas).</p> <p>"There is a limit to the ability to engineer a solution to SLR. Some areas will be able to plan mitigation measures that continue to provide safe access and use of properties and some properties may need to be abandoned because the cost of repeated and/or permanent flooding is too high to mitigate." (p. 141)</p> | Added information to Action 4.1.8 under Objective 4.1 Promote nature-based solutions to manage stormwater and reduce the impacts of flooding and SLR.   |
| Feedback Form | Chapter 6: Mitigation Strategy                      | Under mitigation actions 2.1.1 and 2.1.2, consider adding "additional adaptive/adaptation measures" to list of potential mitigation measures: "elevate, acquire, relocate, or retrofit". All these listed actions are specific to individual properties whereas "other adaptive/adaptation measures" could include an approach for a wider area/district (such as raised ground/berm, living shoreline, seawall, etc.). I appreciate how this is a focus for specific actions/neighborhoods such as 2.8.3 Eastwick Place-Based Climate Risk, Adaptation, and Resiliency Planning. Are there opportunities to add adaptation to other broader objectives/actions and extend beyond just mitigation commitments and adaptation as listed for specific projects?  | Added additional adaptive/adaptation measures to 2.1.1 and 2.1.2. Yes, adaptation can be part of mitigation actions even when not specifically listed. This is a strategic plan so some of the details for projects are developed with further planning, in grant applications, or in engineering documents. FEMA grant applications can include BCA information for future conditions. |



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| Feedback Form           | Chapter 6: Mitigation Strategy                                    | <p>I really appreciate the stated focus on equity and resilience, and specifically the selected "Mitigation in Focus" projects detailed at the end of the section with an emphasis on community-based/led planning efforts. Some of the actions that I found particularly critical are 2.8.3 (Eastwick), 2.8.4 (Healthy Corridors), 3.2.1 (Resilient Infrastructure Fund), 3.3.1 (Community Resilience and Environmental Action Fund), 4.1.4 (Germantown planning and flood risk reduction), to name a few.</p> <p>For action 4.1.1 (Mapping Stormwater Flooding Risk) - I think it will be important that these resources be made publicly accessible upon development and not only limited to PWD/City agencies. Consider adding this into the action so that residents and partners can know to expect this and have access to important resources documenting historic flooding and risk. (p. 325)</p> | Thank you for your support of the Mitigation in Focus idea. Added information to action 4.1.1   |
| Email and Feedback Form | Chapter 6: Mitigation Strategy and Chapter 7: Plan Implementation | OEM received the results of a class assignment from UPenn Students participating in a Public Health and Climate Change class this semester. The student reports show enthusiasm for envisioning a more resilient future, though many of the ideas in the reports exceed the purpose of Hazard Mitigation Plans. The Stafford Act and Title 44 Code of Federal Regulations (CFR) § 201.1 (b) states, "The purpose of mitigation planning is for State, local, and Indian tribal governments to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of resources."   | The City elected to recognize students' work by adding an action to the plan and adding information to Chapter 7: Plan Implementation on how feedback from the 2022 planning process will continue to inform future annual updates and 5-year update. New action 3.3.5 focuses on productive collaboration opportunities with local universities. A follow up conversation is in the process of being scheduled with Penn Professors to discuss future collaboration. |
| Email                   | Chapter 6: Mitigation Strategy                                    | What does the term "resiliency" mean? In discussing "resiliency" in terms of a "community," "infrastructure" and other resiliency, care must be taken on potential impacts to other neighbors or natural resources downstream. For example, the U.S. Army Corps of Engineers had studied (and may still be doing so) the construction of a berm near the Clearview Landfill and the Planet Streets in Eastwick. The conclusion was that there was likelihood of the berm exacerbating flooding down and even up-stream. The berm is only one example. The HMP must be clear on recognizing that making one neighborhood "resilient" may make another more vulnerable. Many municipalities in the Darby Creek Watershed (and Tacony and Pennypack, etc.) are making their neighborhoods more resilient, but that may be to the detriment of Philadelphia.   | Added question on no adverse impact to the equity considerations prior to Table 6-5. Mitigation Action Prioritization Criteria. The concept was present, but additional questions strengthened this concept.  |

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| Email | Chapter 6: Mitigation Strategy                               | <p>2.6.10 Enlarge culverts of the Poquessing Creek tributaries to protect roadway and residences. (Page 277). o Policy should be created and incorporated into the HMP a systematic and corresponding requirement that for every culvert that is identified for enlarging, there should be an up-stream (drainage area) assessment for green infrastructure opportunities. Enlarging culverts alone may reduce localized flooding, but maybe at the detriment of water quality and downstream impacts. o Enlarged culverts should also be designed with a sediment capturing capability</p>   | Added, "without providing any adverse impact to upstream or downstream properties" to the action to emphasize this point.   |
| Email | Chapter 2: Community Profile, Section 2.2.2.3 Tourism, pg 23 | <p>This Section highlights the great economic value that the tourism industry has for the City; pointing specifically to the tax revenue and job creation. It further points to the economic “hit” that many of the brick and mortar destinations (Table 2-5. Page 25) took due to the pandemic.</p> <p>It is equally important that the HMP calculate the value of the non-brick and mortar assets of the City’s outdoor recreation facilities. While the museums, historic sites, etc. did feel the economic pain because of covid, the City’s outdoor recreation uses went off-the-chart – providing economic stability and jobs.</p> <p>For all of the above reasons why outdoor recreation is of great economic and public health value to the City, it is imperative that this HMP plan provide pre and post-hazard planning and funding to address the long-term maintenance, restoration and continued expansion of opportunities to these non-brick and mortar community assets just as they will the brick and mortar facilities listed in the DRAFT HMP.</p> | Thank you for this feedback. This is very important point. The Mitigation Strategy of the 2022 Plan addresses both structure and non-structural risk reduction techniques for both bricks and mortar facilities, and other key community assets such as our parks. See Mitigation Actions 4.3.1, 4.2.6 and Mitigation in Focus Action 2.2.4: Trail Resiliency Planning for reference. |
| Email | Chapter 6: Mitigation Strategy                               | 2022 Hazard Mitigation Goals and Objectives (Table 6-2. Page 263): The businesses that support the City’s outdoor recreational resources should be considered “critical businesses” just as a museum or historic site might be (Objective 3.1)  | PPR is a partner on 18 actions and Fairmount Park Conservancy is a partner on 6 actions. Works at the nexus of parks and hazard mitigation is woven into objectives and actions under goal 'Goal 2: Build the resilience of community assets, including property, infrastructure, and cultural resources' and 'Goal 4: Restore and enhance the natural ecology'.                      |
| Email | Chapter 2: The Community Profile, Population and             | Are there measures in place to locate abandoned homes or protect homeowners nearby from the dangers of abandoned homes like increased risk of fires or home collapse?   | Please see section 4.3.19: Urban Fire and Explosion for more information on the link between vacant properties and fire risk. Chapter 5: The Capability Assessment outlines the Philadelphia Fire Department's current capabilities as they relate to fire outreach and preparedness. Mitigation Action   |

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|       | Demographics , pg 30  |  | <p>2.8.11 demonstrates the City's priority to continue these initiatives.</p> <p>To report a vacant property to L&amp;I's Clean and Seal team, call 311. For more information on properties that have been cleaned and sealed by the L&amp;I team, go to: <a href="https://data.phila.gov/visualizations/li-clean-seal">https://data.phila.gov/visualizations/li-clean-seal</a></p> |
| Email | Chapter 2: The Community Profile, Population and Demographics , pg 31 | What is the city doing to support equity in access to housing? New Homes and rent have grown exponentially faster than wages and have often been listed at prices only attainable by a small population.   | This is outside of the scope of the Hazard Mitigation Plan.   |
| Email | Chapter 2: The Community Profile, Population and Demographics , pg 32 | Is there anything being done to support infrastructural or community updates to areas not witnessing new development?  | The Hazard Mitigation Plan identified both structural and non-structural projects that reduce risk to hazards City-wide. This includes areas of new development.  |
| Email | Chapter 2: The Community Profile, Population and Demographics , pg 33 | How can residents who have lived in the city for a long time gain access to the benefits associated with housing updates in affluent neighborhoods in the city?  | This is outside of the scope of the Hazard Mitigation Plan.   |
| Email | Chapter 2: The Community Profile, Section 2.4                         | The Philadelphia Planning Commission divided Philadelphia neighborhoods into 18 planning districts. How are these districts created? Is there an inclusive iterative update process for these districts or efforts to undo redlining or other forms of discrimination? | This is outside of the scope of the Hazard Mitigation Plan, but we encourage you to learn more about the Planning's Commission's Comprehensive Plan at <a href="https://www.phila2035.org">https://www.phila2035.org</a> .  |

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| Email | Chapter 2:<br>The<br>Community<br>Profile,<br>Section 2.5 | What is being done to ensure new development is not concentrated in areas of hazard risks like flood-prone zones?   | Please see Chapter 4 for more information provided on hazard risk and future development. While the HMP is not a regulatory document, we hope that our partners can use this tool as a resource when making decisions regarding new development in hazard-prone areas.  |
| Email | Chapter 2:<br>The<br>Community<br>Profile,<br>Section 2.6 | What is the city doing to undo devastating impacts of redlining or to at least ensure that new development does not proceed in a similarly culturally and economically discriminatory manner  | Equity was a priority throughout the plan update. Equity was added as a criterion for mitigation project prioritization in the 2022 plan. All Hazard Mitigation Projects will be evaluated to ensure that implementation does not disproportionately impact one population over another as outlined in Chapter 4: The Mitigation Strategy.  |
| Email | Chapter 2:<br>The<br>Community<br>Profile,<br>Section 2.7 | How can the HMP's Goals and Objectives and the Mitigation Plan serve as a tool in the City's toolbox to protect long-time residents from the impacts of gentrification, particularly People-of-Color in disadvantaged neighborhood?   | Equity was a priority throughout the plan update. In addition to adding equity to our project prioritization criteria, equity was also incorporated throughout our mitigation goals and objectives. Additional information on populations disproportionately placed at greater risk to the hazard in our plan was incorporated into each hazard profile so that it can be used as a tool for our planning projects as plan and implement risk reduction techniques. |
| Email | Chapter 6:<br>Mitigation<br>Strategy                      | Objective 2.4.1 (pg 273) We support this initiative. Can OOS also be included?  | Added OOS.  |
| Email | Chapter 6:<br>Mitigation<br>Strategy                      | Training content and format should be evaluated and revised as needed to take into consideration the expanded scope of the HMP, particularly topics on climate change and the impacts on the City residents, facilities and infrastructure. This training should be, if it isn't already, mandatory for all City elected, appointed, staff and community (RCO and others) members to actively participate in. | Added text to 7.2.2 Plan Integration and Implementation regarding building on the hazard mitigation training offered during 2022 plan update process and expanding to additional stakeholders.  |

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| Email | Chapter 2:<br>Community Profile,<br>Section 2.4.2.4, pg 60 | The HMP must more directly address, in terms of exposure prevention, residents and businesses to hazardous materials releases along the freight rails that run throughout the City   | Added information to introduction of 4.3.16 on how hazardous materials are a compounding hazard with transportation accidents and added freight reference under 4.3.6.1.   |
| Email | Chapter 2:<br>Community Profile,<br>Section 2.5            | How can the public gain access to or support updates to the FIRM or other recent updates in flood risks?   | Added note to 2.5 that FIRM information is available on the FEMA Flood Map Service Center ( <a href="https://msc.fema.gov/portal/home">https://msc.fema.gov/portal/home</a> ).   |
| Email | Chapter 2:<br>Community Profile,<br>Section 2.5            | We advocate for the use of the most recent NOAA Sea-Level Rise data  | Added additional information to Section 2.5 on the use of the 2017 NOAA projections for the Philadelphia local scenario.   |
| Email | Chapter 4: the Risk Assessment, Flooding                   | 4.3.4.4 Future Occurance: Example of economic impacts: sea level rise Sea level rise has, and will continue, to inundate Pennsylvania with flooding. These damages can cost Pennsylvania billions of dollars but will center around Philadelphia.<br><a href="https://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/2021/2-23-21/2021_Impacts_Assessment_Final_2-09-21_clean.pdf">https://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/2021/2-23-21/2021_Impacts_Assessment_Final_2-09-21_clean.pdf</a> | Added paragraph to 4.3.4.4 quoting this statement in plan and added plan to Bibliography.  |
| Email | Chapter 6:<br>Mitigation Strategy                          | The airport's ongoing \$6.2 billion expansion, to be completed in phases through 2025 lengthening two of the airport's four runways and building a fifth runway along the Delaware River, includes struggles against sea level rise such as filling 135 acres of floodplain and building 11 acres on stormwater basins. (Pages 277 & 278)  | The HMP is a broad strategic plan for the City on how it plans to address hazard mitigation. The details of development like this would be covered through a separate planning process. PHL is addressed in the HMP as at risk to some hazards including flooding, the Philadelphia Airport Sustainability Plan is captured in 5.2.1.22, and PHL is involved in mitigation actions 2.6.1, 2.6.3, 2.6.13, and 2.6.15. |

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| Email | Chapter 4: the Risk Assessment, Drought (pg 110)           | In the Delaware River Basin, some 147,000 jobs and \$20.4 billion in residential property values could be affected by the combined impact of sea level rise, storm surge and flooding. (Page 279)   | Added paragraph to 4.3.4.4 quoting this statement in plan and added plan to Bibliography.   |
| Email | Chapter 4: the Risk Assessment, Civil Disturbance (pg 188) | Are there any plans in place to respond to civil disturbance or updates considering the last few years? The OEM HMP has placed it as a relatively low priority which is concerning as, although somewhat rare, we have seen in 2020 just how pervasive the unwanted effects can be. | This is the first time that Civil Disturbance is featured in the City's HMP, indicating that it is a priority for the City to address this hazard. Please see mitigation action number 5.1.4 which addresses continued and future training for City staff related to civil disturbance and responses to other human-caused threats and hazards. The details of many plans related to human-caused hazard and threats are not documented in detail in this plan due to the sensitive nature of those documents.  |
| Email | Chapter 4: the Risk Assessment, Cyber Terrorism (pp 190)   | In addition to helping disadvantaged communities become computer literate, are we also educating them on vulnerabilities to cyber-attacks and internet scamming.  | Please see new mitigation action which addresses this question: 3.1.6: Develop cyber–Security Incident Response and Recovery Plan, including education and outreach to stakeholders and the public.   |
| Email | Chapter 4: the Risk Assessment, Gun Violence (pg 192)      | How has our approach to gun violence changed since 2017? Are there collaborative networks in place to leverage resources?   | This is the first time that gun violence is being featured in Philadelphia's HMP and was not addressed in our 2017 plan. For more information on the City's approach to gun violence, please see the Office of Policy and Strategic Initiatives for Criminal Justice and Public Safety's website: <a href="https://www.phila.gov/departments/office-of-policy-and-strategic-initiatives-for-criminal-justice-and-public-safety/">https://www.phila.gov/departments/office-of-policy-and-strategic-initiatives-for-criminal-justice-and-public-safety/</a> . |
| Email | Chapter 4: the Risk Assessment, Hazardous Materials        | Are there any programs in place to mitigate health risks of being placed near hazardous materials leakage?  | Additional information was added to Chapter 5: the Capability Assessment on OEM's Hazardous Materials Response Plan, which is updated regularly. Specific details of this plan are not included in the Hazard Mitigation Plan due to the sensitive nature of the information. Please refer to   |

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|       | Release (pg 194)   |   | Mitigation Action numbers 2.2.7, 2.2.8, 2.3.6, 4.5.3, 4.5.4, and 5.1.5 which all address Hazmat Release.   |
| Email | Chapter 4: the Risk Assessment, Hazardous Materials Release (pg 194) | What has the city learned from the hazardous materials fire of 2020 and what is it doing to improve preparation and responses to hazardous waste leaks?   | Additional information was added to Chapter 5: the Capability Assessment on OEM's Hazardous Materials Response Plan, which is updated regularly. Specific details of this plan are not included in the Hazard Mitigation Plan due to the sensitive nature of the information. Please refer to Mitigation Action numbers 2.2.7, 2.2.8, 2.3.6, 4.5.3, 4.5.4, and 5.1.5 which all address Hazmat Release.   |
| Email | Chapter 4: the Risk Assessment, Hazardous Materials Release (pg 194) | There appear to be loop-holes for smaller business (<10 full-time employees) to avoid reporting obligations to EPA. There should be an assessment of each facility and their full-time/part-time employee break-down. Are there some facilities being operated where there are a large number of part-time employees and avoiding the 10 full-time employee threshold? Could a small facility manage its workforce in terms of part-time/full-time employees, to avoid the EPA reporting? Does the number of employees truly provide an accurate "yardstick" at determining how devastating to a community a spill or other release of contaminants at that site could be? This loop-hole should be closed.<br>4.3.16.1<br>(Page 195)   | Added information to 4.3.15.5 on businesses both small and large.  |
| Email | Chapter 4: the Risk Assessment, Hazardous Materials Release (pg 194) | The HMP must address new proposals to transport liquified natural gas (LNG) through the City, across the ConRail Bridge into Pennsauken, NJ on its way to a proposes export facility in Gibbstown, NJ. Recent Gibbstown applications for permits reveal more than 5 million gallons of LNG is the average daily export volume. Permits allow up to 2 100-railcar trains every day to pass through the City. Up to 1.9 million people are within two miles of the transportation route. (Gibbstown Logistics Center Plans to Export Liquefied Natural Gas (LNG), Delaware Riverkeeper Network Fact Sheet <a href="https://delawariverkeeper.org/ongoingissues/gibbstown-logistics-center-lng-ngl-exports-proposed">https://delawariverkeeper.org/ongoingissues/gibbstown-logistics-center-lng-ngl-exports-proposed</a> ) | There is no liquified natural gas (LNG) being transported by rail through Philadelphia at this time pending further review by the Pipeline and Hazardous Materials Safety Administration (PHMSA) and the Federal Railroad Administration (FRA). The movement of LNG by rail in Philadelphia and the region will be considered during the annual review process and future updates if/when conditions change. For more information see: <a href="https://www.federalregister.gov/documents/2021/11/08/2021-23132/hazardous-materials-suspension-of-hmr-amendments-authorizing-transportation-of-liquefied-natural-gas">https://www.federalregister.gov/documents/2021/11/08/2021-23132/hazardous-materials-suspension-of-hmr-amendments-authorizing-transportation-of-liquefied-natural-gas</a> |

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| Email | Chapter 4: the Risk Assessment, Extreme Heat (pg 122) | Is the city doing anything to address inequities in extreme temperature vulnerabilities?    | Please see Chapter 4: The Mitigation Strategy for several mitigation projects that address high heat including actions 1.2.1, 2.8.2, 2.8.4, 2.8.5, and 3.3.1. These actions specific target areas most vulnerable to heat. Additional information was also added to Chapter 5: The Capability Assessment on the City's recently launched Environmental Justice Advisory Commission. Commission members will work to identify where multiple impacts occur, as well as where City policies or procedures result in barriers to achieving environmental justice. The Commission will strive to amplify the concerns of frontline communities and will work with the City to co-develop plans to address disparities in exposure to environmental harm. |
| Email | Chapter 4: the Risk Assessment, Extreme Heat (pg 122) | Is there an easily accessible extreme temperature alert system in place?                    | Residents are encouraged to sign up for READYPhiladelphia emergency alerts by visiting OEM's website at <a href="http://www.phila.gov/ready">www.phila.gov/ready</a> or by texting READYPhila to 888-777. Mitigation Action 5.2.3 addresses OEM's continued commitment to improving the City's Alert and Warning system, including an increased focus on reaching individuals with access and functional needs.  |
| Email | Chapter 4: the Risk Assessment, Extreme Heat (pg 122) | Are there any resources available to support heat vulnerable individuals like older people? | Please find more information on safety, emergency preparedness, and City resources during high heat here: <a href="https://www.phila.gov/services/safety-emergency-preparedness/natural-hazards/excessive-heat/">https://www.phila.gov/services/safety-emergency-preparedness/natural-hazards/excessive-heat/</a> . We also encourage you to schedule and emergency preparedness workshop for your community offered by OEM.   |
| Email | Chapter 4: the Risk Assessment, Extreme Heat (pg 122) | How can citizens learn about supporting or gaining access to the OHS outreach team?         | Please find more information on safety, emergency preparedness, and City resources during high heat here: <a href="https://www.phila.gov/services/safety-emergency-preparedness/natural-hazards/excessive-heat/">https://www.phila.gov/services/safety-emergency-preparedness/natural-hazards/excessive-heat/</a> . We also encourage you to schedule and emergency preparedness workshop for your community offered by OEM.   |



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| Email | Chapter 4: the Risk Assessment, Flooding (pg 129)                                | What is being done to support flood prone areas like Eastwick from catastrophic flooding vulnerabilities or sinkholes?   | Please see Chapter 4: The Mitigation Strategy for more information on mitigation actions that address hazard risk citywide, and in the Eastwick neighborhood. This includes the Mitigation in Focus Action: Eastwick Place-Based Climate Risk, Adaption, and Resiliency Planning  |
| Email | Chapter 4: the Risk Assessment, Flooding (pg 129)                                | Is there an effective and easily accessible system in place to warn inhabitants of flood prone areas like Eastwick when KING tides and/or compounding storms are afoot?  | Residents are encouraged to sign up for READYPhiladelphia emergency alerts by visiting OEM's website at <a href="http://www.phila.gov/ready">www.phila.gov/ready</a> or by texting READYPhila to 888-777. Mitigation Action 5.2.3 addresses OEM's continued commitment to improving the City's Alert and Warning system, including an increased focus on reaching individuals with access and functional needs.   |
| Email | Chapter 4: the Risk Assessment, Flooding (pg 129)                                | Where do residents go specifically when flooding occurs in the community of Eastwick? Is there an evacuation plan or route of least threat? It is critical that this information is presented in a variety of different formats (City websites, YouTubes and other social media, through community organizations, flyers in public spaces, tabling events, etc.).  | Evacuation routes vary based on a variety of factors specific to each incident. Residents are encouraged to listen to instructions from local officials on the best route for evacuation in times of disasters. Residents should have a household emergency plan and are also encouraged to sign up for READYPhiladelphia emergency alerts by visiting OEM's website at <a href="http://www.phila.gov/ready">www.phila.gov/ready</a> or by texting READYPhila to 888-777. |
| Email | Chapter 4: the Risk Assessment, Flooding (pg 129)                                | Eastwick flood risk study. The City recently completed a Hydrologic and Hydraulic (H&H) Study of publicly-owned lands in Eastwick. While valuable information, that study does not present the full story of flood risk in Eastwick. A comprehensive flood risk study should be initiated immediately. Potential partners on this effort could include the Wharton Risk Management Center-University of Pennsylvania | Please see Chapter 4: The Mitigation Strategy for more information on mitigation actions that address hazard risk citywide, and in the Eastwick neighborhood. This includes the Mitigation in Focus Action: Eastwick Place-Based Climate Risk, Adaption, and Resiliency Planning.   |
| Email | Chapter 4: the Risk Assessment, Hurricane, Tropical Storm, Nor'easter (page 147) | ARE THERE OTHER METHODS WE CAN USE TO ASSESS A STORM'S POTENTIAL IMPACT BESIDES THE DOLAN-DAVIS SCALE SINCE IT HAS LIMITED UTILITY FOR ASSESSING STORM POTENTIAL ON INLAND CITIES?   | The Hazard Mitigation Plan includes results from a Hazus Analysis conducted in 2021 for this plan update. The Hazus analysis looks at potential impacts and losses resulting from various flooding events, storm surge events, and Sea Level Rise. Please see Chapter 4 for more information on the results of the analysis and how it informed mitigation action development.  |

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| Email | Chapter 4: the Risk Assessment, Pandemic & Infectious Disaster (page 156) | Encouraging that there seems to be more inclusion and exploration of pandemic and infectious disease implications for Philadelphia. Are there efforts in place to improve dissemination of disaster related information to vulnerable communities during times of crisis?  | Please see mitigation action 5.2.2, action 2.8.1 and action 5.2.3 which addresses this question.   |
| Email | Chapter 4: the Risk Assessment, Pandemic & Infectious Disaster (page 156) | Is there a sinkhole response measure in place? SINKHOLES UNEQUALLY AFFECT AREAS THAT ARE PRONE TO UNATURAL WATER MOVEMENT, FLOODING OR AGING INFRASTRUCTURE LIKE EASTWICK.   | Subsidence and sinkholes are typically responded to through Philadelphia Department of License & Inspection when the issue is slow moving. In emergency conditions, PFD, OEM and other response departments can be involved in the response. The subsidence and sinkhole conditions in Eastwick would be included in actions 2.2.1 and 2.2.10. We also added Subsidence & Sinkhole to action 2.8.3 since it is a compounding hazard with the planned flood initiative. |
| Email | Chapter 4: the Risk Assessment, Winter Storm pg 232                       | Is flood vulnerability accounted for during winter storms?   | For more information on flood vulnerability, please see Section 4.3.4: Flood, Flash Flood, and Ice Jam which addresses how ice jams and snow melt can impact flooding.   |
| Email | Chapter 5: The Capability Assessment, page 233                            | The City must commit to implementing the CRS. It is though the Community Rating Systems program that all City residents paying for flood insurance could realize reduced premiums. It is reported that Baltimore is a CRS participant. Philadelphia OEM or other appropriate department should engage with Baltimore counter-parts to determine how it was done in that river-front city and then prioritize a course-of-action to advance it in Philly. | The City of Philadelphia is continuing to explore pathways for participation in the Community Rating System. The City is currently in the process of working with FEMA to complete the City's 2015 Community Assistance Visit (CAV), address outstanding issues, and developing a plan for how Philadelphia should proceed. See mitigation action 2.1.7.   |
| Email | Chapter 5: The Capability Assessment, page 239                            | Although encouraging to see Eastwick explicitly mentioned, this is an alarmingly short section. No details about timing of efforts, how community members may get involved, hierarchy of priorities, very vague discussion here. This appears to be a \$400,000/per year initiative with the City (specifically the OOS) providing just \$50,000.  | The HMP is a broad strategic plan for the City on how it plans to address hazard mitigation. The details of projects are often developed through the writing of grant applications or through a separate planning process like Eastwick Strategic Planning and Alignment: A Place-Based Framework or mitigation action 2.8.3. It is one piece of a large   |

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|       |   |  | puzzle and initiative to support hazard mitigation in Eastwick.  |
| Email | Chapter 6: Mitigation Strategy, Table 6-2 | Table 6-2: (Objective 2.1): Are there efforts being made to improve coordination of flood responses?   | Additional information was added to Chapter 5: the Capability Assessment on OEM's Severe Weather Plan, which is updated on an annual basis. Also see Hazard-Based Emergency Plans and Function-Based Emergency Plans included in the Plan integration matrix of The Capability Assessment. Ongoing coordination related to flood response and mitigation continues through the City's Flood Risk Management Task Force, highlighted in Chapter 5: The Capability Assessment. |
| Email | Chapter 6: Mitigation Strategy, Table 6-4 | What actions are being made to support Bartram's North and South Flood Mitigation projects and how can the community become involved?  | Lead agencies are identified for each mitigation action. Please reach out to the lead agency for the action to gather more information on how to get involved.   |
| Email | Overall                                   | Overall this HMP is much improved as compared to the 2017 version with more substantial and meaningful public safety information and assumed accountability • We are pleased to see more explicit reference to and consideration of the Eastwick Community • A lot of the Hazard mitigation goals and objectives specifically talk about using up to date building codes and regulations to identify the most appropriate areas for expansion/redevelopment to mitigate experienced disaster effects. However, there are plans for significant development in hazard prone areas like those near John Heinz Refuge and some areas of Eastwick • Philadelphia's Green Cities Clean Waters program is a highly ambitious and innovative approach to addressing stormwater runoff and surface water pollution while providing social and public health benefits to the city | Thank you for this feedback.   |