



# HAZARD MITIGATION PLAN KICKOFF WORKSHOP

Presented October 23, 2024





# WELCOME AND INTRODUCTIONS

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Emergency Management Coordinator

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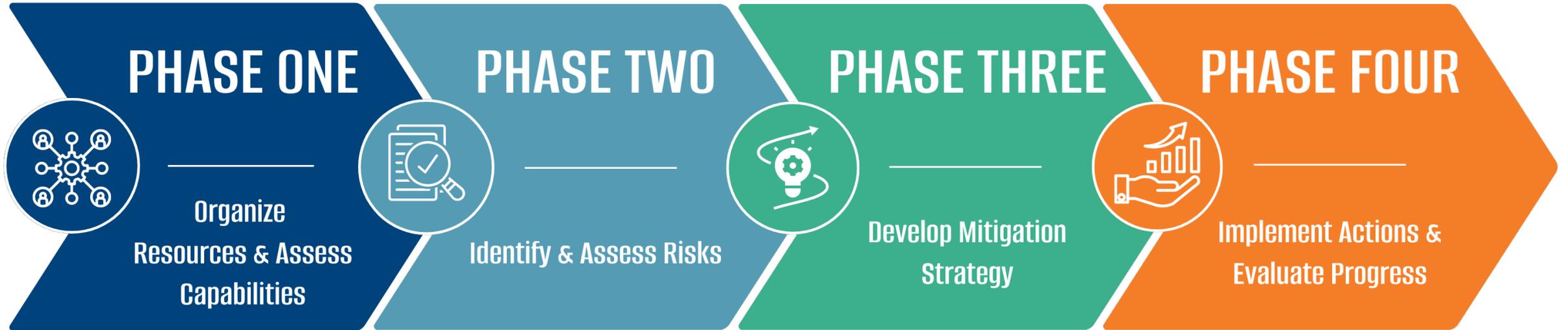
Deputy Emergency Management Coordinator



# PLANNING PURPOSE

- Protect public safety and prevent loss of life and property
- Identify cost-effective mitigation measures
- Reduce risk to existing and future development
- Build partnerships by involving people, organizations, and businesses
- Align risk reduction with other community objectives
- Leverage FEMA funding

# PLANNING PROCESS



# PHASE 1 - ORGANIZE



**Planning Area:** The planning process was conducted for the City of Baytown

**Planning Team:** Key officials from the Planning Area

**Stakeholder Group:** General public, neighboring communities, local businesses, hospitals, schools, area agencies, and other interested groups

*Following FEMA approval of the mitigation plan, the City of Baytown may apply directly to FEMA for certain grant funding.*

# PHASE 2 - ASSESSMENT



## CAPABILITY ASSESSMENT

Measures capability of the City of Baytown to implement hazard mitigation projects

Identifies opportunities to integrate the Hazard Mitigation Action Plan into other plans, programs, policies

Identifies mitigation measures already in place or underway



Identify  
Hazards

Profile  
Hazard

Inventory  
Assets

Estimate  
Losses

# HAZARDS

## RISK ANALYSIS

- Identify Natural Hazards
- Risk Analysis
  - Description
  - Historical Occurrences
  - Extent
- Probability of Future Occurrences
- Impact
- Vulnerability



# EMAP & CRS INTEGRATION

## EMAP

- Hazard Identification & Risk Analysis
- Consequence Analysis

## CRS

- 510 Floodplain Management Plan



# HAZARDS ASSESSED

*Probability =  
Historical Event Counts*

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*Time period*

*Average Annualized Loss =  
Historical Loss Amount*

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*Time period*



Coastal Erosion



Dam Failure



Drought



Earthquake



Extreme Heat



Flood



Hail



Hurricane / Coastal Storm



Land Subsidence



Lightning



Thunderstorm Wind



Tornado



Wildfire



Winter Storm



Cyber Attack



Hazardous Materials



Infectious Disease



Technological Hazards



Terrorism

# PHASE 3 – MITIGATION STRATEGY



## MITIGATION GOALS

Once opportunities/capabilities have been assessed, hazards analyzed, and risk addressed, mitigation actions (projects) are developed to reduce the threat to known hazards – they are the heart of the Plan

## TYPES OF ACTIONS / NUMBER OF MITIGATION ACTIONS

- Types:
  - Local Plans & Regulations
  - Structural and Infrastructure Projects
  - Natural Resource Protection
  - Public Education and Awareness
- Number: One action, per hazard



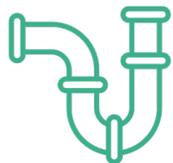
# SAMPLE MITIGATION PROJECTS



Acquisition/demolition/elevation of flood-prone structures



Community and individual storm shelter programs



Small scale structural projects (channel, culvert)



Retrofitting facilities (flood proofing, shuttering)



Generators to protect critical facilities



Limited funding is available for initiative projects such as public awareness, alert and warning systems

# PHASE 4 - IMPLEMENTATION



## IMPLEMENTING THE PLAN

How will the City implement, monitor progress, and maintain the HMAP?

Reconvene Planning Team periodically to determine any changes, additional mitigation actions to add. Approved HMAP may be amended anytime but must be formally updated every 5 years.

Have mitigation actions been implemented, or grants applied for? If not, why?





# GRANTS & INCENTIVES

*Hazard Mitigation Assistance (HMA) Grants  
Available with a FEMA Approved HMAP*

## Hazard Mitigation Grant Program (HMGP)

Triggered by a Presidential Declaration of a major natural disaster with an estimated 15% set aside and is available statewide with impacted jurisdictions having priority.

## Building Resilient Infrastructure and Communities (BRIC)

Annual grant funded through the Disaster Relief Fund as a 6% set aside from estimated disaster grant expenditures and is available nationwide.

## Flood Mitigation Assistance (FMA)

Annual grants funded through congressional appropriation and is available nationwide.

## Hazard Mitigation Grant Program Post Fire (FMAG)

Triggered by a FMAG declaration with funding based on an average of FMAG declarations from the past 10 years and is available statewide with impacted jurisdictions having priority.

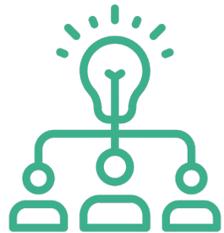
## High Hazard Potential Dam (HHPD) Grant

Eligible for application and inclusion of dam risks in HMAP. Provides assistance for technical, planning, and design activities toward repair, removal, or rehabilitation of HHPD.

# PUBLIC OUTREACH



Inform/educate the general public and community stakeholders about hazards



Invite interested parties to contribute their views and ideas for mitigation



Provide data and information that improves overall quality and accuracy of the HMAP

Public input will be sought through meetings, social media, and an online survey posted to the City of Baytown website and social media:

<http://tinyurl.com/BaytownHMAP>



# ROLES & RESPONSIBILITIES OF CONSULTANT



## Technical Assistance

- Planning Guidance
- State and Federal Compliance



## Facilitate Workshops and Meetings



## Data Collection & Analysis

- Risk Assessment
- Capability Assessment
- Summarize results/report findings



## Prepare Draft and Final HMAP



# ROLES & RESPONSIBILITIES OF CITY OF BAYTOWN



Active participation during the planning process and meet all plan deadlines:

- Provide meeting locations and attend all meetings
- Conduct outreach, post information to website, and social media
- Provide available local GIS/historical data to H2O Partners
- Develop comprehensive mitigation actions for each hazard
- Review Draft Plan & provide feedback



Plan Adoption upon FEMA approval

# TIMELINE





# NEXT STEPS

- Capability Assessment Worksheet
- Critical Facilities
- Previous Action Analysis
- Strategize with key officials and departments to finalize all requested documents by **November 22, 2024**.

# CAPABILITY ASSESSMENT



## Local Capability Assessment Survey

Jurisdiction and/or Dept.: \_\_\_\_\_

Phone: \_\_\_\_\_

Name and Title: \_\_\_\_\_

E-mail: \_\_\_\_\_

**1. PLANNING AND REGULATORY CAPABILITY** - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation. Finally, please provide additional comments or explanations in the space provided or with attachments. **\*\*If there is a link to any of these plans, please provide in the the comments box.**

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Comments
Capital Improvements Plan				
Climate Change Adaptation Plan				
Community Wildfire Protection Plan				
Comprehensive/Master Plan / Land Use Plan: Please indicate in notes column if hazards addressed listed among the elements of the municipal master plan?				
Continuity of Operations Plan				
Drought Contingency Plan				
Economic Development Plan				
Emergency Management Action Plan				
Emergency Operations Plan				
Extreme Heat Plan / Protocol				
Evacuation Plan				



# PREVIOUS ACTIONS ANALYSIS



Jurisdiction	Project #	Proposed Action	Site Location	Type of Action	Hazard(s) Addressed	Objectives From Previous Plan	Effect on New/Existing Buildings	Target Completion Date	Responsible Organization	Estimated Cost	Potential Funding Sources	Priority	Project Status for Plan Update	Comments
City of Baytown	BAY1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.	Citywide	Property Protection, Natural Resources Protection	Flooding, Hurricane, Severe Storm, Dam Failure	(Obj. 12, 13, 14, 15) Manage new and existing development in high hazard areas, especially those known to be repetitively damaged. / Support the protection of vital and essential records, and strengthening or replacement of buildings, infrastructure, and lifelines to minimize post-disaster disruption and facilitate short-term and long-term recovery. / Through the enforcement of relevant federal, State and local regulations, sustain life and property protection measures for all communities and structures located in the greater Harris County region. / Promote disaster resistant development.	Existing	Long Term - Completion within 10 years	Engineering	High	HMGP, PDM, FMA, CDBG-DR	Medium		
City of Baytown	BAY2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Capital Improvement Programs, Master Plans, and Strategic Plans.	Citywide	Prevention, Natural Resources Protection, Community Capacity Building	Coastal erosion, Dam/levee failure, Drought, Earthquakes, Flooding, Hurricanes and coastal storms, Mass movement, Severe weather, and Wildfire	(Obj. 3, 5, 7, 9, 10) Improve understanding of the locations, potential impacts, and linkages among threats, hazards, vulnerability, and measures needed to protect life safety and health. / Coordinate state and local efforts to reduce greenhouse gas emissions and implement climate adaptation strategies through hazard mitigation plans and actions. / Encourage all state, regional and local hazard mitigation projects and planning programs to protect the environment and promote implementation of sustainable mitigation and climate resilience actions. / Encourage all cities, counties, special districts, Councils of Governments and tribal organizations to develop, adopt, and implement local hazard mitigation principles that may be integrated with local comprehensive plan safety elements, local coastal plans, facilities master plans, and other local plan initiatives. / Advance community resilience through preparation, adoption, and implementation of state, regional and local multi-hazard mitigation plans and projects.	New and Existing	Ongoing - No completion date	Emergency Management	Low	Staff Time, General Funds	Medium		
City of Baytown	BAY3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Citywide	Prevention	Coastal erosion, Dam/levee failure, Drought, Earthquakes, Flooding, Hurricanes and coastal storms, Mass movement, Severe weather, and Wildfire	(Obj. 3, 5, 7, 9, 10) Improve understanding of the locations, potential impacts, and linkages among threats, hazards, vulnerability, and measures needed to protect life safety and health. / Coordinate state and local efforts to reduce greenhouse gas emissions and implement climate adaptation strategies through hazard mitigation plans and actions. / Encourage all state, regional and local hazard mitigation projects and planning programs to protect the environment and promote implementation of sustainable mitigation and climate resilience actions. / Encourage all cities, counties, special districts, Councils of Governments and tribal organizations to develop, adopt, and implement local hazard mitigation principles that may be integrated with local comprehensive plan safety elements, local coastal plans, facilities master plans, and other local plan initiatives. / Advance community resilience through preparation, adoption, and implementation of state, regional and local multi-hazard mitigation plans and projects.	New and Existing	Short-term - Completion within 5 years	Emergency Management	Low	Staff Time, General Funds	Medium		
City of Baytown	BAY4	Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: - Enforce the flood damage prevention ordinance. - Participate in floodplain identification and mapping updates. - Provide public assistance/information on floodplain requirements and impacts.	Citywide	Prevention, Public Education and Awareness	Flooding, Hurricane, Severe Weather, Dam Failure	(Obj. 2, 8, 9, 11, 14) Implement wildfire mitigation and watershed protection strategies through local, state, tribal, federal and private partnerships. / Support hazard mitigation measures that promote and enhance natural processes and minimize adverse impacts on the ecosystem. / Encourage all cities, counties, special districts, Councils of Governments and tribal organizations to develop, adopt, and implement local hazard mitigation principles that may be integrated with local comprehensive plan safety elements, local coastal plans, facilities master plans, and other local plan initiatives. / Encourage projects that simultaneously reduce risk while increasing resilience and sustainability. / Through the enforcement of relevant federal, State and local regulations, sustain life and property protection measures for all communities and structures located in the greater Harris County region.	New and Existing	Ongoing - No completion date	Engineering	Low	Staff Time, General Funds	High		

# HUMAN-CAUSED HAZARD FORM



## Human-Caused Hazard Data Information

City of Baytown

Name/Title: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

Please note that we understand that some of this information may not be recorded or otherwise readily available. Please do your best to answer the questions as completely as possible. This is the process required to collect the best data available for each element of the plan. This helps us to identify data deficiencies to be noted in the plan in order to meet FEMA's minimum requirements.

### 1. Cyber Attack

- a) How many DDoS attacks in the last year have impacted services?
- b) Does the City have background checks, or protocols in place to ensure privacy in the cyber systems for each employee? Please briefly describe.
- c) Have there been instances where the City had issues with viruses and malware detection? If so, please explain the number of instances.
- d) Does the City use any third parties/contractors for cyber activities? If so, is there a process to "vet" the company? What contractual agreement is in place to ensure data is stored properly? Has there been any instance when an employee or third party/contractor had mismanaged data?
- e) How does the City monitor symptoms of APT? In the last 5 years have there been instances of infection by malware which has commanded or controlled the cyber system?

### 2. Hazardous Material (H2O utilizes incident history from the Department of Transportation PHMSA site, however, if there are specific incidents the city would like to ensure are profiled, please indicate below) (Includes: Industrial, Road, Pipeline, Rail, Maritime, and Aviation)

- a) How many transportation incidents have been reported in the City in the last 70 years (or as far back as records allow, please indicate year)?
- b) Please indicate the following related to each documented incident:
  1. Jurisdiction impacted (Inside/Outside City Limits)
  2. Date
  3. Fatalities
  4. Injuries
  5. Property Damage

### 3. Infectious Disease / Pandemic

- a) How many people in the City have been impacted / confirmed cases of the virus?
- b) How many deaths in the City related to the virus?



# DUE DATES AND DELIVERABLES

**NOVEMBER 22**

Initial Documentation (Kick-Off Documentation)

- Capabilities Assessment
- Critical Facilities Identification
- Previous Actions Analysis
- Human-Cause Hazard Form

**JANUARY 22**

NCEI Preliminary Data Review (optional)

**JANUARY 31**

New Project Identification and Development  
Any deferred projects identified in the previous action analysis will be the starting basis of the 2025 Plan Update. This is an opportunity to include new projects.

**FEBRUARY 17  
thru MARCH 3**

Section 26– Mitigation Actions Distributed for Preliminary Review by Planning Team

**MARCH 31**

Full Draft HMAP Distributed for Review by Planning Team  
*A public copy will be generated once revisions and feedback from the planning team have been incorporated into the Draft Plan.*

# PLEASE DIRECT QUESTIONS OR COMMENTS TO H2O PARTNERS



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# PUBLIC SURVEY

