



# Brownsville Public Utilities Board Hazard Mitigation Plan – 2022 Update

## Planning Team Kick-Off Meeting | August 12, 2021

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## Agenda




- Welcome and Introductions
- Benefits of Hazard Mitigation
- Hazard Mitigation Planning Overview
- Project Organization
- Planning Team Responsibilities
- Public and Stakeholder Outreach
- Update Hazards of Concern and Risk Assessment
- Critical Facilities and Lifelines
- Goals and Objectives
- Schedule
- Questions/Next Steps/Wrap Up



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## Hazard Mitigation – What is it?


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

-or-


Any action taken to reduce future disaster losses

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




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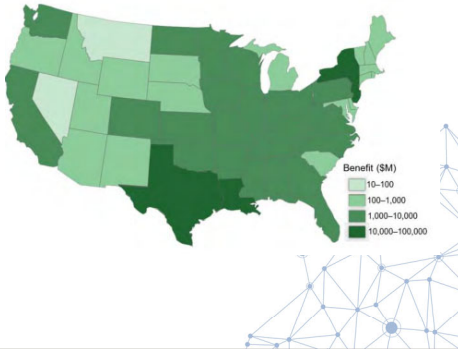


## Hazard Mitigation Works!


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

Mitigation saves in every in state! Texas has saved at least \$10 billion in benefits.

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



Benefit (\$M)  
■ 10-100  
■ 100-1,000  
■ 1,000-10,000  
■ 10,000-100,000


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# Why Update?

- To remain eligible for pre- and post-disaster mitigation funding, FEMA requires anyone with an approved HMP to update it every 5 years.
- Updating the plan helps us re-evaluate our risk and identify any new risks or vulnerabilities.
  - New information, data and studies are always coming in – so we will use that to help us update as well (e.g., hazard maps, event history, change in population, etc.)
- The mitigation plan update will:
  - Help Brownsville prepare for and mitigate the effects of hazards
  - Continue to allow Brownsville Public Utilities Board and participating partners to be eligible for pre- and post-disaster mitigation funding
  - Support CRS participation/rating of municipalities



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# What's at Risk?

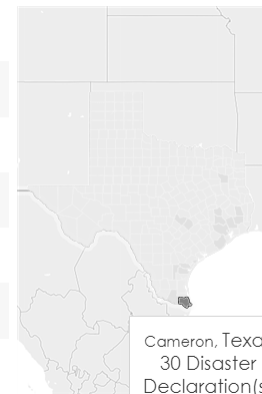
## • FEMA Disaster Declarations

Year of Declaration Date	Declaration Title	Disaster Number
1967	HURRICANE BELLAH	232
1971	HEAVY RAINS, HIGH WINDS & FLOODING	313
1980	HURRICANE ALLEN	627
1984	SEVERE FREEZING WEATHER	696
	SEVERE STORMS & FLOODING	726
1988	HURRICANE GILBERT	816
1990	SEVERE FREEZE	850
1991	SEVERE STORMS, TORNADOES & FLOODING	900

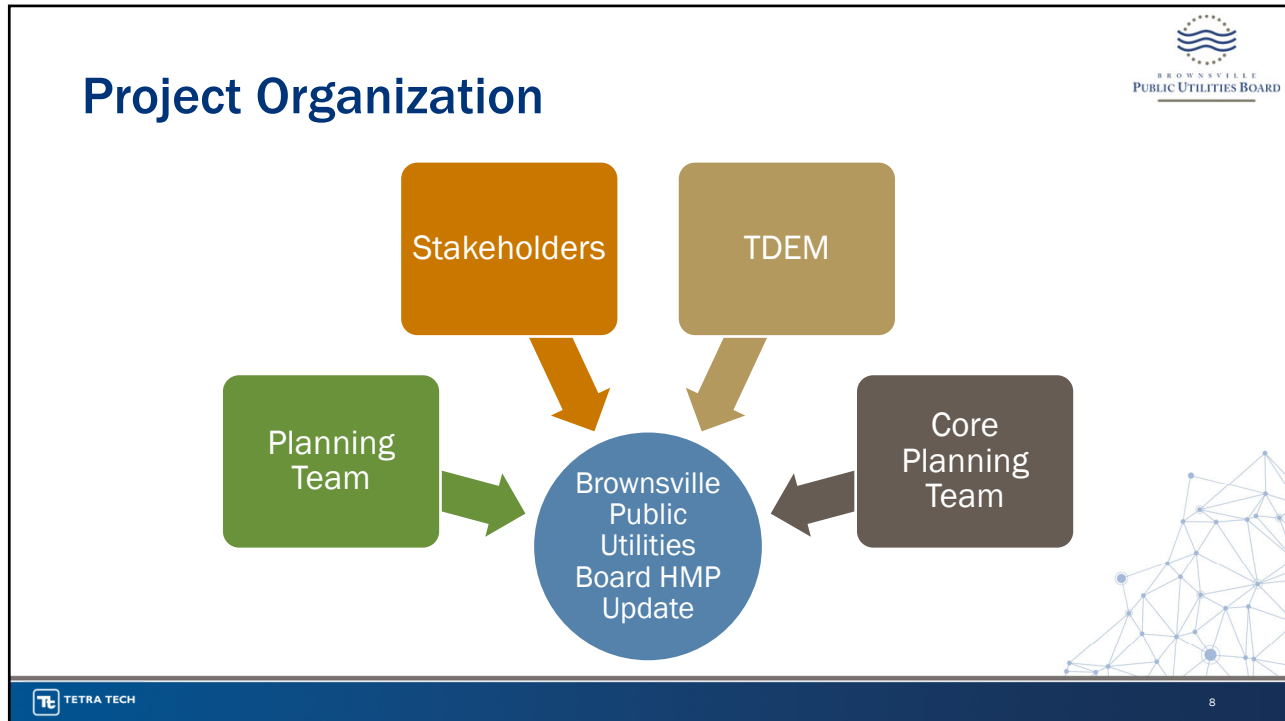
Year of Declaration Date	Declaration Title	Disaster Number
1998	TROPICAL STORM CHARLEY	1239
1999	HURRICANE BRET	1287
2002	SEVERE STORMS, TORNADOES AND FLOODING	1439
2003	LOSS OF THE SPACE SHUTTLE COLUMBIA	3171
2005	HURRICANE KATRINA EVACUATION	3216
	HURRICANE RITA	1606
		3261
2006	EXTREME WILDFIRE THREAT	1624

Year of Declaration Date	Declaration Title	Disaster Number
2007	HURRICANE DEAN	3277
2008	HURRICANE DOLLY	1780
	HURRICANE GUSTAV	3290
	HURRICANE IKE	3294
	WILDFIRES	3284
2010	HURRICANE ALEX	1931
	TROPICAL STORM ALEX	3313
2016	SEVERE STORMS, TORNADOES, STRAIGHT-LINE WINDS, AND...	4245
2018	SEVERE STORMS AND FLOODING	4377
2019	SEVERE STORMS AND FLOODING	4454
2020	COVID-19	3458
	COVID-19 PANDEMIC	4485
	HURRICANE HANNA	3530
	TROPICAL STORMS MARCO AND LAURA	3540

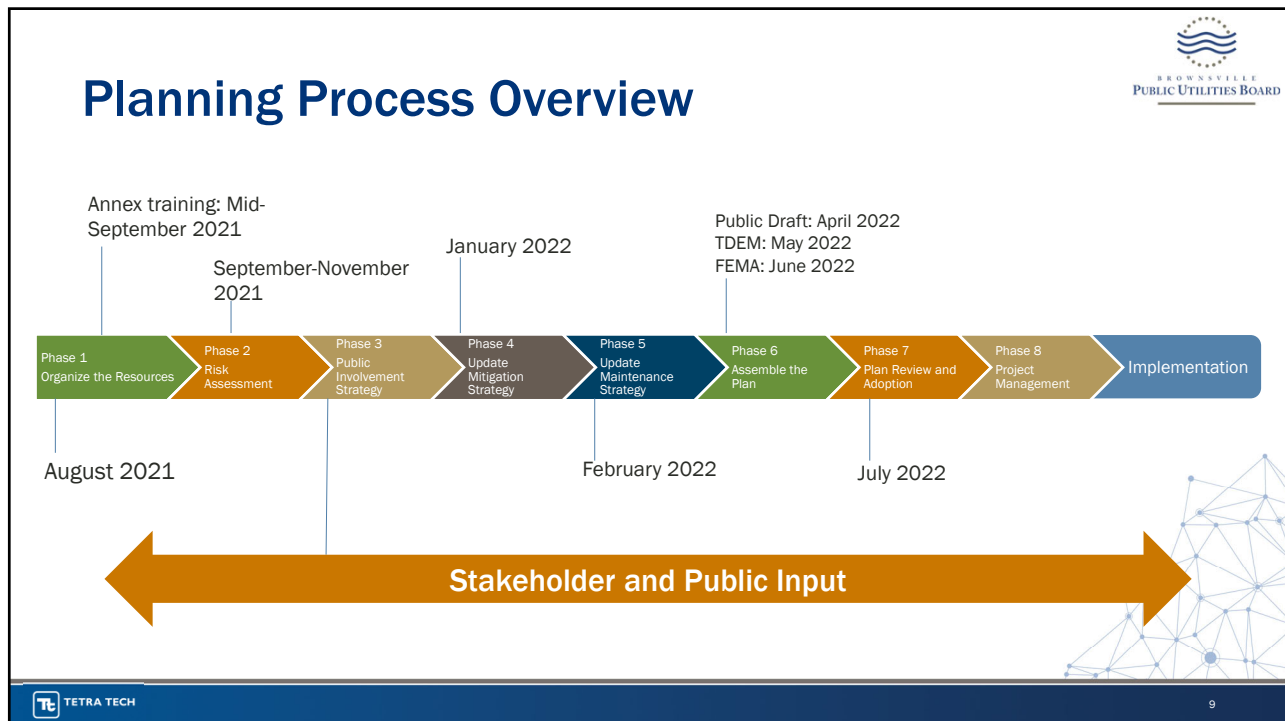
- 15 Hurricane
- 4 Flood
- 4 Severe Storm(s)
- 2 Biological
- 2 Fire
- 2 Freezing
- 1 Other




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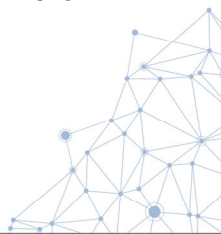


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## Public and Stakeholder Outreach

- We are working on developing a website just for the HMP – once it's up and running, we will send out to everyone
- Social Media – we will provide a series of graphics and text that you can use to help us get the word out about the HMP
- Stakeholder Survey – we will send this to all identified stakeholders to help us get an understanding of how they are involved in hazard mitigation
- Public Survey – this will help us get input and feedback from residents in the area
- Neighboring Community Outreach –
  - Notified of planning process
  - Survey



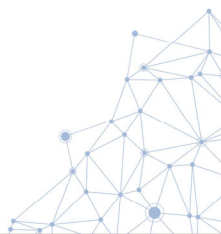
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## Project Scope

- Update the Risk Assessment – what's at risk?
- Update the Capabilities Assessment – what tools do you have in place that integrate hazard mitigation? What do you have available to help your community in the event of a disaster?
- Update the Mitigation Strategy – review and update previous actions; develop new actions
- Update Other Sections of the HMP
- Submit the HMP for Review
- Adopt the HMP
- Implement the HMP



TETRA TECH 11

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BROWNSVILLE  
PUBLIC UTILITIES BOARD

## Update Risk Assessment

- Update assets
- Examine previous impacts
- Analyze risks
- Review with Planning Team
- Risk assessment meeting – November/December 2021



**NATURAL HAZARDS**

- Location
- Extent (Magnitude/Strength)
- Previous Occurrences
- Future Probability

**COMMUNITY ASSETS**


- Population
- Built Environment
- Natural Environment
- Economy

**RISK**



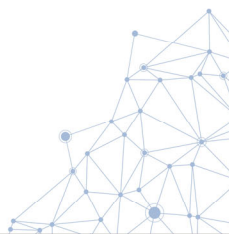
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BROWNSVILLE  
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## 2015 Hazards of Concern

- Dam Failure
- Drought
- Earthquake
- Extreme Heat
- Flood
- Hail
- Hurricane Wind
- Thunderstorm
- Tornado
- Wildfire
- Winter Storm



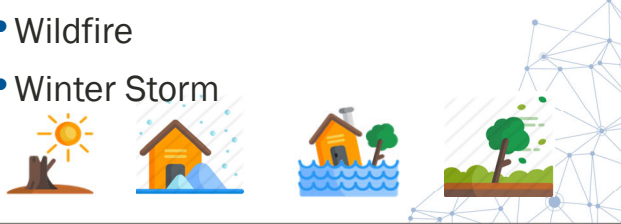
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## Potential 2022 Hazards of Concern

- Dam and **Levee** Failure
- Disease Outbreak
- Drought
- Earthquake
- **Erosion (coastal and inland)**
- Extreme Heat
- Flood (riverine, coastal, flash, stormwater)
- Hail
- Hurricane/Tropical Storm
- Lightning
- Thunderstorm Wind
- Tornado
- Wildfire
- Winter Storm




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## Community Lifelines


- Review 2015 critical facility inventory to ensure complete
- Crosswalk and identify lifelines

***Lifelines** provide indispensable service that enables the continuous operation of **critical business** and **government functions**, and is critical to **human health and safety**, or **economic security***

***Critical Facilities** are those facilities considered critical to the health and welfare of the population and that are especially important following a hazard. As defined for this HMP, critical facilities include essential facilities, transportation systems, lifeline utility systems, high-potential loss facilities, and hazardous material facilities.*

***Essential facilities** are a subset of critical facilities that include those facilities that are important to ensure a full recovery following the occurrence of a hazard event. This category is usually defined to include police, fire, EMS, schools/colleges, shelters, senior facilities, and medical facilities.*



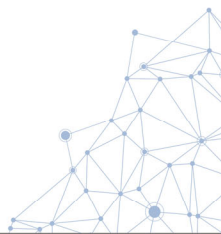

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## Community Lifelines

- To be reviewed:
  - 911 Centers
  - Airport
  - Bridges
  - Churches
  - Communication Towers
  - Community Services
  - Detention Centers
  - Emergency Operation Centers
  - Evacuation Routes
  - Fire Stations
  - Government Buildings
  - Heliports
  - Hospitals
  - Nursing Homes
  - Parks
  - Police Stations
  - Ports
  - Public Works
  - Pump Stations
  - Schools
  - Shelters
  - Utilities
  - Wastewater Treatment Facilities
  - Water District Facilities
  - **Any suggestions?**





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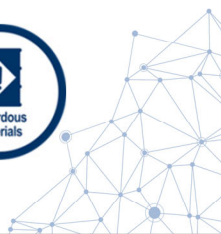
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## Community Lifelines

- What additional facilities and lifelines should we add? Types to consider:
  - Utility locations – substations, pump stations, treatment plants
  - Critical food establishments – food pantries, grocery stores, senior nutrition
  - COVID-19 locations – testing and vaccination sites
  - Others?







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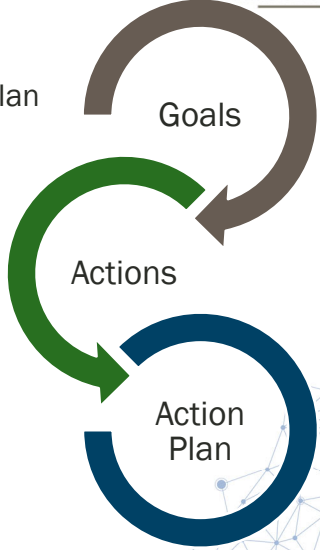
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# Mitigation Strategy

- Review and update the goals and objectives from the last plan
  - What outcomes do you want to achieve?
  - Should we include new goals?
- Determine the status of previous mitigation actions
- Identify new mitigation actions/projects
  - What specific actions will be taken to reduce risk from hazards?
  - Focus on specific, implementable and achievable actions!
- Action Plan
  - How will the actions be prioritized and implemented?





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# Goals and Objectives Review and Update

Goal/ Objective #	2015 HMP Goal Statement	Goal/ Objective #	2015 HMP Goal Statement
<b>1</b>	<b>Protect Public Health and Safety</b>	<b>4</b>	<b>Leverage outside funds for investment in hazard mitigation.</b>
1.1	Maintain critical facilities	4.1	Maximize the use of outside sources of funding.
1.2	Maximize the utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.	4.2	Maximize participation of property owners in protecting their properties.
1.3	Reduce the danger to, and enhance protection of, high risk areas during hazard events.	4.3	Maximize insurance coverage to provide financial protection against hazard event.
1.4	Protect critical facilities and services.	4.4	Prioritize mitigation projects based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.
<b>2</b>	<b>Protect new and existing properties</b>	<b>5</b>	<b>Increase the understanding of residents for the need for mitigation, and steps they can take to protect people and properties.</b>
2.1	Reduce repetitive losses to the National Flood Insurance Program (NFIP).	5.1	Heighten public awareness of the full range of natural and human-made hazards they face.
2.2	Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.	5.2	Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards.
2.3	Enact and enforce regulatory measures to ensure that development will not put people in harm's way or increase threats to existing properties.	5.3	Publicize and encourage the adoption of appropriate hazard mitigation measures.
<b>3</b>	<b>Build and support partnerships to enhance mitigation to continuously become less vulnerable to hazards.</b>	Additional Goals?	<b>Address Long-Term Vulnerabilities from High Hazard Dams</b>
3.1	Build and support local partnerships to continuously become less vulnerable to hazards.		
3.2	Build a cadre of committed volunteers to safeguard the community before, during and after a disaster.		
3.3	Build hazard mitigation concerns into the City of Brownsville and Brownsville Public Utilities Board (BPUB) planning and budgeting processes.		

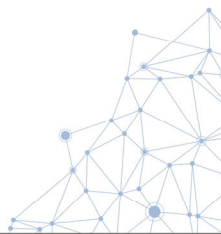

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## Update Other Sections of the HMP

- Community Profile
  - Taking the previous profile from the last plan and updating it accordingly
- Planning Process
  - Documentation of the update process
- Plan Maintenance
  - Incorporation into other plans as well as identifying way to incorporate other plans into the updated HMP
  - Identify a game plan for annually reviewing and updating the HMP



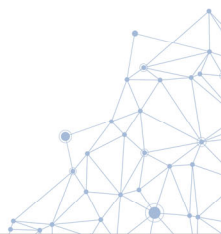
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## Submit the HMP for Review

- Review Draft with Planning Team
- 14-day Public Comment Period
- Conduct Public Meeting to Review the Draft
- Submit for Texas Division of Emergency Management (TDEM) Review
  - 14 to 28 days
- Submit for Federal Emergency Management Agency (FEMA) Review
  - 45 days
- “Approvable Pending Adoption” Status



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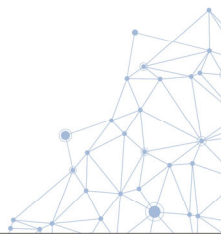


## Adopt the HMP

- Brownsville Public Utilities Board and the City of Brownsville need to adopt the HMP
- Once FEMA approves the plan, adoption can begin
- Adoption deadline – July 2022


## Implement the HMP

- Regular Planning Team meetings
- Implement mitigation actions and projects
  - Integrate actions in other areas of your community where appropriate




TETRA TECH 22

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## Schedule

- Planning Process
  - Planning Team Kick-Off – TODAY!
  - Annex Training – mid-September
- Update Risk Assessment
  - Data collection is underway
  - Begin vulnerability assessment
  - Planning Team Risk Assessment Meeting: November 2021 to confirm hazard ranking and finalize goals
- Public Involvement Strategy – ongoing throughout the planning process



TETRA TECH 23

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## Schedule

- Mitigation Strategy
  - Begin working with the Utilities Board and City in the next two weeks – stay tuned for emails
  - Mitigation Strategy Workshop – February 2022
- Draft Plan to Planning Team in March 2022 (as sections are ready)
- Public Review Period (14 days) – April 2022
- Final draft plan to TDEM by May 2022 and FEMA by June 2022




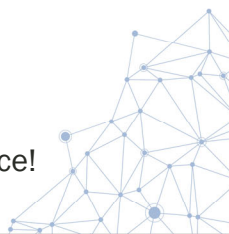
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## Next Steps

- Take online survey to update goals – to be distributed via email
- Take online survey to determine Hazards of Concern to include in the HMP
- Review Hazard Profiles
- Review Risk Assessment Results
- Identify Problems and Problem Areas; develop Mitigation Strategy
- Review Draft Plan
- Submit Draft Plan for TDEM/FEMA Review
- Adopt FEMA-Approved Plan
- Implement Projects and Maintain the Plan  Increase Resilience!



TETRA TECH 25

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Thank You!

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