

7. CITY OF DEER PARK

This jurisdictional annex to the Harris County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) provides information to assist public and private sectors in the City of Deer Park with reducing losses from future hazard events. This annex is not guidance on what to do when a disaster occurs; its focus is on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex presents a general overview of Deer Park, describes who participated in the planning process, assesses Deer Park's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

7.1 HAZARD MITIGATION PLANNING TEAM

The City of Deer Park identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many City departments. The Deer Park Local Mitigation Planning Team represented the community within the Harris County HMP Planning Partnership and Steering Committee, and they also supported the local planning process by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 7-1 summarizes City officials who participated in the development of the annex and in what capacity. Additional documentation of the City's planning activities through Planning Partnership meetings is included in Volume I.

Table 7-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: <i>Jamie Galloway/Emergency Services Director</i> Address: N/A Phone Number: 281-478-7298 Email: <i>jgalloway@deerparktx.org</i>	Name/Title: <i>Buddy Rice/Asst Dir. Emergency Services</i> Address: N/A Phone Number: 281-478-7291 Email: <i>brice@deerparktx.org</i>
National Flood Insurance Program Floodplain Administrator	
Name/Title: <i>Kathy Holcomb</i> Address: 710 E. San Augustine St., Deer Park, TX 77536 Phone Number: 281-478-7239 Email: <i>kholcomb@deerparktx.org</i>	
Additional Contributors	
Name/Title: <i>Dilcia Jimenez / City Engineer</i> Method of Participation: N/A	
Name/Title: <i>David Van Riper / Public Works Director</i> Method of Participation: N/A	
Name/Title: <i>Sara Robinson / Assistant City Manager</i> Method of Participation: N/A	
Name/Title: <i>James Stokes / City Manager</i> Method of Participation: N/A	
Name/Title: <i>James Lewis / IT Director</i> Method of Participation: N/A	

7.2 COMMUNITY PROFILE

7.2.1 Location

The city of Deer Park, Texas is located in southeastern Harris County and is in the highly industrialized ship channel area of the county. It is approximately 22 miles east of downtown Houston. The current boundaries are generally extended by the city of Pasadena, Texas, to the south and west, by the city of La Porte, Texas, to the south and east, and by the Houston Ship Channel (dredged out Buffalo Bayou) to the north. The City was founded by Simeon West in 1892 and was incorporated on December 12, 1948, when the population was 700. According to the U.S. Census, the 2020 population for Deer Park was 34,495, a 7.8 percent increase from the 2010 Census.

Research has shown that some populations are at greater risk from hazard events because of decreased resources or physical abilities. These populations can be more susceptible to hazard events based on a number of factors, including their physical and financial ability to react or respond during a hazard and the location and construction quality of their housing. Data from the 2020 U.S. Census indicates that 6.1 percent of the population is 5 years of age or younger, 16.4 percent is 65 years of age or older, 1.1 percent is non-English speaking, 8.2 percent is below the poverty threshold, and 12.8 percent is considered disabled.

7.2.2 Governing Body Format

The City of Deer Park, Texas is a Home Rule City adopted in December 1960 which provides for a Mayor-Council form of government. The Mayor and six members of Council are elected at large and establish goals and priorities that are executed and implemented through the appointed City Manager. The City Council assumes responsibility for the adoption of this plan; the Office of Emergency Management will oversee its implementation.

7.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Deer Park performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume I describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment for this annex includes analyses of the following:

- Planning and regulatory capabilities
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Classification under various community mitigation programs

- Adaptive capacity to withstand hazard events

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into day-to-day local government operations. As part of the hazard mitigation analysis, planning and /policy documents were reviewed and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. Development of an updated mitigation strategy provided an opportunity for Deer Park to identify opportunities for integrating mitigation concepts into ongoing City procedures.

The plan aims to demonstrate how participating jurisdictions make Substantial Improvement/Substantial Damage (SI/SD) determinations and ensure that property owners obtain necessary permits to bring substantially improved or damaged structures into compliance with floodplain management regulations. To assess current capabilities, a survey was distributed to some participating jurisdictions to gather additional information on their existing floodplain management provisions and local capacity to implement SI/SD requirements. The results of this survey are summarized in Appendix J.

Although some jurisdictions do not currently have the provisions or capacity in place, each recognizes the importance of incorporating SI/SD standards into their local flood damage prevention ordinances. These jurisdictions express their intent to revise their ordinances to include such provisions in the future as part of ongoing efforts to expand capabilities and strengthen compliance with the National Flood Insurance Program (NFIP). Updates will be pursued as opportunities arise—such as through ordinance amendments, comprehensive plan updates, or as funding and staffing resources become available—to ensure consistency with state and federal floodplain management standards.

The City of Deer Park will continue to evaluate opportunities to strengthen floodplain management and emergency response capabilities, as described in Section 7.3.1 to 7.3.7 of this plan.

7.3.1 Planning and Regulatory Capability and Integration

Table 7-2 summarizes the planning and regulatory tools that are available to Deer Park.

Table 7-2. Planning and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
CODES, ORDINANCES, & REGULATIONS				
Building Code	Yes	Code of Ordinances, Chapter 18 Buildings and Building Regulations	<i>Local, State</i>	Planning Development
Zoning/Land Use Code	Yes	Code of Ordinances, Appendix A Zoning	<i>Local</i>	Planning Development
Subdivision Code	Yes	Code of Ordinances, Chapter 98 Subdivisions	<i>Local</i>	Planning Development

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Site Plan Code	Yes	Code of Ordinances, Chapter 106 Utilities, Chapter 98 Subdivisions and Appendix A Zoning	<i>Local</i>	Engineering
Stormwater Management Code	Yes	Code of Ordinances, Chapter 106 Utilities	<i>Local</i>	Engineering
Post-Disaster Recovery/ Reconstruction Code	Yes	Code of Ordinances, Chapter 18 Buildings and Building Regulations Division 3 Disaster Recovery Contractors	<i>Local</i>	Planning Development
Real Estate Disclosure Requirements	No	N/A	N/A	N/A
Growth Management	Yes	Code of Ordinances, Chapter 98 Subdivisions and Chapter 102 Taxation	<i>Local</i>	Planning Development
Environmental Protection Ordinance(s)	Yes	Code of Ordinances, Chapter 106 Utilities, Chapter 18 Buildings and Building Requirements and Appendix A Zoning	<i>Local</i>	Planning Development
Flood Damage Prevention Ordinance	Yes	Code of Ordinances, Chapter 46 Floods, Chapter 98 Subdivisions and Chapter 18 Buildings and Building Regulations	<i>Local</i>	Engineering, FPM
Wellhead Protection	No	N/A	N/A	N/A
Emergency Management Ordinance	Yes	City Ordinance #2929 dated November 4, 2003	<i>Local</i>	OEM
Climate Change Ordinance	No	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A
PLANNING DOCUMENTS				
General/Comprehensive Plan	Yes	Comprehensive Plan	<i>Local</i>	Planning Development
Capital Improvement Plan	Yes	Annual during the budget process	N/A	Citywide
Disaster Debris Management Plan	Yes	Contracts are reviewed annually and the contracts are renewed every 5 years	<i>Local</i>	OEM, PW
Floodplain Management or Watershed Plan	Yes	Code of Ordinances, Chapter 46 Floods	<i>Local</i>	Engineering, FPM
Stormwater Management Plan	Yes	Code of Ordinances, Chapter 106 Utilities	<i>Local</i>	Engineering
Stormwater Pollution Prevention Plan	Yes	Code of Ordinances, Chapter 106 Utilities	Local	Engineering, PW
Open Space Plan	No	N/A	N/A	N/A

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Urban Water Management Plan	No	N/A	N/A	N/A
Habitat Conservation Plan	No	N/A	N/A	N/A
Economic Development Plan	N/A	N/A	N/A	N/A
Community Wildfire Protection Plan	No	N/A	N/A	N/A
Community Forest Management Plan	No	N/A	N/A	N/A
Transportation Plan	No	N/A	N/A	N/A
Agriculture Plan	No	N/A	N/A	N/A
Climate Action/Resilience/Sustainability Plan	No	N/A	N/A	N/A
Tourism Plan	No	N/A	N/A	N/A
Business/ Downtown Development Plan	No	N/A	N/A	N/A
Other:	N/A	N/A	N/A	N/A
RESPONSE/RECOVERY PLANNING				
Emergency Operations Plan	Yes	2022	Local	OEM
Continuity of Operations Plan	Yes	N/A	Local	Citywide
Substantial Damage Response Plan	No	N/A	N/A	N/A
Threat and Hazard Identification and Risk Assessment	Yes	2017	County	HCOHSEM
Post-Disaster Recovery Plan	No	N/A	N/A	N/A
Public Health Plan	Yes	Annex H – Health and Medical of the Emergency Operations Plan	County	HCPH
Other:	N/A	N/A	N/A	N/A

7.3.2 Development and Permitting Capability

Table 7-3 summarizes the capabilities of Deer Park to oversee and track development.

Table 7-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits?	Yes	Planning Development
- If you issue development permits, what department is responsible? - If you do not issue development permits, what is your process for tracking new development?		
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Planning Development
Do you have a buildable land inventory?	Yes	N/A
If you have a buildable land inventory, please describe		
Describe the level of buildout in your jurisdiction.	N/A	90%

7.3.3 Administrative and Technical Capability

Table 7-4 summarizes potential staff and personnel resources available to Deer Park and their current responsibilities that contribute to hazard mitigation.

Table 7-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	Staff Planning Development
Zoning Board of Adjustment	Yes	Planning Development
Planning Department	Yes	Planning Development
Mitigation Planning Committee	Yes	OEM, Engineering, FPM, Planning Development
Environmental Board/Commission	No	N/A
Open Space Board/Committee	No	N/A
Economic Development Commission/Committee	Yes	Deer Park EDC
Public Works/Highway Department	Yes	PW, Planning Development, Engineering
Construction/Building/Code Enforcement Department	Yes	Planning Development
Emergency Management/Public Safety Department	Yes	Maintain EOP, EOC
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Planning Development
Mutual aid agreements	Yes	Citywide
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	HR

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	Yes	Available staff
Engineers or professionals trained in building or infrastructure construction practices	Yes	Available staff
Planners or engineers with an understanding of natural hazards	Yes	Available staff
Staff with expertise or training in benefit/cost analysis	Yes	Available staff
Professionals trained in conducting damage assessments	Yes	Available staff
Personnel skilled or trained in GIS and/or Hazus applications	Yes	Available staff
Staff that work with socially vulnerable populations or underserved communities	No	N/A
Environmental scientists familiar with natural hazards	No	Consultants
Surveyors	Yes	Available
Emergency manager	Yes	EMC
Grant writers	Yes	Staff, Consultants
Resilience Officer	No	
Other (this could include stormwater engineer, environmental specialist, etc.)	No	N/A

7.3.4 Fiscal Capability

Table 7-5 summarizes financial resources available to Deer Park.

Table 7-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open Space Acquisition funding programs	No

7.3.5 Education and Outreach Capability

Table 7-6 summarizes the education and outreach resources available to Deer Park.

Table 7-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	N/A
Personnel skilled or trained in website development	Yes	N/A
Hazard mitigation information available on your website	Yes	N/A
Social media for hazard mitigation education and outreach	Yes	N/A
Citizen boards or commissions that address issues related to hazard mitigation	No	N/A
Warning systems for hazard events	Yes	N/A
Natural disaster/safety programs in place for schools	Yes	N/A
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	N/A
Public outreach mechanisms/programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	Yes	Meetings of Community Partners

7.3.6 Community Classifications

Table 7-7 summarizes classifications for community programs available to Deer Park.

Table 7-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	Yes	6	05/01/2017
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	02/24/2010
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	2	2016
National Weather Service StormReady Certification	Yes	N/A	2022
Firewise Communities classification	No	N/A	N/A
Other: Organizations with mitigation focus (advocacy group, non-government)	N/A	N/A	N/A

N/A = Not applicable

7.3.7 Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 7-8 summarizes the adaptive capacity for each identified hazard of concern and the City’s capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement

Table 7-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Coastal Erosion	Weak
Dam/Levee Failure	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Cold	Strong
Extreme Heat	Strong
Flooding	Moderate
Hurricanes, Coastal Storms	Strong
Mass Movement	Weak
Severe Weather	Strong
Tsunami	Weak
Wildfire	Moderate
Energy Pipeline Failure	Strong
Public Health Emergency	Moderate
Technology Failure	Weak
Toxic Release/HazMat	Weak
Utility Failure	Moderate

7.3.8 Integration With Other Planning Initiatives

The City of Deer Park incorporates its hazard mitigation strategy directly into its local planning, regulatory, and fiscal frameworks to ensure mitigation principles are embedded across municipal operations and decision-making processes.

Integration into Local Plans and Ordinances

Deer Park has a robust framework of codes and ordinances that already reflect hazard mitigation considerations. The City Code of Ordinances includes chapters addressing building codes, floodplain management (Chapter 46), stormwater management (Chapter 106), and subdivisions (Chapter 98), all of which serve as vehicles for integrating mitigation priorities. The city's Comprehensive Plan, Capital Improvement Plan, and Disaster Debris Management Plan are regularly updated with mitigation objectives—such as land-use policies that minimize flood risk, and infrastructure design standards that improve resilience.

The city's Flood Damage Prevention Ordinance (Ordinance No. 4380, amended January 2017) ensures compliance with NFIP standards and exceeds minimum requirements through freeboard elevations above the 100-year flood level. Deer Park's ordinance updates are opportunities to incorporate newly identified mitigation actions, ensuring consistent integration into zoning, subdivision, and site plan reviews.

Incorporation into Daily Operations and Development Review

Hazard mitigation principles are routinely applied through the Planning and Development Department, which reviews all new development for hazard exposure and compliance with floodplain standards. The city tracks development permits within hazard-prone areas and maintains GIS-based flood risk mapping tools to inform decision-making. Staff in planning, engineering, and emergency management collaborate to ensure that mitigation actions identified in the HMP are reflected in project design and review processes.

The city's Mitigation Planning Committee—comprised of representatives from OEM, Engineering, Floodplain Management, and Planning—oversees integration of mitigation projects into annual work plans, budget priorities, and grant applications.

Fiscal and Administrative Integration

Deer Park leverages multiple funding sources—CDBG, capital improvement funds, and general obligation bonds—to support hazard mitigation projects. This fiscal capability allows the city to prioritize drainage improvements, facility retrofits, and infrastructure hardening as part of its broader public works investments.

Mitigation planning is also integrated into the budget process, during which the City Council and City Manager evaluate capital projects that address flood risk reduction, critical facility resilience, and energy reliability.

Implementation and Coordination

The Office of Emergency Management (OEM) is responsible for coordinating implementation of mitigation actions across departments. OEM ensures alignment between the HMP and emergency operations planning, NFIP compliance, and the City's participation in the Community Rating System (CRS), where Deer Park currently holds a Class 6 rating.

Through ongoing coordination with Harris County Flood Control District, TCEQ, and FEMA, Deer Park continues to integrate hazard data, Risk MAP updates, and climate-informed flood projections into its planning and permitting systems.

Continued Integration and Maintenance

Deer Park maintains an ongoing commitment to HMP implementation through Action DP_2, which institutionalizes the process of integrating mitigation measures into ordinances and city projects. This effort is considered an "Ongoing Capability"—indicating that integration occurs continually through ordinance updates, infrastructure improvements, and comprehensive plan amendments.

Future updates to the city’s Comprehensive Plan, stormwater and drainage ordinances, and capital planning documents will explicitly reference the HMP, ensuring that hazard reduction goals are formally embedded into all long-range and operational frameworks.

7.4 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 7-1 is responsible for maintaining this information.

7.4.1 NFIP Statistics

Table 7-9 summarizes the NFIP policy and claim statistics for Deer Park.

Table 7-9. Deer Park NFIP Summary of Policy and Claim Statistics

# Policies	3,238
# Claims (Losses)	2,821
Total Loss Payments	\$84,618,526.87
# Repetitive Loss Properties (NFIP definition)	42
# Repetitive Loss Properties (FMA definition)	38
# Severe Repetitive Loss Properties	6
# Policies Within the 1% Annual Chance Flood Boundary	N/A

NFIP Definition of Repetitive Loss: The NFIP defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978.

FMA Definition of Repetitive Loss: FEMA’s Flood Mitigation Assistance (FMA) program defines a repetitive loss property as any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

Definition of Severe Repetitive Loss: A residential property covered under an NFIP flood insurance policy and: (a) That has at least four NFIP claim payments over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or (b) For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. At least two of the claims must have occurred within any 10-year period, more than 10 days apart.

Source: Harris County Flood Control District 2025

7.4.2 Flood Vulnerability Summary

Table 7-10 provides a summary of the NFIP program in Deer Park.

Table 7-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Areas near our two bayous are the most prone to flooding. That would be Boggy Bayou and Patrick's Bayou.
Do you maintain a list of properties that have been damaged by flooding?	Not a list, but we do have an AutoCad map that designates the homes we know have experienced flooding.
Do you maintain a list of property owners interested in flood mitigation?	We would if we received any enquiries.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	There have been no enquiries.
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	On January 4, 2022 Harris County Commissioner's Court voted to approve interlocal participation agreement 2022-50 between Harris County Flood Control and the City of Deer Park. Harris County Flood Control will be taking the lead on this project due to the possibility of right-of-way and easement acquisition. The project will address flooding problems identified within the College Park subdivision, which has reported repetitive flood losses in several homes from separate rainfall events. The project will also include storm sewer system improvements, new detention basin and will provide the minimum 2-year conveyance capacity as well as alleviate structural flooding in the 100- year rainfall event. Along with the drainage improvements, the associated streets, sanitary sewer lines, and sidewalks will be reconstructed. Deer Park's participation equates to 49% or \$3,245,352 of the estimated \$6,598,231 design and construction cost.
How do you make Substantial Damage determinations?	We have not experienced any Substantially Damaged homes or businesses within the SFHA
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	N/A
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	There have been 2 homes in Deer Park that had their homes demolished and rebuilt at a higher elevation. However, the City was not involved in this other than issuing the building permit. The homeowners applied for and received funding from Hurricane Harvey Recovery Funds. Neither home was located within the SFHA
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	No, the current ones do not. Most of the documented flooding within our city limits, has taken place outside the SFHA. However, the County is currently working with FEMA to have new flood maps issued that will better reflect flood risk within Deer Park.
NFIP Compliance	
What local department is responsible for floodplain management?	The City's Planning & Development Department.
Are any certified floodplain managers on staff in your jurisdiction?	Yes, we have two on staff.
Do you have access to resources to determine possible future flooding conditions from climate change?	No

NFIP Topic	Comments
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, both floodplain managers have just recently received their CFM and do not have the experience to fill 100% confident. They along with others in the department would love additional training
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Planning & Development Department reviews all building plans and, if approved, will issue the building permit.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	We would look at the market value of the existing structure and if the proposed improvement is valued at 50% or more of the market value of the existing structure it would be determined as a Substantial Improvement.
What are the barriers to running an effective NFIP program in the community, if any?	Having all staff fully understand the importance of the program.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	2021 was out list CAV.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 46 of the Deer Park Code of Ordinances. (Ordinance No. 4380)
What is the date that your flood damage prevention ordinance was last amended?	January 2017
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Exceeds, due to our free-board requirements. We require the lowest floor be elevated to the 500-hundred-year water surface elevation or two feet above the center line of the street or one-foot above the BFE, WHICHEVER IS HIGHER.
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	No
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	We currently have a CRS score of 6, but we are always interested in improving our score.

7.5 GROWTH/DEVELOPMENT TRENDS

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Recent and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table 7-11 through Table 7-13.

Table 7-11. Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
2020				
Total Permits	19	1	10	30
Permits within SFHA	0	0	4	4
2021				
Total Permits	16	0	7	23
Permits within SFHA	0	0	2	2
2022				
Total Permits	9	0	17	26
Permits within SFHA	0	0	5	5
2023				
Total Permits	28	0	6	34
Permits within SFHA	0	0	2	2
2024				
Total Permits	8	0	10	18
Permits within SFHA	0	0	3	3

SFHA = Special Flood Hazard Area (1% flood event)

Table 7-12. Recent Major Development and Infrastructure from 2020 to Present

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
Future Offices	Commercial	1	2830 E Pasadena	0	N/A
CICB	Commercial	1	1700 S Battleground	0	N/A
Fire Training Facility	Commercial	1	102 Luella Ave #B	0	N/A
Fire Station # 1	Commercial	1	801 W 13th Street	0	N/A

* Only location-specific hazard zones or vulnerabilities identified.

Table 7-13. Known or Anticipated Major Development and Infrastructure in Next 5 Years

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
Municipal Courthouse	Commercial	1	501 W 13th St	0	N/A
Jimmy Burke Activity Center	Commercial	2	501 W 13th St	0	N/A
Community Center & Pool House	Commercial	2	610 E San Augustine	0	N/A

7.6 JURISDICTIONAL RISK ASSESSMENT

The hazard profiles in Volume I provide detailed information regarding each planning partner's vulnerability to the identified hazards, including summaries of Deer Park's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

7.6.1 Hazard Event History

The history of natural and non-natural hazard events in Deer Park is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 7-14 provides details on loss and damage in Deer Park during hazard events since the last hazard mitigation plan update.

Table 7-14. Hazard Event History in Deer Park

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
1/10/2020	- Thunderstorm - Wind	No	A strong storm system produced a squall line that moved eastward across the area and produced a lot of wind damage and one tornado.	N/A
1/20/2020 – 5/11/2023	Biological (DR-4485; EM-3458)	No	COVID-19	Stay at home orders, Municipal & school closures as well as businesses
3/11/2020	Biological	Yes	Public Health Emergency – local disaster declared as COVID-19 swept the region.	Stay at home orders, Municipal & school closures as well as businesses
4/18/2020	Hail	No	Large discrete severe thunderstorms formed in the vicinity of an inland advancing warm frontal boundary. Golf ball to baseball size hailstones were reported around Houston and over north Lake Livingston and points southwestward.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
5/15/2020	Flash Flood	No	An upper low helped trigger scattered, slow-moving thunderstorms within an unstable, warm, and very moist air mass. Flooding was reported in southeastern Harris County from the Pasadena and Deer Park areas down into El Lago and Seabrook. 60 to 80 apartments near the Shaver Street and East Edgebrook Drive intersection were flooded with about one to two inches of water. There was high water and stranded vehicles at Spencer Highway and Beltway 8. Web cameras showed floodwater inundation on State Highway 225 near Richey Street. Local media were showing pictures of flooded roads in the El Lago and Seabrook areas. Property damages are estimated to be \$100,000.	Street flooding
5/27/2020	Tornado	No	Severe thunderstorms developed and produced wind damage, hail, and a few tornadoes. Damage along a short NW-to-SE track parallel to Red Bluff Road. An eyewitness saw a tornado. Numerous trees were down, plus damage to fences & carports. The tornado received an EF-0 rating and produced an estimated \$30,000 in property damage	N/A
5/6/2020 – 2/18/2020	Drought (USDAS4669)	Yes	N/A	N/A
7/25/2020 – 7/31/2020	Hurricane (EM-3530)	No	Hurricane Hanna made landfall in southern TX as a Category 1 hurricane. Moderate to minor coastal flooding of 1 to 3 feet above ground level occurred along the Texas coastal bend.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
8/23/2020 – 8/27/2020	Hurricane (EM-3540)	No	Hurricane Laura made landfall along the southwest Louisiana coast. The hurricane brought high surf, elevated tides, and some winds and wind gusts to tropical storm force along the SE Texas coast. There were no measured sustained winds to tropical storm force at land observation sites and very little rainfall. The period of storm surge flooding and high surf from 8/26 to 8/27 led to flooding of low-lying areas and roads. Beach erosion. Tide gauges measured tides 3 to 4 feet above MHHW. Minor flooding around Seabrook, Nassau Bay, and other coastal communities around Galveston Bay.	Cat B \$142000
9/21/2020	- Storm Surge - Flash Flood - Flood	No	Tropical Storm Beta made landfall near Matagorda Bay on September 21. As the system pushed slowly inland, portions of SE Texas experienced flash flooding from heavy rain bands, storm surge, and some strong wind gusts. Storm surge was enhanced by the long fetch of northeast winds over the Gulf behind a cold front. 20 to 25 homes were damaged by high water along portions of Clear Creek and Lower Brays Bayous. Total property damage estimates reached \$900,000 across Harris County.	N/A
2021	Technology Failure	No	Harris County ransomware attack – a cyberattack targeted county systems, affecting operations and requiring extensive recovery efforts	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
2/11/2021 – 2/21/2021	- Severe Ice Storm - Power Failure - Extreme Cold - Technology Failure - Utility Failure (DR-4586; EM-3554)	No	Record cold and windy conditions gripped Southeast Texas behind the passage of an Arctic front. Very cold air and gusty winds overspread SE Texas behind an Arctic front with wind chill indices from near zero to single digits for much of the period from Sunday night to Tuesday morning. The extreme cold and increased demand led to widespread power outages for many and loss of heat for many, which led to the bursting of pipes. At its peak, 4.5 million homes and businesses were without power (and internet) for several days. Numerous fatalities resulted from hypothermia, carbon monoxide poisoning, and other effects. More than 200 lives were lost in TX, 66 in Harris County alone. Property damage estimates reached \$33,700,000, while the economic impacts were estimated to be as high as \$295 billion.	\$1,000,000 of denied FEMA assistance. Minor debris issue. Damage to water systems and residential plumbing
5/18/2021	Thunderstorm Wind, Lightning	No	Showers and thunderstorms moved across the area in the evening through late night hours and produced wind damage, lightning damage, flooding, as well as widespread reports of downed trees. Lightning struck and set fire to an empty apartment unit near the intersection of Westview Drive and Caywood Lane in the Spring Branch East area.	N/A
July 2021	Toxic Release/HazMat	No	A fire at an industrial facility led to air quality warnings and temporary evacuations	N/A
December 2021	Toxic Release/HazMat	No	An explosion at the ExxonMobil refinery in Baytown injured multiple people and caused temporary air pollution concerns.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
1/8/2022	- Tornado - Flash Flood	No	Scattered thunderstorms associated with the approach of an offshore low-pressure system produced several tornadoes on the evening of January 8 and the early morning of January 9. These tornadoes resulted in several instances of property and tree damage across the Greater Houston Area. Some non-tornadic storms also produced strong, damaging wind gusts. Later, heavy rainfall associated with continuing thunderstorm activity resulted in flash flooding across the Houston Metro. This brief EF0 tornado occurred near IAH. It tracked across JFK Blvd and did some minor damage to a few structures, including a hotel and knocked over a few trees. Video showed the tornado crossing San Houston Parkway. A second EF0 tornado near Spring Branch caused mostly intermittent EF0 damage along a one-mile path. There was a small area of EF1-rated damage at the start of the path, with a brick facade on a multi-story office building failing and nearby tree trunks snapped. Two other tornadoes, both EF1, produced \$500,000 in damages across the Humble and Moonshine Hill areas.	N/A
3/15/2022 – N/A	Drought (USDA S5188)	Yes	N/A	N/A
4/5/2022 – N/A	Drought (USDA S5209)	Yes	N/A	N/A
4/12/2022 – N/A	Drought (USDA S5214)	Yes	N/A	N/A
5/1/2022 – 9/30/2022	Excessive Heat (USDA S5350)	Yes	N/A	N/A
5/10/2022 – N/A	Drought (USDA S5197)	Yes	N/A	N/A
6/14/2022 – N/A	Drought (USDA S5221)	Yes	N/A	N/A
7/19/2022 – N/A	Drought (USDA S5240)	Yes	N/A	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
8/2/2022 – N/A	Drought (USDA S5252)	Yes	N/A	N/A
8/10/2022	- Lightning - Thunderstorm - Wind	No	Showers and thunderstorms moved southward across the area, producing wind damage and lightning strikes. One man injured after being struck by lightning in an office parking lot. Elsewhere, wind damage totaled \$50,000, mainly across the Katy, TX area.	N/A
12/2022	Technology Failure	No	In December 2022, Southwest Airlines experienced a major technology failure, resulting in over 16,000 flight cancellations and stranding millions of passengers due to issues with their outdated crew scheduling and flight operations systems. This technology failure impacted flights at Houston airports, demonstrating the vulnerability in transportation systems.	N/A
1/24/2023	Tornado	No	This EF3 tornado touched down near El Franco Lee Park east of Brookside Village. The path of damage extended east northeast, then northeast from there, across portions of Southeast Houston, Pasadena, Deer Park and Baytown. Most of the damage was rated EF0 and EF1 with damage to trees, fences and minor roof damage, but there were some spots with more severe damage, rated EF2. These included the Beamer apartments in Southeast Houston, a few homes in Pasadena, a church in Deer Park near Center Street and East P Street, and a single-family home with roof and some walls removed near the intersection of East X Street and Luella. From an aerial survey, there were three high-tension electrical towers flattened northeast of Deer Park near the Houston Ship Channel with EF3 damage. From there, the damage path entered Baytown, north of the Ship Channel.	8 homes destroyed, 28 major damage. 42000 CYOF debris, SBA declaration. DPISD and City office closed due to power outages for a week. Loss of business revenue.

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
			In Baytown, there was a mobile home and a single-family home destroyed along Weaver Street near Bayway. Damage became more spotty and less intense northeast from there with spotty damage as far north as TX 330 Spur. Aerial surveys indicated some minor roof damage to the Exxon building south of West Baker Street. Damage continued up to Interstate 10 where down power lines were observed. No damage was indicated north of Interstate 10.	
			The tornado tracked more than 23 miles across Pearland and SE Houston, producing \$6.6 million in property damages. 1.75" diameter hail stones accompanied the tornadoes and severe storms.	
4/5/2023	Hail	No	Early evening severe thunderstorms produced numerous reports of large hail, including 2.00" hailstones at I-10 and Fry Road.	N/A
5/5/2023	Toxic Release / HazMat	No	On Friday, May 5, 2023, a fire erupted at Shell's Deer Park Chemicals facility, specifically in the olefins unit, and reignited after being initially extinguished, burning for nearly 72 hours and causing a large plume of smoke. This was the sixth chemical fire of 2023.	SIP less than 2 hours
5/8/2023	- Thunderstorm - Wind - Flash Flood - Hail	No	A cluster of severe thunderstorms moved across the area and produced hail, damaging winds and flash flooding. Law enforcement reported that a tree fell on a vehicle near the intersection of East Cypresswood Dr and Whitewood Dr. One fatality was reported.	N/A
6/23/2023	Hail	No	Early to mid-evening thunderstorms produced numerous reports of large hail, including egg-sized hail	N/A
8/15/2023 – N/A	Drought (USDA S5499)	Yes	N/A	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Deer Park
8/22/2023 – N/A	Drought (USDA S5683)	Yes	N/A	N/A
4/26/2024 – 6/5/2024	Flood (DR-4781)	No	Severe weather, including large hail, damaging winds, heavy rainfall, and flash flooding, impacted the state from April 26-June 5	N/A
5/2/2024	Severe Weather & Flooding	Yes	Beginning April 30, 2024, Harris County suffered widespread or severe damage, injury, or loss of life or property resulting from severe weather and flooding due to heavy rain	N/A
5/16/2024	- Severe Weather - Tornadoes - Strong Wind - Hail - Flooding (DR-4781)	Yes	Beginning May 16, 2024, Harris County suffered widespread or severe damage, injury, or loss of life or property resulting from severe weather, including tornadoes, strong wind, hail, and flooding due to heavy rain.	N/A
7/5/2024 – 7/9/2024	Hurricane (DR-4798)	Yes	County disaster declaration issues due to widespread or severe damage from Hurricane Beryl, which brought severe weather (including heavy rain, flooding, tornadoes, high winds, and hail) to Harris County.	Debris 39000CY, Power outages for a week. \$1,4 million FEMA Claims. Minor damages to homes throughout the city.
10/10/24	Chemical Release	No	Pemex Deer Park Refinery, working on wrong valve released H2S resulting in the death of 2 workers. Air Monitoring activated and SIP issued for Deer Park & Pasadena for 2.5 hours.	Hwy 225, roadways in Deer Park

EM = Emergency Declaration (FEMA)

FEMA = Federal Emergency Management Agency

DR = Major Disaster Declaration (FEMA)

N/A = Not applicable

Sources: (USDA 2025); (FEMA 2025);

7.6.2 Hazard Ranking and Vulnerabilities

The hazard profiles in Volume I have detailed information regarding each planning partner's vulnerability to the identified hazards. The following presents key risk assessment results for Deer Park.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its own degree of risk to each hazard. The community-specific hazard ranking is based on problems and impacts identified by the risk assessment presented in Volume I. The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; community capabilities to address the hazard; and changing future climate conditions. Deer Park reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the City indicated the following:

- None Identified

Table 7-15 shows Deer Park's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 7-15. Hazard Ranking

Hazard	Rank
Coastal Erosion	Medium
Dam/Levee Failure	Low
Drought	Low
Earthquake	Low
Extreme Cold	Medium
Extreme Heat	Medium
Flooding	High
Hurricanes, Coastal Storms	High
Mass Movement	Low
Severe Weather	High
Tsunami	Low
Wildfire	Medium
Energy Pipeline Failure	Medium
Public Health Emergency	Medium
Technology Failure	High
Toxic Release / Hazardous Materials	High
Utility Failure	Medium

Note: Based on hazard rankings shown in Volume I, modified as appropriate based on review by the jurisdiction

Critical Facilities

Table 7-16 identifies critical facilities in the community located in the 1 percent annual chance floodplain. No high hazard dams are located in Deer Park.

Table 7-16. Critical Facilities Flood Vulnerability

Name	Count	Vulnerability
		1% Annual Chance Event
Communications	6	1.8%
Energy	0	0%
Food, Hydration, Shelter	0	0%
Hazardous Materials	9	2.7%
Health and Medical	0	0%
Safety and Security	1	.3%
Transportation	10	3%
Water Systems	6	1.8%
Other Critical Facilities	1	.3%

Source: ATLAS 2022; BTS/USDOT 2023; CIMA 2024; City of La Porte 2025; City of Seabrook 2025; FleetCor 2024; Harris County 2020, 2024; Harris County Office of Emergency Management 2022-2025; Harris County Public Library, HCUS 2020, HCPCS 2024, HIFLD 2021-2024; METRO 2024; NPMS 2024; SETRAC 2024; TCEQ 2023-2024; Regional Catastrophic Preparedness Grant Program 2023; DSHS 2024; TEA 2023; THC 2023; USACE 2024; FEMA 2016, 2018, 2019

7.6.3 Identified Issues

After review of Deer Park’s hazard event history, hazard rankings, hazard location, and current capabilities, Deer Park identified the following vulnerabilities within the community:

- None Identified

7.7 MITIGATION STRATEGY AND PRIORITIZATION

This section discusses the status of mitigation actions from the previous HMP, describes proposed hazard mitigation actions, and prioritizes actions to address over the next five years.

7.7.1 Past Mitigation Action Status

Table 7-17 indicates progress on the City’s mitigation strategy identified in the 2020 MJ HMP. Actions that are still recommended but not completed or that are in progress are carried forward and combined with new actions as part of the mitigation strategy for this plan update. Previous actions that are now ongoing programs and capabilities are indicated as such and are presented in the capability assessment earlier in this annex.

Table 7-17. Status of Previous Mitigation Actions

DP_1: 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

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>City Administration</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Previous structure removed for construction of detention ponds. Lambuth, Pasadena Blvd and San Jac Elem. Flooding of homes. Property acquired, detention pond built Pasadena Blvd.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_2: Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the City of Deer Park

Hazards Addressed	<i>Drought, Flood, Wildfire, Hazardous Materials</i>
Responsible Party	<i>City Administration</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	Plan integrated with new city construction projects, ordinance updates and planning.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_3: Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan

Hazards Addressed	<i>Drought, Flood, Hurricane, Hazardous Materials, Severe Weather, Coastal Storm</i>
Responsible Party	<i>City Administration</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	Review MAP. Annual updates to MAP.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_4: 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.

Hazards Addressed	<i>Flood</i>
Responsible Party	<i>City Administration</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	MapNext update. Update mapping and Flood plain Ordinance
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_5: Adopt a City Ordinance to require emergency power generation for fueling stations during new construction

Hazards Addressed	<i>Flood, Hurricane, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	No Progress
Narrative describing progress or obstacles that have prevented implementation	N/A
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	Held over item that is no longer feasible.

DP_6: Retrofit critical infrastructure/public buildings/facilities with generator power systems

Hazards Addressed	<i>Flood, Hurricane, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	Add emergency power systems to new construction and retrofit as needed. Install fixed generators on city facilities and lift stations.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_7: Install Alertus (mass notification) early warning systems for public buildings

Hazards Addressed	<i>All Natural Hazards, Severe Weather, Tornado</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Updated warning system in city buildings & DPISD
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	Currently use Alertus through the City of Pasadena system.

DP_8: Install new lightning warning systems at outdoor sporting venues, trail systems and golf course

Hazards Addressed	<i>Lightning, Severe Weather</i>
Responsible Party	<i>Parks</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	Enrolled in National Weather Systems that provide alerts to sports facilities. PARD researching system to provide lightning warnings to facilities.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_9: Update drainage ordinance to require detention future development and redevelopment for detention and within the AO (sheet flow) zones

Hazards Addressed	<i>Flood, Hurricane</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Ordinance updated December 2020. Maps updated
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Update drainage ordinance and plan
If discontinue, explain why	N/A

DP_10: Improvement to drainage channels within the city limits. Will be a multi-jurisdictional project

Hazards Addressed	<i>Flood,</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	Boggy Bayou study with HCFCF issues.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_11: Identify flood prone properties and create detention ponds

Hazards Addressed	<i>Flood</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	The City has several of these projects in development. Tied to DP1 detention ponds constructed
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_12: Retrofit and harden critical infrastructure and/or shelters with impact and wind resistant glass and shutter systems to withstand effects of Hurricane, Hail and high-winds

Hazards Addressed	<i>Hurricane, Severe Weather, Tornado</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	There are several ongoing projects that will result in the hardening of the structures. All new facility construction to meet 141 mph winds
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_13: Protect VHF Radio System and other emergency communications infrastructure components through hardening and protective structures. New facility construction meet wind load of 140 mph.

Hazards Addressed	<i>Flood, Hurricane, Wildfire, Severe Weather, Tornado</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	New construction of city facilities requiring radio towers will meet wind design per engineering. All new facilities and towers constructed for 141 mph winds
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_14: Retrofit and improve gravel roofing to limit loose debris and high wind damage

Hazards Addressed	<i>Hurricanes and Coast, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	Design facilities without gravel roofs and update when roofs are replaced.
Action Review	
Status	
Narrative describing progress or obstacles that have prevented implementation	New construction will not have gravel roofs. Older buildings with these types of roofs are being replaced.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_15: Center Street Revitalization Project – Utility Relocation

Hazards Addressed	<i>Hurricane, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	No Progress
Narrative describing progress or obstacles that have prevented implementation	N/A
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	Not feasible

DP_16: Construct protective shelters for critical equipment and vehicles. New construction to meet 141 mph winds

Hazards Addressed	<i>Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	New facility construction will meet the needs of this item.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_17: Improve/Retrofit air filtration systems for critical infrastructure/public buildings/school facilities with improved filtration and air purifying capacity to minimize health risks associated with low air quality and to minimize equipment damage due to smoke

Hazards Addressed	<i>Hazardous Materials</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	New construction will meet HVAC high efficiency systems with filtration needs
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_18: Improve code/ordinance to require removal of dead vegetation/dry fuel sources in high risk areas

Hazards Addressed	<i>Wildfire</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Ordinance previously updated
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_19: Harden water piping lines and systems to prevent loss of water due to breaks and to mitigate Drought

Hazards Addressed	<i>Drought, Winter Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Public information developed for the City Drought Contingency Plan, including updating elected official on drought plan
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_20: Develop a Public Education/Outreach Program to inform the public on water conservation mitigation measures

Hazards Addressed	<i>Drought</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Public information developed for the City Drought Contingency Plan, including updating elected official on drought plan.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_21: Install emergency power at cooling center

Hazards Addressed	<i>Extreme temperature, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	Facilities identified as cooling centers have capability of emergency power and generator installation is planned for new construction.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_22: Improve existing site to be utilized as a cooling zone (Community Center, Library,) with enhanced cooling capabilities, to include misting systems and additional HVAC cooling capacity

Hazards Addressed	<i>Extreme temperature, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	New construction will meet HVAC needs. Systems updated as needed.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_23: Install generator to provide adequate heating for use as a warming center

Hazards Addressed	<i>Severe Weather, Winter Storm</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	JBAC, DOW Activity center heating
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	New construction will meet the need, similar to cooling centers.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_24: Upgrade public facility heating systems to allow utilization of warming centers through improved insulation and energy efficient heating systems, and educate public on actions to mitigate property losses from the hazards of winter storms

Hazards Addressed	<i>Severe Weather, Winter Storm</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	JBAC, DOW Activity center heating
Action Review	N/A
Status	
Narrative describing progress or obstacles that have prevented implementation	As systems are updated and as new facilities are constructed this is being addressed
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_25: Install detection systems to monitor and warn of chemical releases

Hazards Addressed	<i>Hazardous Materials</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	Install fixed air monitoring along the north city limit
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Currently communicate with Industry Partners, ECHMA, E-notify for notifications of chemical releases. Harris County has implemented mobile monitoring capabilities.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_26: Improve code/ordinance for pipeline signage

Hazards Addressed	<i>Energy Pipeline Failure</i>
Responsible Party	<i>Emergency Management</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Code/Ordinances up to date
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	Code/Ordinances up to date

DP_27: Mapping/identification of inundation risk area for high risk dams/levees

Hazards Addressed	<i>Dam/Levee Failure, Flooding</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	Tie maps to the RiskMap update. This falls under HCFCFCD
Action Review	
Status	Ongoing Capability
Narrative describing progress or obstacles that have prevented implementation	New risk maps in use
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_28: Install automated public alert warning system, such as outdoor sirens or automated messaging/telephone notification systems, to provide advance warning for Dam Failure or flood

Hazards Addressed	<i>Dam/Levee failure, Flooding</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	Update outdoor warning sirens, Alertus and Mass notifications Systems
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Utilize CodeRed and IPAWS along with Social Media for notifications.
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_29: Storm Sewer enlargement and storm sewer additions in different parts of city as part of the Master Drainage Plan that was developed. Include opened drainage.

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	Bayou Bend is completed. College Park, Bayou Bend, The Terrace are ongoing
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_30: Widening and deepening of HC Flood Control Channel B112-02-00

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>Engineering</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	No Progress
Narrative describing progress or obstacles that have prevented implementation	N/A
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	This is an HCFCD project

DP_31: Develop/implement tree management program and mitigation measures to reduce high wind damages

Hazards Addressed	<i>Hurricane, Severe Weather</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Ordinance is up to date
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	Ordinance is up to date

DP_32: Establish/Expand GIS Mapping/Identification of Pipeline Risk Areas in flood areas

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>Emergency Management</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Review RRC and national Pipeline and Flood maps to integrate into GIS files.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_33: Develop/implement pipeline safety program

Hazards Addressed	<i>Energy Pipeline Failure</i>
Responsible Party	<i>Emergency Management</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Met with pipeline companies. Every pipeline company has a safety program and a mitigation plan. The City usually is a part of their plans.
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_34: Actively participate in and support the implementation of the six area-wide actions identified in Volume 1 of this plan

Hazards Addressed	<i>Drought, Flood, Hurricane, Wildfire, Severe Weather, Coastal Storm</i>
Responsible Party	<i>City of Deer Park</i>
Summary of Original Problem and Solution (Project)	Annual MAP review and update
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Updated MAP
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_35:

Hazards Addressed	N/A
Responsible Party	N/A
Summary of Original Problem and Solution (Project)	N/A
Action Review	N/A
Status	N/A
Narrative describing progress or obstacles that have prevented implementation	N/A
Next Steps	
Include in the 2025 HMP or Discontinue?	Select One
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_36: Construct detention pond Luella and 8th st.

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	Flooding of homes
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Project awarded
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_37: Acquires parcel of land from DPIS to construct detention pond at Luella and 8th St. Will alleviate flooding issues in the residential areas and DPISD facilities.

Hazards Addressed	<i>Flooding</i>
Responsible Party	<i>Public Works</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	Complete
Narrative describing progress or obstacles that have prevented implementation	Detention pond constructed
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_38: Update public education booklets for All Hazards.

Hazards Addressed	<i>All Hazards</i>
Responsible Party	<i>OEM</i>
Summary of Original Problem and Solution (Project)	Update guides for public distribution on all hazards
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	Developing a Public Education/Outreach Program to inform the public All Hazards Preparedness. Update and print guides for distribution to the public.
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

DP_39: Update access control points throughout the city for facilities.

Hazards Addressed	<i>Cyber Attacks</i>
Responsible Party	<i>Information Technology</i>
Summary of Original Problem and Solution (Project)	N/A
Action Review	
Status	In Progress
Narrative describing progress or obstacles that have prevented implementation	Plan to meet FEMA Directive 140-2. Continue cybersecurity programs to meet CISA & DHS guidelines
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	N/A
If discontinue, explain why	N/A

7.7.2 Additional Mitigation Efforts

In addition to the mitigation actions completed in Table 7-17, Deer Park identified the following mitigation efforts completed since the last HMP:

- D1: 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
- D12: Retrofit and harden critical infrastructure and/or shelters with impact and wind resistant glass and shutter systems to withstand effects of Hurricane, Hail and high-winds
- DP26: Improve code/ordinance for pipeline signage
- DP32: Establish/Expand GIS Mapping/Identification of Pipeline Risk Areas in flood areas

Since the adoption of the County's first HMP, Deer Park has made significant mitigation progress in the following areas:

- None Identified

7.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Deer Park participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included review of the following FEMA documents:

- FEMA 551 "Selecting Appropriate Mitigation Measures for Floodprone Structures" (March 2007)
- FEMA "Mitigation Ideas—A Resource for Reducing Risk to Natural Hazards" (January 2013).

The action worksheets included at the end of this annex list the mitigation actions that Deer Park would like to pursue in the future to reduce the effects of hazards. The actions are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in City priorities.

Table 7-18 indicates the range of proposed mitigation action categories. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Volume I identifies 14 evaluation criteria for prioritizing the mitigation actions. To assist with rating each mitigation action as high, medium, or low priority, a numeric rank is assigned (-1, 0, or 1) for each of the evaluation criteria. Table 7-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 7-18. Analysis of Mitigation Actions by Hazard and Category

2025 Hazards	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	X	-	-	X	X	-	X	-	-	X
Dam/Levee Failure	X	-	X	X	X	X	X	-	-	X
Drought	X	-	-	X	X	-	X	-	-	X
Earthquake	X	-	-	X	X	-	X	-	-	X
Extreme Cold	X	-	-	X	X	-	X	-	-	X
Extreme Heat	X	-	-	X	X	-	X	-	-	X
Flooding	X	X	X	X	X	X	X	-	X	X
Hurricanes, Coastal Storms	X	-	-	X	X	-	X	-	-	X
Mass Movement	X	-	-	X	X	-	X	-	-	X
Severe Weather	X	-	-	X	X	X	X	-	-	X
Tsunami	X	-	-	X	X	-	X	-	-	X
Wildfire	X	-	-	X	X	-	X	-	-	X
Energy Pipeline Failure	X	-	-	X	X	-	X	-	-	X
Public Health Emergency	X	-	-	X	X	-	X	-	-	X
Technology Failure	X	-	-	X	X	-	X	-	-	X
Toxic Release / HazMat	X	-	-	X	X	-	X	-	-	X
Utility Failure	X	-	-	X	X	-	X	-	-	X

Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.

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

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

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

Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.

Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.

Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.

Natural Resource Protection (NR)—Actions that minimize hazard loss and preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.

Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities

Table 7-19. Summary of Prioritization of Actions

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
DP_2	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	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_3	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	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_4	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	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_5	Adopt a City Ordinance to require emergency power generation for fueling stations during new construction and	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
DP_14	Retrofit and improve gravel roofing to limit loose debris and high wind damage	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_15	Center Street Revitalization Project – Utility Relocation	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_16	Construct protective shelters for critical equipment and vehicles New construction to meet 141 mph winds	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_17	Improve/Retrofit air filtration systems for critical infrastructure/public buildings/school facilities with improved filtration and air purifying capacity to minimize health risks associated with low air quality and to minimize equipment damage due to smoke	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_18	Improve code/ordinance to require removal of dead vegetation/dry fuel sources in high-risk areas	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_19	Harden water piping lines and systems to prevent loss of water due to breaks and to mitigate Drought	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
DP_20	Develop a Public Education/Outreach Program to inform the public on water conservation mitigation measures	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_21	Install emergency power at cooling center	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_22	Improve existing site to be utilized as a cooling zone (Community Center, Library,) with enhanced cooling capabilities, to include misting systems and additional HVAC cooling capacity	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_23	Install generator to provide adequate heating for use as a warming center	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_24	Upgrade public facility heating systems to allow utilization of warming centers through improved insulation and energy efficient heating systems, and educate public on actions to mitigate property losses from the hazards of winter storms	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_25	Install detection systems to monitor and warn of chemical releases	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_27	Mapping/identification of inundation risk area for high risk dams/levees	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
DP_28	Install automated public alert warning system, such as outdoor sirens or automated messaging/telephone notification systems, to provide advance warning for Dam Failure or flood	1	1	1	0	0	1	0	1	1	1	1	0	1	0	9	Medium
DP_29	Storm Sewer enlargement and storm sewer additions in different parts of city as part of the Master Drainage Plan that was developed. Include opened drainage.	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_30	Widening and deepening of HC Flood Control Channel B112-02-00	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_31	Develop/implement tree management program and mitigation measures to reduce high wind damages	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_33	Develop/implement pipeline safety program	1	1	1	0	0	1	0	1	1	1	1	0	1	0	9	Medium
DP_34	Actively participate in and support the implementation of the six area-wide actions identified in Volume 1 of this plan	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_35	-	1	1	1	0	0	1	0	1	1	1	1	0	1	0	9	Medium
DP_36	Construct detention pond Luella and 8th st.	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
DP_37	Acquires parcel of land from DPIS to construct detention pond at Luella and 8th St. Will alleviate flooding issues in the residential areas and DPISD facilities.	1	1	1	0	0	1	0	1	1	1	1	0	1	0	9	Medium
DP_38	Update public education booklets for All Hazards.	1	1	1	0	0	1	1	1	0	1	1	1	1	0	10	Medium
DP_39	Cybersecurity -- update access control points throughout the city for facilities.	1	1	1	0	0	1	1	1	1	1	1	1	1	0	11	High
DP_40	Adopt update building, fire, mechanical and electrical codes.	1	1	1	0	0	1	0	1	1	1	1	0	1	0	9	Medium
AW_2	Continue to maintain and update the hazard mitigation page on HCOHSEM's ReadyHarris website with relevant information on the plan's implementation, such as annual progress reports, public comment opportunities, and plan integration opportunities. Each planning partner can support this initiative by creating a link to the County's hazard mitigation page on their jurisdictional websites	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High

Note: Volume I, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).

Action DP_40 Worksheet

Lead Agency:	Engineering, Fire Marshal
Supporting Agencies:	OEM
Hazards of Concern:	Severe Weather, Energy Pipeline Failure, Technology Failure, Toxic Release/Hazardous Materials, Utility Failure
Action Description:	Adopt update building, fire, mechanical and electrical codes.
Description of the Problem:	Current codes are outdated
Description of the Solution:	Adopt newer codes to meet current standards.
Estimated Cost:	Low (<\$10,000)
Potential Funding Sources:	Local funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	2, 3, 4, 5
Benefits:	Medium (\$10,000 to \$100,000)
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	N/A
Impact on Critical Facilities/Lifelines:	N/A
Impact on Capabilities:	N/A
Climate Change Considerations:	N/A
Mitigation Category	Local Plans and Regulations (LPR)
CRS Category	Property Protection (PP)
Priority	Medium

Area Wide Action #2 (AW_2)

Action Description	Continue to maintain and update the hazard mitigation page on HCOHSEM's ReadyHarris website with relevant information on the plan's implementation, such as annual progress reports, public comment opportunities, and plan integration opportunities. Each planning partner can support this initiative by creating a link to the County's hazard mitigation page on their jurisdictional websites
Lead Agency	Harris County Office of Homeland Security & Emergency Management
Supporting Agencies:	All Planning Partners
Hazards of Concern:	Coastal Erosion, Dam/Levee Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flooding, Hurricanes/Coastal Storms, Mass Movement, Severe Weather, Tsunami, Wildfire, Energy Pipeline Failures, Public Health Emergency, Technology Failure, Toxic Release/HazMat, Utilities Failure
Description of the Problem:	Without a well-maintained online resource and coordination among planning partners, important updates and opportunities for involvement risk being overlooked, limiting community awareness and collaboration in hazard mitigation efforts.
Description of the Solution:	This provides a centralized, continuously updated online resource that keeps the public and stakeholders informed about the progress and implementation of the hazard mitigation plan. By sharing annual reports and avenues for public involvement, it promotes transparency, engagement, and collaboration.
Estimated Cost:	Low (<\$10,000)
Potential Funding Sources:	Local funding
Implementation Timeline:	Ongoing
Goals Met:	1, 2, 4, 8, and 9
Benefits:	Medium (\$10,000 to \$100,000)
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	N/A
Impact on Critical Facilities/Lifelines:	N/A
Impact on Capabilities:	N/A
Climate Change Considerations:	N/A
Mitigation Category	Local Plans and Regulations (LPR) Education and Awareness Programs (EAP)
CRS Category	Emergency Services (ES) Public Information (PI) Preventative Measures (PR)
Priority	High