2025 Harris County Multi-Jurisdictional Hazard Mitigation Plan

PLANNING PARTNER ANNEXES

VOLUME 2

HARRIS COUNTY HOMELAND SECURITY & EMERGENCY MANAGEMENT TEXAS

TETRA TECH

2025 Harris County Multi-Jurisdictional Hazard Mitigation Plan Update

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#105s045090

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APPENDICES

39. LEE COLLEGE

This jurisdictional annex to the Harris County Hazard Mitigation Plan (HMP) provides information to assist Lee College 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 Lee College, describes who participated in the planning process, assesses Lee College's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

39.1 HAZARD MITIGATION PLANNING TEAM

Lee College identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many departments. The Lee College 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 39-1 summarizes jurisdiction officials who participated in the development of the annex and in what capacity. Additional documentation of the jurisdiction's planning activities through Planning Partnership meetings is included in Volume I.

Table 39-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Thomas Quinn/Manager, Emergency & Safety Operations **Address:** 200 Lee Dr, Baytown, TX 77520 **Phone Number:** 281-425-6409 **Email:** tquinn@lee.edu	**Name/Title:** Eric Williams/Chief of Security **Address:** 200 Lee Dr, Baytown, TX 77520 **Phone Number:** 281-425-6888 **Email:** ewilliams@lee.edu
National Flood Insurance Program Floodplain Administrator	
Name/Title: N/A **Address:** N/A **Phone Number:** N/A **Email:** N/A	

39.2 COMMUNITY PROFILE

Lee College is a public community college located in Baytown, Texas. The college's main campus and McNair Center span 40 acres near downtown Baytown, with an additional satellite center in nearby Liberty. Serving a geographic area of over 220,000 residents, Lee College includes the school systems of Goose Creek, Anahuac, Barbers Hill, Baytown Christian Academy, Crosby,

Dayton, Devers, East Chambers, Hardin, Hardin-Jefferson, Huffman, Hull-Daisetta, Kountze, Liberty, and West Hardin. The college has an enrollment of approximately 8,800 students.

39.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Lee College 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 Lee College to identify opportunities for integrating mitigation concepts into ongoing College procedures.

39.3.1 Planning and Regulatory Capability and Integration

Table 39-2 summarizes the planning and regulatory tools that are available to Lee College.

Table 39-2. 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	*N/A*	*N/A*	*N/A*	*N/A*
Zoning/Land Use Code	*N/A*	*N/A*	*N/A*	*N/A*
Subdivision Code	*N/A*	*N/A*	*N/A*	*N/A*
Site Plan Code	*N/A*	*N/A*	*N/A*	*N/A*
Stormwater Management Code	*N/A*	*N/A*	*N/A*	*N/A*
Post-Disaster Recovery/ Reconstruction Code	*N/A*	*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
Real Estate Disclosure Requirements	*N/A*	*N/A*	*N/A*	*N/A*
Growth Management	*N/A*	*N/A*	*N/A*	*N/A*
Environmental Protection Ordinance(s)	*N/A*	*N/A*	*N/A*	*N/A*
Flood Damage Prevention Ordinance	*N/A*	*N/A*	*N/A*	*N/A*
Wellhead Protection	*N/A*	*N/A*	*N/A*	*N/A*
Emergency Management Ordinance	*N/A*	*N/A*	*N/A*	*N/A*
Climate Change Ordinance	*N/A*	*N/A*	*N/A*	*N/A*
Other	*N/A*	*N/A*	*N/A*	*N/A*
PLANNING DOCUMENTS				
General/Comprehensive Plan	*N/A*	*N/A*	*N/A*	*N/A*
Capital Improvement Plan	*N/A*	*N/A*	*N/A*	*N/A*
Disaster Debris Management Plan	*N/A*	*N/A*	*N/A*	*N/A*
Floodplain Management or Watershed Plan	*N/A*	*N/A*	*N/A*	*N/A*
Stormwater Management Plan	*N/A*	*N/A*	*N/A*	*N/A*
Open Space Plan		*N/A*	*N/A*	*N/A*
Urban Water Management Plan	*N/A*	*N/A*	*N/A*	*N/A*
Habitat Conservation Plan	*N/A*	*N/A*	*N/A*	*N/A*
Economic Development Plan	*N/A*	*N/A*	*N/A*	*N/A*
Community Wildfire Protection Plan	*N/A*	*N/A*	*N/A*	*N/A*
Community Forest Management Plan	*N/A*	*N/A*	*N/A*	*N/A*
Transportation Plan	*N/A*	*N/A*	*N/A*	*N/A*
Agriculture Plan	*N/A*	*N/A*	*N/A*	*N/A*
Climate Action/ Resilience/Sustainability Plan	*N/A*	*N/A*	*N/A*	*N/A*
Tourism Plan	*N/A*	*N/A*	*N/A*	*N/A*
Business/ Downtown Development Plan	*N/A*	*N/A*	*N/A*	*N/A*
Other	*Yes*	*Facilities Master Plan (in progress)*	*N/A*	*Facilities*

	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
RESPONSE/RECOVERY PLANNING				
Emergency Operations Plan	*Yes*	*Emergency Operations Plan (EOP)*	*State*	*Emergency and Safety Operations*
How has or will this be integrated with the HMP and how does this reduce risk? Integrating the Emergency Operations Plan with the Hazard Mitigation Plan aligns response efforts with long-term risk reduction strategies. This lowers risk by improving preparedness, reducing disaster impacts, and ensuring faster, safer recovery.				
Continuity of Operations Plan	*Yes*	*Continuity of Operations Plan Annex of the EOP*	*N/A*	*N/A*
How has or will this be integrated with the HMP and how does this reduce risk? Integrating the Continuity of Operations Plan with the Hazard Mitigation Plan protects critical functions and infrastructure against known risks, ensuring the college can maintain or quickly resume operations during disasters—reducing downtime, damage, and recovery costs.				
Substantial Damage Response Plan	*No*	*N/A*	*N/A*	*N/A*
Threat and Hazard Identification and Risk Assessment	*No*	*N/A*	*N/A*	*N/A*
Post-Disaster Recovery Plan	*No*	*N/A*	*N/A*	*N/A*
Public Health Plan	*Yes*	*Communicable Disease Annex of the EOP*	*N/A*	*N/A*
How has or will this be integrated with the HMP and how does this reduce risk? Integrating the Communicable Disease Annex with the Hazard Mitigation Plan reduces health risks and disruption by improving disease prevention infrastructure, coordinating response efforts, and ensuring the college is prepared to operate safely during outbreaks.				
Other:	*No*	*N/A*	*N/A*	*N/A*

39.3.2 Development and Permitting Capability

Table 39-3 summarizes the capabilities of Lee College to oversee and track development.

Table 39-3. Development and Permitting Capability

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

39.3.3 Administrative and Technical Capability

Table 39-4 summarizes potential staff and personnel resources available to Lee College and their current responsibilities that contribute to hazard mitigation.

Table 39-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	Lee College Board of Regents functions as its governing body. This board is responsible for overseeing the college's operations, strategic direction, and policy decisions. In addition to the full board, Lee College also has subcommittees that focus on specific areas: Audit & Investment Committee, Building Committee, and Policy Committee
Zoning Board of Adjustment	*N/A*	*N/A*
Planning Department	N/A	N/A
Mitigation Planning Committee	*Yes*	*Safety and Security Committee*
Environmental Board/Commission	*N/A*	*N/A*
Open Space Board/Committee	*N/A*	*N/A*
Economic Development Commission/Committee	*N/A*	*N/A*
Public Works/Highway Department	*N/A*	*N/A*
Construction/Building/Code Enforcement Department	*N/A*	*N/A*
Emergency Management/Public Safety Department	*Yes*	*Lee College Security Department & Emergency and Safety Operations Department & Campus Security*

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	*Yes*	*Facilities responsible for ground and tree maintenance*
Mutual aid agreements	*No*	*N/A*
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	*No*	*N/A*
Other	*N/A*	*N/A*
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	*N/A*	*N/A*
Engineers or professionals trained in building or infrastructure construction practices	*N/A*	*N/A*
Planners or engineers with an understanding of natural hazards	*N/A*	*N/A*
Staff with expertise or training in benefit/cost analysis	*Yes*	*N/A*
Professionals trained in conducting damage assessments	*Yes*	*N/A*
Personnel skilled or trained in GIS and/or Hazus applications	*No*	*N/A*
Staff that work with socially vulnerable populations or underserved communities	*Yes*	*N/A*
Environmental scientists familiar with natural hazards	*No*	*N/A*
Surveyors	*No*	*N/A*
Emergency Manager	*Yes*	*N/A*
Grant writers	*Yes*	*N/A*
Resilience Officer	*No*	*N/A*
Other (this could include stormwater engineer, environmental specialist, etc.)	*N/A*	*N/A*

39.3.4 Fiscal Capability

Table 39-5 summarizes financial resources available to Lee College.

Table 39-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	*N/A*
Capital improvement project funding	*N/A*
Authority to levy taxes for specific purposes	*Yes*
User fees for water, sewer, gas, or electric service	*N/A*
Impact fees for homebuyers or developers of new development/homes	*N/A*
Stormwater utility fee	*N/A*
Incur debt through general obligation bonds	*N/A*
Incur debt through special tax bonds	*Yes*
Incur debt through private activity bonds	*N/A*
Withhold public expenditures in hazard-prone areas	*N/A*
Other federal or state funding programs	*Yes*
Open Space Acquisition funding programs	*N/A*
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	*N/A*

39.3.5 Education and Outreach Capability

Table 39-6 summarizes the education and outreach resources available to Lee College.

Table 39-6. 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	Campus Emergency Alerts and PA Speaker System
Natural disaster/safety programs in place for schools	*Yes*	*Lee College Campus Security Dept.* *Emergency & Safety Operations Dept.*
Organizations that conduct outreach to socially vulnerable populations and underserved populations	*Yes*	*N/A*
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	*Yes*	*College safety outreach events*

39.3.6 Community Classifications

Table 39-7 summarizes classifications for community programs available to Lee College.

Table 39-7. Community Classifications

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

N/A = Not applicable
— = Unavailable

39.3.7 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 39-8 summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction'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 39-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Coastal Erosion	*Weak*
Dam/Levee Failure	*Moderate*
Drought	*Weak*
Earthquake	*Weak*
Extreme Cold	*Strong*
Extreme Heat	*Strong*
Flooding	*Moderate*
Hurricanes, Coastal Storms	*Strong*
Mass Movement	*Weak*
Severe Weather	*Strong*
Tsunami	*Weak*
Wildfire	*Moderate*

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Energy Pipeline Failure	*Strong*
Public Health Emergency	*Moderate*
Technology Failure	*Moderate*
Toxic Release / Hazardous Materials	*Strong*
Utility Failure	*Moderate*

39.4 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Educational institutions are not participants in FEMA's National Flood Insurance Program (NFIP). Table 39-9 and Table 39-10, summarizing NFIP information, are included here only so that this annex aligns with the other participating entities in the 2025 Harris County MJ-HMP.

Table 39-9. Lee College NFIP Summary of Policy and Claim Statistics

# Policies	*N/A*
# Claims (Losses)	*N/A*
Total Loss Payments	*N/A*
# Repetitive Loss Properties (NFIP definition)	*N/A*
# Repetitive Loss Properties (FMA definition)	*N/A*
# Severe Repetitive Loss Properties	*N/A*
# 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.

Table 39-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	*N/A*
Do you maintain a list of properties that have been damaged by flooding?	*N/A*
Do you maintain a list of property owners interested in flood mitigation?	*N/A*
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	*N/A*
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	*N/A*

NFIP Topic	Comments
How do you make Substantial Damage determinations?	*N/A*
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?	*N/A*
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	*N/A*
NFIP Compliance	
What local department is responsible for floodplain management?	*N/A*
Are any certified floodplain managers on staff in your jurisdiction?	*N/A*
Do you have access to resources to determine possible future flooding conditions from climate change?	*N/A*
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?	*N/A*
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	*N/A*
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	*N/A*
What are the barriers to running an effective NFIP program in the community, if any?	*N/A*
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	*N/A*
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	*N/A*
What is the local law number or municipal code of your flood damage prevention ordinance?	*N/A*
What is the date that your flood damage prevention ordinance was last amended?	*N/A*
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	*N/A*
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?	*N/A*
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	*N/A*

39.5 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 39-11 through Table 39-13.

Community colleges do not handle building permits within their district, and no new growth or development was noted by the jurisdiction during the planning process.

Table 39-11. Number of 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	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2021				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2022				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2023				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2024				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A

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

Table 39-12. Recent Major Development and Infrastructure from 2017 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
N/A	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

** Only location-specific hazard zones or vulnerabilities identified.*

Table 39-13. Known or Anticipated Major Development and Infrastructure in the Next Five 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
Barbers Hill ISD Higher Education Center - Lee College Branch Campus	*Instructional*	*1*	*Gill Parkway at FM 1409, Mont Belvieu, TX*	*None*	*Tentative completion Date: 2027*

39.6 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 Lee College's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

39.6.1 Hazard Event History

The history of natural and non-natural hazard events at Lee College is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 39-14 provides details on loss and damage for Lee College during hazard events since the last hazard mitigation plan update.

Table 39-14. Hazard Event History for Lee College

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
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	• DR-4485/EM-3458 • –COVID-19 Biological	No	COVID-19	N/A
3/11/2020	• Biological	Yes	Public Health Emergency – local disaster declared as COVID-19 swept the region.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
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
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.	N/A
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

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
7/25/2020 – 7/31/2020	• EM-3530– Hurricane Hannah	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
8/23/2020 – 8/27/2020	• EM-3540– Hurricane Laura	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 we 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.	N/A
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

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
2021	• Technology Failure	No	Harris County ransomware attack – a cyberattack targeted county systems, affecting operations and requiring extensive recovery efforts.	N/A
2/11/2021 – 2/21/2021	• DR-4586 • EM-3554– Severe Ice Storm, Power Failure, Extreme Cold, Technology Failure, Utility Failure	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.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
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 at Lee College
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

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
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
December 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

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
1/24/2023	• Tornado	No	This EF3 tornado touched down near El Franco Lee Park east of Brookside Village. Damage extended 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. Spots with more severe damage, rated EF2, 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. Three high-tension electrical towers were flattened northeast of Deer Park near the Houston Ship Channel with EF3 damage. In Baytown, a mobile home and a single-family home were destroyed along Weaver Street near Bayway. Damage became less intense northeast from there with spotty damage as far north as TX 330 Spur. Aerial surveys indicated roof damage to the Exxon building south of West Baker Street. Damage continued to Interstate 10 where downed power lines were observed. No damage was indicated north of Interstate 10. The tornado tracked 23 miles across Pearland and SE Houston, producing $6.6 million in damage. 1.75” diameter hail stones accompanied the tornadoes.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
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.	N/A
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
4/26/2024 – 6/5/2024	• Flood	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	No	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

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses at Lee College
5/16/2024	• Severe Weather • Tornadoes • Strong Wind • Hail • Flooding	No	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	• DR-4798– Hurricane Beryl	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.	Lee College Cat A (Debris) PW754612 in the amount of $72,371.25 - awarded, Cat B (Emergency Work) PW754615 in the amount of $38,762.40 – pending award, and Cat E (Equipment Damage) PW756464 in the amount of $108,487.19 – pending award.
1/20/2025	• Winter Storm	No	Winter Storm Enzo impacted Texas to include SE Texas from January 20th until January 22nd. Under a Winter Storm Warning, 1 – 5 inches of snow accumulated. Snowmelt and below freezing temperatures created icy sheets/black ice on roads.	All Lee College campuses were closed on January 21st and 22nd due to hazardous road conditions. Liberty Center campus was closed on an additional day on January 23rd.
3/4/2025	• Severe Weather, Strong Wind	No	On March 4, 2025, a strong line of thunderstorms moved into SE Texas with a Wind Advisory to include 40 mph wind gusts causing widespread power surges and outages.	Widespread power surges and outages, were reported in the region, including several Lee College Main Campus buildings
6/12/2025	• Severe Weather & Flooding		Excessive rainfall impacted SE TX early morning with 3-6 inches of rainfall, flash flooding, and widespread power outages.	All Lee College campuses were closed due to hazardous road conditions, power outages on Main Campus buildings.

EM = Emergency Declaration (FEMA); FEMA = Federal Emergency Management Agency; DR = Major Disaster Declaration (FEMA); N/A = Not applicable

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

39.6.2 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 Lee College.

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. Lee College 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 jurisdiction indicated the following:

- None Identified

Table 39-15 shows Lee College's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 39-15. Hazard Ranking

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

Note: The scale is based on the hazard rankings established in Volume I, modified as appropriate based on review by the jurisdiction

39.6.3 Identified Issues

After review of Lee College's hazard event history, hazard rankings, hazard location, and current capabilities, Lee College identified the following vulnerabilities within the community:

- None Identified

39.7 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.

39.7.1 Past Mitigation Action Status

The Lee College did not participate in the 2020 MJ HMP and does not have any past mitigation actions for this section.

39.7.2 Additional Mitigation Efforts

Lee College identified the following mitigation efforts completed since the last MJ-HMP:

- None Identified

Since the adoption of the County's first MJ-HMP, Lee College has made significant mitigation progress in the following areas:

- None Identified

39.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Lee College 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 Lee College would like to pursue in the future to reduce the effects of hazards. The actions are dependent upon available capabilities and may be modified or omitted at any time based on the occurrence of new hazard events and changes in Lee College priorities.

Table 39-16 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 39-17 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 39-16. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion	-	X	-	X	-	-	-	-	-	-
Dam/Levee Failure	-	X	-	X	-	-	-	-	-	-
Drought	-	X	-	X	-	-	-	-	-	-
Earthquake	-	X	-	X	-	-	-	-	-	-
Extreme Cold	-	X	-	X	-	-	-	-	-	-
Extreme Heat	-	X	-	X	-	-	-	-	-	-
Flooding	-	X	-	X	-	-	-	-	-	-
Hurricanes and Coastal Storms	-	X	-	X	-	-	-	-	-	-
Mass Movement	-	X	-	X	-	-	-	-	-	-
Severe Weather	-	X	-	X	-	-	-	-	-	-
Tsunami	-	X	-	X	-	-	-	-	-	-
Wildfire	-	X	-	X	-	-	-	-	-	-
Energy Pipeline Failure	-	X	-	X	-	-	-	-	-	-
Public Health Emergency	-	X	-	X	-	-	-	-	-	-
Technology Failure	-	X	-	X	-	-	-	-	-	-
Toxic Release / HazMat	-	X	-	X	-	-	-	-	-	-
Utility Failure	-	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 39-17. 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	
LEE1	Generator Trailer	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE2	Generators	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE3	Emergency Operations Center	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE4	Tree Trimming by Power Lines	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE5	UPS Battery Backups	0	1	1	1	1	1	0	1	1	1	0	1	1	1	**11**	High
LEE6	Cover Above-Ground Utilities	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE7	Multi-Use Safe Rooms	1	1	1	1	1	1	0	1	1	1	0	0	1	1	**11**	High
LEE8	Enhance Network Security	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE9	Infrastructure for Remote Work	1	0	1	1	1	1	0	1	1	1	0	1	1	1	**11**	High
LEE10	Safety Data Sheets	1	1	1	0	1	1	1	0	1	1	0	1	0	0	**9**	Medium
LEE11	Continuity of Operations Plan	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE12	Power Outage Contingency Plan	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE13	NOAA Weather Radios	1	0	1	0	1	1	0	1	1	1	0	1	1	1	**10**	Medium
LEE14	NWS StormReady	1	0	0	1	1	1	0	1	1	1	0	1	1	1	**10**	Medium
LEE15	Gym Retrofit for Shelter	1	0	0	1	1	1	0	1	1	1	0	1	1	1	**10**	Medium
LEE16	Shelter-in-Place Kits	1	0	1	1	1	1	0	1	1	1	0	1	1	1	**11**	High
LEE17	Two-Way Radios	1	0	1	1	1	1	0	1	1	1	0	1	1	1	**11**	High
LEE18	Education Program	1	0	1	0	0	1	0	1	1	1	0	1	1	1	**9**	Medium
LEE19	CERT Program	1	1	1	1	1	1	0	1	1	1	0	1	1	1	**12**	High
LEE20	Fiber Optic Lines	1	0	1	1	1	1	0	1	1	1	0	1	1	1	**11**	High

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

Action LEE_1 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Technology Failure, Utility Failure
Action Description:	Deploy a generator trailer with quick connect capability for critical college facilities.
Description of the Problem:	Older permanent campus building generators are prone to fail during emergency operations. One generator on campus that supports the server room in a main campus building had to be shut down due to potential failure during Hurricane Beryl and subsequent widespread and prolonged power outage. Emergency IT employees had only one hour to close down server applications for college operations, or all data would have been lost.
Description of the Solution:	Having a generator trailer with quick connects was needed in this situation to prevent potential server failure and data loss. It would also be needed to support other critical facilities on campus.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_2 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Technology Failure, Utility Failure
Action Description:	Install permanent backup generators for the critical campus facilities (Gray Science, Lofts, Gym, Mont Belvieu campus, etc.).
Description of the Problem:	The college science building contains lab specimens. During Hurricane Beryl's widespread and prolonged power outage, extension cords were deployed from a long distance from an adjacent campus building with a generator to supply continuous power to lab specimens in refrigerator units. This practice was unsafe, violated fire safety codes, and left the building unsecured due to cords running through entry doorways. Critical facilities like the student-athlete dormitory also needed continued emergency power. The immediate community would benefit from a community shelter if our gym operated on emergency power from a permanent generator. Lastly, we will need a permanent generator to provide emergency power to a new off-site campus building scheduled for 2027, which will serve mostly dual credit students in Mont Belvieu, Texas.
Description of the Solution:	Installing a permanent generator for these buildings would prevent further damage and loss due to prolonged power outages.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_3 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Build a new Emergency Operations Center (EOC) to serve as a central command and coordination hub during emergencies.
Description of the Problem:	The college does not have a "hot" EOC to support emergency operations. A central hub will be needed for the college's Incident Management Team and Policy Group to coordinate response and recovery and to provide as an alternate EOC for Goose Creek Consolidated Independent School District and the City of Baytown Office of Emergency Management.
Description of the Solution:	Building a new "hot" EOC and an alternate EOC
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_4 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Hurricanes/Coastal Storms, Severe Weather, Utility Failure
Action Description:	Trim trees away from power lines.
Description of the Problem:	There are numerous trees throughout Main Campus. Trees that are close to power lines need to be trimmed. During ice storms, severe weather, high-wind, and hurricane events, they have caused lines to break.
Description of the Solution:	Trim all tree limbs close to power lines.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_5 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Extreme Heat, Hurricane/Coastal Storms, Severe Weather, Utility Failure
Action Description:	Install appropriate surge protectors and Uninterrupted Power Supply (UPS) Battery Backup in critical facilities.
Description of the Problem:	During widespread and prolonged power outages from Hurricane Beryl, numerous power surges occurred and damaged electrical equipment in Main Campus critical facilities that had to be repaired or replaced, such as HVAC equipment, pumps, etc.
Description of the Solution:	Installation of appropriate surge protectors and Uninterrupted Power Supply (UPS) Battery Backup in critical facilities.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_6 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Hurricane/Coastal Storm, Severe Weather
Action Description:	Cover and insulate above-ground utility lines on campus.
Description of the Problem:	The utility lines on Main Campus are above ground and over walkways. This leaves utilities vulnerable during severe weather, hurricane, and extreme cold events. During the last couple of winter storms, multiple valves leaked due to damage from the freeze, causing ice to form on walkways making it unsafe for students and employees.
Description of the Solution:	Cover and insulate above-ground utility lines on campus.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_7 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Hurricane/Coastal Storm, Severe Weather
Action Description:	Build multi-use safe rooms for critical campus buildings.
Description of the Problem:	Critical facilities need safe rooms for the campus community to shelter-in-place during high wind, tornado, and hurricane events where large gatherings occur on Main Campus, such as the student-athlete dormitories, student center, gym, arena, theater, and off-site campus facilities.
Description of the Solution:	Build multi-use safe rooms for critical campus buildings.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_8 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Technology Failure, Hurricane/Coastal Storms, Severe Weather, Utility Failure
Action Description:	Enhancing network security.
Description of the Problem:	Enhancing network security reduces the risk of disruptions to critical services during or after a natural hazard event, and it helps protect essential systems from cascading failures triggered by cyberattacks during times of vulnerability. During and after Hurricane Beryl and subsequent widespread power outages, the physical infrastructure can be weakened, creating opportunities for cyberattacks. Critical facilities on campus depend on networked technology, such as the HVAC power plants and facilities with network servers. Strengthening cybersecurity ensures these systems remain operational during and after natural disasters and reduces the risk of compounded impacts. Secure networks will also help maintain communications, data access, and emergency operations centers (EOCs) functioning, allowing for a coordinated and effective disaster response.
Description of the Solution:	Implement strategic solutions to increase network security, such as having a physical backup server at an alternate location.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_9 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Invest in infrastructure, training, and policies to support remote work for college employees and virtual instruction for students in the event of a hurricane or other natural hazard. This includes cloud-based platforms, VPNs, learning management systems (LMS), communication tools, and staff training.
Description of the Problem:	Hurricanes, pandemics, and other natural or biological hazards can severely disrupt access to campus facilities, utilities, and safe learning environments. In the case of hurricanes, storm damage and flooding often render college campuses inoperable for extended periods. Similarly, pandemics (as demonstrated by COVID-19) can necessitate prolonged closures or restrictions on in-person gatherings. Enabling remote work for employees and virtual instruction for students ensures that academic programs and critical administrative functions continue without interruption. This strategy protects health and safety, reduces the risk of educational loss, provides operational flexibility for displaced or quarantined individuals, and supports compliance with emergency preparedness, accreditation, and public health requirements. It also strengthens the institution's overall resilience and reduces financial impacts associated with extended closures or operational downtimes.
Description of the Solution:	Invest in infrastructure, training, and policies to support remote work for college employees and virtual instruction for students in the event of a hurricane or other natural hazard. This includes cloud-based platforms, VPNs, learning management systems (LMS), communication tools, and staff training.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	N/A
Priority	High

Action LEE_10 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Toxic Release/Hazardous Materials
Action Description:	Ensure each facility has Safety Data Sheets for all hazardous materials on-site and staff know the location.
Description of the Problem:	During natural or technological hazard events, facilities that store or use hazardous materials are at increased risk of spills, chemical reactions, fires, or exposure risks—especially if those materials are damaged, improperly stored, or accessed by untrained personnel.
Description of the Solution:	Ensuring that Safety Data Sheets (SDS) are readily available and that staff are trained on their location and use helps protect employees, first responders, and the public. This action supports safe handling during emergencies, quick identification of health and environmental risks, and informed response decisions. It also fulfills regulatory requirements (e.g., OSHA's Hazard Communication Standard) and reduces potential liability, environmental damage, and injury during disasters.
Estimated Cost:	Low (<$10,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Ongoing
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	Medium

Action LEE_11 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Hurricane/Coastal Storm, Severe Weather
Action Description:	Develop a Continuity of Operations Plan (COOP).
Description of the Problem:	The college does not have a COOP as a best practice to ensure critical academic, administrative, and public safety services can continue or rapidly resume during and after a pandemic, such as from the COVID pandemic, or after a prolonged power outage, such as from Hurricane Beryl.
Description of the Solution:	Develop a COOP for all college operations to include training and drills.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Education and Awareness (EAP)
CRS Category	N/A
Priority	High

Action LEE_12 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Technology Failure, Utility Failure
Action Description:	Create a power outage continuity plan for all critical facilities.
Description of the Problem:	The college does not have a power outage continuity plan that identifies essential systems and personnel, establishes backup power solutions, and ensures preparedness for extended grid outages caused by natural or technological hazards. During Hurricane Beryl and winter storms, there was a risk to data loss from loss of power to servers, equipment damage from power surges, loss of HVAC and life-safety systems, discontinuation of instruction, security and administrative services, and food spoilage from the campus food pantry that serves employees, students and community daily and during disaster events.
Description of the Solution:	Develop a facility-wide power outage continuity plan that includes emergency power needs, generator capabilities, critical load prioritization, manual operations procedures, and communication protocols.
Estimated Cost:	Low (<$10,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	High

Action LEE_13 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Coastal Erosion, Drought, Earthquake, Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Tsunami,
Action Description:	Equip campus buildings with a NOAA weather radio.
Description of the Problem:	There are no NOAA weather radios in campus buildings to provide direct, real-time alerts from the National Weather Service for hazards such as severe storms, tornadoes, flash floods, hurricanes, and other weather-related emergencies, especially when power, internet, or cellular services may be disrupted.
Description of the Solution:	Install NOAA weather radios in campus buildings to enhance the campus's capacity to take timely protective actions, such as moving people to safe areas, activating lockdowns or shelter-in-place protocols, and initiating emergency notifications.
Estimated Cost:	Low (<$10,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	Medium

Action LEE_14 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Coastal Erosion, Drought, Earthquake, Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Tsunami
Action Description:	Join NWS StormReady program and achieve StormReady designation.
Description of the Problem:	The college must strengthen the communication and safety skills needed to save lives and property before, during, and after severe weather and hurricane events. Achieving StormReady designation will assist in strengthening warning systems, establishing emergency operations protocols, and engaging in public outreach and staff training.
Description of the Solution:	Achieving StormReady designation will assist in strengthening warning systems, establishing emergency operations protocols, and engaging in public outreach and staff training.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Education and Awareness (EAP)
CRS Category	N/A
Priority	Medium

Action LEE_15 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Coastal Erosion, Dam/Levee Failure, Drought, Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Tsunami, Wildfire, Public Health Emergency, Utility Failure
Action Description:	Increase sheltering capabilities (retrofitting the campus gym)
Description of the Problem:	The college campus has limited community sheltering capabilities.
Description of the Solution:	Increase sheltering capabilities by retrofitting the campus gym to provide a safe refuge for students, staff, and the community during high-impact weather events, reducing the risk of injury or death. Supports emergency management and continuity of operations plans.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Education and Awareness (EAP)
CRS Category	N/A
Priority	Medium

Action LEE_16 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	Extreme Cold, Extreme Heat, Flooding, Hurricane/Coastal Storm, Severe Weather, Energy Pipeline Failure, Toxic Release/Hazardous Materials
Action Description:	Shelter-in-Place kits for all buildings.
Description of the Problem:	Campus buildings are not supplied with shelter-in-place kits to assist with sheltering for severe weather events or exterior hazardous materials events. The college is in close proximity to a major refinery, multiple pipelines, a highway, and a railroad that runs immediately behind campus grounds.
Description of the Solution:	Supply all campus buildings with shelter-in-place kits to protect occupants during hazards that require individuals to remain indoors, such as tornadoes, hazardous material incidents, and extreme heat or cold events.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	High

Action LEE_17 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Two-way radios for redundant communication lines for emergency teams.
Description of the Problem:	During Hurricane Beryl and winter storms, communication systems such as cell phones, internet-based apps, or landlines failed due to prolonged power outages, network congestion, or infrastructure damage. The college's emergency team relied on spotty cell coverage and had to meet physically to coordinate response and recovery efforts.
Description of the Solution:	Two-way radios provide a reliable, independent, and immediate method of communication for emergency teams and campus security.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	High

Action LEE_18 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Implement an education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate the campus community of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
Description of the Problem:	The college must enhance an education and outreach program to educate the campus community about hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damage.
Description of the Solution:	By implementing a targeted outreach program—using media, social media, flyers, workshops, and bulletins—the community can be empowered to take proactive steps to protect themselves and their property.
Estimated Cost:	N/A
Potential Funding Sources:	N/A
Implementation Timeline:	N/A
Goals Met:	1
Benefits:	N/A
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	Medium

Action LEE_19 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Implement a campus Community Emergency Response Team (CERT) program.
Description of the Problem:	The college must increase campus-wide emergency response capability, improve survival outcomes during disasters, support continuity of operations, and build a culture of preparedness and leadership within the campus community by implementing a program such as CERT.
Description of the Solution:	Develop and maintain a Campus CERT program to train students, faculty, and staff in disaster preparedness and basic emergency response skills. CERT members will assist in campus emergencies and support professional responders during hazard events. The program includes FEMA-compliant training, coordination with local emergency services, and regular exercises and drills.
Estimated Cost:	Medium ($10,000 to $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
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	Education and Awareness (EAP)
CRS Category	N/A
Priority	High

Action LEE_20 Worksheet

Lead Agency:	Lee College
Supporting Agencies:	N/A
Hazards of Concern:	All Hazards
Action Description:	Install fiber optic lines to a campus building to maintain access to critical systems, support remote operations and secondary Emergency Operations Center.
Description of the Problem:	Critical facilities, such as a building with an alternate Emergency Operations Center and student-athlete dormitories, on the exterior of the main campus do not have fiber optic lines to ensure continuity of communications and data services or to support emergency operations and situational awareness in the alternate Emergency Operations Center.
Description of the Solution:	Installing fiber optic lines to critical facilities, including the alternate EOC location, will reduce the risk of communication outages during disasters, support long-term resilience by enabling remote learning, remote work, and emergency operations, and situational awareness.
Estimated Cost:	High (> $100,000)
Potential Funding Sources:	HMGP, Local Funds
Implementation Timeline:	Short-term (< 5 years)
Goals Met:	1
Benefits:	High (> $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	Structure and Infrastructure Projects (SIP)
CRS Category	Emergency Services (ES)
Priority	High

APPENDIX A: PARTICIPATING JURISDICTION LETTERS OF INTENT

6/5/2024

Harris County Hazard Mitigation Planning Partnership
Mrs. Brittany Ray
Resilience Planner
Harris County
Office of Homeland Security & Emergency Management
6922 Katy Road
Houston, TX 77024

Harris County Hazard Mitigation Planning Partnership,

Please be advised that Lee College is committed to participating in the update of the Harris County Multi-Jurisdictional Hazard Mitigation Plan. As the Executive Director of Human Resources for this jurisdiction, I certify that I will commit all necessary resources to meet Partnership expectations as outlined in the "Planning Partners expectations" document provided by the Core Planning Team (CPT), to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

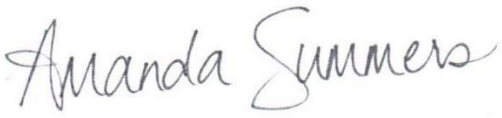
The following individuals will be our jurisdiction's primary and alternate point of contact for the mitigation planning process:

Name	**Title**	**Phone**	**Email**
Eric Williams	Security Chief	281-425-6888	ewilliams@lee.edu
Tom Quinn	Manager, Emergency & Safety Operations	281-425-6409	tquinn@lee.edu

The following individuals will serve on our jurisdiction's Local Mitigation Planning Team (LMPT):

Name	**Title**	**Phone**	**Email**
Eric Williams	Security Chief	281-425-6888	ewilliams@lee.edu
Tom Quinn	Manager, Emergency & Safety Operations	281-425-6409	tquinn@lee.edu

Sincerely,



Amanda Summers
Executive Director, Human Resources