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As the Director of the Harris County Office of Homeland Security & Emergency Management (HCOHSEM), I am pleased to share with you this summary of the activities and accomplishments for 2018.

The challenges our community faces will also bring many opportunities to make our county even more prepared, responsive and resilient.

The many talented and hardworking individuals at HCOHSEM and related agencies instill a sense of trust and confidence every day, and I feel fortunate to work with them.

We are strengthening our efforts to improve public engagement and preparedness across our complex and diverse environment. We need our community as a partner and I encourage you to get involved.

It is an honor to serve the residents of Harris County. I look forward to working with emergency management partners and community members to advance our vision, protect Harris County and advance our future prosperity.

Thank you for your support and partnership.

Sincerely,
MISSION STATEMENT

The Harris County Office of Homeland Security & Emergency Management (HCOHSEM) will be a national model of best practices in emergency planning, preparation, response and recovery.

HCOHSEM will help prepare, safeguard, protect the residents and property of Harris County from the effects of disasters through effective planning, preparation, response and recovery activities. To accomplish this mission, HCOHSEM will:

- Develop, maintain, and coordinate a comprehensive emergency management plan.
- Activate and staff an Emergency Operations Center (EOC) to coordinate and support efforts to respond to, and recover from, emergencies and disasters.
- Develop and assist in the delivery of effective public outreach programs.
- Collect, provide, and disseminate information for elected officials, the media, our residents, partners, and other stakeholders.
- Train, educate, and prepare for emergencies through the development and delivery of effective classes, drills, and exercises.

HCOHSEM BY THE NUMBERS

- **551** Exercises, drills, and trainings attended or instructed
- **415** Presentations and outreach events
- **2,136** Visitors toured Houston TranStar and Emergency Operations Center
- **658** Media inquiries and interviews
- **4,018** Notifications documented by on-call duty officer
- **1,146** Meetings with external partners and stakeholders
- **35** Emergency Operations Center activations, responses, and monitoring
- **170** Local Emergency Planning Committee and other industry group meetings
- **3,616** Communications products for web, broadcast, and social media
Harris County is composed of 34 cities, including the City of Houston, the fourth largest city in the nation and the largest in the state. The county has 57 fire departments, 125 law enforcement agencies, 22 major watersheds and more than 1,200 municipal and public utility districts.

Its proximity to the Gulf of Mexico makes Harris County vulnerable to tropical storms; however, severe weather events like flash floods and winter storms have become more prevalent to the area. Other dangers include wildfires, and hazardous material and industrial accidents.

HCOHSEM plans, coordinates and implements all emergency management and homeland security-related activities for Harris County. When a disaster occurs, HCOHSEM works with federal, state and local partners to facilitate quick and effective recovery efforts.

HCOHSEM also serves as the communication hub for the coordination of emergency public information. During a disaster, HCOHSEM keeps elected officials, stakeholders, emergency management partners, residents and the media informed.

In its effort to help build resilient communities, HCOHSEM promotes disaster preparedness year-round through regional emergency planning, training and community outreach programs.
HCOHSEM monitors all tropical systems and activates its EOC when storms move into or develop in the Gulf of Mexico. The first tropical threat of the season occurred in mid-June; however, it did not become a named storm. The worst hit areas from that disturbance were Port Arthur, Beaumont, Corpus Christi and the Rio Grande Valley. In September, several counties along the Southeast Texas Coast dealt with heavy rain and flash flooding during the Labor Day weekend. Later that month, Governor Greg Abbott issued a disaster declaration in response to a tropical disturbance in the Gulf. This shelf of low pressure in the Western Gulf caused flooding in Brazoria, Galveston and Harris Counties. Galveston recorded more than 16.5 inches of rain.

According to the National Oceanic and Atmospheric Administration (NOAA), an average hurricane season usually brings 12 named storms, six hurricanes and three major hurricanes to the Atlantic. Hurricane season is from June 1 to November 30. Peak hurricane season runs from mid-August to mid-October.

The 2018 Atlantic hurricane season spared Harris County, but caused chaos along the Gulf Coast and Eastern Seaboard. Experts had originally predicted 2018 would be a lower-than-average year for hurricanes, but this changed as the season progressed. A total of 15 named storms, including two major hurricanes — Hurricane Florence, which hit North Carolina in September, and Hurricane Michael, which made landfall in October on the Florida Panhandle — devastated hardest hit areas, claiming lives and causing extensive damage.
Harris County observed Hurricane Harvey’s one-year anniversary by reminding area residents still recovering from the storm that the county continues to work with the public and private sectors to meet their needs and create communities that are more resilient.

In advance of Harvey’s one-year anniversary, HCOHSEM worked with non-profit, faith-based and government organizations affiliated with the Harris County Long-Term Recovery Committee to promote events that would involve public participation in service initiatives. Projects ranging from home rebuilds and food bank shifts to art exhibitions and neighborhood forums served as a reminder that disaster recovery is a multi-year process while providing an opportunity for everyone to get involved.

Harvey made landfall as a Category 4 hurricane near Rockport, Texas, on August 25, 2017. The slow-moving storm moved east, dropping close to 50 inches of rain in a four-day period. Harvey claimed 36 lives in Harris County and led to one of the largest rescue efforts in Texas history. The flooding caused by Harvey damaged more than 300,000 vehicles and up to 160,000 homes and businesses. Damages in excess of $125 billion make it one of the costliest hurricanes on record.

In May 2018, HCOHSEM released its Hurricane Harvey After Action Report (AAR). The AAR reviewed the county’s overall response efforts during Harvey and identified what worked well and what needs improvement. Some of the suggestions are things that are simple to adjust, while others will require a major long-term investment of time and resources.

Created with the input and collaboration of numerous local, state, federal, private and nonprofit organizations, the report indicates that the overall response and recovery efforts by HCOHSEM and its partners demonstrated professional and well-practiced levels of planning, coordination and collaboration.

Additionally, HCOHSEM conducted an AAR on Regional Joint Information Center (JIC) operations, and other Harris County departments administered internal reviews as well.

The county is currently working to implement the lessons learned to improve its response to future disasters.
HCOHSEM’s industrial liaison is the executive administrator for the Greater Harris County Local Emergency Planning Committee (LEPC) and works with the Texas Commission on Environmental Quality (TCEQ) on statutory requirements for acquiring industry chemical inventories, also known as Tier II reports.

The industrial liaison is also a member of the East Harris County Manufacturers Association (EHCMA) and works on a committee to reinforce expectations of emergency communications during industrial incidents. Additionally, the industrial liaison serves as the administrator for the EHCMA Hurricane Status Reporting System. This system allows for the reciprocation of information between industry and emergency management before, during and after hurricane threats.

As an EHCMA protocol, HCOHSEM’s liaison also responds to industrial incidents to support facilities and provide timely information to local emergency managers and public safety officials. The information is used to determine the best course of protective action for the community. HCOHSEM is involved in nine east Harris County Community Advisory Panels (CAP) and Councils (CAC). CAC/CAP opens dialogue between residents and industry.

In 2018, HCOHSEM responded to eight incidents:

- Pipeline leak, Pasadena
- Cooling tower fire at chemical facility, La Porte
- Explosion at gas facility, La Porte
- Chemical leak inside a transport container, Deer Park
- Power outage and sulfur dioxide release at local refinery, Houston
- Explosion and fire at chemical facility, Pasadena
- Fire at industrial facility, Pasadena
- Chemical stain reported at cement facility, Galena Park
- Gas explosion, Bellville

As home to the largest petrochemical area in the country, HCOHSEM’s industrial liaison assists with planned drills and major industrial incidents across the region.

EMERGENCY OPERATIONS CENTER (EOC)

The EOC is a centralized location where public safety, emergency response, county departments, community services and other jurisdictional agencies coordinate planning and support activities. During an activation, staff from HCFMO, HCPH, transportation and law enforcement partners report to the EOC. During large-scale incidents, liaisons from local, state, federal, private and non-profit agencies will work from the EOC to coordinate an overall response.

The Harris County EOC is located at Houston TranStar. It is a state-of-the-art facility equipped with the latest technology and designed for round-the-clock operations. The EOC seats 98 and has additional meeting space in the adjacent conference room.

In 2018, the Harris County EOC activated 19 times; seven of those were for severe weather.

ON-CALL

HCOHSEM personnel monitor severe weather, industrial accidents and other emergencies round-the-clock. An assigned on-call duty officer provides situational awareness during an event and is available to assist with resource requests or function as an on-scene liaison, if needed.

In 2018, HCOHSEM documented 4,018 notifications, requiring more than 471 hours of staff time.

In 2018, HCOHSEM responded to eight incidents:

- January 18 Pipeline leak, Pasadena
- January 22 Cooling tower fire at chemical facility, La Porte
- February 14 Explosion at gas facility, La Porte
- February 19 Chemical leak inside a transport container, Deer Park
- March 22 Power outage and sulfur dioxide release at local refinery, Houston
- May 19 Explosion and fire at chemical facility, Pasadena
- July 9 Fire at industrial facility, Pasadena
- July 10 Chemical stain reported at cement facility, Galena Park
- July 17 Gas explosion, Bellville
- September 26 Power outage at steam facility causes flaring at industry complex, Channelview

INDUSTRY

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16 — A mix of mainly sleet and snow fell across much of Harris County with temperatures well below freezing. This caused multiple ice accumulations on roadways and preempted the closure of several businesses and schools. The National Weather Service (NWS) issued a winter storm warning for all areas in the region, including Galveston Island. Low temperatures of 19 degrees prompted a hard freeze warning and a wind chill advisory for the entire area.

JANUARY
2 — A trace amount of light snow and small ice pellets fell across Harris County and were officially recorded at three major climate sites for the region: Bush Intercontinental Airport, Hobby Airport and Galveston Scholes Field.

16 — A mix of mainly sleet and snow fell across Scholes Field.

FEBRUARY
21–25 — Consistent rainfall in the latter part of February caused flooding conditions in area creeks and river systems. Both the East and West Forks of the San Jacinto River, which flow through Harris County, were elevated to minor flood stage by February 25. As rainfall drained down from the north, the river remained high for several days before returning into its banks.

MARCH
19 — A rare “dry thunderstorm” event occurred across the area in mid-March. After a cold frontal passage, very dry air was ushered into the region resulting in extremely low relative humidity. Most precipitation evaporated before reaching the ground. Lightning from the dry thunderstorms created a potential for wildfire development.

28–29 — A slow moving storm system and associated frontal boundary brought heavy rain and thunderstorms to the area. Widespread amounts of one to three inches with isolated amounts of four to five inches fell across Harris County. NWS issued severe thunderstorm and tornado warnings, and several thousand homes lost power.

APRIL
3 — Results from a NWS storm survey concluded that a microburst (small, violent outflow of very cold air) occurred from a thunderstorm over Hobby Airport at 11:50 pm on Tuesday, April 3. Peak wind speeds estimated at 80 mph destroyed a hangar and damaged an aircraft.

JUNE
17–19 — The first tropical threat of the season for Harris County occurred in mid-June. Although the tropical wave never organized, nor became a named storm, it produced a threat for flooding for the entire Texas coast. The worst hit areas were Port Arthur, Beaumont, Corpus Christi and the Rio Grande Valley.

JULY
4 — Up to eight inches of rain fell in two hours in parts of Harris County on the Fourth of July. This was mainly a street flooding event and most of the bayous remained below flood stage.

19–24 — A mini heat wave swept across the state during the latter half of July. NWS issued heat advisories for Harris County and surrounding areas for several days. Temperatures topped 106 degrees with heat indices reaching 112. Emergency officials urged residents to limit outside activities and use extreme caution when in the heat. HCOHSEM coordinated with the Harris County Public Library System to open cooling centers for residents.

AUGUST
16–23 — An extended time of excessive heat occurred in August. NWS issued four different heat advisories for heat index values over 108 degrees. The heat index is a calculation that incorporates the temperature and humidity in the near surface air. When temperatures and humidity are elevated simultaneously, the risk of heat-related illnesses increases.

SEPTEMBER
1–30 — Monthly precipitation values were well above normal for the month of September across much of southeast Texas. Most of the precipitation was due to a lingering frontal boundary, ample gulf moisture and an area of low pressure. Though rainfall ended well above normal monthly totals, no daily precipitation records were set. However, Galveston did record its second wettest September on record, ending the month with a total of 24.32 inches.

OCTOBER
31 — Severe weather was in the forecast for Halloween with expectations for tornadoes and strong wind gusts. NWS issued a tornado watch in the early afternoon hours. Damage surveys confirmed that three tornadoes touched down in several nearby counties. The strongest tornado was an EF-1 with estimated peak wind speeds of 90 mph.

NOVEMBER
13–15 — The first freeze of the season occurred in mid-November after a strong cold front swept through the state. NWS issued freeze warnings for all of Southeast Texas and a few isolated spots received a trace amount of snow flurries or sleet during the morning hours of November 13.

DECEMBER
7–12 — NWS issued a flash flood watch for all of Southeast Texas as a strong system moved through the state. Widespread rainfall of four to six inches occurred, sending a few creeks and bayous into short-term overbank conditions and the East and West Forks of the San Jacinto River into flood stages for multiple days. In addition, areas receiving higher rainfall rates experienced road flooding conditions during the event.

The EOC has four levels of emergency response activation. The level of activation is determined by the Emergency Management Coordinator and depends on the severity and scope of the incident.

LEVEL 1 – MAXIMUM READINESS
Hazardous and dangerous conditions exist and are a direct threat to life or property. Maximum readiness requires multiple operational periods and numerous agencies to support a response from the Emergency Operations Center.

LEVEL 2 – HIGH READINESS
Hazardous or dangerous conditions exist or are imminent and pose a significant threat to life or property. High readiness requires multiple operational periods and numerous agencies to support a response from the Emergency Operations Center.

LEVEL 3 – INCREASED READINESS
Hazardous conditions exist but pose no direct or imminent threat to life or property. Increased readiness may require additional agencies to support a response from the Emergency Operations Center.

LEVEL 4 – NORMAL READINESS
No hazardous conditions are imminent and the normal capabilities of the Emergency Operations Center do not require the support of other agencies.
HCOHSEM collaborates with local, state and federal partners to develop and coordinate programs to meet the region’s homeland security needs. HCOHSEM’s Intelligence Task Force (ITF) continues to provide timely, actionable intelligence to the local public safety community via its Threat Information Summary Report (TISR), In Focus and Quarterly Suspicious Activity Review (SAR) products.

The TISR is a strategic ITF product released monthly. It focuses on a wide range of local, regional, national and international intelligence trends and issues of interest to HCOHSEM’s partner organizations in Harris County. It also features SARs submitted by these agencies.

In 2018, the ITF also released six issues of In Focus, which looked in-depth at specific intelligence topics of potential interest to consumers, and launched the Quarterly SAR that recapped and updated the aforementioned SARs.

Additionally, the ITF continued to expand its distribution list for these products. In particular, in the wake of the Parkland and Santa Fe school shootings, the group focused upon adding local school districts police departments to its consumer base.

ITF team members spoke at HCOHSEM’s quarterly homeland security briefings; regularly interacted with partner agencies and other area public-safety organizations; and participated in security and intelligence-related government and industry groups.

The ITF is increasingly involved in working with and supporting the Houston Regional Intelligence Sharing Center (HRISC), also known as the regional “Fusion Center.” ITF team members meet regularly with high-level representatives from federal partner agencies to brief them on the innovative ITF model for information sharing with local homeland security and emergency management officials. In terms of professional development, ITF team members attend events such as the Texas Emergency Management Conference in San Antonio, the National Homeland Security Conference and the annual Law Enforcement Intelligence Units/International Association of Law Enforcement Intelligence Analysts Annual Training Event. They also participate in trainings, exercises or discussions on security-related topics such as school safety, financial-crimes analysis, weapons of mass destruction, mass-casualty events and threats to critical infrastructure.

The ITF is also involved in all EOC activations. During these responses, team members keep emergency management officials and partner organizations informed about important developments in and around Harris County. In addition, the ITF serves as a liaison with the local law enforcement and fire/EMS communities.

The ITF consists of a full-time intelligence supervisor who works with team members from HCOHSEM first responder partner organizations. In 2018, these included the Harris County Fire Marshal’s Office (HCFMO), Harris County Toll Road Authority (HCTRA), Harris County Constable Precinct 1, Precinct 5 and Precinct 8 and the Harris County Sheriff’s Office (HCSO).
HCOHSEM works with law enforcement, fire, flood control, health and transportation officials year-round and relies on these partners to support and coordinate EOC operations during disasters. Depending on the situation, we call on partners from the local, regional, state and federal level to support response efforts. HCOHSEM builds and maintains these vital relationships through exercises, regional meetings and training opportunities.

HARRIS COUNTY SHERIFF’S OFFICE
The Harris County Sheriff’s Office (HCSO) Emergency Management Unit (EMU) at Houston TranStar is the sheriff’s liaison to HCOHSEM. The EMU assists with daily operations, incident situational awareness and training events. Deputies coordinate planning and response activities with local law enforcement organizations and federal agency partners. The EMU also maintains and updates homeland security emergency plans, and participates in various exercises/drills, EOC activations and other community outreach programs.

In 2018, the EMU assisted HCPH with the Community Assessment for Public Health Emergency Response (CASPER) program as teams went door-to-door conducting follow-up surveys designed to provide feedback from residents recovering from Hurricane Harvey.

HARRIS COUNTY FIRE MARSHAL’S OFFICE
HCOHSEM works with the Harris County Fire Marshal’s Office (HCFMO) to coordinate with a variety of response and private industry partners during an emergency. This coordination maintains a common operating picture and enhanced situational awareness.

In 2018, the HCFMO staffed the Fire/Rescue/HazMat Branch (Fire Desk) during EOC activations in order to provide critical coordination and operational support between county officials and emergency response partners from all levels of government.

HCFMO has a dedicated EOC activation team of 12 personnel available to provide 24 hours of continuous operations through the duration of the incident. Additionally, HCFMO also supports Harris County during emergencies by providing staging operations for emergency response assets and support in shelter management, and by conducting post disaster infrastructure surveys throughout the county.

PORT SECURITY
The HCFMO HazMat Response Team coordinates closely with the United States Coast Guard, local law enforcement and industry professionals to ensure safety initiatives and response capabilities are in place at the Port of Houston for the people who work there and live in the surrounding communities.

ACTIVE SHOOTER AND HOSTILE EVENT RESPONSE COORDINATION
Based on the dual certification of HCFMO employees (law enforcement/fire), this office is actively engaged with local law enforcement, first responders, hospitals, school districts and businesses to train/plan in response operations for active shooter incidents. HCFMO works to ensure facilities are following the recommended and mandatory practices for fire and life safety. Fire Marshal Laurie Christensen serves...
as a principle member of the NFMA 3000: Standard for an Active Shooter/Hostile Event Response (ASHER) Program.

HARRIS COUNTY FLOOD CONTROL DISTRICT

HCOHSEM works closely with the Harris County Flood Control District (HCFCD) year-round to keep the region informed during severe weather events. In 2018, HCFCD staff supported several severe weather activations in the Harris County EOC.

HCFCD’s weather experts and its Flood Warning System (FWS) help emergency management officials make critical decisions that reduce the loss of life, injuries and property damage. Local meteorologists and the NWS use FWS data during severe weather events. Residents can also monitor local rainfall amounts and bayou/stream levels during storms at www.harriscountyfws.org.

PROJECTS

HCFCD has a significant number of flood damage reduction projects occurring all over Harris County as part of its ongoing Capital Improvement Program (CIP) and the 2018 Bond Program.

HCFCD also relies on securing funding from the federal government, through programs administered by the Federal Emergency Management Agency (FEMA) and flood damage reduction project partnerships with the U.S. Army Corps of Engineers. Securing federal funds enables HCFCD to leverage its funding resources to further plan, design and implement additional CIP and Bond projects on its own and with other local partners, including cities and community groups within Harris County.

In 2018, funding for HCFCD projects was greatly enhanced when voters approved $2.5 billion in bond funds. This new funding enables an even more aggressive implementation of flood damage reduction projects across Harris County.

HARRIS COUNTY FLOOD BOND

On May 1, Harris County Commissioners Court voted to request a special election in August for a bond referendum that would allow residents to approve as much as $2.5 billion to finance critical flood-control projects. The election took place on August 25 to coincide with Hurricane Harvey’s one-year anniversary.

The bond proposal, the largest investment toward flood and drainage improvements in the county’s history, offers an opportunity to accelerate the delivery of flood damage reduction projects to both assist with recovery after previous flooding events and to make Harris County more resilient in the future. It is also key to accessing federal funds.

In the months leading up to the bond election, HCFCD hosted 23 community engagement meetings and attended other outreach activities to gather public input about potential bond projects in each watershed.

HCFCD’s community engagement activities resulted in more than 70,000 visitors to the bond program website; approximately 3,800 residents attended the community meetings; and input from more than 2,400 individuals added 38 community-identified capital projects to the list of almost 200 projects to be funded by the bond.

The bond package allows HCFCD to spend around $450 million annually on flood projects over the next 10 to 15 years. Going forward, HCFCD will prioritize, plan and build projects with bond funding and will provide transparent tracking of progress on those projects along the way.

HARRIS COUNTY PUBLIC HEALTH

HCOHSEM works with Harris County Public Health (HCPH) to ensure the region is prepared to handle potential health emergencies. During an emergency, HCPH staff deploys to the Harris County EOC to handle and coordinate health emergencies.

HURRICANE HARVEY RECOVERY

One year after Hurricane Harvey, HCPH continued to provide recovery assistance to area residents. Community Assessment for Public Health Emergency Response (CASPER) surveys have helped authorities understand impacted residents, what their current needs are and how to better prepare them for future emergencies.

Throughout the year, HCPH staff and volunteers held mobile health events in affected neighborhoods. HCPH activated its mobile fleet consisting of bus-like mobile units offering free services, including the following:

- Mobile Market Unit — Free fruits and vegetables
- Mobile Pet Adoption Unit — Pet vaccines, microchipping, pet food and flea medication
- Mobile Environmental Public Health Unit — Free cleaning supplies and food and water safety information
- Mobile Virtual Health Response Unit — Mobile command post, where three video screens on the outside of the unit display services offered and additional recovery resources
- Woman Infant Children (WIC) services — Free baby formula and program registration

The mobile units provided health services for more than 900 patients, dispensed food for more than 2,000 families and supplied pet services to more than 1,400 animals.

MOSQUITO TRANSMITTED VIRUSES

In the last few years, mosquito transmitted viruses have kept local health authorities very busy. HCPH reported seven cases in 2018, including one West Nile virus related death in September.

The Zika virus was not prevalent in Harris County in 2018; however, in 2017, HCPH reported four travel-related cases; and in 2016, Harris County lead the state with 68 travel-related cases and one confirmed death.

HCPH educates residents by promoting personal protection measures and techniques to reduce or eliminate mosquito-breeding sites.
HCOHSEM develops and maintains emergency operation plans based on an all-hazards approach and following state and federal guidelines. Harris County’s Basic Plan and its 22 annexes define and describe how the county will respond to incidents and provide guidelines for emergency management activities including mitigation, preparedness, response and recovery. HCOHSEM strives to meet FEMA’s “Whole Community” approach to planning and integrates guidance for access and functional needs (AFN) residents into current plans.

In 2018, the Planning Section:

- Updated and received State of Texas approval on six annexes to the Basic Plan
- Created or updated more than 25 internal plans and documents
- Produced 543 mapping products

HOUSTON TRANSTAR

Established in 1996, the Houston TranStar consortium is a partnership of four government agencies that are responsible for providing transportation and emergency management services to the Greater Houston Region. The Houston TranStar building is home to HCOHSEM, the Texas Department of Transportation (TxDOT), the Metropolitan Transit Authority (METRO) and the City of Houston.

ROADWAY FLOOD WARNING SYSTEM

In 2018, Houston TranStar released an innovative roadway flood-warning feature, created through a collaboration with HCFCD and HCOHSEM, that helps travelers avoid flooded roads during rain events. The Roadway Flood Warning System also helps METRO bus controllers, commercial vehicle operators and emergency responders map safer routes during heavy rain events.

To develop this roadway flood-warning feature, Houston TranStar and the Texas A&M Transportation Institute worked with the HCFCD to overlay rainfall sensor data on the TranStar traffic map. This information, paired with TranStar’s real-time roadway data, helps predict which areas are at risk for localized street flooding.

This flood-warning feature is available on Houston TranStar’s real-time traffic map at www.houstontranstar.org and on its mobile app.

Houston TranStar was the first center in the nation to combine transportation and emergency management technologies; it is also home to HCOHSEM and the Harris County EOC.
Annex Updates
HCOHSEM updates annexes every five years as required by the state of Texas to keep its advanced emergency management profile. Planners review annexes for relevance and accuracy in consultation with the partners named in the documents. Once completed, the annexes go to the Harris County Commissioners Court for approval, then they are submitted to the Texas Division of Emergency Management. Maintaining up-to-date annexes allows HCOHSEM to receive Emergency Management Performance Grant funding. The following six annexes were updated in 2018:

Annex C – Shelter & Mass Care: Outlines the organizational arrangements, operational concepts, responsibilities, and procedures to protect evacuees and others from the effects of a disaster or emergency by providing shelter and mass care. Providing shelter and care is complex and involves partners from the public, private, and non-profit sectors.

Annex G – Law Enforcement: Defines the organization, operational concepts, responsibilities, and procedures to perform emergency law enforcement requirements. This annex is applicable to all agencies, organizations, and personnel assigned law enforcement functional responsibilities. The responsibilities include the protection of life and property, enforcement of criminal laws, and coordination of or assistance in the movement of people and resources in and around the affected area. The Harris County Sheriff’s Office leads law enforcement within the county.

Annex H — Health & Medical Services: Provides for the coordination of health and medical resources needed to respond to public health and medical care needs prior to, during, and following a significant natural disaster or man-made event. Harris County Public Health is the lead partner for this annex.

Annex O — Human Services: Provides human services support to people who require food, new clothing, mental health services, and victim’s compensation in the aftermath of an emergency. Like Annex C, multiple partners from all sectors of society are involved in the planning process.

Annex P — Mitigation: Describes the organization of the Harris County threat and hazard mitigation programs, and assigns tasks and responsibilities for coordinated threat and hazard mitigation planning, implementation, activities, and actions. It also addresses mitigation as a long-term, on-going process, and identifies planning and implementation actions applicable to both pre-incident and post-incident situations. HCOHSEM updated Annex P a year early in order to be relevant to the 2020 Hazard Mitigation Plan update.

Plans & Documents
Multi-Hazard Mitigation Action Plan
The current version of the Harris County Multi-Hazard Mitigation Action Plan (MHMAP) will expire in 2020 and HCOHSEM kicked off the nearly two-year planning process in September 2018. The plan provides a vision to reduce risks from natural hazards and strategies to build communities that are more resilient.

The MHMAP is required for the county, as well as each jurisdiction within the county, to maintain eligibility for the FEMA Hazard Mitigation Assistance grants, which includes the following programs: 1) Hazard Mitigation Grant Program, 2) Pre-Disaster Mitigation and 3) Flood Mitigation Assistance.

The planning partnership consists of Harris County, Harris County Flood Control District, municipalities, special purpose districts, private non-profits, and several stakeholder organizations. Public meetings and workshops will allow residents the opportunity to provide input.

Post-Disaster Commodity Tracking
Two years after Hurricane Ike in 2010, HCOHSEM created a Business Commodities Plan to track the availability of basic commodities (food, water, ice) in the aftermath of disasters. The Harris County Fire Marshal’s Office is the lead response agency for incidents of this type.

State of Texas Emergency Assistance Registry
HCOHSEM’s Planning Team manages the data collected from the State of Texas Emergency Assistance Registry (STEAR). STEAR provides local emergency planners and responders with additional information on the needs in their community. Residents who register with STEAR provide information about their specific situation to emergency management officials who will work to help them evacuate safely, or provide them with the appropriate life-sustaining help they need during a disaster. This information also helps emergency planners as they develop plans and procedures for assisting residents during emergencies. At the end of 2018, nearly 6,000 Harris County residents had registered for evacuation assistance.

Geographic Information System
HCOHSEM uses Geographic Information Systems (GIS) for planning and situational awareness. This provides decision-makers with the ability to visualize hazards, impacts and key resources in the county and region. Emergency managers can then identify the best locations for shelters, pre-positioning resources and evacuations. GIS models and simulation capabilities allow decision-makers to advise FEMA on tracking supply chain distribution networks on a regional and national basis. This project promises to improve understanding on how disasters affect the flow of essential commodities on a national level, including both imported and domestically produced goods. In addition, it could assist in tracking pharmaceuticals and fuel production.
In addition to managing the flow of goods and services during emergency operations in Harris County, HCOHSEM’s Logistics Section also updates and maintains the EOC’s communications systems in order to efficiently respond to and mitigate emergencies. The team completed numerous projects and participated in and/or conducted various training courses at the regional, state and national levels in 2018.

One year after Hurricane Harvey, the Logistics Section continues to support local and regional entities with recovery efforts, as well as coordinating with partners to increase readiness and implement lessons learned. Logistics has also worked to expand its response capabilities by increasing assets needed to respond to disasters.
Training and exercises support Harris County’s mission of being a model of best practices, as proven during a highly active year of response in 2018. It was a robust training year, with focus on operational coordination and communication, critical infrastructure, mass power outages and terrorism.
HCOHSEM works in collaboration with Harris County Citizen Corps to educate residents on how they can protect their families and neighbors before, during and after an emergency. This makes communities safer, stronger and better prepared to respond to threats of terrorism, crime, public health issues and disasters of all kinds.

In 2018, HCOHSEM hosted 95 exercises and participated in 28 partner exercises throughout the region, including the following:

**NGFR FULL-SCALE EXERCISE**
The DHS NGFR Apex Program works with first responders across the country to ensure the technology they use while responding to an emergency keeps them better protected, connected and fully aware. In December, Harris County participated in this operational experimentation exercise held at the Port of Houston.

The goal of the NGFR exercise was to assemble first responders and industry together in the hopes of identifying capability gaps in currently used technology. By collaborating, participants were able to look at the gaps and find solutions in the effort of improving responder’s situational awareness and safety.

**EARTHEX 2018 TABLETOP EXERCISE**
Harris County is no stranger to long-term power outages due to tropical weather, as experienced during Hurricane Ike in 2008. In August, HCOHSEM took this scenario several steps further by exercising its response to a subcontinent-scale power outage with cascading infrastructure failures.

This unique exercise allowed members of the EOC response team to run through the effect of a multi-week power outage by reviewing and evaluating current response and consequence management plans. HCOHSEM was able to take lessons learned from this exercise and establish action items to strengthen its current terrorism and severe weather plans.

**COMMUNICATIONS EXERCISE (COMMEX)**
Over the past several years, HCOHSEM has worked to train personnel to fill key roles in its EOC through position-specific trainings. Part of this initiative has been training the communications team in key positions such as Communications Unit Leader (COML) and Communications Technician (COMT).

In November, HCOHSEM held a Communications Unit Exercise at the Harris County Fire and Sheriff’s Training Academy. This exercise provided an opportunity for COML and COMT trainees to demonstrate proficiency and a chance to complete the requirements in their respective position task books.

The purpose of this one-day exercise was to simulate scenarios that COMLs and COMTs might encounter during an actual incident. The exercise allowed more than 150 participants to complete their task books to earn certifications for their roles.

**PARTNER EXERCISES**
In 2018, HCOHSEM also participated and or assisted with several partner exercises, including exercises held by our non-profit and private industry communities. Some notable exercises included:

- Splendora Active Shooter Exercise
- Northgate MUD District 1 Tabletop Exercise
- Vopak Tabletop Exercise
- Various LEPC and industrial exercises
The Communications Section provides public information, crisis communication and social media support to HCOHSEM, while focusing on outreach and community engagement to increase emergency preparedness.

HARRIS COUNTY CITIZEN CORPS

Harris County Citizen Corps offers year-round training and numerous opportunities for local residents to volunteer in their communities. In 2018, the number of trained members of the Community Emergency Response Team (CERT) program grew to almost 35,000.

The CERT program teaches disaster preparedness and basic response skills in fire safety and suppression, search and rescue tactics and disaster medical operations. CERT volunteers are trained to respond safely, responsibly and effectively to emergency situations, but they can also support their communities during non-emergency events as well.

In addition to the more than 34,931 trained volunteers involved in 276 CERTs, Harris County Citizen Corps membership includes 22,026 volunteers from 24 Volunteers in Police Service agencies, 4,165 volunteers in the Medical Reserve Corps; 6,187 volunteers from the 351 neighborhoods participating in the National Neighborhood Watch Program; and 24 Fire Corps programs.

2018 VOLUNTEER ACTIVITIES

Harris County Citizen Corps members continue to support local agencies and organizations in post-Harvey operations and activities. Because of the catastrophic impacts from the storm, Harris County Citizen Corps members reinforce their capabilities and skills by attending training focused on shelters, animal response, CPR and leadership.

Other volunteer activities include:
- BP MS 150
- CERT Rodeo
- Extreme Weather Ready Expo
- Pasadena Community Safety Fair & Hurricane Workshop
- Wings Over Houston
- Trash Bash 2018
- Fire Festivals and Open Houses hosted by local fire departments
- Community Assessment for Public Health Emergency Response (CASPER)
- Walk Like MADD
- Mass Casualty Exercises

CERT RODEO

The Harris County Citizen Corps hosted a successful CERT Rodeo Round-up at the Harris County Fire and Sheriff’s Training Academy in Humble. Although the day began with torrential rains, 17 CERT teams from across the state gathered to test their skills in basic medical operations, search and rescue, fire suppression, incident command, emergency preparedness and hazmat recognition. More than 450 volunteers participated at the 12th annual event.

TEEN CERT AND JUNIOR MEDICAL RESERVE CORPS (MRC) – HEALTH OCCUPATION STUDENT ORGANIZATION (HOSA) PARTNERSHIP

During the 2018-2019 school year, Teen CERT was offered at 62 high schools within 26 area school districts. With more than 5,200 students enrolled, the Teen CERT program saw an increase of more than 1,600 students from the previous school year.

Klein High School HOSA placed first in the Medical Reserve Corps Partnership category at the 2018 HOSA International Leadership Conference. The HOSA team at Klein High School had formed a partnership with the Harris County MRC and supported MRC activities that would improve public health, increase emergency response capabilities and strengthen the resiliency of their community. The six-person team attended several classes such as Psychological First Aid and Community Emergency Response Team, and earned their Emergency Medical Technician (EMT) certifications. With the guidance of their HOSA advisor and MRC coordinator, the team volunteered at events throughout Harris County, and organized events at Klein High School and in the local community. In total, they volunteered 1,400 hours, earned six national certifications each, and raised approximately $2,000 to support specific causes the team selected, such as childhood cancer research. Team members also received honorary MRC recognition pins and the esteemed HOSA Barbara James Silver Service awards for their hours of service to their community.

Klein High School HOSA had a total of 30 students advance to compete at the 2018 HOSA International Leadership Conference. Of the 30 students, 21 placed in the top 10 in the world. Klein HOSA won a gold medal as public health team and earned fifth place as community emergency response team.
READY HARRIS ALERTS
Harris County uses an emergency notification system known as Ready Harris Alerts. During a crisis, Ready Harris Alerts provide timely information and updates; during non-emergencies, HCOHSEM provides news features, preparedness and safety tips.

To improve the delivery of crucial information, HCOHSEM switched service providers in 2018. Residents can now choose how they receive emergency notifications. Messages are available via text, email, voice calls and social media. The new notification system also allows targeted messaging to subscribers in areas directly affected by a particular event.

SOCIAL MEDIA
Social media is a strong and growing influence in emergency management. It allows emergency managers to disseminate information to wider audiences, interact with the public, gain better situational awareness and improve partner collaboration. HCOHSEM is very active on Facebook, Twitter, Instagram and other social media platforms.

REGIONAL JOINT INFORMATION CENTER
HCOHSEM maintains the Regional Joint Information Center (RJIC), which serves as the central location to coordinate multi-agency efforts to issue timely information to emergency management partners, the public and news media.

HCOHSEM’s Communications Section and strike team members consisting of public information professionals from other Harris County departments and key external partners staff the RJIC. In 2018, the RJIC activated 19 times to support other Harris County departments and key external partners.

WIRELESS EMERGENCY ALERTS
HCOHSEM has been active in advocating and educating on enhancements to the FEMA Integrated Public Alerts and Warnings System (IPAWS), Wireless Emergency Alerts (WEA) and Emergency Alerts System (EAS). HCOHSEM led the way in advocacy through a series of Op-Eds, national webinars and official comment letters to the Federal Communications Commission (FCC). A landmark ruling from the FCC in January 2018 will improve the geo-targeting capabilities of emergency alerting technology.

Since then, HCOHSEM has advocated for additional enhancements to these systems, including multilingual capabilities, multimedia content, extended message length and greater overall use of the systems by public safety officials nationwide.

HCOHSEM Deputy Emergency Management Coordinator Francisco Sanchez has served as a member of the Communications Security, Reliability and Interoperability Council (CSRIC) since 2013. His work has increased the role public safety partners play in the future of alerts and warnings, and further developed relationships with the wireless industry and the FCC.

HCOHSEM also developed and conducted a test of IPAWS system capabilities as part of the U.S. Department of Homeland Security (DHS) Next Generation First Responder Exercise in December 2018.

HURRICANE SEASON CAMPAIGNS
Every year, HCOHSEM holds several events before and at the beginning of hurricane season:

- Hurricane Preparedness Week promotes preparedness ahead of hurricane season.
- Countdown to the start of hurricane season on numerous digital billboards across the county.
- Hurricane season public service announcements produced and distributed to local television and radio stations.
- HCOHSEM’s hurricane season kickoff provides media the opportunity to ask questions and to broadcast live from the Harris County EOC.
- HCOHSEM’s meteorologist luncheon. Emergency managers, public officials and NWS forecasters meet with local TV meteorologists to discuss the upcoming hurricane season.

NATIONAL PREPAREDNESS MONTH
September is National Preparedness Month (NPM) and HCOHSEM supports this annual effort led by FEMA and sponsored by the Ready Campaign.

Throughout the month of September, HCOHSEM engages in preparedness initiatives and encourages residents to follow Ready Harris on social media for important information about making and practicing an emergency plan, learning lifesaving skills, getting flood insurance and saving for an emergency.

HCOHSEM also promotes its ReadyHarris app that sends emergency alerts, provides guidance for creating a personalized family disaster plan, offers tip sheets, maps evacuation routes and locates local emergency services. The app is free and available at the App Store and Google Play.

STORM READY
In October 2018, NWS recertified Harris County as a StormReady County. The StormReady designation, originally obtained in 2015, was extended for another three years.

Less than 20 percent of all Texas counties are designated StormReady. To be certified, a NWS advisory board reviews the county’s application and inspects its emergency management operations capabilities.

The StormReady designation is also significant for earning Community Rating System points. These points are recognized by the FEMA’s National Flood Insurance Program and help keep flood insurance rates affordable.

INTERNSHIP PROGRAM
Established in 2009, HCOHSEM’s internship program is successfully offering college students the opportunity to learn about emergency management. The program strengthens fundamental emergency management concepts and communication skills that prepare interns for future employment opportunities. To date, the internship program has hosted more than 95 students. Six former interns are now full-time employees at HCOHSEM.

HCOHSEM also collaborates with the Michael E. DeBakey Veterans Affairs (VA) Medical Center and the Chapter 31 Vocational Rehabilitation and Employment program in Houston to provide military personnel that are transitioning out of the military an opportunity to broaden their skills and learn about the role of local government in public safety through the Veterans Integration Program (VIP). The VIP program offers veterans a chance to explore diverse career opportunities, and HCOHSEM is proud to be a partner.
HCOHSEM promotes personal preparedness through a highly active public outreach program and works closely with partners in the public and private sector, faith-based organizations, school districts and other groups to promote an all-hazards approach to disaster preparedness.

PUBLIC SERVICE ANNOUNCEMENTS
HCOHSEM released a new disaster preparedness public service announcement (PSA) in September, just in time for National Preparedness Month. The PSA is part of Harris County’s ongoing public awareness campaign to encourage residents to prepare for emergencies. Images remind the public of the “neighbor helping neighbor” spirit that has helped Harris County residents recover from disasters.

HCOHSEM produced 15 and 30-second spots in English and Spanish, and distributed them to local media and emergency management partners. The PSAs were promoted on social media and are posted on YouTube.

EVENTS & PRESENTATIONS
The 2018 hurricane season was one of the busiest on record for outreach activities. Following major disaster declarations in 2015 and 2016, and Hurricane Harvey in August 2017, community interest spiked in preparedness education. In 2018, HCOHSEM took part in 415 outreach events and presentations.

HCOHSEM also updated its brochures, all-hazards disaster guides and essential checklists to encourage residents to prepare and help build resilient communities. Digital copies of these publications are available at www.readyharris.org.

EXTREME WEATHER READINESS EXPO
HCOHSEM participated in and supported one of the largest preparedness events of 2018: the NWS Extreme Weather Readiness Expo, held at the George R. Brown Convention Center. More than 3,000 residents from across the area visited with dozens of exhibitors, TV meteorologists, emergency managers and other experts to learn about hurricane preparedness.
The Emergency Management Association of Texas (EMAT) recognized Harris County Emergency Management Coordinator (EMC) Mark Sloan as 2018 Emergency Manager of the Year at its annual conference in San Marcos, Texas. Last June, HCOHSEM received two awards at the annual Texas Association of Municipal Information Officers (TAMIO) conference in Georgetown, Texas. The TAMIO Awards of Honor were for communication products in two categories: marketing and technological services.

OPERATON IMPACT
In 2018, HCOHSEM collaborated with Interfaith Ministries for Greater Houston on Operation IMpact, a countywide campaign that focuses on hurricane preparedness. Volunteers distributed boxes of shelf-stable meals and bottled water to more than 4,000 senior citizens from the Meals on Wheels program. HCOHSEM provided hurricane information kits with valuable information about available services for seniors.

EOC TOURS
In 2018, more than 2,136 visitors toured the EOC and Houston TranStar, including local, state and federal officials and dignitaries from Australia, Ecuador, France and Kenya.

To request a tour or presentation go to www.readyharris.org.

SMART PAWZ
HCOHSEM, HCPH, Houston SPCA, Best Friends Animal Society and Friends of County Pets teamed up to host a special event to promote pet preparedness. The free Smart Pawz event was open to the public and their pets. Dozens of pet owners attended and received information about how to help keep their pets safe during disasters and everyday emergencies.

AWARDS & RECOGNITIONS
EMAT recognizes Harris County EMC Mark Sloan as 2018 Emergency Manager of the Year.

The Emergency Management Association of Texas (EMAT) recognized Harris County Emergency Management Coordinator (EMC) Mark Sloan as 2018 Emergency Manager of the Year at its annual conference in San Marcos, Texas. Last June, HCOHSEM received two awards at the annual Texas Association of Municipal Information Officers (TAMIO) conference in Georgetown, Texas. The TAMIO Awards of Honor were for communication products in two categories: marketing and technological services.
• 2017 EMAT Technology and Innovation Award for Threat Information Summary Report
• 2017 TAMIO Award of Excellence for ReadyHarris app
• 2016 EMAT Outstanding Emergency Management Public Information Award
• 2016 EMAT Community Service Award – Teen CERT Coordinator
• 2016 TAMIO Award of Excellence for HCHOSEM’s 2014 Annual Report
• 2016 TAMIO Award of Excellence for HCHOSEM’s 2015 Hurricane Public Service Announcements (PSA)
• 2015 FEMA Mitigation Best Practices: Collaborative Community Resilience: Multi-Jurisdictional Hazard Mitigation Planning
• 2014 DHS Innovative Practice: Infrastructure Systems: Developing a Critical Infrastructure and Key Resources (CIKR) Plan
• 2013 FEMA Individual and Community Preparedness Award – National Citizen Corps Honorable Mention for Outstanding CERT Initiatives
• 2013 EMAT Excellence in Emergency Management Award – STINGER
• 2012 FEMA incorporates HCHOSEM’s Tweets in Social Media Training Course
• 2011 Jack Colley Citizen Corps Leadership Award
• 2011 EMAT Excellence in Emergency Management Award – Joint Information Center Plan
• 2011 EMAT Excellence in Emergency Management Award – Business Commodities Plan
• 2011 FEMA Innovative Practice: Emergency Public Information: HCHOSEM’s Implementation of a Social Media Protocol
• 2010 Honorable Mention: National Citizen Corps Achievement Awards – Celebrating Resilient Communities
• 2010 FEMA Innovative Practice: Interactive Hurricane Evacuation Map
• 2009 DHS Innovative Practice: Lessons Learned: Joint Information Centers: Increasing Personnel to Operate a Phone Bank after an Incident
• 2009 FEMA Practice: Zip Code Based Evacuation Plan
• 2009 National Citizen Corps Council Achievement Award for Volunteer Integration
• 2008 Honored by President George W. Bush at the White House
• 2007 President’s Call to Service
• 2006 Governor’s Volunteer Award for Community Capacity Builder
• 2003 Best Practices Innovation Award from the Texas Association of Counties
Harris County Judge Lina Hidalgo

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