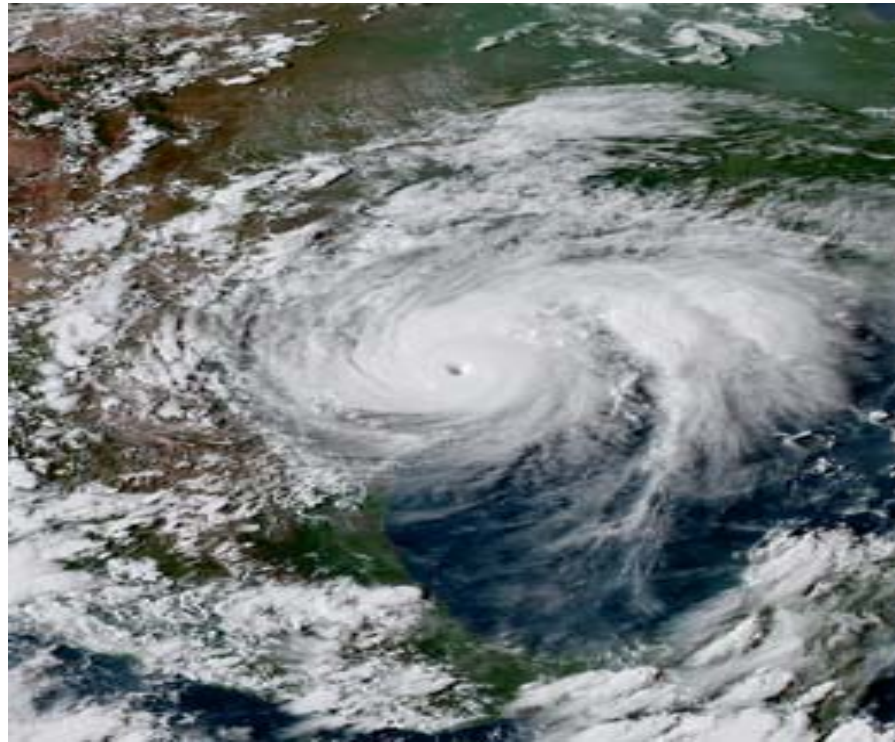




Hurricane Harvey

After Action Report

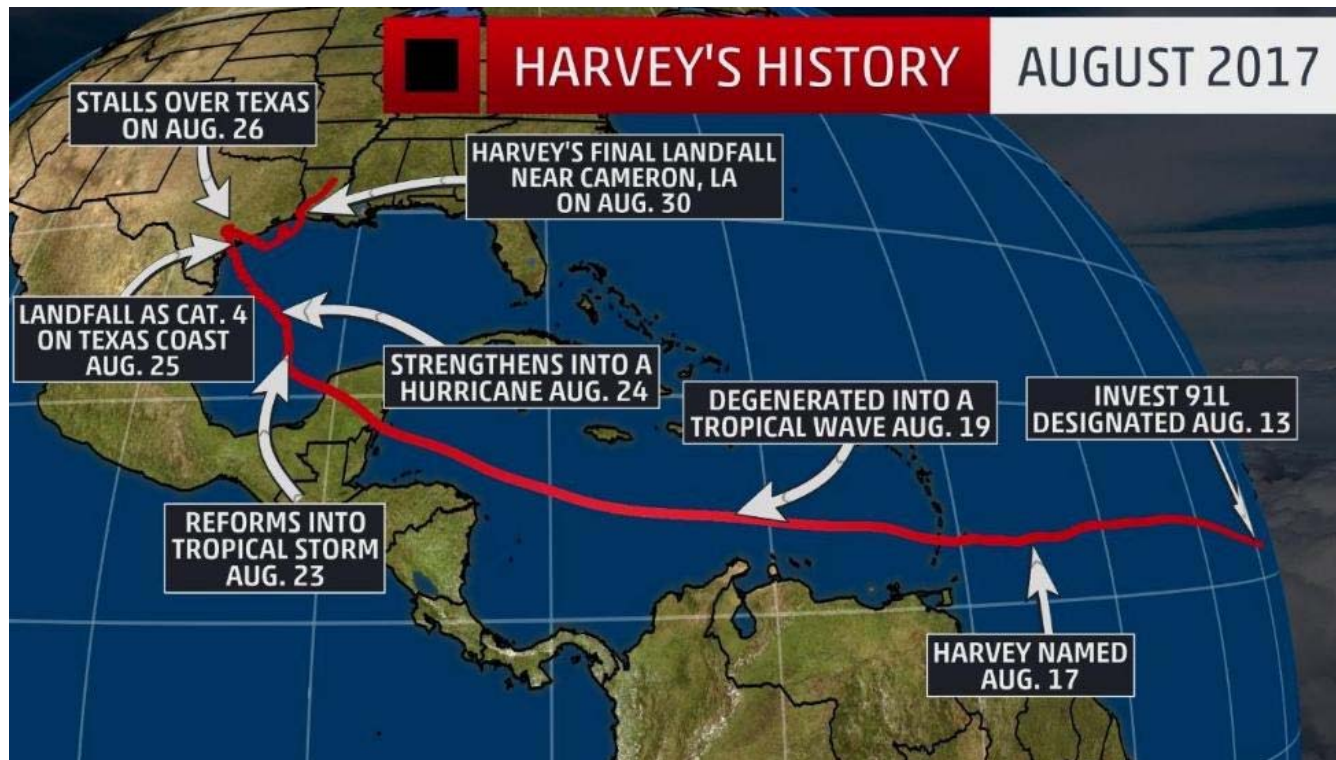


Final 12-7-2017



Hurricane Harvey

After Action Report





Event Timeline



August 22, 2017 – Tuesday

Conference Call with State Operation Center/NWS
CCISD/Red Cross Meeting
Life-size Conference Call with Nueces County EMC's
Marina Reverse Alert was sent out (410)

August 23, 2017 – Wednesday

Conference Call with State Operation Center/NWS
Life-size Conference Call with Nueces County EMC's
Reverse Alert went out to Weather Opt-Ins (11,481)

August 24, 2017 – Thursday

Press Conference 1 pm – Voluntary Evacuation

- Residents in low lying areas; zones A and B

Corpus Christi Gym – Evacuation Process begins

- 3 RTA Buses Robstown; 73 evacuees; 1 dog
- 11 CCISD Buses; 240 evacuees



Event Timeline Continued



August 25, 2017 – Friday

EOC Activation

Reverse Alert Wesley Seale Dam – Flooding notification (121)

Reverse Alert went out to City of Corpus Christi (120,066)

Del Mar Safe Room – 1st Responders

Tuloso-Midway High School Safe Room Open as a Refuge

Calallen Safe Room - City Employee Shelter

Corpus Christi Gym – Evacuation

- 9 Charter Buses; 414 evacuees

August 26, 2017- Saturday

EOC Activation – moved to the airport

Calallen Safe Room closed

August 27, 2017 – Sunday

EOC Activation - Airport

Del Mar Safe Room closed



Event Timeline Continued



August 28, 2017 – Monday

EOC Activation - Returned to Fire HQ

August 29, 2017 – Tuesday

EOC Activation

August 30, 2017 – Wednesday

EOC Activation

Advanced Repatriation Team sent to San Antonio

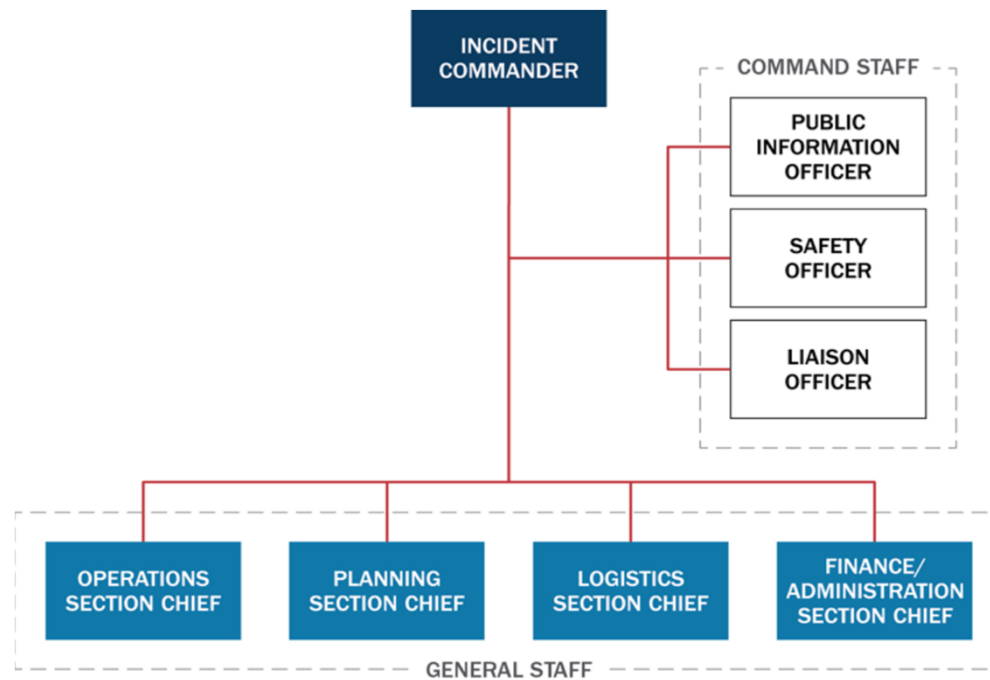
August 31, 2017 – Thursday

Repatriation

- 22 CCISD Buses; 2 Charter Buses
- 392 people , 1 service animal and 31 pets



City of Corpus Christi Emergency Operation Center





Hurricane Harvey

Operation Section



The Operation Section is responsible for tactical activities that typically focus on saving lives, reducing the immediate hazard, protecting property and the environment, establishing situational control, and restoring normal operations. Lifesaving and responder safety are always the highest priorities.

Major Strengths

- Prior training and activations amongst the members of the Operation Section was an advantage, staff were situated in their appropriate place during activation
- Excellent coordination between EOC and Hospitals (CBRAC)
- Good communication between field and EOC
- Strong usage of WebEOC

Areas of Improvements

- Delegation of responsibilities
- Coordination with other agencies
- Communication with DOC
- WebEOC Star request process
- Establish regular meeting schedules within the Operation Section – establish Battle Rhythm



Hurricane Harvey

Planning Section



The Emergency Management Division provided annual training to Planning Section team member prior to hurricane season. Staff in the Planning Section collect, evaluate, and disseminate operational information pertaining to the incident. Planning Section personnel prepare incident Action Plans (IAPs), incident maps, and gather and disseminate information important to incident.

Major Strengths

- Coordination with other Sections and outside agencies
- Developed IAPs and distribute the plans to first responders
- Positive attitude of work crews, team players were willing to assist with any task
- Utilized WebEOC for improved communication

Areas of Improvements

- More organizational structure during event
- Scheduled meetings to establish a battle rhythm
- Utilize GIS more for real-time data
- EOC location and lack of consistent power supply made operation within the EOC difficult



Hurricane Harvey

Logistics Section



Logistics Section staff provides for all the incident's support needs, such as ordering resources and providing facilities, transportation, supplies, equipment maintenance and fuel, communications, food and medical services for incident personnel.

Major Strengths

- Great coordination with Logistics/Operations
- Great diversity amongst team members with good knowledge base
- Team members were highly dependent on one another and provided for good teamwork.
- Team needed to be flexible in making STAR Request to the State of Texas Department of Emergency Management.

Areas of Improvements

- Training on WebEOC
 - Identify operational shifts
 - Identify when departments start/stop requesting resources
 - Identify a way to track equipment/items after they arrive
 - Familiarization and knowledge of essential City contracts
-



Hurricane Harvey

Finance Section



The Finance Section is staffed when on-site financial and/or administrative services are needed to support incident management activities. In addition to monitoring multiple sources of funds, the Finance Section tracks and reports accrued costs to forecast the need for additional funds before operations are negatively affected.

Major Strengths

- Pre-storm preparation was strong and pre-identified issues
- Great flexibility by Finance staff during the storm
- Great cooperation with IT department
- Shifts and rotations of staff well planned and organized
- Finance and Logistics Sections work together to facilitate emergency purchases

Areas Improvements

- Develop a system for capturing correct data in real time
- Examine how Finance Section could use WebEOC for better capture of information
- Establish quarterly meeting for Finance Section for better coordination
- Training in the usage of ICS forms



Communications



The EOC activated on August 22, 2017 and for the next 14 days, the City of Corpus Christi Communication Division:

- Distributed 53 News Releases
- The City conducted 4 news conferences with 19,599 video views
- Saw a 24% increase in Newsroom subscribers
- Had 220 Facebook postings with 3,478 new fans, 7,760 shares, 4,267 comments, a reach of 460,949 and over 2,113,000 impressions
- Utilized Twitter by sending out 334 tweets
- 3,793 new followers on Twitter
- Reached 4,813,404 with the top post being the Evacuation tweet
- The Corpus Christi website on August 25th had 479,597 page views and more than 1.2 million views in total during the two-week time period
- Over 300 media contacts
- 4 Emergency Alert/Call downs
- 12,653 calls to the City 3-1-1 Call Center
- City Hall employees received 9 internal communications



Hurricane Harvey Evacuation



On Thursday, August 24, 2017, Mayor Joe McComb issued a voluntary evacuation notice to the City of Corpus Christi for Zones A and B as well as the low-lying areas near the Oso Creek Tributary. Immediately, the order was distributed to the Emergency Operations Center and the Evacuation Team was assembled. The Evacuation Team executed the City Evacuation Plan with great cooperation with team members from the EOC, RTA, and CCISD. Annual drills at the Natatorium were crucial to the success of the Evacuation Hub. Evacuees were processed, tagged, and placed on busses headed for San Antonio. Some of the strengths include:

Major Strengths

- Annual Drills
- Timely flow of information from EOC to Evacuation Hub
- Cannot stress enough the great cooperation with RTA and CCISD on transportation
- Emergency Tracking System software worked well
- Teamwork and morale
- Bus drivers greatly contributed to the success of the evacuation
- Quick response on activating
- Support from the Red Cross, Salvation Army and Functional Needs Support Team



Evacuation

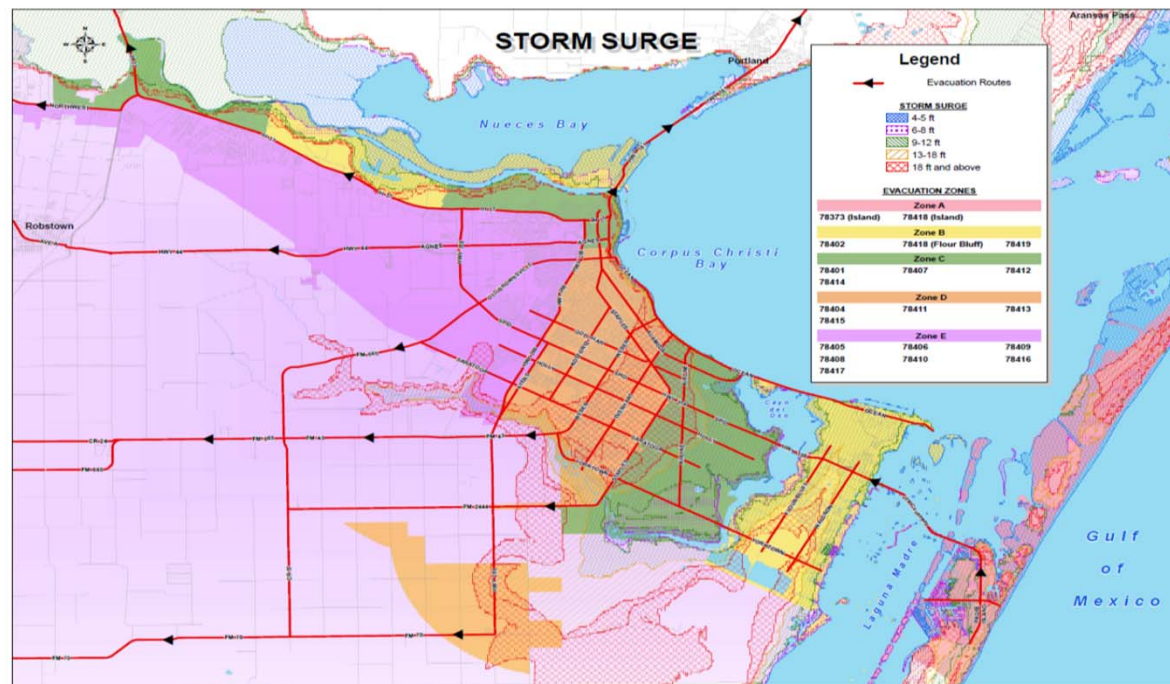


Areas of Improvement:

- Wi-Fi at the Natatorium
- Consistency with tagging of personal belongings
- Tag buses prior to arriving at CC Gym
- Request more buses capable of wheel chair transport
- Better on-site communication with staff and evacuees
- Create shared expectations with the public
- Utilize a single radio channel for communication
- Better information prior to evacuation of how pets will be evacuated and how residents can assist



Evacuation Zones





Hurricane Harvey Repatriation



City utilized an Advanced Repatriation Team consisting of 2 Fire Captains, 2 Police Captains and 4 members of Parks and Recreation. The team was instructed to repatriate residents back to Corpus Christi. Major strengths and areas of improvement identified:

Major Strengths

- Team work
- Advance Evacuees Repatriation Team
- Van to transport
- Cooperation with CCISD and RTA

Areas of Improvements

- Wi-Fi at the Evacuation site
- Communication with Evacuees in San Antonio
- Transportation for Evacuees
- Utilizing Emergency Tracking Network
- Tracking down Evacuees in San Antonio



Hurricane Harvey

Donations and Volunteers



Calls for Donations or to Volunteer were directed by the City Call Center to the Coastal Bend Disaster Recovery Group

Post-Harvey thru August 31, 2017, donations and volunteers references:

Volunteers - Coastal Bend Food Bank

Supplies - Church Unlimited

Clothing - Catholic Charities of Corpus Christi

Monetary - Coastal Bend Community Foundation

Calls Post-Hurricane Harvey

32 calls to donate supplies

5 corporate calls to donate supplies

3 calls to offer shelter

20 of those to volunteer a group of five or more

18 calls to donate use of heavy equipment and services or heavy-duty vehicles

15 calls to offer miscellaneous services and/or donations

70 calls to volunteer

6 of those are medical volunteers

2 calls to assist with insurance claims



Refuge Of Last Resort



The City of Corpus Christi is not a sheltering community. A refuge of last resort provides those unable to evacuate or be evacuated protection during a hurricane. Its activation is intended to be short. In the case of a hurricane, it's not expected to be activated longer than 24 hours.

Major Strengths:

- Established quickly despite short lead time
- Cooperation and support from Safe Room owners
- Agility of City staff assigned to Safe Rooms
- Assistance of Red Cross as activation increased in duration

Areas of Improvement:

- Contingency plans for longer activation periods
- Education and increase awareness of expectation concerning ROLR
- Communication with internal and external partners



Damage Assessment



The role of the City Damage Assessment Team (DAT) is to evaluate the status of the City post-storm. The DAT is coordinated between the City Development Services and Code Enforcement. There were clear organizational lines within the Damage Assessment Team members and an excellent job was done mapping, plotting, and breaking the City into different areas.

Major Strengths:

- On the morning of Saturday, August 26, 2017, DAT was out evaluating building and road infrastructure immediately
- Reports were transmitted to EOC for processing

Areas of Improvement:

- Improve communication between the DAT and the EOC
- Meetings and team assignments were not communicated to the EOC
- Coordination between GIS and DAT
- Coordination between Utilities DAT, City DAT
- Better utilization of software
- Assign a Disaster Management Coordinator in the future



Damage Assessment Results



According to the Damage Assessment Team, 256 Commercial structures and 2,459 residential homes were damaged by Hurricane Harvey. Of the structures damaged in the City of Corpus Christi, the structures fall under (4) four FEMA Damage Categories as follows:

- Affected 1,803
- Minor 788
- Major 119
- Destroyed 5



Donation Management



The City received an outpouring of donations for hurricane relief. The EOC set up a Donations Management Sector (handled by Police Department Volunteer Services Coordinator Tom Brown) to assist with donations. The City utilized the Call Center to divert calls for donations to the Coastal Bend Disaster Recovery Group. Immediately, lines of communication were set up with the Emergency Management Coordinators from the surrounding counties

There were 140 calls post Hurricane Harvey:

- 32 calls were to donate supplies
- 5 corporations called to donate supplies
- 18 calls to donate heavy equipment/services
- 2 calls to assist with insurance claims
- 3 calls to offer shelters
- 15 miscellaneous class to offer donations or services
- 70 calls to volunteer
 - 20 calls were groups of 5 or more volunteers
 - 6 calls were medical professionals volunteering their services



Donations Management Continues



The organizational structure of the Donations Management Sector Post Hurricane Harvey was separated in the following manner:

- Volunteers Coastal Bend Food Bank
- Supplies Church Unlimited
- Clothing Catholic Charities
- Monetary Donations Coastal Bend Community Foundation

Most, if not all donations were forwarded to areas where Hurricane Harvey hit the hardest (Port Aransas, Rockport, Fulton, Aransas Pass, etc.). The City of Corpus Christi served as conduit for donation management from the donor to the recipient.



Debris Management



On July 30, 2013, City Council approved a contingency service agreement with CrowderGulf for emergency debris clearing and disposal services in response to a hurricane or other disaster.

The original agreement includes the cost of providing heavy duty equipment required to move large amounts of debris, work crews that will assist in the cleanup, dump trucks required to transport the debris to Temporary Debris Staging and Reduction (TDSR) sites, opening, operating and closing the TDSR sites, documenting the volume and types of debris removed from City ROWs and disposal of hazardous waste. However, the original agreement did not include transporting the debris/mulch to the Cefe F. Valenzuela Landfill.

Debris management is ongoing and will continue until completion. Funding will be provided from the Fund Balance for Major Contingencies in the General Fund, and the City anticipates a 92% reimbursement from Federal Emergency Management Agency (FEMA) at a later date.



Debris Collection for Remainder of 2017



Areas	Collection Begins	
Area 1-A	Oct 23	
Area 1-B	Oct 30	
Area 2	Nov 6	
Area 3-A	Nov 13	
Area 3-B	Nov 20	
Area 4	Nov 27	
Area 5	Dec 4	
Area 6	Dec 11	
Area 7-A	Dec 18	
Area 7-B	Dec 26	
Area 8	Jan 2	
Area 9	Jan 8	
Area 10	Jan 15	



Hurricane Harvey

Departments and Agencies Involved



- Assistant City Manager's Office
 - Management & Budgeting
 - Communications
 - Development Services
 - Engineering
 - Environmental/Strategic Initiatives
 - Facility Building Maintenance
 - Finance Department
 - Fire Department
 - GIS
 - Gas
 - Health Department
 - Human Relations
 - Intergovernmental Relations
 - IT
 - Legal
 - Library
 - Marina
 - MetroCom
 - Neighborhood Services
 - Office of Emergency Management
 - Parks and Recreation
 - Police Department
 - Public Works
 - Risk Management
 - Street Department
 - Utilities
 - AEP
 - American Red Cross
 - CCISD
 - Coast Guard
 - DBI Services
 - Del Mar College
 - Ham Radio Operator
 - HEB
 - National Weather Service
 - Port of Corpus Christi -Police
 - RTA
 - Salvation Army
 - Texas Division Emergency Management
 - Texas Task Force 1
 - Texas EMTF
 - Texas Search and Rescue
-



Damage Estimates

- Projects are Classified as:
 - Urgent – Immediate attention required to prevent further deterioration of the building or for safety purposes. Among some of the items, this category includes the Corpus Christi Museum of Science and History and Packery Channel. This amount is estimated at \$7.5 million.
 - High – Immediate attention is required or some immediate short-term prevention items must be put in place to prevent further damage. Among the items in this category are the Frost Bank Building and the Corpus Christi Central Library. This amount is estimated at \$10.4 million.
 - Medium – Attention is required; however, the area is secured from further damage and/or currently not being utilized. Among the items in this category are damage to roof shingles, fencing, carpet, etc. If left untouched, these items could create other hazardous issues such as mold. This amount is estimated at \$1.4 million.
 - Low – Attention is required; however, departments have service agreements or other items in place to address the issue. These are items that may be handled at the department level. The amount is estimated at \$361,000.



FEMA Reimbursement

- Staff has been working directly with FEMA to prepare individual project sheets for each building affected
- Maximum reimbursement is 75%.
- Strict adherence to procurement and FEMA guidelines
- The final damage list is due on December 25, 2017



Overall Summary



The City of Corpus Christi staff did an outstanding job in preparing and responding for Hurricane Harvey. Much of the credit must go to pre-storm preparation by City Departments. The City requires all City Departments to submit Disaster Action Plans to the Office of Emergency Management and the plans are discussed and reviewed. Prepositioned contracts (some already approved by FEMA) were already in place prior to Hurricane season.

Overall, the City Emergency Operations Center and City Departments performed their roles effectively by sticking to the City Disaster Plan and maintaining communication with other local, state, and federal governmental agencies, as well as non-profit groups.

Before, during, and after the storm, meetings were held with the City Manager and Executive Staff to brief them. Conference calls with the National Weather Service were held in the Emergency Operations Center with City staff and outside agencies. After each call, City Departments and outside agencies provided updates regarding what they were doing in preparations for Hurricane Harvey. Video conference calls were also held between Emergency Managers in Nueces County and the TDEM State District Coordinator



Overall Summary



Once the storm passed, Damage Assessment Teams, Utilities, and First Responders began to evaluate damages to buildings and critical infrastructure. This important evaluation process continues as the City enters the next phase in Hurricane Harvey recovery. Working with City Engineering, City Facilities and Maintenance, Office of Emergency Management and our City Finance Department, the City is gathering the information necessary to submit documentation to FEMA for possible FEMA reimbursements.

One item notable to report – the City of Corpus Christi suffered no loss of life throughout the storm.

Many things went well as far as communication, cooperation, and planning before, during and after the event. There are areas that the Office of Emergency Management will continue to work towards in the upcoming months on lessons learned from the experiences of Hurricane Harvey and to prepare for the next emergency. Areas of improvement are highlighted through this After Action Report and the City will move forward with continuing best practices, making modifications where necessary, and keep the lines of communication open for all.