

Hon. R. Jack Cagle, Commissioner, Harris County, Texas

April 9, 2018

It Came

Hurricane Harvey was the worst flood event to ever impact the Harris County region. A few statistics helps put the storm in perspective:

- The storm dumped about one trillion gallons of water over Harris County, producing the largest recorded rainfall event in the continental United States and flooding 8 percent of the county.
- Damage estimates range from \$120 billion to \$180 billion.
- In Precinct 4, nearly 11,000 homes flooded with more than 2 feet of water. More than 130,000 homes and businesses throughout Houston and Harris County flooded and 600,000 cars were damaged.
- The hurricane killed 36 people.
- The storm generated an estimated 8 million cubic yards of debris in Houston. By comparison, Hurricane Ike produced more than 5 million cubic yards of debris in the area. That's nearly the same amount of debris caused by Hurricane Alicia (1983) and Tropical Storm Allison (2001) combined.

We Came

During the worst of the storm, Precinct 4 employees worked to provide essential services, even while some dealt with flooding in their own homes. Some of these services included operating a 24-hour phone bank the week of Harvey, providing updates to the public through social media, and rescuing flood victims. Precinct 4 also had staff at the Emergency Operations Center (EOC), providing updates on the latest disaster developments 24 hours per day for nine days of EOC operation.

Precinct 4's Road & Bridge Department started preparing for Harvey days before the storm hit and stayed busy through the cleanup phase. Although their official duties included clearing roadways for emergency responders and closing flooded roads, Road & Bridge crews did much more. Many staff members willingly put

themselves at risk rescuing flood victims. In the meantime, other staff members located staging areas and emergency supplies until permanent shelters could be established.

Precinct 4 deployed 14 maintenance trucks for rescue service and two Senior Adult Program passenger buses to transport flood victims throughout the precinct. Additionally, Precinct 4 mobilized its 18-wheeler and flatbed trailer, usually utilized to haul equipment, to relocate the Office of Emergency Management's equipment to NRG Park.

The highwaters threatened the integrity of several levees throughout Harris County. One harrowing moment concerned the evacuation of the Inverness Forest subdivision. Harris County Flood Control District discovered that the levee had been compromised. Precinct 4 Road & Bridge crews along with deputies from the Harris County Sheriff's Office and the Constable's Office rushed into the neighborhood to evacuate the remaining citizens under the threat of a complete levee collapse. Thankfully, the water began to recede and flood control staff along with community engineers were able to shore up the compromised portions of the levee before a full breach occurred.

We Overcame

Once the storm passed, Precinct 4 opened a self-help storm debris drop-off site for the public that eased demand on county debris removal services and benefitted constituents who did not wish to wait for county pickup. We are grateful for U.S. representatives Michael McCaul and Kevin Brady for petitioning FEMA to allow us to operate the self-help storm debris drop-off site at 13928 Humble Road in Tomball. We operated the site daily from 9 a.m. to 5 p.m. through December and collected 194,648 cubic yards of debris. Of that number, 21,803 cubic yards was dropped off by the public.

One of the FEMA requirements of the self-help storm debris drop-off site was that owners must accompany their load. This requirement made it extremely difficult for nonprofits, community organizations, volunteers, and church groups mucking out and removing debris from the homes of constituents unable to help themselves. Requiring homeowners to accompany those loads impeded the process and made it much more difficult.

We also managed to remove a record 534,109 cubic yards of debris in three passes in partnership with contractors and TxDOT. During the first pass of debris removal, Precinct 4 cleared approximately 260 homes per day and completed debris removal in record time. In comparison, Precinct 4 took three weeks to complete the first pass of debris removal after the Tax Day Flood. After Harvey, our Road & Bridge crews in conjunction with our contractors removed about the same amount of volume in two days.

Our progress was slowed by high demand for contractors and the FEMA requirement that homeowners needed to wait for inspectors before we could remove their debris.

In addition, Precinct 4 helped organize two Disaster Recovery Fairs and assigned staff to work at food distribution sites. We are grateful for cooler donations from RTIC and water donations from HEB, Kroger, and Wal-Mart. Other duties included building temporary roads at the self-help storm debris drop-off site in Tomball as well as cleaning up damaged parks and flooded county buildings. Some staff even volunteered at food banks and shelters or were diverted to other tasks during the storm.

The county also moved quickly to help residents rebuild after Harvey. FEMA requires owners of flooded homes to have a permit to rebuild. To expedite the process, county staff went door-to-door in all flooded areas to issue permits.

During the recovery phase, Harris County Public Health offered free water testing at four locations in Precinct 4, while Harris County Flood Control District gauged interest in a home buyout program.

To Continue Overcoming

As we near the next hurricane season, it's now imperative to begin work on additional flood control projects and repair the systems we already have.

My top priorities include the following:

1. Build a third reservoir that takes into consideration the anticipated growth of the region and the lessons learned from the might and size of Harvey.

2. Expedite the buyout process, so local entities can raise the funds, buy the homes, and wait for federal reimbursement. This will free homeowners from the prolonged agony of waiting to see whether they will be approved for the federal buyout program and aid them in deciding whether they need to rebuild or not in anticipation of being bought out.
3. Floodplain planning.
4. Fund the big four projects: White Oak Bayou, Hunting Bayou, Brays Bayou, and Clear Creek.
5. Make improvements to Barker/Addicks reservoirs and pursue home buyouts to remove homes from the flood pool.
6. Remove the “checkerboard” problem and allow the acquisition of streets through the FEMA buyout program.
7. Control flooding and alleviate drought through the Drainage Reuse Initiative.
8. Expand the Office of Emergency Management’s ability to serve regionally.
9. Grant the county ordinance-making power to establish flood-safety protocols and enforce regulations preventing fill violations in the floodplain.
10. Acquire additional greenspace.
11. Streamline FEMA rules while taking into consideration how the most efficient solution, at many times, is in the volunteer and private sector and allowing volunteers and nonprofits to serve constituents without having to wait for federal approval.
12. Reduce the match required of local entities to receive aid during disasters.