

from El Paso set up at the county airport and provided medical services until power was partially restored and a nearby Emergency Room could resume operations. We still have problems with access to medical care and are working on finding solutions to the loss of the hospital and clinics. We now have a large number of residents experiencing difficulty accessing medical care. The future of medical care and medical access in San Patricio County is very uncertain at this time.

Emergency Preparedness

Hurricane Harvey, though it was destructive, also created awareness of the importance of Hurricane Preparedness. It has educated the public on the importance of listening to the information and services that local health departments provide. We trust that the events we encountered will be a learning experience for our community.

Lessons Learned:

1. Hurricanes can change very rapidly. Over prepare. Prepare early.
2. Expect to lose power for three days.
3. Gasoline is not available if there is no electricity.
4. Ambulance services were stretched beyond the breaking point.
5. Many citizens will run out of medication, especially narcotics, especially Code II narcotics.

6. Persons and agencies from the outside required food, showers, water, sleeping accommodations and laundry. This added increased stress to the community resources.
7. Pets need to be evacuated also.
8. Mosquitoes and vector borne disease are a concern.
9. Make sure every member of the health department from janitor to medical director has CPR and First Aid training and has a first aid kit.
10. Different areas will experience different effects and will have different needs.

How TPHA can help:

1. Publish a Focused Issue on Hurricane Harvey activities
2. Use TPHA meetings to provide discussion and recommendation sessions.
3. Maintain a web accessible data base of topics and information such as water issues, legal forms and restoration of restaurant activities. Make it available as a download that can be stored on devices and accessed offline. Update annually.
4. Keep a contact list of persons and agencies. Consider publishing as a download that can be stored on devices and accessed offline. Update at least annually.

The San Patricio County Department of Public Health is preparing a full After Action Report which will be shared when available.

Response of the Southwest Center for Agricultural Health, Injury Prevention, and Education to Hurricane Harvey

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The Southwest Center for Agricultural Health, Injury Prevention, and Education (SW Ag Center) focuses its work on research, outreach and education for workers in the agricultural sector – which includes row crop agriculture, ranching, farming, forestry, and commercial fishing (AFF). With a home base at The University of Texas Health Science Center at Tyler (UTHSCT), the SW Ag Center has been serving AFF workers in Texas, Louisiana, Arkansas, Oklahoma, and New Mexico for over 20 years.

When Hurricane Harvey made landfall in Rockport, Texas, on August 25th, it pounded the region with torrential rain and winds reaching 130 mph. Harvey was the first Category 4 hurricane to make landfall in the United States since Charley in 2004, and its impact was felt far beyond the Coastal Bend. Harvey's slow movement across the state led to catastrophic flooding throughout southeast Texas. Rural and agricultural communities lost homes, crops, livestock, equipment, and livelihoods. In southeast Texas, residents can tell you that the only thing stronger than the storm was the support shown by selfless neighbors, tireless volunteers and countless organizations. SW Ag Center staff members and their families helped rescue people and pets from their homes by boat and drove them to shelters. They also helped remove water soaked debris and 'muck out' homes. Affected families and businesses have started to rebuild, but the process will take months

or even years. A large portion of those affected did not have flood insurance and have taken on the demolition and construction efforts themselves in order to save money.

In September, 2008, The National Institute of Environmental Health Sciences published a bulletin entitled, "Safety and Health Precautions for People Working in Hurricane Damaged or Flooded Areas." General personal protective equipment, respirators, good personal hygiene, and heat stress prevention measures are all recommendations for special attention to keep responders safe. Further, local news outlets stressed the need for personal protective equipment. Donations poured into shelters, churches and make-shift recovery stations from across the state and nation. Clothes and toys were plentiful, but front-line workers reported that they needed toiletries, first aid items and protective gear and hand sanitizer. As a health and safety organization, we chose to focus our contributions on personal protective equipment to help residents stay safe as they rebuilt their lives. To aid in flood recovery efforts, the SW Ag Center purchased supplies including gloves, goggles, dust masks, insect repellent, and hand sanitizer. Volunteers from UTHSCT spent an afternoon stuffing these supplies into 1,000 individual bags. The SW Ag Center then partnered with rural agricultural extension agents and the U.S. Coast Guard to distribute recovery supplies to hard-hit rural com-

munities.

The SW Ag Center continues to keep its finger on the pulse of the recovery efforts, especially for rural and agricultural workers that provide us with the food and fiber to feed and clothe our families. To that end, we are conducting follow-up phone calls with extension agents and U.S. Coast Guard personnel to evaluate the value of our contributions and solicit feedback for future relief efforts. In addition, commercial shrimp fishermen and oystermen from Corpus Christi to Port Arthur suffered great losses including damaged vessels and an influx of silt-choked floodwaters into delicate oyster beds. The SW Ag Center is developing a survey to assess these losses and the needs of these AFF workers and their families. This survey will help to inform priority areas for research and outreach to be addressed by the SW Ag Center.

As a center that works with rural and agricultural communities, we are all too aware of challenges faced in rural communities – limited access to healthcare, longer distances between homes and resources, the digital divide, limited access to transportation, and limited roads. When disaster strikes a broad area, rural and agricultural areas receive less attention compared to large cities such as Houston or New Orleans. With pre-existing challenges in rural and agricultural communities, the effects of a natural disaster are felt much more acutely. Raising the level of awareness regarding these challenges and the impact of natural disasters on rural areas is a critical step in assuring that these communities get the help they need the next time disaster strikes. As a center, we learned that after a disaster, the greatest needs are physiological needs – food, water, warmth, and shelter. When a home is destroyed or damaged, these basic needs cannot be met. Getting tangible items to help restore these needs to communities is essential. Although flyers or

fact sheets are distributed with good intentions, communities need help with demo and clean up, basic necessities such as underwear and toiletries, and food. Offering a way to protect their safety and health through personal protective equipment is appreciated when faced with the financial enormity of remodeling costs.

The Texas Public Health Association can help lead this effort by helping to organize, coordinate, and dispatch teams for clean-up efforts, sourcing personal protective equipment and coordinating efforts for distribution, and providing navigation assistance to those seeking federal and state disaster relief funds.

<https://staticapp.icpsc.com/icp/loadimage.php/mogile/325452/07e2cd35353ec823951b9ecce87d8850/image/jpeg>



SW Ag Center Special Projects Coordinator, Nickie Warren (bottom right), ordered supplies and assembled a team of volunteers to build resource packages.

San Antonio Metropolitan Health District's Response to Hurricane Harvey

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On August 23, 2017, an agreement between the San Antonio Metropolitan Health District (Metro Health) and a local hospital was activated due to the forecasted movement of Tropical Storm Harvey that, on August 24, turned into a Category 4 hurricane. This agreement allowed Metro Health to staff the Medical Services Station (MSS) in the shelters and the Reception Center with staff from a local hospital. The Emergency Operations Center (EOC) was activated along with Metro Health's Public Health Emergency Preparedness (PHEP) division to begin shelter set-up, order supplies, and schedule staff and volunteers to work the response. The staff of Metro Health was activated that evening when evacuees began to arrive.

All evacuees, regardless of type of transportation coming into San Antonio, went through the Reception Center. Directions to the Reception Center were located on TransGuide. The evacuees were evaluated and sent to a general population shelter, medical shelter, or to a hospital based upon the Reception Placement Guidance form. PHEP's 44 ft. Mobile Medical Response Unit was moved to the Reception Center and utilized as a First Aid Station/Respite Area for the Reception Center Triage Team and First Responders. This worked especially well during the heat and humidity pre-landfall, and the wind and rain as the storm blew over San Antonio. The Reception Center was open from August 24-September 9, 24/7. While the Center is usually open for only 3-4 days to receive evacuees, services were extended due to flooding in other areas.

The EOC was the central area where major decisions were made by several agencies, including Metro Health. Activities taking place in the EOC by Metro Health were scheduling staff; documentation of daily activities; coordination of logistics for supplies/equipment; and ordering of supplies. The EOC also housed the Public Information Officer (PIO) who worked in the Joint Information Center with other agencies to develop media releases for elected officials. Information Technology (IT) personnel were used to assist with the 800 MHz radios and other IT equipment issues.

Centennial was identified as the first shelter to open. The MSS was stood up in the evening of August 24. The Kazen shelter was opened on August 25 and Athens was set up as the next shelter to open. Harlan Clarke was opened on August 27 and the evacuees from Athens were moved there. Over 1,500 evacuees from Corpus Christi, Aransas Pass, Rockport, Houston, Beaumont, and other southeast Texas areas were housed in San Antonio shelters. The initial area affected was Corpus Christi, Aransas Pass, and Rockport, but the Houston area was affected two days later with 52 inches of rain. There was a lot of movement of evacuees between shelters as well as set-up and breakdown of shelters. This was due to the constant change in the estimated number of evacuees arriving.

The MSS in each shelter had several staff providing health and medical assistance. Services were provided by a local hospital, contracted medical staffing agencies, and medical volunteers (all

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