region6news

Thursday, September 07, 2017

Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribal Nations

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Hurricane coverage:

1 — Government ill-equipped to monitor industrial plants damaged by Hurricane Harvey, Houston Chronicle, 9/6/2017
http://www.houstonchronicle.com/news/houston-texas/houston/article/Government-ill-equipped-to-monitor-industrial-12178805.php
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It's been 14 years since EPA inspectors last visited an Arkema Corp. facility in Crosby, Texas, that saw chemical explosions caused by flooding from Hurricane Harvey, a company official told Bloomberg BNA.

3 — In Harvey's wake, critics see big money behind lax petrochemical reporting, Texas Tribune, 9/7/2017
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In the wake of Hurricane Harvey, an exploding chemical plant and spikes in cancer-causing emissions are highlighting how little the public knows about potential dangers from the oil and chemical industries. Critics say one reason for the darkness: tons of campaign money.

4 — EDITORIAL: Let Crosby be a lesson: Chemical plants need to reveal their inventories, Houston Chronicle, 9/6/2017
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Crosby is a community where people are accustomed to living around industrial plants, but now even these usually tolerant Texans are downright mad about the catastrophe caused by a chemical plant explosion that happened in the middle of the biggest natural disaster in their town's history.

5 — Receding Floodwaters Expose Long-Term Health Risks After Harvey, Bloomberg, 9/7/2017
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Benzene churns through Houston's economy. The clear, sweet-smelling chemical is found in the crude oil processed in the region's refineries and is used to make plastic, pesticides and other products.

6 — A week after Harvey left Texas, some areas still under water, San Antonio Express-News, 9/6/2017
http://www.mysanantonio.com/news/local/texas/article/A-week-after-Harvey-left-Texas-some-areas-still-12174993.php
Floodwaters from Harvey are steadily receding in some of the worst-hit areas of Texas, but many parts of Houston and East Texas remain under water nearly a week after the storm's final Texas blows. (photo gallery)

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7 — A year before Harvey, Houston-area flood control chief saw no "looming issues", Texas Tribune, 9/7/17
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Experts say the flooding in the Houston region could have wreaked far less havoc if local officials had made different decisions over the last several decades. But the former head of a key flood control agency strongly disagreed with that take in an interview last year.

8 — EPA says Houston-area oil spill cleaned up, AP, 9/6/17
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A spokeswoman for the Environmental Protection Agency says a 2,500-gallon oil spill linked to Harvey's strike on the Houston area has been cleaned up.

9 — Air Monitors Tracking Benzene, Other Pollutants, In Post-Harvey Manchester, Houston Press, 9/7/17
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http://www.kristv.com/story/36305332/texas-to-launch-air-attack-to-combat-mosquitoes-in-wake-of-hurricane-harvey
To address increasing numbers of mosquitoes created from the rain left behind by Hurricane Harvey, and the risk they pose to the recovery effort and public health, the Texas Department of State Health Services has activated its contract for aerial mosquito control.

11 — See where Superfund sites are in the Greater Houston area, Houston Chronicle, 9/7/17
http://www.chron.com/news/houston-texas/houston/article/See-where-Superfund-sites-are-in-the-Greater-12177396.php
Some of the most contaminated, polluted land in the U.S. is probably within driving distance from your house, the EPA reports. (photo gallery)

Other news:

12 — Hurricanes and floods not the only thing hampering recovery in Texas, Southwest Farm Press, 9/7/17
http://www.southwestfarmpress.com/insects/hurricanes-and-floods-not-only-thing-hampering-recovery-texas
Officials in Houston and Baytown and as far south down the coast as the Port of Corpus Christi are warning of the dangers from standing water and polluted tributaries near the coast. Environmental officials warn of the possibility that bays and channels are contaminated from sunken vessels or barges.

13 — In 'Gasland' community, new tests revive old drilling debate, San Antonio Express-News, 9/7/17
http://www.mysanantonio.com/business/energy/article/In-Gasland-community-new-tests-revive-old-12179595.php
Questions surrounding Dimock's groundwater have yet to be resolved — and the federal government is back for the first time in more than five years to investigate ongoing claims of contamination. Public health experts visited 25 homes last month to test for bacteria, gases and chemicals.

14 — How Hurricane Harvey's floodwaters could harm coral reefs in Gulf of Mexico, Dallas Morning News, 9/7/17
https://www.dallasnews.com/news/harvey/2017/09/07/hurricane-harveys-floodwaters-harm-coral-reefs-gulf-mexico
As Hurricane Harvey's floodwaters recede across Texas and Louisiana, they may soon affect another vulnerable community: the coral reefs in the Gulf of Mexico.

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Hurricane Harvey began with raging winds, but its legacy will be water. Seemingly endless, relentlessly insidious water — a staggering 40 inches or more that swamped parts of Houston in just five days. The water — and the muck and mold that follow — will create misery that will linger for years and likely cost tens of billions of dollars all told.

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Government ill-equipped to monitor industrial plants damaged by Hurricane Harvey

Plants: As industrial facilities damaged by storm reboot, safety issues could stay hidden for months or years to come

By Mark Collette and Matt Dempsey | September 6, 2017

2

Photo: Melissa Phillip, MBO

A flare is seen Aug. 29 at Shell's Deer Park refinery, where two tanks were damaged by the storm. Several plants shut down after Hurricane Harvey made landfall are coming back on line.

Ada, OK: This Brilliant Company Is Disrupting A $200 Billion Industry

EVERQUOTE

More than a dozen Texas chemical and refining plants reported damaged storage tanks, ruptured containment systems and malfunctioning pressure relief valves as a result of Hurricane Harvey,

portending safety problems that might not become apparent for months or years, according to a Houston Chronicle review of regulatory filings.

The filings are incomplete and represent only damage that produced excessive air pollution, a fraction of the impact on plants in southeast Texas that provide more than 40 percent of the nation's petrochemical capacity and about 30 percent of its refining.

At Shell's Deer Park refinery, two tanks were damaged and oil ran into a surrounding berm. At BASF's Beaumont pesticide plant, tanks overflowed and leaked unknown chemicals. At the Chevron Phillips Cedar Bayou plant, a cooling pump failed, causing overpressurized chemicals to be burned off in a flare.

When Harvey swept through the Gulf Coast and Houston area, it forced the shutdown of hundreds of industrial facilities across the region. Now, with waters receding, these operations will be coming back on line in the coming weeks, raising the prospect of cancer-causing gas emissions, toxic spills, fires and explosions, said Sam Mannan, director of a center that studies chemical process safety at Texas A&M university.

"Such a large industry coming up at the same time," he said. "All you need to do is have some mistakes pop up somewhere and it will be magnified elsewhere."

Further, experts noted, the long-term implications of flooding disasters of this scale in petrochemical clusters have been poorly studied, and the possibility of future plant mishaps - months or years away - stands to be worsened by damages that have yet to be discovered.

"There are two things to focus on," said Jordan Barab, a former top Occupational Safety and Health Administration official. "The startup problem, and then longer-term safety."

Restarting a chemical plant or refinery already is the most dangerous period in the life of a plant, because it entails regenerating complex chains of chemical reactions that require a perfect balance to prevent uncontrolled releases and explosions.

"Will (companies) be offering bonuses and other incentives to speed the restart?" Barab asked. "How many normal procedures will be loosened because it's an emergency situation? How much overtime will workers be required to work and what kind of fatigue factors will they be dealing with? Will chemical exposures be overlooked because it's an emergency? How are they going to deal with safety issues if some instruments ... will not work prior to restart?"

The U.S. Environmental Protection Agency, OSHA and Texas Commission on Environmental Quality are poorly equipped to monitor plant startups or look for long-term problems because they are understaffed, underfunded and don't account for scores of dangerous chemicals, the Chronicle found in a 2016 investigation.

"Who is going to oversee any of this?" Barab asked. "The answer is no one."

President Donald Trump's budget cut OSHA enforcement spending - including inspections - but a House budget committee in July went even further, proposing cuts of $14.7 million, or more than 7 percent. The agency was already unable to inspect most facilities.

MORE INFORMATION

By the numbers

25 percent

The U.S. refining capacity knocked out by Hurricane Harvey

50 percent

Percentage of the nation's ethylene production Harvey disabled

1 million

Dangerous pollutants in pounds released by Texas plants during flaring and chemical spills triggered by Harvey

Inspections stop

The Labor Department said Aug. 31 that it would stop doing scheduled workplace inspections in Harvey-affected areas, choosing to focus instead on the safety of recovery workers. That means regular visits to petrochemical facilities will stop, Barab said, leaving no one to oversee the massive startup of hundreds of facilities up and down the Gulf Coast.

Ada, OK: This Brilliant Company Is Disrupting A $200 Billion Industry
EVERQUOTE

Harvey knocked out almost a quarter of the U.S. refining capacity, and more than half of the nation's ethylene, a plastics building block, hadn't come back on line almost two weeks after the storm.

OSHA didn't immediately respond to questions about how long the hold on enforcement actions will last and what else it might do to oversee recovery operations at plants.

Gov. Greg Abbott waived requirements that companies submit air pollution reports during recovery. They will have to record them later, a spokeswoman for TCEQ said. In the interim, the missing data means clues about malfunctioning plant equipment and health exposures for coastal residents are unavailable.

Some companies continue to voluntarily report emissions, and the Center for Biological Diversity, using those incomplete reports, showed that Texas plants released nearly 1 million pounds of seven especially dangerous pollutants during flaring and chemical spills triggered by Harvey.

Plants burn off excess chemicals in flares to prevent more dire releases during equipment malfunctions, shutdowns and startups. The practice is legal.

Those seven chemicals can cause serious health problems, and several cause cancer, according to the center.

Storm-related shutdowns of oil refineries have emitted pollutants that help form ozone, the Environmental Defense Fund said, and the

TRANSLATOR

Houston region has been under ozone warnings because of concentrations 10 times higher than what health officials deem safe.

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EPA cuts

Meanwhile, the EPA is investigating a benzene plume in the area of Valero's refinery in Manchester. It said it has about 160 people helping hurricane response efforts and is using aircraft to monitor industrial sites on the Houston Ship Channel, including the benzene concerns.

But in a response to questions, the agency provided no details on whether it would step up monitoring of plants that are restarting or establish any long-term recovery oversight of facilities in its Risk Management Program, which have some of the most hazardous chemical inventories.

There's a concern that if the EPA does not increase inspections, the public could be in the dark about how much it's exposed to potentially harmful chemicals because of the storm.

"God knows what's in the soil and water now that floodwaters have receded," said Gretchen Goldman, research director for the Union of Concerned Scientists. "I don't know if there's a capacity to test what you'd ideally want to test."

New EPA rules established by the Obama administration were delayed by the new head of the agency, Scott Pruitt. The rules would require facilities to consider reducing dangerous chemical inventories and get outside safety audits.

RMP facilities develop worst-case scenarios that are supposed to give plant employees, first responders and the public information they need to prepare for disasters. Arkema's plan for its explosive chemicals didn't work.

"Worst-case scenarios take a series of things to go wrong all at once," said Paul Orum, a consultant and longtime chemical safety advocate. "But worse things do go wrong all at once, all the time."

He argued a third-party audit could have caught the flaws in Arkema's hurricane plans. The company has said no one could have prepared for that much rain.

Trump targeted the EPA for even deeper cuts than OSHA. The agency's enforcement office is slated for a 40 percent reduction. Public Employees for Environmental Responsibility, a group representing government environmental workers, published data obtained under the Freedom of Information Act showing that criminal pollution cases initiated by the EPA fell two-thirds since 2012, while the number of agents in the division dropped by half since 2003, leaving it 53 agents shy of the number required by law.

More storms

A series of blasts at the Arkema chemical plant northeast of Houston showed how a storm like Harvey can thwart any company's best-laid plans, as up to 50 inches of rain swamped the factory, cut power and deluged backup refrigeration systems for heat-sensitive chemicals. Three freezer trucks exploded over six days and the remaining six trucks were intentionally burned while a 1.5-mile area around the plant was evacuated.

Residents are worried about chemicals in the air and dust.

The effect of natural disasters - particularly flooding - on hazardous facilities didn't draw much attention until the Fukushima Daiichi nuclear disaster brought on by a tsunami in Japan in 2011, Mannan said.

A 2009 analysis of multiple chemical incident databases worldwide by researchers at the University of Bologna in Italy found storage tanks, pipes and compressors were the most likely to be damaged in flood events. And major releases were more likely to occur when floodwaters were more than 3 feet high.

Houston has experienced three major flooding events in the past three years. With Hurricane Irma heading toward the U.S. and Tropical Storm Jose not far behind, the area might not be finished with major flooding events for 2017.

"We're going to see more extreme weather events hitting the Gulf with more frequency, and both government and business are going to have to deal with that," Barab said.

Every major storm will challenge the disaster plans for facilities throughout the area. Not every plan will pass that test.

Barab questioned why Arkema hadn't done more to protect its refrigeration and power systems when Houston hospitals in the Texas Medical Center had done so after Tropical Storm Allison caused what, up to that point, had been unimaginable flooding. He fears too many plants don't account for true worst cases.

"Evacuating an unstable plant and watching it explode," Barab said, "isn't exactly an acceptable solution."

Mark Collette
Investigative Reporter

Matt Dempsey
Data Reporter

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By Sam Pearson

It's been 14 years since EPA inspectors last visited an Arkema Corp. facility in Crosby, Texas, that saw chemical explosions caused by flooding from Hurricane Harvey, a company official told Bloomberg BNA.

Arkema spokesman Stan Howard, and David Gray, a spokesman for the Environmental Protection Agency's Region 6 office in Dallas, both said the plant was last inspected under the agency's risk management program in 2003. The EPA is more likely to inspect high-risk facilities under the program "where offsite consequences impact a large number of people or they have had an accident," Gray said in an email Sept. 6.

Arkema's Crosby facility came under scrutiny after power failures due to an estimated 40 inches of rain at the plant during Harvey caused electricity and multiple backup generators to fail and volatile chemicals to overheat and catch fire.

The lack of inspections at the Crosby plant doesn't surprise many. According to a Sept. 1 letter Sen. Tom Carper (D-Del.) sent to EPA Administrator Scott Pruitt, the agency has "about 30 inspectors" who can complete between 300 and 350 inspections per year of around 12,500 facilities in the program—information the senator's spokeswoman told Bloomberg BNA came from a telephone briefing with EPA staff last week.

That means it would take at least 35 years to check all of the sites once.

Carper told Bloomberg BNA Sept. 6 the inspection gaps are "way too long."

Jim Frederick, assistant health and safety director at the United Steelworkers union, said the long timeframe between checks at the Crosby site wasn't surprising.

"Both EPA and OSHA are certainly not staffed to a level to have the reach to be able to inspect facilities on a very frequent basis," Frederick said.

Several other Arkema facilities had more recent EPA inspections. The agency inspected Arkema's Axis, Ala., plant in 2015, 2009, and 2004; a plant in Beaumont, Texas, in 2008 and 2003; the Alsip,

Ill., plant in 2007; and facilities in Piffard, N.Y. and Calvert City, Ky., in 2010, according to EPA data obtained by Bloomberg BNA.

Lawmakers Interested

How often the inspections occur is a focus for lawmakers interested in learning more about Arkema's problems.

The letter from Carper, the ranking member of the Environment and Public Works Committee, asked Pruitt provide inspection data for the Crosby plant and other Arkema facilities. Carper said the plant's risk management plan seemed insufficient given the hurricane's impact on the plant.

"The failure of both of Arkema's emergency backup power supply measures and subsequent evacuation of on-site personnel clearly raise questions related to the sufficiency of Arkema's plan and its implementation," Carper wrote.

Under the EPA's program, Arkema is required to submit a risk management plan every five years. The company filed its most recent plan for the Crosby facility in 2014, which didn't mention the organic peroxides that exploded since those chemicals are not covered under the risk management program. But the company's plan did identify the risk of hurricanes, power failures and power surges, and flagged the 66,260 pounds of anhydrous sulfur dioxide that, if released, could threaten more than 1 million residents within 23 miles of the plant.

Mark Farley, a partner at the law firm Katten Muchin Rosenmann LLP in Houston, told Bloomberg BNA Sept. 6 he didn't think including organic peroxides in the risk management plan would have made a difference at Arkema's plant.

"The company and the government knew that these chemicals were highly hazardous and the employer had redundant systems in place to try to mitigate that risk," Farley said. "What should they have done? Had a fourth backup system?"

OSHA, Contractors Help Too

EPA regional offices may also use consultants to check plants, and OSHA process safety management inspectors are on the lookout for many similar types of violations, Stephen Richmond, a principal at the law firm Beveridge and Diamond PC, told Bloomberg BNA Sept. 6.

A typical inspection involves as many as five inspectors, who scour the plant over several days, Richmond said.

"They're pretty intensive," Richmond said. "The inspection, if you have five inspectors on site for as much as a week, they can cover a lot of ground."

Other agencies that made it to the Crosby plant sometimes found violations.

OSHA inspectors that visited the site in 2016 issued 10 citations for serious violations, nine of which involved management of highly hazardous chemicals, records show. The U.S. Chemical Safety Board, which is investigating the incident, may also make recommendations to EPA if it finds the agency could better enforce existing regulations.

Given the magnitude of what happened, Carper wrote, reducing EPA inspections further through budget cuts “seems shortsighted at best.”

In Harvey's wake, critics see big money behind lax petrochemical reporting

In the wake of Hurricane Harvey, an exploding chemical plant and spikes in cancer-causing emissions are highlighting how little the public knows about potential dangers from the oil and chemical industries. Critics say one reason for the darkness: tons of campaign money.

BY **JAY ROOT** SEPT. 7, 2017 9 HOURS AGO

Illustration by Todd Wiseman / Caleb Bryant Miller

Unlike any past storm — natural or man-made — Hurricane Harvey has exposed the fault lines between the politically powerful Texas petrochemical industry and the public's right

to know what dangers lie within their facilities

In Crosby, on the outskirts of Houston, French-owned Arkema refused to provide the public an inventory of the substances inside its chemical plant even as they were burning and causing mandatory evacuations. Along flood-stricken petrochemical row near the Houston ship channel, meanwhile, city officials detected a huge spike in cancer-causing benzene outside a refinery this week — while the state's environmental protection agency temporarily suspended certain spill and emission reporting rules in Harvey's wake.

Critics point to a common thread in the light-handed regulations from state government: campaign money from oil and chemical companies flowing like floodwaters into the coffers of top Texas leaders. Those leaders have said in the past that campaign money has no role in their decision-making process.

The top recipient of industry money in Texas is Republican Gov. Greg Abbott, who in 2014 ruled that Texas health officials no longer have to provide citizens with plants' chemical inventories under state transparency laws. It was also Abbott who granted the Texas Commission on Environmental Quality's request to temporarily suspend certain emission reporting requirements for permitted facilities.

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According to a May report by Texans for Public Justice, a liberal watchdog group, more than one of every five campaign dollars Abbott received from 2013 through 2016 — over $16 million, or 21 percent — came from the oil and gas industry. The report also showed that a significant slice of political contributions to the leader of the Texas Senate, Lt. Gov. Dan Patrick (16 percent) and House Speaker Joe Straus, R-San Antonio, (14 percent), came from oil and gas interests.

At the request of The Texas Tribune, TPJ also ran the numbers on the chemical industry. The records again showed a lopsided amount going to the governor — more than $700,000 since 2013. That included more than $600,000 from a single chemical company CEO — S. Reed Morian of DX Service Company Inc., whom Abbott appointed to the Texas Parks & Wildlife Commission in 2015.

Since 2013, Patrick has received about $300,000 from chemical interests while Straus received a little more than $30,000, according to TPJ figures. Besides Morian, other major donors to the top leaders from chemical interests include Lyondell Chemical Co. PAC,

Walter White, the CEO of Economy Polymers & Chemicals and the Dow Chemical Company PAC.

Spokesmen for Patrick and Straus did not immediately respond to requests for comment. Abbott spokesman John Wittman said: "The health and safety of Texans during this time of crisis is the Governor's top concern. It's disappointing, but not surprising, that Democrats would use this opportunity to politicize a disaster."

In 2014, Abbott, then the attorney general, said "ongoing terroristic activity" prompted his ruling to block release of the chemical inventory reports he feared could fall into the hands of evildoers. Abbott also said at the time that Texans could "drive around" and ask chemical plants directly for the information — but officials say the state has no authority to make them comply.

Gov. Greg Abbott remarks on chemical plants

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Jim Marston, the Texas regional director of the Environmental Defense Fund, noted that Texas is among a small minority of states that won't release "Tier II inventory" reports showing which dangerous substances — and how much of those substances — are stored at chemical plants. Officials said more than a dozen first responders sought medical attention after breathing some of the fumes from the Arkema plant in Crosby.

"Literally policemen are being sent to the hospital because they … do not know what's in these dangerous plants," Marston said. "Does the fact that our governor gets large sums

of money from the oil and chemical interest affect his actions? It sure as hell does. Nobody believes they're giving the money to Abbott because they think he's a swell guy."

As for Abbott's more recent decision to order a temporary suspension of rules requiring immediate reporting of certain chemical emissions, Wittman noted that the rules apply "only to situations in which compliance with these requirements would actually prevent, hinder or delay necessary action in coping with the disaster.

"Environmental reporting obligations that can be met without negatively impacting disaster response remain in place," he added.

Bay Scoggin, director of the environmental group TexPIRG, said the big money coming from oil and chemical interests doesn't look good in the wake of Harvey.

"These contributions smell as bad as the chemicals Texans are breathing right now," he said. "Money influences who gets elected and money can open doors, giving donors access to lawmakers."

Disclosure: Dow Chemical has been a financial supporter of The Texas Tribune. A complete list of Tribune donors and sponsors is available here.

Read related Tribune coverage:

- As chemicals heat up in a Crosby manufacturing plant, a large-scale fire or explosion looks increasingly likely. [Full story]
- After explosions in a Crosby chemical plant, the public had no option but to trust government and company assurances that billowing smoke presented little danger. [Full story]
- Arkema Inc. said the Harris County Emergency Operations Center notified the company at 2 a.m. Thursday of explosions and black smoke coming from its Crosby plant, which was inundated by Hurricane Harvey's floodwaters. [Full story]

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Let Crosby be a lesson: Chemical plants need to reveal their inventories

Crosby explosions prove we should know about hazardous materials in our midst.

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1

Photo: Scott Olson, Staff

A chemical drum labled "organic peroxide" that had washed away from the Arkema plant during flooding caused by Hurricane and Tropical Storm Harvey is trapped with other debris by the plant'sborder fence on Monday in Crosby. (Photo by Scott Olson/Getty Images)

Crosby is a community where people are accustomed to living around industrial plants, but now even these usually tolerant Texans are downright mad about the catastrophe caused by a

chemical plant explosion that happened in the middle of the biggest natural disaster in their town's history.

Amid last week's flooding, everybody living within a 1.5 mile radius of Crosby's Arkema chemical plant was forced to evacuate just before at least two tons of volatile organic peroxides exploded and caught fire. The whole world watched on television as flames shot up from the floodwaters that inundated Crosby. That calamity was bad enough, but company officials ignited their own firestorm by cloaking their plant's inventory in secrecy. And the blame for keeping the public in the dark is shared by our state's top elected leader.

Arkema - whose poor public relations last week became a case study in botched media crisis management - initially refused to tell the people of Crosby what chemicals were stored in their community. Days after the first explosions, Arkema finally released a list of its inventory, but it still wouldn't reveal important details such as how much was stored on its site or where the chemicals were located. Then officials deliberately set fire to some containers of chemicals without any advance notice, detonating more explosions that frightened anxious neighbors living outside the evacuation zone.

"You don't know what's in there," Crosby resident John Rull told a Chronicle reporter. "You don't know what's in the air. Their time for keeping secrets is up."

We agree.

Let those words be a lesson for Gov. Greg Abbott. He's explicitly authorized the secrecy that prevents Texans from finding out about the hazardous chemicals stored not only at the Arkema plant in Crosby, but at plants and warehouses located in neighborhoods throughout the state.

TRANSLATOR

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LETTERS

Thursday letters: Indeed a catastrophe!

Let Crosby be a lesson: Chemical plants need to reveal their

Korea needs peace, stability

Thursday letters: DACA decision, 'Dreamers' lament, gridlock woes

Keillor: When a red state gets the blues

Abbott was attorney general when a deadly explosion rocked the north Texas town of West in 2013. In the wake of that disaster, Abbott decided the state government should begin withholding reports about chemical inventories stored in warehouses and manufacturing plants, arguing the information could be useful to terrorists. Paxton, the current attorney general, has maintained the same position. When reporters asked then attorney general Abbott how Texans were supposed to find out what hazardous materials imperil their communities, he blithely suggested homeowners "simply ask the companies what substances are kept on site."

Nonsense. We tried that, and it didn't work. When the Chronicle asked 20 companies and local emergency response agencies for that information in 2014, half of them released either limited data or no inventories at all. Now people in Crosby are getting the same brush off. An Arkema spokesperson said a detailed breakdown of its inventory would have to come from the Texas Commission on Environmental Quality, but TCEQ said the company is free to release that information "if they so choose."

Businesses storing hazardous materials in Texas communities shouldn't have that choice. This basic level of disclosure should be required by law, and the state should release that information to anybody who wants it. If our attorney general's office insists upon using anti-terrorism legislation as a pretext for keeping endangered communities in the dark, the Legislature needs to change the law.

Something's wrong when a McDonald's restaurant in Crosby has to reveal how many calories kids are eating in its Happy Meals, but an industrial plant can keep its inventory of explosive chemicals a secret.

Ada, OK: This Brilliant Company Is Disrupting A $200 Billion Industry
EVERQUOTE

We've never heard of a terrorist attack on a chemical plant in the United States, but we've seen plenty of explosions and evacuations caused by accidents at facilities storing volatile materials. Our state government should stop using the hypothetical threat of terrorism as an excuse for withholding crucial information about hazardous materials, like the volatile chemicals that exploded in the midst of last week's disaster in southeast Texas.

HEARST newspapers

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Receding Floodwaters Expose Long-Term Health Risks After Harvey

By **Jennifer A Dlouhy**
September 7, 2017, 3:00 AM CDT

- Scores of wastewater, sewage discharges reported since storm
- Air monitoring reveals benzene plume near Houston refinery

Benzene churns through Houston's economy. The clear, sweet-smelling chemical is found in the crude oil processed in the region's refineries and is used to make plastic, pesticides and other products.

It's also a carcinogen whose cancer-causing properties illustrate the risks that will linger for southeast Texas long after the floodwaters of Harvey have receded. Thousands of homes were submerged in murky water that may have been tainted with benzene and other runoff from an area that boasts the nation's largest concentration of refineries and petrochemical plants.

"This is going to be an ongoing concern, because some chemicals, when they get in water, become active and volatile," said Christine Todd Whitman, a Republican who led the Environmental Protection Agency from 2001 to 2003. "There are some major areas of problem."

EPA <https://www.bloomberg.com/quote/0219210Z:US> officials are still trying to access and inspect 11 federal Superfund sites that were swamped by the storm to determine whether contaminants escaped, including such cancer-causing agents as benzene, cadmium and trichloroethene.

Residents near a still-submerged wastewater treatment plant in west Houston were warned Wednesday that the risk of migrating sewage makes it unsafe to drink untreated water from private wells.

More: Vacant Government Posts Hamper Harvey Aid as Irma Set to Strike <https://www.bloomberg.com/politics/articles/2017-09-06/trump-s-sluggish-pace-of-staffing-may-slow-hurricane-response>

At least 94 spills of sewage and wastewater have been reported to the Texas Commission on Environmental Quality <https://www.bloomberg.com/quote/0007358D:US> since Hurricane Harvey hit the state. Among those releases: a discharge of unknown amounts that Kinder Morgan Petcoke LP reported reaching the San Jacinto River and 100,000 gallons that Sasol Chemicals <https://www.bloomberg.com/quote/3640383Z:US> USA said had been discharged from its Green Bayou plant <http://sasolnorthamerica.com/houston-manufacturing> .

There are no reports of benzene reaching waterways in Harvey's wake, but initial disclosures don't detail specific chemicals, and extensive water testing is still needed, said ecologist Shaye Wolf, the Center for Biological Diversity <https://www.bloomberg.com/quote/0572664D:US> 's climate science director.

Valero Energy Corp. is mopping up oil at one of its refineries after a tank roof partially collapsed, releasing an estimated 6.7 pounds of benzene. After local residents complained about the odor, health officials and representatives of the Environmental Defense Fund detected high amounts of benzene in air around the facility. Measured concentrations reached as high as 324 parts per billion, according to the Houston Health Department -- well above the level at which federal officials recommend workers don respiratory masks and protective gear.

Valero spokeswoman Lillian Riojas said the oil that leaked "was quickly contained and has been confined to the corner of the containment area where clean-up is well underway."

More: Irma Lashes Caribbean as Florida Braces for Powerful Storm <https://www.bloomberg.com/news/articles/2017-09-06/irma-sweeps-over-caribbean-as-florida-braces-for-powerful-storm>

The EPA said in a statement it was working with city and county officials on the benzene plume, identified near Houston's Manchester neighborhood. The agency also said it was coordinating with the U.S. Coast Guard on a large oil spill in the Houston area.

Hurricane Harvey's 130 mph (209 kph) winds and drenching rains caused tens of billions of dollars of damage, leaving residents sifting through sodden belongings, ripping up water-soaked carpet and tugging wet drywall to heaping piles of refuse that stand as monuments to the carnage. But environmentalists and public health experts are warning about an array of unseen dangers that may threaten residents after the storm debris is hauled away.

"These are long-term chronic exposures," said Elena Craft, a toxicologist with the Environmental Defense Fund. "We don't know what's going to be in the mud that's in people's houses. We don't know what's going to be in the water of private wells."

And it will take time to determine the extent of the risks.

Superfund Sites

So far, the EPA says there's no indication that Harvey released hazards from 28 Superfund sites in the area that were spared damage or excessive flooding. And the Texas Commission on Environmental Quality said that assessments at 12 of 17 state Superfund sites in hurricane-affected areas have documented "no issues."

But the picture is more complicated at 13 federal Superfund sites that were flooded; response personnel have so far only been able to access and confirm that two of those do not require emergency cleanup.

"Teams are in place to investigate possible damage to these sites as soon as floodwaters recede and personnel are able to safely access the site," EPA spokesman David Gray said by email.

The EPA says it has 185 personnel supporting Hurricane Harvey response efforts, and the agency is coordinating with local, state and other federal officials to address human health and environmental concerns, Gray said.

It could be days before the EPA is able to fully inspect the San Jacinto River Pits, a former dumping ground for pulp and paper-mill waste in the 1960s that's full of cancer-causing dioxin and furans associated with non-Hodgkin's lymphoma, respiratory cancer and soft-tissue sarcoma.

Divers Scheduled

With most of the site still submerged, the agency is planning to deploy divers to inspect an underwater cap of plastic, soil and gravel that's meant to prevent the migration of hazardous material, said Sam Coleman, an EPA acting regional administrator. Based on predicted river conditions, that inspection is expected to take place Monday.

It can take weeks -- or longer -- for some storm-provoked leaks even to be detected. For instance, it took months to discover a breach in the cap at the San Jacinto Waste Pits after flooding two years ago.

At the U.S. Oil Recovery Superfund site in east Houston, where benzene lurks at a former wastewater treatment plant, tight-fitting black tarps covered red containers holding toxic sludge and sewage on Monday. Aerial surveillance showed floodwaters never reached the containers, EPA's Coleman said.

At the nearby Highland Acid Pit, a vegetation-covered soil cap appeared undamaged, indicating the pollution under the surface was unaffected by Harvey, Coleman said, though a check of on-site monitoring wells in coming days is necessary to confirm that preliminary finding.

Ongoing remediation efforts have helped make some Superfund sites more resilient during storms, including the construction of berms to contain runoff, said Neil Carman, a former field inspector for the state's environmental commission who visited more than 200 plants annually.

Soil Sampling

"They've done a lot of things to try and contain this material," Carman said, but even so, "I would expect to find a problem at several of them."

Even if sites appear sound after visual inspections, ongoing water monitoring and soil sampling will be necessary to verify floodwaters or underground leaks haven't carried contaminants far away -- into neighboring yards, homes and private water wells.

"These waters have gone all over these residential areas," said Kara Cook, toxics program director with the U.S. Public Interest Research Group. "It could be in the soil, where your kids play, where they're putting stuff in their mouths."

Flooded homes may have been bathed in contaminants, said Erik Olson, director of the health program at the Natural Resources Defense Council.

Previously: Harvey's Cleanup List: Toxic Plumes, Dead Animals, Debris <https://www.bloomberg.com/news/articles/2017-09-01/harvey-s-cleanup-list-toxic-plumes-dead-animals-moldly-debris>

"We are very concerned about the toxic chemicals in the water," Olson said. "Once the water recedes, that mud is not just mud. It's going to be petrochemicals, it's going to be toxic chemicals."

Some fears may never be realized. After Hurricane Katrina ravaged Louisiana in 2005, New Orleans residents braced for a "toxic gumbo" of chemicals, with "the potential for unparalleled exposure to toxics and contaminants," but the National Academy of Engineering <https://www.bloomberg.com/quote/0725141D:US> reported <https://www.nae.edu/19582/Bridge/TheAftermathofKatrina/ToxicandContaminantConcernsGeneratedbyHurricaneKatrina.aspx> in 2008 that those initial concerns weren't borne out.

"Although floodwaters did contain significant short-term biological hazards that posed risks to stranded residents and relief workers," the engineering academy said, "they did not contain chemical toxicants at levels" that would lead to long-term impacts beyond a similar volume of city storm water.

— With assistance by Ari Natter, and Jack Kaskey

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http://www.mysanantonio.com/news/local/texas/article/A-week-after-Harvey-left-Texas-some-areas-still-12174993.php

A week after Harvey left Texas, some areas still under water

mySA staff **Updated 4:22 pm, Wednesday, September 6, 2017**

IMAGE 1 OF 27

ORANGE, TX - SEPTEMBER 05: Matt Murray, a volunteer with an animal rescue organization, carries a small dog he found abandoned beside a flooded home on September 5, 2017 in Orange, Texas. Thousands of pets and

... more

Floodwaters from Harvey are steadily receding in some of the worst-hit areas of Texas, but many parts of Houston and East Texas remain under water nearly a week after the storm's final Texas blows.

Aerial photos taken Tuesday show neighborhoods, commercial developments and rural areas still swamped by water left behind after the historic storm.

READ MORE: **Government faces suit over Addicks and Barker dam releases**

Harvey first made landfall on Friday, Aug. 25, tearing into the Texas Gulf Coast in the towns of Rockport and Port Aransas.

As it churned over South Texas, Harvey dumped bands of torrential rain on Houston and East Texas before the eye of the storm retreated to the Gulf of Mexico and worked its way north.

Local Channel

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The storm made landfall another two times in the Lone Star State, leaving behind a path of destruction that left 50 Texas counties in a state of emergency.

This week the U.S. House of Representatives will vote on an $8 billion relief package for Harvey recovery, according to a release by Sen. John Cornyn, R-Texas.

A year before Harvey, Houston-area flood control chief saw no "looming issues"

> Experts say the flooding in the Houston region could have wreaked far less havoc if local officials had made different decisions over the last several decades. But the former head of a key flood control agency strongly disagreed with that take in an interview last year.

BY **KIAH COLLIER** AND **NEENA SATIJA** SEPT. 7, 2017 9 HOURS AGO

1

Mike Talbott, who retired after 35 years as executive director of the Harris County Flood Control District, in his Houston office on Aug. 18, 2016.
Michael Stravato for The Texas Tribune

As the Houston region begins its recovery from the worst rainfall to ever befall a major

metropolitan area in modern U.S. history, many flooded-out residents are asking whether local officials could have done anything to mitigate the damage wreaked by Hurricane Harvey.

The short answer from scientists and experts: Yes.

While Houston — nicknamed the "Bayou City" — is naturally flood prone, hydrologists, environmental engineers, and federal officials told The Texas Tribune and ProPublica last year that unchecked development over the decades has heightened flooding risks. They also say the Houston region must start planning for more intense and frequent rainfall events and move away from looking at the past to predict what might happen in the future.

In recent years, some local officials have attempted to strengthen rules to protect from catastrophic flooding, but their efforts have been shot down by politically powerful developers. And then there are the local officials who completely deny it's a problem.

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One of them was Mike Talbott, the longtime head of the powerful Harris County Flood Control District, who — during his 18 years on the job — made many key decisions about how the Houston area should cope with its nagging flooding problems. In an interview last year shortly before his retirement — and after two major, back-to-back floods in Houston — Talbott told us he strongly disagreed with nearly everything scientists and experts had told us.

Stephen Costello, the city of Houston's new "flood czar" appeared more receptive to alternative solutions, like more green space, but conceded that he had little money or manpower — and said he hoped to pursue smaller, quick-hit projects.

Below are edited and condensed versions of our interviews with them last year, shortly after the Tax Day Flood of April 2016.

TT: You have seen a lot of pretty big floods and disasters in your time. What is your worst case scenario? Is there anything you are really scared of?

MIKE TALBOTT: Not really. We don't have any looming issues, like a New Orleans, or something that’s built below sea level. The big issue is just the extreme rainfall events that we get occasionally. Houston and Harris Country have an incredible drainage system,

but it floods occasionally. And it's just the big rains that we are mostly concerned about.

TT: Do you worry about bigger rain events, like what happened in April, during the Tax Day flood? Do you worry about those happening, or happening more frequently?

TALBOTT: Not statistically. Everything we do is based off of rainfall [data]. We have got one of the densest rain gauge networks, [so] we are able to look at those statistics.

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We've had heavy back-to-back rainfalls before. So I don't think it's the new normal. When you talk about a 1 percent chance of happening [in a given year], it can happen. You can flip a coin and have it come up heads 10 times in a row. It's just, statistically, it shouldn't happen, but it can.

TT: So you don't think climate change is to blame for the recent floods?

TALBOTT: I just don't have any information. I'm not an expert in that field. We had the drought. Before people were talking about climate change, we've seen multiple extreme storms in a year. So I don't see this as a huge trend based off of past experience. But there are experts in that field that do look at that. I just haven't seen anything on that.

TT: Scientists say climate change will bring more frequent and intense rainfall to the Houston region. Is there any way to take that into account going forward?

TALBOTT: When people ask me, "Are you designing for climate change?" I say, "I'd love to, if somebody would tell me what that is." To say, "Well, it's going to be more intense." Okay, give me a number. What's the number I should be using instead of the historical numbers? What is this vision that you have?

TT: Do you all consult with experts who look at the potential of climate change to change things?

TALBOTT: We haven't discussed, specifically, climate change.

TT: Scientists, experts, and some government officials have told us that new development in the Houston region is making flooding worse. You've been

quoted as saying that you disagree — that any development since the mid-1980s, when flood mitigation policies were put into place in Harris County, has not made flooding worse. Is that really your take?

TALBOTT: Yes. With engineering data to back that up, it's not just my opinion. The mitigation that's being done by new development is absolutely effective. They're building stormwater detention, they're building new channels, and all of it is being mitigated appropriately.

Every single development goes through a rigorous review process, and everybody's got criteria manuals that are two inches thick.

TT: So the notion that there's rogue development ...

TALBOTT: No, that's absurd. I'm concerned — A lot of the ink that has gone down after [the Tax Day flood] has been given to critics with an agenda. When somebody wants to claim that, "well, it's because we're paving over all the wetlands and these magic sponges out in the prairie would have absorbed all that water," is absurd.

[During the recent floods], the heaviest rain fell on the prairie, and the prairie did some good, but then it flowed off of the prairie, and all the runoff from the prairie is what flooded that development.

A lot of the critics, they have an agenda, and the media has given them a platform without consulting with other experts. I'm not saying they're not experts, but their agenda to protect the environment overrides common sense in a lot of cases.

TT: What's their agenda? What do you think they're motivated by?

TALBOTT: They're anti-growth.

TT: You really don't think that any of the new development that's happened in the past 20 years has had any impact on flooding?

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TALBOTT: No, it hasn't. The land development issues are being mitigated quite well, and I've got the engineering data to back it up.

TT: It sounds like we're talking to people who live in two different cities, or universes. Not a single expert or scientist that we've spoken to has said that new development has had no effect on flooding in Harris County.

TALBOTT: You need to find some better experts.

TT: Who should we talk to?

TALBOTT: Starting here, with me. But, you know, some of these scientific experts have never built or designed anything. They're not in the review process. Most of them that I know of haven't looked at the design criteria. They don't know what's actually happening.

TT: Is there anyone outside of the flood control district? Other academics or experts who could speak to what you're saying? Or engineers? It sounds like you're criticizing academics, and saying engineers know better.

TALBOTT: Well, the practicing engineers that are actually designing and building these things, and studying the impacts. The design criteria that we developed is all based on science, and the records that we have.

The academic side of things is important, but where the rubber meets the road is the actual practice of designing and building something, and being responsible for what you build is the other aspect.

TT: That's a lot of what experts we've interviewed are saying. They're worried that folks who are building aren't always being responsible, and that there's no way for regulators or anyone else to check up on every single development.

TALBOTT: But that's a theory. Show me their facts. What are they basing that on? This is another irritation for me, is that the critics can say whatever they want, and I have to prove they're lying.

They're just not in touch with what's really going on.

TT: So, Sam Brody of Texas A&M University, Phil Bedient, an engineer at Rice University. They're wrong?

TALBOTT: Next question.

In 2016, after the second flood-producing storm in two years, newly-elected Houston Mayor Sylvester Turner appointed former Houston city councilman Stephen Costello as the city's

first "flood czar" to assess the problem and potential solutions. When we spoke to Costello last year — a day after he'd addressed a crowd of angry residents whose homes had recently flooded — he acknowledged his role as more political than action-oriented.

TT: At the meeting last night residents said they've never flooded before, that this is all new, and you told them, "We're trying to help you and fix your problem." Do you think that this is a new problem for them?

STEVE COSTELLO: Some of them have lived there all their lives and they've never experienced flooding, but the question is: Have they had a rainfall like they've had over the last couple of years? Maybe, maybe not, I don't know.

There is an ongoing problem that the city is faced with, with our residents. They don't trust the city, and particularly because we don't have zoning, and they're concerned that developers run the development out here, and there's no regulatory control, which is just the opposite. There is.

TT: Do you think that the new development is properly mitigating for its impact?

COSTELLO: For open disclosure I made a very successful living at working for the development community [through his engineering firm]. We built massive planned communities.

Developers will follow criteria. What you always have, in any type of industry, is the outlier and some who try to push the envelope and some who don't necessarily follow criteria. What happens is that new laws and new criteria are written to address those issues. I think moving forward, because we are having a lot of public concern over our criteria, that we're going to need to explore that, and that's what I've told the mayor that we'll have to do.

TT: Are you optimistic that criteria is actually going to change? It seems very difficult politically to do that.

COSTELLO: The criteria has changed over the years since I've been in the business, and to be honest with you, the development community was sitting at the table with the regulatory community to discuss these issues.

Obviously what you don't want to do is you don't want to curtail development. You want to encourage, still continue to encourage, development. Right now we're encouraging re-development and densification, so there are challenges that we have with all of that, and we just need to sit down collectively and explore that [so developers] can get a better

understanding of what we're hearing from the community.

TT: Do you think there are enough resources to make sure developers are following the criteria?

COSTELLO: Some of the residents are saying that we don't have the resources to go out and police what has been done. If you drive around parts of the city, you'll get confirmation of that.

The real question is that what do you do as a city to solve that. That's a policy decision that I hope to have some discussions with the mayor about.

TT: You talk about all these things you're doing, but I think people are thinking "This is a person with no money and no staff."

COSTELLO: As I've described it to everybody, here is my card and it says "Office of the Mayor." Even though I don't have money or staff, I speak on behalf of the Mayor when I want to do something. In terms of allocation or reallocation of resources, obviously, I have to come up with a plan for him to evaluate and give him some options. If this was a symbolic position I would not have left my firm to come work for the mayor.

TT: You've talked about pursuing smaller, less expensive, quick-hit projects — having response teams, for example, that would go out and deal with minor house flooding and that kind of thing.

COSTELLO: There's a political goal here. What we want to do is we want to be able to touch as many people as possible because a lot of people don't see where [their tax] money is being spent. The question is: Do we spend on three or four $22 million dollar projects on an annual basis or do we spend on 20 $1 million dollar projects so that we touch more people?

TT: How realistic do you think it is to assure people living in the 500-year floodplain — or even outside it — whose homes are flooding that anything can ever be done for them?

COSTELLO: That's why you have to manage expectations, and that's why you have to be frank with them and say that anywhere in the city could flood at any time, because of the tropical nature of where we live. You can't build [channels and bayous] big enough to contain all the water. You can't design for something like that. The question is: Is it better to wipe the whole neighborhood out and then make a green space? That's a balancing act

that we have to try to figure out how to do it.

TT: Is it possible to protect from something like a Tax Day flood?

COSTELLO: No.

Read related Tribune coverage:

- In a 419-3 vote Wednesday, the U.S. House backed a measure that would fund almost $8 billion for Hurricane Harvey relief. The vote included full support from the Texas delegation. [Full story]
- Northwest Houston suburbs like Cypress have exploded in population in recent years. Scientists say that's a big reason some neighborhoods here saw devastating floods last year and now from Hurricane Harvey. [Full story]
- Rapid development continues in Houston, creating some economic gains but also contributing to flood risks. This 2016 project, done in partnership with ProPublica, looks at those risks and the debate over what to do. [Full story]

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The Latest: EPA says Houston-area oil spill cleaned up

8 hrs ago

Vautrot's Cajun Cuisine shows the severe damage caused inside and out following heavy flooding, Wednesday, Sept. 6, 2017 in Bevil Oaks, Texas. (Kim Brent/The Beaumont Enterprise via AP)

Kim Brent

HOUSTON (AP) — The Latest on the aftermath of Harvey (all times local):

9:10 p.m.

A spokeswoman for the Environmental Protection Agency says a 2,500-gallon oil spill linked to Harvey's strike on the Houston area has been cleaned up.

EPA spokeswoman Liz Bowman said the agency had closely coordinated with the U.S. Coast Guard, which reported the cleanup was completed Tuesday. An EPA news release sent Wednesday night did not include details about the spill, including whether it endangered drinking water or forced evacuations.

Magellan Midstream Partners spokesman Bruce Heine says his company reported the spill at its facility in the east Houston suburb of Galena Park on Sunday and has assisted in cleanup.

One of the Tulsa, Oklahoma-based company's pipelines near Bastrop, Texas, was accidentally cut in July. The resulting spill led to evacuations of nearby homes. No one was hurt.

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5:30 p.m.

House Financial Services Committee Chairman Jeb Hensarling says he will support a short-term extension of the National Flood Insurance Program rather than attempting a major overhaul before the program expires at the end of the month.

Hensarling says "the calendar got too crowded" to take up comprehensive legislation designed to lessen the reliance on taxpayers to subsidize a program now nearly $25 billion in debt.

The Texas Republican says he hopes Congress will pass a 90-day extension along with a bill by Reps. Dennis Ross and Kathy Castor of Florida that would clarify whether insurance policies offered by private companies can satisfy the federal government's requirement for purchasing flood insurance.

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4:30 p.m.

Texas health officials say that because of the rains brought by Hurricane Harvey, aerial spraying targeting mosquitoes is set to start this week in two Southeast Texas counties.

The Texas Department of State Health Services said Wednesday that aerial spraying is set to start around dusk Thursday over Refugio and Bee counties. The health department said it had activated its contract for aerial mosquito control and requested additional mosquito control assistance from the Federal Emergency Management Agency.

Health officials say that while most mosquitoes that appear after floods are nuisance mosquitoes that don't spread disease, they can impact recovery operations by preventing responders and those affected by a disaster from being outside. Also, standing water can increase the number of mosquitoes capable of spreading diseases like West Nile virus and Zika.

Health officials say a small amount of insecticide — one to two tablespoons per acre — will be dispersed by airplanes equipped with nozzles that create ultra-low volume droplets that kill mosquitoes.

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2:40 p.m.

County and city officials now attribute at least 70 Texas deaths to Harvey, the storm that dumped several feet of rain on southeast Texas in a matter of days.

The latest deaths reported by county emergency officials include a lineman electrocuted while working to restore electricity outside of Bloomington, about 13 miles (21 kilometers) southeast of Victoria, and several people with medical conditions exacerbated by flooding or delayed from receiving treatment.

The Associated Press has confirmed the fatalities and causes of death by interviewing emergency personnel and county officials in the areas under state and federal disaster designation.

The deaths span 13 counties, with the highest totals in Harris County, where at least 30 people have died from Harvey-related causes, according to officials. At least 10 counties have reported no deaths.

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11 a.m.

A Texas official says the state's gasoline supply is recovering quickly after shortages he blames on hoarding and panic buying due to Harvey.

Texas Railroad Commissioner Ryan Sitton says any shortages likely will be resolved within the next day or two. He says several refineries in the state idled by the storm have restarted, although a few remain closed while undergoing inspections.

Sitton says pipelines are all operational again and supply truck companies are working around the clock to get gasoline from terminals to local gas stations.

The three-member Texas Railroad Commission regulates the oil and gas industry in the state.

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HoustonPress

Air Monitors Tracking Benzene, Other Pollutants, In Post-Harvey Manchester

BY DIANNA WRAY

THURSDAY, SEPTEMBER 7, 2017 AT 4 A.M.

The east side of Houston is still seeing fallout from Hurricane Harvey in the form of air pollution, including streams of benzene.

Photo by Doogie Roux

Hurricane Harvey was nasty enough in its own right, but it's becoming increasingly apparent the catastrophic storm is also behind a significant amount of air pollution coming out of the refineries and petrochemical plants in the storm's path.

Now air pollution, including plumes of benzene, is being tracked in Manchester and other east side Houston neighborhoods nestled against the works of those refineries and plants along the Houston Ship Channel.

In the aftermath of Hurricane Harvey, officials with both the Texas Commission on Environmental Quality and the federal Environmental Protection Agency have gone out of their way to reassure people that the storm that hit the Houston Ship Channel, the heart of the petrochemical industry in the United States, has not resulted in any fallout for those who live near the refineries and plants nestled along the coast.

The EPA even released a statement Sunday that “local residents should not be concerned about air quality issues related to the effects of the storm.” But despite that broad assurance, Houston has been under alert for ground-level ozone, a lung-damaging air pollutant since Friday, according to the EPA's own air pollution tracking website.

TCEQ has mostly just stayed quiet since the state agency opted to turn off its air monitors as the storm approached two weeks ago.

However, both the Houston Health Department and the Environmental Defense Fund set up air quality monitors in Manchester on Monday and have been collecting data. Since then the monitors have detected streams of benzene, a component of crude oil and gas and a known carcinogen, and other air pollutants in the community, making both the TCEQ silence and the EPA assurances look particularly ridiculous.

“EPA said inaccurately and inappropriately that residents should not be concerned about the air quality around Houston. Although air quality monitoring remains limited after the storm, we are seeing high levels of ozone across the region, as well as high levels of air toxics in fence-line communities," Elena Craft, senior health scientist with the Environmental Defense Fund, stated in a release. "We can expect more air pollution as facilities reboot over the next month."

In fact, the shutdowns and startups from the various chemical plants and refineries due to Harvey have already released about four million pounds of pollutants so far in concentrations nearly ten times what health officials have deemed safe, according to the Environmental Defense Fund.

And of course, Manchester, the community where residents were reporting strange odors coming from the refineries and plants before the hurricane had even passed, is seeing some of the worst of the post-Harvey pollution. The two monitors detected sharply different levels of benzene, a component of crude oil and gas that is also a known carcinogen, at different times of day in the neighborhood.

So far, the air monitors installed by the Houston Health Department and the Environmental Defense Fund have measured about 15,000 parts per billion of smog-forming volatile organic compounds in the air around Manchester and the Valero refinery that hugs the low-income, minority-dominated community on its southern fence line.

That's a pretty big deal.

For one thing, benzene is nasty stuff. Short-term exposure can leave a person dizzy and confused with a racing heart, tremors, headache and various other symptoms, while long-term exposure can make the body's cells stop functioning properly, leading to anemia, a damaged immune system and a chance of developing leukemia and other types of cancer, according to the Centers for Disease Control.

It's actually not news that benzene plumes shoot up out of Manchester in thick, toxic bursts every so often. Back in February 2015 researchers discovered benzene coming from the area refineries and the Houston Ship Channel, as expected.

The Houston Advanced Research Center, led by Jay Olaguer, also found benzene was bursting, unseen, out of pipelines buried below Manchester and Galena Park, another fence-line neighborhood, as we reported. (We've reached out to Olaguer to get his take on the recently reported emissions. We'll update when we hear back.) Last year Air Alliance Houston followed up with its own report finding the same type of benzene emissions in nearby Galena Park, as we reported.

But what is interesting about the current reports of benzene emissions in the area is that both local and federal officials are now actively attempting to track the benzene releases and to understand where the emissions are coming from, which is a new twist in the situation in Manchester.

Of course, there's at least one obvious source, Valero. While Valero is not the only refinery to report such issues to the TCEQ, as we've previously reported, it is the refinery located closest to Manchester. But still, the Valero refinery reported leaks of benzene and other oil-related materials to TCEQ on August 27, just as Hurricane Harvey was clearing out.

If Valero is the ultimate source behind the benzene plumes, the company isn't sharing that information. Valero issued a release on August 29 stating that the company's air-quality monitoring found "no detectable levels of emissions in the community," but there has been no update on the situation around the Valero refinery since then.

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Texas to launch air attack to combat mosquitoes in wake of Hurricane Harvey

Posted: Sep 06, 2017 4:30 PM CDT
Updated: Sep 06, 2017 4:30 PM CDT

To address increasing numbers of mosquitoes created from the rain left behind by Hurricane Harvey, and the risk they pose to the recovery effort and public health, the Texas Department of State Health Services has activated its contract for aerial mosquito control.

Corpus Christi Vector Contril crews are stepping up efforts to combat mosquitoes after Hurricane Harvey blew in last week.

Aerial spraying targeting mosquitoes will begin around dusk Thursday over Refugio and Bee counties, weather permitting.

DSHS has requested additional mosquito control assistance from the Federal Emergency Management Agency.

Most mosquitoes that appear after floods are nuisance mosquitoes that don't spread disease but can have a serious effect on recovery operations by preventing responders and people affected by a disaster from being outside.

Areas of standing water can also increase the number of mosquitoes capable of spreading diseases like West Nile virus and Zika.

Aerial application of insecticide, when applied according to label instructions by a licensed professional, is the most effective way to rapidly reduce the number of mosquitoes in a large area and does not present a risk to people, pets or other animals.

A small amount of insecticide, one to two tablespoons per acre, is dispersed by airplanes equipped with nozzles that create ultra-low volume droplets just the right size to kill mosquitoes. The tiny droplets are calibrated to float in the air for a period of time and kill adult mosquitoes on contact while limiting exposure to other animals and people.

Once any remaining droplets settle to the ground, they quickly break down on surfaces, in water and in sunlight.

The small amount of insecticide used does not pose a health risk to people, pets or the environment in the area. According to the Environmental Protection Agency, people may prefer to stay inside and close windows and doors when spraying takes place, but it is not necessary.

Spraying is also done to minimize any effects on beneficial insects like bees. Applications will be done starting around dusk when mosquitoes are most active and after bees have returned to their hives for the night. The insecticides dissipate and break down quickly in the environment, and when bees emerge in daylight, they are not affected. Although this type of application will not cause a significant exposure for bees, beekeepers may choose to cover their colonies and prevent bees from exiting during treatment.

Flights will be conducted by Clarke, Texas' environmental services contractor, using three twin-engine Beechcraft King Air planes. Crews will be working from dusk to dawn beginning Thursday night with Refugio and Bee counties, areas identified as priorities.

Texas is also expecting additional support from the U.S. Air Force Reserve's 910th Airlift Wing flying two specially equipped C-130H cargo planes in the coming days in areas over the upper Texas coast.

DSHS will continue to coordinate with county governments that have requested aerial mosquito spraying and will update information as flight plans are finalized.

People can help control mosquitoes during the recovery effort by dumping out standing water around their homes and businesses and applying a commercially available larvicide in water that can't be drained.

People should also avoid mosquito bites by using an EPA-registered mosquito repellent every time they go outside and making sure their window and door screens are in good repair after the storm to keep mosquitoes out of homes.

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See where Superfund sites are in the Greater Houston area

By John-Henry Perera, Chron.com / Houston Chronicle

Published 6:20 am, Thursday, September 7, 2017

IMAGE 1 OF 24

America has a pollution problem, but that doesn't mean we're not doing anything about it. Following the establishment of Superfunds, the Environmental Protection Agency has created special areas where they ... more

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> Some of the most contaminated, polluted land in the U.S. is probably within driving distance from your house, the **EPA reports**.

Superfund sites, first established in the 1980s, are polluted areas that require years (and years) of cleanup.

READ ALSO: Harvey may have damaged 13 Superfund sites

The Greater Houston area is home to more than a dozen of these sites thanks to large quantities of chemicals being disposed of here and there.

See if you live near any of these places in the gallery above.

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In 'Gasland' community, new tests revive old drilling debate

Michael Rubinkam, Associated Press **Published 8:33 am, Thursday, September 7, 2017**

IMAGE 1 OF 2

Ken Morcom refers to a letter from the Pennsylvania Department of Environmental Protection as he speaks about the contamination of his water well at his home in Dimock, Pa. The federal government is back for ... more

DIMOCK, Pa. — The well water at Ken Morcom and Kim Grosso's house is laced with so much explosive methane that a Pennsylvania environmental regulator who went there to collect samples this summer decided it would be safer to coast her SUV down the driveway.

Morcom and Grosso want to leave but doubt they could sell a house with tainted water. So, a few weeks ago, they asked the gas driller they blame for polluting their well to buy them out.

"I was hoping they'd fix it. But I've given up hope," said Morcom, 49, who supports drilling but has become disillusioned with Houston-based Cabot Oil & Gas Corp. "Just let us out of the box."

"The box" is the couple's 8-acre spread in rural Dimock Township. But Morcom could have been talking about Dimock itself.

A patchwork of homes and farms about 150 miles north of Philadelphia, the community became a battleground for pro- and anti-drilling forces after state regulators found that Cabot — one of the biggest drillers in the vast Marcellus Shale gas field — had contaminated 18 residential wells with methane. Homeowners sued, accusing the company of polluting their water with toxic chemicals and methane. Activists and celebrities descended.

Business Channel

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It's a much quieter place these days. But the questions surrounding Dimock's groundwater have yet to be resolved — and the federal government is back for the first time in more than five years to investigate ongoing claims of contamination. Public health experts visited 25 homes last month to test for bacteria, gases and chemicals.

The testing has resurrected an old debate about the groundwater in Dimock, whose plight was the focus of the Emmy Award-winning documentary "Gasland."

State regulators say Cabot still hasn't fixed the water. Cabot says the methane was there long before it began drilling. It's an argument that's been going on for eight years.

Bill Ely, whose house was tested, said his methane-laced well water looks like milk. He now pipes spring water to his house.

"My place that I've worked for all my life is worth nothing," said Ely, 66.
Dimock was the highest-profile case of contamination linked to Pennsylvania's huge gas drilling industry, but it's far from the only one. State regulators have identified 289 cases since December 2007 in which a private water supply was affected by gas drilling, including seven so far this year.
In Dimock, the dispute centers on the extent to which methane was present in the water before Cabot showed up to drill in 2008.

The odorless, colorless gas is common in Pennsylvania groundwater. It can emanate from swamps, landfills, coal mines and gas wells. Methane is not toxic to humans, but at high concentrations it can lead to asphyxiation or cause an explosion. It was an exploding water well on New Year's Day 2009 that first aroused public attention in Dimock.

Cabot has long insisted the gas in Dimock's aquifer is naturally occurring, saying its pre-drill testing of thousands of private water wells in the area show a high percentage with methane. Company spokesman George Stark said he views the new testing by the U.S. Agency for Toxic Substances and Disease Registry as a waste of time and taxpayer money, pointing out that another federal agency, the Environmental Protection Agency, tested 64 homes in 2012 and concluded the well water didn't pose a health hazard.

Critics have said the EPA buckled to industry pressure. The Agency for Toxic Substances analyzed the same data and concluded that 27 of the wells had unsafe levels of contamination. Its 2016 report drew no conclusion about whether gas drilling caused the water to become tainted.

Some residents agree with Cabot.

Lloyd Conrad, 80, said "swamp gas" has always been an issue in Dimock, including at his own house. "Bunch of yahoos," Conrad said of residents who sued the company in 2009. "They were after this," he added, rubbing his fingers together.

Still, Conrad wonders whether Cabot's drilling might have made things worse. The driller pays to refill a large plastic tank on his property, called a water buffalo, that supplies Conrad's home with water for bathing and washing clothes. Government scientists tested his well in early August.

The Department of Environmental Protection said Cabot has not yet fixed all affected water supplies, nor has it shown that all its gas wells have stopped leaking natural gas into the aquifer. As a result, the agency has refused Cabot's requests to lift a moratorium on drilling in a 9-square-mile area of Dimock.

Though Cabot hasn't been able to drill new wells, state regulators did permit the company to begin producing gas from six existing wells in 2012. The state agency has since held Cabot responsible for three additional cases of contamination, though Stark said two of the cases involve homeowners who have long reported gas in their water.

The third case involves Grosso and Morcom, who reported their well water went bad three months after Cabot "fracked" a nearby gas well. Fracking is a method that uses huge amounts of pressurized water, along with sand and chemicals, to extract oil and natural gas from shale.

State regulators held Cabot responsible, though they cited problems with the cementing of the gas wells and said there is no evidence that fracking itself polluted the water.

Cabot installed a third water buffalo on the couple's property this summer, this one to water their cows.

"After five years of putting up with this," Morcom said, "we just want out."

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Logan Hawkes

Standing water following torrential rains and flooding from Hurricane Harvey poses a health risk--mosquitoes.

CROPS > INSECTS

Hurricanes and floods not the only thing hampering recovery in Texas

Not the least of worries, and a concern that is growing as each day passes, is the rapid population explosion of mosquitoes and the diseases they may be carrying.

Logan Hawkes 3 | Sep 06, 2017

Nearly two weeks after Hurricane Harvey ravaged the Texas coast, flood waters are still receding in hard hit areas across the mid and upper coast of Texas and in parts of Louisiana. More than 25,000 residents remain in shelters, hotel and motel rooms or at the homes of relatives or friends.

In cities, communities and across large parts of rural areas, families are still digging out, shoring up and trying to put their homes and often their lives back together. For most it has been a struggle. Federal, state and local officials have been joined with a mounting number of volunteers to help in the cleanup. Rummaging through damaged or destroyed homes for personal property is an ongoing project for many, and debris removal continues.

Related: 'It looks like a bomb went off' on Texas Gulf Coast

There is plenty of work yet to do. Roads, bridges and dams need repaired, utility crews are still attempting to restore power to many customers, especially in rural areas. Farmers and ranchers are still assessing damage to crops, equipment and structures, while many continue to search for lost cattle or other livestock.

Diligent work continues, but under less than ideal conditions. Many storm-ravaged areas are troubled by heat and unbearable humidity, workers often wishing or searching for an air conditioned cafe or coffee shop in areas that still have electricity for respite from the heat of the late summer sun.

Officials in Houston and Baytown and as far south down the coast as the Port of Corpus Christi are warning of the dangers from standing water and polluted tributaries near the coast. Environmental officials warn of the possibility that bays and channels are contaminated from sunken vessels or barges— fuel and the petrochemicals they carry leaching into the waterways. Some have no fresh running water for drinking or bathing.

MOSQUITO INVASION

Not the least of worries, and a concern that is growing as each day passes, is the rapid population explosion of mosquitoes and the diseases they may be carrying. Jason Ott, Nueces County agricultural agent in Corpus Christi, says mosquitoes go from egg to adult in 4 to 14 days, depending on conditions. The process of development from egg to adult takes less time when the weather is hot.

"Mosquitoes are aquatic in all but the biting adult stage. Eggs, larvae and pupae must have water to mature into blood-feeding adults," he said. "Adult mosquitoes emerge from the aquatic pupal stage and begin to feed. Males feed on nectar [while] females feed on nectar initially, but then they must feed on blood to produce eggs."

According to the Environmental Protection Agency (EPA), all mosquito species go through four distinct stages during their life cycle, from egg hatch as larvae, mosquitoes progress to pupae and then adult stage. The first three stages occur in water, but the adult is an active flying insect. But only the female mosquito bites and feeds on the blood of humans or other animals. After she obtains a blood meal, the female mosquito lays her eggs directly on or near water, soil and at the base of some plants in places that may fill with water. The eggs can even survive dry conditions for several months.

MOST DANGEROUS CREATURE

According to the Center for Disease Control in Atlanta, mosquitos may well be the most dangerous creatures on earth. The Illinois Department of Public Health claims the diseases mosquitoes spread have been responsible for killing more people than all the wars in history. Even in modern times, mosquitoes transmitting malaria kill 2 to 3 million people and infect another 200 million or more globally every year. Tens of millions more are killed and debilitated by a host of other mosquito-borne diseases, including filariasis, yellow fever, dengue, and encephalitis.

In the United States, encephalitis, meningitis and other diseases can develop from the bites of mosquitoes infected with certain viruses. These include the viruses of

West Nile, St. Louis encephalitis, LaCrosse (California) encephalitis, and Eastern equine and Western equine encephalitis. In more recent years however, a new threat has emerged—Zika virus.

Zika is transmitted to humans primarily (but not limited) to two specific mosquito species. These are the same type of mosquitoes that spread dengue and chikungunya viruses. Zika virus in humans is usually mild with symptoms lasting up to a week, and many people do not have symptoms at all, or will experience only mild discomfort. However, a Zika virus infection during pregnancy can cause a serious birth defect called microcephaly along with other severe brain defects.

Most mosquito species bite actively at dusk and dawn, however, the two mosquito species that transmit the Zika virus and many other diseases – Aedes aegypti and Aedes albopictus - bite during daytime, and at dusk and dawn.

Over all, mosquitoes can be described in two groups, depending on where the eggs are laid. One type is floodwater mosquitoes. They lay their eggs on moist soil in areas prone to flood. The eggs lay dormant on the soil surface until the site floods again, at which point the eggs will hatch. Some eggs are weather resistant and can withstand desiccation for up to two years. Summer flooding often results in large populations of these biting floodwater mosquitoes. Floodwater mosquitoes are typically aggressive and deliver a painful bite. But floodwater mosquitoes are not considered primary in human disease transmission.

The second group of mosquitoes lay eggs in standing water. Some prefer to lay eggs in water-filled tree holes, while others prefer artificial containers. Some of these mosquitoes are major players in the transmission of human disease,

PREVENTION IS CRUCIAL

"Prevention of mosquito bites and disease outbreaks will require taking steps to disrupt the mosquito life cycle. Mosquitoes must have food, shelter, and water to

live. Remove any one of these – especially standing water – and they cannot survive. Without water, there are no larvae," Ott explained.

"The most effective thing people can do to reduce mosquito populations is to eliminate standing water. Gutters, boat tarps, under-treated swimming pools, tires, toys, buckets, bird baths, water features, catch dishes under potted plants, cans, bottles, and other containers are all locations that can hold enough water for mosquitoes to breed. When dealing with mosquitoes and mosquito-borne disease, anything that will hold water is a problem, so eliminating these types of items around the house or on the farm will reduce mosquito populations."

As far as the best way to avoid mosquito bites, experts say simply avoid them. And the best way to that is a generous application of a mosquito repellent containing Deet. A remarkably effective alternative is a commercial lemon eucalyptus repellent.

In a 2015 study, Deep Woods repellent containing Deet provided a 94 percent reduction in mosquito attraction upon application, and four hours later it was still providing protection equal to 71 percent reduction in attraction. By comparison, Cutter's lemon eucalyptus repellent provided 91 percent reduced attraction at application and 82 percent reduced attraction four hours later.

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HARVEY 33 MIN AGO

How Hurricane Harvey's floodwaters could harm coral reefs in the Gulf of Mexico

Anna Kuchment, Staff writer

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As Hurricane Harvey's floodwaters recede across Texas and Louisiana, they may soon affect another vulnerable community: the coral reefs in the Gulf of Mexico.

HARVEY

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The reefs, made up of millions of tiny animals known as polyps, are among the world's northernmost tropical coral structures. They are also among the healthiest, even though they live and grow within a mile of the towering oil and gas platforms that dominate the Gulf Coast.

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The corals serve as habitats for loggerhead sea turtles and manta rays, and for commercially important fish like snapper, grouper, mackerel and for the smaller fish on which bigger fish feed. Whale sharks, hammerheads and many other sea creatures are frequent visitors.

Photo Gallery 1/2

The reefs' depth and relative isolation have, for the most part, spared them the worst effects of climate change and tourism that have affected many of the world's other reef systems.

But conservation managers who care for Flower Garden Banks have spotted plumes of runoff heading for the area. They worry about the runoff's impact, even as they go about gutting and cleaning their own flooded homes.

"We are very concerned about freshwater going back out to Flower Garden Banks," said Emma Hickerson, the Galveston-based research coordinator for the sanctuary, which is overseen by the National Oceanic and Atmospheric Administration.

At the Flower Garden Banks, the giant anemone is found only in the deeper areas, not on the reef crest. In other areas of the Caribbean, this species is found in shallow areas. (National Oceanic and Atmospheric Administration)

While Hickerson's home was spared, she has been helping colleagues and friends clean out theirs.

Over Labor Day weekend, she examined satellite data captured by collaborators at the University of South Florida that suggested polluted storm water from Hurricane Harvey was making its way toward the banks.

The runoff is dangerous not only because it could dilute the salinity of the water near the reef but because it carries sewage and contaminants from the petrochemical plants surrounding Houston. The sediment, or dirt, in the runoff can also filter out sunlight, which corals need to grow.

Hickerson has witnessed the effects of previous storms, including Hurricane Rita in 2005, which passed directly over the Banks, and Hurricane Ike in 2008. Both Ike and Rita toppled and broke corals and scooped out and scattered sand that had been protecting the reefs' bases.

A Redlip Blenny perches on top of a coral head, resting on its pelvic fins. (G.P. Schmahl/Flower Garden Banks National Marine Sanctuary)

"The first time we personally saw damage after a hurricane, it was really shocking to us that it could happen so deep down," said Hickerson, who observed the damage while diving and also by using a remotely operated vehicle.

The waters of the gulf had transmitted energy from 20- and 30-foot waves down to a depth of at least 200 feet. But the corals rebounded well from both events. In fact, hurricanes have shaped reef systems in the past by opening space for new corals to settle and grow. Hurricanes can also cool water that has grown too warm, said Laura Mydlarz, a coral researcher at the University of Texas at Arlington.

HARVEY

UT-Arlington flood expert helped keep Houston hospitals safe during Harvey's onslaught

If water remains above 30 degrees Celsius for an extended period, the algae on which coral feed grow toxic. The coral then expel the algae, which give them color. As a result, the reef takes on a whitish appearance — a process known as bleaching.

In the fall of 2016, the Flower Garden Banks coral reefs experienced bleaching but recovered once water temperatures cooled later that year, and the algae returned.

Freshwater intrusion can also severely affect coral, and it may be a more serious threat this time than after previous storms because of Harvey's record-setting rainfall.

HARVEY

Recovering from Hurricane Harvey: Resources for those in need and how you can help

Already the Gulf of Mexico is home to a growing "dead zone," an area the size of New Jersey that is devoid of oxygen. NOAA scientists believe the dead zone results from coastal runoff, especially agricultural waste and fertilizer that travels down the Mississippi River from as far away as the upper Midwest.

"Two-thirds of the United States drains into the Gulf of Mexico," said Hickerson.

The Flower Garden Banks may have experienced the first symptoms of that dead zone last year, when it succumbed to a localized die-off that killed hundreds if not thousands of corals, sponges, crustaceans, mollusks and other invertebrates. The cause of the event remains unclear, and Hickerson and her colleagues are still investigating.

Southern stingrays often rest in the valleys between pinnacles at Stetson Bank near Flower Garden Banks National Marine Sanctuary. (Emma Hickerson/Flower Garden Banks National Marine Sanctuary)

As early as next week, or as weather conditions allow, they plan to begin sampling water in the sanctuary to check its salinity, temperature, pH, nutrients and other parameters. They may also send scuba divers out to examine a shallower, and more vulnerable, portion of the sanctuary known as Stetson Bank, which is closest to shore.

If they do find damage, there won't be much for scientists to do. They will watch, wait and hope the coral communities prove as resilient this time as they have in the past.

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