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FEMA flood maps in place since '89 to change

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It has been almost three decades since the Federal Emergency Management Agency has issued new maps detailing areas it believes are at risk of flooding. It is only a coincidence that the final steps in the process are happening weeks after historic, catastrophic flooding devastated Brazoria County and Southeast Texas.

The new map has been in the works for about a decade, and the 28-year interval since the county's flood hazards were last updated is "longer than normal," said Larry Voice, a FEMA engineer who has been involved in most of the agency's recent revisions of flood maps for South Texas.

A formal meeting of the county's municipal leaders and FEMA took place Sept. 19. When that meeting is published in the U.S. Federal Register, which could take up to three months, it will initiate a 90-day appeal period in which homeowners, real estate developers and other businesses can object to the new map.

FEMA then will take up the task of resolving those appeals, and the earliest the new map, known as a "Flood Insurance Rate Map," could take effect would be in about 18 months, Voice said.

Until then, the current map, adopted in 1989, will remain in effect. The way water moves across Brazoria County has changed in the 28 years since the current map took effect, and the way FEMA analyzes watersheds has changed, too. Both those factors affected the flood risks reflected in the new maps, Voice said.

"A lot can change. The land cover changes. Where there were open fields and forests there are now

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MORECOVERAGE

To view a draft of FEMA's new Flood Insurance Rate Map for Brazoria County, go to http://maps.riskmap6.com/TX/Brazoria/.
Select "Change Layer" under the Map Layers menu to see how the the proposed map differs from the current map.

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Brazoria County Floodplain Department Administrator Joe Ripple looks over proposed revisions to FEMA's Flood Insurance Rate Map for Brazoria County. A new map could take effect for Brazoria County in as soon as 18 months.

Maps

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subdivisions," he said.

FEMA now has more years of flood gauge data to take into account than it did when the 1989 maps were being developed, as well as more accurate computer models with which to analyze that data. Crucially, the agency also now uses Light Detection and Ranging — LIDAR — technology to map a landscape's topography. LIDAR uses lasers mounted on airplanes to scan land from above.

LIDAR "is a big thing now," Voice said. "We try not to do any updates if we don't have LIDAR data because that's been a big issue."

FEMA also takes into account major flooding events like Hurricane Ike and Tropical Storm Harvey.

The computer models that generate the maps do not analyze individual events, but the data gathered during those events can change the predicted frequency of flooding in an area.

The areas in Brazoria County that will see the biggest changes in flood hazard rating are coastal areas and the Bastrop Bayou watershed, Voice said.

Athelstan Sanchez, a civil engineer who works for the City of Lake Jackson, said the proposed changes to Bastrop Bayou's flood hazard ratings have been of interest to city staff, some of who do not agree with the new ratings.

The flooding Lake Jackson experienced recently, however, seemed to confirm the changes, Sanchez said.

"The actual flooding that we saw looked a lot like the new map," he said.

For municipalities like Lake Jackson, the direction of future development is at stake in the map revision process. For homeowners, the new map could affect the cost of flood insurance, where they can build new homes and, if their houses are severely flooded, how they will be required to rebuild.

"There won't be any changes in where a person can build. The key is how high you must build," said Joe Ripple, administrator of Brazoria County's Floodplain Department.

"In Brazoria County we have a 2-foot freeboard, so if FEMA says the base elevation is 20 feet, we add an additional 2 feet," Ripple said. "That's how we protect citizens in case there is a variance there."

In the case of a very rare event like Harvey, however, "all bets are off" and that freeboard was in some cases not enough to protect homes from flooding, even if they were built to code.

Homes built 40 or 50 years ago were often placed on the ground with no additional elevation to protect from flooding, but recent floods have borne out what "old-timers" said bayous and rivers could do in extreme situations, Ripple said.

Those older homes were grandfathered in when the 1989 map took effect, just as homes built now will be grandfathered into the new maps when they are adopted. But when homes experience "substantial damage," a technical term that means they lost more than 50 percent of their value, they have to adhere to current codes in order to receive a government permit.

Many Brazoria County homes were substantially damaged in the 2016 flood and in the floods that followed Harvey.

"We do have a lot of homes that do need to be elevated," Ripple said.

FEMA's flood hazard maps can impact residents' lives in many ways but "if people thought that they are onerous regulations, with the recent state of flooding that we've had, they understand that it's serious business," Brazoria County Judge Matt Sebesta said.

Regardless as to what the maps show, Brazoria County will not take steps to buy out property that is at a high risk of flooding.

"We are not in the buyout business. Those are federal and state programs," Sebesta said.

In the long run, building to the code that will in part be determined by the new map is cheaper for homeowners than flooding, he said.

"If these structures stay dry then it's a huge win for everybody," Sebesta said.

"One of the cheapest things to do is to build up a little bit higher."

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