

**CITY OF SUGAR LAND  
and  
FORT BEND COUNTY LID # 11  
Community Meeting  
May 7<sup>th</sup> Rainfall Event  
June 26, 2019**

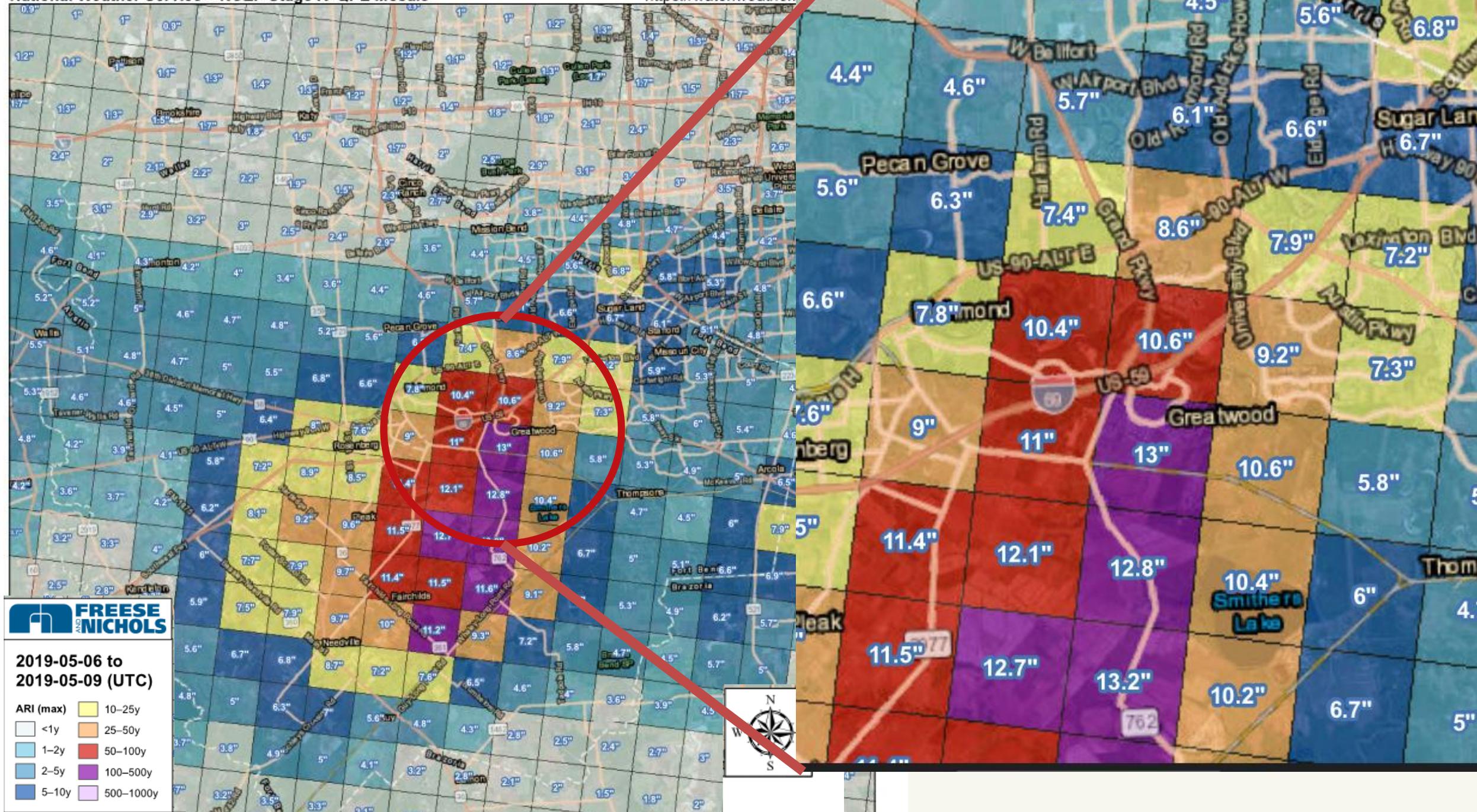
**CITY OF SUGAR LAND**

*Texas*

# May 7, 2019 Rainfall Map

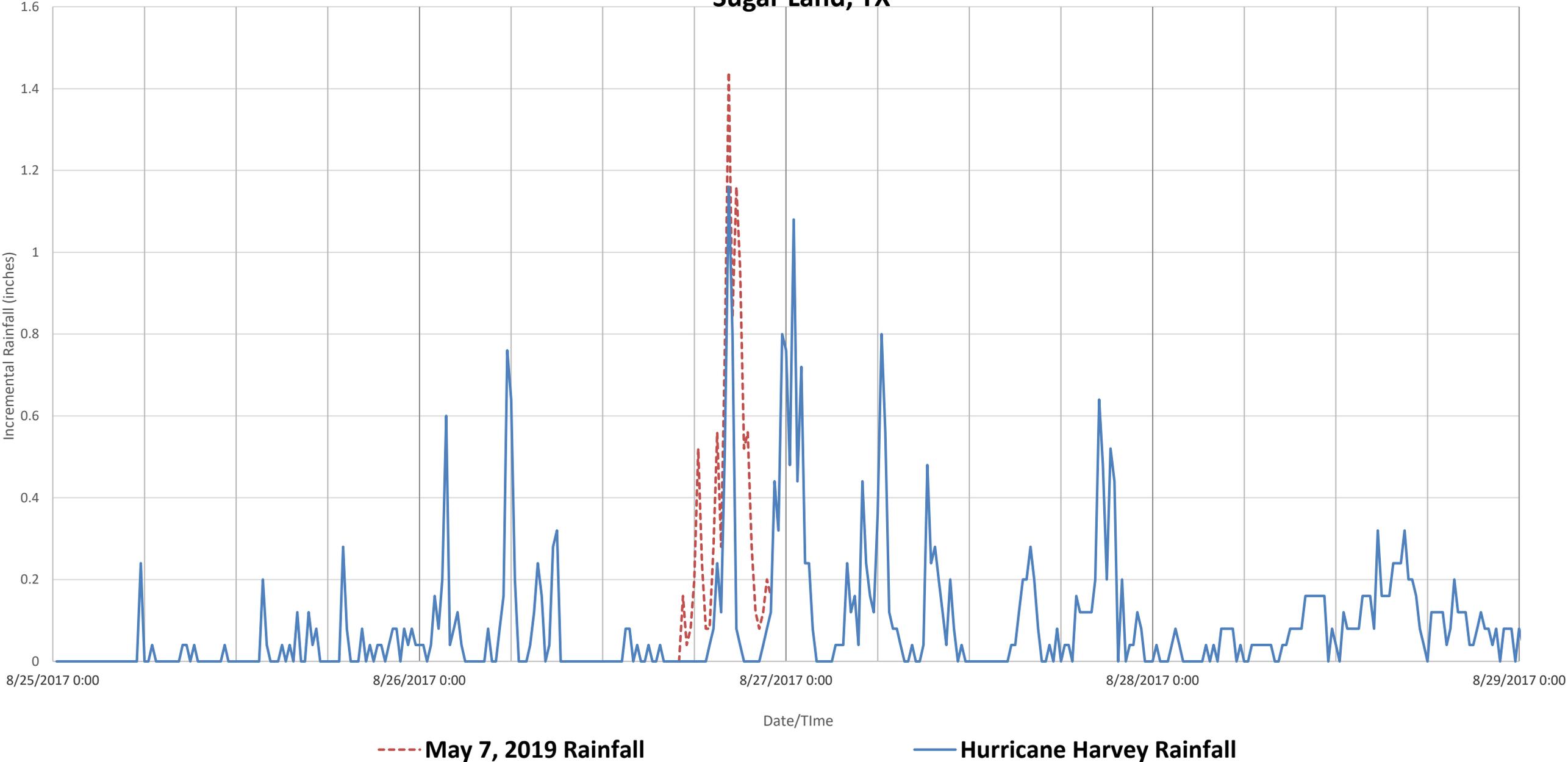
National Weather Service – NCEP Stage IV QPE Mosaic

<https://water.weather.gov>



# May 7, 2019 Rain Even vs. Hurricane Harvey

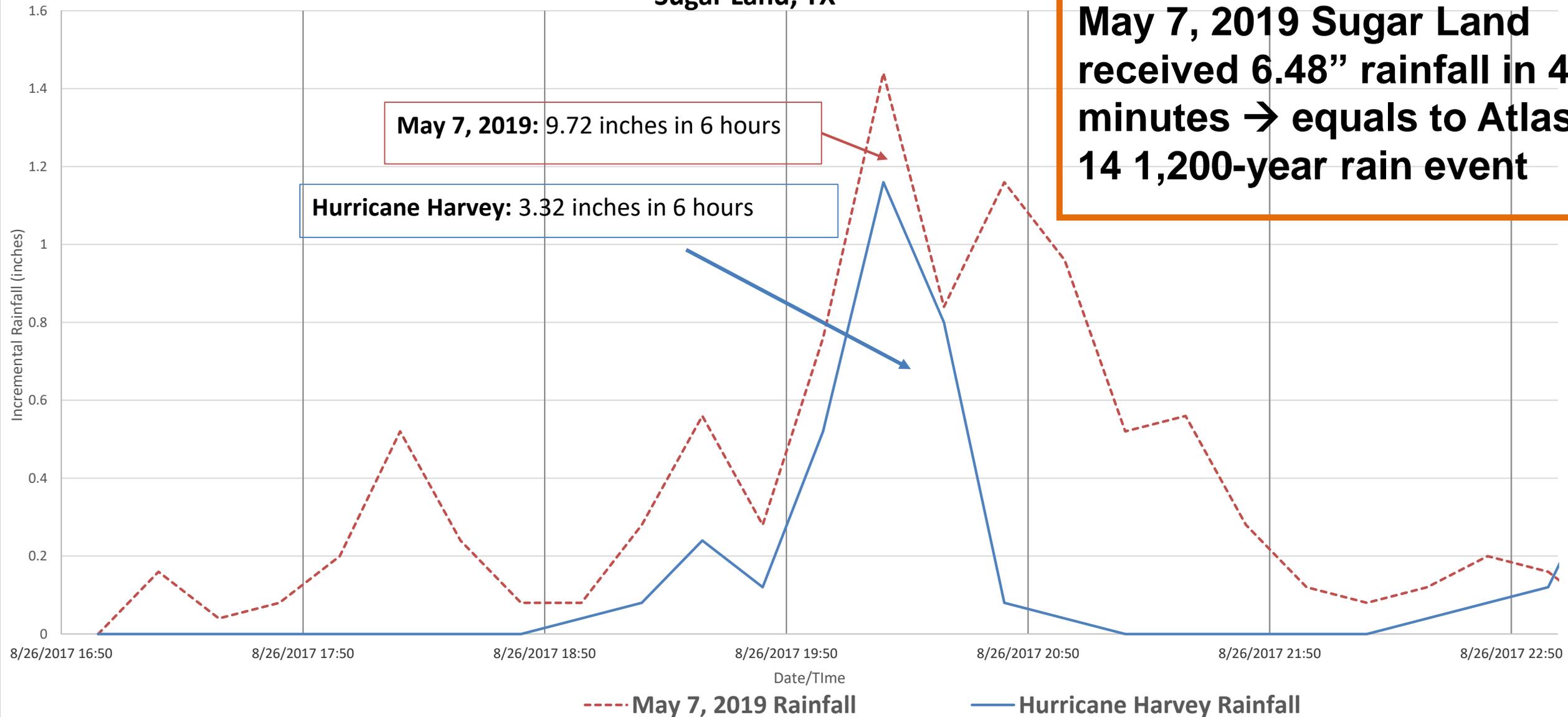
May 2019 Rainfall vs. Hurricane Harvey Rainfall  
Intensity and Rainfall Totals at Peak of Storm  
Sugar Land, TX



# May 7, 2019 Rain Even vs. Hurricane Harvey

## 1<sup>st</sup> Peak Rainfall

May 2019 Rainfall vs. Hurricane Harvey Rainfall  
Intensity and Rainfall Totals at Peak of Storm  
Sugar Land, TX

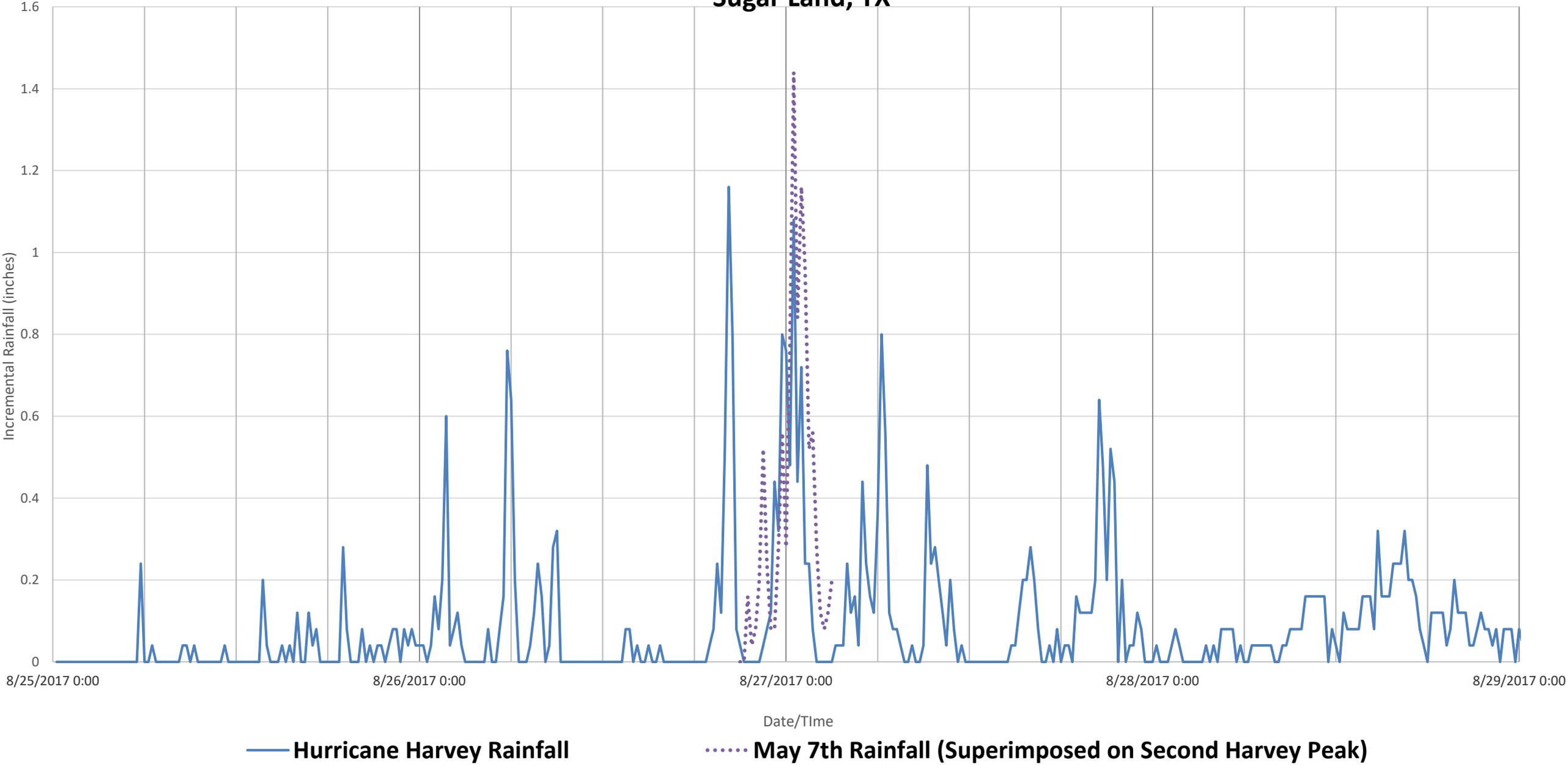


**May 7, 2019 Sugar Land received 6.48" rainfall in 48 minutes → equals to Atlas 14 1,200-year rain event**



# May 7, 2019 Rain Even vs. Hurricane Harvey

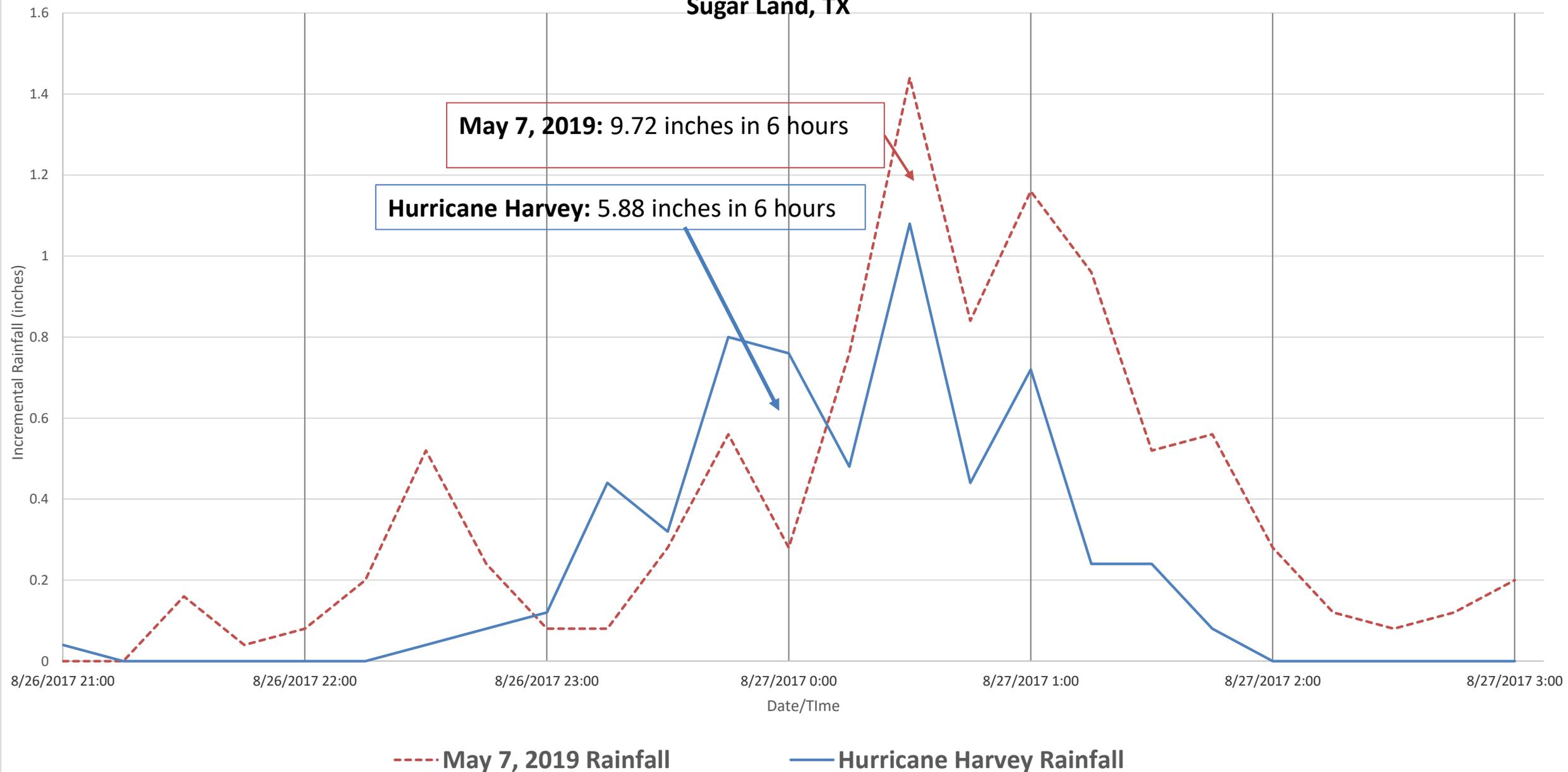
May 2019 Rainfall vs. Hurricane Harvey Rainfall  
Intensity and Rainfall Totals at Peak of Storm  
Sugar Land, TX



# May 7, 2019 Rain Even vs. Hurricane Harvey

## 2<sup>nd</sup> Peak Rainfall

May 2019 Rainfall vs. Hurricane Harvey Rainfall  
Intensity and Rainfall Totals at Peak of Storm  
Sugar Land, TX





# Areas Affected During May 7<sup>th</sup> Storm



# Atlas 14 – Volume 11

- ✓ Atlas 14 Study commissioned by National Oceanic and Atmospheric Administration (NOAA) - Texas update September 27, 2018
- ✓ 24-hr Rainfall Intensity for CoSL
- ✓ CoSL will see larger storms more often

Duration	TP-40	Atlas-14
	Precipitation 100-yr	Precipitation 100-yr
1 hr.	4.6	4.73
12 hr.	10.5	13.5
24 hr.	<u>12.5</u>	<u>16.5</u>



# Drainage Improvement Efforts

- **City Completed four drainage studies**
  - **Started after Harvey**
  - **Completed in June 2018**
  - **Received Hazard Mitigation Grant (HMGP) to upgrade 14 rain/flow gauges and add 14 new gauges.**
- **Updating to the City-wide ISWMM ponding maps**
  - **for 2-, 10-, 50- and 100-yr storm events**
  - **To be completed in summer 2019**
  - **Including Greatwood/ LID 11 Area**



# Drainage Study in Greatwood

- **Need drainage study to determine**
  - **Causes of structural flooding**
  - **Determine areas not in compliance with performance base criteria:**
    - **Excessive ponding depths**
    - **Excessive ponding time**
- **Discussion with City Council on potential GO Bond Election for proposed drainage improvements**





# Questions?