



TIRZ 17 BOARD MEETING

May 9th Event Summary

May 28, 2019



Presentation Outline

- Event Summary
- W140-01-00 (Briar Branch)
Channel Improvement Project
- Infrastructure Performance





Event Summary

- Date/Time – Evening of May 9th
- 10-25 year event
 - 5” in 6 hours
- 3rd day of rainfall – 1” on the 7th
- Spring Branch and Kingwood Focus

May 9, 2019 Rainfall Return Period vs Effective Frequency Rainfall Data

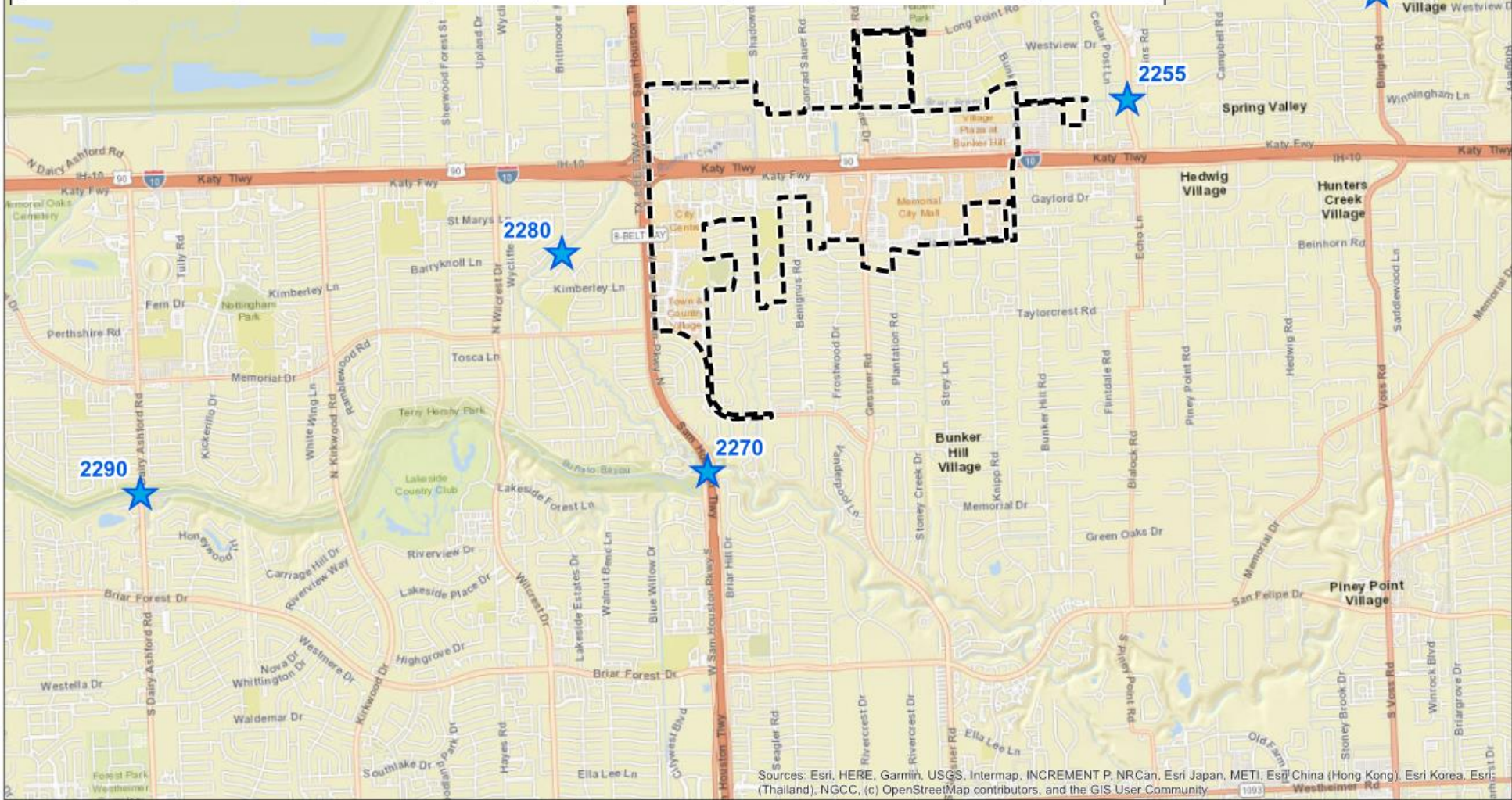
Gauge #	Duration (hr)								
	5-min	15-min	30-min	1-hour	2-hour	3-hour	6-hour	12-hour	1-day
2250	0.4	1.0	1.8	2.1	3.4	4.3	5.2	5.8	5.9
2255	0.36	1.0	1.8	2.0	3.4	3.9	4.6	5.2	5.2
2270	0.32	0.6	0.9	1.3	2.1	2.8	3.5	4.1	4.1
2280	0.36	0.9	1.7	2.1	3.0	4.0	4.4	4.9	5.0
2290	0.44	1.1	1.9	2.8	4.4	5.0	5.7	6.2	6.2

2-year
5-year
10-year
25-year
50-year
100-year
500-year



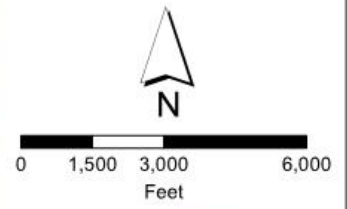
MAY 9, 2019 RAINFALL EVENT ANALYSIS

ESTIMATED RETURN PERIOD BASED ON EFFECTIVE RAINFALL



Legend

- ★ Gauge Locations
- TIRZ 17 Boundary



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

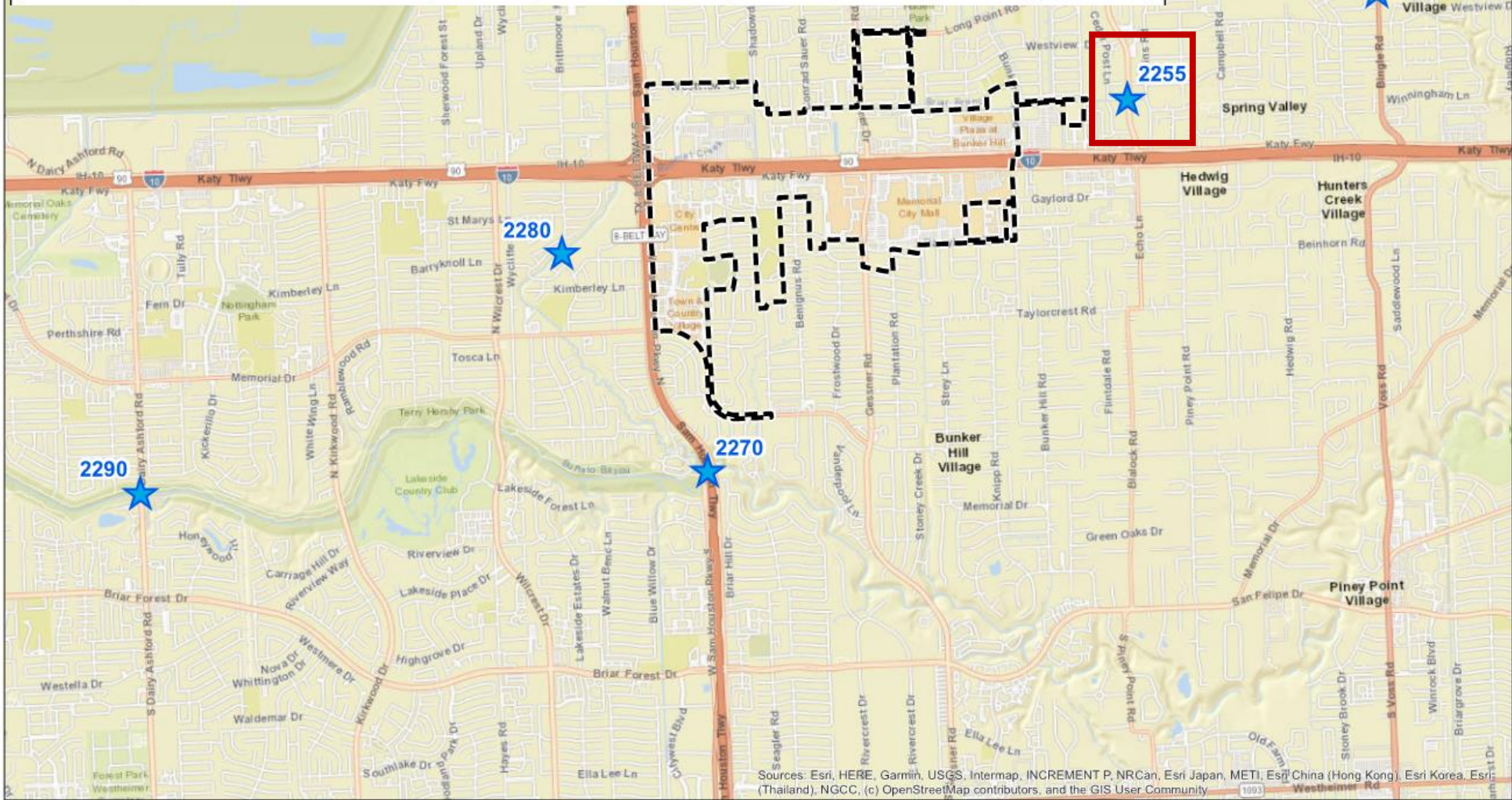
May 9, 2019 Rainfall Return Period vs Effective Frequency Rainfall Data

Gauge #	Duration (hr)									Return Period
	5-min	15-min	30-min	1-hour	2-hour	3-hour	6-hour	12-hour	1-day	
2250	0.4	1.0	1.8	2.1	3.4	4.3	5.2	5.8	5.9	10-year
2255	0.36	1.0	1.8	2.0	3.4	3.9	4.6	5.2	5.2	25-year
2270	0.32	0.6	0.9	1.3	2.1	2.8	3.5	4.1	4.1	50-year
2280	0.36	0.9	1.7	2.1	3.0	4.0	4.4	4.9	5.0	100-year
2290	0.44	1.1	1.9	2.8	4.4	5.0	5.7	6.2	6.2	500-year



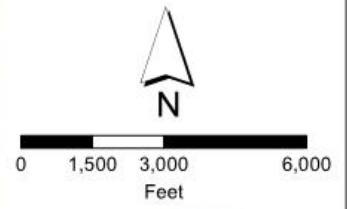
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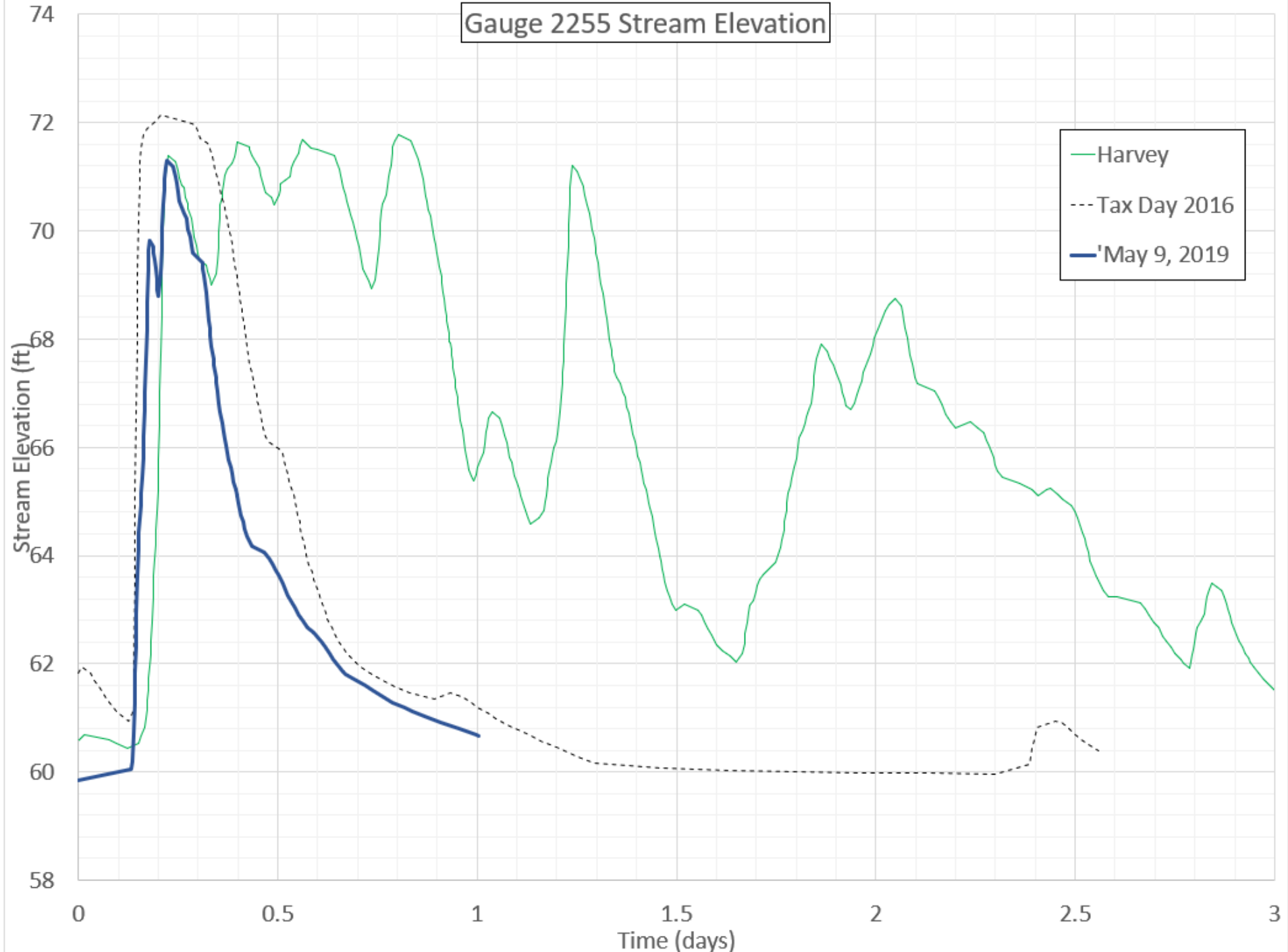
Legend

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Gauge 2255 Stream Elevation



Briar Branch at Bingle

- Short Duration High Intensity Event







High Water Marks











W140-01-00 Briar Branch Construction

- Prep for Event:
 - Removed loss items from the channel
 - Stabilized banks as much as possible to prevent erosion and potential failures
 - Ensured no restrictions caused by construction Multiple
 - Removed debris from channel



W140-01-00 Briar Branch Construction

- Post Event:
 - Removed Debris
 - Collected Highwater Marks



Bunker Hill Bridge Before and After



QUESTIONS