



Drainage

An Introduction

Land Use Conference 2016

Terms

- Hydrology - the science of water, its properties, phenomena and distribution over the earth
- Hydraulics - a branch of civil engineering that deals with the use and control of flowing water
- 100-Year Flood - a flood event that has a 1% probability of occurring in any given year
- 500-Year Flood - a storm event that has a 0.2% probability of occurring in any given year
- Floodplain - land areas adjacent to rivers and streams that are subject to recurring inundation
- Floodway - the channel or a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height

Houston Flood of Dec 1935

View of Downtown Houston
looking east from Buffalo
Bayou



Houston Flood of Dec 1935

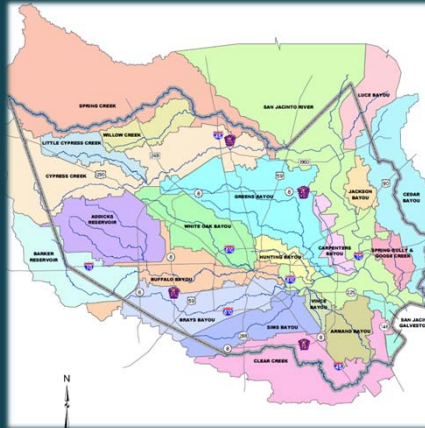
Satsuma in northwest Houston
had 16.49" of rain

Bayous were 52 feet above
normal

2/3 of rural Harris County was
flooded



Watersheds of Harris County



Hydrologic Analysis – Variable Factors

- Rainfall amount
- Distribution of the storm
- Size of the drainage area
- Slope of the terrain
- Type of ground cover
- Type of soil
- Ponding
- Detention

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"Harris County Flood Control Dist. v. Kerr"