SAN JACINTO
REGIONAL WATERSHED
MASTER DRAINAGE PLAN

STUDY FACT SHEET

FALL 2019

What is the SJMDP Study?

The San Jacinto Regional Watershed Master Drainage Plan (SJMDP) is a comprehensive regional study led by local study partners including the Harris County Flood Control District, Montgomery County, the City of Houston and the San Jacinto River Authority. As extreme weather events and flood waters do not recognize jurisdictional boundaries, like county and city limits, these four study partners are working together to address flooding as a regional issue.

This comprehensive study would develop a set of hydrologic and hydraulic (H&H) models for the major tributaries of the Upper San Jacinto River regional **watershed** that would provide a technical basis as a resource for local, state and federal agencies to identify flooding vulnerabilities for existing infrastructure and impacts from future growth to improve flood resiliency in the watershed. The models developed for this study will use consistent, cohesive methodology and rainfall rates, regardless of the county in which studied channels are located. Potential projects supported by the results of this study are intended to reduce flood risks to people and property located throughout the watershed service area resulting in safer, more resilient communities.

Information to be developed in this study includes non-regulatory **inundation maps** (not intended to replace current effective maps) for the studied streams that show the extent and depth of **riverine flooding** of the larger rivers within the watershed for an array of simulated storm events. Additionally, information will be gathered about the number of structures, acres of land, properties, and miles of roadway that are located within the modeled floodplains. Study results will be used to inform and update **Hazard Mitigation Plans** for each of the participating partners and to provide guidance on regulations for future growth within the study area.

Study Goals

The goals of the SJMDP are to:

- Identify the region's vulnerabilities to flood hazards using Atlas 14, the most current rainfall data developed by the National Oceanic and Atmospheric Administration (NOAA);
- Develop approaches to enhance public information and flood level assessment capabilities during a flood disaster event;
- Evaluate flood mitigation strategies to improve community resilience; and
- Provide a comprehensive Flood Mitigation Plan that supports the needs and objectives of each regional partner.

KEY STUDY TERMS

Watershed: A geographical region of land or "drainage area" that drains to a common channel or outlet, mostly creeks and bayous. Drainage of the land can occur directly into a bayou or creek, or through a series of systems that may include storm sewers, roadside ditches, and/or tributary channels.

Inundation maps: Maps that show where flooding may occur over a range of water levels in a community's local stream or river.

Riverine flooding: Flooding that is the result of creeks and bayous leaving their banks due to heavy rainfall.

Hazard Mitigation Plans: Hazard mitigation is the effort to reduce loss of life and property by lessening the impact of disasters, such as flooding. Government organizations engage in hazard mitigation planning to identify risks and vulnerabilities associated with natural disasters, and develop long-term strategies for protecting people and property. Mitigation plans are key to breaking the cycle of disaster damage, reconstruction, and repeated damage.

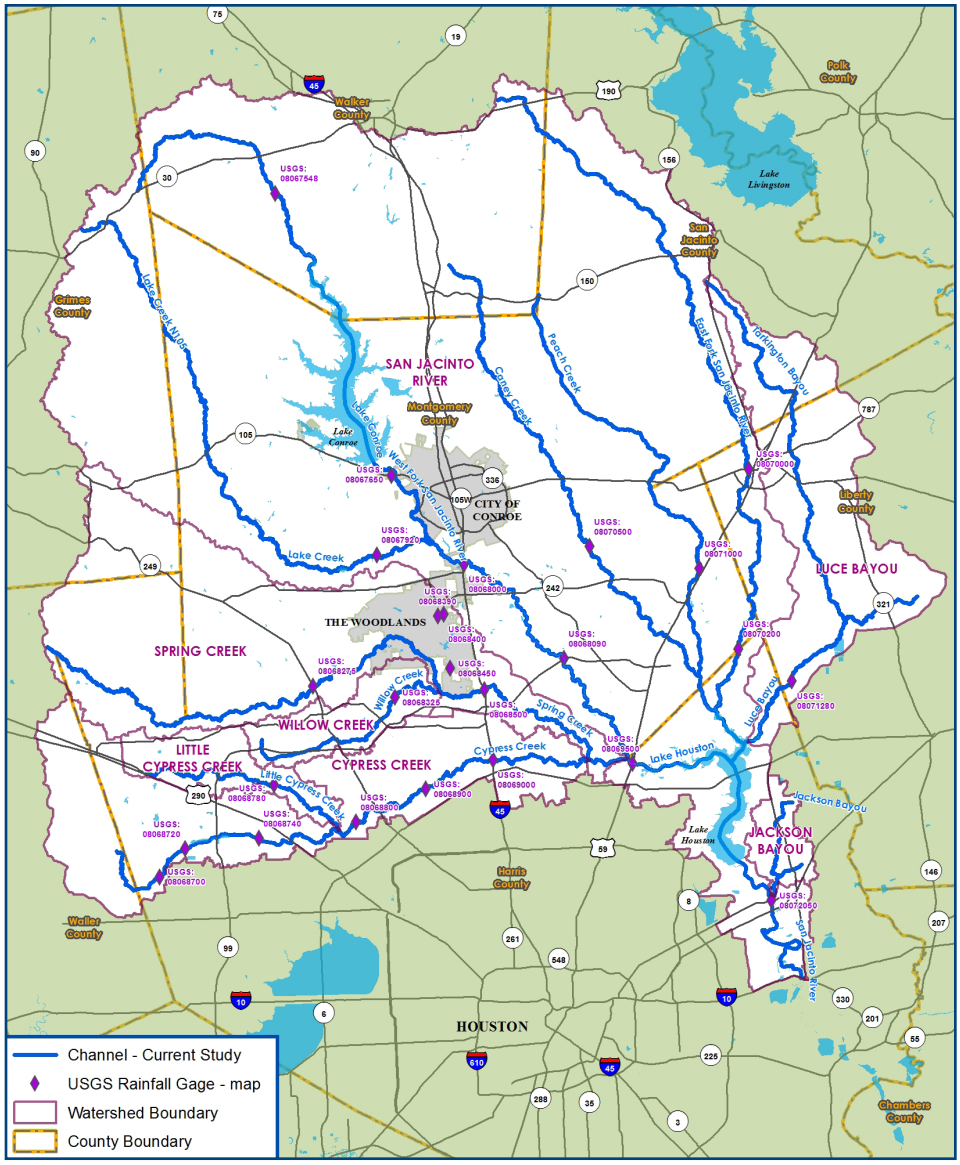
Headwaters: Headwaters are simply the initial source of the water in a river.

Study Area

The study area includes the Upper San Jacinto River regional watershed which extends from the **headwaters** in Walker County to the Interstate 10 crossing at the San Jacinto River in Harris County. This area includes nearly 3,000 square miles across seven different counties:

- Grimes County
- Harris County
- Liberty County
- Montgomery County
- San Jacinto County
- Walker County
- Waller County

The 535 miles of major streams located within the study area include West Fork San Jacinto River, East Fork San Jacinto River, San Jacinto River, Lake Creek, Cypress Creek, Little Cypress Creek, Spring Creek, Willow Creek, Caney Creek, Peach Creek, Luce Bayou, Tarkington Bayou, and Jackson Bayou.



Study Funding

The SJMDP is budgeted at $2.7 million with 75 percent of the study funded through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program. This funding mechanism is intended to enact mitigation measures that reduce the risk of loss of life and property from future disasters. Twenty-five percent of the study is funded by the four local partners.

Contact Our Study Team

The participating study partners are interested in hearing from you. Please contact your local representative with comments and questions:

- **Harris County Flood Control District** – Jing Chen, jing.chen@hcfcd.hctx.net
- **San Jacinto River Authority** – Matt Barrett, mbarrett@sjra.net
- **Montgomery County** – Darren Hess, darren.hess@mctx.org
- **City of Houston** – Adam Eaton, adam.eaton@houstontx.gov

STUDY TIMELINE

April 2019
Start of Study

December 2019
First Round of Public Open Houses

Spring 2020
Second Round of Public Open Houses

Fall 2020
Study is Complete

How Will the Study Results Be Used?

What community and environmental benefits will the results of this study help support?

- Reduction of impacts of disasters on people, property, and the environment
- Protection, public safety and prevention of loss of life and injury
- Reduction of harm to existing and future development
- Maintenance of community continuity and strengthening of social connections that are essential for recovery
- Prevention of damage to community economic, cultural, and environmental assets
- Minimization of operational downtime and acceleration of the recovery of government and businesses after disasters
- Reduction of the costs of disaster response and recovery, and the exposure to risk for first responders
- Implementation of community objectives, such as capital improvements, infrastructure protection, open space preservation, and economic resiliency

The results of this study are intended to inform local, state and federal regulations and hazard planning and assessment tools to benefit communities and property located within the San Jacinto Watershed. The results of this study may support and expedite the implementation of these public services:

- Adoption of regulatory tools, including ordinances, regulations and building codes, to guide and inform land use, development and redevelopment decisions in areas affected by hazards
- Acquisition or elevation of flood-damaged homes or businesses
- Retrofitting of public buildings, schools and other critical facilities prone to the effects of region-specific hazards
- Creation of buffer areas intended to protect natural resources, such as floodplains, wetlands and other sensitive habitats
- Improved water quality and recreational opportunities
- Development and implementation of outreach programs to educate property owners and the public about risk and about mitigation measures to protect homes and businesses

San Jacinto River

FOR MORE INFORMATION, VISIT THE STUDY WEBSITE:

WWW. SANJACSTUDY.ORG

A Note About Flooding...

What are Floodplains?

From time to time, due to heavy rainfall, bayous and creeks naturally come out of their banks and inundate the adjacent land. This area is referred to as a floodplain. A floodplain is defined as any land area susceptible to being inundated by water from any source. Each bayou and creek has its own floodplain, where water collects, pools, and flows during the course of a storm event. As every flood is different, floodplains are typically expressed by stating their annual exceedance probability or the chance of a particular storm to occur in any given year.

What is a 100-year Flood?

The term 100-year flood is misleading. The 1 percent floodplain or 100-year floodplain represents an area of inundation having a 1 percent chance of being equaled or exceeded in any given year. It does NOT mean that if a 1 percent flood event does occur, another 1 percent flood event will not happen for 99 years.

Flooding Fact: It is a popular urban myth that, in Harris County's past, floodplains were contained within the channel banks, and that land development has caused all of the area's flooding problems. That is not necessarily true. Nature can and will provide more rainfall than the area's bayous, creeks, and channels can handle.

Flooding Fact: Statistically, a 1 percent flood has a 26 percent chance of occurring during a 30-year period – the length of many mortgages.

Resources for Flooding Risk:

Floodplain maps produced by FEMA are a key tool used by the Harris County Flood Control District and FEMA to communicate flooding risks to citizens. Interactive maps are publicly accessible online at **www.harriscountyfemt.org**. To learn more about the different types of flooding in Harris County visit **www.hcfcd.org**.

Caney Creek

We Want Your Feedback!

The participating study partners are interested in hearing from you. Written comments on the SJMDP may be submitted at one of the Public Open Houses, by mail, or on the project website.

Written comments may be submitted tonight at the Public Open House or by mail to:

Harris County Flood Control District
Attn: San Jacinto Regional Watershed Master Drainage Plan
9900 Northwest Freeway
Houston, Texas 77092

Comments may also be submitted online at: **www.sanjacstudy.org/contact-us**

For more information about the study, please visit **www.sanjacstudy.org**

We look forward to hearing from you!