

# HOUSTON STRONGER- A BUFFALO BAYOU COMMUNITY PLAN



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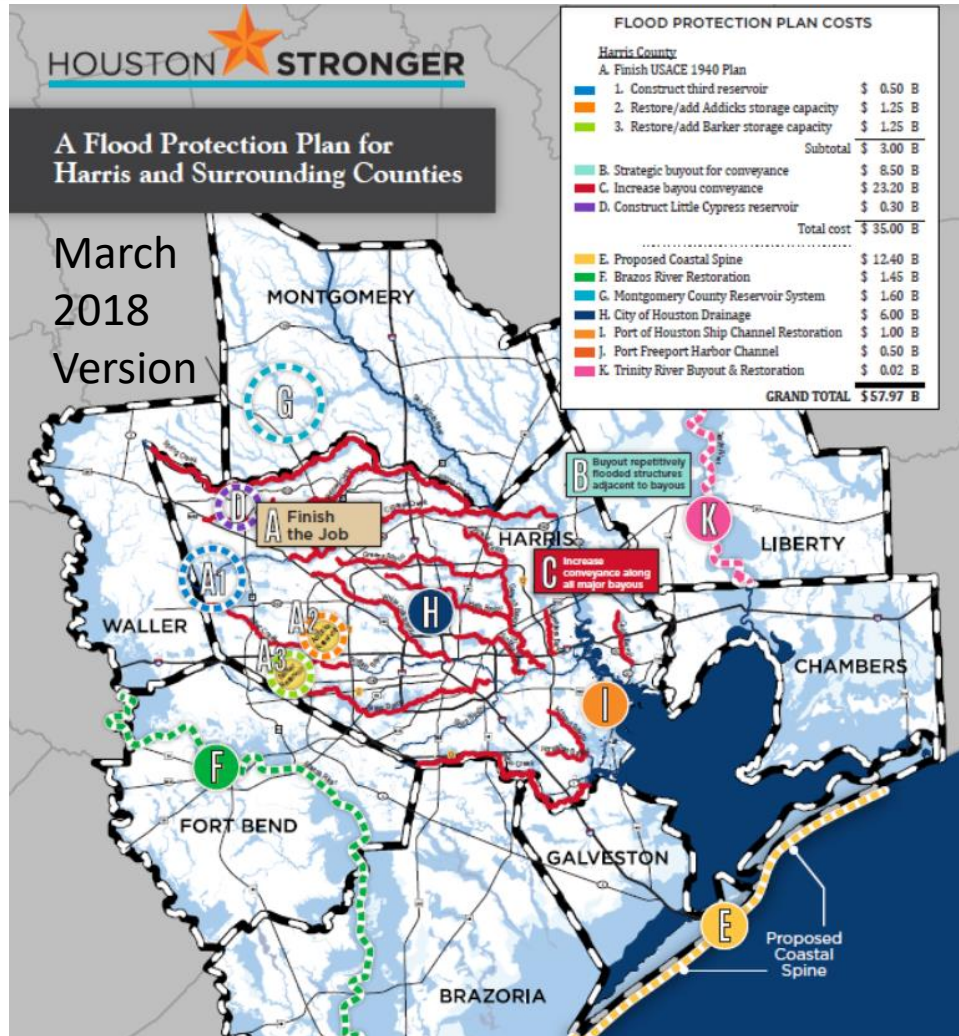
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# What is Houston Stronger?

## BUFFALO BAYOU COMMUNITY PLAN



501(c)(4) Founded in October 2017;  
Chris Lindsay, Executive Director



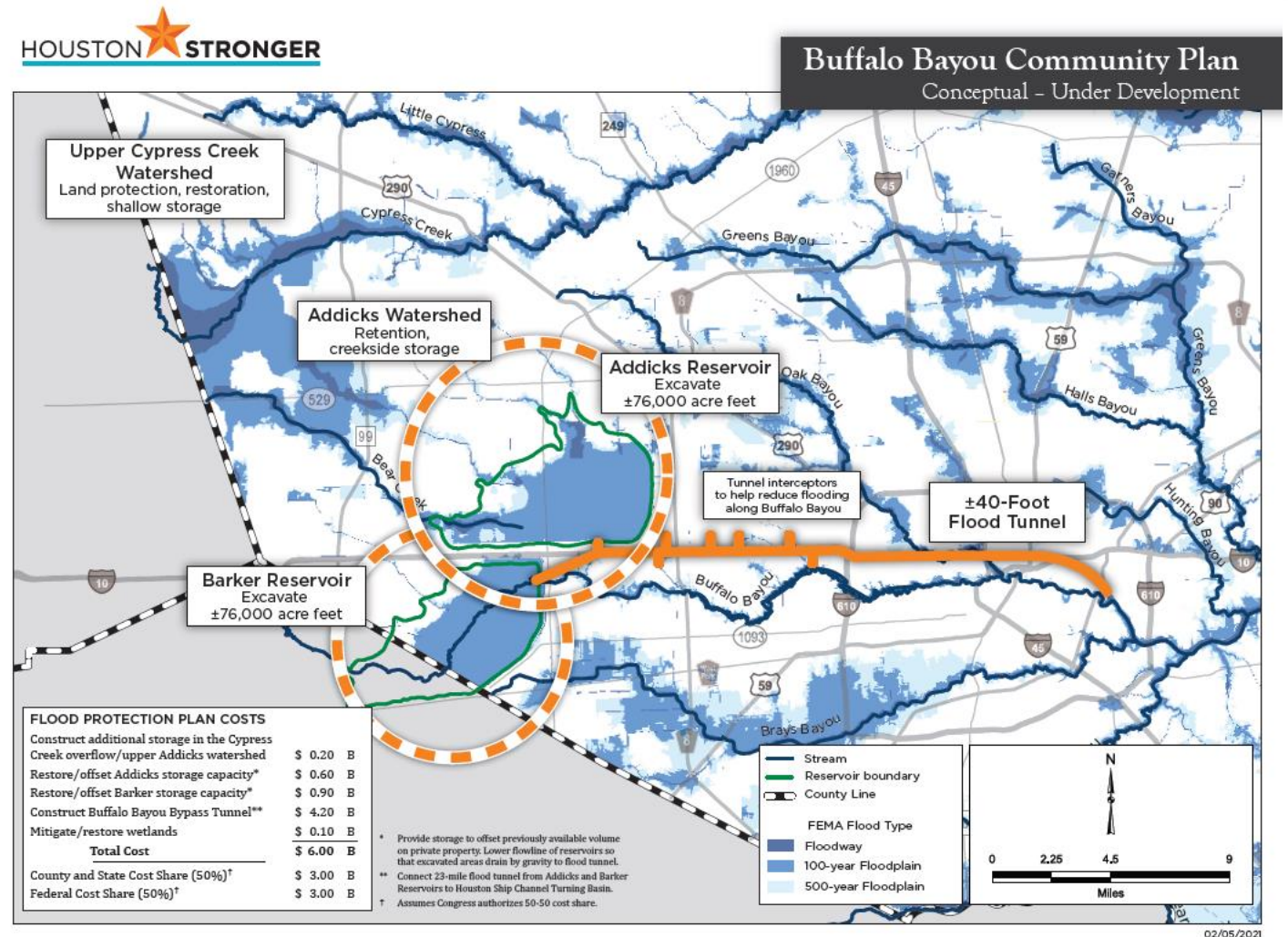
# Buffalo Bayou Community Plan: Overview

## BUFFALO BAYOU COMMUNITY PLAN

### Why Buffalo Bayou:

- USACE 216 Study
- Upstream Litigation

USACE and local sponsors can fix upstream and downstream flooding if the community can agree quickly and work with USACE. These are our ideas.



# Plan Goals

## BUFFALO BAYOU COMMUNITY PLAN

- Contain and convey the storm events similar in magnitude to Hurricane Harvey (2017)
- Contain flood waters within the boundaries of federally owned lands for Barker and Addicks Reservoirs
- Add conveyance downstream of Barker and Addicks Reservoirs without channelizing Buffalo Bayou
- Reduce flooding conditions in Buffalo Bayou watershed downstream of the reservoirs resulting from local rainfall
- Avoid environmental impacts and enhance long term environmental benefits
- Have broad and prolonged community support from a diverse group of stakeholders

# Plan Components

## BUFFALO BAYOU COMMUNITY PLAN

### COMPONENT 1

Construct a  $\pm 40$ -foot diameter tunnel capable of conveying  $\pm 10,000$  cubic-feet per second of flood water from Barker and Addicks Reservoirs to the Houston Ship Channel

### COMPONENT 2

Provide  $\pm 76,000$  acre-feet of compensating storage within Barker Reservoir to offset the loss of volume on private property

### COMPONENT 3

Provide  $\pm 75,000$  acre-feet of compensating storage within Addicks Reservoir to offset the loss of volume on private property

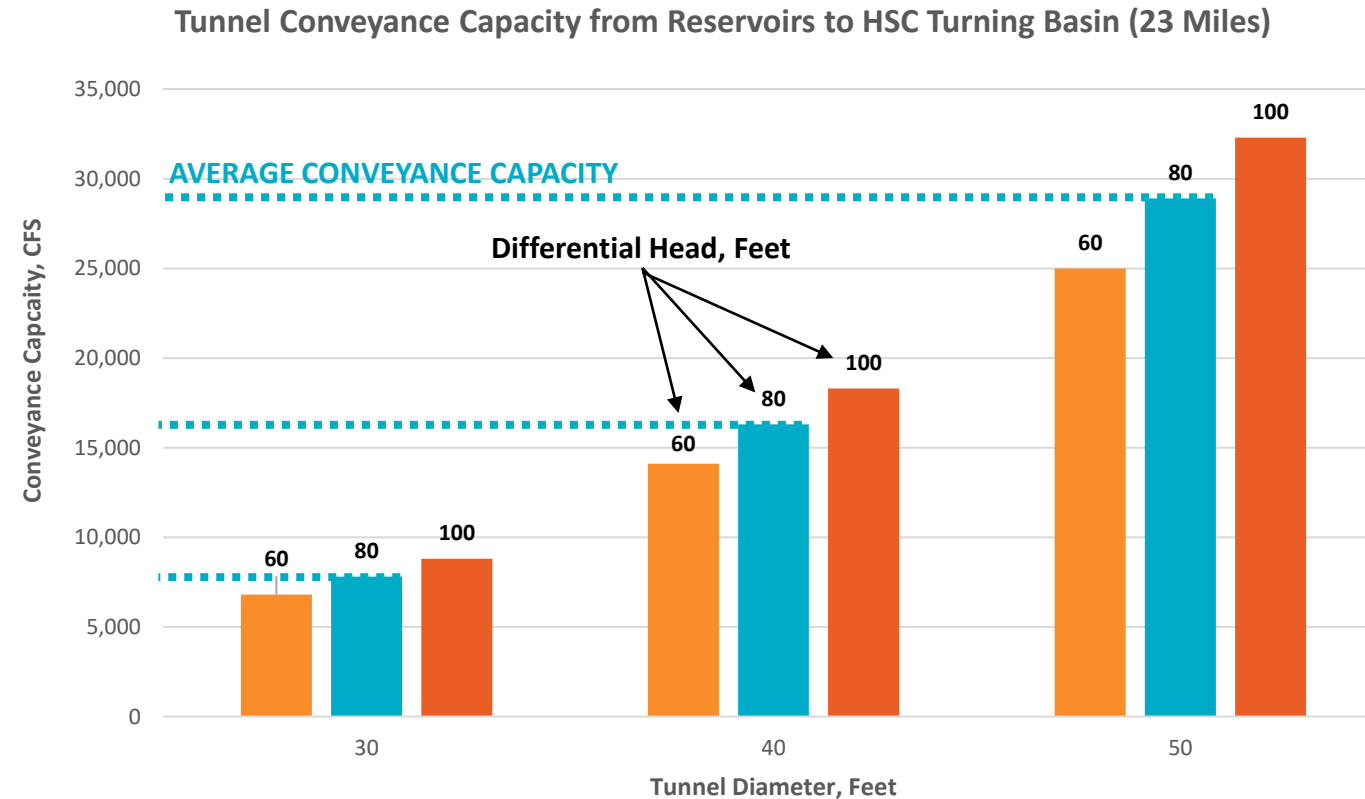
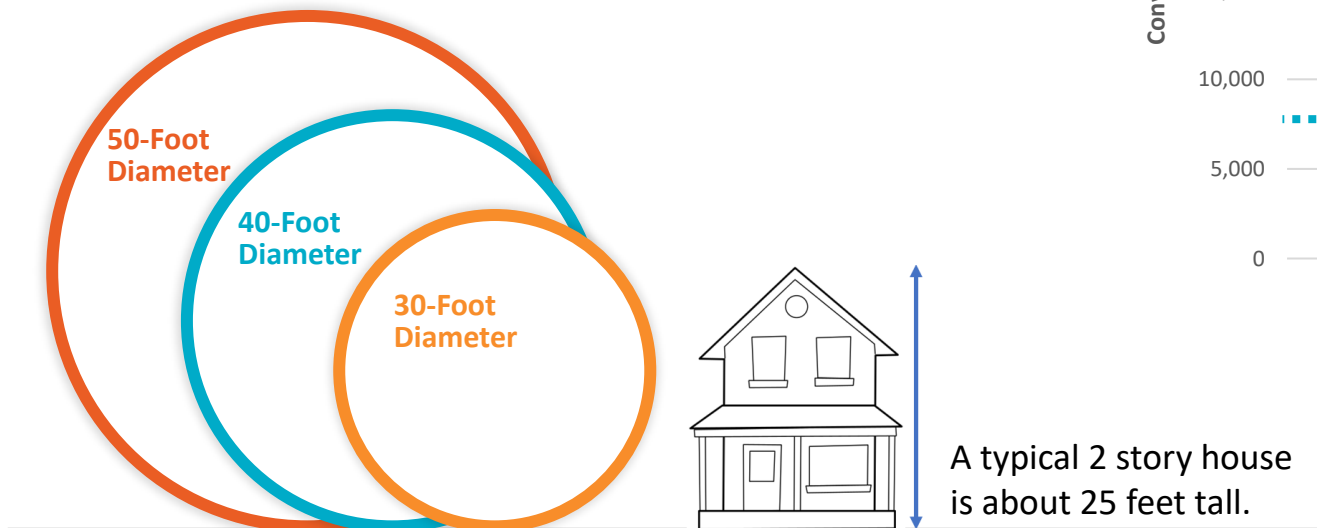
### COMPONENT 4

Construct more storage in the upper Addicks watershed and expand the prairie's natural ability to absorb, slow down, and store flood waters in the upper Cypress Creek watershed.

# Tunnel Diameter and Conveyance Relationship

## BUFFALO BAYOU COMMUNITY PLAN

- Conveyance capacity doubles with every 10-foot tunnel diameter increase
- 50-foot tunnel cost per CFS conveyed is half a 30-foot tunnel



# PROJECT COMPONENTS: VISUALS

## BUFFALO BAYOU COMMUNITY PLAN



# Social and Environmental Benefits and Issues

## BUFFALO BAYOU COMMUNITY PLAN

### EXCAVATION PROS

- Government owned land
- Can begin soon and proceed incrementally
- Captures upstream flooding
- Few buy outs or loss to adjacent communities

### EXCAVATION CONS

- Need to avoid adverse environmental impacts
- Soil stability may be affected
- Expense of dirt moving, need to find ways to use dirt within reservoirs or nearby

### RETENTION PROS

- Upper Addicks WS provides 1:1 flood reduction to Addicks Res.
- Smaller, ungated res. more economical
- Handles overflow from Cypress Creek and overland flooding in WS
- Community benefits of recreation, QoL, etc.

### RETENTION CONS

- Land must be acquired quickly before lost to other land uses
- Must avoid adverse environmental impacts
- Creative design needed to maintain stream integrity

# Social and Environmental Benefits and Issues

## BUFFALO BAYOU COMMUNITY PLAN

### TUNNEL PROS

- Conveys substantial CFS of floodwaters
- Additional flood relief possible along tunnel route
- Bypasses Downtown and empties into Ship Channel
- Potential water supply

### TUNNEL CONS

- Pollutants and low dissolved oxygen may damage aquatic life/economic productivity
- Flow pattern may increase surface water levels and erosion

### PRESERVATION PROS

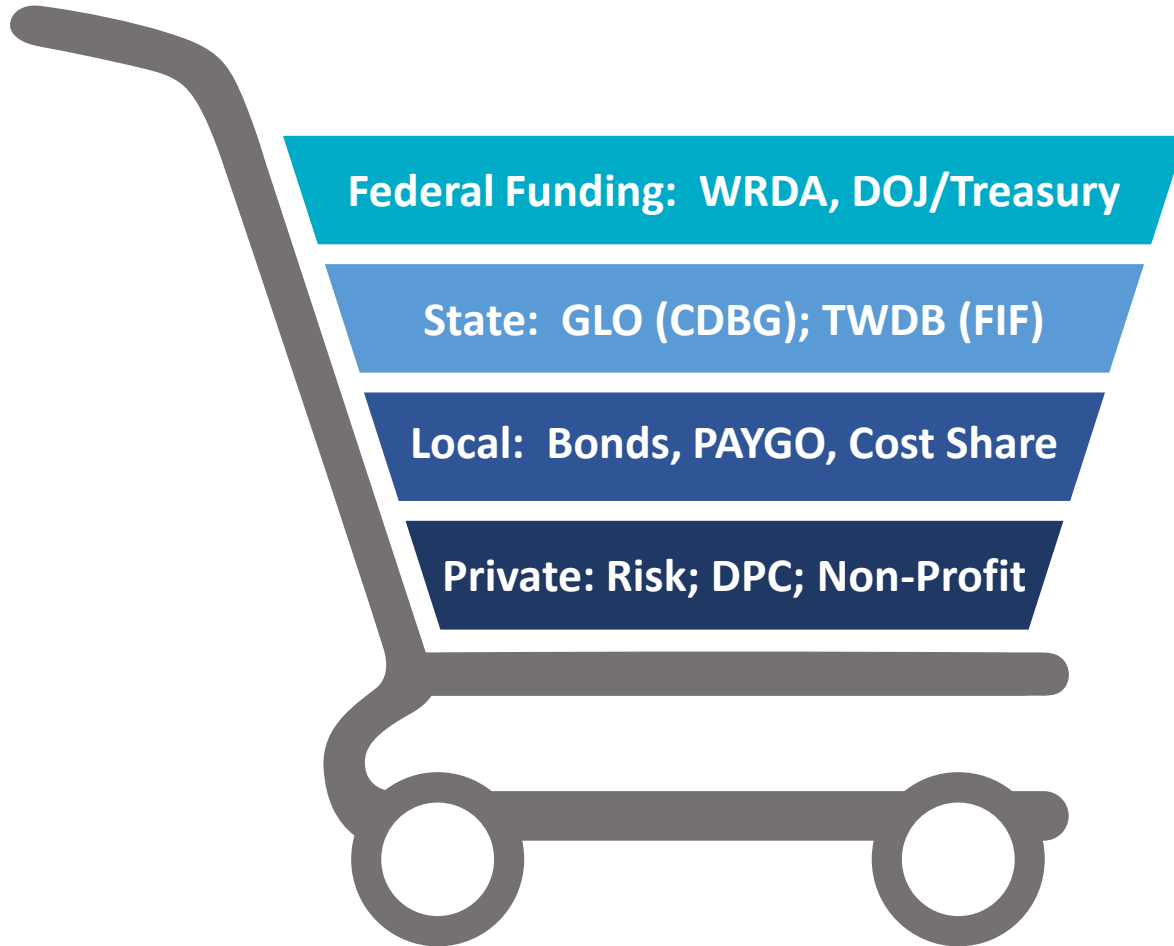
- Expands conservation lands
- Detention easements more economical
- Community benefits
- Increases value of adjacent lands
- Absorbs, slows down, and stores floodwaters

### PRESERVATION CONS

- Land must be acquired quickly before lost to other land uses
- Must avoid adverse environmental impacts
- Creative design needed to maintain land's integrity

# BBCP Funding Strategy: A Shopping Cart Approach

## BUFFALO BAYOU COMMUNITY PLAN



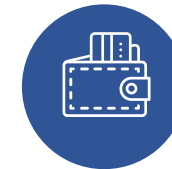
### **Federal Funding: USACE leads the Way**

USACE will make recommendations under the Water Resource Development Act. Negotiation with upstream plaintiffs may also provide significant federal dollars for BBCP components.



### **State Funding: GLO & TWDB can help**

The Texas General Land Office and Water Development Board have authority and funding that can create opportunities to advance BBCP. This funding can underwrite local projects.



### **Local Funding: Many Hands**

Harris County, the City of Houston, smaller cities, special districts, and other local government entities can manage and fund BBCP components.



### **Private Funding: Finding Faster Dollars**

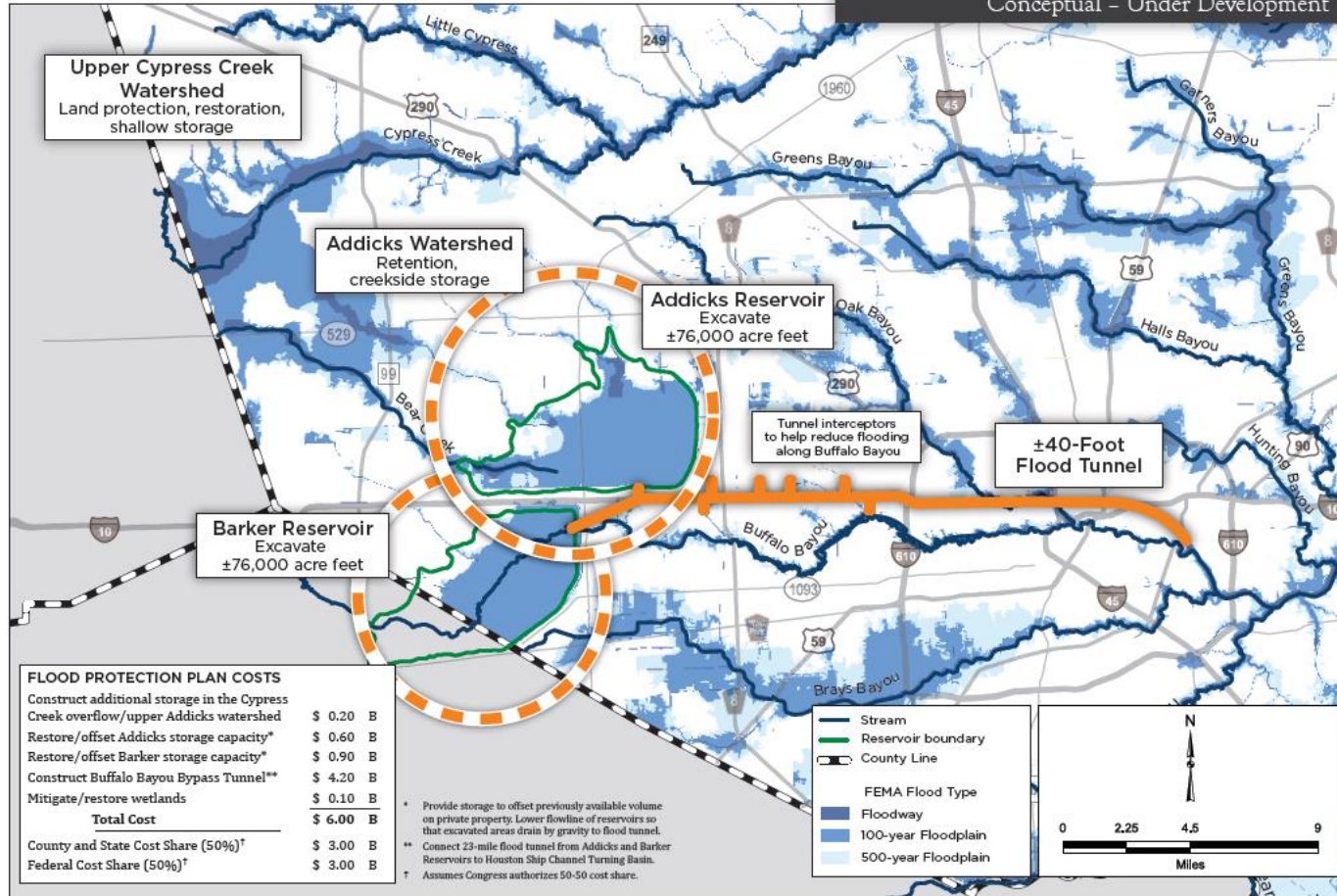
Many entities can and will benefit from these projects; these entities can help fund and coordinate to accelerate BBCP Components.

# Questions, Comments, Survey

## BUFFALO BAYOU COMMUNITY PLAN



### Buffalo Bayou Community Plan Conceptual - Under Development



For more information:

[info@houstonstronger.net](mailto:info@houstonstronger.net)

Survey Link:

<https://www.surveymonkey.com/r/ZM8Q5GZ>

THANKS!

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