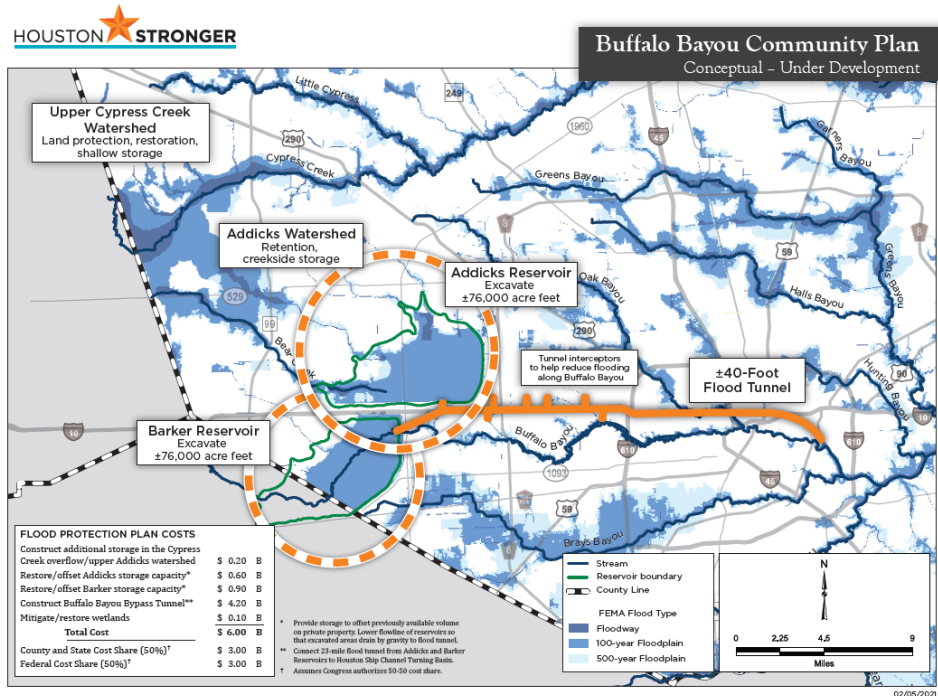


Presentation to the Galveston Bay Council

BUFFALO BAYOU COMMUNITY PLAN



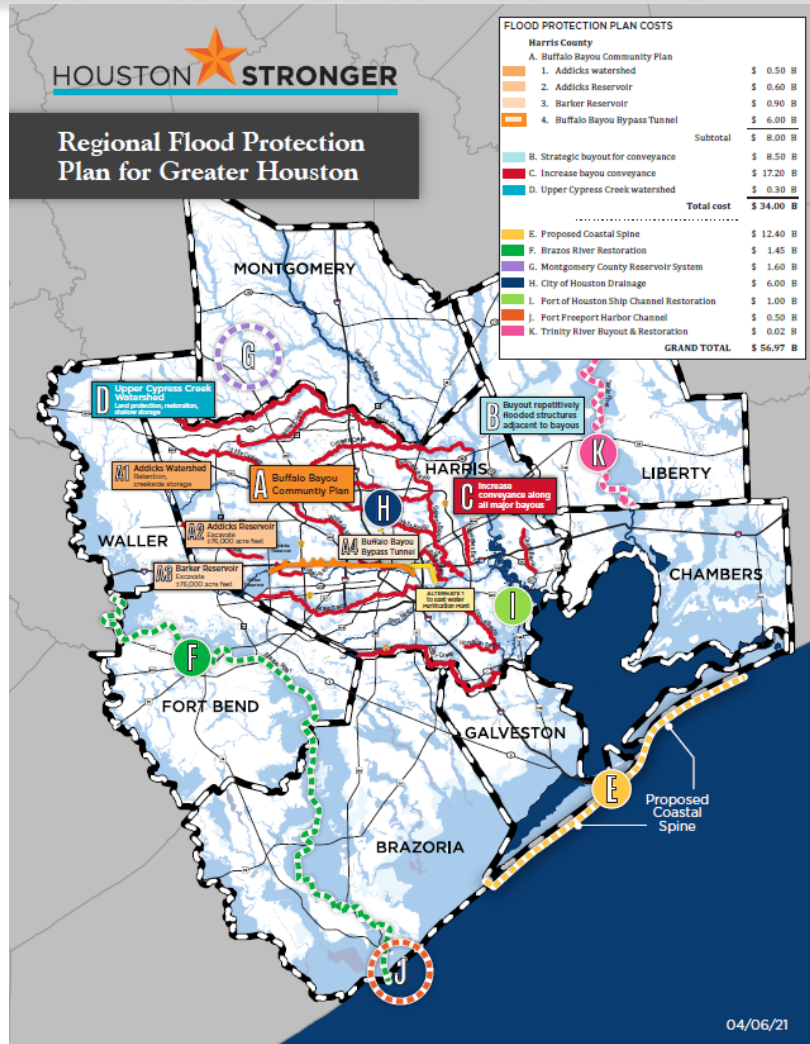
Auggie Campbell, Chairman
Houston Stronger

Mary Anne Piacentini, President
and CEO, Katy Prairie Conservancy

April 21, 2021

What is Houston Stronger?

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



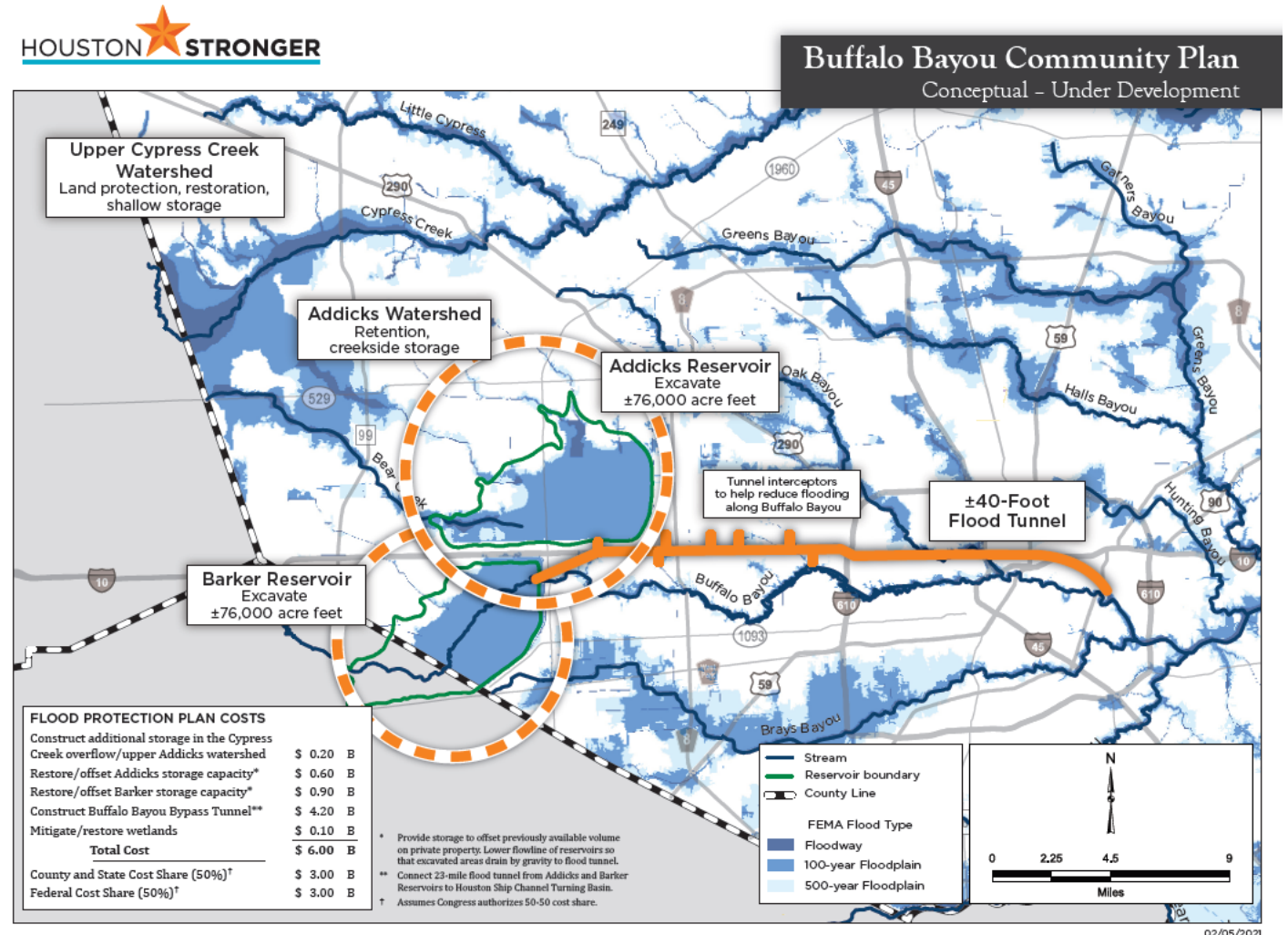
Buffalo Bayou Community Plan: Overview

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

PROJECT COMPONENTS: VISUALS

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Plan Components

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COMPONENT 1

Construct a ± 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

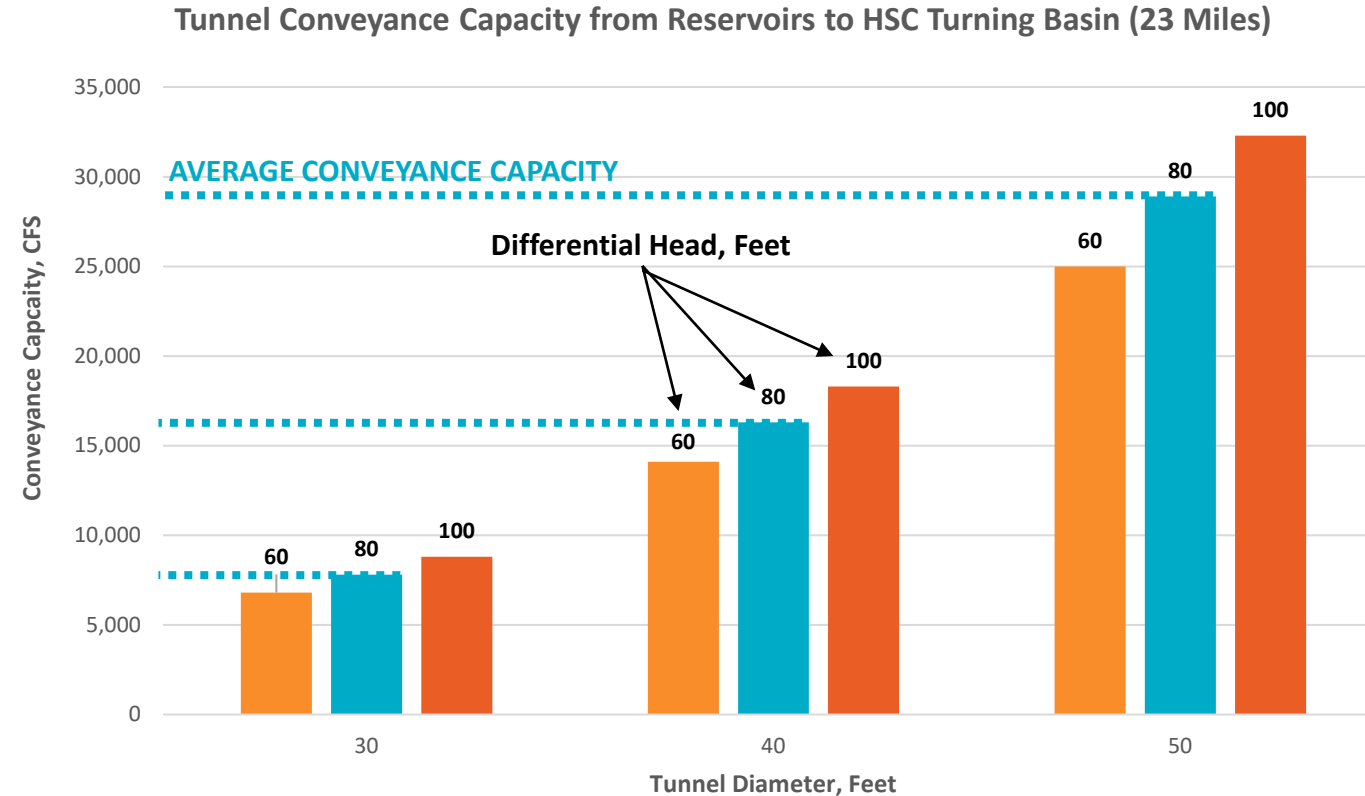
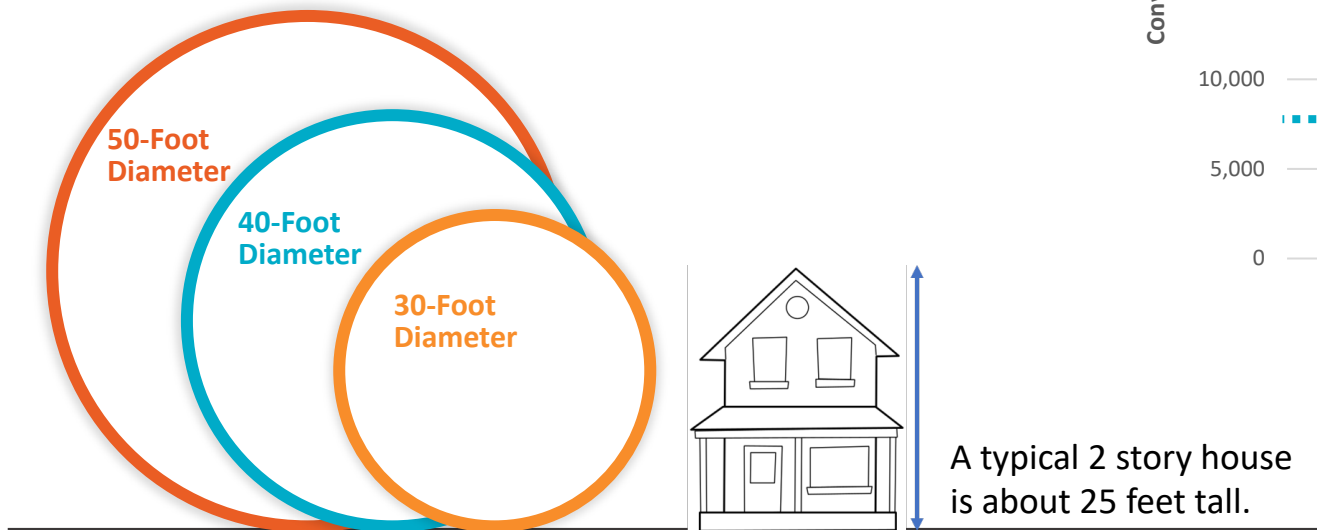
COMPONENT 4

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

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



Social and Environmental Benefits and Issues

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EXCAVATION PROS

- Government already owns land
- Excavation can proceed incrementally
- Captures upstream flooding
- Fewer buy outs needed
- Keeps communities intact

EXCAVATION CONS

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

RETENTION PROS

- Upper Addicks WS provides 1:1 flood reduction to Addicks Reservoir
- Smaller reservoirs more economical
- Handles overflow from Cypress Creek and overland flooding in Watershed
- Community benefits of recreation, QoL, etc.
- Keeps people out of harm's way

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 to other areas
- 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

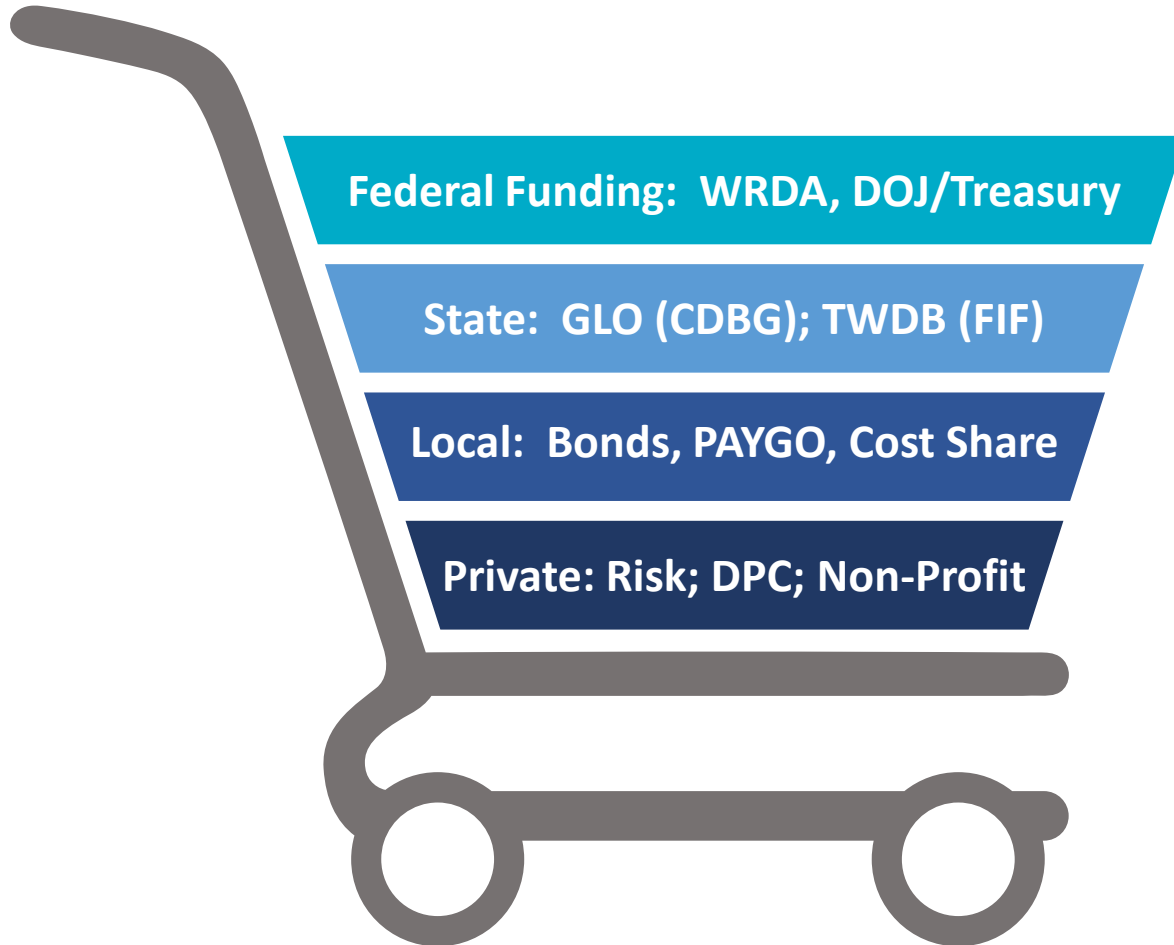
- Expands conservation lands
- Detention easements economical
- Community benefits
- Increases value of adjacent lands
- Absorbs, slows down, and stores floodwaters

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

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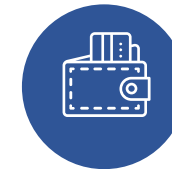
Federal Funding: USACE leads the Way

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.

Project Updates

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Questions, Comments, Survey

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