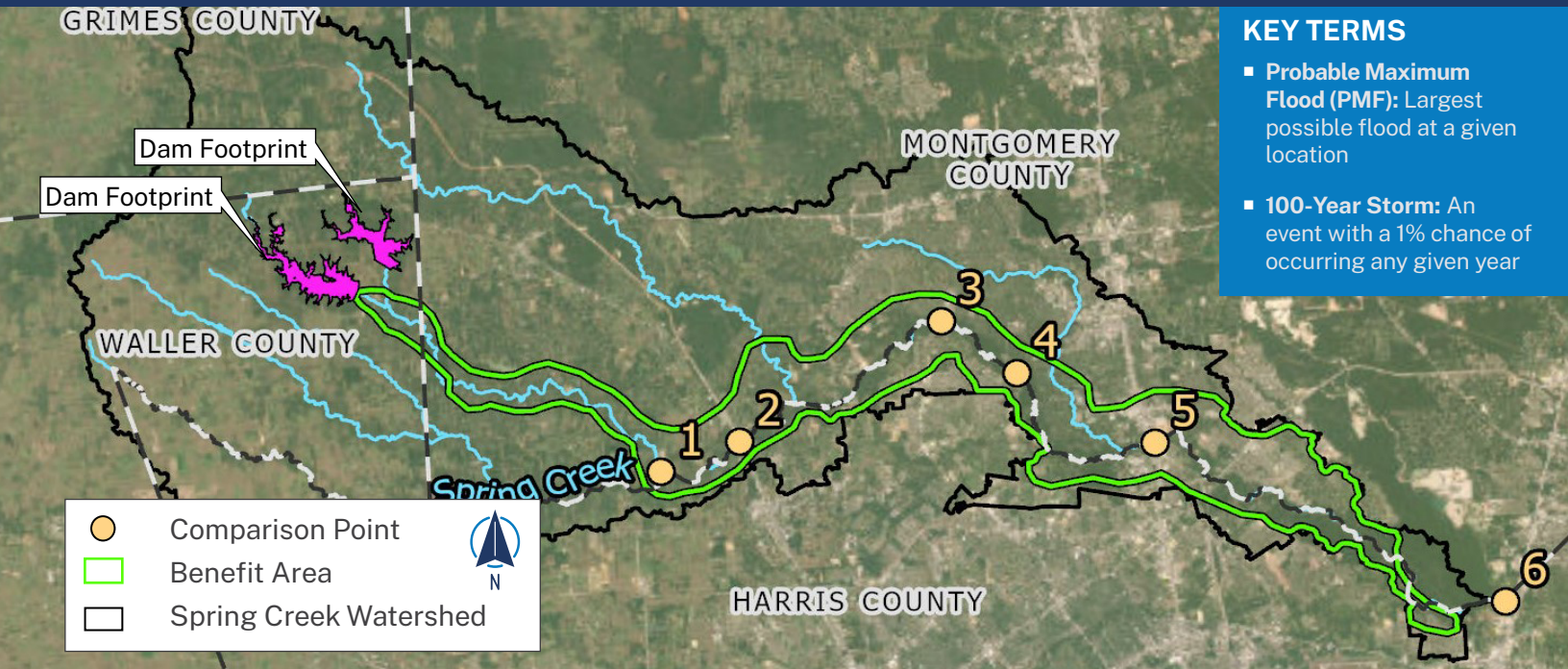


# Walnut Creek & Birch Creek Detention

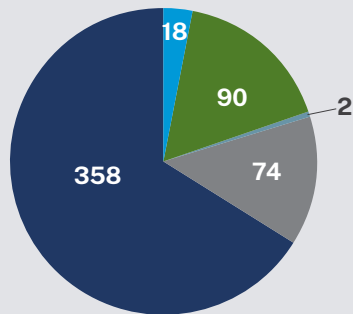
<https://springcreekstudy.com/>

A proposed dry bottom dam facility located on Walnut and Birch Creek

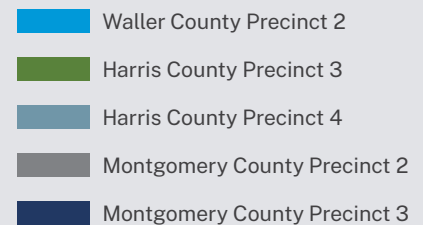
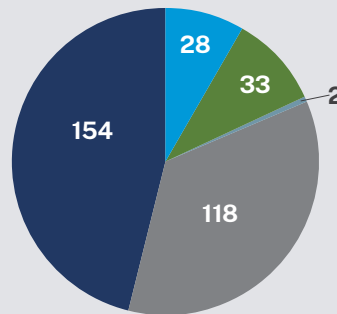


## ESTIMATED BENEFITS

Structures Anticipated to No Longer Flood  
**Hurricane Harvey**



Structures Anticipated to No Longer Flood  
**100-Year Storm**



## ADDITIONAL BENEFITS

- Reduced flooding for 8,762 structures in 500-Year event
- Removed 795 structures from flooding in 500-Year

## ESTIMATED COSTS

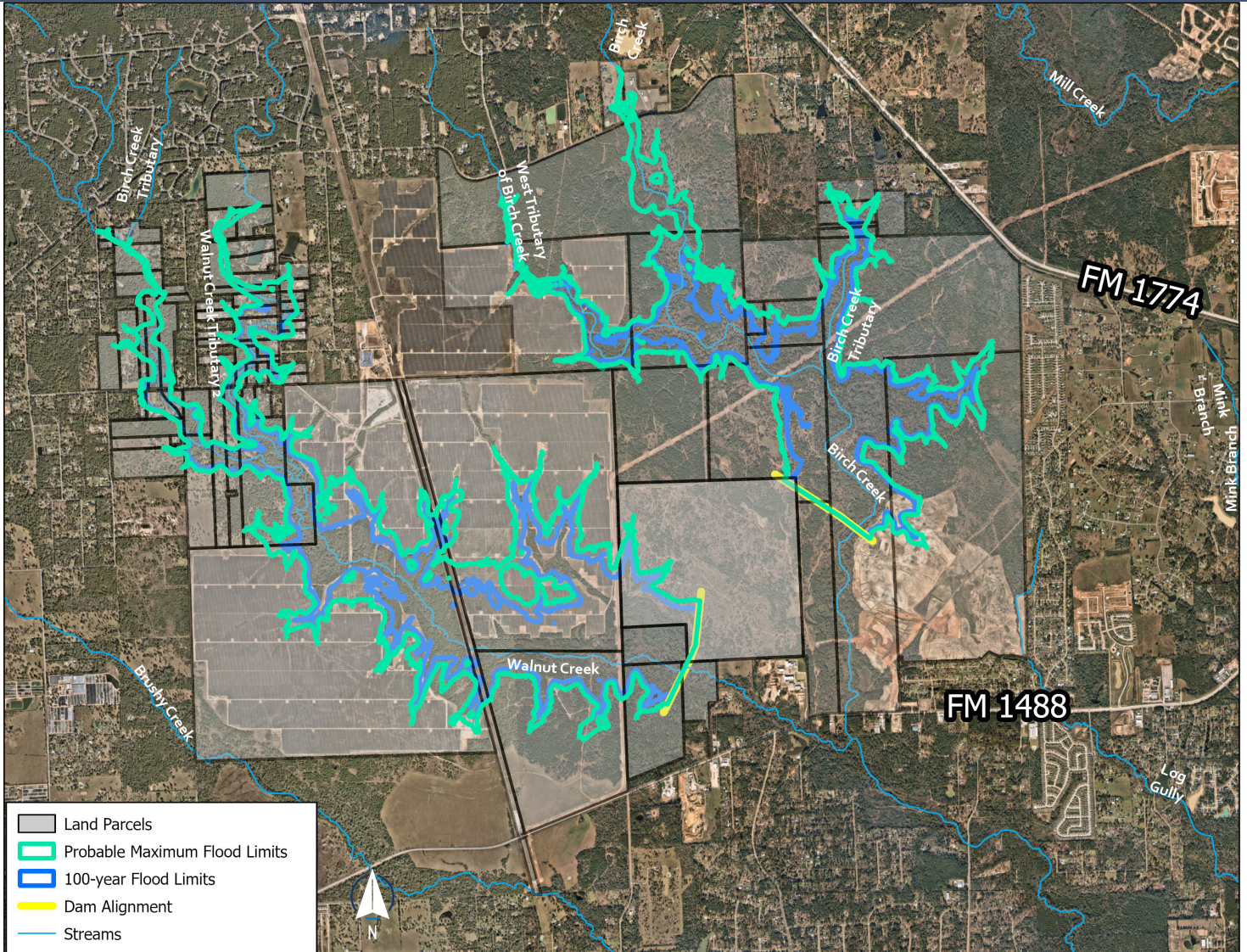
Design Cost .....	\$22M
Environmental Cost .....	\$6M
Construction Cost .....	\$147M
Land Cost .....	\$124M
<b>TOTAL COSTS .....</b>	<b>\$299M</b>
<b>TOTAL BENEFITS .....</b>	<b>\$212M</b>

**PROJECT BENEFIT-COST RATIO: 0.71**

## Reduction in Flood Elevations After Project Construction

Comparison Point	Location	100-YR (ft)
1	On Walnut Creek	-3.64
2	SH 249	-1.2
3	Kuykendahl	-0.88
4	Gosling	-0.82
5	I-45	-0.67
6	West Fork Confluences	-0.36





## PROJECT DETAILS (BIRCH / WALNUT)

- Type: Dry dam detention facility
- Volume provided: 12,100 acre-feet
- Maximum height: 35.4 feet / 39.1 feet
- Dam Length: 3,168 feet / 3,373 feet
- Maximum inundation area: 920 acre / 1,370 acre
- 100-year inundation area: 690 acre / 940 acre
- Spillway Elevation: 251.2 feet / 254.7 feet
- Top of Dam Elevation: 259.1 feet / 263.6 feet

## CHALLENGES

- Future Woodhaven Development and solar farm overlaps portions of the proposed facilities
- USACE coordination required due to minor environmental stream and wetland impacts
- Private land owners within project footprint

## POTENTIAL PARTNERS

- |                  |         |                                 |
|------------------|---------|---------------------------------|
| ■ Montgomery Co. | ■ HCFCF | ■ USACE                         |
| ■ MUDs           | ■ TWDB  | ■ Future Flood Control District |
| ■ SJRA           | ■ GLO   | ■ Waller County                 |
| ■ The Woodlands  | ■ FEMA  |                                 |

## NEXT STEPS

- Coordinate with developers and the solar farm for potential shared project
- Identify potential dam owner and operator
- Identify funding partners
- Seek funding for land acquisition, design and construction
- Acquire land using local and other funding sources
- Final engineering and design of proposed facility
- Construction and operation of dam facility