

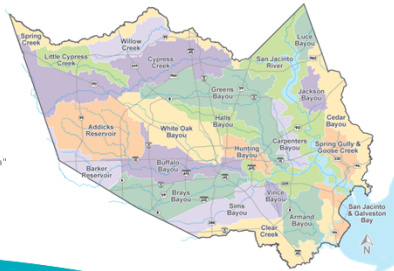
Halls Bayou Watershed Overview

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Harris County Watersheds

What is a watershed?

A geographical region of land or "drainage area" that drains to a common channel or outlet, mostly creeks and bayous in Harris County. 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.



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Halls Bayou Watershed

- Located in north central Harris County
- Flows into Greens Bayou, but a separate watershed
- Approximately 45 square miles in size and 20 miles in length

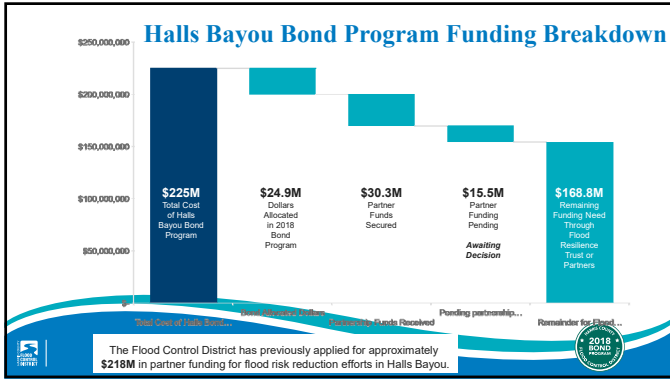


HCFC D.org/Halls

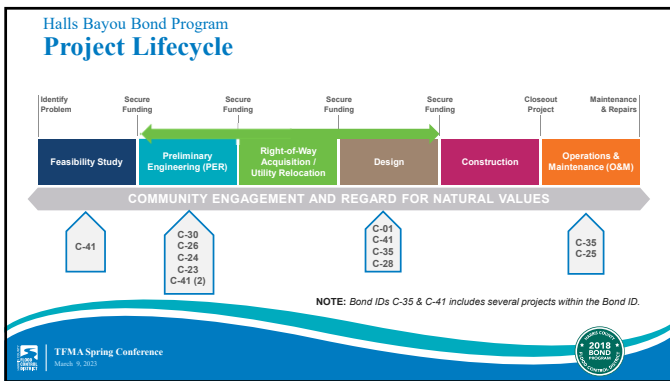
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CMO







Slide 10

CMO Numbers will change. 9.9 into funding secured. Adding additional into pending.

Cody Miller, 2022-11-17T15:38:12.560

Halls Bayou Bond Program Benefits

Performance Metric	100-Year Storm Event	500-Year Storm Event
Reduction of Flooded Structures	2,496	2,432
Reduction of Flooded Roadways	24	22
Reduction of Flooded Acres	1,139	1,018

Note: Metrics depict benefits when all projects in the Halls Bayou Program have been completed.

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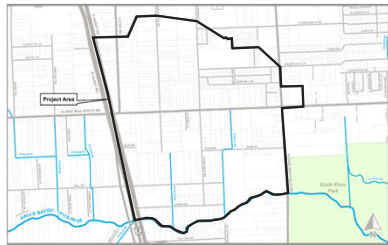
Michael Liga, Ph.D., P.E.

Deputy Program Manager/Project Manager
Harris County Flood Control District Staff Augmentee
Lockwood, Andrews & Newnam (LAN)

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Project Overview Bond Project C-25

- 763 ac. drainage area
- Channel improvements on Tributary P118-21-00
- Construction of a stormwater detention basin



Halls Bond Program TFMA Presentation
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Project Funding and Schedule

- 2016 CDBG-DR Grant: ROW and Construction
- Local Funding
- Design NTP April 2020
- Completion Deadline: August 2022 with extensions – March 2023

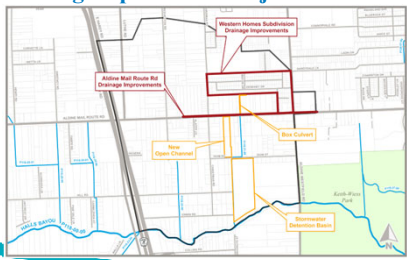


Project Components



Harris County Engineering Department Projects

- Aldine Mail Route Road drainage improvements
- Western Homes subdivision drainage improvements



H&H Strategy for Multiple Projects

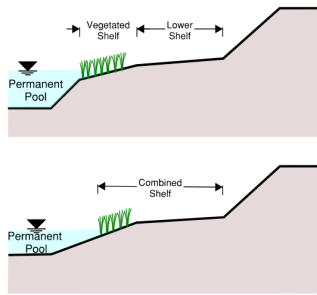
- No WSE Increase along the Tributary and Halls Bayou
- Potential Impacts From
 - HCFC Channel Improvements
 - HCED-RRD Western Homes Drainage Improvements
 - HCED Aldine Mail Route Rd. Roadway and Drainage Improvements
- MAAPnext In-Progress
- HCFC Watershed Method vs. Small Watershed Method
- Calibrated SWM hydrographs for other projects
- Additional storage

Halls Bond Program TFMA Presentation
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Accelerated Delivery Strategies

- Reduced number of design submittals
- 2 Construction packages based on ROW availability
 - Detention Basin
 - Channel Improvements
- Simplified grading plan
 - Eliminated a grade break
 - Decreased permanent pool depth

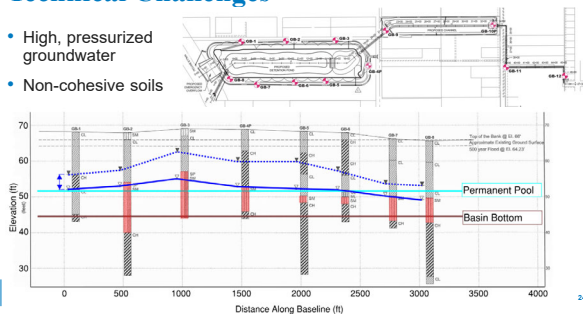


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Technical Challenges

- High, pressurized groundwater
- Non-cohesive soils



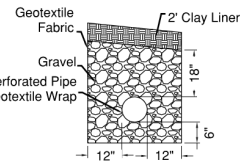
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Groundwater Control During Construction

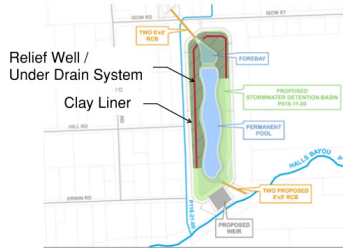
- Well Points



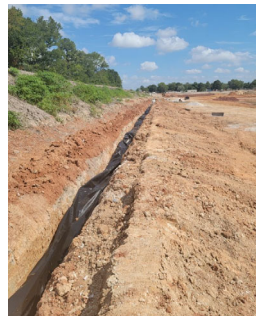
Groundwater Control After Construction



TYPICAL UNDERDRAIN SYSTEM SECTION



Relief Well Construction



2018 BOARD PROGRAM

Completed Basin

Flood Risk Reduction Projects in Halls Bayou
Bond IDs: C-25 & C-28

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2018 BOARD PROGRAM

Open Channel and RCBs

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Q&A

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