

TIRZ 17 Regional Drainage Study and Detention Analysis

May 31, 2011



Presentation Outline

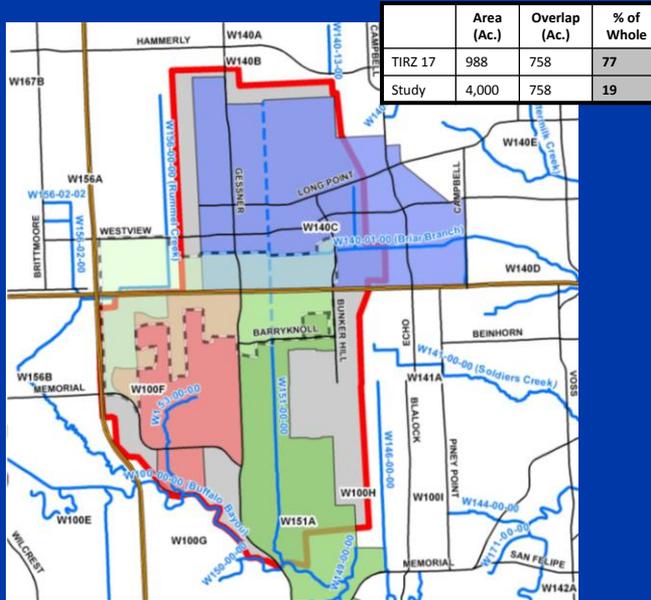
- Brief Study Background
- Proposed Improvements – North of IH-10
- Proposed Storm Water Detention Basin

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SUBJECT TO CHANGE
PENDING REVIEW BY
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TIRZ 17 Regional Drainage Study: Background



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Legend

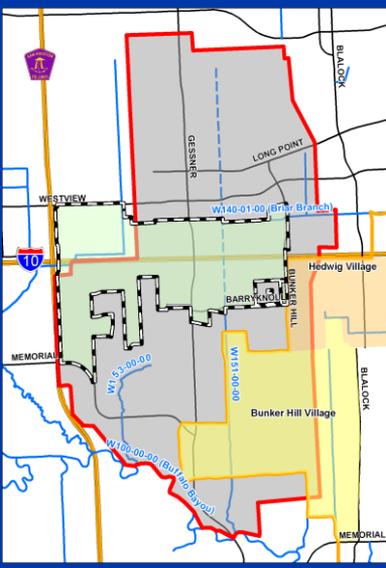
- TIRZ 17
- TRDS Limits
- TSARP Catchments
- SUBBASIN
 - W100F
 - W140C
 - W151A
- HCFC Channels

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TIRZ 17 Regional Drainage Study: Background

- Multiple Jurisdictions
 - TIRZ 17
 - City of Houston
 - Bunker Hill Village
 - Hedwig Village
 - HCFC
 - TxDOT



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Legend

- TIRZ 17
- Houston City Limits
- Bunker Hill Village
- Hedwig Village
- Spring Valley
- HCFC Channels

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<h2>TIRZ 17 Regional Drainage Study: Background</h2>	
<ul style="list-style-type: none"> ▪ Builds on HCFCO W151 Study Released in 2009 ▪ Addresses Regional Drainage Issues <ul style="list-style-type: none"> – Interconnected Systems <ul style="list-style-type: none"> • W151 and W140-01 (Briar Branch) – System and Basin Overflow <ul style="list-style-type: none"> • W151 to W153 ▪ Presented Preliminary Study Findings in September 2010 ▪ Improvement Demand Greater than Available TIRZ 17 Funding 	<div data-bbox="1050 290 1203 374" style="border: 1px solid black; padding: 2px; text-align: center;"> <p style="margin: 0;">DRAFT-PRELIMINARY- SUBJECT TO CHANGE PENDING REVIEW BY CITY OF HOUSTON AND HCFCO</p> </div> <p style="text-align: right; margin-top: 200px;">5/31/2011</p> <div data-bbox="1087 831 1169 911" style="text-align: center;">  </div>

<h2>TIRZ 17 Regional Drainage Study: Proposed Improvements North of IH-10</h2>	
<ul style="list-style-type: none"> ▪ Storm Sewer Improvements: <ul style="list-style-type: none"> – Gessner – Witte – Larston St, Demaret Ln, Windhover Ln ▪ Channel Improvements: <ul style="list-style-type: none"> – Right-of-Way Limitations ▪ Detention: <ul style="list-style-type: none"> – <u>September 2010</u>: “Exploring Additional Detention Opportunities Outside Boundaries with Partnering Agencies” 	<div data-bbox="1050 1138 1203 1223" style="border: 1px solid black; padding: 2px; text-align: center;"> <p style="margin: 0;">DRAFT-PRELIMINARY- SUBJECT TO CHANGE PENDING REVIEW BY CITY OF HOUSTON AND HCFCO</p> </div> <p style="text-align: right; margin-top: 200px;">5/31/2011</p> <div data-bbox="1087 1681 1169 1762" style="text-align: center;">  </div>

TIRZ 17 Regional Drainage Study: Proposed Improvements North of IH-10

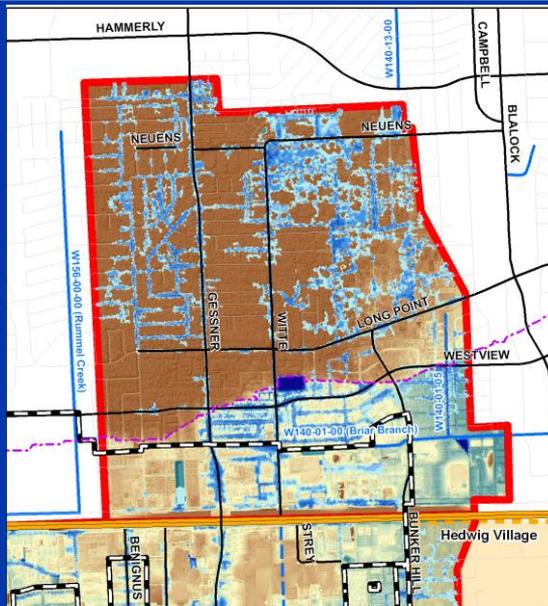
- **Storm Sewer Improvements:**
 - Gessner
 - Witte
 - Larston St, Demaret Ln, Windhover Ln
- **Channel Improvements:**
 - Right-of-Way Limitations
- **Detention:**
 - September 2010: “Exploring Additional Detention Opportunities Outside Boundaries with Partnering Agencies”
 - Current: Identified 8-Acre Site East of Bunker Hill

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TIRZ 17 Regional Drainage Study: Existing Conditions 10-YR Rainfall



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Legend

- Long Point Fault
- TIRZ 17
- TIRZ 17 RDS Study Limits
- HCFCD Channels
- Freeway/Tollway
- Major
- Local

Ponding Depth

- <0.25 ft
- 0.25 ft - 0.50 ft
- 0.50 ft - 1.00 ft
- 1.00 ft - 2.00 ft
- 2.00 ft - 5.00 ft
- >5.00 ft

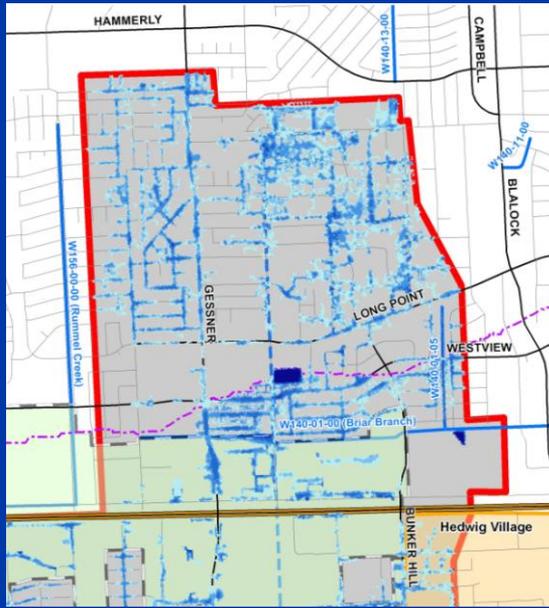
Elevation

- High : 85 ft
- Low : 75 ft

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TIRZ 17 Regional Drainage Study: Proposed Improvements North of IH-10



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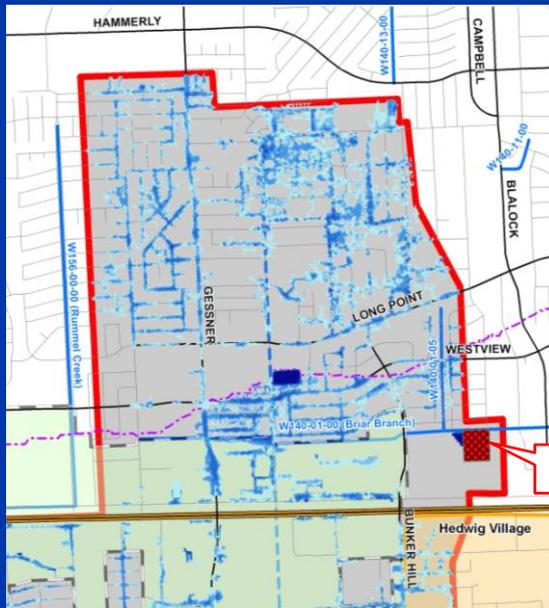
Legend

- TIRZ 17 Boundary
- TIRZ 17 RDS Study Limits
- Long Point Fault
- Houston City Limits
- HCFC Channels
- TIRZ-17 Projects
 - Standard Conveyance
 - Detention Locations
 - Channel Improvements
- Projects to be Performed by Others
 - Standard Conveyance
 - Detention Locations
 - Channel Improvements
- Depth of Ponding (ft)
 - <0.25
 - 0.25 - 0.50
 - 0.50 - 1.0
 - 1.0 - 2.0
 - 2.0 - 5.0
 - >5.0

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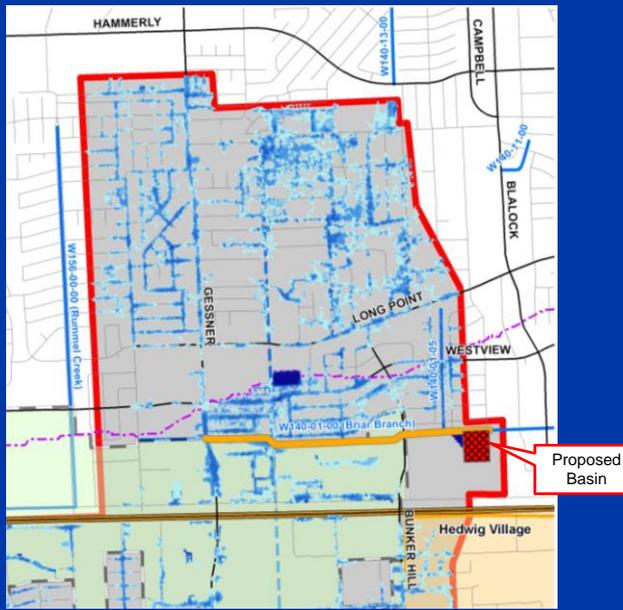
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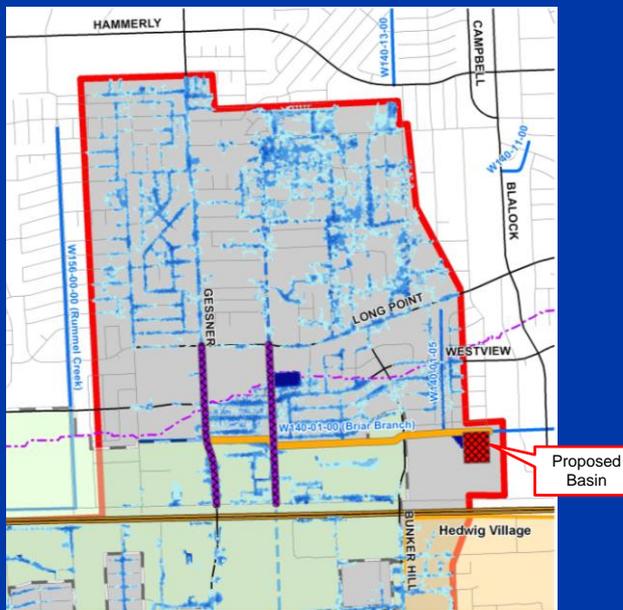
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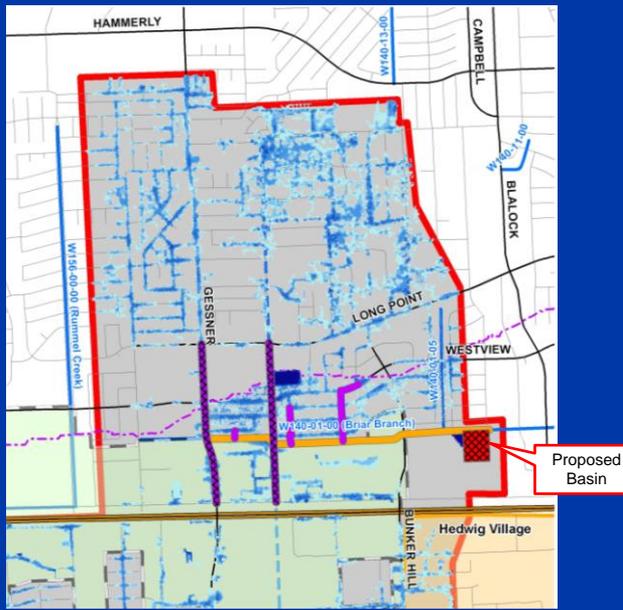
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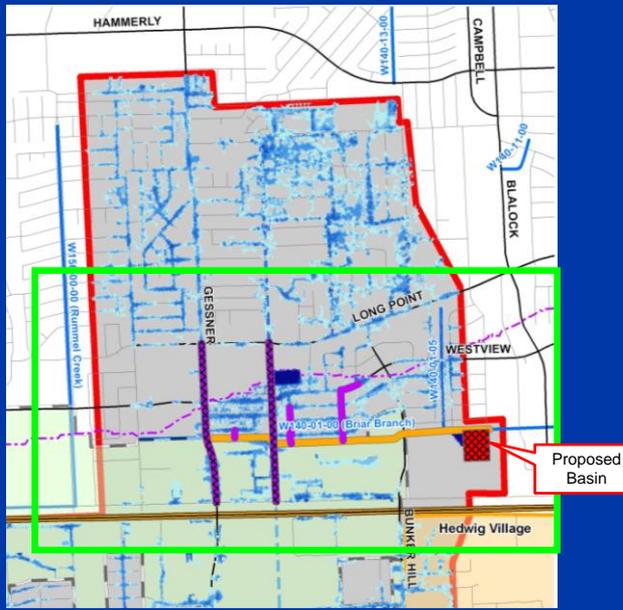
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Proposed Basin

Legend

- TIRZ 17 Boundary
- TIRZ 17 RDS Study Limits
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- HCFCD Channels
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 - Standard Conveyance
 - Detention Locations
 - Channel Improvements
- Projects to be Performed by Others**
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 - Channel Improvements
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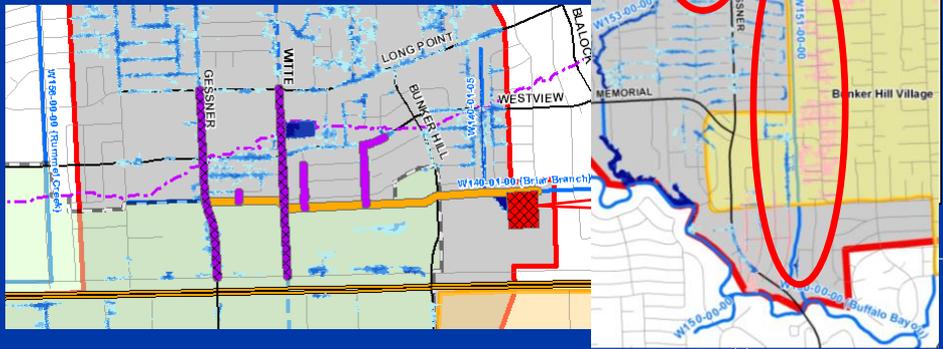
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- Detention Maximizes 10yr Benefits of Proposed Conveyance Alternatives
- Direct Benefit to TIRZ 17 CIP Projects
 - Gessner/Witte
- Direct Benefit to Adjacent Communities
- Direct Benefit to W151 Watershed
- Indirect Benefit to W153 Watershed



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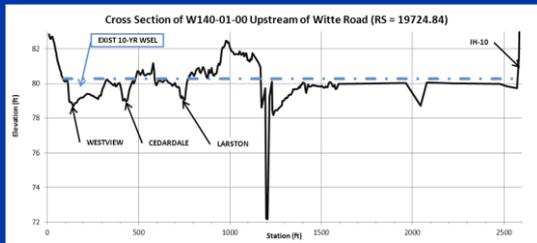
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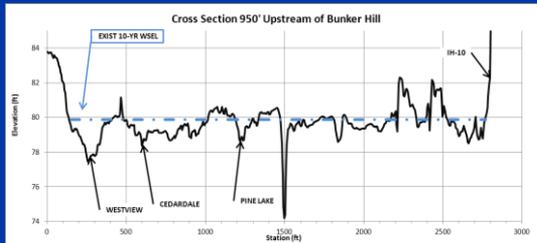
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SECTION A-A



SECTION B-B



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TIRZ 17 Regional Drainage Study: 8-Acre Detention Basin



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TIRZ 17 Regional Drainage Study: 8-Acre Detention Basin: Schedule

- **90 Day Option Period**
 - Feasibility Study
 - Geotechnical Investigation
 - Environmental Investigation
 - Boundary Survey
 - HCFCD Standard Hydraulics Evaluation
 - TIRZ 17 Plan Amendment Approval
 - TIRZ 17 Budget Approval
- **Real Estate Transaction Closing**
 - Target Completion: August 2011
- **Preliminary Engineering**
 - Target Completion: December 2011
- **Detailed Design**
 - Target Completion: June 2012
- **Construction**
 - Target Completion: Early 2013

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<h1>Questions</h1>	<p>DRAFT-PRELIMINARY- SUBJECT TO CHANGE PENDING REVIEW BY CITY OF HOUSTON AND HCFCO</p>
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<h1>END OF PRESENTATION</h1>