CANEY CREEK — I-69 CHANNELIZATION

(RECOMMEND PROJECT IN SJMDP)

LOCATION: Approximately 0.5 miles D/S of I-69 to confluence of East Fork of San Jacinto River
OBJECTIVE: Reduce flooding along Caney Creek
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 4% ACE

IMPROVEMENT SPECIFICATIONS
• 7.8 miles of channelization
• 700-foot wide bench
• 629 acres
• 4.7M cubic yards of excavation
• 530 acre-feet mitigation required

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 509
• Reduction in instances of flooding over 50-year period: 1,122
• Benefited areas:
  o Baptist Encampment Road, New Caney
• Reduces 1% ACE WSEL at least 0.5 feet for 9.0 miles along Caney Creek
• Improves ponding depths on 5 road/rail crossings
• Net Present Value Benefit: $57.4 M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, HCFCD, TxDOT, SJRA, USACE, TWDB, GLO

REQUIRED REAL ESTATE
• 156 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 133 acres of potential wetlands
• 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 10 oil & gas pipeline conflicts
• 0.6 miles of roads (1% ACE)

ESTIMATED COSTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Cost</td>
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<td>20-Year Escalation Cost</td>
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BENEFIT-COST RATIO: 0.30

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
**LOCATION:** Approximately 1.0 miles U/S of FM 1097 on Caney Creek  
**OBJECTIVE:** Reduce flooding along Caney Creek  
**HOW IT WORKS:** Dry dam detention facility impounds stream flow during flood events  
**IMMEDIATE DOWNSTREAM BENEFIT:** Incremental Atlas 14 WSEL reduction – 1% ACE to 4% ACE  

**OPPORTUNITIES AND CHALLENGES**  
**POTENTIAL PARTNERS**  
Montgomery County, TxDOT, SJRA, HCFCD, USACE, TWDB, GLO  

**REQUIRED REAL ESTATE**  
- 182 parcels within PMF  
- 95 parcels within 1% ACE WSEL  

**DESKTOP ENVIRONMENTAL MITIGATION**  
- 1 acre of potential wetlands  
- 1,291 linear feet of NHD streams  

**RELOCATIONS/RECONSTRUCTION**  
- No known oil & gas pipeline conflicts  
- 4.1 miles of roads (PMF)  
- 1.3 miles of roads (1% ACE)  

**IMPROVEMENT SPECIFICATIONS**  
- Dry dam detention facility  
- 1,514 acres (1% ACE)  
- 2,435 acres (PMF)  
- 13,900 acre-feet (1% ACE)  
- Embankment: 1.5M cubic yards  
- Max dam height: 53 ft  
- Dam length: 1.2 miles  

**ESTIMATED BENEFITS**  
- Structures removed from 1% ACE floodplain: 285  
- Reduction in instances of flooding over 50-year period: 783  
- Benefited areas:  
  - New Caney, The neighborhoods near SH 242 and FM 1484  
  - Reduces 1% ACE WSEL at least 0.5 feet for 40.0 miles downstream of detention facility  
- Improves ponding depths on 18 road/rail crossings  
- Net Present Value Benefit: $27.7M  

**ESTIMATED COSTS**  
Design Cost: $8M  
Construction Cost: $65M  
Environmental Cost: $8M  
ROW Cost: $24M–$50M  
**TOTAL COSTS:** $105M–$131M  
20-Year Escalation Cost: $159M–$199M  

**BENEFIT-COST RATIO:** 0.21–0.26
**CANEY CREEK — SH 105 DETENTION**

*(Recommend Project in SJMDP)*

**LOCATION:** Approximately 1.9 miles U/S of SH 105 on Caney Creek  
**OBJECTIVE:** Reduce flooding along Caney Creek  
**HOW IT WORKS:** Dry dam detention facility impounds stream flow during flood events  
**IMMEDIATE DOWNSTREAM BENEFIT:** Incremental Atlas 14 WSEL reduction – 1% ACE to 4% ACE

---

**OPPORTUNITIES AND CHALLENGES**

**POTENTIAL PARTNERS**  
Montgomery County, TxDOT, HCFCD, SJRA, TWDB, GLO, USACE

**REQUIRED REAL ESTATE**  
- 402 parcels within PMF  
- 227 parcels within 1% ACE WSEL

**DESKTOP ENVIRONMENTAL MITIGATION**  
- 4 acres of potential wetlands  
- 1,058 linear feet of NHD streams

**RELOCATIONS/RECONSTRUCTION**  
- 1 oil & gas pipeline conflict  
- 0.9 miles of roads (PMF)  
- 0.5 miles of roads (1% ACE)

---

**IMPROVEMENT SPECIFICATIONS**

- Dry dam detention facility  
- 1,502 acres (1% ACE)  
- 2,310 acres (PMF)  
- 28,090 acre-feet (1% ACE)  
- Embankment: 1.2M cubic yards  
- Max dam height: 62 ft  
- Dam length: 0.8 miles

**ESTIMATED BENEFITS**

- Structures removed from 1% ACE floodplain: 658  
- Reduction in instances of flooding over 50-year period: 1,596  
- Benefited areas:  
  - The neighborhoods near SH 242 and FM 1484  
- Reduces 1% ACE WSEL at least 0.5 feet for 31.5 miles downstream of detention facility  
- Improves ponding depths on 11 road/rail crossings  
- Net Present Value Benefit: $55.2M

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**ESTIMATED COSTS**

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<td>20-Year Escalation Cost</td>
<td>$173M–$227M</td>
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**BENEFIT-COST RATIO:** 0.37–0.48

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*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.*
LOCATION: FM1485 to Luce Bayou confluence on East Fork of San Jacinto River

OBJECTIVE: Reduce flooding along East Fork of San Jacinto River

HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact

IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel ~ 1% ACE to 10% ACE

OPPORTUNITIES AND CHALLENGES

IMPROVEMENT SPECIFICATIONS
- 4.3 miles of channelization
- 1400-foot wide bench
- 882 acres
- 12.4 cubic yards of excavation
- 15,000 acre-feet mitigation required

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 318
- Reduction in instances of flooding over 50-year period: 727
- Benefited areas:
  - Kingwood, River Terrace, Rolling Creek Acres
- Reduces 1% ACE WSEL at least 0.5 feet for 10.4 miles
- Improves ponding depths on 5 road/rail crossings
- Net Present Value Benefit: $26.4M

REQUIRED REAL ESTATE
- 166 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 286 acres of potential wetlands
- 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- 5 oil & gas pipeline conflicts
- 0 miles of roads (1% ACE)

ESTIMATED COSTS

Design Cost……………………...$29M
Construction Cost…………………..$243M
Environmental Cost………………..$36M
ROW Cost………………………..$32M
TOTAL COSTS……………………$340M
20-Year Escalation Cost……………$515M

BENEFIT-COST RATIO: 0.08

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 10 miles U/S of Cleveland on East Fork of San Jacinto River
OBJECTIVE: Reduce flooding along East Fork of San Jacinto River
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

**IMPROVEMENT SPECIFICATIONS**
- Dry dam detention facility
- 3,030 acres (1% ACE)
- 3,182 acres (PMF)
- 28,248 acre-feet (1% ACE)
- Embankment: 1.3M cubic yards
- Max dam height: 54 ft
- Dam length: 1.4 miles

**ESTIMATED BENEFITS**
- Structures removed from 1% ACE floodplain: 570
- Reduction in instances of flooding over 50-year period: 1,109
- Location of benefits:
  - Cleveland, Plum Grove
- Reduces 1% ACE WSEL at least 0.5 feet for 38.7 miles downstream of detention facility
- Improves ponding depths on 6 road/rail crossings
- Net Present Value Benefit: $51.9M

**OPPORTUNITIES AND CHALLENGES**

**POTENTIAL PARTNERS**
San Jacinto County, SJRA, TxDOT, USACE, USDA, BNSF Railroad, UPRR, TWDB, GLO, HCFCD

**REQUIRED REAL ESTATE**
- 328 parcels within PMF
- 214 parcels within 1% ACE WSEL

**DESKTOP ENVIRONMENTAL MITIGATION**
- 12 acres of potential wetlands
- 1,617 linear feet of NHD streams

**RELOCATIONS/RECONSTRUCTION**
- 4 oil & gas pipeline conflicts
- 0.6 miles of roads (PMF)
- 0.1 miles of roads (1% ACE)

**ESTIMATED COSTS**

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<tr>
<th>Description</th>
<th>Cost (M)</th>
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**BENEFIT-COST RATIO:** 0.31-0.36

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.*
LOCATION: Approximately 11 miles U/S Winters Bayou from East Fork of San Jacinto River
OBJECTIVE: Reduce flooding along East Fork of San Jacinto River
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- Dry dam detention facility
- 2,271 acres (1% ACE)
- 2,385 acres (PMF)
- 36,370 acre-feet (1% ACE)
- Embankment: 1.4M cubic yards
- Max dam height: 53 ft
- Dam length: 1.3 miles

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 544
- Reduction in instances of flooding over 50-year period: 1,215
- Location of benefits:
  - Cleveland, Plum Grove
- Reduces 1% ACE WSEL at least 0.5 feet for 31.6 miles along East Fork
- Improves ponding depths on 10 road/rail crossings
- Net Present Value Benefit: $57.3M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
San Jacinto County, SJRA, TxDOT, USACE, USDA, BNSF Railroad, UPRR, TWDB, GLO, HCFCD,

REQUIRED REAL ESTATE
- 182 parcels within PMF
- 105 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 7.5 acres of potential wetlands
- 1,385 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- No known oil & gas pipeline conflicts
- 0.7 miles of roads (PMF)
- 1.2 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost.................................$7M
Construction Cost..........................$62M
Environmental Cost........................$9M
ROW Cost..................................$52M–$102M
TOTAL COSTS..........................$131M–$181M
20-Year Escalation Cost.............$198M–$274M

BENEFIT-COST RATIO: 0.32–0.44

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 3 miles U/S Winters Bayou from East Fork of San Jacinto River

OBJECTIVE: Reduce flooding along East Fork of San Jacinto River

HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events

IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- Dry dam detention facility
- 2,480 acres (1% ACE)
- 2,600 acres (PMF)
- 45,055 acre-feet (1% ACE)
- Embankment: 1.3M cubic yards
- Max dam height: 48 ft
- Dam length: 1.6 miles

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 615
- Reduction in instances of flooding over 50-year period: 1,334
- Location of benefits:
  - Cleveland, Plum Grove
- Reduces 1% ACE WSEL at least 0.5 feet for 31.6 miles along East Fork
- Improves ponding depths on 10 road/rail crossings
- Net Present Value Benefit: $63.5M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
San Jacinto County, SJRA, TxDOT, USACE, USDA, BNSF Railroad, UPRR, TWDB, GLO, HCFC

REQUIRED REAL ESTATE
- 181 parcels within PMF
- 88 parcels within 1% ACE

DESKTOP ENVIRONMENTAL MITIGATION
- 18 acres of potential wetlands
- 442 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- 3 oil & gas pipeline conflicts
- 1.5 miles of roads (PMF)
- 1.1 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost: ............................................... $9M
Construction Cost: ...................................... $74M
Environmental Cost: .................................... $7M
ROW Cost: ................................................. $45M–$77M
TOTAL COSTS: ...................................... $134M–$167M
20-Year Escalation Cost: $204M–$252M

BENEFIT-COST RATIO: 0.38–0.47

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 0.3 miles U/S of SH 105 on Caney Creek
OBJECTIVE: Reduce flooding along Lake Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- Dry dam detention facility
- 1,886 acres (1% ACE)
- 3,272 acres (PMF)
- 19,750 acre-feet (1% ACE)
- Embankment: 825k cubic yards
- Max dam height: 52 ft
- Dam length: 0.8 miles

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 323
- Reduction in instances of flooding over 50-year period: 686
- Benefited areas:
  - Woodforest, River Plantation, City of Conroe, Woodloch
- Reduces 1% ACE WSEL at least 0.5 feet for 35.1 miles along Lake Creek
- Improves ponding depths on 4 road/rail crossings
- Net Present Value Benefit: $42.1M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Grimes County, Montgomery County, SJRA, USACE, TWDB, GLO, HCFCFD,

REQUIRED REAL ESTATE
- 220 parcels within PMF
- 123 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 10 acres of potential wetlands
- 660 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- No known gas pipeline conflicts
- 4.9 miles of roads (PMF)
- 1.1 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost..............................................$4M
Construction Cost...................................$34M
Environmental Cost..................................$7M
ROW Cost..............................................$54M-$118M
TOTAL COSTS......................................$98M-$163M
20-Year Escalation Cost.............$149M-$247M

BENEFIT-COST RATIO: 0.26–0.43

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 0.7 miles U/S of Lake Creek on Garrettts Creek
OBJECTIVE: Reduce flooding along Lake Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction - 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
• Dry dam detention facility
• 1,739 acres (1% ACE)
• 3,009 acres (PMF)
• 16,850 acre-feet (1% ACE)
• Embankment: 1.0M cubic yards
• Max dam height: 43 ft
• Dam length: 1.2 miles

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 295
• Reduction in instances of flooding over 50-year period: 684
• Benefited areas:
  o Dobbin, River Plantation, City of Conroe, Woodloch, Woodforest
• Reduces 1% ACE WSEL at least 0.5 feet for 53.2 miles along Lake Creek
• Improves ponding depths on 7 road/rail crossings
• Net Present Value Benefit: $39.8M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Grimes County, Montgomery County, TxDOT, SJRA, USACE, TWDB, GLO, HCFCFD

REQUIRED REAL ESTATE
• 74 parcels within PMF
• 36 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 35 acres of potential wetlands
• 2,590 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 2 oil & gas pipeline conflicts
• 4.6 miles of roads (PMF)
• 1.5 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost...........................................$6M
Construction Cost.................................$51M
Environmental Cost................................$17M
ROW Cost.........................................$32M–$56M
TOTAL COSTS......................................$107M–$131M
20-Year Escalation Cost..............$162M–$198M

BENEFIT-COST RATIO: 0.31–0.37

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LAKE CREEK — LITTLE CANEY CREEK DETENTION

(Recommend Project in SJMDP)

LOCATION: Approximately 1.1 miles U/S of Lake Creek on Little Caney Creek, West of FM 1486
OBJECTIVE: Reduce flooding along Lake Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS

- Dry dam detention facility
- 1,612 acres (1% ACE)
- 2,976 acres (PMF)
- 17,500 acre-feet (1% ACE)
- Embankment: 1.2M cubic yards
- Max dam height: 51 ft
- Dam length: 0.8 miles

ESTIMATED BENEFITS

- Structures removed from 1% ACE floodplain: 248
- Reduction in instances of flooding over 50-year period: 564
- Benefited areas:
  - Woodforest, River Plantation, City of Conroe, Dobbin, Woodloch
- Reduces 1% ACE WSEL at least 0.5 feet for 40.1 miles along Lake Creek
- Improves ponding depths on 6 road/rail crossings
- Net Present Value Benefit: $35.0M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, Grimes County, SJRA, USACE, TWDB, GLO, HCFC

REQUIRED REAL ESTATE

- 215 parcels within PMF
- 111 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION

- 8.9 acres of potential wetlands
- 1,105 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*

- 6 oil & gas pipeline conflicts
- 3.5 miles of roads (PMF)
- 1.2 miles of roads (1% ACE)

ESTIMATED COSTS

- Design Cost: $6M
- Construction Cost: $49M
- Environmental Cost: $10M
- ROW Cost: $33M–$63M
- TOTAL COSTS: $98M–$128M
- 20-Year Escalation Cost: $149M–$195M

BENEFIT-COST RATIO: 0.27–0.36

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 0.8 miles U/S of SH 105 on Lake Creek
OBJECTIVE: Reduce flooding along Lake Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
• Dry dam detention facility
• 4,942 acres (1% ACE)
• 8,060 acres (PMF)
• 75,100 acre-feet (1% ACE)
• Embankment: 3.0M cubic yards
• Max dam height: 58 ft
• Dam length: 1.3 miles

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 931
• Reduction in instances of flooding over 50-year period: 1,694
• Benefited areas:
  • Woodforest, River Plantation, City of Conroe, Dobbin, Woodloch
• Reduces 1% ACE WSEL at least 0.5 feet for 36.1 miles downstream of detention facility
• Improves ponding depths on 6 road/rail crossings
• Net Present Value Benefit: $100.4M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, TxDOT, SJRA, USACE, GLO, HCFCDC

REQUIRED REAL ESTATE
• 483 parcels within PMF
• 209 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 23 acres of potential wetlands
• 810 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 5 oil & gas pipeline conflicts
• 10.1 miles of roads (PMF)
• 2.8 miles of roads (1% ACE)

ESTIMATED COSTS

Design Cost ......................................................... $11M
Construction Cost ............................................. $97M
Environmental Cost .......................................... $7M
ROW Cost ....................................................... $74M–$154M
TOTAL COSTS .............................................. $187M–$267M
20-Year Escalation Cost ........... $284M–$405M

BENEFIT-COST RATIO: 0.38–0.54

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: D/S of I-69 to FM 1485 on Peach Creek

OBJECTIVE: Reduce flooding along Peach Creek

HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact

IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 4% ACE

IMPROVEMENT SPECIFICATIONS
- 4.3 miles of channelization
- 800-foot wide bench
- 417 acres
- 7M cubic yards of excavation
- 800 acre-feet mitigation required

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 383
- Reduction in instances of flooding over 50-year period: 1,880
- Benefited areas:
  - Woodbranch, Patton Village, Roman Forest
- Reduces 1% ACE WSEL at least 0.5 feet for 6.2 miles along Peach Creek
- Improves ponding depths on 4 road/rail crossings
- Net Present Value Benefit: $73.6M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, SJRA, USACE, TWDB, GLO

REQUIRED REAL ESTATE
- 286 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 28 acres of potential wetlands
- 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- 3 oil & gas pipeline conflicts
- 1.9 miles of roads

ESTIMATED COSTS
- Design Cost..........................................................$15M
- Construction Cost...............................................$129M
- Environmental Cost..............................................$7M
- ROW Cost............................................................$8M
- TOTAL COSTS.......................................................$159M
- 20-Year Escalation Cost.................................$241M

BENEFIT-COST RATIO: 0.46

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 12 miles U/S of New Caney on Peach Creek
OBJECTIVE: Reduce flooding along Peach Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 4% ACE

IMPROVEMENT SPECIFICATIONS
• Dry dam detention facility
• 3,025 acres (1% ACE)
• 5,195 acres (PMF)
• 36,197 acre-feet (1% ACE)
• Embankment: 6.4M cubic yards
• Max dam height: 46 ft
• Dam length: 4.7 miles

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 400
• Reduction in instances of flooding over 50-year period: 1,768
• Benefited areas:
  o Woodbranch and Splendora
• Reduces 1% ACE WSEL at least 0.5 feet for 15.4 miles downstream of detention facility
• Improves ponding depths on 6 road/rail crossings
• Net Present Value Benefit: $81.5M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, SJRA, USACE, TWDB, GLO

REQUIRED REAL ESTATE
• 505 parcels within PMF
• 273 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 7 acres of potential wetlands
• 900 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 1 oil & gas pipeline conflict
• 10.7 miles of roads (PMF)
• 4.7 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost.................................................$26M
Construction Cost .....................................$214M
Environmental Cost.................................$7M
ROW Cost..................................................$110M–$187M
TOTAL COSTS............................................$356M–$433M
20-Year Escalation Cost ............$540M–$657M

BENEFIT-COST RATIO: 0.19–0.23

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 19 miles U/S of New Caney on Peach Creek
OBJECTIVE: Reduce flooding along Peach Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 10% ACE

IMPROVEMENT SPECIFICATIONS
- Dry dam detention facility
- 1,235 acres (1% ACE)
- 2,191 acres (PMF)
- 36,000 acre-feet (1% ACE)
- Embankment: 4.7M cubic yards
- Max dam height: 51 ft
- Dam length: 3.2 miles

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 261
- Reduction in instances of flooding over 50-year period: 1,073
- Benefited areas:
  - Woodbranch, Patton Village, Splendora
- Reduces 1% ACE WSEL at least 0.5 feet for 30.5 miles downstream of detention facility
- Improves ponding depths on 9 road/rail crossings
- Net Present Value Benefit: $56.3M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, San Jacinto County, TxDOT, SJRA, USACE, TWDB, GLO

REQUIRED REAL ESTATE
- 60 parcels within PMF
- 42 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 9 acres of potential wetlands
- 1,365 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- 1 oil & gas pipeline conflict
- 1.1 miles of roads (PMF)
- 0.4 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost.......................................................$19M
Construction Cost..............................................$160M
Environmental Cost...........................................$9M
ROW Cost.......................................................
TOTAL COSTS..................................................$201M–$218M
20-Year Cost Escalation Cost...........$305M–$331M

BENEFIT-COST RATIO: 0.26–0.28

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
**SPRING CREEK — WOODLANDS CHANNELIZATION (200-ft)**

*(Recommend Project in SJMDP)*

**LOCATION:** U/S of Kuykendahl Road to D/S of Willow Creek confluence on Spring Creek  
**OBJECTIVE:** Reduce flooding along Spring Creek  
**HOW IT WORKS:** Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact  
**IMMEDIATE AREA BENEFIT:** Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 2% ACE

**OPPORTUNITIES AND CHALLENGES**

**POTENTIAL PARTNERS**  
Montgomery County, SJRA, USACE, MUD 386, The Woodlands Township, Woodlands Water Agency, TWDB, GLO, HCFCD

**REQUIRED REAL ESTATE**  
- 113 parcels within 1% ACE WSEL

**DESKTOP ENVIRONMENTAL MITIGATION**  
- 11 acres of potential wetlands  
- 0 linear feet of NHD streams

**RELOCATIONS/RECONSTRUCTION**  
- 2 oil & gas pipeline conflicts  
- 0.10 miles of roads (1% ACE)

**IMPROVEMENT SPECIFICATIONS**
- 8.8 miles of channelization  
- 200-foot wide bench  
- 155 acres  
- 1.9M cubic yards of excavation  
- 7,200 acre-feet mitigation required

**ESTIMATED BENEFITS**
- Structures removed from 1% ACE floodplain: 221  
- Reduction in instances of flooding over 50-year period: 477  
- Benefited areas:  
  - The Woodlands, Timber Lakes  
- Reduces 1% ACE WSEL at least 0.5 feet for 11.8 miles along Spring Creek  
- Improves ponding depths on 2 road/rail crossings  
- Net Present Value Benefit: $34.7M

**ESTIMATED COSTS**
- Design Cost.................................................. $6M  
- Construction Cost.......................................... $47M  
- Environmental Cost..................................... $1M  
- ROW Cost.................................................. $2M  
- **TOTAL COSTS**......................................... **$56M**  
- 20-Year Escalation Cost.................................. $85M

**BENEFIT-COST RATIO:** 0.62

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*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.*
LOCATION: U/S of Kuykendahl Road to D/S of Willow Creek confluence on Spring Creek
OBJECTIVE: Reduce flooding along Spring Creek
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 10% ACE

IMPROVEMENT SPECIFICATIONS
• 9.7 miles of channelization
• 500-foot wide bench
• 577 acres
• 6.0M cubic yards of excavation
• 12,500 acre-feet mitigation required

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 357
• Reduction in instances of flooding over 50-year period: 776
• Benefited areas:
  o The Woodlands, Timber Lakes
• Reduces 1% ACE WSEL at least 0.5 feet for 12.7 miles along Spring Creek
• Improves ponding depths on 4 road/rail crossings
• Net Present Value Benefit: $48.1M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, Harris County, SJRA, USACE, The Woodlands Township, Woodlands Water Agency, TWDB, GLO, HCFCD

REQUIRED REAL ESTATE
• 119 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 53 acres of potential wetlands
• 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 2 oil & gas pipeline conflicts
• 0.20 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost...........................................................................$15M
Construction Cost..............................................................$124M
Environmental Cost...........................................................$7M
ROW Cost..............................................................................$4M
TOTAL COSTS.......................................................................$149M
20-Year Escalation Cost .......................................................$226M

BENEFIT-COST RATIO: 0.32

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Between Gosling Road and I-45
OBJECTIVE: Reduce flooding along Spring Creek
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 4% ACE

IMPROVEMENT SPECIFICATIONS
• 5.2 miles of channelization
• 500-foot wide bench
• 311 acres
• 5.4M cubic yards of excavation
• 9,000 acre-feet mitigation required

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 676
• Reduction in instances of flooding over 50-year period: 991
• Benefited areas:
  o The Woodlands, Timber Lake, Timber Ridge, Grogan’s Point
• Reduces 1% ACE WSEL at least 0.5 feet for 10.0 miles along Spring Creek
• Improves ponding depths on 2 road/rail crossings
• Net Present Value Benefit: $63.2M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, Harris County, SJRA, USACE, TWDB, GLO, HCFCD, The Woodlands Township, Woodlands Water Agency,

REQUIRED REAL ESTATE
• 160 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
• 43 acres of potential wetlands
• 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 8 oil & gas pipeline conflicts

ESTIMATED COSTS
Design Cost .............................................. $12M
Construction Cost ................................... $103M
Environmental Cost .................................. $5M
ROW Cost .............................................. $12M
TOTAL COSTS .......................................... $132M
20-Year Escalation Cost ............................ $200M

BENEFIT-COST RATIO: 0.48

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: From I-45 to approximately 4 miles D/S of Riley Fuzzel Road on Spring Creek
OBJECTIVE: Reduce flooding along Spring Creek
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in this watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 4% ACE

IMPROVEMENT SPECIFICATIONS
- 6.9 miles of channelization
- 300-foot wide bench
- 188 acres
- 3.7M cubic yards of embankment
- 8,000 acre-feet mitigation required

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 1,240
- Reduction in instances of flooding over 50-year period: 1,739
- Benefited areas:
  - Northgate Crossing, Lexington Woods, Spring
- Reduces 1% ACE WSEL at least 0.5 feet for 10.7 miles along Spring Creek
- Improves ponding depths on 4 road/rail crossings
- Net Present Value Benefit: $99.4M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, TxDOT, SJRA, USACE, TWDB, GLO, FEMA, HCFCDC

REQUIRED REAL ESTATE
- 137 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 35 acres of potential wetlands
- 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
- 5 oil & gas pipeline conflicts
- 0.05 miles of roads (1% ACE)

ESTIMATED COSTS
- Design Cost ................................................. $8M
- Construction Cost ..................................... $69M
- Environmental Cost .................................... $4M
- ROW Cost ................................................ $4M
- TOTAL COSTS ............................................. $85M
- 20-Year Escalation Cost .............................. $129M

BENEFIT-COST RATIO: 1.17

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
**SPRING CREEK — BIRCH CREEK DETENTION**

*(Recommend Project in SJMDP)*

**LOCATION:** Approximately 12 miles U/S of Spring Creek on Birch Creek  
**OBJECTIVE:** Reduce flooding along Spring Creek  
**HOW IT WORKS:** Dry dam detention facility impounds stream flow during flood events  
**IMMEDIATE DOWNSTREAM BENEFIT:** Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

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**IMPROVEMENT SPECIFICATIONS**
- Dry dam detention facility
- 873 acres (1% ACE)
- 917 acres (PMF)
- 7,731 acre-feet (1% ACE)
- Embankment: 460k cubic yards
- Max dam height: 41 ft
- Dam length: 0.7 miles

**ESTIMATED BENEFITS**
- Structures removed from 1% ACE floodplain: 815
- Reduction in instances of flooding over 50-year period: 1,084
- Benefited areas:
  - The Woodlands, Tomball, Stagecoach
- Reduces 1% ACE WSEL at least 0.5 feet for 25.9 miles along Spring Creek
- Improves ponding depths on 13 road/rail crossings
- Net Present Value Benefit: $66.0M

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**OPPORTUNITIES AND CHALLENGES**

**POTENTIAL PARTNERS**
Waller County, Montgomery County, SJRA, USACE, MUD 386, The Woodlands Township, Woodlands Water Agency, City of Tomball, TWDB, GLO, FEMA, HCFCD

**REQUIRED REAL ESTATE**
- 71 parcels within PMF  
- 15 parcels within 1% ACE WSEL

**DESKTOP ENVIRONMENTAL MITIGATION**
- 2.1 acres of potential wetlands  
- 1,370 linear feet of NHD streams

**RELOCATIONS/RECONSTRUCTION**
- 1 oil & gas pipeline conflicts  
- 0.6 miles of roads (PMF)  
- 0.3 miles of roads (1% ACE)

**ESTIMATED COSTS**
- Design Cost: $3M  
- Construction Cost: $23M  
- Environmental Cost: $6M  
- ROW Cost: $48M–$88M  
- **TOTAL COSTS:** $80M–$120M  
- 20-Year Escalation Cost: $121M–$181M

**BENEFIT-COST RATIO:** 0.55–0.83

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*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.*
LOCATION: Approximately 10 miles U/S of Spring Creek on Mill Creek
OBJECTIVE: Reduce flooding along Spring Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 4-10% ACE

IMPROVEMENT SPECIFICATIONS
• Dry dam detention facility
• 989 acres (1% ACE)
• 1,039 acres (PMF)
• 11,159 acre-feet (1% ACE)
• Embankment: 500k cubic yards
• Max dam height: 44 ft
• 0.9 miles in length

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 885
• Reduction in instances of flooding over 50-year period: 1,015
• Benefited areas:
  ◦ Tomball, The Woodlands
• Reduces 1% ACE WSEL at least 0.5 feet for 23.8 miles along Spring Creek
• Improves ponding depths on 9 road/rail crossings
• Net Present Value Benefit: $65.1M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, SJRA, USACE, MUD 386, The Woodlands Township, Woodlands Water Agency, TWDB, GLO, HCFC

REQUIRED REAL ESTATE
• 234 parcels within PMF
• 129 parcels within 1% ACE WSL

DESKTOP ENVIRONMENTAL MITIGATION
• <0.1 acres of potential wetlands
• 1,250 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION*
• 4 oil & gas pipeline conflicts
• 0 miles of roads (PMF)
• 0 miles of roads (1% ACE)

ESTIMATED COSTS
Design Cost..............................................$4M
Construction Cost.................................$30M
Environmental Cost.............................$8M
ROW Cost...........................................$58M–$89M
TOTAL COSTS....................................$99M–$131M
20-Year Escalation Cost ..........$150M–$198M

BENEFIT-COST RATIO: 0.50–0.67

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: Approximately 12 miles U/S of Spring Creek on Walnut Creek
OBJECTIVE: Reduce flooding along Spring Creek
HOW IT WORKS: Dry dam detention facility impounds stream flow during flood events
IMMEDIATE DOWNSTREAM BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- Dry dam detention facility
- 1,218 acres (1% ACE)
- 1,279 acres (PMF)
- 12,159 acre-feet (1% ACE)
- Embankment: 670k cubic yards
- Max dam height: 46 ft
- 1.2 miles in length

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 1,205
- Reduction in instances of flooding over 50-year period: 1,653
- Benefited areas:
  - Tomball, The Woodlands
- Reduces 1% ACE WSEL at least 0.5 feet for 41.2 miles along Spring Creek
- Improves ponding depths on 13 road/rail crossings
- Net Present Value Benefit: $101.2M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Waller County, Montgomery County, SJRA, USACE, MUD 386, City of Tomball, The Woodlands Township, Woodlands Water Agency, TWDB, GLO, FEMA, HCFCD, Harris County

REQUIRED REAL ESTATE
- 37 parcels within PMF
- 30 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 6 acres of potential wetlands
- 840 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION
- 1 oil & gas pipeline conflicts
- 1.3 miles of roads (PMF)
- 1.3 miles of roads (1% ACE)

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: I-45 to between SH 242 and SH 99 on West Fork of San Jacinto River
OBJECTIVE: Reduce flooding along West Fork of San Jacinto River
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in the Lake Creek watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- 9.3 miles of channelization
- 500-foot wide bench
- 560 acres
- 6.17M cubic yards of excavation
- 13,200 acre-feet mitigation required

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 383
- Reduction in instances of flooding over 50-year period: 1,016
- Benefited areas:
  - River Plantation, Montgomery Creek Ranch, The Woodlands, Sleepy Hollow
- Reduces 1% ACE WSEL at least 0.5 feet for 12.6 miles along West Fork
- Improves ponding depths on 3 road/rail crossings
- Net Present Value Benefit: $44.4M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, SJRA, TWDB, GLO

REQUIRED REAL ESTATE
- 212 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 228 acres of potential wetlands
- 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION
- 6 oil & gas pipeline conflicts
- 0.1 miles of roads

ESTIMATED COSTS
Design Cost..............................................$15M
Construction Cost....................................$126M
Environmental Cost..................................$32M
ROW Cost.............................................$14M
TOTAL COSTS.......................................$187M
20-Year Escalation Cost.........................$283M

BENEFIT-COST RATIO: 0.24

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATIONS: I-45 to SH 242 on West Fork of San Jacinto River
OBJECTIVE: Reduce flooding along West Fork of San Jacinto River
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in the Lake Creek watershed must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 2% ACE

IMPROVEMENT SPECIFICATIONS
- 5.7 miles of channelization
- 750-foot wide bench
- 520 acres
- 5.7M cubic yards of excavation
- 12,400 acre-feet mitigation required

ESTIMATED BENEFITS
- Structures removed from 1% ACE floodplain: 383
- Reduction in instances of flooding over 50-year period: 1,004
- Benefited areas:
  - River Plantation, Montgomery Creek Ranch
  - Reduces 1% ACE WSEL at least 0.5 feet for 9.1 miles along West Fork
  - Improves ponding depths on 2 road/rail crossings
  - Net Present Value Benefit: $45.5M

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Montgomery County, SJRA, TWDB, GLO

REQUIRED REAL ESTATE
- 225 parcels within 1% ACE WSEL

DESKTOP ENVIRONMENTAL MITIGATION
- 152 acres of potential wetlands
- 0 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION
- 6 oil & gas pipeline conflicts
- 0.1 miles of roads

ESTIMATED COSTS
- Design Cost: $13M
- Construction Cost: $110M
- Environmental Cost: $22M
- ROW Cost: $11M
- TOTAL COSTS: $157M
- 20-Year Escalation Cost: $238M
- BENEFIT-COST RATIO: 0.29

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.*
LOCATION: I-69 to West Lake Houston Parkway on West Fork of San Jacinto River

OBJECTIVE: Reduce flooding along West Fork of San Jacinto River

HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in the Lake Creek or Spring Creek watersheds must be constructed first to mitigate adverse impact

IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction along the channel – 1% ACE to 2% ACE

**IMPROVEMENT SPECIFICATIONS**
- 5 miles of channel benching
- 3,500-foot wide bench
- 3,527 acres
- 30.5 M cubic yards of excavation
- 923 acre-feet mitigation required

**ESTIMATED BENEFITS**
- Structures removed from 1% ACE floodplain: 743
- Reduction in instances of flooding over 50-year period: 963
- Benefited areas:
  - Kingwood, Atascocita, Humble
- Reduces 1% ACE WSEL at least 0.5 feet for 9.2 miles along West Fork
- Improves ponding depths on 2 road/rail crossings
- Net Present Value Benefit: $60.5M

**OPPORTUNITIES AND CHALLENGES**

**POTENTIAL PARTNERS**
Harris County, HCFCD, Montgomery County, SJRA, USACE, GLO, City of Houston

**REQUIRED REAL ESTATE**
- 1,301 parcels within 1% ACE WSEL

**DESKTOP ENVIRONMENTAL MITIGATION**
- 1,416 acres of potential wetlands
- 0 linear feet of NHD streams

**RELOCATIONS/RECONSTRUCTION**
- 4 oil & gas pipeline conflicts
- 9.9 miles of roads

**ESTIMATED COSTS**
- Design Cost: $64M
- Construction Cost: $537M
- Environmental Cost: $180M
- ROW Cost: $56M
- **TOTAL COSTS**: $837M
- 20-Year Escalation Cost: $1.3B

**BENEFIT-COST RATIO**: 0.07

*C*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.
LOCATION: I-69 to West Lake Houston Parkway on West Fork of San Jacinto River
OBJECTIVE: Reduce flooding along West Fork of San Jacinto River
HOW IT WORKS: Channelization increases conveyance capacity; a separate upstream detention project in the Lake Creek or Spring Creek watersheds must be constructed first to mitigate adverse impact
IMMEDIATE AREA BENEFIT: Incremental Atlas 14 WSEL reduction – 1% ACE to 2% ACE

OPPORTUNITIES AND CHALLENGES

POTENTIAL PARTNERS
Harris County, HCFC, Montgomery County, SJRA, USACE, GLO, City of Houston

REQUIRED REAL ESTATE
• 737 parcels

DESKTOP ENVIRONMENTAL MITIGATION
• 948 acres of potential wetlands
• 61,950 linear feet of NHD streams

RELOCATIONS/RECONSTRUCTION
• 3 oil & gas pipeline conflicts
• 5.1 miles of roads

IMPROVEMENT SPECIFICATIONS
• 5 miles of channelization
• 3,000-foot wide channel
• 1,700 acres
• 31M cubic yards of excavation
• 1,365 acre-feet mitigation required

ESTIMATED BENEFITS
• Structures removed from 1% ACE floodplain: 895
• Reduction in instances of flooding over 50-year period: 1,140
• Benefited areas:
  ○ Kingwood, Atascocita, Humble
• Reduces 1% ACE WSEL at least 0.5 feet for 9.9 miles along West Fork
• Improves ponding depths on 2 road/rail crossings
• Net Present Value Benefit: $72.2M

ESTIMATED COSTS
Design Cost ................................................. $64M
Construction Cost ...................................... $534M
Environmental Cost .................................... $354M
ROW Cost ............................................... $23M
TOTAL COSTS .......................................... $976M
20-Year Escalation Cost ............................... $1.5B

BENEFIT-COST RATIO: 0.07

*Costs for these items are not explicitly included in the project estimate; however, a 30% contingency was added to the project that may cover all or a portion of these relocations. More detailed information should be provided during project development.