WILLIS CREEK

CONTINUING AUTHORITIES PROGRAM
SECTION 205 – FLOOD DAMAGE REDUCTION

May 24, 2016

Jon Loxley

Program Manager
Continuing Authorities Program
Fort Worth District
U.S. Army Corps of Engineers
Willis Creek Presentation Outline

- Willis Creek Flooding
- Project Timeline
- Previous Recommendation
- Current Approach
- Next Steps
- Remaining Timeline
Willis Creek Flooding Problem

- City of Brownwood has experienced damages and loss of life from Willis Creek flooding
- Economic damages >$10 Million
Willis Creek Flooding Problem

Willis Creek, Brownwood, Texas Damagable Structures
Willis Creek Project Timeline

- USACE completed a study of Willis Creek in 2003
  - City Council decided against moving forward with 2003 Recommended Alternative
- Late 2014 City of Brownwood entered into an agreement with USACE to re-examine feasibility of 2003 Recommended Alternative
  - Ensure the cost-to-benefit ratio was justifiable
  - Update floodplain to current conditions
  - Design channel to carry 1% chance flood event (100-yr)
  - Incorporate environmental mitigation features
Willis Creek – 2003 Recommended Plan

- Approx. 3 miles of Willis Creek
- Contained 100 year flows
- One-side constructed channel
- Central reach bypass
Willis Creek – 2015 Alternative Channel

- 2015 public response indicated public concern for 2003 Alternative -
  - Loss of residential property
  - Impact to natural Willis Creek
  - Loss of screening from adjacent land uses
- City of Brownwood proposed secondary channel
  - Excavated along south side of existing Willis Creek
  - Allow for maintaining natural Willis Creek
  - Less disruption to residential properties
  - Same level of flood protection
  - Less environmental impacts
Alternative Channel – Downstream to 14th St

Planning Considerations -
• Companion Channel
• Maintain Natural Character
• Convey 100-year flows
Willis Creek – 2015 / 2003 Combo Plan
Willis Creek – Combo Plan Analysis

• Initial H&H modeling was design to accommodate 100 year flows
  • Channel design will need refinement to properly balance conveyance

• Real estate acquisitions in both residential and commercial areas
  • Additional real estate needed for environmental mitigation and screening plantings

• Initial costs indicated a project beyond federal program spending limits
  • Team considered lessening level of protection
  • Team settled on reducing extent of project
    • Focus on reach with greatest damages
    • Minimize impacts to existing Willis Creek
    • Less real estate and environmental mitigation
Willis Creek – 2016 Current Approach

- Develop companion channel for upstream reach
- Accommodate on-site environmental mitigation
- Incorporate screening plantings along southern edge
- Convey 100-year flows
## Willis Creek – Current Timeline

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Interest Determination</td>
<td>01 JUL 2014</td>
</tr>
<tr>
<td>Feasibility Cost Sharing Agreement Signed</td>
<td>12 DEC 2014</td>
</tr>
<tr>
<td>Feasibility Scoping Meeting</td>
<td>8 FEB 2016</td>
</tr>
<tr>
<td>Alternatives Formulation Briefing/MSC Decision Milestone</td>
<td>28 APR 2017</td>
</tr>
<tr>
<td>Public Comment Period Start</td>
<td>19 MAY 2017</td>
</tr>
<tr>
<td>Final Report Approval &amp; Sign FONSI</td>
<td>14 AUG 2017</td>
</tr>
</tbody>
</table>
Willis Creek
CONTINUING AUTHORITIES PROGRAM
SECTION 205 – FLOOD DAMAGE REDUCTION

Questions?