DALLAS FLOODWAY PROJECT

DRAFT FEASIBILITY REPORT and DRAFT ENVIRONMENTAL IMPACT STATEMENT PUBLIC MEETING

Rob Newman
Director, Trinity River Corridor Project, Fort Worth District
8 May 2014
Purpose of This Public Meeting

- Describe the Proposed Action and the Recommended Plan for the Dallas Floodway Project to the public
- Summarize the potential impacts associated with the Project
- Solicit comments from the public on what clarification or revisions should be incorporated into the Final Environmental Impact Statement (EIS) and Feasibility Report
Two Documents: Environmental Impact Statement and Feasibility Report

- **EIS – Proposed Action**
  - Adheres to NEPA process
  - Discloses impacts
  - Facilitates design and construction under Section 408 permitting process

- **Feasibility Report – Recommended Plan**
  - Adheres to Corps of Engineers Civil Works Planning Process
  - Formulates for maximum economic benefits
  - Determines which actions suitable for federal support and sets project federal-local cost-share proportions
Proposed Action Presentation
Overview

- Description of the Proposed Action contained in the Draft Environmental Impact Statement
- Results of the Impact Analysis
- Conclusions
- Opportunities for Ongoing Public Involvement
Proposed Action: Background

- The Proposed Action represents the culmination of decades of planning by the city and the citizens of Dallas.
- Since 2007, the U.S. Army Corps of Engineers has been a partner in the development and planning of the Trinity River Corridor features.
Proposed Action: Overview

- Flood Risk Management
- Ecosystem Restoration
- Recreation Enhancements
- Interior Drainage Improvements
Flood Risk Management (FRM)

- 4 Main Elements
  - Levee raise
  - AT&SF Bridge modification
  - Levee flattening
  - Nonstructural flood control improvements

Environmental Impact Statement – Proposed Action
FRM: Levee Raise

Existing Levee
Elevation 429.40

1500-year Flood

Trinity Parkway
Flood Protected
Elevation 419.06

100-year
Elevation 417.06
Same as 1908
flood of record

May 1990
47-year Flood
Elevation 415.24

June 2007
5-year Flood
Elevation 408.38

Ground Elevation
about 400.00

Average low flow
conditions that stay within the river
channel of the Dallas Floodway
Elevation 382.00

Environmental Impact Statement – Proposed Action
FRM: AT&SF Bridge Modification

- Remove embankments and remaining narrowly spaced wooden piers that block flood flows

- Retain a 350-foot section of historic wooden trestle associated with the Santa Fe Trestle Trail

Environmental Impact Statement – Proposed Action
FRM: Levee Flattening

- Modify the levees to a 4:1 slope
- Benefits of the shallower slope:
  - safer mower maintenance, and
  - reduced risk of slides
- The excavation of material would double as the preliminary excavations for the West Dallas Lake

Environmental Impact Statement – Proposed Action

BUILDING STRONG®
FRM: Nonstructural Improvements

- The City of Dallas currently has a very advanced effective warning system and Emergency Action Plan (EAP)
- Improved inundation mapping and data sharing can help improve EAP revision and implementation
# Ecosystem Restoration and Recreation Enhancement

## Balanced Vision Plan Study Ecosystem Restoration and Recreation Enhancements

<table>
<thead>
<tr>
<th>Category</th>
<th>Features</th>
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<tbody>
<tr>
<td>Lakes</td>
<td>West Dallas Lake, Urban Lake, Natural Lake</td>
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<tr>
<td>River</td>
<td>Relocation and Modification</td>
</tr>
<tr>
<td>Wetlands</td>
<td>Marshlands, Cypress Ponds, Corinth Wetlands</td>
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<tr>
<td>Athletic Facilities</td>
<td>Potential Flex Fields, Playgrounds, River Access Points</td>
</tr>
<tr>
<td>General Features</td>
<td>Parking and Public Roads, Lighting, Vehicle Access, Pedestrian Amenities, Restrooms, Amphitheaters</td>
</tr>
<tr>
<td>Interior Drainage Outfall Modifications</td>
<td>Pump Station Outfalls, Pressure Sewer Outfalls</td>
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<tr>
<td>Able Sump Ponds</td>
<td>Recreation and Ecosystem Enhancements</td>
</tr>
</tbody>
</table>

## Diagram

- **Trinity River**
- **West Dallas Lake**
- **Cutoff Wall**
- **Urban Lake**
- **Natural Lake**

### Environmental Impact Statement – Proposed Action

**BUILDING STRONG®**
Ecosystem Restoration and Recreation Enhancement: Lakes

- The Proposed Action includes three lakes:
  - West Dallas Lake
  - Urban Lake
  - Natural Lake
Ecosystem Restoration and Recreation Enhancement: River

- 8 miles of the river channel would be modified
- River meanders would improve water quality and habitat
Ecosystem Restoration and Recreation Enhancement: Wetlands

- 3 main areas of wetlands:
  - Marshlands
  - Cypress Ponds
  - Corinth Wetlands
Ecosystem Restoration and Recreation Enhancement: Recreational Facilities

- Flex fields and playgrounds
- River Access
- Gathering and entertainment Venues
- Trails
Interior Drainage System Improvements

**Interior Drainage Plan Improvements**

**East Levee**
- Demolish Old Hampton Pump Station
- Construct New Hampton Pump Station
- Nobles Branch Sump Improvements

**West Levee**
- Demolish Charlie Pump Station
- Construct New Charlie Pump Station
- Rehabilitate Existing Delta Pump Station
- Construct New Delta Pumping Station
- Eagle Ford and Trinity-Portland Sump Improvements
- Construct New Trinity-Portland Pumping Plant

**Environmental Impact Statement – Proposed Action**
Alternatives Considered

- No Action Alternative
- Alternative 2: Proposed Action *with* the Parkway
- Alternative 3: Proposed Action *without* the Parkway

### Notable Differences

<table>
<thead>
<tr>
<th>Feature</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Change (from 2 to 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike Path</td>
<td>0 miles</td>
<td>3.4 miles</td>
<td>+ 3.4 miles</td>
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<tr>
<td>Flex Fields</td>
<td>77.8 acres</td>
<td>88.1 acres</td>
<td>+ 10.3 acres</td>
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<tr>
<td>Amphitheaters</td>
<td>2</td>
<td>3</td>
<td>+ 1</td>
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<tr>
<td>Meadow</td>
<td>1,259.5 acres</td>
<td>1,230.0 acres</td>
<td>- 29.5 acres</td>
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<tr>
<td>Park Road</td>
<td>9.6 miles</td>
<td>11.8 miles</td>
<td>+ 2.2 miles</td>
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<tr>
<td>Planter Boxes (raised vegetation)</td>
<td>4.9 acres</td>
<td>14.7 acres</td>
<td>+ 9.8 acres</td>
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<tr>
<td>Secondary Pedestrian Path</td>
<td>17.5 miles</td>
<td>16.9 miles</td>
<td>- 0.6 miles</td>
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<tr>
<td>Wetlands</td>
<td>201.3 acres</td>
<td>206.7 acres</td>
<td>+ 5.5 acres</td>
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<tr>
<td>Parking Area</td>
<td>17.75 acres</td>
<td>19.75 acres</td>
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<tr>
<td>Number of Access Gateways</td>
<td>25</td>
<td>29</td>
<td>+ 4</td>
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Environmental Impact Statement – Proposed Action
Cumulative Analysis

As part of impact analysis, the Proposed Action is considered on its own, and in concert with other past, present, and reasonably foreseeable future projects.
Environmental Consequences

- **Impact Summary:**
  - **Beneficial impacts**
    - The Proposed Action would be consistent with current zoning and the Trinity River Corridor Comprehensive Land Use Plan.
  - **Less than significant impacts**
    - Proposed flood risk management elements would have less erosion potential and be more stable, thus reducing risk associated with geologic hazards (e.g., slumps and slides).
    - Proposed recreation and landscaping features would further stabilize soils.

**HYDROLOGY AND HYDRAULICS**

- **Impact Summary:**
  - **Less than significant impacts**
    - The plan with the highest performing flood risk and life safety benefits for the City of Dallas would be achieved.
    - The Proposed Action would not meet the Trinity River Environmental Impact Statement criteria for the 100-year water surface or valley storage, but potential negative impacts are insignificant, and a variance to the criteria is recommended.
    - Water surface elevations of the 100-year flood would be contained by the levees.

**WATER RESOURCES**

- **Impact Summary:**
  - **Significant adverse impacts during construction; Beneficial impacts during operation**
    - Direct impacts to jurisdictional wetlands and waters of the U.S. would be offset by Balanced Vision Plan (BVP) features.
    - The Proposed Action would result in a net gain of 1,735 linear feet for the Trinity River; a net gain of 240 acres of other waters; and a net gain of 12 acres of wetlands.

<table>
<thead>
<tr>
<th>Frequency Flows at Dallas for Existing and Future Conditions:</th>
<th>Project Component</th>
<th>Trinity River (linear feet)</th>
<th>Other Waters (acres)</th>
<th>Wetlands (acres)</th>
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<tbody>
<tr>
<td>West &amp; Elm Fork Confluence</td>
<td>Existing Condition</td>
<td>423.27</td>
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<td>Difference</td>
<td>-0.41</td>
<td>-0.62</td>
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</tbody>
</table>

Levee Template
Environmental Consequences

**Environmental Impact Statement – Proposed Action**

**BIOLOGICAL RESOURCES**

- **Impact Summary:**
  - Significant adverse impacts during construction; Beneficial impacts during operations
- Given the magnitude of the proposed construction activities, which would result in nearly complete disturbance of the Floodway, implementation of Proposed Action would result in significant adverse impacts to biological resources within the Floodway during construction.
- Post-construction, there would be an increase in key habitat acreage and value. Impacts to special status species located within the Dallas Floodway would be minimized through the implementation of avoidance, minimization, and mitigation measures.
- Most, if not all species, are expected to recolonize habitat after construction.

**CULTURAL RESOURCES**

- **Impact Summary:**
  - Significant adverse impacts
- The removal of large portions of the AT&SF Railroad Bridge would diminish its ability to convey its significance and result in an impact to a historic property. A portion of the existing wood trestle bridge, steel trestle, and the open steel truss center would remain.
- The demolition or alteration of contributing features to the Dallas Floodway Historic District would result in impacts to a historic structure as well as an impact to the overall historical integrity of the Dallas Floodway.

**RECREATIONAL RESOURCES**

- **Impact Summary:**
  - Beneficial impacts
- Construction would result in temporary disruptions to recreation.
- The Proposed Action includes a significant increase in the number and types of recreation opportunities available to the people in the City of Dallas, significantly reducing the recreation shortfall within the City.
- Proposed Interior Drainage Plan improvements would reduce the flood risk to some existing and proposed recreation areas.
Environmental Consequences

**VISUAL RESOURCES**

- **Impact Summary:** *Beneficial impacts*
  - Temporary construction impacts to the visual environment within the Dallas Floodway.
  - The overall visual quality of the Dallas Floodway and the interior drainage area would improve with the implementation of the Proposed Action.
  - Night lighting features would be designed and operated to minimize impacts to nighttime views.

- **SOCIOECONOMICS**
  - **Impact Summary:** *Beneficial impacts*
    - Implementation of Proposed Action would create construction jobs, boost labor income, and increase economic output.
    - The increase in recreational opportunities (and access to them) would directly benefit residents of Dallas.
    - The anticipated increase in visitors to the City of Dallas would result in more money spent in the local economy and support tourism-related businesses such as hotels and retail establishments.
    - Additional money spent by visitors would generate jobs and income for Dallas residents as well as tax revenues for local governments and the State of Texas.
    - Reduction in flood risk and associated socioeconomic impacts within the Study Area.

- **SAFETY**
  - **Impact Summary:** *Beneficial impacts*
    - Proposed Action would result in an increase in Floodway access points, emergency response services, and a reduction in flood-related safety concerns.

- **TRANSPORTATION**
  - **Impact Summary:** *Less than significant impacts*
    - Temporary impacts from construction vehicles.
    - Users of the proposed recreational facilities and amenities would create a substantial and recurring daily traffic increase on highways approaching the Floodway and on internal streets that provide access to and from the facilities.
    - Roads potentially subject to flooding would have a reduced risk of flooding-related closure following implementation of the proposed flood risk management elements and Interior Drainage Plan improvements.

*Slides Observed in 2007*

These slides were identified in 2007 and have been repaired by the City of Dallas. Proposed flood risk management would reduce the likelihood of similar slides in the future.
Environmental Consequences

**HAZARDOUS MATERIALS AND WASTES**

- **Impact Summary:**
  - Less than significant impacts
- Known environmental contamination would be avoided.
- Based on previous sampling, the soil proposed for use as borrow material would be acceptable for use under Texas Risk Reduction Program Tier 1 Residential standards.

**UTILITIES**

- **Impact Summary:**
  - Beneficial impacts
- Any impacts to utility services during construction would be temporary and communicated to customers ahead of the temporary outage.
- The proposed Interior Drainage Plan (IDP) improvements would substantially increase the level of stormwater conveyance.
- A slight increase in utility demand would be met by utility providers and Balanced Vision Plan Study features (e.g., solar panels).
- The proposed IDP improvements would substantially increase the level of stormwater conveyance.

**AIR QUALITY**

- **Impact Summary:**
  - Significant adverse impacts during construction; Less than significant impacts during operation
- Oxides of nitrogen (NO\textsubscript{x}) emissions generated by construction activities would exceed regulatory de minimis thresholds.
- No substantial long-term increase in mobile or stationary source emissions would occur.

**NOISE**

- **Impact Summary:**
  - Less than significant impacts
- Construction noise would be temporary, localized, and comply with the City of Dallas noise ordinance. Construction activities are removed from sensitive noise receptors.
- Operational increases in ambient noise levels would be relatively minor, temporary, and consistent with existing conditions.

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*Environmental Impact Statement – Proposed Action*
### Environmental Consequences

<table>
<thead>
<tr>
<th>Resource Period</th>
<th>Impact Period</th>
<th>Alternative 2 Impacts</th>
<th>Alternative 3 Impacts</th>
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<tr>
<td></td>
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<td>Discrete</td>
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<tr>
<td>Land Use</td>
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<td>o</td>
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<tr>
<td></td>
<td>Operation</td>
<td>+</td>
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<td>Hydrology and Hydraulics</td>
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<td>Operation</td>
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<td></td>
<td>Operation</td>
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*Impact Summary Key:* + = Beneficial impacts  o = Less than significant impacts ▲ = Significant adverse impacts.

Summary impacts presented assume the incorporation of all avoidance, minimization, and mitigation measured identified in Chapter 7 of the Environmental Impact Statement.

**Alternative 2 is the U.S. Army Corps of Engineers’ Preferred Alternative and has preliminarily determined it to be the Least Environmentally Damaging Practicable Alternative.**

**Environmental Impact Statement – Proposed Action**
Recommended Plan Presentation
Overview

- Review Flood Risk Management Plan
- Results of Comprehensive Analysis
- Overview of the Recommended Plan in the Draft Feasibility Report
Review of Flood Risk Management Plan

- U.S. Army Corps of Engineers and City of Dallas utilized an integrated approach for identifying a Flood Risk Management Plan for improving the levee system
- Utilized results from economic analyses and risk assessment
- Analyzed both structural and non-structural measures
Flood Risk Management
Recommended Plan Identified

Three (3) recommended actions:

• About $10 million dollars total
  • AT&SF Bridge modifications/partial removal
  • Raise the levees to contain a 277,000 cubic feet per second (cfs) flow
    • This flow equates to a 2,500-year flood event
  • Improvements to the City’s Emergency Action Plan
Comprehensive Analysis

The Water Resources Development Act in 2007 (WRDA 2007) directed the Corps to ensure that the Balanced Vision Plan and Interior Drainage Plan are “technically sound” and “environmentally acceptable”

• Technical soundness is determined by completing comprehensive analysis of hydrology and hydraulics* (H&H), geotechnical and civil design

• Environmental acceptability is determined by completing National Environmental Policy Act (NEPA) process

*H&H analysis determines the amount of runoff, depth, extent, and velocity of the flood waters coming down the river
Comprehensive Analysis Conclusions

- Trinity Parkway, Balanced Vision Plan (BVP) and Interior Drainage Plan (IDP) features have been determined individually to be technically sound at current level of design.

- Potential negative impacts related to deviations from 1988 Record of Decision (ROD) criteria are insignificant; a variance to ROD is currently proposed.

- With slight modifications of the expected design refinements, all features would function on a comprehensive system wide level from a Corps Civil Works perspective.
Recommended Plan

• WRDA 2007, Section 5141, authorized $459 million total budget for Recommended Plan

  • Includes cost share of 65% federal and 35% non-federal

  • The City can spend a portion of its cost share portion before the Corps begins spending money
Recommended Plan (Alternative 2)

- The cost share portion of the project cannot exceed the WRDA 2007 authorization of $459 million plus inflation
  - The cost share portion includes flood risk reduction and ecosystem restoration

- Remaining BVP and IDP projects will be constructed by the City through the Section 408 process

- Accommodates Trinity Parkway construction by other entity
Recommended Plan (Alternative 2)

FLOOD RISK MANAGEMENT:
- Levees
  - Raise levee low spots along 9.3 miles of levees to meet 277K flow
  - Low spots to be filled from borrow area of future site of West Dallas Lake
  - Modify AT&SF Bridge
  - 3:1 to 4:1 slopes may be funded by City

- Interior Drainage
  - Baker Pump Station
  - Able Pump Station
  - Hampton Pump Station

ECOSYSTEM RESTORATION:
- River Relocation
  - Adds meanders back to river
  - Builds habitat pools to improve aquatic diversity

- Corinth Wetlands
  - Expands existing wetland; Corps participates in excavation and plantings
  - City may construct recreational features such as boardwalks and trails
Recommended Plan (Alternative 2) Cost Sharing Summary

• Total Cost: $529.1 million

• Federal Cost: $343.9 million

• Non-Federal Share: $185.2 million
  • 5% cash on Flood Risk Management: $10.4 million
  • Estimated Credit: $115.5 million
  • Lands, Easements, Rights of Ways and Relocations: $59.3 million

• Bottom line for City:
  • $10.4 million + $59.3 million = $69.7 million still needed
HOW TO PROVIDE COMMENTS

- The Draft EIS Public Review Period runs from April 18th to June 2.
- Comments are being taken here in writing and spoken to a recorder.
- Comments may also be emailed or via US Mail.
- Submit your comments no later than June 2
- Final opportunity to comment on the EIS
  - For additional information on how to comment, visit the sign in table.
  - This is your best opportunity to be involved in final development of this action!