Allens Creek Reservoir Update

Presented by
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Central and Lower Basin
Regional Manager

Meeting Date: January 25, 2016
Allens Creek Reservoir

• Project Review

• Projects
  – Permitting
  – Levee
  – River Pump Station(s)
  – Discharge Structure

• Allens Creek Challenges

• Proposed Budget and Timeline
  $300,000,000 + and 8-10 Years

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Proposed Allens Creek Dam & Reservoir Site
Allens Creek Reservoir

• Montgomery Watson Harza
  – 97 Reservoir Projects in USA
    ➢ Project Manager: Completed 5 Similar Projects in 10 Years
    ➢ Lead Designer: 9 Off-Channel Reservoirs
    ➢ Lead Pump Designer: 40 Years Experience

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Allens Creek Reservoir

- SWCA
  - Permit Manager: 50 Permits in Galveston USACE Office in 10 Years
  - Over 65 Staff in Houston Office

- Fugro, Carollo, Arts+Labor, John Chance, Inc., Northwest Hydraulic Consultants, & Percheron
Embankment Dam

- Soil cement erosion protection layer
- Low permeability compacted clay
- Seepage collection & management
- Grass Covered Slope
- Flood Protection Berm
- Under Seepage
- Toe Ditch
Pump Station

- Engine
- Discharge Manifold
- Wet Well
- Pump Station
Proposed Allens Creek Dam & Reservoir Site
Reservoir Outlet

Outlet Tower

Embarkment Dam

Outlet Pipeline
Spillway

- Spillway Channel
- Potential Gates
- Reservoir-Side Spillway Approach
- Energy Dissipaters
Challenges

Numerous Puzzle Pieces
- Reservoir Design & Constructability
- River Pump Station
- Reservoir Release Issues
- Mitigation
- Environmental Impacts

Permitting
Allens Creek Reservoir

Project Phases & Timeline:

• Phase I  Environmental Assessments and 30% Design (2016-2019*)

• Phase II  Permit Approval Process, Public Interaction, Archaeological Relocation, Construction Preparation (2019-2021)

• Phase III  Construction (2021-2024)

*Assumptions are critical.
Allens Creek Reservoir

Estimated Project Cost:

- Phase I & II  $80,000,000
- Phase III  $200,000,000
- Mitigation  >$25,000,000

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Next:

- Continue Time Sensitive Environmental Work
- Finalize Agreement and Scope with MWH
- Formalize Interlocal with City of Houston
- Prepare a Funding Plan to Present to the Board in April
- Board Approval in April