Challenges in Establishing Floodplain Protection on Upper Berryessa Creek

Milpitas and San Jose, CA

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• David Munro, PWS – Senior Ecologist, Tetra Tech
• Ira Mark Artz, PE – Divisional Vice President, Tetra Tech
  – Subconsultants – Railroad/Structural Engineering; Archeology; Habitat Features; Drilling & Lab Analysis; Potholing/GPR
2.2 miles reach; 22.4 mi$^2$ watershed

West out of the Diablo Range thru San Jose and Milpitas

Joins Lower Penitencia, then Coyote Creek, then SF Bay

Artificially diverted north through industrial portions of Milpitas
• 1989- Initial feasibility study by USACE

• 1990 – Congressional authorization
  – Lacked wide support in the community
  – SCVWD requested restudy

• 2001-2014 – General Reevaluation Report
  – Overall cost ~ $20M
  – $11M in *annual* net benefits
  – $1.3M in *annual* costs
  – B/C ratio over 8

• 2014-2016 – Design, Plans & Specs

• 2016-2017 – Construction
Native American Remains

- Native American Human Remains at Project Area
- Identified Most Likely Descendant
- Obtained MLD Recommendations, removed remains prior to Construction with NA Monitoring
- Heightened monitoring of remains area during project excavation negotiated with SHPO

Shown with permission of appointed MLD Andy Galvan
Toxic Groundwater Plume

- VOC Plume from 1982 tank explosion Jones Chemical Inc. (JCI) crosses under creek channel
- Project excavations likely to encounter shallow plume
- Plume area hydraulically isolated
- Encountered groundwater in plume area collected for treatment per SF RWQCB General Permit for VOC and Fuel-Impacted Sites (R2-2012-0012)
REGULATORY ISSUES

- Artificial channel built in 1950s, hydric soils have not developed
- Little or no riparian vegetation
- Mitigation: Hydroseed with native wetlands and grass seeds
- Mitigation: Plant native trees top of bank
- RWQCB permit for operation in negotiation; concern over periodic disruption of channel for future sediment removal
• New Milpitas BART Station
  – Part of $2.3 billion BART Silicon Valley Extension
  – Serve 23,000 daily passengers
  – Station Opening Fall 2017

• Montague Expressway Improvement Project
  – Joint Project with County of Santa Clara and VTA
  – City of Milpitas
  – Projected Completion Fall of 2017
Santa Clara Valley Water District’s Lower Berryessa Project
- Downstream of Upper Berryessa
- Construction Start: June 2015

UPRR Coordination
- Encroachment Permit
- Land Acquisition Process
- Construction and Maintenance Agreement
Santa Clara Valley Water District

- Project Management
- Groundwater Management Plan
- Hydrology
- Hydraulics
- Sediment Transport, Scour
- Geotechnical Engineering
- Utility Evaluation
- Environmental Analysis/EIR
- Cultural Resources
US Army Corps of Engineers

- Design Documentation Report (DDR)
- Plan Sheets
- Specifications
- UPRR Coordination
- Noble Consultants/GEC
  - Project Management
  - Cost Estimates
FUTURE ACTIVITIES

• Award of Construction Contract
• Start and Completion of Construction
• Process LOMR for Removal of FEMA 100-year Floodplain
• Regional Project Completion
  – Upper Berryessa
  – Lower Berryessa Phases 1, 2, and 3
  – Upper and Lower Penitencia Creeks
THANK YOU FOR YOUR ATTENTION!