SANTA CLARA RIVER ESTUARY HABITAT RESTORATION AND ENHANCEMENT PROJECT

Chris Hammersmark, Dale Meck, Denise Tu – cbec eco-engineering
Dan Chase, Mike Josselyn and others – WRA
Mike Podlech – Independent Aquatic Ecologist

2015 FMA Conference
September 9, 2015
Closed Berm
Flooded Campground
Typical Water Levels

- SR-1 stage (measured)
- SR-1 stage (from South sonde stage data)
- SR-1 stage (inferred)
- Tide (Santa Barbara, CA)
Typical Water Levels

Campground Starts to Flood

Stillwater Sciences, 2011
Recently Breached Berm
Existing Conditions
Sensitive Species and Habitat

**Threatened and Endangered Species**
- Steelhead
- Tidewater goby
- California least tern
- Western snowy plover
- Ventura marsh milk vetch

**Sensitive Communities**
- Wetlands
- Coastal dune
- Riparian
Project Objectives

Evaluate feasibility of relocating the campground and restoring 15 - 35 acres of land within the Santa Clara River Estuary

Restoration elements could include:
- estuarine lagoon
- side channels
- contiguous wetlands
- riparian upland habitat

Development of a 30% design that meets the needs of the landowner as well as the needs of Southern California steelhead and other sensitive species
Geomorphology
Considerations

• Dynamic site
• Species & Habitats
• Future Hydrology
  – WWT Plant Discharge
  – Sea Level Rise

*Estimate based on current tidal datums and SLR projections from the NRC (2012).
Design Charrette

- California State Parks
- Wishtoyo Foundation
- CDFG
- USFWS
- NMFS
- L.A. Regional Board
- Heal the Bay
- Coastal Conservancy
- City of Oxnard
- City of Ventura
- The Nature Conservancy
- Coastal Commission
- National Park Service
- Friends of the Santa Clara River
- Santa Clara Watershed Coalition
- Sierra Club
- Elected Officials
- Technical Experts (UCLA, CSUCI, Santa Monica Bay Restoration Foundation)
- Various consultants
Concepts from the Design Charrette
Concept Evaluation

Developed a suite of 2D models to evaluate:

• Circulation and Temperature Patterns
• Tidal Inundation
• Flood Inundation and Morphological Change
Refined Concept
Thanks for Listening!

Chris Hammersmark

[Contact Information]

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- McGrath Lake Trustee Council
- Wishtoyo Foundation (in kind)
- California State Parks (in kind)