Santa Ana River Water Right Applications for Supplemental Water Supply

Presentation to California State Water Resources Control Board

May 2-4, 2007

MUNI/WESTERN EXHIBIT 8-17 SLIDE 1

Terrestrial Biology

Summary

- Sensitive, protected and common terrestrial resources present in the Santa Ana River watershed would be adversely affected during construction and operations
- All Project impacts on terrestrial resources would be mitigated to less than significance
- Construction is the principal impact agent affecting terrestrial resources
- Operational impacts are change in overbank flow frequency and increased duration of inundation
- Adopted mitigation measures are potentially useful to habitat restoration actions by others

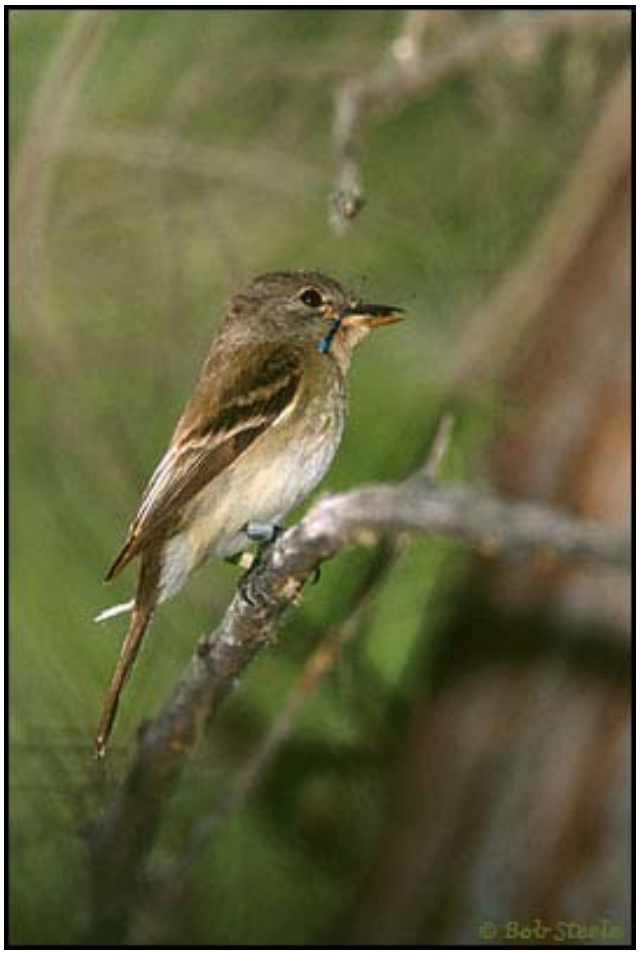
Outline

- Review of existing conditions
- Impacts of the Project
- Mitigation Measures and residual impacts

Upstream of Seven Oaks Dam – Segment A

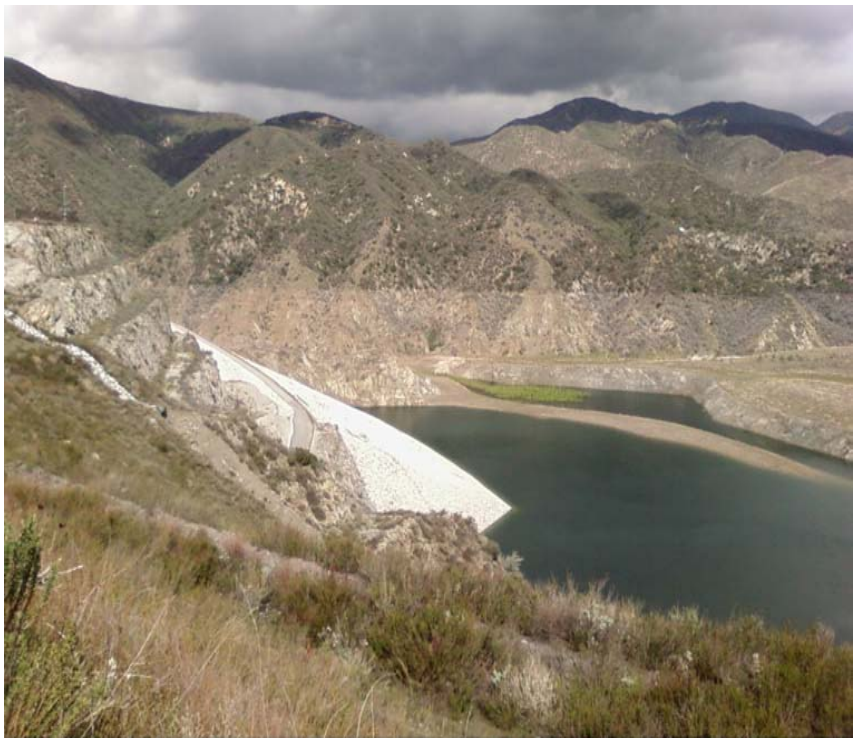
- Terrestrial resources are affected by existing flood control operations
  - Critical habitat for southwestern willow flycatcher is subject to frequent inundation, scour and burial
  - Hillside chaparral is subject to variable water levels and inundation

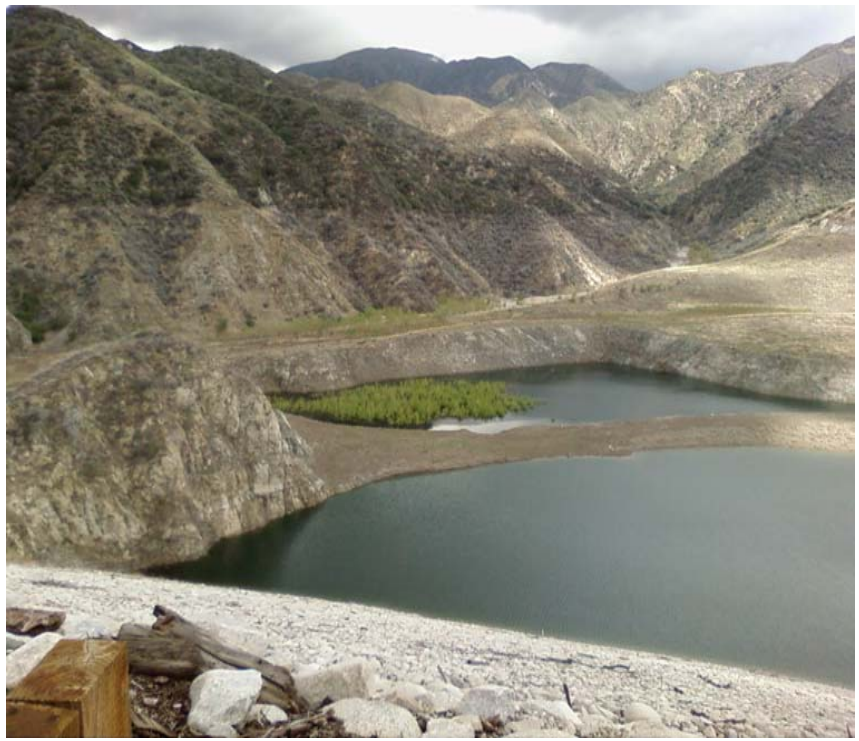
Southwestern willow flycatcher



- ESA listed as endangered in 1995
- Prefers riparian forest with moist soil conditions
- Not present in Project construction areas
- Critical habitat designated in 2005

Existing Chaparral Habitat Upstream of Seven Oaks Dam (Segment A)

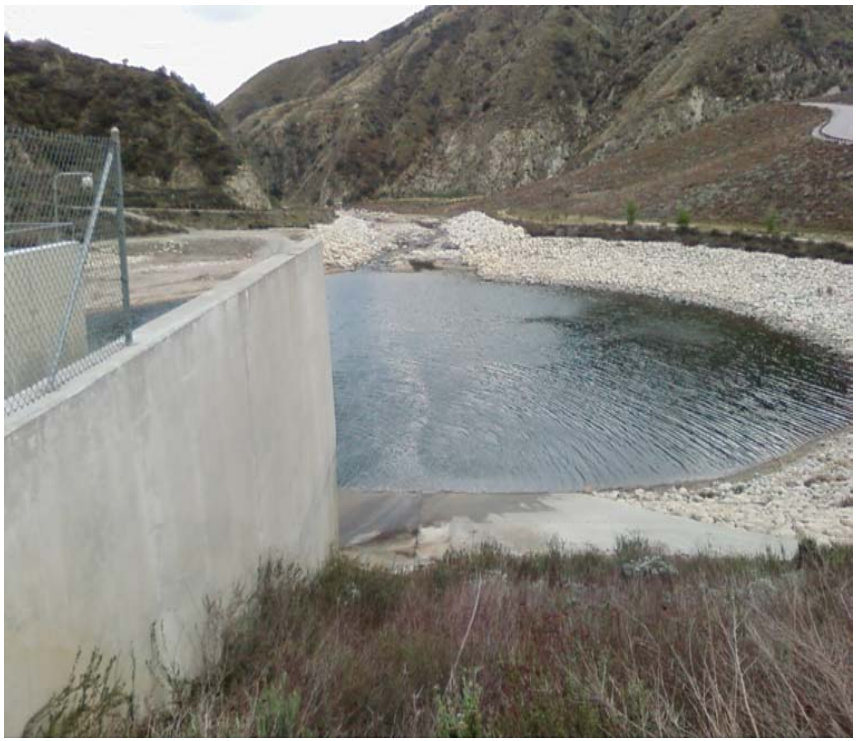




Existing Habitat - Seven Oaks Dam to Cuttle Weir (Segment B)

- Terrestrial resources are highly modified by past construction and affected by ongoing flood control operations
  - Critical and sensitive habitats elements are generally not present and are subject to scour from flood releases
  - Affected vegetation would be replaced following construction

Existing Habitat - Seven Oaks Dam to Cuttle Weir (Segment B)



Existing Habitat – Santa Ana River Alluvial Fan

- Unique terrestrial habitats dependent on soil substrate and infrequent disturbance
  - Several sensitive and protected species associated with RAFSS
    - San Bernardino kangaroo rat
    - Santa Ana River woolly-star
    - Slender-horned spineflower
    - Parry's spineflower
  - Critical habitat elements for southwestern willow flycatcher are generally not present without presence of rising groundwater

Riversidian Alluvial Fan Sage Scrub

San Bernardino kangaroo rat

- ESA listed as endangered in1998
- Prefers sandy soils in alluvial plain
- Project avoids higher quality habitat – affects marginal habitat only
- Critical habitat designated in 2002

Slender-horned spineflower

- Listed as endangered: CA 1982, Federal 1987
- Found on older alluvial terraces - intermediate to mature stage RAFSS
- Unlikely to be affected by Project

Santa Ana River woolly-star

- Federal and CA listed as endangered in 1987
- Found in early to intermediate phase RAFSS
- No construction effect. Potential operations effects in Segments C and D
- Woolly-star preserve area established in 2000 for Seven Oaks Dam

Existing Habitat – Santa Ana River "E" Street to Riverside Narrows (Segments E and F)

- No Project construction
- No Project operations effects outside of flood control channel
- Indirect impacts from future development within the Muni/Western service areas

Project Construction

- Impact from habitat disturbance and removal. Mitigation by impact minimization, habitat restoration and relocation of animals, as necessary.
  - Less than significant with adopted mitigation
- Impact of human presence and construction activity during construction
  - Less than significant
- Temporary loss of movement corridor between the foothills and the alluvial fan or within the alluvial fan habitat
  - Less than significant

Project Operation

- Increased duration of inundation from seasonal conservation storage
  - Less than significant

- Reduction in frequency of over-bank flows
  - Less than significant with adopted mitigation

Indirect Impacts

- Project-derived new water will remove an obstacle to future development
- Future development would convert open lands (some with habitat) to urban land uses in the region
- Existing land use plans and policies incorporate resource protection measures
- Other permitting and regulatory processes will impose additional conditions to development

Cumulative Impacts

- No substantial contribution to cumulative impacts upstream of Seven Oaks Dam
- Less than significant cumulative impacts to common species and habitats
- Project contributes to significant cumulative impacts to sensitive habitats and species
- Project contributes to significant indirect cumulative impacts to sensitive habitats and species