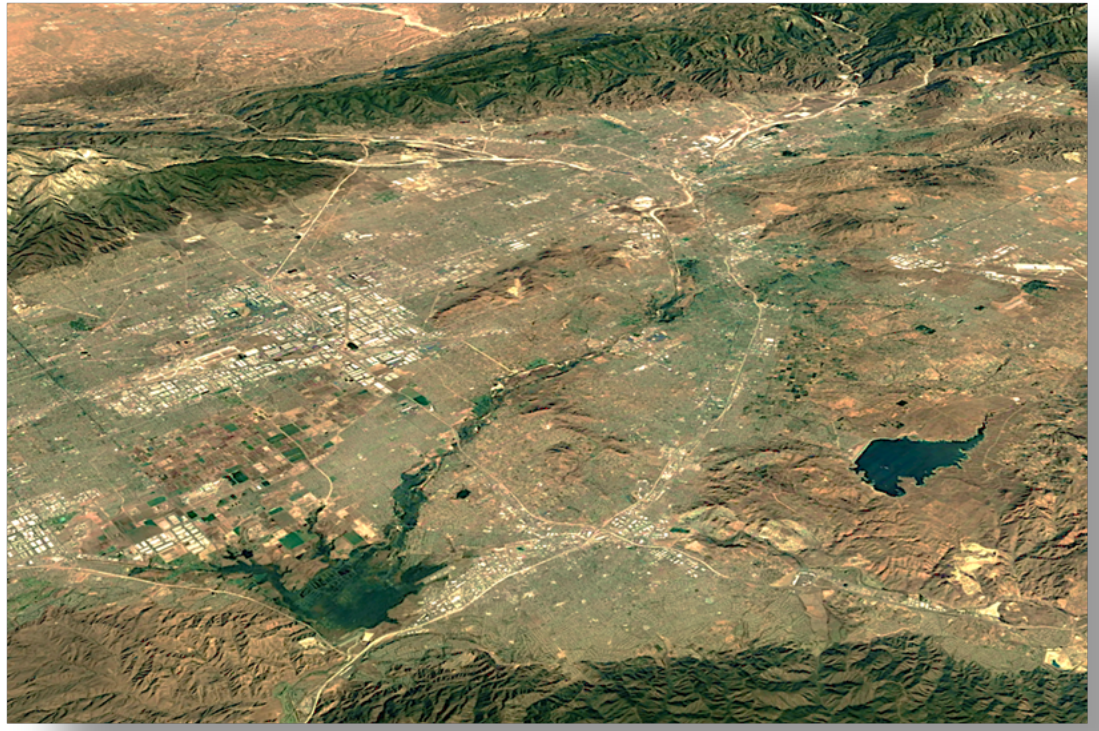
Upper Santa Ana River Habitat Conservation Plan (HCP): Draft Environmental Impact Report

HCP Overview

Santa Ana River Watershed

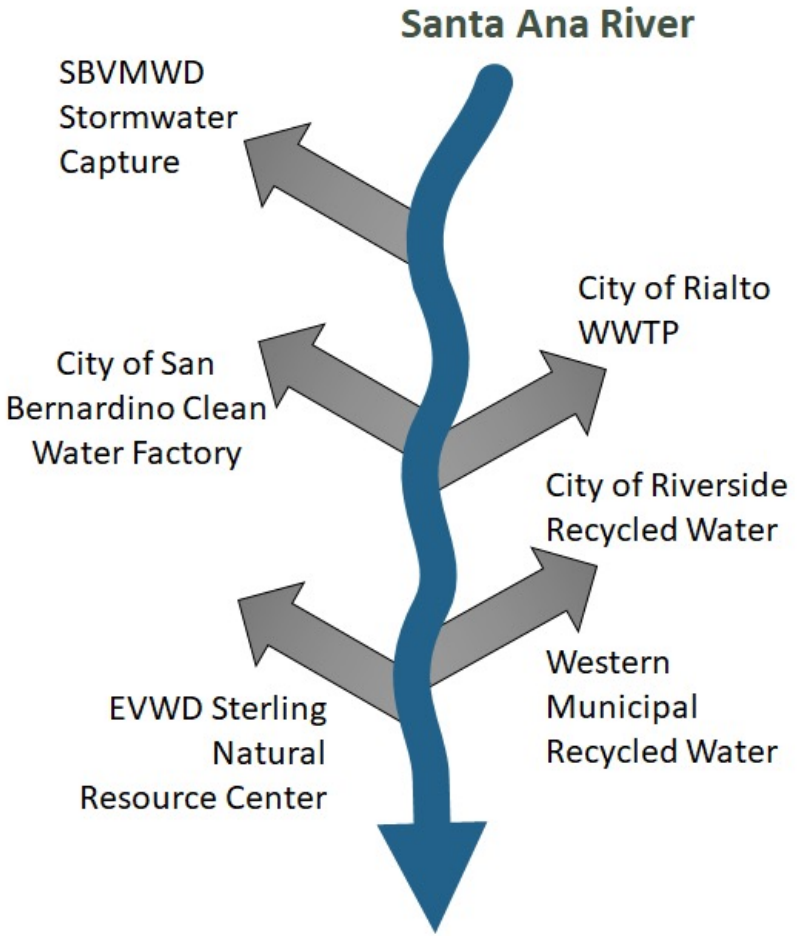
- Santa Ana River: largest coastal stream system in Southern California
- Multiple water agencies: responsible management of water supply and sustainable stewardship
- Growing population
  - Increased water demands
  - Decrease in natural hydrological processes
  - Decrease in groundwater recharge
- Multiple species listed as threatened or endangered under FESA

Santa Ana River Watershed Challenge



- ❑ How do we meet water supply needs while protecting the needs of a functional riverine ecosystem
- ❑ How do we work together to maximize the value of local water resources for all agencies

Cumulative Impacts of Water Projects



- ❑ Statewide push to diversify local supplies
- ❑ Wastewater viewed as an asset to be monetized
- ❑ Conflicting objectives regarding the River as a resource

Old Strategy: Litigation

Upper Santa Ana River
• HABITAT CONSERVATION PLAN •

Santa Ana Sucker, Little Fish at Center of Water Agencies' Suit Against Feds, Gets a Legal Assist

BY MATT COKER

TUESDAY, NOVEMBER 22 201

Threatened Sucker Fish, Strangles Water Supplies

ENDANGERED SPECIES:

Calif. suit over fish habitat baits hook for Supreme Court

Jeremy P. Jacobs, E&E reporter

Greenwire: Thursday, October 22, 2015

Lawsuit Appeals Expanded Critical Habitat for Santa Ana Sucker

Submitted by Matt Williams on Wed, 06/05/2013 - 1:01pm in Endangered and

Santa Ana Sucker Fish Critical Habitat Designation Challenged in Court

Southern California water agencies file lawsuit

August 24, 2011

Supreme Court keeps protections for Santa Ana sucker fish

New Strategy: Partnership

- Accept Reality and Plan Accordingly
  - People need water and so do fish.
  - What's good for the River is good for people.
  - The watershed is interconnected with many stakeholders.

- Failure is not an option
  - Nobody benefits if we do nothing.
  - The cost is too great for doing nothing.
  - Working together is the only way forward.

- Inter-Agency Collaboration
  - Water Districts, NGOs, and Wildlife Agencies work together to find win-win solutions.

Inland Empire water agencies pool resources to save Santa Ana sucker

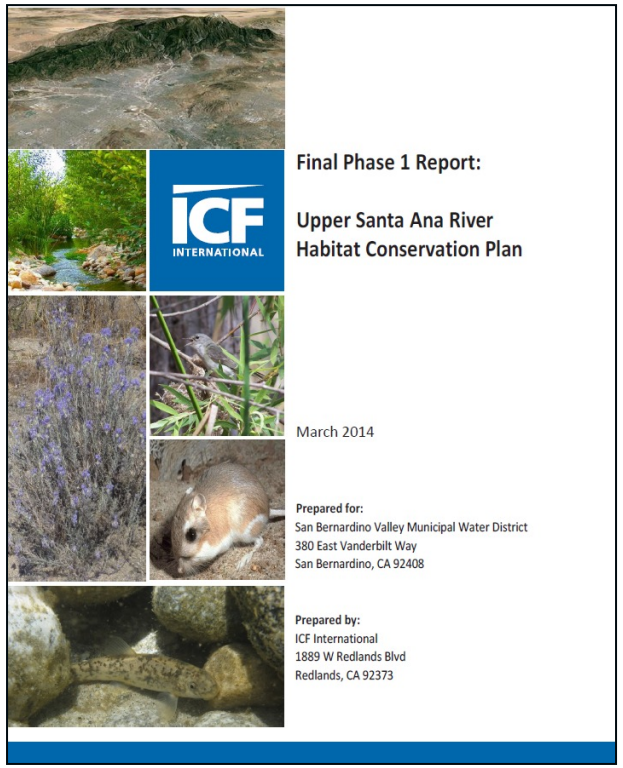
Brett Mills (L), Tawny Hoemke (C), both of Southwest Resource Management Association and Heather Dyer (R), water resources project manager for San Bernardino Valley Municipal Water District, look to remove non-native predators that are threatening the Santa Ana sucker fish, in the Rialto Channel portion of the Santa Ana River, Tuesday, March 3, 2015. The goal is to ...

In the Beginning…

- **April 2013 – Concept of the Upper Santa Ana River HCP**

- **September 2013 – Phase I: HCP Scoping Study**
  - Estimated timeline
  - Listed Tasks to be completed
  - Estimated Costs

- **March 2014 - Phase I Report**
  - Described Covered Activities
  - Data Gaps
  - Potential Conservation
  - Cost, Schedule, & Work plan



- **April 2014 – Phase 2: Begin Developing HCP**

- **2015-2019 - Expanded Program to provide Full Environmental Compliance**

- http://www.uppersarhcp.com/

Endangered Species Act (ESA)

- **Purposes of the ESA:**
  - "...to provide a means whereby the ecosystem upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such ...species..."

- **Impacts to ESA-listed species:**

  Incidental Take Authorization Required

  - "Take" is defined in the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect a listed plant or animal.
  - "Take" also includes significant habitat modification that kills or injures a listed species through impairment of essential behavior (nesting, spawning, foraging)

- **Section 10 of ESA – Habitat Conservation Plans (HCP)**
  - Planning documents
  - Required as part of an application for an incidental take permit
  - Describe effects of impacts, how impacts will be minimized/mitigated
  - How the HCP will be funded

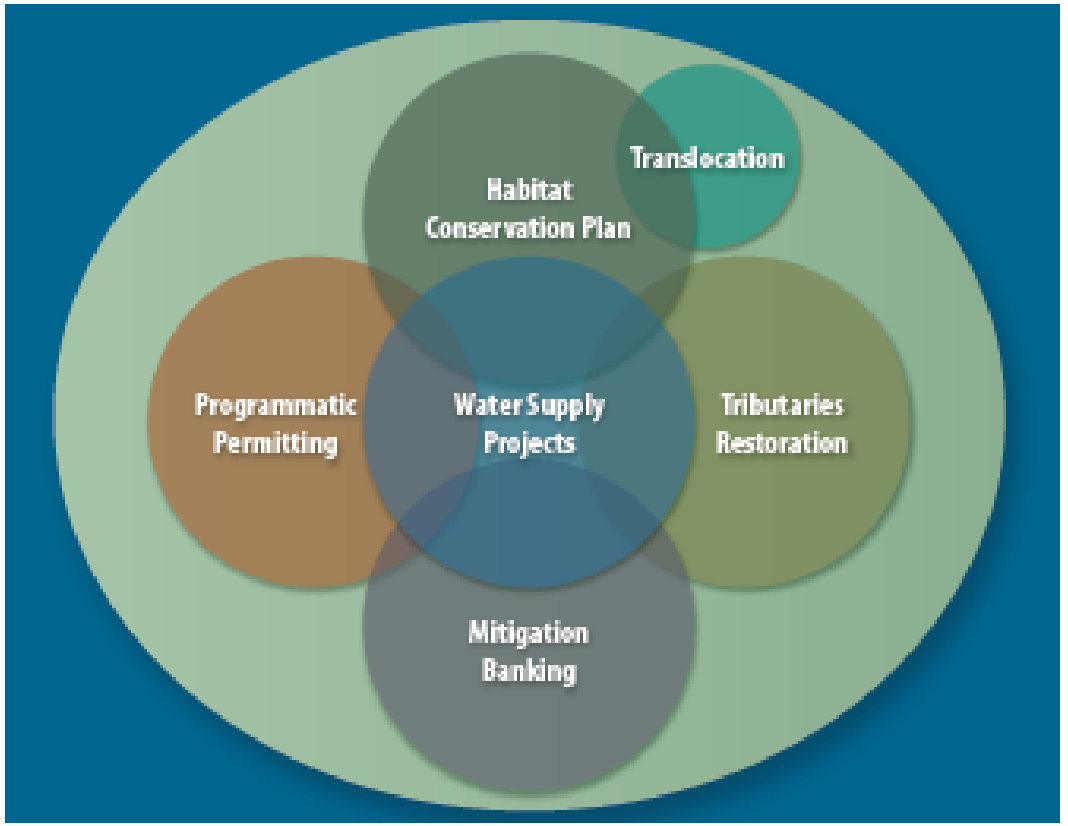
Photo: Courtesy of SAWA

HCP: Purpose

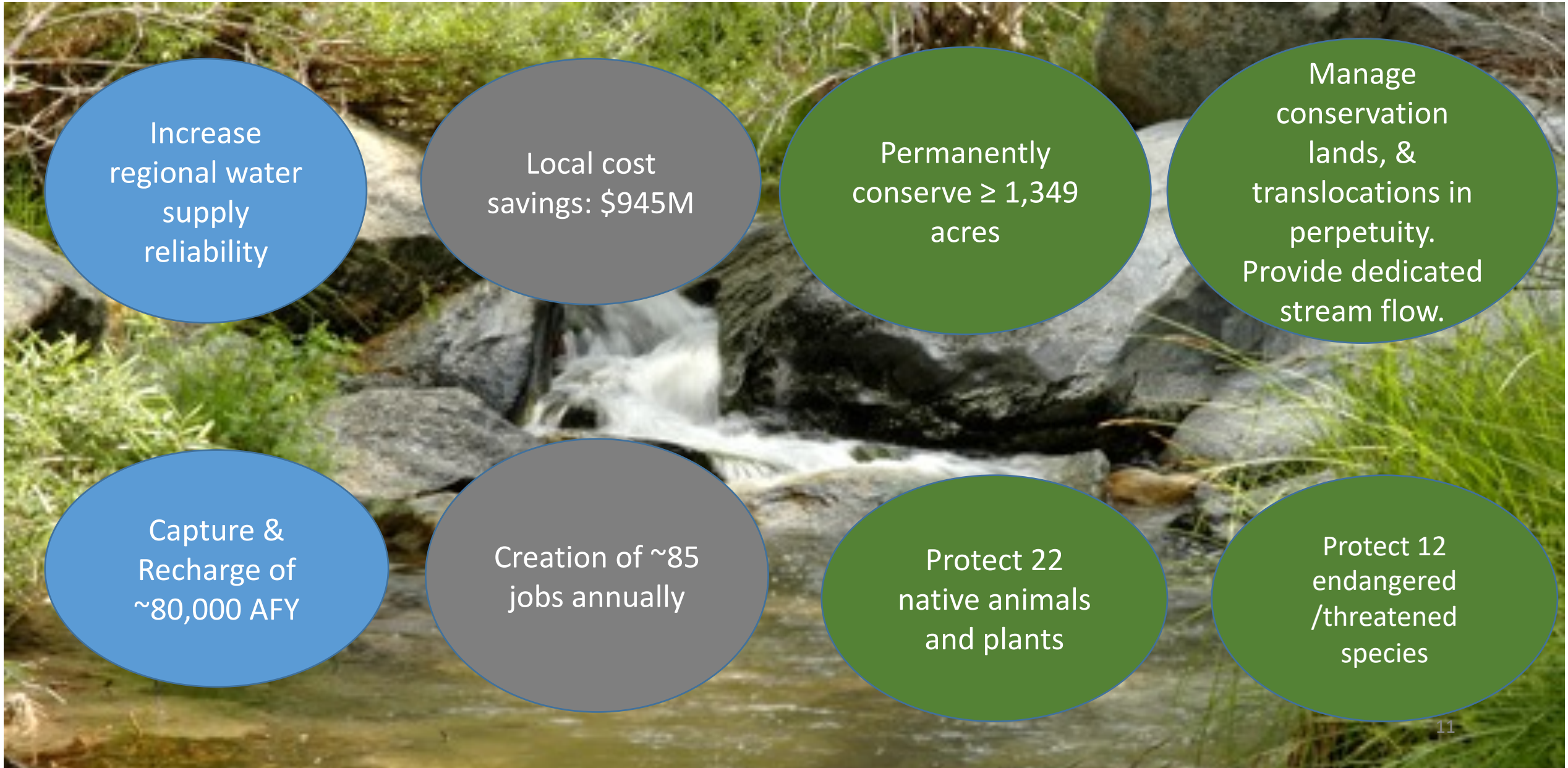
Partnership and Collaboration

Regional, comprehensive program:

- ❑ Framework to protect, enhance, restore habitat for species
- ❑ Streamline permitting for projects



HCP Benefits



HCP Permittees

- **HCP Team:**
  - **11 water agencies**
    - San Bernardino Valley Municipal Water District
    - San Bernardino Valley Water Conservation District
    - San Bernardino Municipal Water Department
    - Western Municipal Water District
    - East Valley Water District
    - West Valley Water District
    - Riverside Public Utilities
    - Inland Empire Utility Agency
    - City of Rialto
    - Orange County Water District
    - Metropolitan Water District of Southern California
  - **Southern California Edison**

HCP Planning Area

Upper Santa Ana River
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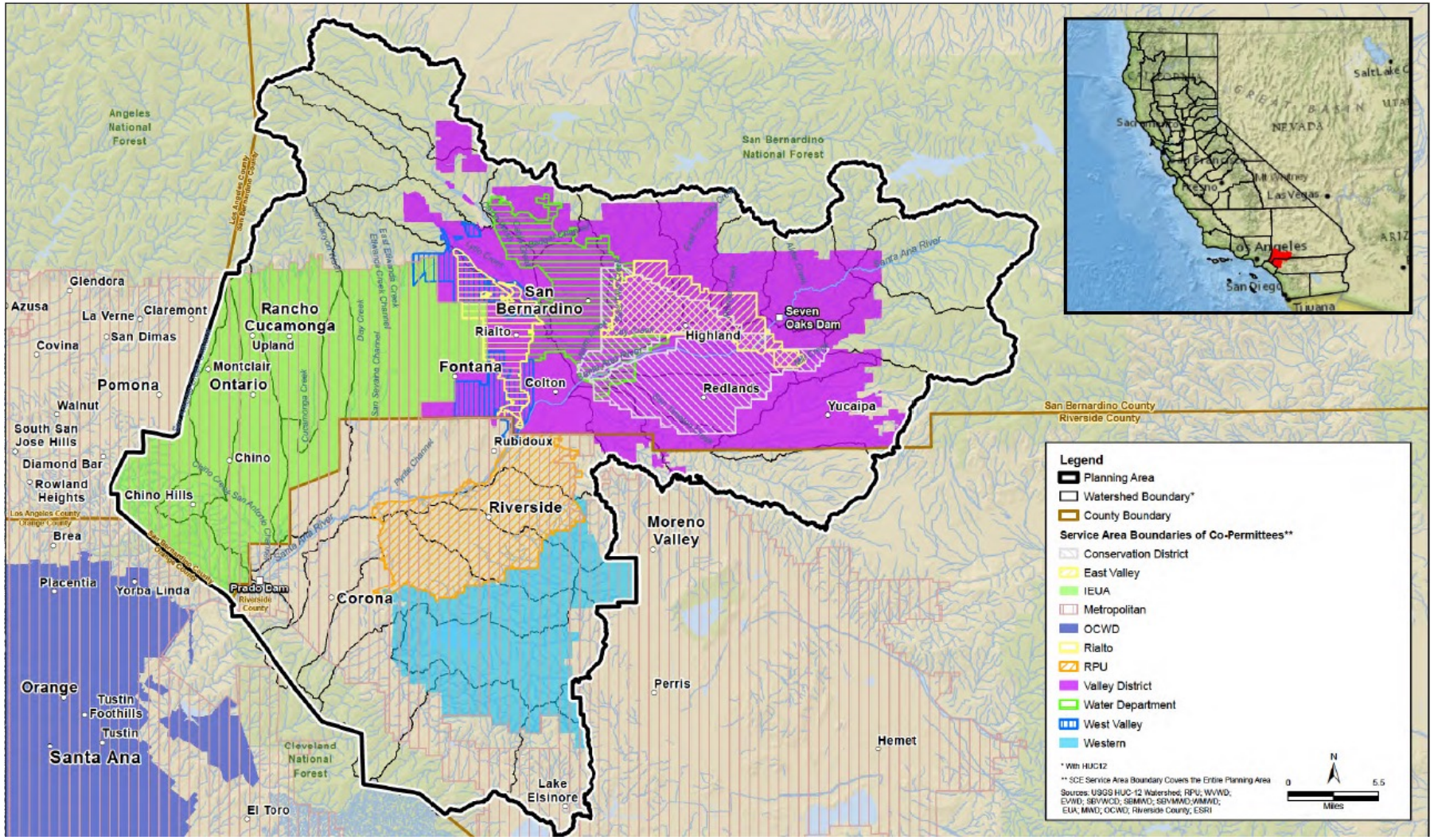

- 863,000 Acres
  - 35,000 = Riparian
  - 22,000 = Water
  - 425,000 = Upland
  - 336,000 = Developed
- Includes Areas with:
  - Covered Activities
  - Covered Species
  - Conservation Activities

Covered Activities

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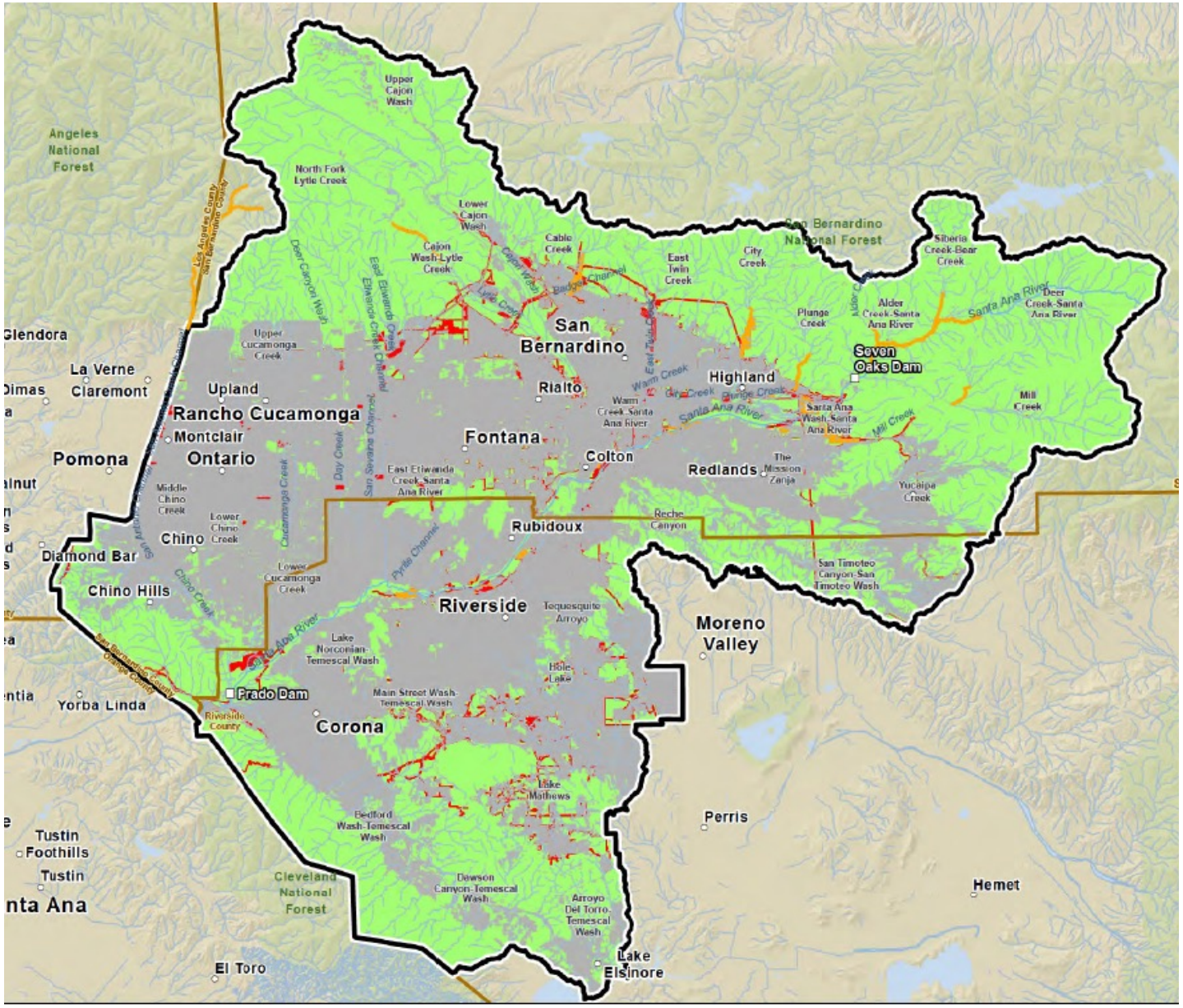
- >100 Projects over 50 years
  - Phase 1: 0 - 5 years
  - Phase 2: 6 - 10 years
  - Phase 3: 11 - 15 years
  - Phase 4: 16+ years

- Types of Covered Activities:
  - Water Reuse
  - Groundwater Recharge
  - Wells and Water Conveyance Infrastructure
  - Solar Energy Development
  - Existing Facility Routine Operations and Maintenance
  - Habitat Improvement, Management, and Monitoring



Covered Activity: Water Reuse

Covered Activity: Groundwater Recharge

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Covered Activity: Wells & Water Conveyance

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Covered Activity: Existing Facility Routine O&M

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Covered Activity: Habitat Improvement, Management, Monitoring

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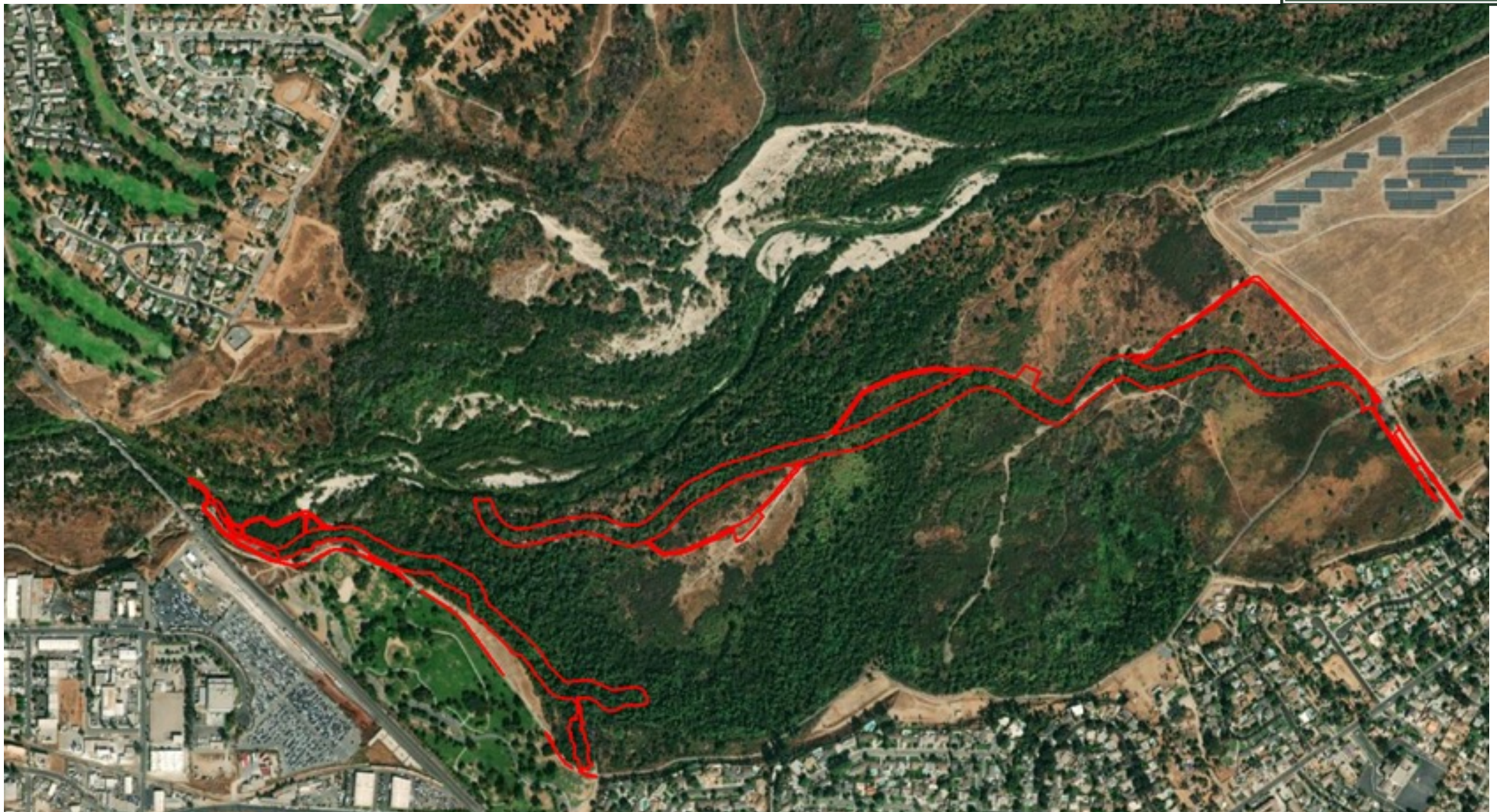

Covered Species

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Plants

Slender-horned spineflower

Santa Ana River woolly-star

Fishes

Santa Ana sucker

Arroyo chub

Santa Ana speckled dace

Amphibians and Reptiles

Western spadefoot

Mountain yellow-legged frog

Western pond turtle

South coast garter snake

California glossy snake

Mammals

San Bernardino kangaroo rat

Los Angeles pocket mouse

Birds

Least Bell's vireo

Southwestern willow flycatcher

Yellow-breasted chat

Western yellow-billed cuckoo

Tricolored blackbird

Burrowing owl

Coastal California gnatcatcher

Cactus wren

Fully avoided species

Delhi Sands flower-loving fly

Arroyo toad

Photo: SB County Public Works

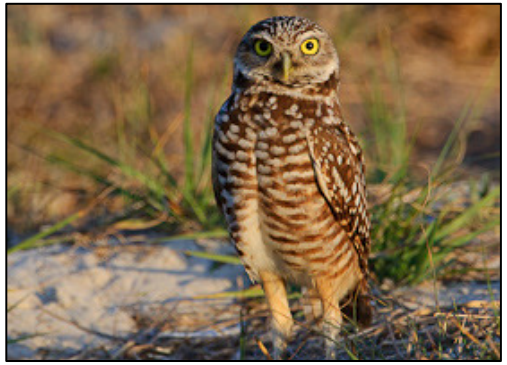

Photo: Cornell Lab of Ornithology

Photo: RCRCD

Photo: San Diego Zoo

Overview of HCP Building Block Process

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Baseline

Covered Activities

Avoidance / Minimization

Effects

Conservation Measures

Mitigation

ESA Analyses

Covered Activities' Impacts

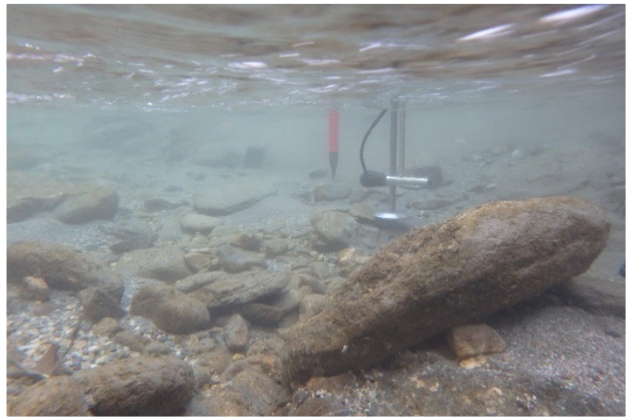
-Changes in Hydrology
-Alteration of Spawning Habitat
-Loss of Riparian Vegetation Cover
-Changes in Function of Habitat
-Acres of Habitat Disturbed
-Effects on Upland Vegetation
-Changes in Water Quality

Conservation Benefits

+ Improvement to Hydrology
+ Increased Spawning Habitat
+ Augmentation of Population
+ Increased Riparian Vegetation
+ Increased Function of Habitat
+ Preservation of Habitat
+ Decreased Predation

Focus on Quality Science

- USGS Researchers
- Sediment Transport Study
- Santa Ana sucker baseline survey: 2015 - 2020
- Measured habitat variables “at fish” observation
- HCP Technical Team developed habitat criteria specifically for SAS based on survey data (depth, velocity, substrate needs)
- USGS/EPA/Universities – additional research on HCP species & watershed function, health



Baseline Hydrology

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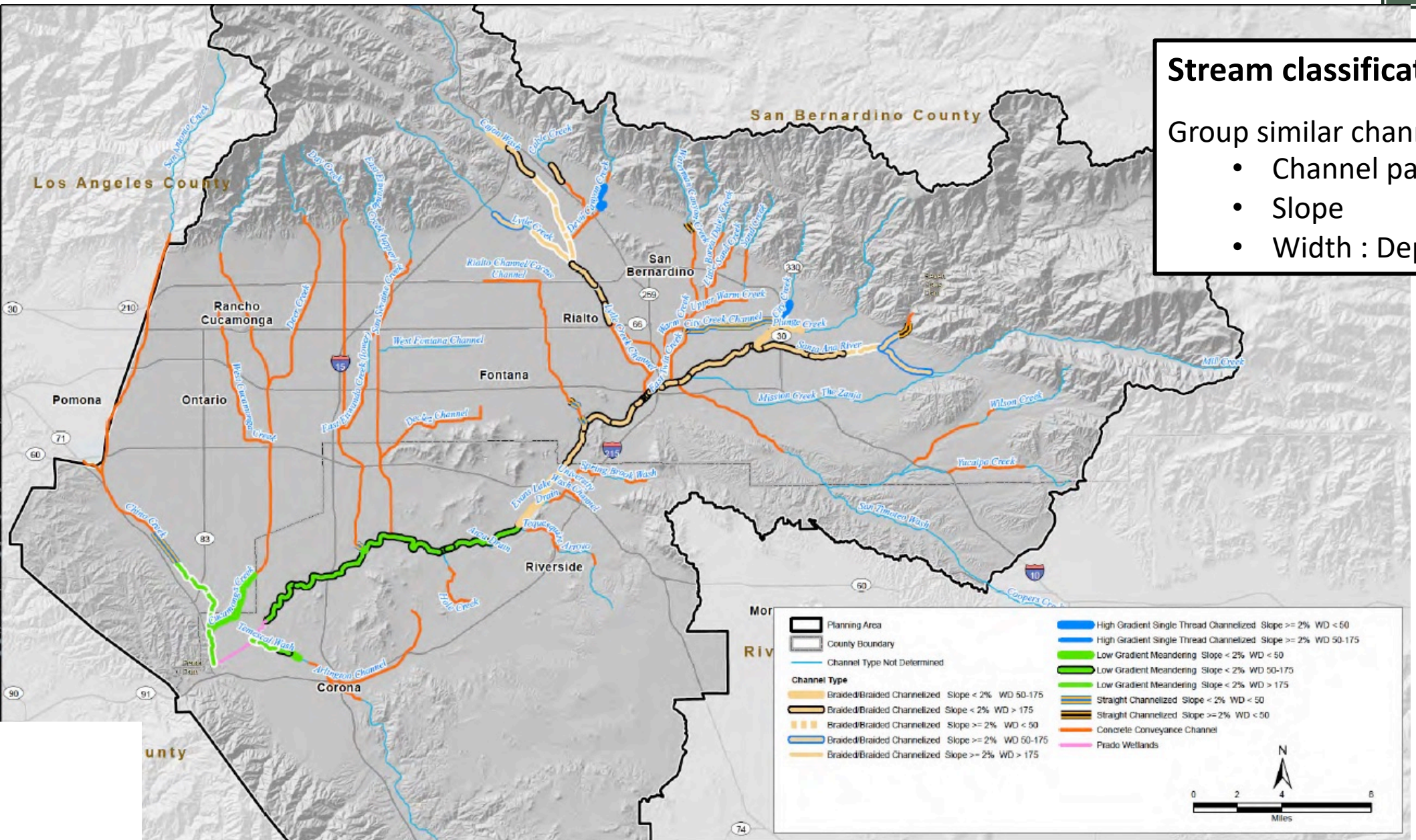
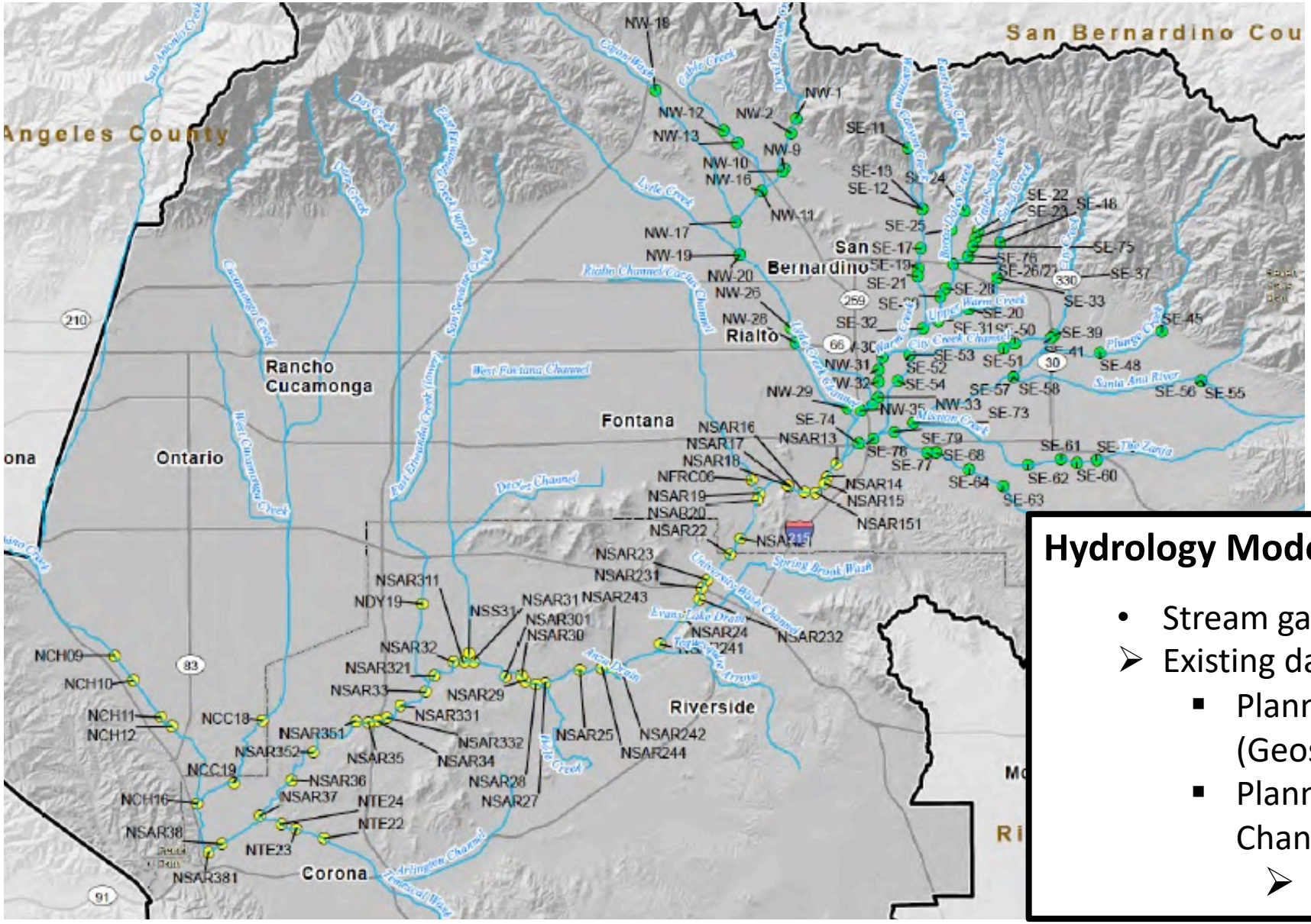


Stream classification

Group similar channels based on:

- Channel pattern
- Slope
- Width : Depth

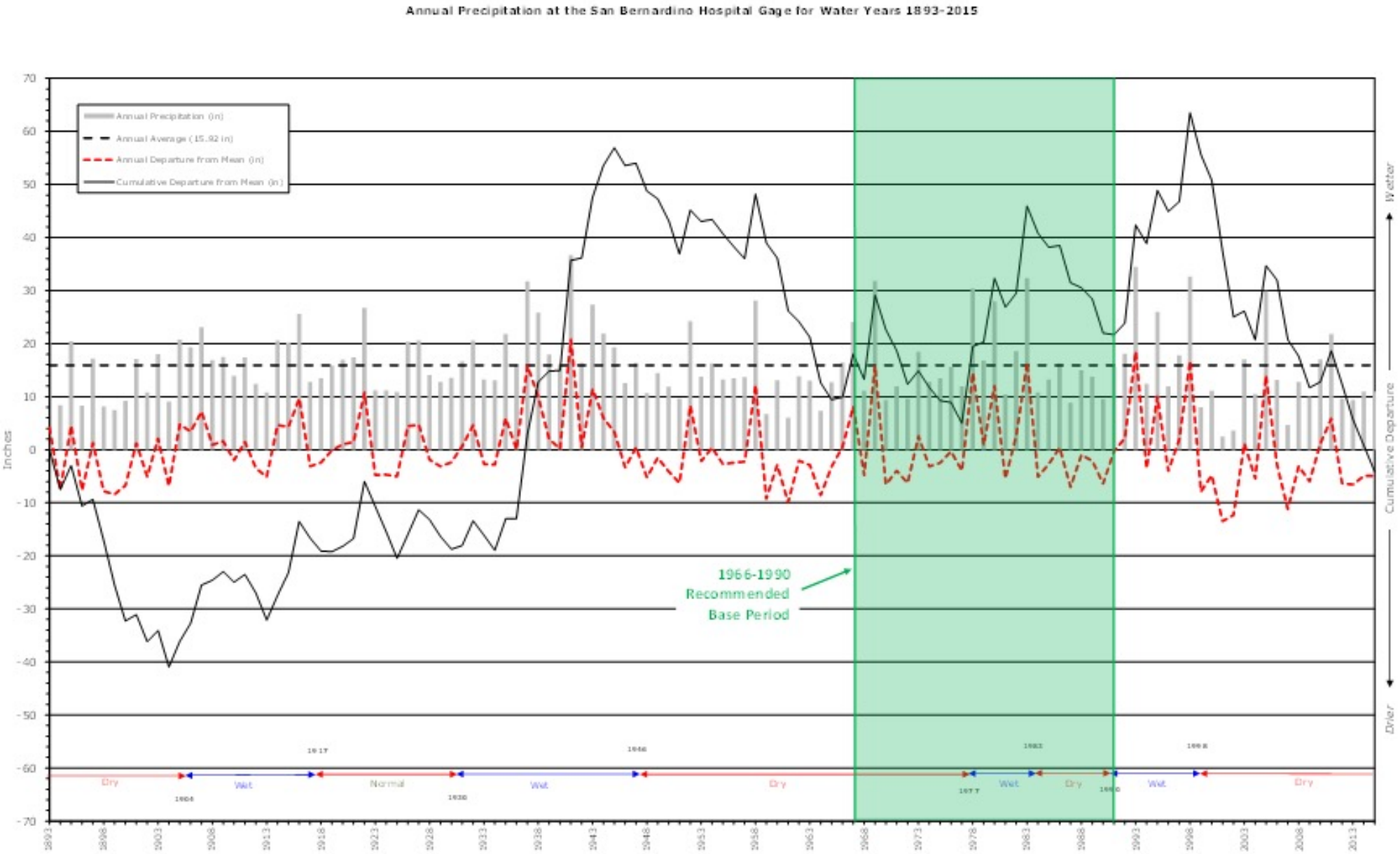
Baseline Hydrology



Hydrology Model

- Stream gage data
- ➢ Existing data: two existing models:
  - Planning Area upstream of Rialto Channel (Geoscience Hydrology Model)
  - Planning Area downstream of Rialto Channel (Wildermuth Hydrology Model)
    - ➢ **HCP Hydrology Model**

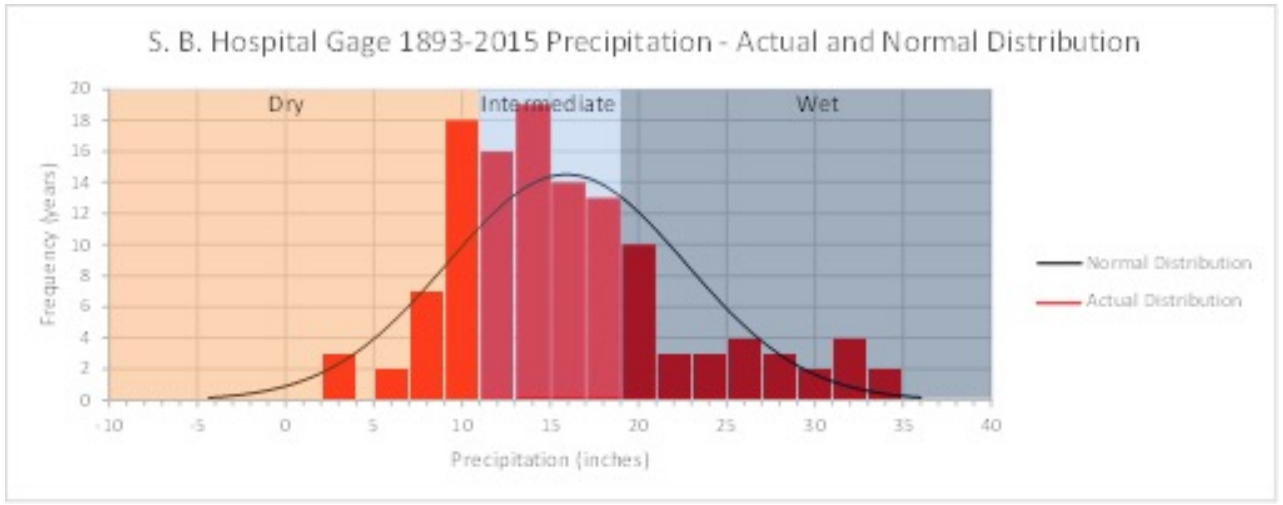
Baseline Hydrology

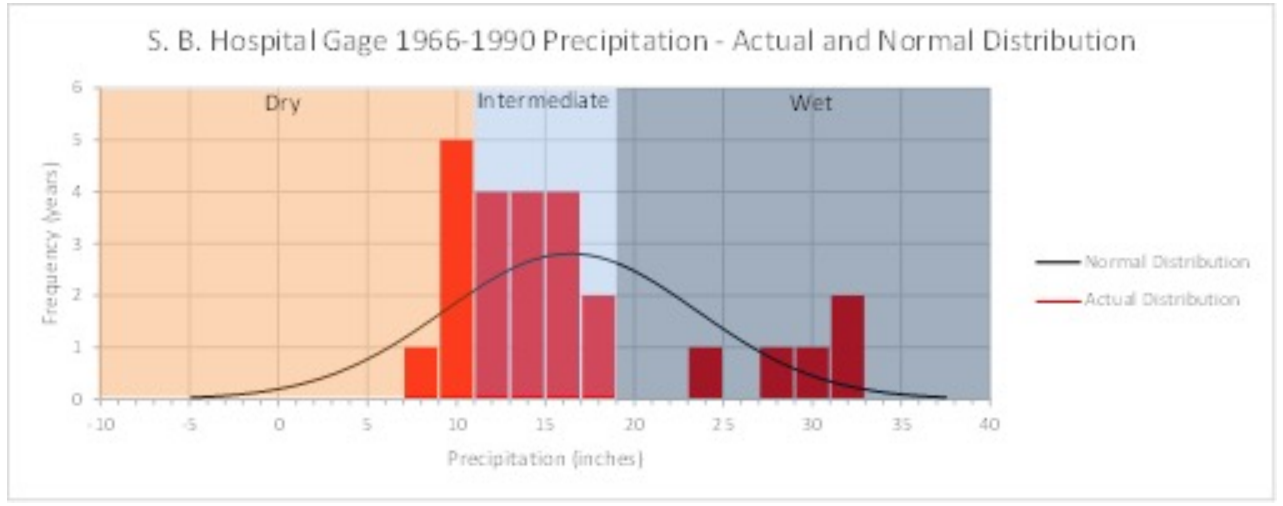


Baseline Hydrology

Selection of Baseline Hydrology Period 1966-1990

Designation of Dry, Intermediate, & Wet Water Year Types





Entire Period 1892-2014 (123 Years)				
Water Year Type	**Rainfall (in)**	**# Years**	**% Years**	**Average Rainfall (in)**
Dry	<11	30	24%	8.7
Intermediate	11-19	62	50%	14.7
Wet	>19	31	25%	25.4

Hydrology Base Period 1966-1990 (25 Years)				
Water Year Type	**Rainfall (in)**	**# Years**	**% Years**	**Average Rainfall (in)**
Dry	<11	6	24%	9.8
Intermediate	11-19	14	56%	14.7
Wet	>19	5	20%	29.3

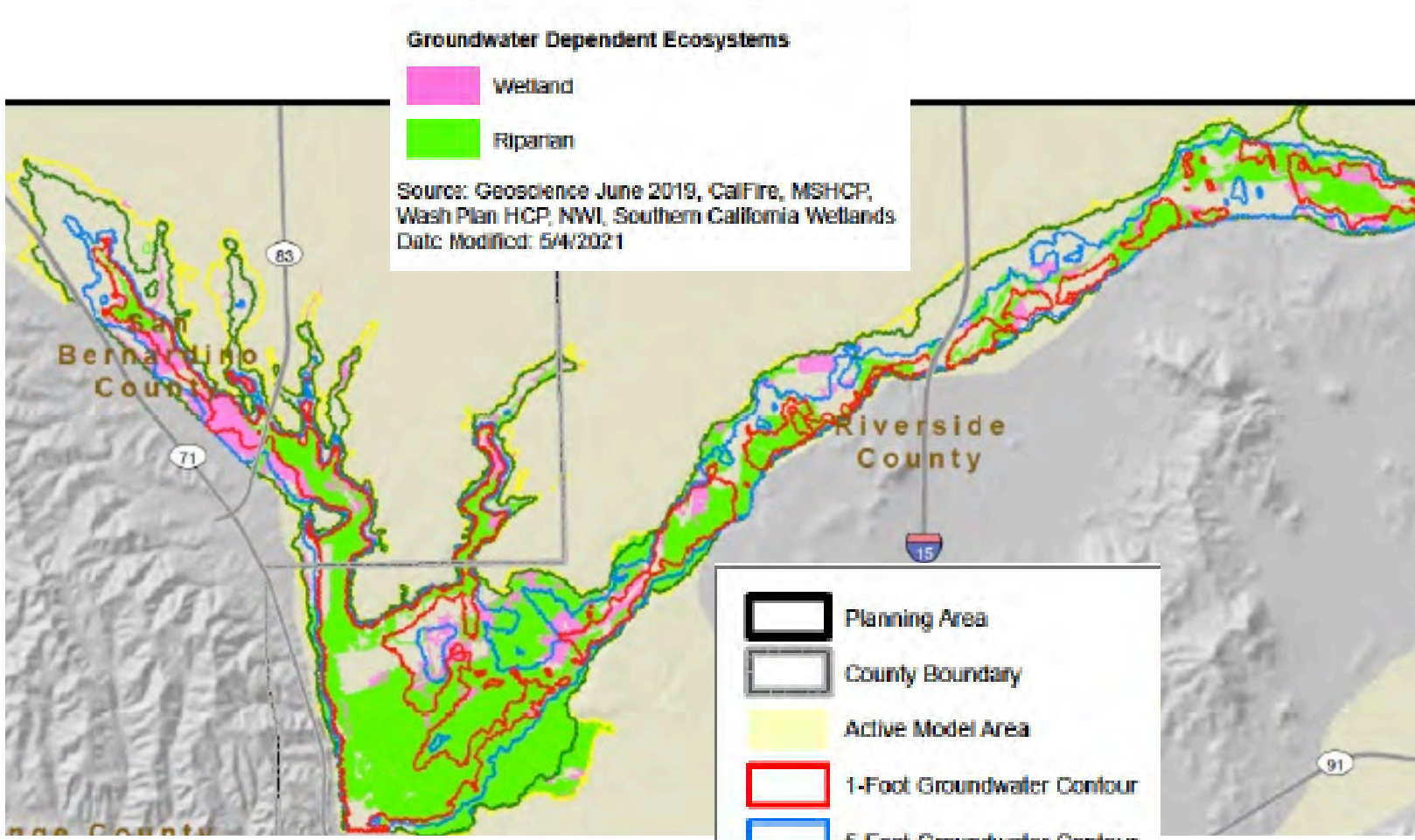
Baseline Hydrology

HCP Hydrology Model

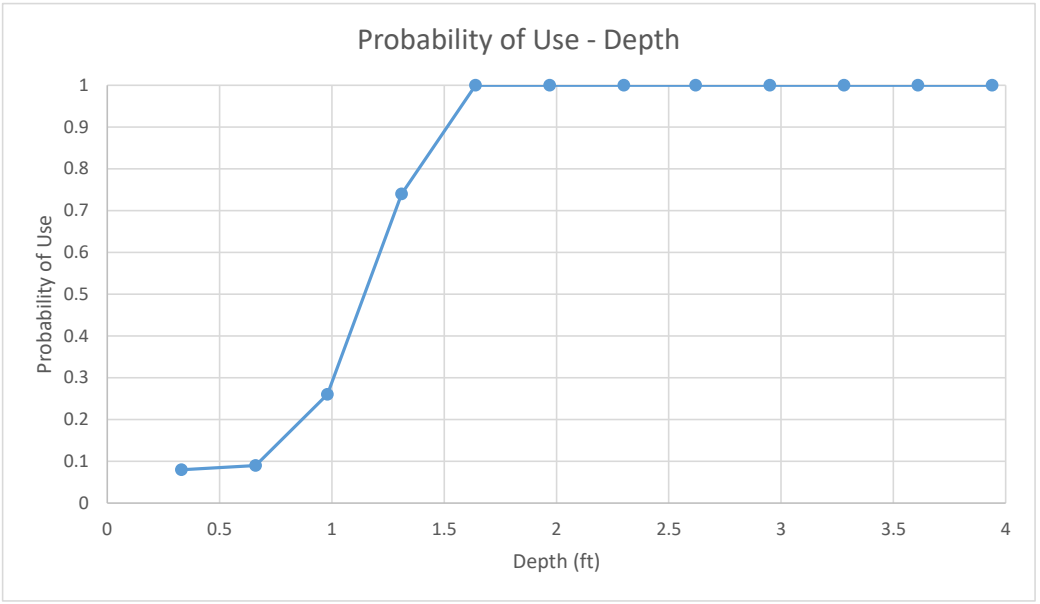
- Daily stream flow (wet and dry years)
- Sediment transport

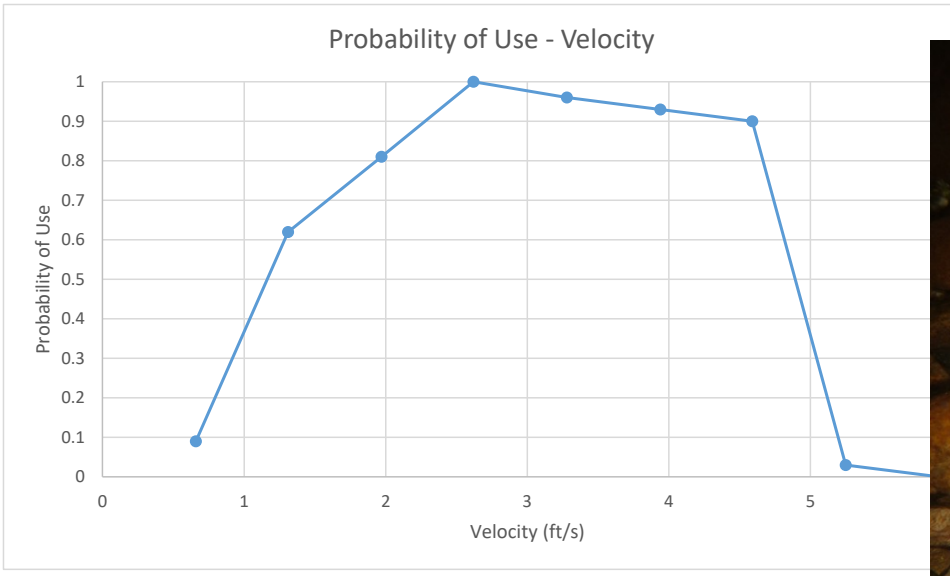
Integrated Model

Existing Groundwater Models + Existing Surface Flow Models



Habitat Suitability Models: Santa Ana Sucker





Surface Area 2D Models → Depth/Velocity Surface Area Values → Reaches with suitable habitat: >10% Gravel/Cobble → Sucker Preferred Habitat Area

Santa Ana Sucker Preferred Habitat

Semi-aquatic and terrestrial species

Terrestrial species and semi-aquatic species

- Species distribution modeling
  - Scientific literature
  - Species occurrence data
  - Expert opinion

Southwestern pond turtle

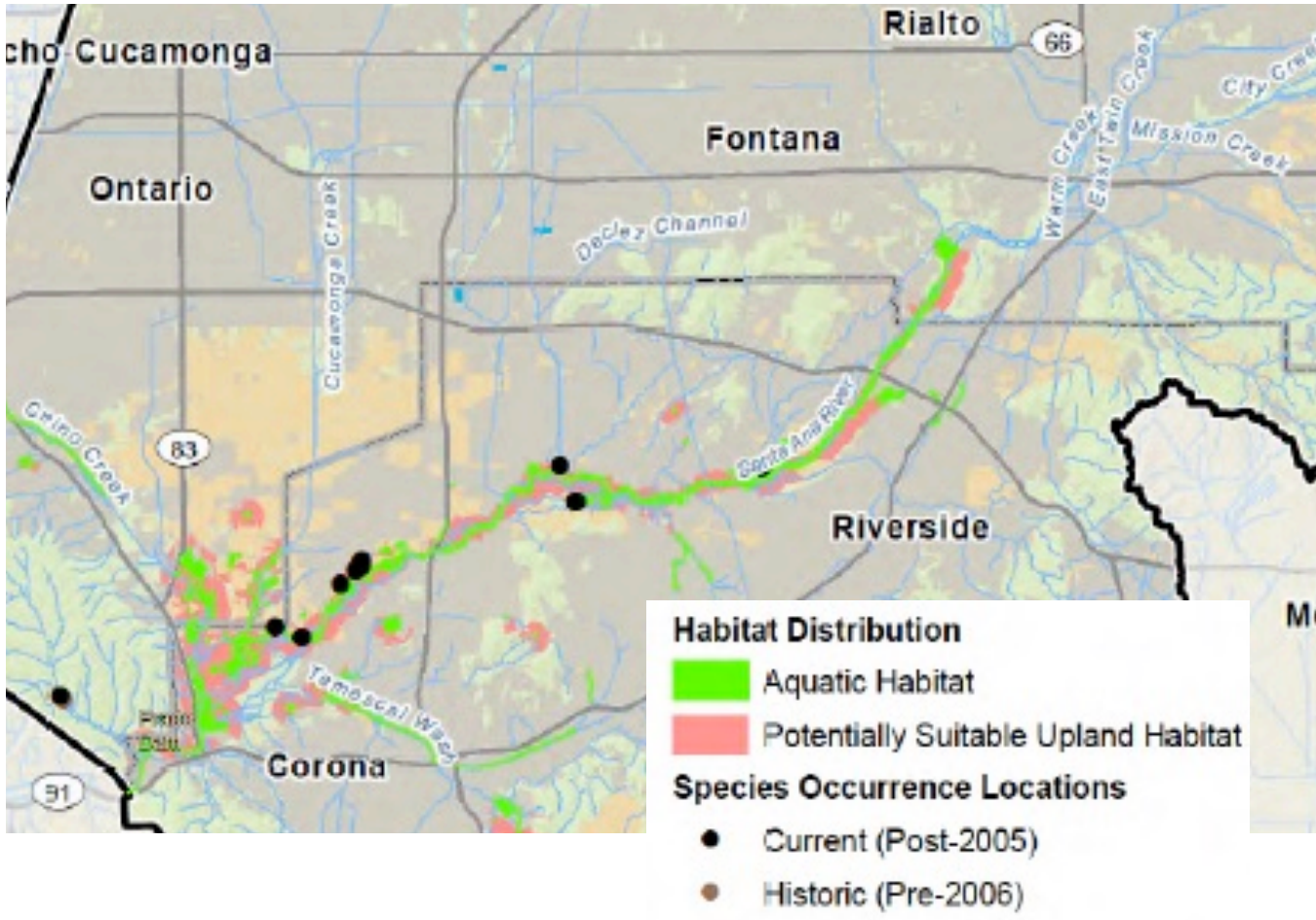
Aquatic Habitat

- **Land Cover**: Water-Permanent (except within existing groundwater recharge basins) and Western North American Freshwater Aquatic Vegetation; **AND**
- **Elevation**: 0–1,800 feet.

Upland Habitat

- Areas within 1,640 feet of Aquatic Habitat (Reese and Welsh 1997); **AND**
- **Elevation:** 0–1,800 feet; **AND**
- Contiguous with Aquatic Habitat *except for* Developed; Agriculture; California Chaparral; and Cool Interior Chaparral, Western North American Cliff, Scree, and Rock Vegetation.

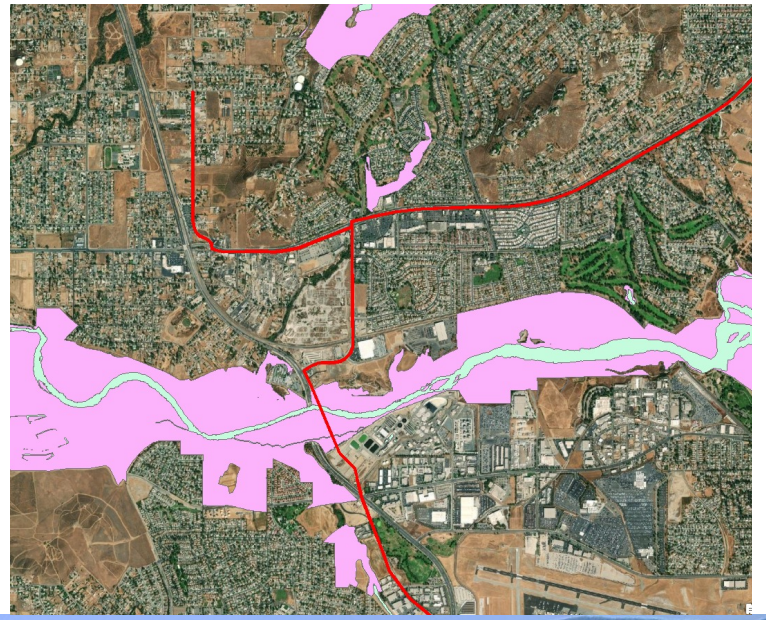
Post-processing: Removed fragmented and isolated patches surrounded by development and upstream of RIX Discharge.



Impacts and Effects Analysis

Approach to incidental take assessment and impact analyses

- Purpose: Estimate the impact ("incidental take" on covered species)
- Methods for Impact Analysis
  - Effects of Ground-disturbing Activities
  - Effects to Mean Daily Streamflow Hydrology
  - Effects to Hydrologic Sediment Transport
  - Effects to Aquatic Species Habitat
  - Effects of Groundwater Change on Riparian and Wetland Habitats



Impacts: Santa Ana Sucker

Estimated Impacts on Santa Ana Sucker Modeled Preferred Habitat

1. Quantify species habitat
2. Determine reduction in quantity and/or quality of modeled habitat from Covered Activities
3. Assess potential effect of impact on species:
   - ➢Aquatic Habitat
     - ➢Hydrologic effects on aquatic habitat
       - ➢Changes in flow, velocity, water depth
       - ➢Loss of ~1.3 acres of preferred habitat

Impacts: Least Bell's Vireo

Estimated Impacts on Least Bell's Vireo Modeled Habitat

1. Quantify habitat (species distribution modeling)
2. Determine reduction in quantity and/or quality of modeled habitat from Covered Activities
3. Assess potential effect of impact on species
   - ➢Terrestrial Habitat
     - ➢Ground-disturbing effects

Modeled Habitat	Impacts (acres)	
	Permanent (outside exist basins)	Temporary
Core Breeding Habitat		
Phase 1	0.2	17.0
Phase 2	<0.1	0.2
Phase 3	0.0	0.0
Phase 4	0.0	0.0
Total	0.2	17.2
Other Breeding Habitat		
Phase 1	33.7	14.9
Phase 2	9.5	12.0
Phase 3	14.7	0.0
Phase 4	0.0	0.6
Total	58	27.5
Total Modeled Habitat Outside Existing Basins	**58.2**	**44.7**

Estimated Impacts

- Maximum potential impacts (includes existing basins)
- Covered Activities: worst-case scenario footprint
- Landscape-scale habitat mapping used in models, not site-specific mapping
- Impacts to modeled habitat (not necessarily occupied habitat)
- Hydrology impacts: assume all Covered Activities are in place
- Pre-project habitat assessments, species surveys
  - Project siting, avoidance and minimization measures

Impacts anticipated to be substantially less

Conservation Strategy

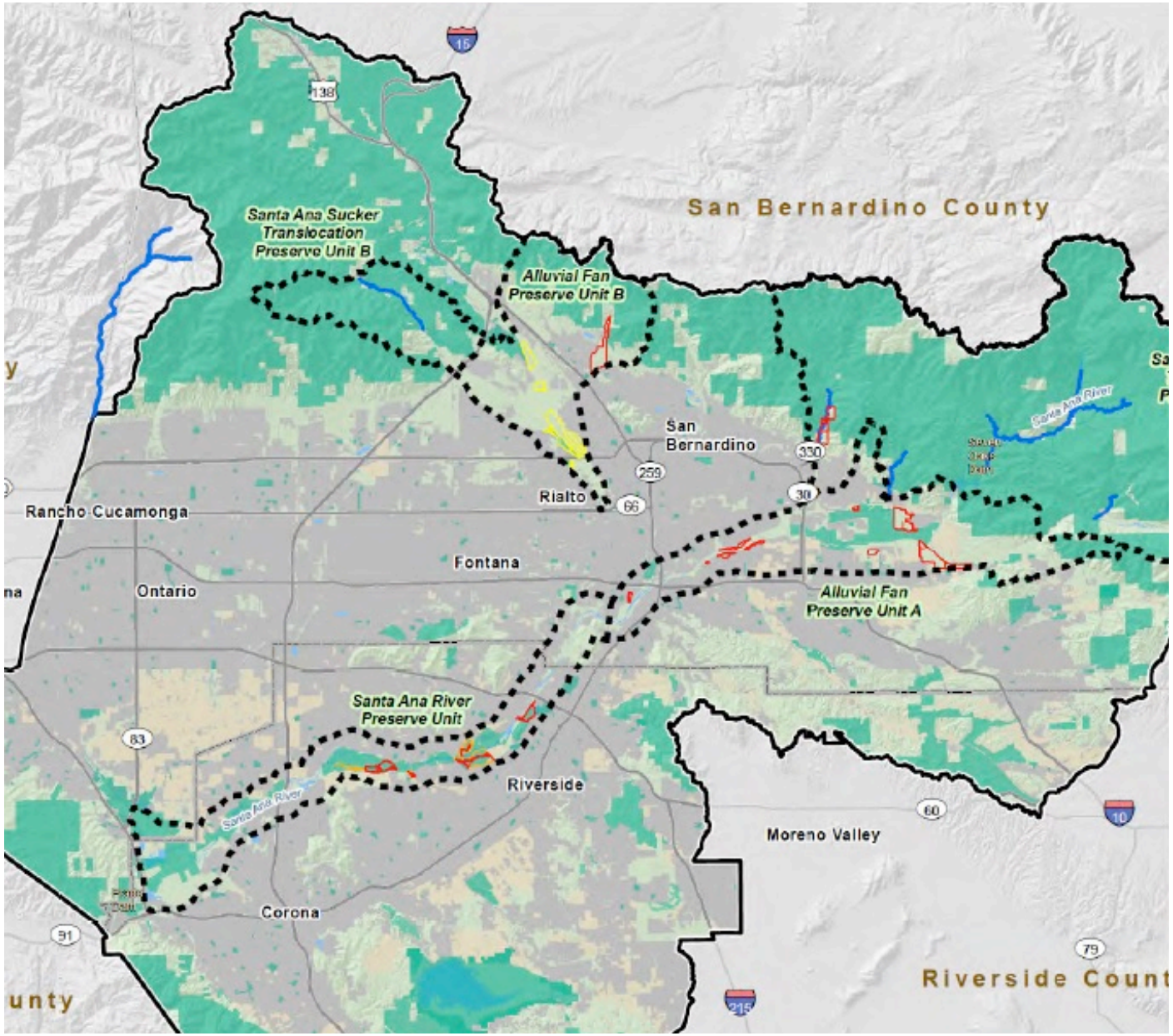
Upper Santa Ana River • HABITAT CONSERVATION PLAN •

Upper SAR HCP Preserve System

- Minimum of 1,349 acres assembled within five preserve units (~areas)
  - Assembled through Phase 2 of HCP Implementation (ahead of impacts)
  - Up-Front and Stay-Ahead Provision

		Implementation Period (years)				
	Up-Front	Phase 1 (0–5)	Phase 2 (6–10)	Phase 3 (11–15)	Phase 4 (>15)	Total
Conservation HCP Preserve System	6%	61%	33%	--	--	100%
Covered Activity Impacts		46%	35%	10%	9%	100%

Conservation Strategy



Santa Ana River Preserve Unit: 310 acres

Alluvial Fan Unit A: 455 acres

Alluvial Fan Unit B: 320 acres

Santa Ana Sucker Preserve Units A & B: 264 acres

Total: 1,349 acres

Tributaries Restoration

- CREATE MORE HABITAT
- PROTECT & ENHANCE EXISTING HABITAT
- REDUCE THREATS

Increase Habitat and Distribution

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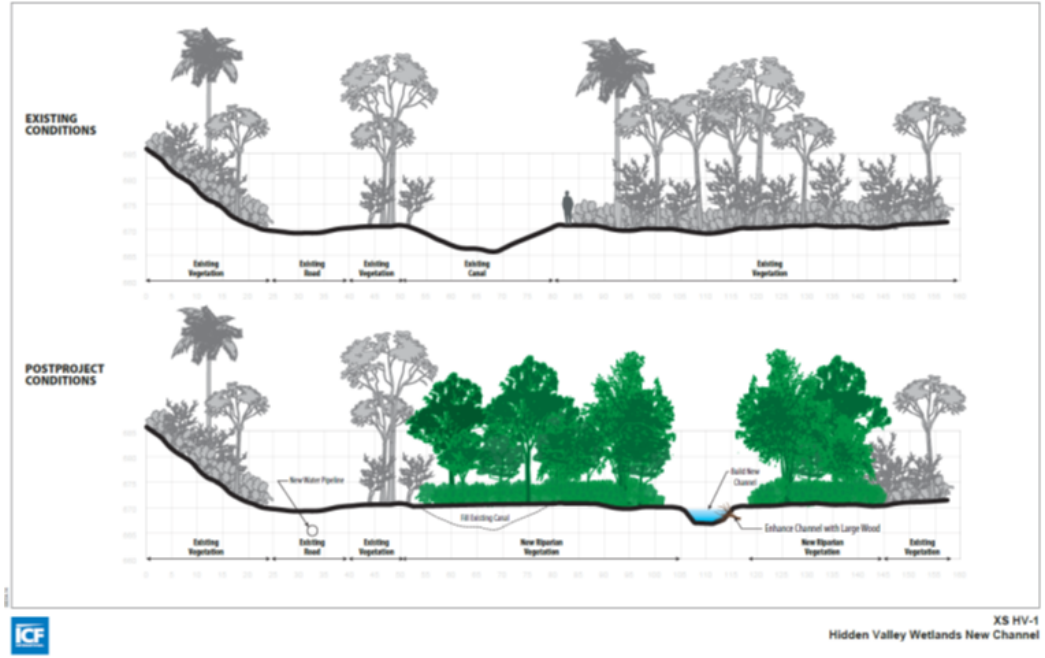
Restoration Sites:

- Hidden Valley Creek
- Lower Hole Creek
- Anza Creek
- Old Ranch Creek
- Evans Creek
- Sunnyslope Creek



Increase Habitat

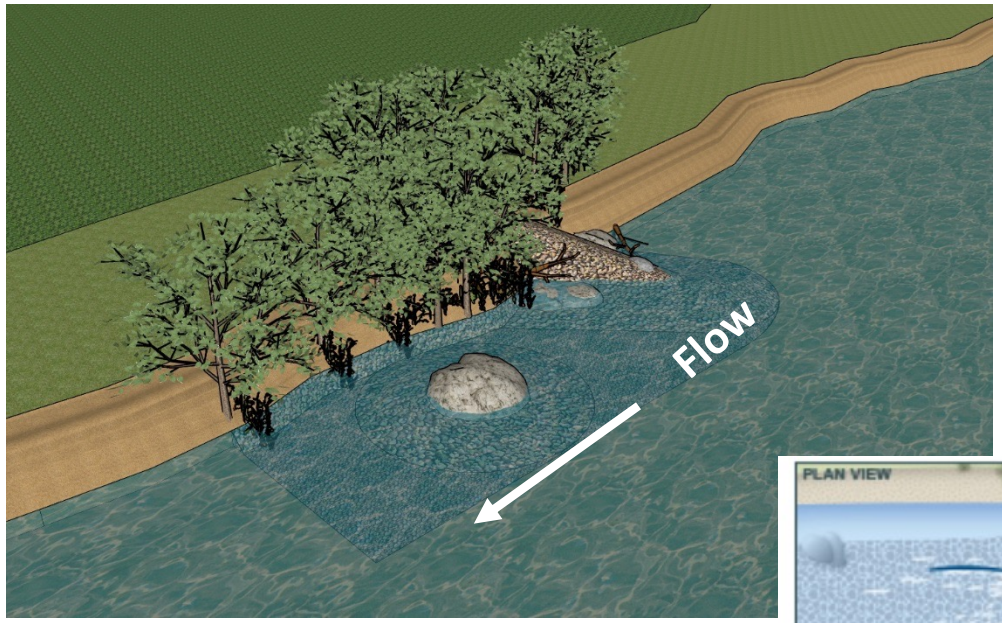
Restoration/conservation:

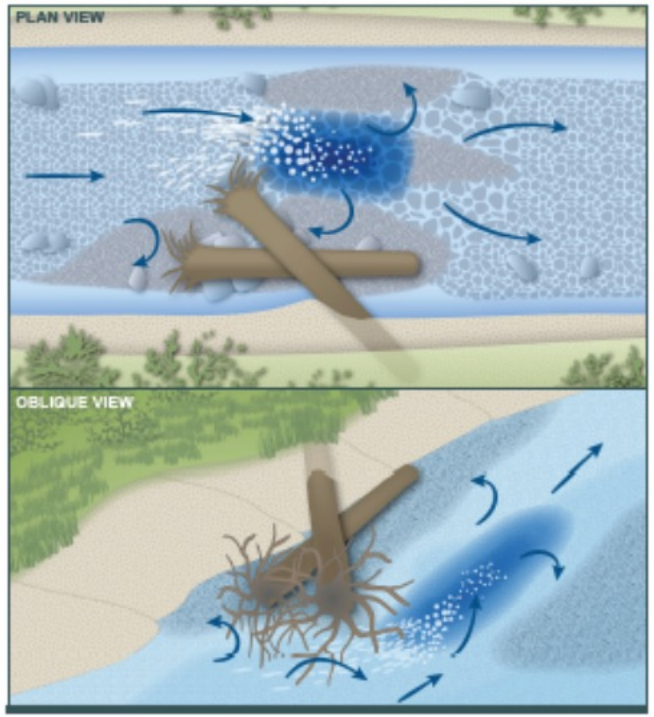
- **310 acres conserved and managed**
- **3.6 acres tributary restoration/establishment**
- **3.9 miles stream**
- Restoration, rehabilitation, creation of channels
- Enhancements to existing riparian and floodplain habitats
- Funded Ranger patrol of restoration sites
- Conservation easements and non-wasting endowment
- Long-term management and monitoring

Microhabitat Enhancement

- CREATE MORE HABITAT
- PROTECT & ENHANCE EXISTING HABITAT
- REDUCE THREATS

Microhabitat In SAR



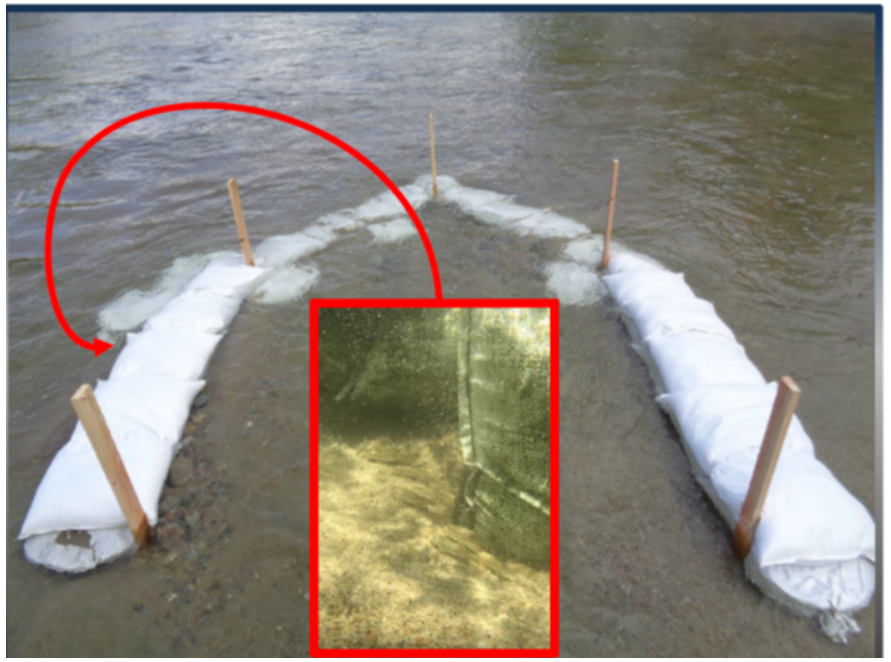


ROOT WAD GROIN SCOUR POOL

Microhabitat enhancement: 1.5 acres

Microhabitat In SAR

FIGURE 8: OPEN WATER RUNNER PHYSICAL MODEL



Commitment to maintain minimum flow

- Minimum of 35 cfs (22.6 MGD; 25,295 AFY) at RIX/Rialto channel

- Supplemental/permanent water supply to mainstem tributaries:
  - Hidden Valley Creek
  - Lower Hole Creek
  - Anza Creek
  - Old Ranch Creek
  - Evans Lake Creek
  - Hidden Valley Wetlands

➢Support aquatic species in perpetuity

Photo: RCRCD

Santa Ana Sucker Preserve Units A & B

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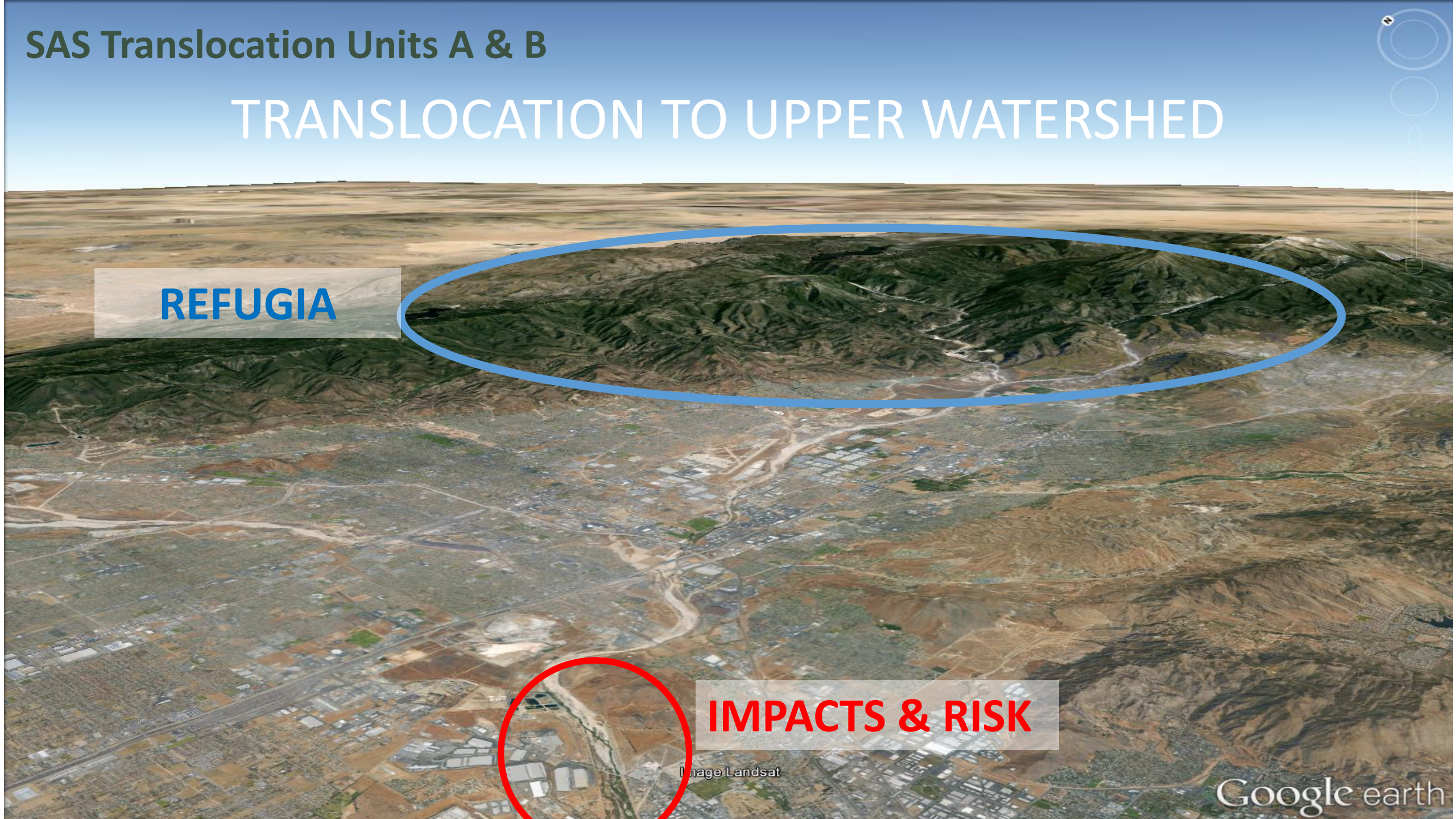
Translocation

- CREATE MORE HABITAT
- ESTABLISH ADDITIONAL POPULATIONS
- REDUCE THREATS

SAS Translocation Units A & B

TRANSLOCATION TO UPPER WATERSHED



Santa Ana Sucker Preserve Units A & B

- **264 acres conserved and managed**
- **3 new populations of Santa Ana sucker**

Captive Headstarting & Translocation

- YOY – raised to larger size class
- Translocated to high-quality habitat:
  - Streams on the National Forest where there are few anthropogenic risks (instant increase in occupied river miles)
- Populations will be monitored and managed
- Create redundancy and resiliency in the Santa Ana sucker population

POTENTIAL TRANSLOCATION SITES

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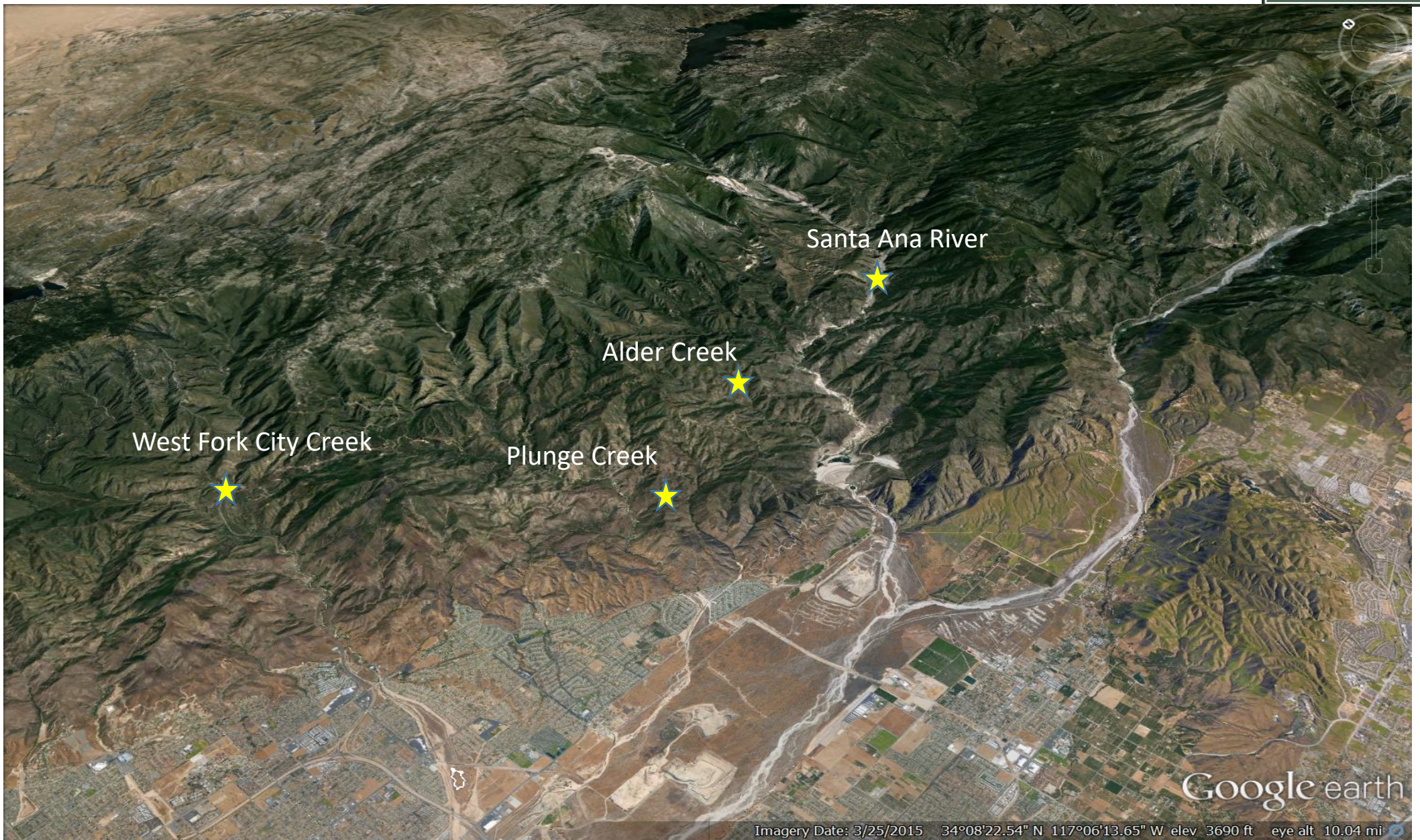


Alluvial Fan Habitat

Photo: SB County Public Works

Alluvial Fan Unit A

- 455 acres conserved and managed

Alluvial Fan Unit B

- 320 acres conserved and managed

Long-term Adaptive Management & Monitoring

Adaptive management in the context of natural drivers, and threats and stressors operating at different scales

Ecohydrological approach for the CAMMP

- Emphasizing key ecological processes and linkages that can be applied at various spatial scales.
- Coarser landscape and watershed scales leads to the finer stream reach and site-specific spatial scales.
- Processes and inputs from upslope and upstream areas having a strong influence on local conditions and ecosystem dynamics.
- Assessment of feedbacks between these processes and major stressors are integrated into the adaptive management and monitoring process.

HCP Implementation

Joint Powers Authority is Implementing Entity

- HCP administration and management
- HCP compliance
  - Project consistency review
  - Allocation of incidental take, assignment of mitigation credit
  - Liaison to USFWS
  - Annual reporting
- Implementation of conservation strategy
  - Sponsor to mitigation strategy
  - Land acquisition, preserve management and monitoring
  - Implementation of adaptive management and monitoring program

HCP Implementation

JPA cont.

- Establishment and management of Technical Advisory and Stakeholder Committees
- Public outreach and education
- Administrative/Other functions:
  - Support to Permittee Agencies: GIS, technical (e.g., permitting)
  - Grant procurement and administration
  - Third-party contracting
  - Implementation, oversight of CDFW 2081 ITP
  - Implementation, oversight of waters permits (401, 404, 1602)

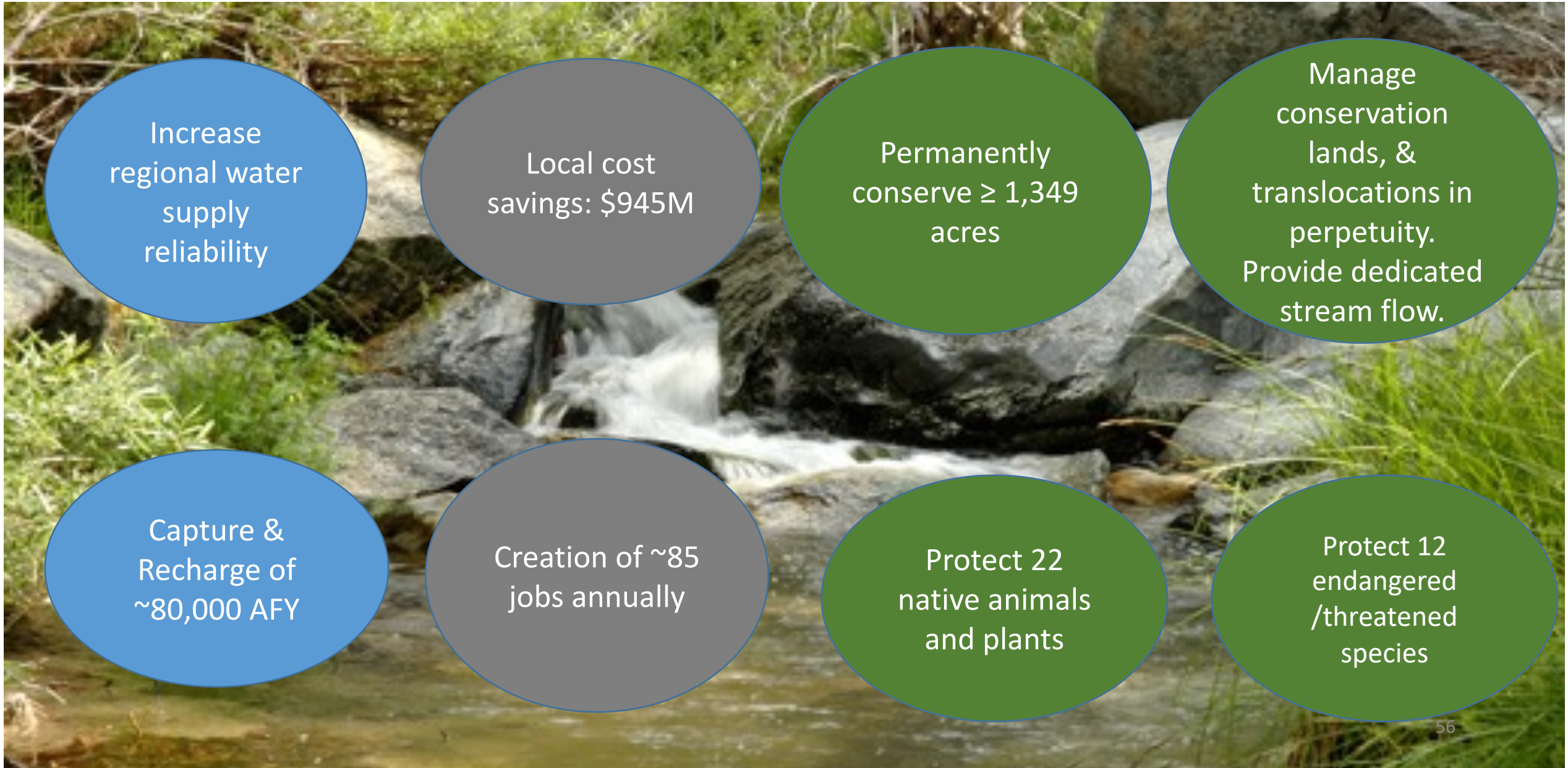
HCP Implementation

HCP Estimated Annual Proportional Contribution to Implementation Costs

Permittee Agency	Total Share	Estimated Annual Operating Cost of Program Implementation
San Bernardino Valley Municipal Water District	40%	$ 933,200.00
East Valley Water District	7%	$ 163,310.00
Riverside Public Utilities	5%	$ 116,650.00
Inland Empire Utilities Agency	20%	$ 466,600.00
Western Municipal Water District of Riverside County	15%	$ 349,950.00
San Bernardino Municipal Water Department	5%	$ 116,650.00
Metropolitan Water District of Southern California	2%	$ 46,660.00
Rialto Utility Authority	2%	$ 46,660.00
San Bernardino Valley Water Conservation District	3%	$ 69,990.00
Orange County Water District	1%	$ 23,330.00
West Valley Water District	1%	$ 23,330.00
Total	**100%**	**$ 2,333,000**

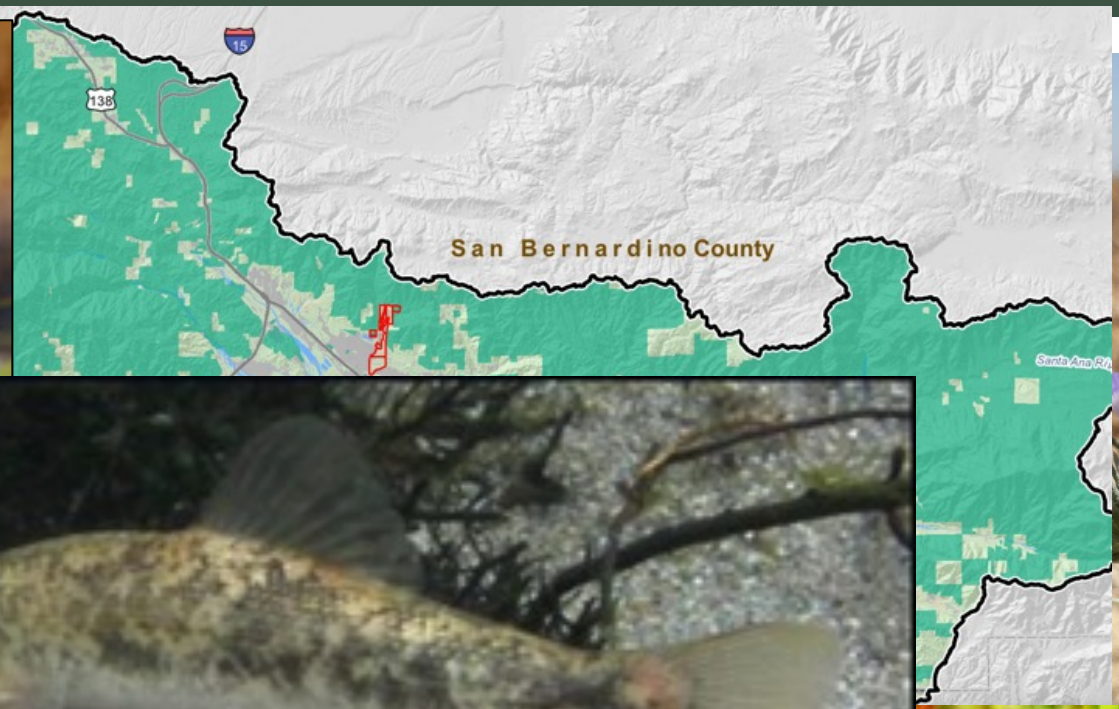
HCP Benefits

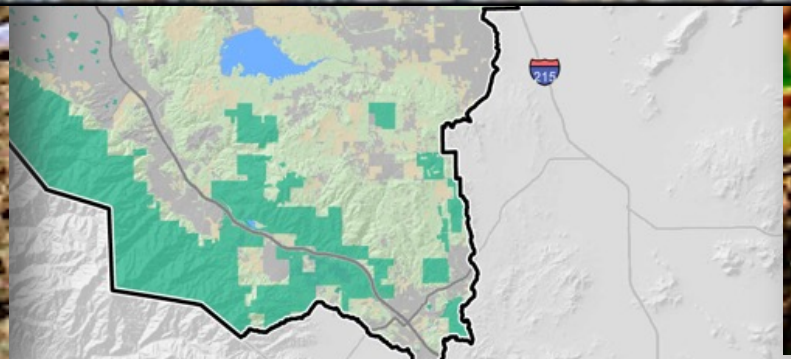
Upper Santa Ana River
• HABITAT CONSERVATION PLAN •



Upper Santa Ana River

• HABITAT CONSERVATION PLAN •





Public Notification of Draft EIR (Notice of Availability)

Availability/Review

- Notice of Availability County Clerk / State Clearinghouse : May 17, 2021

- 60 Day Draft EIR Review ending July 16, 2021 at 5:00pm PST

Links to online documents:

- http://www.uppersarhcp.com/Additional.aspx

CEQA Process

- San Bernardino Valley Municipal Water District (CEQA Lead Agency)
- Other Cooperating/Responsible/Trustee Agencies:
  - ✓ U.S. Army Corps of Engineers
  - ✓ U.S. Fish and Wildlife Service
  - ✓ California Department of Fish & Wildlife
  - ✓ Santa Ana Regional Water Quality Control Board

CEQA Goals

- The purpose of an environmental impact report is:
  - to identify the significant effects on the environment of a project,
  - to identify alternatives to the project, and
  - to indicate the manner in which those significant effects can be mitigated or avoided. (PRC Section 21002.1).
- Other Goals:
  - Local/State/Federal Cooperation & Objective Review
  - Forum to engage public in the process and obtain input on the proposed actions and alternatives

EIR Overview

- Executive Summary
- Proposed Project is the Proposed HCP
- Through Alternatives Screening, 4 alternatives out of 12 considered, were selected to evaluate in the EIR (12 screened down to 4)
- Alternatives Evaluated in the EIR :

✓ Alternative 1 – No Project

Action Alternatives:

✓ Alternative 2 – Phase 1 Covered Activities Only

✓ Alternative 3 – Reduced Impacts on Santa Ana Sucker

✓ Alternative 4 – Reduced Impacts on San Bernardino Kangaroo Rat

Project Description

Proposed Project -

- Issuance of incidental take permits (ITPs) from USFWS pursuant to Section 10(a)(1)(B) of the FESA

- Issuance of CESA Section 2081(b) permit(s) from CDFW. The CESA ITP will be a Section 2081 Multi-Project ITP, or other ITP(s) as deemed appropriate by CDFW.

- Subsequent adoption and implementation of the Plan by the Permit Applicants (Permittees) consistent with the permits

The permits would authorize take of certain State and Federally listed species (i.e., Covered Species) during the course of otherwise lawful activities (i.e., Covered Activities).

Project Description (cont.)

The EIR evaluates the direct and reasonably foreseeable indirect impacts associated with implementation of the Proposed Project, specifically related to:

- Issuance of ITPs and CESA Permits, and
- Activities associated with implementation of the Upper SAR HCP:
  - Conservation
  - Habitat improvement activities
  - Management, maintenance, and monitoring activities

Project Description/Covered Activities

Proposed Project relationship to Covered Activities

- Issuance of permits by the Wildlife Agencies would provide compliance with the Federal and State Endangered Species Acts for the Covered Species. The ITPs authorize the incidental take of Covered Species that may occur as a result of implementing Covered Activities.
- Approval of the proposed HCP would not confer or imply *approval to implement* the Covered Activities.
- Each of the resource sections in this chapter includes a summary discussion of the potential types of effects associated with implementation of the Covered Activities for informational purposes.

Environmental Effects Analyzed

- Aesthetics
- Agricultural & Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, & Paleontological Resources
- Greenhouse Gas Emissions & Energy
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use
- Minerals
- Noise & Vibration
- Population & Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities & Service Systems
- Wildfire

Proposed Project Impacts

- Aesthetics (Less Than Significant)
- Agricultural & Forestry Resources (Less Than Significant)
- Air Quality (Significant/Unavoidable)
- Biological Resources (Significant/Unavoidable)
- Cultural Resources (Less than significant w/Mitigation)
- Geology, Soils, & Paleontological Resources (Less than significant w/Mitigation)
- Greenhouse Gas Emissions & Energy (Less than significant w/Mitigation)
- Hazards & Hazardous Materials (Less than significant)
- Hydrology & Water Quality (Significant/Unavoidable)
- Land Use (No Impact)
- Minerals (Less Than Significant)
- Noise & Vibration (Less Than Significant w/Mitigation)
- Population & Housing (Less Than Significant)
- Public Services (Less Than Significant)
- Recreation (Less Than Significant)
- Transportation (Less Than Significant)
- Tribal Cultural Resources (Less Than Significant w/Mitigation)
- Utilities & Service Systems (Less Than Significant)
- Wildfire (Less Than Significant)

Biological Resources Impacts – Proposed Project

- The HCP has a net beneficial effect for all covered species
- Restoration activities associated with the Conservation Strategy are anticipated to benefit aquatic habitat for Santa Ana sucker through quality enhancements compared with existing conditions.
- AMMs for Santa Ana sucker will be implemented, and the HCP's Up-Front and Stay-Ahead Provisions will require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%.
- However, given the threatened status of the species and consideration of the species current limited distribution within the Santa Ana River, for the purposes of this CEQA analysis, the potential impact on Santa Ana sucker is conservatively found to be significant and unavoidable.
- The EIR reaches this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect on Santa Ana Sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.

Mitigation Measures – Proposed Project

- Biological Mitigation Measures
  - For Non-Covered Species
    - BIO-1: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Plant Populations
    - BIO-2: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Amphibians and Reptiles
    - BIO-3. Conduct Pre-activity Surveys to Document the Presence of Bat Maternity and Hibernation Roosts (Non-Covered species)
    - BIO-4: Conduct Pre-activity Surveys to Document Presence of San Diego Desert Woodrats (Non-Covered species)
    - BIO-5: Conduct Pre-activity Surveys to Document the Presence of American Badger (Non-Covered species)
  - For Consistency with other HCPs:
    - BIO-6: Conduct Impact Analysis to Ensure that Activities Do Not Conflict with the Provisions, Goals, and Objectives of Other HCPs within the Permit Area
    - BIO-7: Comply with Policies, Goals, Objectives, and Conservation Measures of Other HCPs Located within the Permit Area

Mitigation Measures – Proposed Project (cont.)

- Cultural Resources Mitigation Measures
  - CR-1: Establish Environmentally Sensitive Areas
  - CR-2: Retain a Qualified Archaeologist
  - CR-3: Conduct Archaeological Assessment
  - CR-4: Provide Archaeological and Native American Monitoring
  - CR-5: Temporarily Halt Construction Activities for any Unanticipated Discoveries
  - CR-6: Human Remains and Associated or Unassociated Funerary Objects
- Paleontological Resources Mitigation Measures
  - GEO-1: Monitor for Discovery of Paleontological Resources and Prepare and Follow a Recovery Plan for Found Resources
- Tribal Cultural Resources Mitigation Measures
  - TCR-1: Protect Tribal Cultural Resources

Mitigation Measures – Proposed Project (cont.)

- Hazards Mitigation Measures
  - HAZ-2: Prepare a Soil Investigation and/or Soil Management Plan CR-2: Retain a Qualified Archaeologist
  - HAZ-1: Conduct a Database Review and Retain a Hazardous Materials SpecialistCR-4: Provide Archaeological and Native American Monitoring
- Noise Mitigation Measures
  - NOI-1: Practices to Reduce Proposed Project Noise from Heavy Equipment
- Air Quality Mitigation Measures
  - AQ-1: Apply Dust Control Measures During Construction
  - AQ-2: Reduce Equipment and Vehicle Exhaust Emissions During Construction and Operation
  - AQ-3: Evaluate Feasibility of Offsets After All Feasible Mitigation Has Been Applied for Proposed Project Activities

Alternative 1 - No Project Alternative

- No Upper SAR HCP or jointly held Section 10 ITP would be granted to the Permittees to permit Covered Activities.
- No HCP Preserve System would be established and activities like Tributaries Restoration/Rehabilitation and translocation of Santa Ana sucker would occur without the Section 10 permit issued as part of the Proposed Project.
- Covered Activities could be implemented individually by independently seeking permits, but without HCP or programmatic permit coverage.

Alternative 1 – Impacts

- Aesthetics (Less Than Significant)
- Agricultural & Forestry Resources (Less Than Significant)
- Air Quality (Less than significant)
- Biological Resources (Significant/Unavoidable)
- Cultural Resources (Less than significant)
- Geology, Soils, & Paleontological Resources (Less than significant)
- Greenhouse Gas Emissions & Energy (Less than significant)
- Hazards & Hazardous Materials (Less than significant)
- Hydrology & Water Quality (Less than significant)
- Land Use (No Impact)
- Minerals (Less Than Significant)
- Noise & Vibration (Less Than Significant)
- Population & Housing (Less Than Significant)
- Public Services (Less Than Significant)
- Recreation (Less Than Significant)
- Transportation (Less Than Significant)
- Tribal Cultural Resources (Less Than Significant)
- Utilities & Service Systems (Less Than Significant)
- Wildfire (Less Than Significant)

Action Alternatives

All of the action alternatives would include the issuance of an ITPs by the USFWS—together with subsequent adoption and implementation of the Plan by the Permit Applicants (Permittees) consistent with the permits

Alternative 2 – Phase 1 Covered Activities Only

All of the action alternatives would include the issuance of an ITPs by the USFWS—together with subsequent adoption and implementation of the Plan by the Permit Applicants (Permittees) consistent with the permits

Alternative 2: Phase 1 Covered Activities Only Alternative

- This alternative would only include those high-priority near-term Covered Activities that are identified in Phase 1 (Years 0–5) of the Upper SAR HCP.

Alternative 2 – Impacts

- Aesthetics (Less Than Significant)
- Agricultural & Forestry Resources (Less Than Significant)
- Air Quality (Significant/Unavoidable)
- Biological Resources (Significant/Unavoidable)
- Cultural Resources (Less Than Significant w/ Mitigation)
- Geology, Soils, & Paleontological Resources (Less Than Significant w/ Mitigation)
- Greenhouse Gas Emissions & Energy (Less Than Significant)
- Hazards & Hazardous Materials (Less Than Significant w/ Mitigation)
- Hydrology & Water Quality (Significant/Unavoidable)
- Land Use (No impact)
- Minerals (Less Than Significant)
- Noise & Vibration (Less Than Significant w/ Mitigation)
- Population & Housing (Less Than Significant)
- Public Services (Less Than Significant)
- Recreation (Less Than Significant)
- Transportation (Less Than Significant)
- Tribal Cultural Resources (Less Than Significant w/ Mitigation)
- Utilities & Service Systems (Less Than Significant)
- Wildfire (Less Than Significant)

Alternative 3 – Reduced Impacts on Santa Ana Sucker

Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative

- Proposed recycled water projects that reduce effluent discharge to the Santa Ana River and have the most impact on Santa Ana sucker would be scaled back or eliminated from Covered Activities.

- This alternative would result in reduced impacts on the baseflow in the Santa Ana River; therefore, Santa Ana sucker habitat would not require the same level of conservation measures and mitigation to offset the impacts, such as Tributaries Restoration/Rehabilitation and Translocation.

Alternative 3 – Impacts

- Aesthetics (Less Than Significant)
- Agricultural & Forestry Resources (Less Than Significant)
- Air Quality (Significant/Unavoidable)
- Biological Resources (Less Than Significant w/ Mitigation)
- Cultural Resources (Less Than Significant w/ Mitigation)
- Geology, Soils, & Paleontological Resources (Less Than Significant w/ Mitigation)
- Greenhouse Gas Emissions & Energy (Less Than Significant)
- Hazards & Hazardous Materials (Less Than Significant w/ Mitigation)
- Hydrology & Water Quality (Less Than Significant)
- Land Use (No Impact)
- Minerals (Less Than Significant)
- Noise & Vibration (Less Than Significant w/ Mitigation)
- Population & Housing (Less Than Significant)
- Public Services (Less Than Significant)
- Recreation (Less Than Significant)
- Transportation (Less Than Significant)
- Tribal Cultural Resources (Less Than Significant w/ Mitigation)
- Utilities & Service Systems (Less Than Significant)
- Wildfire (Less Than Significant)

Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative

- Storm flow diversion projects that potentially have the most impact on the SBKR habitat would be scaled back or eliminated from Covered Activities.

- Reduced impact on SBKR habitat from Covered Activities would not require the same level of conservation measures and mitigation to offset the impacts, such as purchase, restoration/rehabilitation, and conservation of occupied habitat.

Alternative 4 –Impacts

- Aesthetics (Less Than Significant)
- Agricultural & Forestry Resources (Less Than Significant)
- Air Quality (Significant/Unavoidable)
- Biological Resources (Significant/Unavoidable)
- Cultural Resources (Less Than Significant w/ Mitigation)
- Geology, Soils, & Paleontological Resources (Less Than Significant w/ Mitigation)
- Greenhouse Gas Emissions & Energy (Less Than Significant)
- Hazards & Hazardous Materials (Less Than Significant w/ Mitigation)
- Hydrology & Water Quality (Significant/Unavoidable)
- Land Use (No Impact)
- Minerals (Less Than Significant)
- Noise & Vibration (Less Than Significant w/ Mitigation)
- Population & Housing (Less Than Significant)
- Public Services (Less Than Significant)
- Recreation (Less Than Significant)
- Transportation (Less Than Significant)
- Tribal Cultural Resources (Less Than Significant w/ Mitigation)
- Utilities & Service Systems (Less Than Significant)
- Wildfire (Less Than Significant)

Comparison of Alternatives

Environmental Issue Area	Proposed Project	Alternative 1:	Alternative 2:	Alternative 3:	Alternative 4:
Aesthetics	LTS	+	+	+	+
Agriculture and Forestry Resources	LTS	=	=	=	=
Air Quality	SU	-	-	-	-
Biological Resources	SU	-	-	-	-
Cultural Resources	LTS w/MM	-	-	-	-
Geology, Soils, and Paleontological Resources	LTS w/MM	-	-	-	-
Greenhouse Gas Emissions/Energy	LTS	-	-	-	-
Hazards and Hazardous Materials	LTS	-	-	-	-
Hydrology and Water Quality	SU	+	+	+	+
Land Use	NI	=	=	=	=
Mineral Resources	LTS	-	-	-	-

Comparison of Alternatives (cont.)

Environmental Issue Area	Proposed Project	Alternative 1:	Alternative 2:	Alternative 3:	Alternative 4:
Noise and Vibration	LTS w/MM	-	-	-	-
Population and Housing	LTS	=	=	=	=
Public Services	LTS	=	=	=	=
Recreation	LTS	+	=	=	=
Transportation	LTS	-	-	-	-
Tribal Cultural Resources	LTS w/MM	-	-	-	-
Utilities and Service Systems	LTS	=	=	=	=
Wildfire	LTS	=	+	+	+
Cumulative Impacts	SU	-	-	-	-

Impacts of All Alternatives

- Nearly all resources had less-than-significant impacts with mitigation or no impact under all alternatives:
  - Aesthetics
  - Agriculture & Forestry Resources
  - Cultural Resources
  - Greenhouse Gas Emissions/Energy
  - Hazards
  - Land Use
  - Mineral Resources
  - Noise
  - Population & Housing
  - Public Services
  - Recreation
  - Transportation
  - Tribal Cultural Resources
  - Utilities & Service Systems
  - Wildfire

Impacts of All Alternatives – Cont.

- Some resources had significant and unavoidable impacts under some or all alternatives:
  - Air Quality (all alternatives)
  - Biological Resources (Alternatives 1, 2 and 4)
  - Hydrology (Alternatives 2 and 4)
  - Cumulative Impacts

Opportunities for Public Input

- ❑ Today's Public Meeting for comments on the Draft EIR (submitted in writing)

- ❑ Draft EIR Circulation (60 day public review period) ends at 5:00 PM on July 16, 2021

- ❑ Written comments and written responses to all written comments on the Draft EIR received during the public comment period will be included in the Final EIR.

Comment Submission

- San Bernardino Valley Municipal Water District, 380 East Vanderbilt Way, San Bernardino, CA 92408; via email uppersarhcp@icf.com; no later than 5:00pm on July 16, 2021

- Please note that comments must be submitted in writing via mail or email.

Questions?