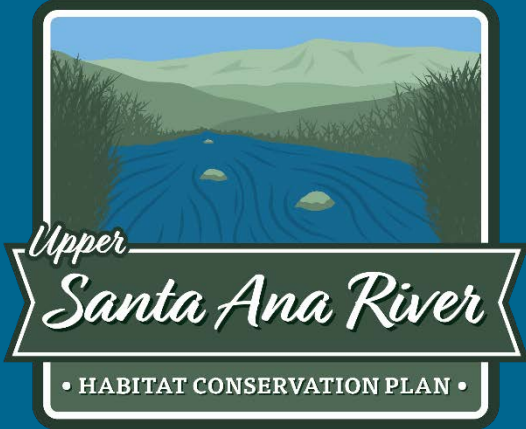


Upper Santa Ana River Habitat Conservation Plan (HCP): Draft Environmental Impact Report



HCP Overview

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)

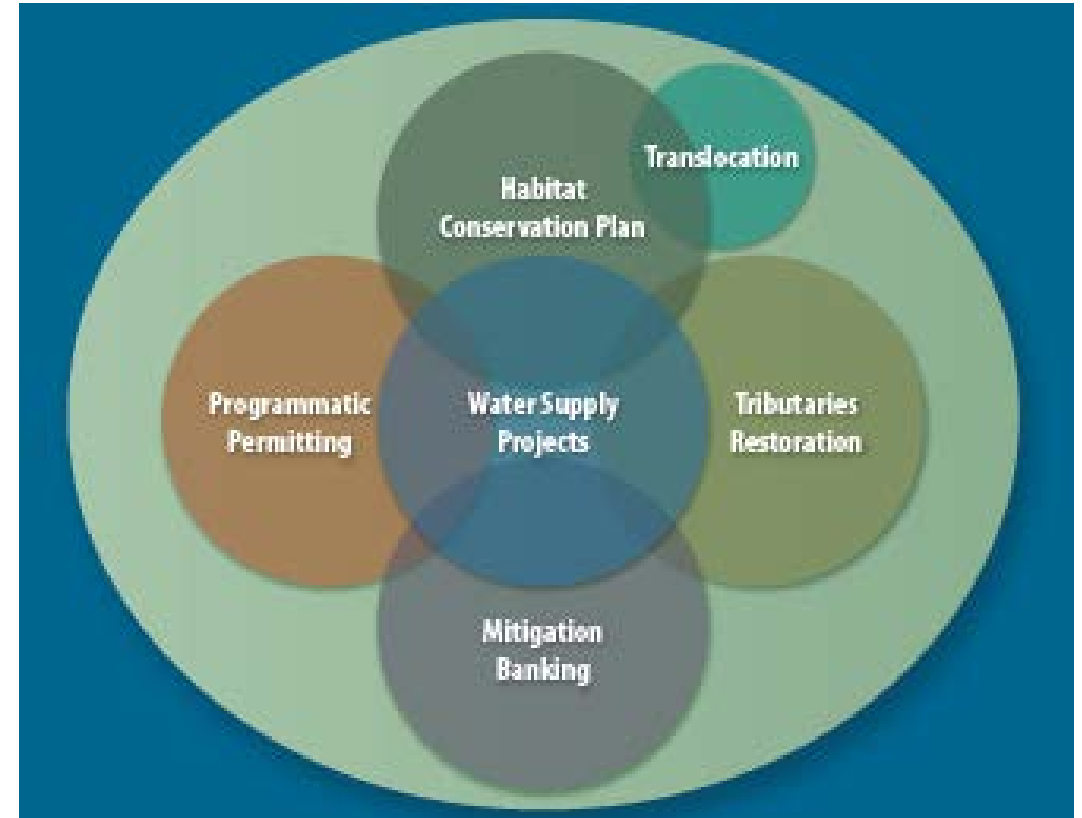
- Planning documents
- Required as part of an application for an incidental take permit
- Describe effects of impacts, how impacts will be minimized/mitigated
- How the HCP will be funded



Partnership and Collaboration

Regional, comprehensive program:

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



HCP Benefits

Increase
regional water
supply
reliability

Local cost
savings: \$945M

Permanently
conserve $\geq 1,349$
acres

Manage
conservation
lands, &
translocations in
perpetuity.
Provide dedicated
stream flow.

Capture &
Recharge of
~80,000 AFY

Creation of ~85
jobs annually

Protect 22
native animals
and plants

Protect 12
endangered
/threatened
species

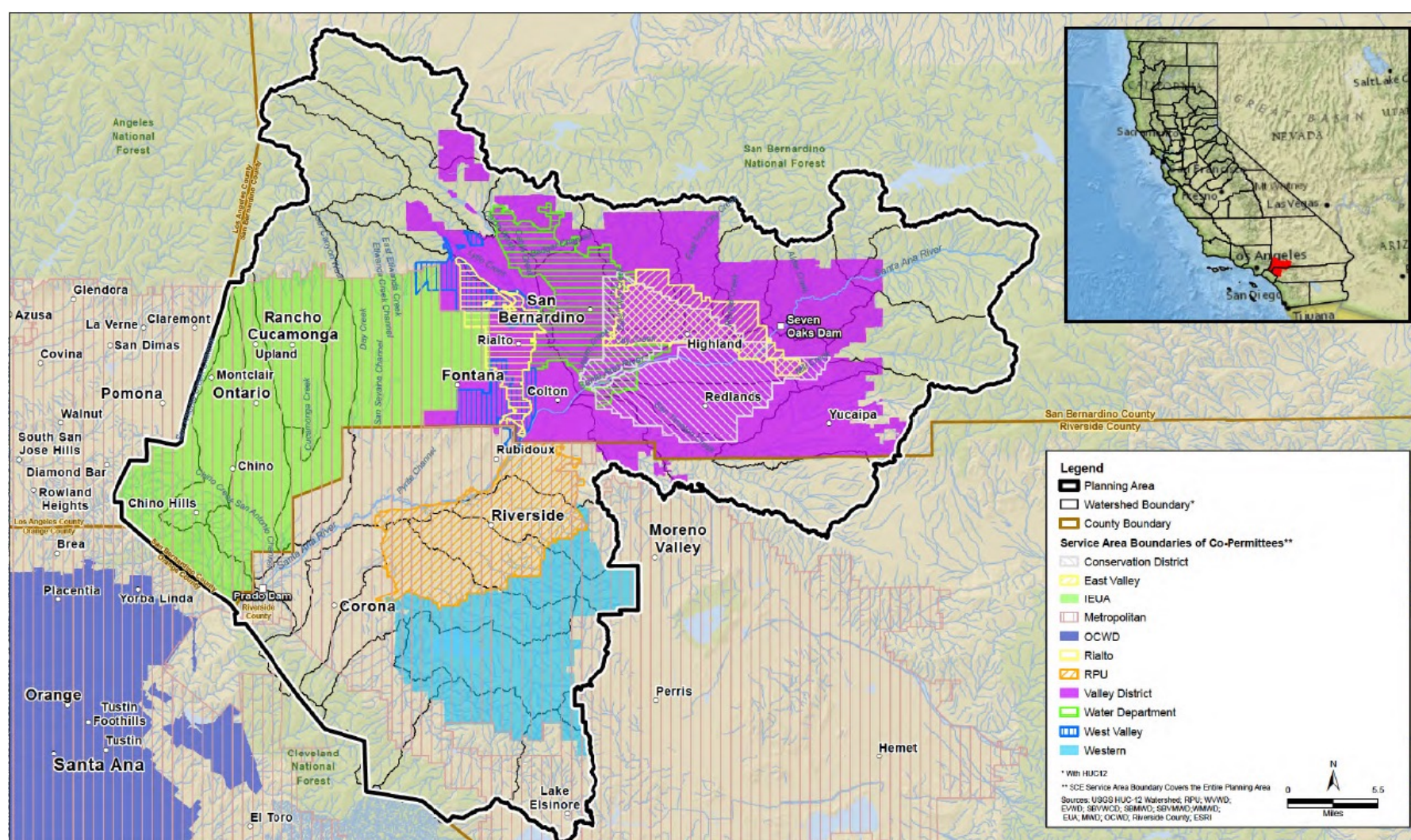
➤ HCP Team:

➤ **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

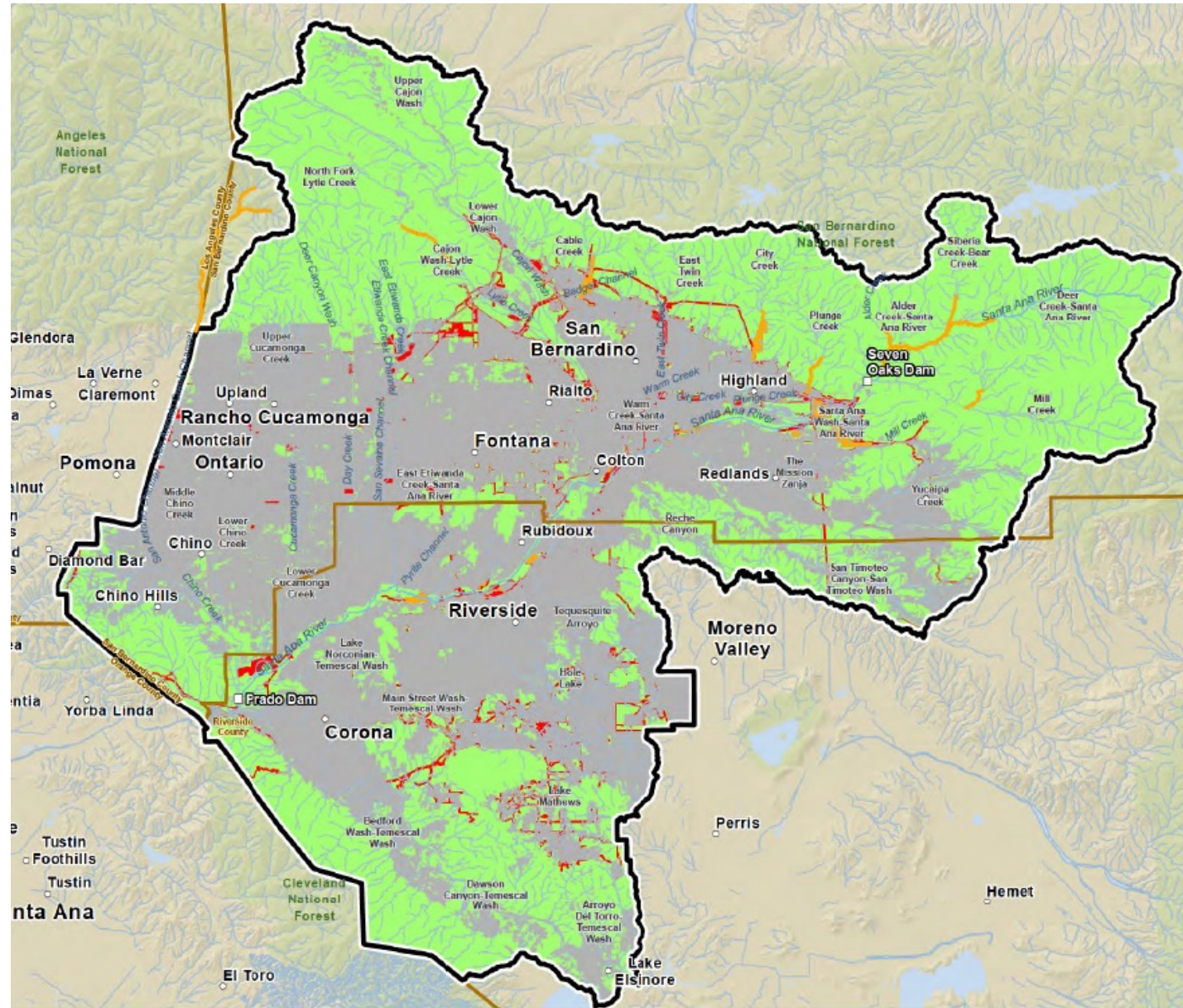


- **863,000 Acres**
- 35,000 = Riparian
 - 22,000 = Water
 - 425,000 = Upland
 - 336,000 = Developed

- **Includes Areas with:**
- Covered Activities
 - Covered Species
 - Conservation Activities

Covered Activities

- >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 Species

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



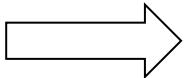
Photo: RCRCD



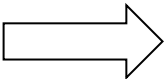
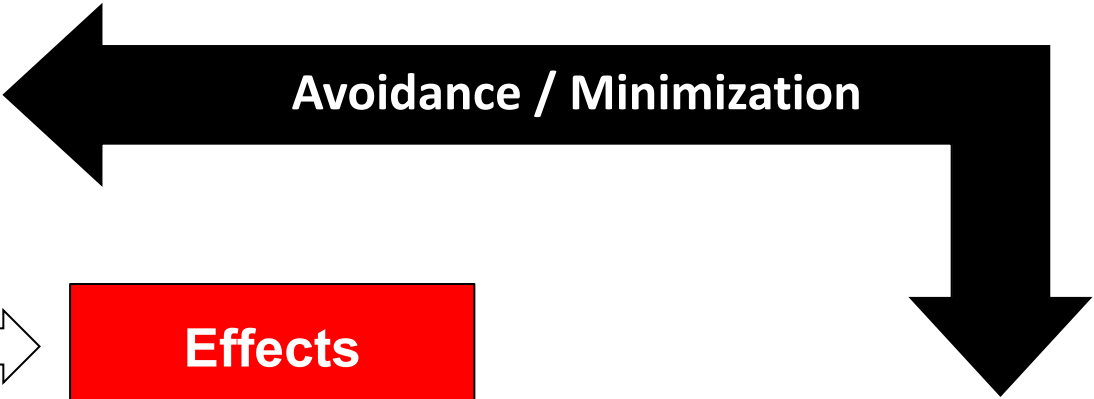
Photo: San Diego Zoo

Overview of HCP Building Block Process

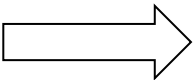
Baseline



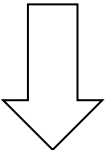
Covered Activities



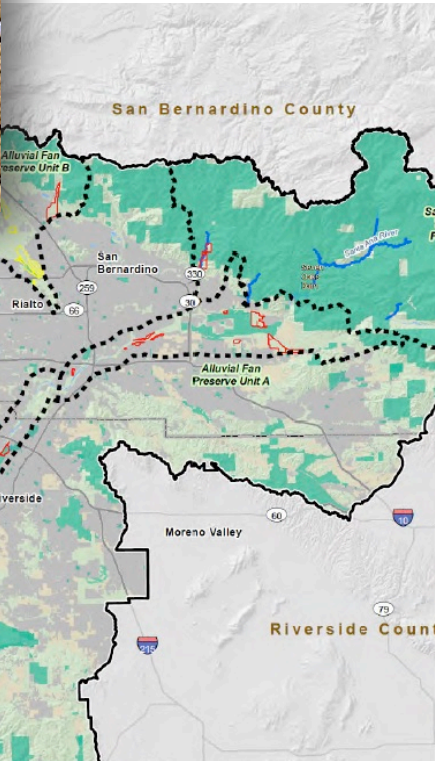
Effects



Conservation Measures



Mitigation



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

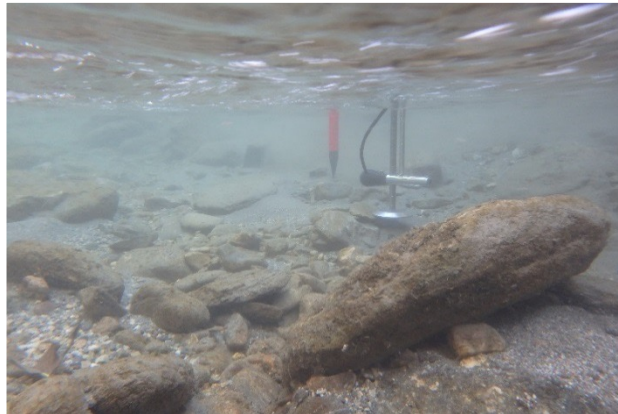
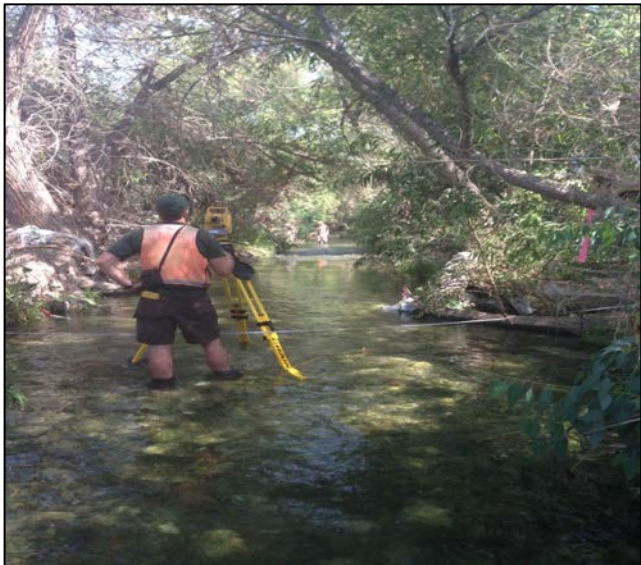


Conservation Benefits

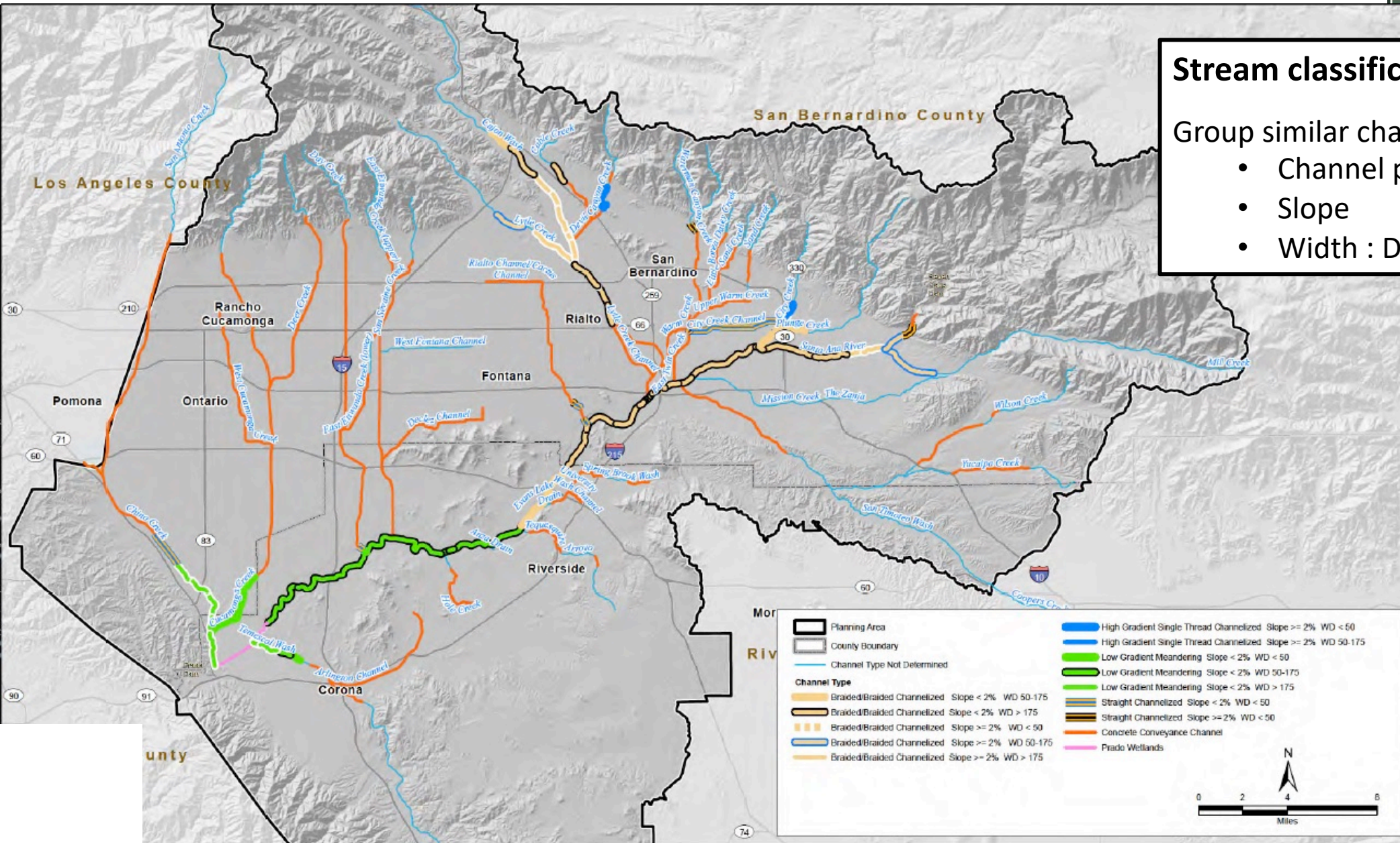
- + Improvement to Hydrology
- + Increased Spawning Habitat
- + Augmentation of Population
- + Increased Riparian Vegetation
- + Increased Function of Habitat
- + Preservation of Habitat
- + Decreased Predation

Focus on Quality Science

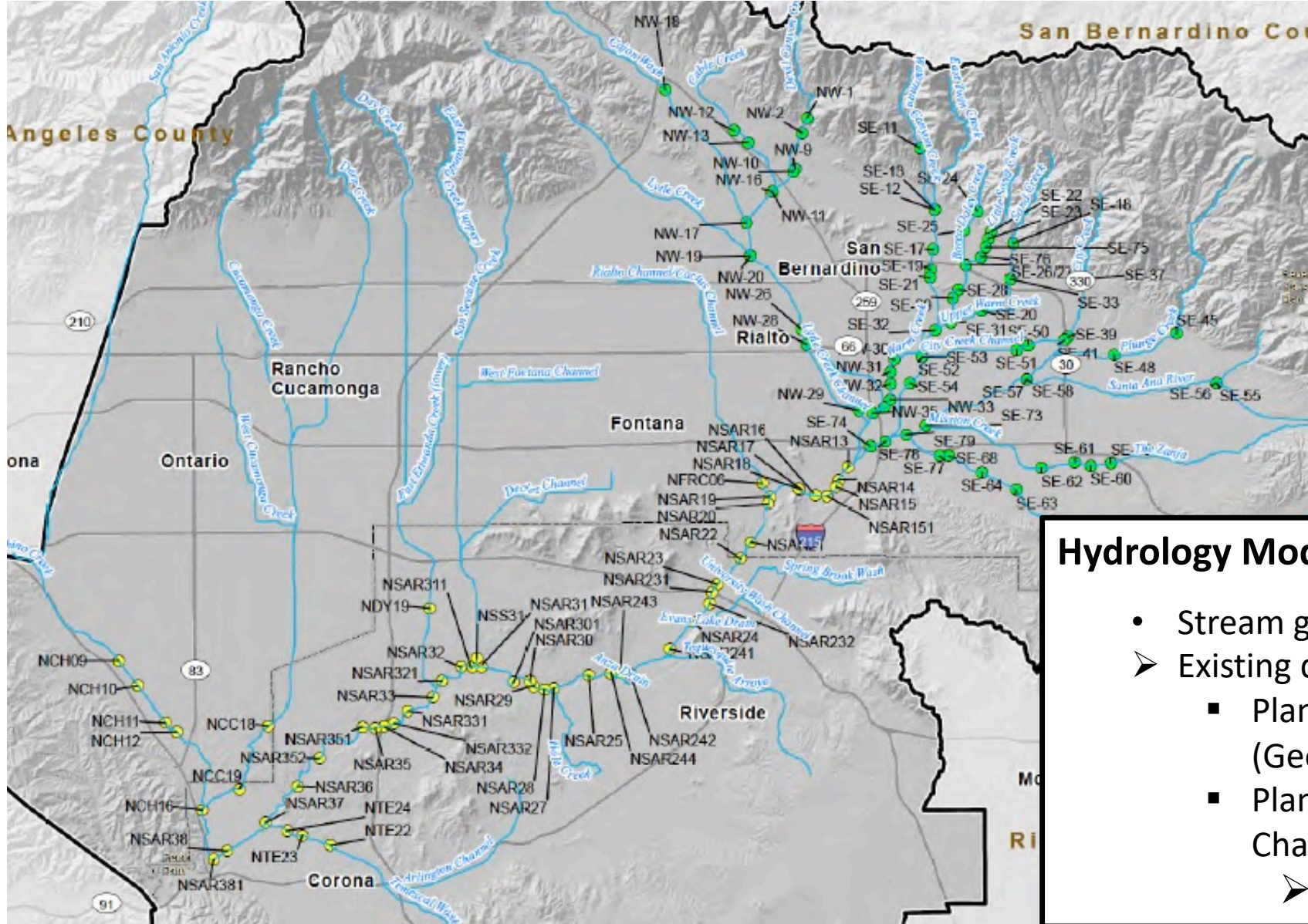
- USGS Researchers
- Sediment Transport Study
- Santa Ana sucker baseline survey: 2015 - 2020
- Measured habitat variables “at fish” observation
- HCP Technical Team developed habitat criteria specifically for SAS based on survey data (depth, velocity, substrate needs)
- USGS/EPA/Universities – additional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



Baseline Hydrology



Baseline Hydrology

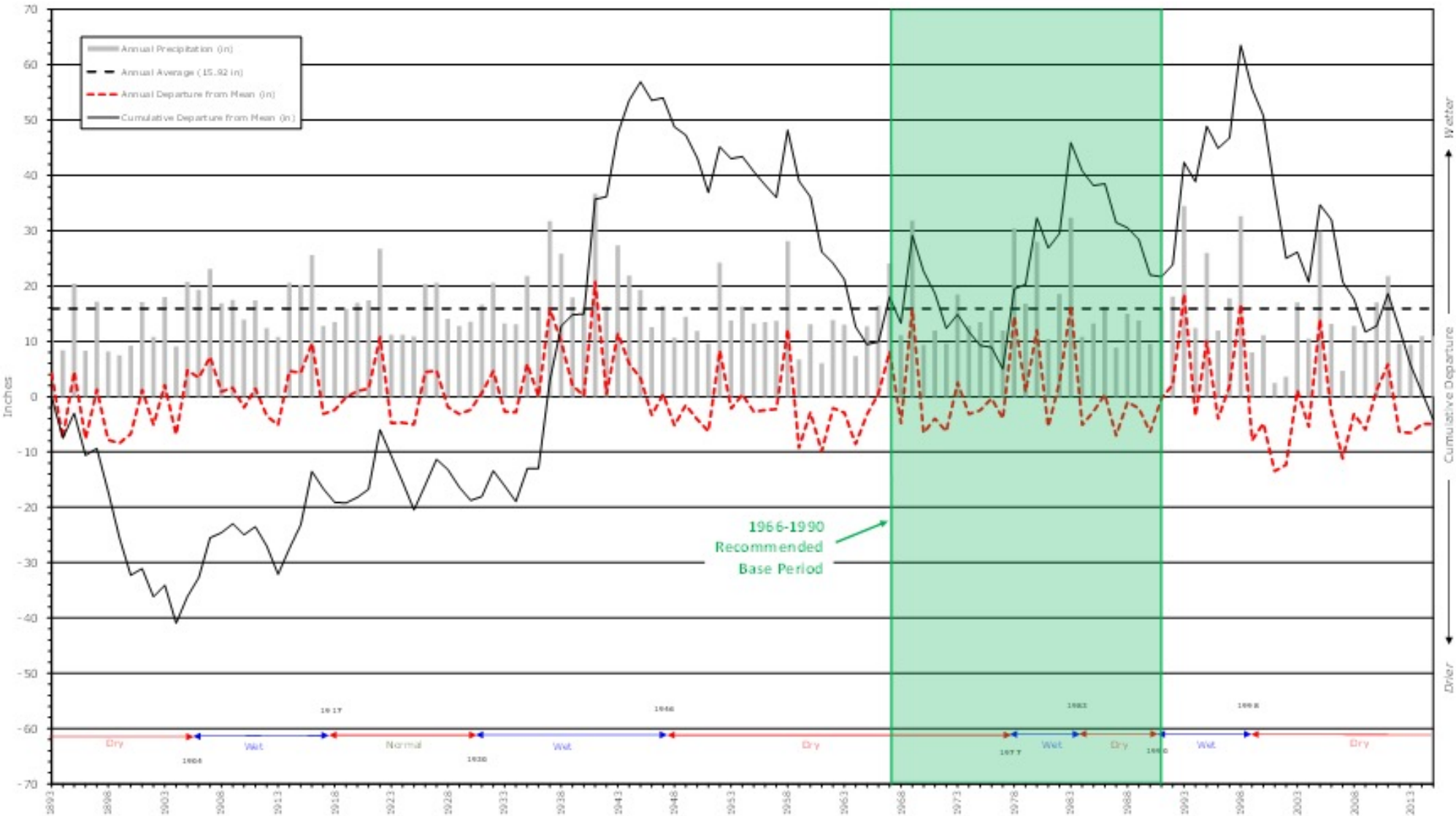


Hydrology Model

- 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**

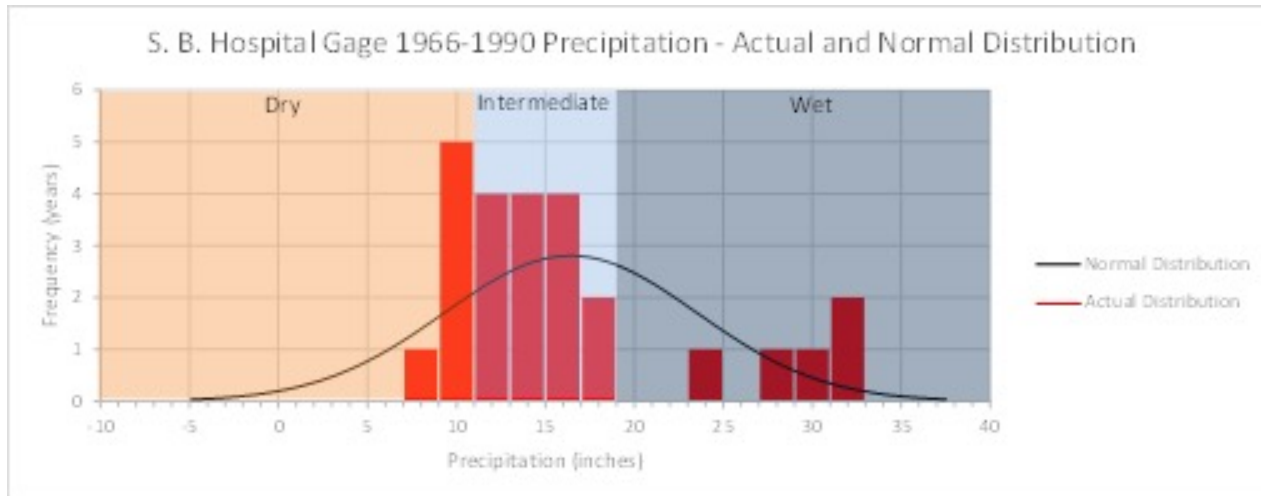
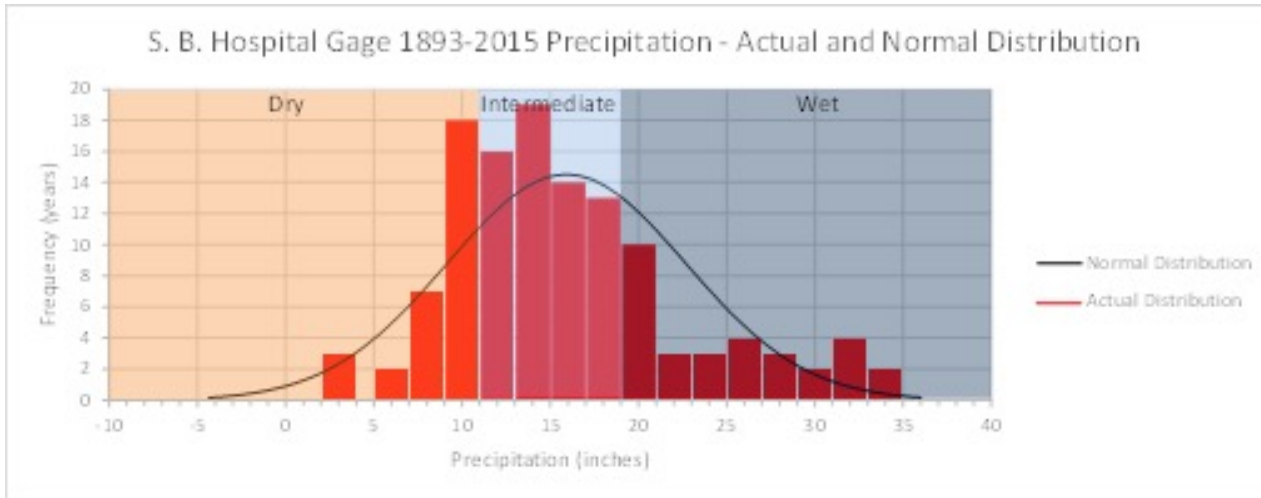
Baseline Hydrology

Annual Precipitation at the San Bernardino Hospital Gage for Water Years 1893-2015



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

HCP Hydrology Model

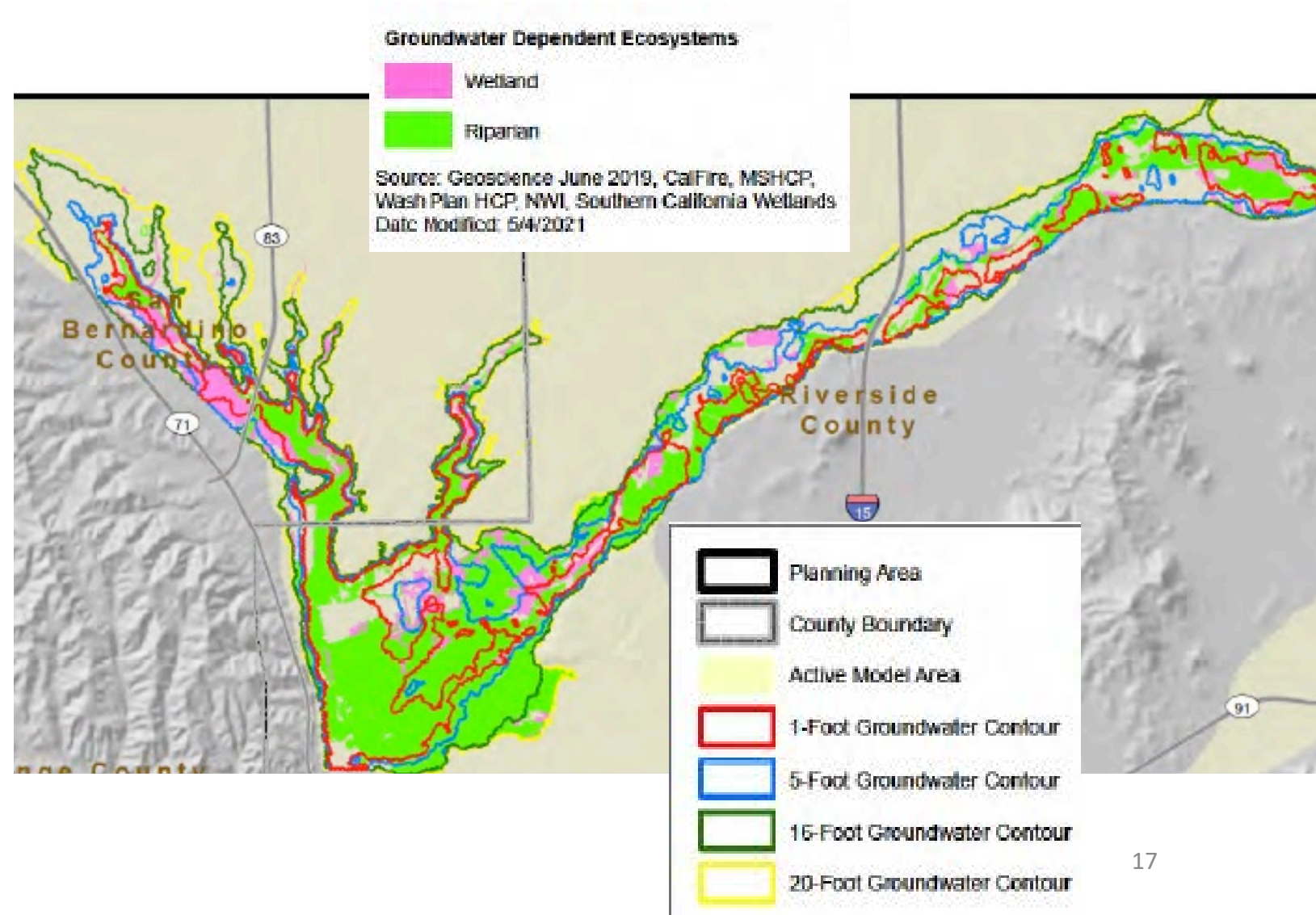
- Daily stream flow (wet and dry years)
- Sediment transport

Integrated Model

Existing
Groundwater
Models

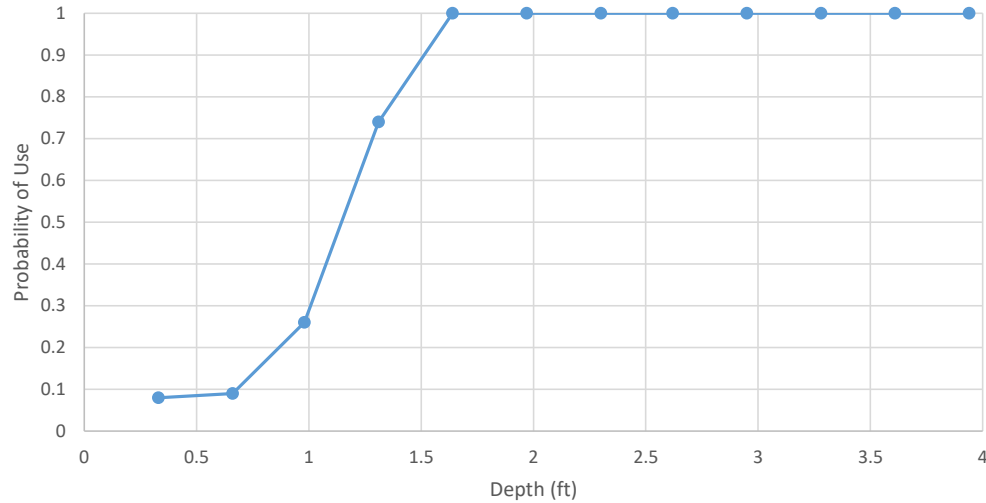


Existing
Surface Flow
Models

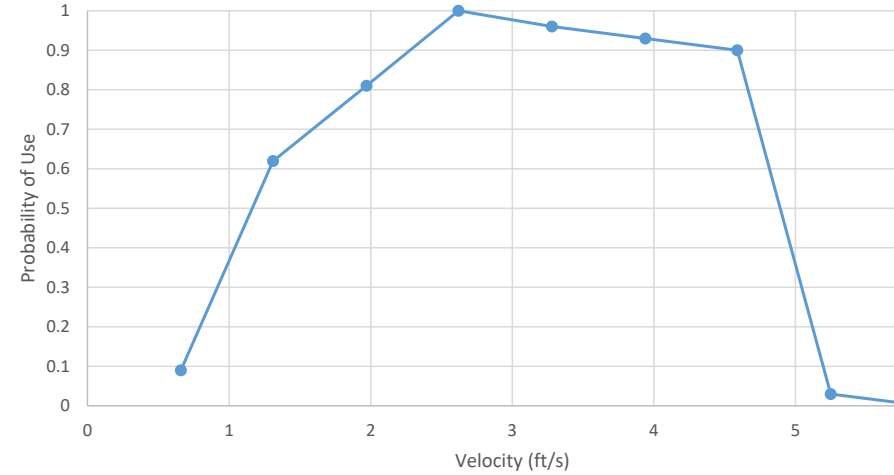


Habitat Suitability Models: Santa Ana Sucker

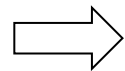
Probability of Use - Depth



Probability of Use - Velocity



Surface Area
2D Models



Depth/Velocity
Surface Area
Values

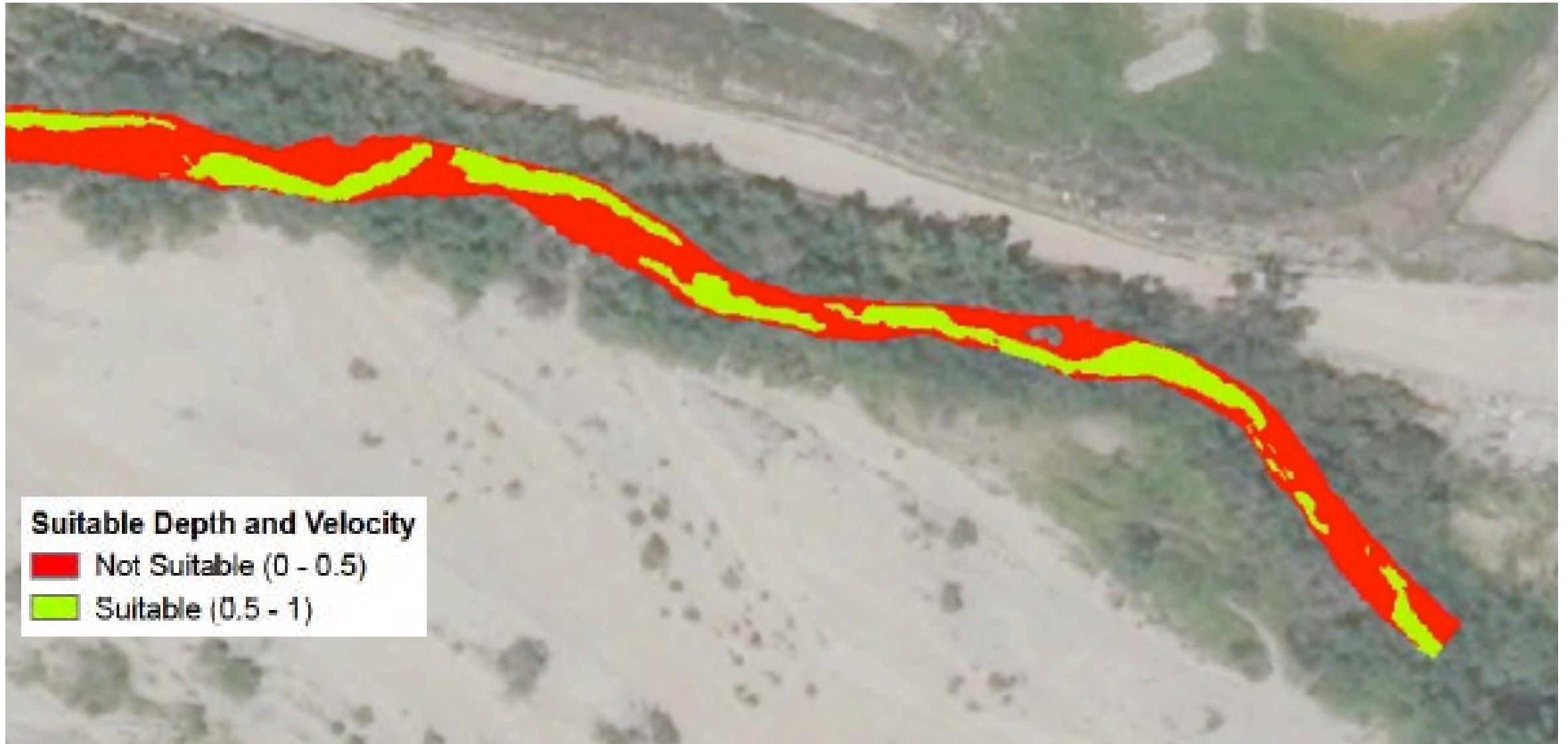


Reaches with
suitable habitat:
>10%
Gravel/Cobble



Sucker Preferred
Habitat Area

Santa Ana Sucker Preferred Habitat



Terrestrial species and semi-aquatic species

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

Southwestern pond turtle

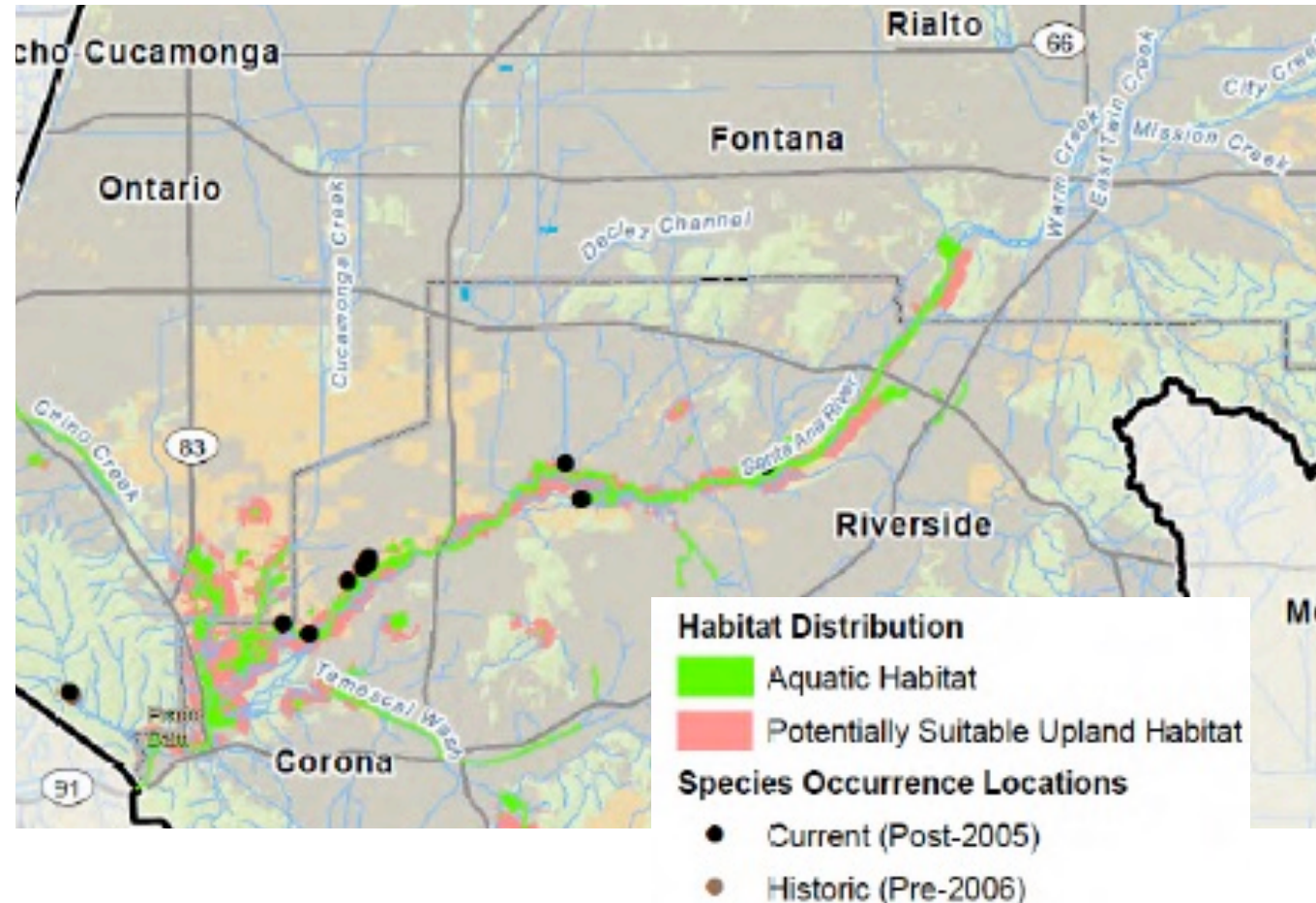
Aquatic Habitat

- **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.

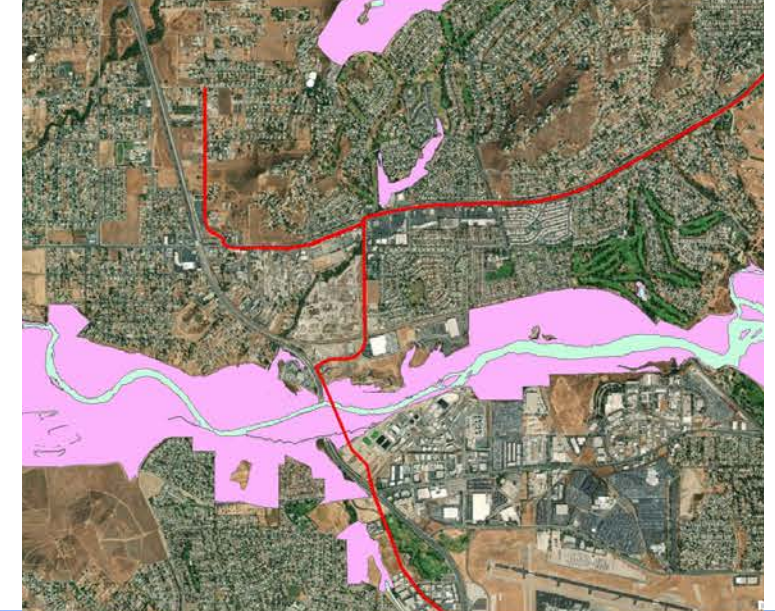
Post-processing: Removed fragmented and isolated patches surrounded by development and upstream of RIX Discharge.



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



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

- 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

HCP Goals and Objectives

HCP Goal 1: Conserve Covered Species and manage habitats to contribute to the recovery of listed species or those that may become listed under the Federal Endangered Species Act.

HCP Goal 2: Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.

HCP Goal 3: Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.

HCP Goal 4: Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

HCP Objective 1: Conserve, restore/rehabilitate, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.

HCP Objective 2: Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.

HCP Objective 3: Maintain and successfully enhance existing and new Santa Ana sucker habitats.

HCP Objective 4: Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.

HCP Objective 5: Implement successful conservation measures to promote the recovery of Covered Species.

HCP Objective 6: Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

Conservation Strategy



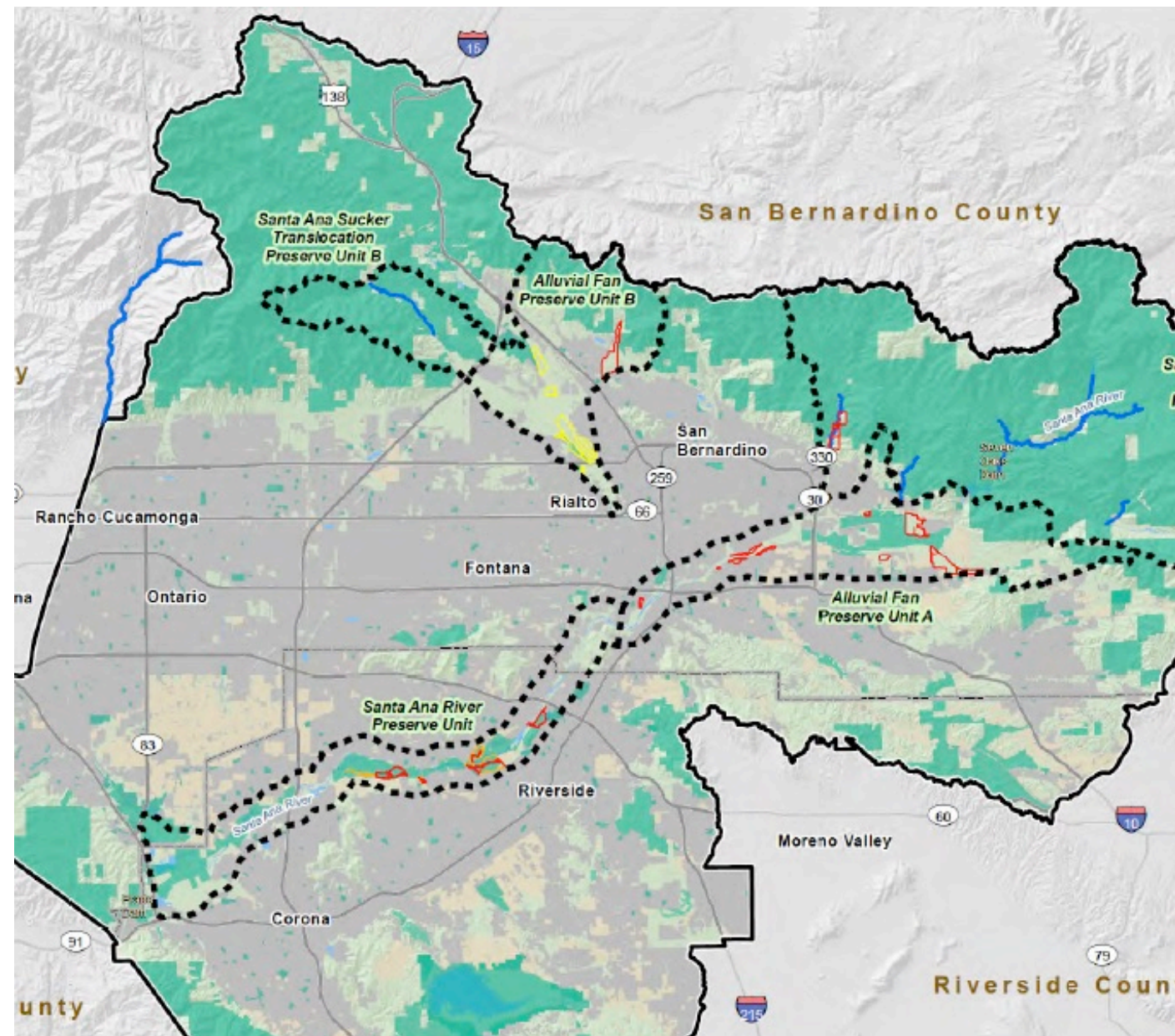
Conservation Strategy

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

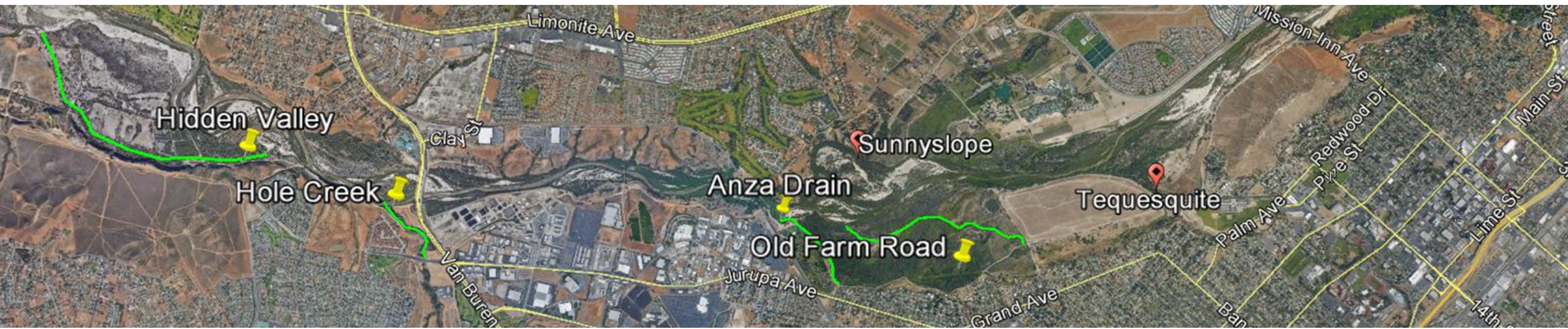
Tributaries Restoration

CREATE MORE
HABITAT

PROTECT &
ENHANCE
EXISTING
HABITAT

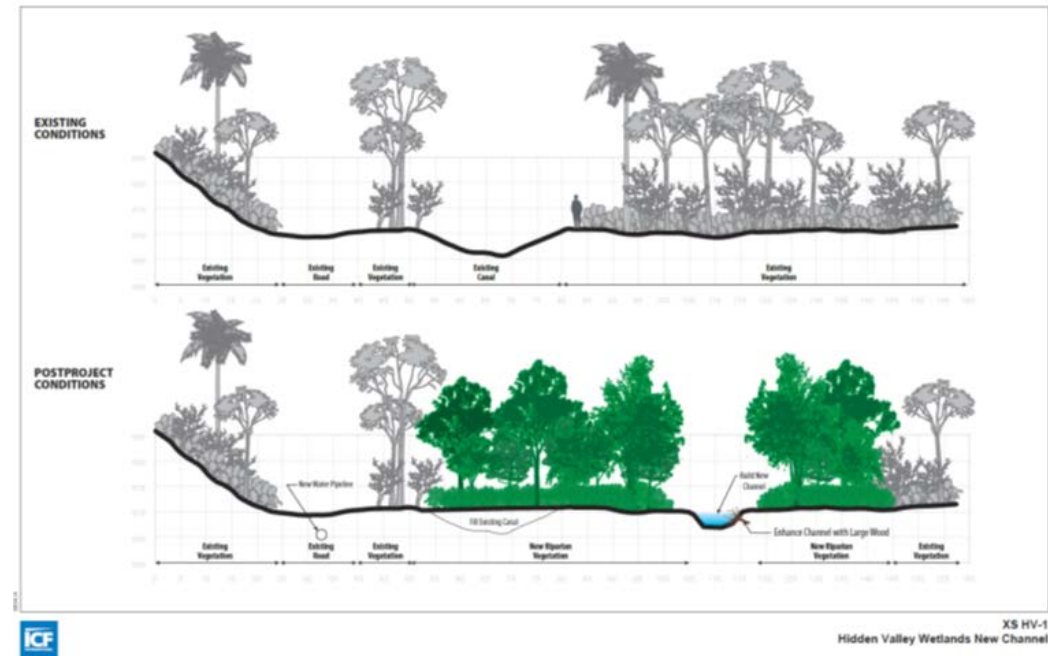
REDUCE
THREATS

Increase Habitat and Distribution



Restoration Sites:

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





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

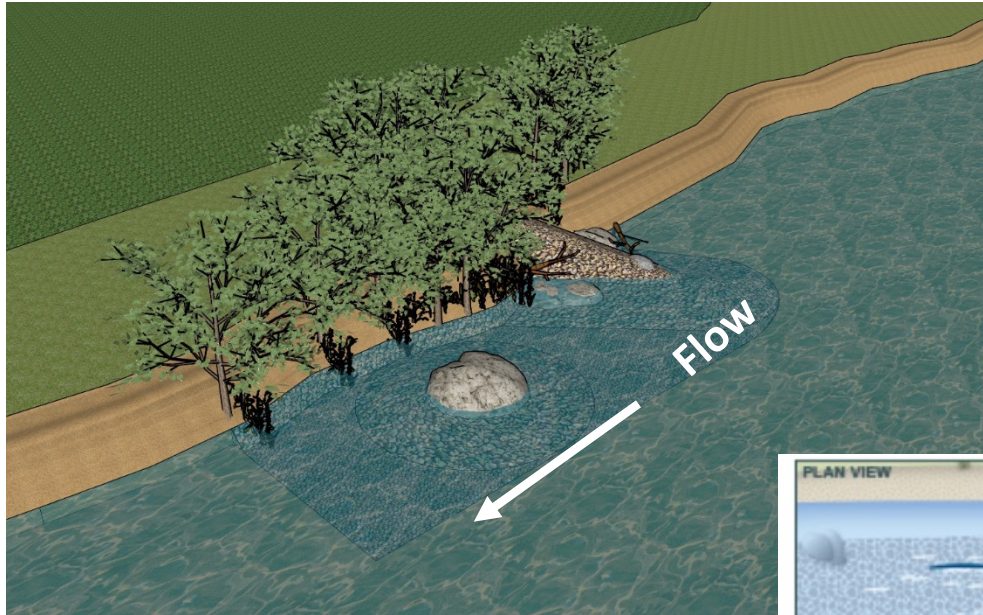
Microhabitat Enhancement

CREATE MORE
HABITAT

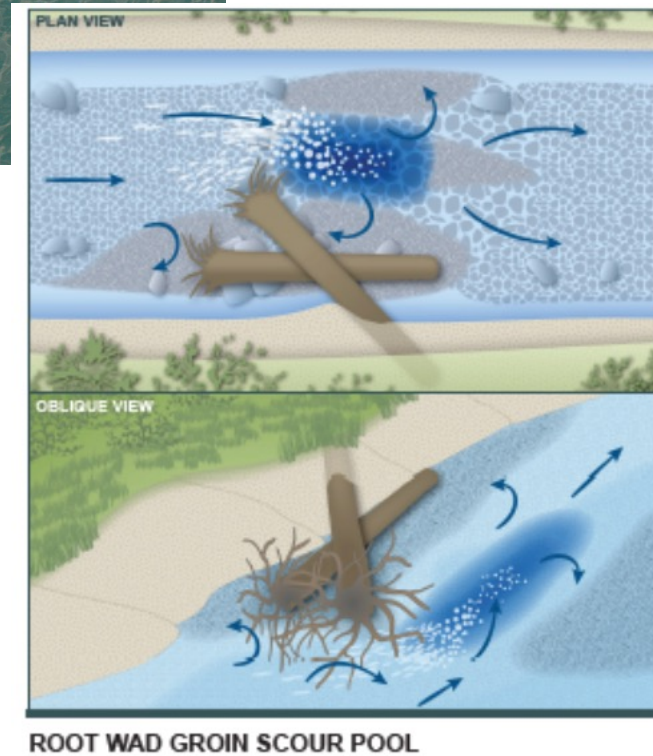
PROTECT &
ENHANCE
EXISTING
HABITAT

REDUCE
THREATS

Microhabitat In SAR

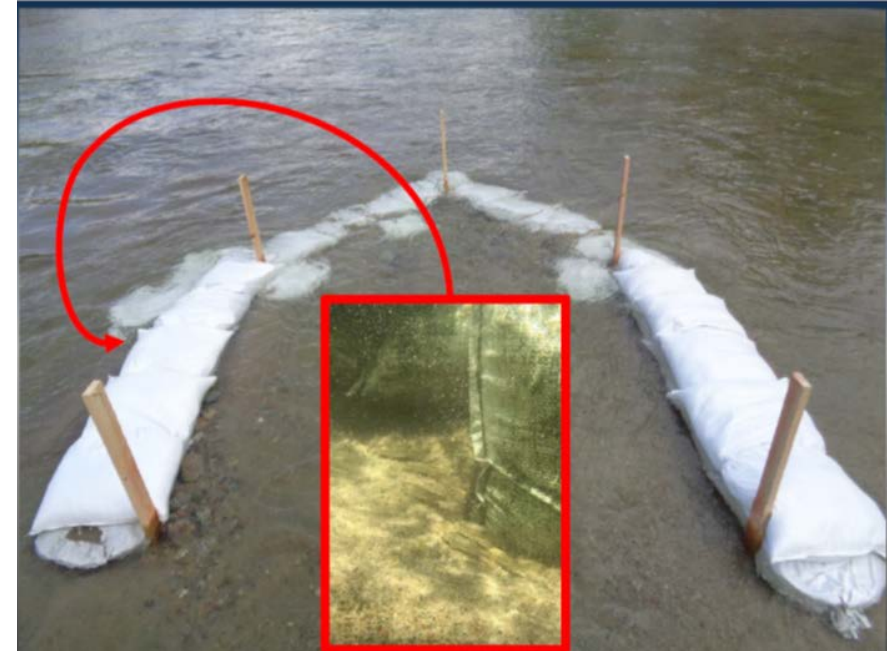


Microhabitat
enhancement: 1.5 acres



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 (3.1 cfs)
 - Lower Hole Creek (Up to 2.0 cfs)
 - Anza Creek (1.0 cfs)
 - Old Ranch Creek (2.0 cfs)
 - Evans Lake Creek (3.0 cfs)
 - Hidden Valley Wetlands (0.7 cfs)
 - Tequesquite (1.0 cfs)



(Remainder to 34.5 cfs [25,000 afy, 22.3 mgd]: Riverside WWTP)

➤ Support aquatic species in perpetuity



Translocation

CREATE MORE
HABITAT

ESTABLISH
ADDITIONAL
POPULATIONS

REDUCE
THREATS

SAS Translocation Units A & B

TRANSLOCATION TO UPPER WATERSHED

REFUGIA

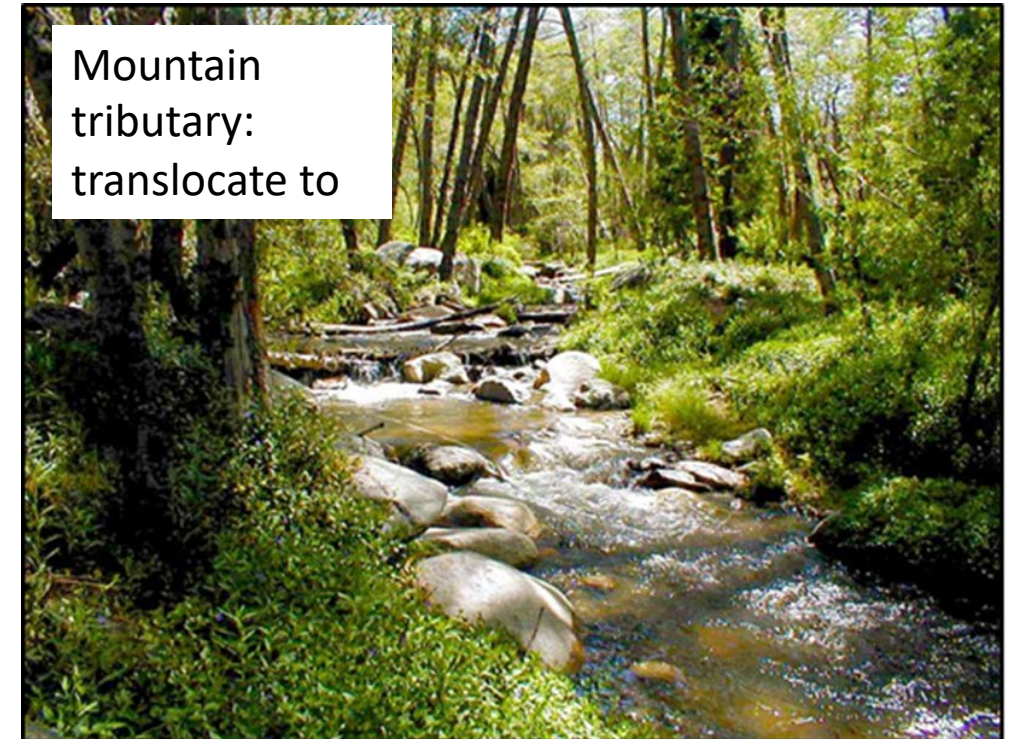
IMPACTS & RISK

Image Landsat

Google earth

Santa Ana Sucker Preserve Units A & B

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

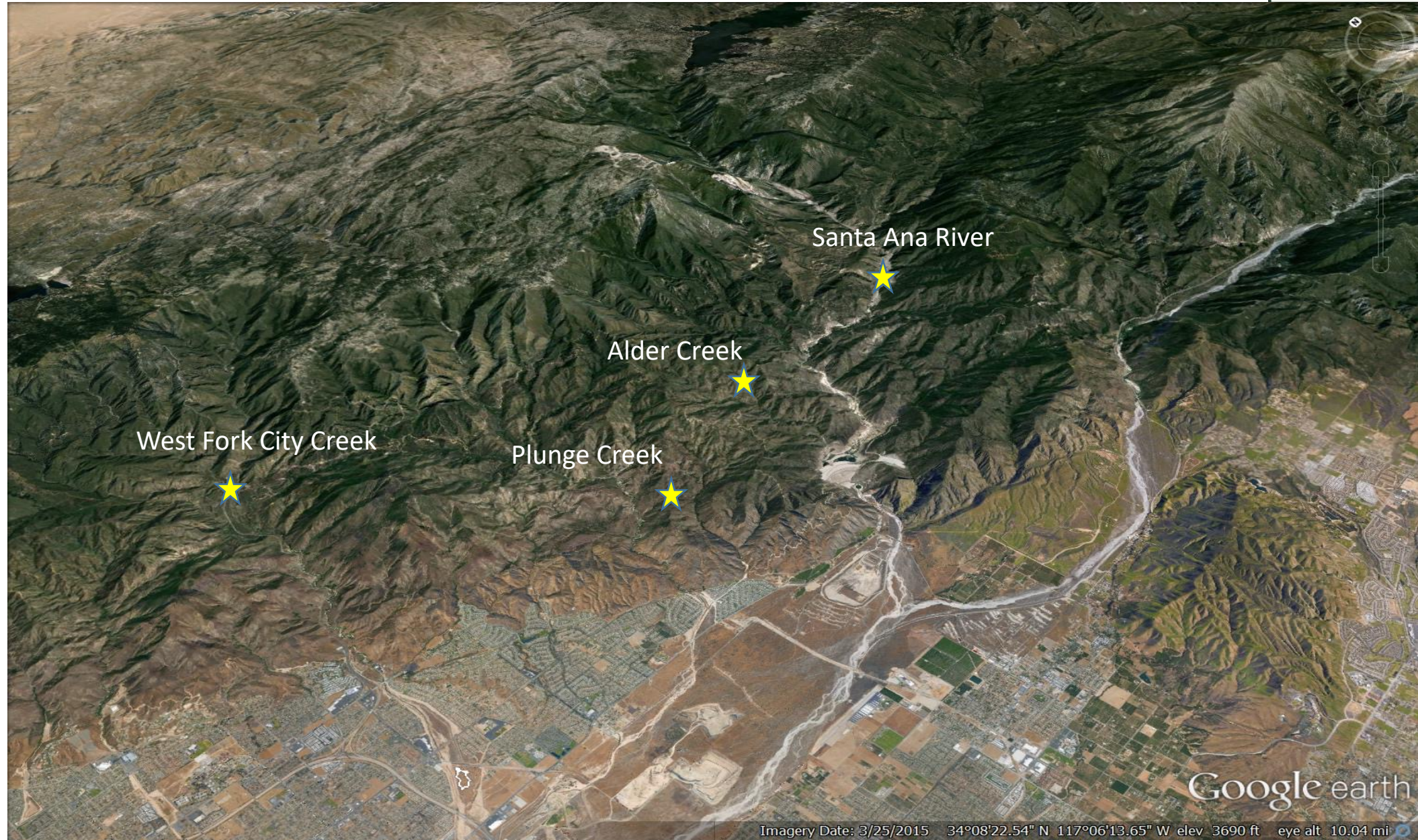


Captive Headstarting & Translocation

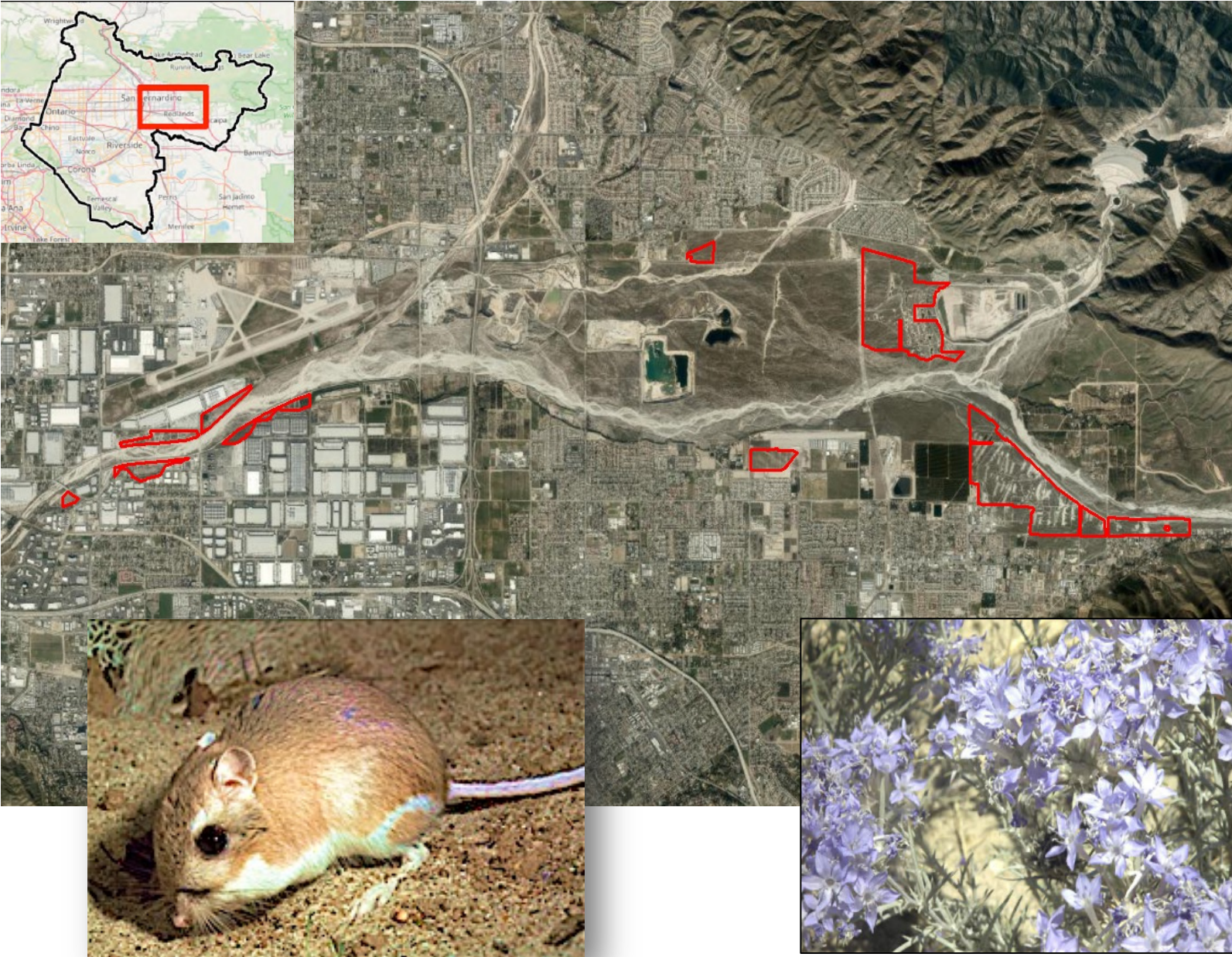
- YOY – raised to larger size class
- Translocated to high-quality habitat:
 - Streams on the National Forest where there are few anthropogenic risks (instant increase in occupied river miles)
- Populations will be monitored and managed
- Create redundancy and resiliency in the Santa Ana sucker population



POTENTIAL TRANSLOCATION SITES



Alluvial Fan Habitat



Alluvial Fan Unit A

- 455 acres conserved and managed

Alluvial Fan Unit B

- 320 acres conserved and managed

Objectives

➤ Goals

SAS Objective 3: Increase the amount and quality of available spawning habitat in lowland tributaries to the mainstem of the Santa Ana River.

- **SAS Action 3A:** Create or restore 3.6 stream miles of suitable habitat, including stream restoration/rehabilitation in the Anza Creek, Old Ranch Creek, Hidden Valley Creek, Lower Hole Creek, and Evans Lake habitat improvement areas.
- **SAS Action 3B:** Supplement or provide flow to Anza Creek, Old Ranch Creek, Hidden Valley Creek, and Lower Hole Creek Tributary habitat improvement areas via the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project (RPU.10).
- **SAS Action 3C:** Provide supplemental water to the Tequesquite Creek via the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project (RPU.10) (see Section 5.5.5, *Tequesquite Creek Supplementary Flows*).

Minimize effects of CAs

- **SAS AMM-1:** Limit work in the occupied wetted channel for restoration activities or other purposes during the Santa Ana sucker spawning season (currently determined to be February 15 to July 31).
- **SAS AMM-2:** During work within the occupied wetted channel, a qualified Santa Ana sucker biologist will be present to monitor the activities. A qualified Santa Ana sucker biologist is defined as an individual that holds a current 10(a)(1)(A) recovery permit for Santa Ana sucker. This individual, or any other project biologist, will have the authority to stop activities at any time if impacts on native aquatic species are observed. If impacts on Santa Ana sucker occur, the Alliance and USFWS will be contacted immediately to determine if additional measures to further minimize project impacts are needed.
- **SAS AMM-3:** Prior to diverting any water or de-watering a reach of the river, a team of biologists, which will include at least one qualified Santa Ana sucker biologist, will conduct a preliminary survey of the affected reach(es) to determine the presence of Santa Ana sucker. Where a large project is planned, any Santa Ana sucker located within the reach will be captured and relocated outside of the defined work area to a nearby suitable habitat immediately outside of the impact area. Work areas will be defined by block netting to minimize any relocated fish from reentering the work area. The affected reach(es) will be surveyed for fishes throughout the duration of the project using seining, traps, or electrofishing, as necessary. For small and or low impact projects (e.g., stream restoration/rehabilitation projects), impacts will be minimized through slow and deliberate work using hand tools.

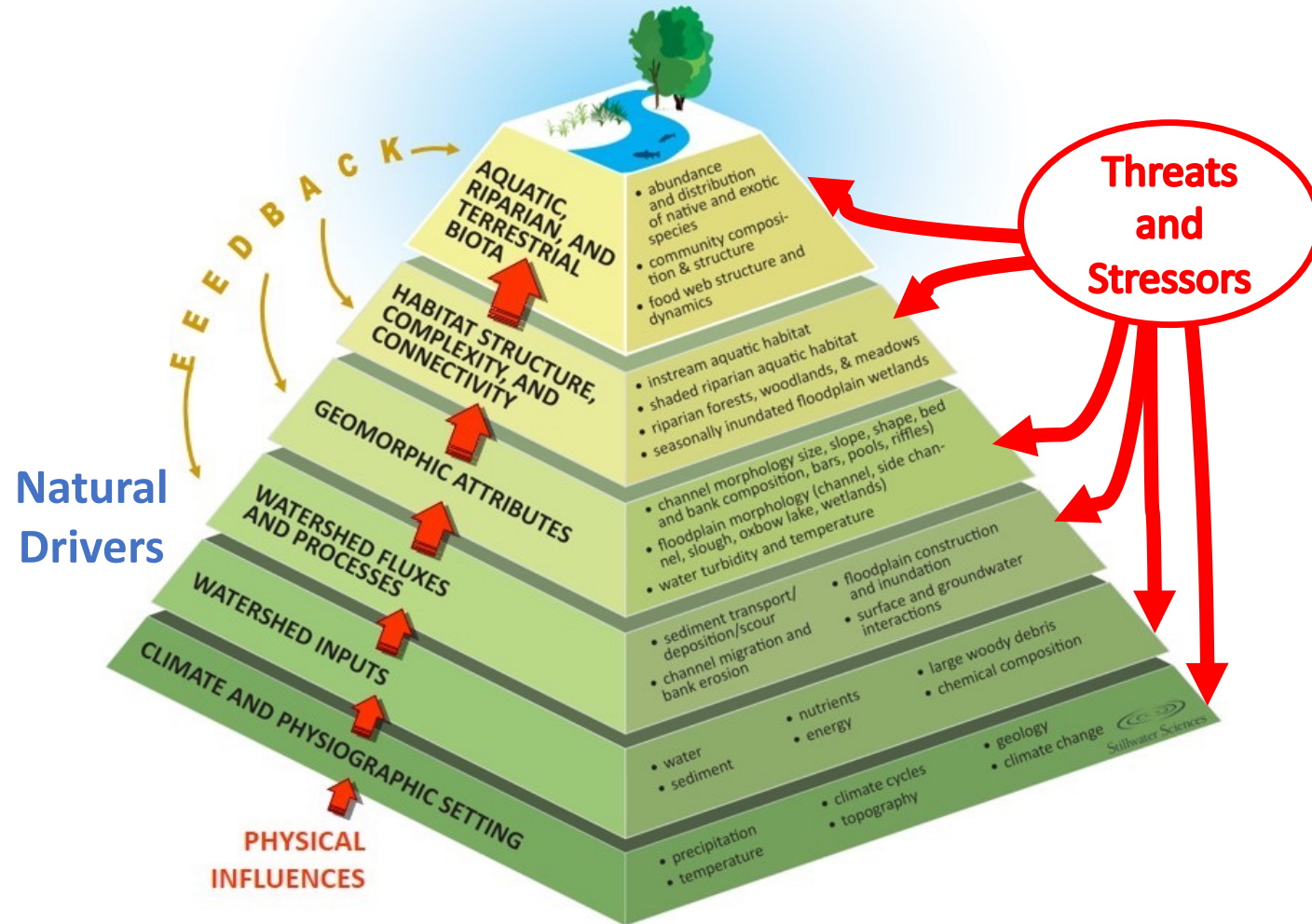
Minimize effects of CAs

- All Covered Activities
 - E.g., pre-construction surveys
- Habitat specific:
 - Riparian and Aquatic
 - E.g., Frac-Out
 - Alluvial Scrub
 - Soil sequestering
- Special-Status Species
- Breeding Bird

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.



Key elements of site-level adaptive management and monitoring include:

- Site Evaluation
- Goals, Objectives, and HCP Conservation Actions
- Conceptual Models
- Management
- Monitoring
- Evaluation Process
- Uncertainties
- Research Needs

Management of the HCP Preserve System

- Nonnative Invasive Species Control and Management (CAMMP 1)
- Nonnative Aquatic Predator Control Program (CAMMP 1A)
- Nonnative Vegetation Management Program (CAMMP 1B)
- Cowbird Management Program (CAMMP 1C)
- Basin Sediment Management Program (CAMMP 2)
- Encampment Prevention and Removal (CAMMP 3)

Fire

Preserve System:

- CAMMP – Fire section
- Reduce probability of future catastrophic wildfires: thinning, rehabilitating landscapes to provide resistance against crown fires and habitat type conversion, and resilience of native habitat types to persist/regrow after fires pass.
- Damage from fire - repaired/restored within 6 months of damage detection (note: repairs/restoration will likely occur within 1 month or less; however, if significant damage occurs additional time will be needed to secure contracts, etc., to complete the work)

Species Measures:

- **SAS Action 4F, MYLF Actions 1C & 4B, CACW Actions 1B & 2C**
 - Support and coordinate with USFS to implement fuel reduction to limit the potential for high-intensity wildfires in habitat within mountain streams (SAS, MYLF 1C).
 - Support relocation of mountain yellow-legged frogs from streams where environmental conditions have deteriorated (e.g., fire, drought and low flow, or other threats) to suitable habitat (MYLF 4B)
 - Nonnative plant control (CACW 1B)
 - Native nursery (seeds, cactus) – transplant/reseed after fire

Covered Activities:

- **AMM-24, 25**
 - Spark arrestors, extinguishers action plans (staging areas, weather, welding). Red flag wind warning, fire weather warning.

Monitoring by Phase:

- Compliance
- Inventory
- Targeted Studies
- Long-term Monitoring

Compliance (Implementation) Monitoring

- Up-Front and Stay-Ahead
- Tracking Impacts
- Oversight of Preserve System
- Tracking Habitat Improvement
- Surface and Groundwater Dependent Ecosystem Monitoring
- Annual Reporting

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

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 Estimated Annual Proportional Contribution to Implementation Costs

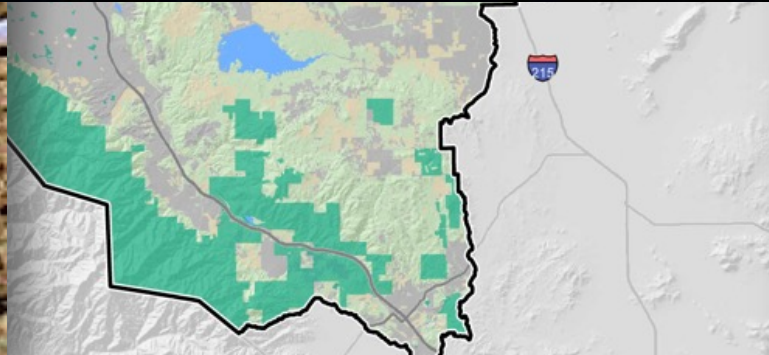
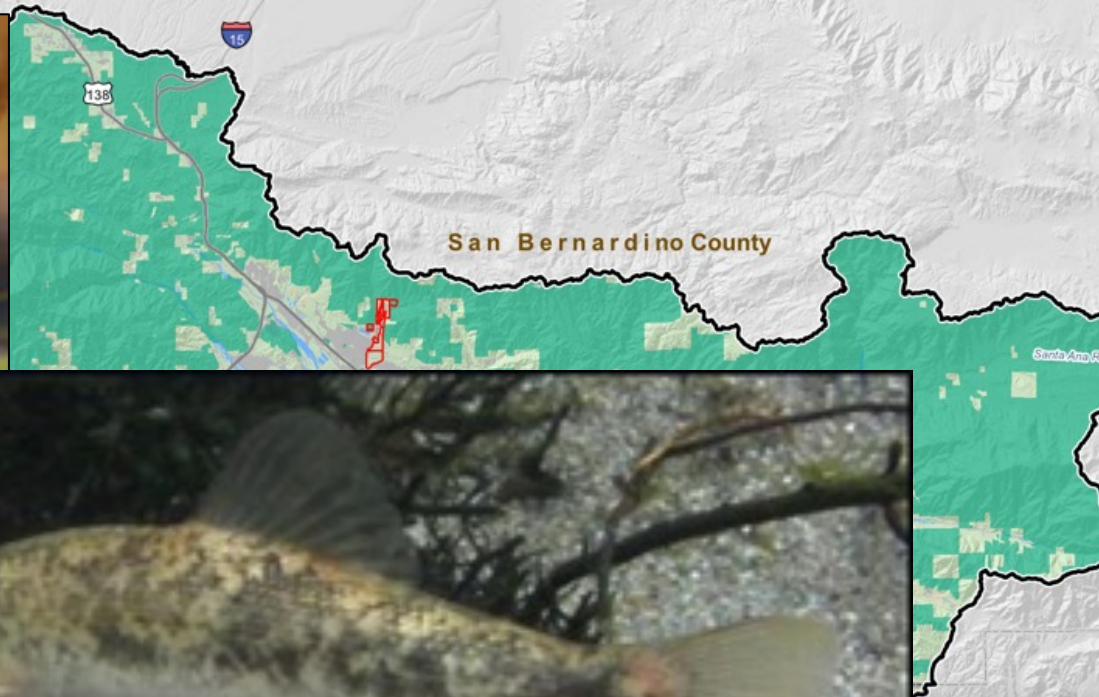
Permittee Agency	Total Share	Estimated Annual Operating Cost of Program Implementation
San Bernardino Valley Municipal Water District	40%	\$ 933,200.00
East Valley Water District	7%	\$ 163,310.00
Riverside Public Utilities	5%	\$ 116,650.00
Inland Empire Utilities Agency	20%	\$ 466,600.00
Western Municipal 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

NEPA

- Working with USFWS in parallel with EIR public review period

Other Permitting

- In review/in preparation





Public Notification of Draft EIR (Notice of Availability)

☐ 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>

- San Bernardino Valley Municipal Water District (CEQA Lead Agency)
- Permittee Agencies are Responsible Agencies
- 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

- The Permittees may use this EIR to consider impacts of the HCP and the scope of any comments to submit to Valley District on the impacts of the HCP. They will use this EIR for the following actions.
 - ✓ Review and consideration of the HCP
 - ✓ Adoption and implementation of the HCPs

- Covered Activities will be the subject of separate CEQA evaluations.
- Covered Activities will be considered and approved by the Permittees as independent lead agencies.
- Each independent lead agency will evaluate and determine the appropriate CEQA document and level of review required for Covered Activities under their jurisdiction.

- The Permittees may decide to use or refer to applicable analyses in this EIR, to the extent appropriate; most appropriately for
 - ✓ biological resources impacts
 - ✓ hydrological resources impacts
- Use of the information in this EIR in connection with subsequent consideration of Covered Activities may be limited to determining whether the impacts of individual Covered Activities on listed species were sufficiently evaluated in this EIR.

- 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

- 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

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).

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

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)

- 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.

- 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

- 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

- Hazards Mitigation Measures
 - HAZ-2: Prepare a Soil Investigation and/or Soil Management Plan
 - HAZ-1: Conduct a Database Review and Retain a Hazardous Materials Specialist
- 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)

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

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

- 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	-	-	-	-

- 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

- 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

- ☐ 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.

- ☐ 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?

