

Tulare Basin Conceptual Conservation Projects
For Tulare Basin Watershed Initiative
And High Speed Rail Mitigation Recommendations

October 2013



Prepared by:



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Introduction

The Tulare Basin Wildlife Partners (TBWP) is an IRS 501 (c) 3 non-profit conservation organization incorporated in the State of California in May 2005. Its mission is to facilitate the engagement of partners, funders, and stakeholders in multi-benefit projects to achieve the goals of promoting ecological and economic health, sustaining agricultural heritage, and enhancing quality of life in the Tulare Basin for current and future generations.

In 2009, the TBWP completed four comprehensive conservation plans for the Tulare Basin including three regions in the Tulare Basin: Sand Ridge - Tulare Lake, Goose Lake and Buena Vista Lake – Kern Lake, and a fourth plan evaluating riparian and wildlife corridors which flow into the Basin. These plans detail goals and management objectives for smaller, sub-management areas within each planning area that will enhance, protect and restore wildlife and their habitats. The four conservation plans together call for landscape-scale conservation measures that will protect 518,000 acres of uplands and 30,000 acres of wetlands and restore 296,000 acres of uplands, 94,000 acres of wetlands, and 20,000 acres of riparian habitat. TBWP uses a wide range of conservation tools to work with willing and interested landowners and government agencies to protect or restore important farmland, rangeland and areas with natural habitat throughout the region.

In February 2010, the TBWP completed its fifth and final planning effort -- the Tulare Basin Conservation Plan Water Supply Strategies Report (Water Report). This uniquely valuable Report sets the stage for Tulare Basin water management entities and the TBWP to partner, collaboratively plan, and implement conservation opportunities to protect, restore, and enhance habitat at the watershed and landscape scale.

In early 2011, the TBWP commenced a new Basin-wide integrated resource management program – the Tulare Basin Watershed Initiative, with funding from the California Department of Conservation Watershed Program, Natural Resources Conservation Service Wetland Reserve Program, and Bureau of Land Management Healthy Lands Initiative. Under this program, project concepts resulting from the four conservation plans and the Water Report will be implemented in collaboration with Tulare Basin Integrated Regional Water Management groups (IRWMs) -- or Tulare Basin Water Management Planning (IRWMP) -- groups. These groups are participants in the Tulare Basin-wide IRWM Collaboration Group (TB IRWMC) meetings that occur monthly at Provost & Pritchard Consulting Group, Inc. in Visalia. The TB IRWMC includes the Kaweah Basin IRWMP, Kern County IRWM, Poso Creek IRWM, Southern Sierra IRWMP, Tule River IRWMP, the Upper Kings Basin IRWM Joint Powers Authority, and the Westside IRWMP.

Conceptual Project Selection

The Tulare Basin Wildlife Partners has developed project concepts for potential implementation over the next ten to twenty years based on input from the Tulare (Lake) Basin Working Group, the four conservation plans, the Water Report, findings from the Central Valley Joint Venture Implementation Plan 2006 Update, and the Tulare Basin Watershed Initiative (TBWI). The TBWI Team includes the Tulare Basin Watershed Coordinator, Assistant Watershed Coordinator, and Outreach/Communications Specialist. The project concepts listed are suitable for active facilitation of Basin-wide integrated resource management by the TBWI Team beginning in January 2012.

Brief descriptions of the project concepts follow, grouped by watershed. Criteria used to select the proposed projects include: wildlife value, water management, connectivity, availability of

funding, and the availability of willing landowners. All of these projects provide for climate change, adaptation, and mitigation. Additional information about water management and land management solutions will be developed by working with the Tulare Basin IRWM groups, water districts, regional non-governmental organizations, federal and state agencies, private landowners and other stakeholders.

In February 2012, the TBWP agreed to provide wetland-riparian-farmland mitigation project concept recommendations for the South Valley to URS Corporation for High Speed Rail (HSR) mitigation planning in collaboration with the Sequoia Riverlands Trust and the California Department of Conservation. The list that follows includes these recommendations as “Phase 1 HSR recommendations”. The TBWP intends to follow later with upland project concept recommendations in collaboration with the Central Valley Region staff of California Department of Fish and Game. These potential project concepts are annotated to indicate “Phase 2 HSR upland mitigation recommendations”. All are subject to change.

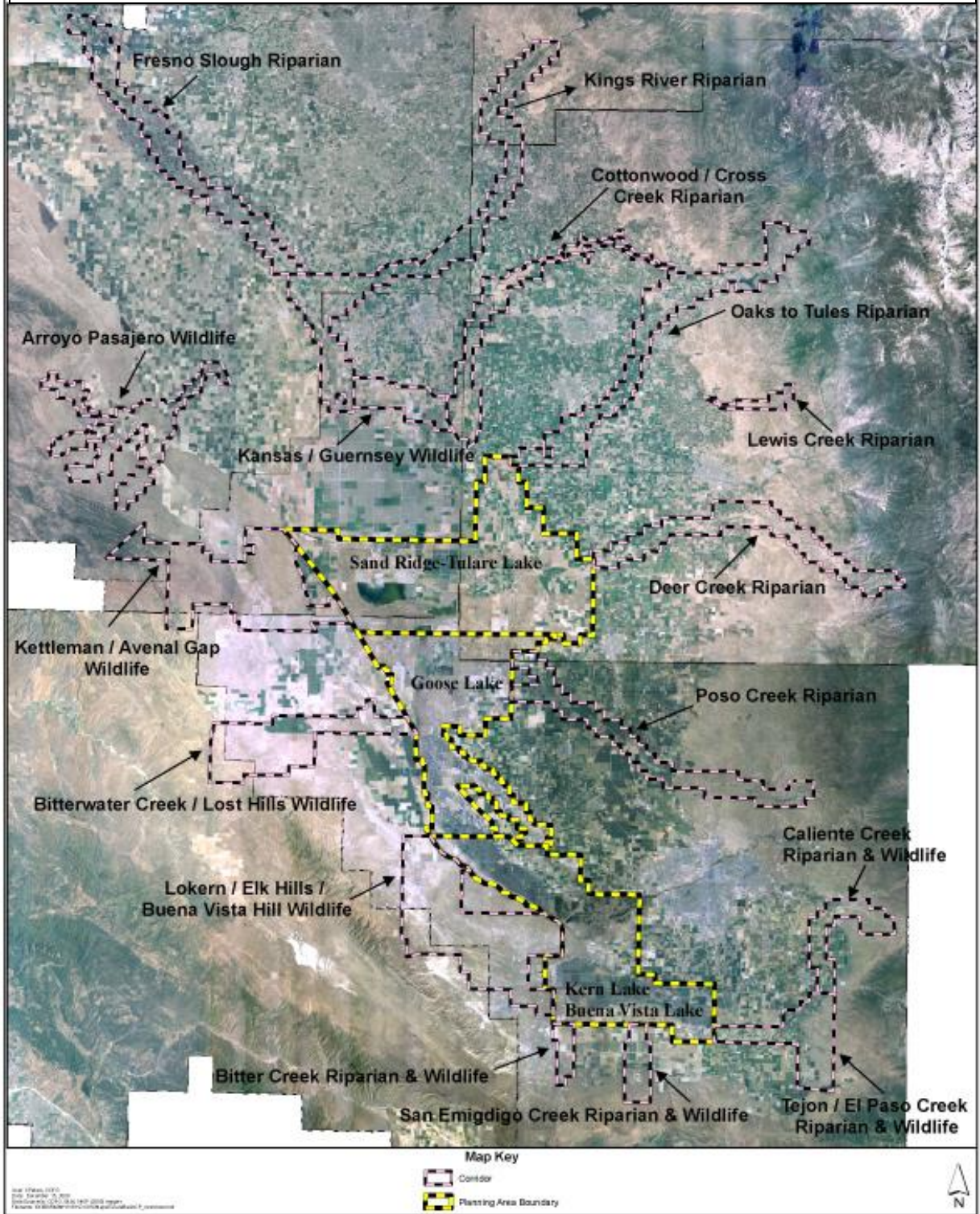
Criteria for selecting wetland-riparian-farmland mitigation project concept recommendations include project areas that have the following characteristics: high priority riparian areas adjacent to high priority farmland; large blocks of farmland adjacent to nodes of riparian/wetland/vernal pools to create connectivity; sandy soils conducive to groundwater recharge; and high potential for restoration of degraded wetland/riparian/vernal pools (or creation thereof). Two other factors will be critical for the feasibility of such projects: the establishment of a regional programmatic Safe Harbor Agreement and the existence of willing sellers in every case.

Select Partner Acronyms

For ease of use, the following key is provided for potential partner names used repeatedly throughout this document. When a partner is only listed a few times, no acronym is provided.

Abbreviation	Name
ALC	American Land Conservancy
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CADF&G	California Department of Fish & Game
CADWR	California Department of Water Resources
CASP	California State Parks
CNLM	Center for Natural Lands Management
CNPS	California Native Plant Society
CSG	Conservation Strategy Group
CWA	California Waterfowl Association
DU	Ducks Unlimited
IRWM/IRWMP	Integrated Regional Water Management/Planning
MBHCP	Metro-Bakersfield Habitat Conservation Plan
NRCS	Natural Resources Conservation Service
NASL	Naval Air Station Lemoore
RCD	Resource Conservation District
SRT	Sequoia Riverlands Trust
TBWA	Tulare Basin Wetlands Association
TBWP	Tulare Basin Wildlife Partners
USFWS	U.S. Fish & Wildlife Service
WC	Wildlands Conservancy
WCB	Wildlife Conservation Board

Tulare Basin Project Areas and Corridors



High Priority Project Concepts

The following projects have an undetermined outlook for completion due to their untested level of readiness, feasibility and other factors. Partners listed are potential, and more are yet to be identified. Watershed/wildlife corridors that appear on the map (page 4) are listed alphabetically, and projects are grouped within these corridors

Arroyo Pasajero Riparian Corridor & Wildlife Complex

Project Name: Arroyo Pasajero Flood Control Strategies & Habitat Enhancement

Location: Fresno County (Riparian- & Wildlife Corridor Planning Area)

Description: This project develops strategies to provide flood protection for Interstate 5, the California Aqueduct, and farmland, while restoring riparian and upland habitat. . Possible flood protection strategies include: upper watershed restoration; development of storm water catch basins above Interstate 5; enlargement of an existing flood control basin west of the aqueduct; construction of a siphon under the aqueduct; development of a floodway connecting to the Kings River.

Size: 65,000 acres

Estimated Funding: To be determined.

Opportunities: All parties agree that this creek poses a major flooding problem for the Interstate, the Aqueduct, and surrounding farmland.

Challenges: Getting competing interests to agree on a win-win solution for stakeholders.

Potential Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, California Water Institute (California State University at Fresno)/Westside RCD & Westside IRWMP

Caliente Creek Riparian and Wildlife Corridor

Project Name: Caliente Creek Riparian Habitat Restoration – HSR Phase 1 riparian restoration-farmland/ranchland mitigation recommendation

Location: Kern County

Description: Restore riparian habitat along Caliente Creek, including removing Tamarisk trees and shrubs and replacing them with native species.

Size: 200 acres

Estimated Funding: \$400,000

Opportunities: This would increase the riparian habitat value of the area, flood control for city of Arvin

Challenges: Finding landowners interested in participating.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, NRCS, Kern Co. IRWMP

Cottonwood Creek-Cross Creek Riparian Corridor

Project Name: Cottonwood Creek – Cross Creek Vernal Pool and Upland Habitat Protection -- HSR wetland/vernal pool-farmland mitigation recommendation

Location: Tulare County, Kings County

Description: Protect the remaining vernal pool and upland habitat in the corridor through fee title purchase, conservation easements, or new multi-species regional mitigation bank.

Size: 8,000 acres

Estimated Funding: \$12 million

Opportunities: This project represents an opportunity to link existing preserves which will buffer the effects of climate change and decrease the potential for species extinction.

Challenges: Protecting the land before it is converted to cropland by dairy interests or sold for subdivisions.

Partners: TBWP, Fagundes family, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Project Name: Cottonwood Creek – Cross Creek Riparian Habitat Restoration --HSR Phase 1 riparian-farmland mitigation recommendation

Location: Tulare County, Kings County

Description: Restore a riparian strip approximately 150 feet wide along the Cross Creek channel from Highway 99 to Corcoran.

Size: 500 acres

Estimated Funding: \$1 million

Opportunities: This is an opportunity to create a north-south riparian wildlife corridor to the center of the Tulare Basin.

Challenges: Convincing decision-makers to use native vegetation for corridor bank stabilization rather than rip-rap or other man-made stabilizers.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Deer Creek Riparian Corridor

Project Name: “Sequoias to the Sloughs” -- Deer Creek Riparian & Upland Habitat Protection – Phase 1 HSR riparian-farmland recommendation

Location: Tulare County

Description: Protect the remaining riparian and upland habitat in the corridor through fee title purchase or conservation easements.

Size: 5,000 acres

Estimated Funding: \$10 million

Opportunities: This would expand the amount of protected upland and riparian habitat in the corridor to create and protect a landmark valley-to-foothill wildlife corridor, ideal for recreation and tourism cultivation.

Challenges: Finding willing sellers and landowners interested in participating.

Partners: TBWP, SRT, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Tule River IRWMP

Project Name: Alpaugh Area Wetland Reserve Voluntary Conservation Agreements – Phase 1 HSR wetland mitigation recommendation, marginal farmland

Location: Alpaugh Wetland Reserve Area and Homeland Ranch; Atwell Island; and Ton Tache Basin, Tulare County

Description: Protect wetlands through NRCS’s Wetlands Reserve Program’s voluntary conservation agreements.

Size: 10,000 acres

Estimated Funding: \$15 million

Opportunities: Potentially superb wildlife habitat

Challenges: Identifying additional wetland sites for voluntary conservation agreements; finding water sources.

Potential Partners: TBWP, CSG, NRCS, BLM, Atwell Island Water District, BOR, White Ranch, Kaweah Basin IRWMP

Project Name: Pixley NWR Completion – potential HSR Phase 2 upland recommendation

Location: Tulare County

Description: Protect the remaining upland and vernal pool habitat in the corridor through fee title purchase or conservation easements.

Size: 2,200 acres

Estimated Funding: \$4.4 million

Opportunities: This is some of the best remaining upland habitat in the Tulare Basin. There is a willing seller for at least a portion of the land. This land is critical for maintaining linkages between Allensworth Ecological Reserve and Creighton Ranch.

Challenges: There is a threat of agricultural conversion; conservation interests may be outbid by dairy interests.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Project Name: Deer Creek Flood Control Strategies -- HSR Phase 1 wetland-farmland recommendation

Location: Tulare County

Description: Develop a strategy to control flooding along Deer Creek, while preserving and enhancing the riparian and upland habitats in the watershed.

Size: 8,595 acres

Estimated Funding: \$200,000

Opportunities: This area has the longest contiguous stretch of riparian habitat in the southern three-quarters of the Tulare Basin. The towns of Earlimart and Alpaugh face periodic, potentially serious flooding problems.

Challenges: Involving all stakeholders and reaching consensus on a flood control strategy.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Tule River IRWMP

Project Name: Tulare County Conservation Bank (Priority for Tulare County) potential HSR Phase 2 upland mitigation recommendation

Location: Pixley National Wildlife Refuge, Tulare County (Sand Ridge – Tulare Lake Planning Area)

Description: Implement conservation strategies to achieve multi-purpose, multi-benefit solutions that benefit wildlife, landowners, and local/regional agency stakeholders

Size: 720 acres

Estimated Funding: \$1 million

Opportunities: Willing seller; protects high-quality uplands

Challenges: Follow up on the part of Tulare County Association of Governments.

Partners: TBWP, CSG, USFWS, County of Tulare, Tule River IRWMP

Fresno Slough Riparian Corridor

.Project Name: Mendota Wildlife Area Expansion -- HSR Phase 1 wetland – farmland recommendation

Location: Fresno and Kings Counties

Description: Add 1,500 acres of restored upland and 1,500 acres of restored wetland habitats to the Mendota Wildlife Area.

Size: 3,000 acres

Estimated Funding: \$6.0 million

Opportunities: This would expand the existing 6,562-acre wetland area and increase the habitat suitability of the area.

Challenges: Obtaining water for the wetland complex during drought years.

Partners: TBWP, WCB, CSG, CADF&G, DU, CWA, Upper Kings Basin IRWM JPA

Project Name: Fresno Slough Riparian Habitat Restoration -- HSR Phase 1 wetland-farmland mitigation recommendation

Location: Fresno and Kings Counties

Description: Restore riparian habitat along the Fresno Slough.

Size: 500 acres

Estimated Funding: \$900,000

Opportunities: Only 332 acres of riparian habitat remains in this region; an additional 500 acres of restored riparian habitat would more than double the available habitat.

Challenges: Obtaining sufficient summer and fall soil moisture to maintain native riparian vegetation.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Upper Kings Basin IRWM JPA

Project Name: Expanding & Linking Alkali Sink & Kerman Ecological Reserves

Location: Fresno and Kings Counties

Description: This project protects 3,200 acres of native upland and vernal pool habitat and seeks to restore 2,000 acres of currently farmed land that so that it can serve as linkage corridors to existing protected lands.

Size: 5,200 acres

Estimated Funding: \$12 million

Opportunities: There is still extremely high quality upland habitat in this area and connecting the refuges will help prevent extinctions from climate change and stochastic events.

Challenges: Resistance to retiring farmland and restoring native habitat.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Upper Kings Basin IRWM JPA

Project Name: Fresno Slough Wetlands Reserve Program Expansion & Management

Location: Fresno and Kings Counties

Description: Expand the NRCS Wetlands Reserve Program along the Fresno Slough by acquiring easements and restoring an additional 1,500 acres of wetlands, as well as 1,500 acres of upland habitat.

Size: 3,000 acres

Estimated Funding: \$5 million

Opportunities: This is an opportunity to add to an existing program to make it even more valuable to wildlife. This area will serve as a stepping stone on the migratory route for waterfowl and other wetland birds in this Tulare Basin portion of the Pacific Flyway.

Challenges: Obtaining water for existing and future Wetlands Reserve Program Easements in this area.

Partners: TBWP, NRCS, DU, CWA, Upper Kings Basin IRWM JPA

Kern River Riparian Corridor

Project Name: Sand Ridge Ecological Reserve – potential HSR Phase 2 upland mitigation recommendation

Location: Sand Ridge, Kings County (Sand Ridge – Tulare Lake Planning Area)

Description: Create Sand Ridge Ecological Reserve through cooperative agreements, land exchanges or fee title purchase.

Size: 4,160 acres

Estimated Funding: TBD

Opportunities: This upland/wetland complex comprises the most significant east-west corridor in the vicinity of historic Tulare Lake (a corridor that could stretch from the Sierra to the Coast Range); it also contains some of the largest reproducing populations of unique wildlife in the only dune grassland/shrubland natural community in the planning area.

Challenges: Negotiations previously underway are currently on hold.

Potential Partners: TBWP, CADF&G, BLM, NRCS, J. G. Boswell Company, Upper Kings Basin IRWM JPA and Kings Co. Board of Supervisors through the IRWM/P outreach process

Kings River Riparian Corridor

Project Name: Liberty Ranch Flood Storage and Habitat Enhancement – HSR Phase 1 wetland-farmland mitigation recommendation if litigation no longer an issue

Location: Liberty Ranch, Kings County (Sand Ridge – Tulare Lake Planning Area)

Description: Creation of a major flood storage and habitat restoration area; implement conservation strategies to achieve multi-purpose, multi-benefit conjunctive use solutions that benefit wildlife, landowners, and stakeholders

Size: 3 25,000 acres

Estimated Funding: \$50 million

Opportunities: Willing seller, site uniquely situated for flood storage, improved water supply, conveyance and wildlife enhancement; current focus of Tulare Basin-wide Intergrated Regional Watershed Management Planning effort; a climate change adaptation strategy/solution.

Challenges: Large scale project in need of feasibility study funding and implementation concept development, followed by phased funding and phased implementation

Partners: TBWP, CSG, CDFW, CDWR, NRCS, USACOE, USFWS, WCB, Sand Ridge Partners, Kings Basin Water Association

Project Name: CalClark Farms “River Ranch” Riparian Habitat Acquisition and restoration—HSR Phase 1 riparian-farmland mitigation recommendation

Location: Kings County, intersection of North and South Forks of the Kings River (road access from east end of Elgin Avenue, from Fremont Avenue, and from Everett Avenue)

Description: Willing seller proposes acquisition and restoration to valley oak riparian habitat of 290-acre working farm potentially by CA DFG/WCB as a Wildlife Management Area, with naming rights reserved

Size: 290 acres, includes an island and nine parcels

Estimated Funding: TBD

Opportunities: Broaden current floodplain and valley oak forest while providing flood control, groundwater recharge, and recreational opportunities

Challenges: Acquisition funding

Potential Partners: CalClark Farms, Kings River Conservation District, TBWP, Sequoia Riverlands Trust, Trust for Public Land, CADF&G, WCB, BOR, USFWS, CSG, Upper Kings Basin IRWM JPA

Oaks to Tules Riparian Corridor

Project Name: Kaweah Oaks Preserve Expansion – HSR Phase 1 riparian-farmland mitigation recommendation

Location: Tulare County

Description: Triple the size of Kaweah Oaks Preserve by protecting the remaining valley oak habitat in the area and restoring additional habitat.

Size: 700 acres

Estimated Funding: \$2.8 million

Opportunities: This project would expand an existing, extremely important example of rare valley oak riparian forest habitat. Kaweah Oaks Preserve is a high-profile preserve, so this project is likely to engender public support.

Challenges: Acquiring the remaining relatively unaltered habitat and the areas suitable for restoration.

Partners: TBWP, SRT, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

**Project Name: Lindsay-Strathmore Irrigation District Lands Protection -- HSR Phase 1
HSR riparian-farmland recommendation**

Location: Tulare County

Description: Lindsay-Strathmore Irrigation District and several others own and manage large holdings of native land between Kaweah Oaks Preserve and Kaweah Reservoir. This project would develop a protection strategy for this area and protect the remaining upland and riparian habitat through fee title purchase, mitigation bank development, or conservation easements.

Size: 1,600 acres

Estimated Funding: \$150,000

Opportunities: This is one of the largest continuous undeveloped riparian habitat areas on the valley floor on the east side of the Tulare Basin.

Challenges: Bringing the various interests together to determine a mutually beneficial protection strategy, conservation easement desirable

Partners: TBWP, Lindsay-Strathmore Irrigation District, NRCS, Tulare County RCD, USFWS, CADF&G, WCB, Kaweah Basin IRWMP

Poso Creek Riparian Corridor

Project Name: Poso Creek Riparian & Upland Habitat Protection—HSR Phase 1 riparian-farmland mitigation recommendation

Location: Kern County

Description: Protect the remaining upland and riparian habitat in the corridor through fee title purchase or conservation easements.

Size: 11,667 acres

Estimated Funding: \$23 million

Opportunities: There is still high-quality riparian habitat remaining in the corridor.

Challenges: Finding willing landowners and obtaining funding.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Poso Creek IRWM

Other Project Concepts

This list includes project concepts that are lower priority for the Tulare Basin Watershed Initiative and for Phase 1 wetland-riparian-farmland project recommendations. Potential HSR Phase 2 upland mitigation project concepts, many on West side, are noted.

Arroyo Pasajero Riparian & Wildlife Corridor Complex

Project Name: Pleasant Valley Ecological Reserve Expansion

Location: Fresno County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 4,000 acres

Estimated Funding: \$4 million

Opportunities: Oil companies could create a conservation bank in the area to protect the remaining habitat, much of which they own.

Challenges: Bringing the stakeholders together in a timely manner.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Chevron USA Inc., California Water Institute (California State University at Fresno)/Westside IRWMP

Avenal Gap Wildlife Corridor

Project Name: Avenal Gap Upland Habitat Protection

Location: Kings County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 100,000 acres

Estimated Funding: \$20 million

Opportunities: This is one of the few corridors connecting the Tulare Basin to the Coast Ranges. Most of the land is unfarmed and owned in large ranches.

Challenges: Obtaining funding for large-scale conservation easements and convincing landowners to participate in easement programs.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, large ranching interests and oil companies, Westside IRWM

Project Name: Quay Valley Upland Habitat Restoration

Location: Kings County

Description: This project obtains and restores the land previously planned for the Quay Valley new town.

Size: 6,000 acres

Estimated Funding: \$9 million

Opportunities: This land was fallow for 30 or more years and was then disked once. As the Quay Valley new town fades from the scene, another venture capitalist (Sand Ridge Partners) is pursuing the an opportunity to purchase and restore this property while developing its well water for use elsewhere.

Challenges: Obtaining funding in a timely manner; determination of ownership

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Upper Kings Basin IRWM JPA, Tule River IRWMP

Bitter Creek Wildlife Corridor

Project Name: Bitter Creek Upland Habitat Protection

Location: Kern County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 5,500 acres

Estimated Funding: \$4 million

Opportunities: The area upslope from this corridor is already owned by BLM and USFWS.

Challenges: Considerable conversion of native habitat to agriculture has occurred on the north end of the corridor, making it difficult to establish a connection to native lands in the north.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Kern Co. IRWMP

Project Name: Bitter Creek to Wind Wolves Corridor & Upland Habitat Protection

Location: Kern County

Description: Protect the remaining upland habitat linking Wind Wolves Preserve to Bitter Creek National Wildlife Refuge through fee title purchase or conservation easements.

Size: 10,000 acres

Estimated Funding: \$7 million

Opportunities: Unprotected high-quality upland habitat connects existing preserved areas.

Challenges: Funding

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Wildlands Conservancy, Kern Co. IRWMP

Buena Vista Hills – Elk Hills – Lokern Wildlife Corridor

Project Name: Hills & Wildlife Corridor Upland Habitat Mega Preserve

Location: Kern County

Description: Protect the remaining upland habitat in the corridor through fee title purchase, mitigation bank development or conservation easements.

Size: 84,000 acres

Estimated Funding: \$42 million

Opportunities: This is the largest block of native habitat in the Tulare Basin. Many of the oil companies in the area are considering creating conservation banks to mitigate their oilfield developments

Challenges: Scale of project.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, CNLM, Kern Co. IRWMP

Project Name: Hills & Wildlife Corridor Critical Upland Linkage Protection

Location: Kern County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements. There are two undeveloped linkages: (1) Highway 33 between Lokern Road and the Missouri Triangle, connecting the Buena Vista Lake – Kern Lake Planning Area to an undeveloped region along Chico Martinez Creek to the Temblor Range; and (2) the north side of the Elk Hills from the east, and Buena Vista Valley from the southeast across Highway 33 and into the Telephone Hills just south of the town of McKittrick and thence into the Temblor Range and to the Carrizo Plain National Monument.

Size: 16,500 acres

Estimated Funding: \$11.5 million

Opportunities: These are the last two undeveloped east-west corridors in this area and are critical for linking the Tulare Basin to Carrizo Plan National Monument.

Challenges: Funding, multiple owners.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, CNLM, Kern Co. IRWMP

Caliente Creek Riparian and Wildlife Corridor

Project Name: Sand Ridge Preserve Expansion

Location: Kern County

Description: Protect the remaining 540 acres of upland habitat and disturbed land on CNLM's Sand Ridge Preserve through fee title purchase or conservation easements.

Size: 540 acres

Estimated Funding: \$1.5 million

Opportunities: This project would add to 391 acres of habitat managed by CADF&G and CNLM, more than doubling the amount of contiguous protected land.

Challenges: The area has multiple owners.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, CNLM, Kern Co. IRWMP

Project Name: Sand Ridge Habitat Restoration

Location: Kern County

Description: Restore 56 acres of sand quarries, 22 acres of orange groves, and 30 acres of disturbed lands to native habitat. Remove invasive weed species..

Size: 108 acres

Estimated Funding: \$1 million

Opportunities: This would add additional habitat to the existing preserve and increase the habitat value of the existing preserve.

Challenges: Developing knowledge of stabilized dune system restoration.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, CNLM, CNPS, Kern Co. IRWMP

Kansas Avenue – Guernsey Wildlife Corridor

Project Name: Kansas Avenue – Guernsey Upland Habitat Protection

Location: Kings County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 3,765 acres

Estimated Funding: \$7.5 million

Opportunities: This project encompasses some of the highest quality upland habitat in the Tulare Basin.

Challenges: The habitat is highly fragmented. Significant restoration on adjacent farmed lands will be needed to link the fragments.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, ALC, Upper Kings Basin IRWM JPA and Kings Co. Board of Supervisors (through the IRWM/P outreach process)

Project Name: Kansas Avenue – Guernsey Refuge Establishment

Location: Kings County

Description: Establish a state or federal refuge to manage and restore the upland habitat in the corridor.

Size: 12,800 acres

Estimated Funding: \$250,000/year

Opportunities: This would provide the best management solution for the complex of lands within this important habitat conservation area.

Challenges: Will require action by the State Fish and Game Commission or US Congress

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Upper Kings Basin IRWM JPA and Kings Co. Board of Supervisors (through the IRWM/P outreach process)

Project Name: Kansas Avenue – Guernsey Upland Habitat Restoration

Location: Kings County

Description: Purchase and restore the currently farmed, marginal farmland in this corridor linking remaining native upland parcels.

Size: 9,104 acres

Estimated Funding: \$18 million

Opportunities: This land is highly alkaline and has low agricultural productivity, but can be restored to native habitat.

Challenges: The corridor has multiple land owners and some of the area has recently been converted to farmland to provide forage for local dairies.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Upper Kings Basin IRWM JPA and Kings Co. Board of Supervisors (through the IRWM/P outreach process)

Kern River Riparian and Wildlife Corridor

Special Note: This corridor is not shown on the map on page 4. It is located south of Poso Creek and north of Caliente Creek.

Project Name: Corridor Connections Part One HSR Phase 2, potential upland mitigation recommendation

Location: Interstate 5 Corridor, Kern County

Description: Improve connectivity between Buttonwillow Ecological Reserve, Kern Water Bank, and Coles Levee Ecosystem Preserve

Size: 9,380 acres

Estimated Funding: \$18.9 million

Opportunities: Protect natural areas and corridors for wildlife by linking Buttonwillow Ecological Reserve, Kern Water Bank and Coles Levee Ecosystem Preserve

Challenges: Availability of land for sale; land prices escalating; funding availability

Potential Partners: TBWP, CSG, MBHCP, CADF&G, Kern Co. IRWMP

Project Name: Corridor Connections Part Two

Location: Westside Corridor, Kern County (Buena Vista Lake - Kern Lake Planning Area)

Description: Improve connectivity between Lokern Ecological Reserve and the Lokern Preserve

Size: 6,800 acres

Estimated Funding: \$13.6 million

Opportunities: Protects and restores wildlife corridors between Lokern Ecological Reserve and the Lokern Preserve and along Buena Vista Slough from Buena Vista Lake to Tulare Lake

Challenges: Availability and price of land for sale

Potential Partners: TBWP, CSG, CADF&G, MBHCP, BLM, Kern Co. IRWMP

Project Name: Semitropic Ecological Reserve Completion – (Note: Metro-Bakersfield HCP activity impacts ranking on this list)

Location: Semitropic Ecological Reserve Area, Kern County (Goose Lake Planning Area)

Description: Improve connectivity, expand Semitropic Ecological Reserve

Size: 18,433 acres

Estimated Funding: \$33.2 million

Opportunities: Protect critical wildlife corridors; restore natural areas and fragmented corridors

Challenges: Lack of available land for sale; cost of land; length of time it takes to conserve land

Potential Partners: TBWP, CSG, CADF&G, MBHCP, Center for Natural Lands Management, BOR, Poso Creek IRWM

Kings River Riparian Corridor

Project Name: Kings River Valley Oak Restoration – potential HSR Phase 1 riparian-farmland mitigation recommendation

Location: Fresno, Kings, and Tulare Counties

Description: Restore portions of Kings River Corridor with valley oak riparian woodland, broadening the existing floodplain vegetation

Size: 6,000 acres

Estimated funding: \$18 million

Opportunities: Broaden current floodplain riparian and valley oak forest while providing flood control, groundwater recharge, and recreational opportunities.

Challenges: Funding, potential opposition from development interests and local governments.

Partners: TBWP, CalClark Farms, SRT, KRCD, Upper Kings Basin IRWM JPA, NRCS, USFWS, CADF&G, WCB, CSG, and Kings County Fish and Game Advisory Committee

Project Name: Kings River Erosion Control -- potential HSR Phase 1 riparian-farmland mitigation recommendation

Location: Fresno, Tulare and Kings Counties

Description: Use native vegetation rather than rip-rap or other structures to prevent erosion and stabilize river banks.

Size: 1,000 acres

Estimated Funding: \$1 million

Opportunities: There are areas along the river in need of bank stabilization; using native vegetation is a viable and cost-effective option.

Challenges: Resistance to changing the way that bank stabilization is generally carried out.

Partners: TBWP, WCB, BOR, CADWR, USFWS, CSG, CASP, Kings River Conservation District, NRCS, local RCDs, CADF&G, Upper Kings Basin IRWM JPA and Kings Co. Board of Supervisors through the IRWM/P outreach process

Lewis Creek Riparian Corridor

Project Name: Lindsay Unified School District Lewis Creek Parkway (Note: a stretch for IRWMs, may not be eligible as a mitigation project)

Location: Tulare County (Riparian & Wildlife Corridor Planning area)

Description: Construct a parkway path for recreation and environmental education along a restored reach of Lewis Creek. This project would coincide with construction of a new high school and involve students and the community in the project through stewardship, education, and volunteer opportunities. Project permits would be amendments to the existing final Environmental Impact Report. Project support is strong from County, City, and local non-profit groups. This project is shovel-ready.

Size: 0.7 mile pathway; new channel & seasonal wetlands area TBD

Estimated Funding: \$606,000

Opportunities: Lewis Creek is an ephemeral stream and one of the few remaining unregulated streams that flow into the Tulare Lake Basin. In compliance with CADF&G and US Army Corps of Engineers mitigation and monitoring plans, a new channel will be created at the northern edge of the property creating seasonal wetlands, riparian woodland, and upland woodland. This restoration mitigation site would be adjacent to the proposed parkway for recreation and education.

Challenges: Obtain funding

Partners: Lindsay Unified School District, TBWP, CADF&G, US Army Corps of Engineers, County of Tulare, SRT, Kaweah Basin IRWMP

Project Name: Lewis Creek Riparian Habitat Protection –potential HSR Phase 1 riparian-farmland mitigation recommendation

Location: Tulare County

Description: Protect the remaining riparian habitat in the Lewis Creek Riparian Corridor through fee title purchase or conservation easements.

Size: 268 acres

Estimated Funding: \$800,000

Opportunities: This is some of the highest quality riparian habitat remaining in the Tulare Basin.

Challenges: Finding willing landowners.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Project Name: Lewis Creek Riparian Habitat Restoration –potential HSR Phase 1 riparian mitigation recommendation

Location: Tulare County

Description: Purchase and restore riparian habitat along Lewis Creek.

Size: 100 acres

Estimated Funding: \$400,000

Opportunities: This additional habitat would greatly enhance the already high-quality riparian habitat along the stream corridor.

Challenges: Finding willing landowners.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Project Name: Lewis Creek Flood Control Strategies --potential HSR Phase 1 riparian mitigation recommendation

Location: Tulare County

Description: Develop a strategy to control flooding in the town of Lindsay, while preserving and enhancing the riparian and upland habitats in the watershed.

Size: 7,175 acres

Estimated Funding: \$100,000

Opportunities: This area has some of the highest quality riparian habitat in the Tulare Basin and the town of Lindsay has a serious flooding problem.

Challenges: Involving all stakeholders and reaching consensus on a flood control strategy.

Partners: TBWP, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

Lost Hills – Bitterwater Creek Wildlife Corridor

Project Name: Lost Hills – Bitterwater Creek Upland Habitat Protection

Location: Kern County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 54,000 acres

Estimated Funding: \$38 million

Opportunities: This is one of few remaining corridors between the Tulare Basin and the Coast Ranges. Several large landowners own a large portion of the area. Oil Companies in the area may be open to creating conservation banks.

Challenges: High cost, multiple owners. Several miles of the corridor on the east end are farmed and would need to be restored to native habitat to complete the linkage.

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, CNLM, Kern Co. IRWM

Oaks to Tules Riparian Corridor

Project Name: Creighton Ranch Protection – low feasibility for IRWM or mitigation, highest value habitat

Location: Tulare County

Description: Restore protection to the site that was once The Nature Conservancy's Creighton Ranch Preserve, currently owned by J.G. Boswell Company.

Size: 5,280 acres

Estimated Funding: \$500,000

Opportunities: More than 10,000 acres of native habitat remains in this corridor and much of it is included at this site.

Challenges: Reaching an agreement that is mutually beneficial to all parties.

Partners: TBWP, J.G. Boswell Company, CSG, NRCS, CADF&G, Tule River IRWMP

Project Name: Herbert Preserve Expansion, potential HSR Phase 1 riparian-farmland mitigation recommendation

Location: Tulare County

Description: Acquire and restore upland and vernal pool habitat in the vicinity of the James K. Herbert Preserve Wetland Prairie Preserve.

Size: 640 acres

Estimated Funding: \$1.9 million

Opportunities: There is 50 to 100 acres of native habitat remaining in the vicinity of the Preserve that could be acquired. In addition, there is land immediately south of the preserve that appears to be marginal farmland, which could be acquired and restored.

Challenges: Finding willing sellers and resistance to restoring farmland to native habitat.

Partners: TBWP, SRT, WCB, BOR, CSG, NRCS, USFWS, CADF&G, Kaweah Basin IRWMP

San Emigdio Creek Riparian & Wildlife Corridor

Project Name: San Emigdio Creek Riparian & Upland Habitat Protection

Location: Kern County

Description: Protect the remaining upland habitat in the corridor through fee title purchase or conservation easements.

Size: 3,000 acres

Estimated Funding: \$3 million

Opportunities: This land is adjacent to Wind Wolves Preserve.

Challenges: Obtaining funding; finding willing sellers

Partners: TBWP, WCB, BOR, CSG, USFWS, CADF&G, Kern Co. IRWMP

Project Name: San Emigdio Creek Corridor Connection to BLM Duck Pond

Location: Kern County

Description: Restore San Emigdio Creek and the adjacent uplands between Wind Wolves Preserve and the BLM Duck Pond area.

Size: 7,000 acres

Estimated Funding: \$21 million

Opportunities: This is one of few opportunities to connect preserved land in the foothills of the Transverse Ranges to BLM land in the Tulare Basin.

Challenges: A large portion (70%) this land is currently farmed and would need to be restored to native upland and riparian habitat.

Partners: TBWP, WCB, BOR, CSG, USFWS, BLM, CADF&G, WCB, Kern Co. IRWMP