Table 4-1: Resources-At-Risk Matrix – Species, Plants, Habitats, Protected Lands

Common Name	Scientific Name	Status^	CHWR (General Habitat Description) and USFWS (Critical Habitat Designated) *	Micro Habitat Description
Birds				
Burrowing Owl	*Athene cunicularia*	State: SSC Fed:	CWHR: Frequents open grasslands and shrublands with perches and burrows. USFWS: N/A	A yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Uses rodent or other burrow for roosting and nesting cover. Moves perch to thermoregulate; perches in open sunlight in early morning, and moves to shade, or to burrow, when hot.
Le Conte's Thrasher	*Toxostoma lecontei*	State: SSC Fed:	CWHR: Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent habitats; also occurs in Joshua tree habitat with scattered shrubs. USFWS: N/A	Frequents desert washes and flats with scattered shrubs and large areas of open, sandy, or alkaline terrain in desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats.
Swainson's Hawk	*Buteo swainsoni*	State: T Fed:	CWHR: Open desert, grassland, or cropland containing scattered, large trees or small groves. USFWS: N/A	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.
Tricolored Blackbird	*Agelaius tricolor*	State: CE/SSC Fed:	CWHR: Frequents fresh emergent wetlands. USFWS: N/A	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.
White-tailed Kite	*Elanus leucurus*	State: FP Fed:	CWHR: Inhabits herbaceous and open stages of most habitats mostly in cismontane California. USFWS: N/A	Uses trees with dense canopy for cover. Forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands.

Loggerhead Shrike	*Lanius ludovicianus*	State: SSC Fed:	CWHR: Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. USFWS: N/A	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse cover.
Mammals				
American badger	*Taxidea taxus*	State: SSC Fed:	CWHR: Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. USFWS: N/A	Suitable habitat for badgers is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils. Badgers dig burrows in friable soils for cover. Help control small mammal populations.
Buena Vista Lake ornate shrew	*Sorex ornatus relictus*	State: SSC Fed: E	CWHR: Most abundant in riparian habitat. USFWS: Designated 2013, within the boundary of the Kern River GRP	Prefers moist microhabitats with low, dense vegetation for protection from the elements. Uses stumps, logs, and litter for cover.
San Joaquin kit fox	*Vulpes macrotis mutica*	State: T Fed: E	CWHR: Lives in annual grasslands or grassy open stages of vegetation dominated by scattered brush, shrubs, and scrub. USFWS: N/A	Open, level areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance represent suitable habitat for kit foxes. Kit foxes can also be found in the urban environment.
San Joaquin antelope squirrel (Nelson's antelope squirrel)	*Ammospermophilus nelsoni*	State: T Fed:	CWHR: Dry, sparsely vegetated, loam soils. USFWS: N/A	Frequent areas with sandy loam soils, widely spaced alkali scrub vegetation, and dry washes. This species digs burrows or uses kangaroo rat burrows.
Short-nosed kangaroo rat (subspecies of San Joaquin kangaroo rat)	*Dipodomys nitratoides brevinasus*	State: SSC Fed:	CWHR: Western side of San Joaquin Valley in grassland and desert shrub associations, especially Atriplex. USFWS: N/A	Needs soft friable soils on flat or gently rolling terrain in grassland and desert-shrub vegetation. Digs burrows in elevated soil mounds at bases of shrubs.
Tipton kangaroo rat (subspecies of San Joaquin kangaroo rat)	*Dipodomys nitratoides nitratoides*	State: E Fed: E	CWHR: Saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley. USFWS: N/A	Needs soft friable soils which escape seasonal flooding. Digs burrows in elevated soil mounds at bases of shrubs.

Tulare grasshopper mouse	*Onychomys torridus tularensis*	State: SSC Fed:	CWHR: Alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. USFWS: N/A	Low to moderate shrub cover is preferred. Frequents desert areas, especially scrub habitats with friable soils for digging. Nests are constructed in burrows abandoned by other rodents or may be excavated.
Fish				
N/A				
Amphibians				
Western Spadefoot	*Spea hammondii*	State: SSC Fed:	CWHR: This species occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood wetlands. Some populations persist for a few years in orchard or vineyard habitats. USFWS: N/A	Grasslands with shallow temporary pools are optimal habitats for the Western Spadefoot.
Reptiles				
Bakersfield Legless Lizard	*Anniella grinnelli*	State: SSC Fed:	CWHR: Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types. USFWS: N/A	Sparsely vegetated areas with sandy or loose organic soils or where there is plenty of leaf litter.
Blunt-nosed Leopard Lizard	*Gambelia sila*	State: E/FP Fed: E	CWHR: Scarce resident of sparsely vegetated alkali and desert scrub habitats. USFWS: N/A	Suitable habitat for leopard lizards is characterized by sparsely vegetated scrub and grassland habitats in areas of low topographic relief. In areas of high relief, distribution is usually confined to broad sandy washes. Use small mammal burrows for cover.

California Glossy Snake	*Arizona elegans occidentalis*	State: SSC Fed:	CWHR: Most common in desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass. USFWS: N/A	Prefer open sandy areas with scattered brush, but also found in rocky areas.
San Joaquin Coachwhip	*Coluber flagellum ruddocki*	State: SSC Fed:	CWHR: Coachwhips occur in open terrain and are most abundant in grass, desert, scrub, chaparral, and pasture habitats. USFWS: N/A	Coachwhips seek cover in rodent burrows, bushes, trees, and rock piles.
Western Pond Turtle	*Emys marmorata*	State: SSC Fed:	CWHR: Associated with permanent or nearly permanent water in a wide variety of habitat types. USFWS: N/A	Western Pond Turtles require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks.
Invertebrates				
N/A				
Plants				
Bakersfield cactus	*Opuntia basilaris* var. *treleasei*	State: E Fed: E Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Chenopod scrub, valley and foothill grassland, cismontane woodland. Sandy or gravelly soils.
Horn's milk-vetch	*Astragalus hornii* var. *hornii*	State: Fed: Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Meadows and seeps, playas. Alkaline sites.
Kern mallow	*Eremalche parryi* var. *kernensis*	State: Fed: E Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	On dry, open sandy to clay soils; usually within valley saltbush scrub and foothill grasslands, on eroded hillsides and alkali flats.
Lost Hills crownscale	*Atriplex coronata* var. *vallicola*	State: Fed: Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Chenopod scrub, valley and foothill grassland, vernal pools. In powdery, alkaline solids that are vernally moist with *Frankenia*, *Atriplex* spp., and *Distichlis*.

rose-flowered larkspur	*Delphinium purpusii*	State: Fed: Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Chaparral, cismontane woodland, pinyon and juniper woodland. On shady rocky slopes, often on carbonates.
San Joaquin woollythreads	*Monolopia congdonii*	State: Fed: E Plant Rank: 1B.2	CWHR: N/A USFWS: N/A	Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub.
Shevrock's golden-aster	*Heterotheca shevockii*	State: Fed: Plant Rank: 1B.3	CWHR: N/A USFWS: N/A	Chaparral, cismontane woodland. Ditches, crevices, shallow sand.
oil neststraw	*Stylocline citroleum*	State: Fed: Plant Rank: 1B.1	CWHR: N/A USFWS: N/A	Chenopod scrub, coastal scrub, valley and foothill grassland. Flats, clay soils in oil-producing areas.

^State and federal threatened and endangered species and California Species of Special Concern. Migratory birds w/o any other status were not included. T= Threatened, E = Endangered, C= Candidate, SSC= State Species of Concern, R = Rare, FP= Fully Protected

USFWS Critical Habitat Mapper - https://www.arcgis.com/home/item.html?id=2c2453ee613f47cdae9dbd0ed7939409

NOAA Fisheries West Coast Critical Habitat Mapper - http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html

For plants: Primary Source = CDFW Native Plant Program; Secondary Source = Calflora and CNPS only

~Large concentrations, rookeries, spawning, breeding, etc. For plants include the blooming season (include months) and flower description (if applicable)

USFWS Designated Wetlands		
Wetland Type (Riverine assumed present)	**Federal Wetland System Description**	**Federal Wetland Class Description**
Palustrine System: Emergent (aka Freshwater Emergent Wetland)	Includes all nontidal vegetated wetlands. It also includes wetlands lacking vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5m (8.2 ft) at low water, and (4) salinity due to ocean-derived salts less than 0.5ppt.	In this wetland class, emergent plants (i.e., erect, rooted, herbaceous hydrophytes, excluding mosses and lichens) are the tallest life form with at least 30% areal coverage. In areas with relatively stable climatic conditions, Emergent Wetlands maintain the same appearance year after year.
Palustrine System: Scrub-shrub (aka Freshwater Scrub-shrub Wetland)	Includes all nontidal vegetated wetlands. It also includes wetlands lacking vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5m (8.2 ft) at low water, and (4) salinity due to ocean-derived salts less than 0.5ppt.	In Scrub-Shrub Wetlands, woody plants less than 6m (20ft) tall are the dominant life form - i.e., the tallest life form with at least 30% areal coverage. Scrub-Shrub Wetlands may represent a successional stage leading to Forested Wetland, or they may be relatively stable communities.
Palustrine System: Forested (aka Freshwater Forested Wetland)	Includes all nontidal vegetated wetlands. It also includes wetlands lacking vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5m (8.2 ft) at low water, and (4) salinity due to ocean-derived salts less than 0.5ppt.	In Forested Wetlands, trees are the dominant life form - i.e., the tallest life form with at least 30% areal coverage. Trees are defined as woody plants at least 6m (20 ft) in height. Normally, Forested Wetlands possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer.
Palustrine System: Unconsolidated Bottom (aka Freshwater Pond)	Includes all nontidal vegetated wetlands. It also includes wetlands lacking vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5m (8.2 ft) at low water, and (4) salinity due to ocean-derived salts less than 0.5ppt.	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones and a vegetative cover less than 30%. Unconsolidated Bottoms are characterized by the lack of large stable surfaces for plant and animal attachment. They are usually found in areas with lower energy than Rock Bottoms and may be very unstable.

Palustrine System: Unconsolidated Shore (aka Freshwater Pond)	Includes all nontidal vegetated wetlands. It also includes wetlands lacking vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5m (8.2 ft) at low water, and (4) salinity due to ocean-derived salts less than 0.5ppt.	Unconsolidated Shore includes all wetland habitats having three characteristics: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) exposed or flooded on an irregular, regular, temporary, seasonal, or intermittent basis.
Lacustrine System: Limnetic unconsolidated bottom (aka Lake)	Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 ha (20 acres). Limnetic subsystem includes all deepwater habitats (i.e., depth greater than 2.5m (8.2 ft) at low water.	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones and a vegetative cover less than 30%. Unconsolidated Bottoms are characterized by the lack of large stable surfaces for plant and animal attachment. They are usually found in areas with lower energy than Rock Bottoms and may be very unstable.
Lacustrine System: Littoral unconsolidated bottom (aka Lake)	Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 ha (20 acres). Littoral subsystem includes all wetlands from the shoreward boundary of the system to a depth of 2.5m (8.2 ft) below low water.	Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones and a vegetative cover less than 30%. Unconsolidated Bottoms are characterized by the lack of large stable surfaces for plant and animal attachment. They are usually found in areas with lower energy than Rock Bottoms and may be very unstable.
Lacustrine System: Littoral unconsolidated shore (aka Lake)	Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with 30% or greater areal coverage; and (3) total area of at least 8 ha (20 acres). Littoral subsystem includes all wetlands from the shoreward boundary of the system to a depth of 2.5m (8.2 ft) below low water.	Unconsolidated Shore includes all wetland habitats having three characteristics: (1) unconsolidated substrates with less than 75% areal cover of stones, boulders, or bedrock; (2) less than 30% areal cover of vegetation other than pioneer plants; and (3) exposed or flooded on an irregular, regular, temporary, seasonal, or intermittent basis.

Source: Classification of Wetlands and Deepwater Habitats of the US

Source: https://www.fws.gov/wetlands/data/mapper.html

Commercial and Recreational Fisheries (Public Health, Fisheries Closure)			
Common Name	**Scientific Name**	**Contact Information**	**Seasonal and Special Considerations, Notes**
rainbow trout	*Oncorhynchus mykiss*	San Joaquin/Kern River Hatchery; CDFW Region 4 fisheries	Open all year. Stocking at lakes: Ming, Hart Park, Truxtun, River Walk
black bass	*Micropterus spp.*		open all year
bullhead & catfish	*Ictalurus spp. & Ameiurus spp.*		open all year
striped bass	*Morone saxalis*		open all year
common carp	*Cyprinus carpio*		open all year
sunfish & crappie	*Lepomis spp. & Pomoxis spp.*		open all year

Designated or Protected Lands			
Area Name	**Designation**	**Contact Information**	**Seasonal and Special Considerations, Notes**
Panorama Vista Preserve	habitat conservation	Carolyn Belli (661) 872-3569	school tours
Cole's Levee	habitat conservation	Joe Cobb (661) 340-8378	conservation credits
Kern Water Bank	habitat conservation	Jonathan Parker (661) 398-4900	migratory birds
Bakersfield Cactus Ecological Reserve	ecological reserve	Erin Tennant (661) 477-9239	
Tule Elk State Natural Reserve	state natural reserve	Calif. Dept. of Parks and Rec. (661) 764-6881	public wildlife viewing, guided tours, geocaching, visitor center