

7.4 TERRESTRIAL BIOLOGICAL RESOURCES (REVISED)

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7.4.1 INTRODUCTION

7.4.1.1 Content

The proposed project analyzed in the Monterey Plus EIR was the Monterey Amendment and the Settlement Agreement. The Monterey Plus EIR considered five “elements” of the Monterey Amendment as follows:

- *Changes in the procedures for allocation of Table A water and surplus water among the SWP contractors;*
- *Approval to permanent transfers of 130,000 acre feet and retirement of 45,000 acre-feet of SWP long-term water supply contracts’ Table A amounts;*
- *Transfer of property known as the “Kern Fan Element property” in Kern County;*
- *Water supply management practices; and*
- *Restructured water rates.*

This REIR has changed the description of the Kern Fan Element property transfer to be:

- *Transfer of property known as the "Kern Fan Element property" in Kern County and its development and continued use and operation as a locally owned and operated groundwater banking and recovery project.*

There are no revisions to the other elements of the Monterey Amendment or of the Settlement Agreement, and no changes have been made relating to them in this REIR. (See discussion in Introduction/Executive Summary.)

This REIR does not supersede the analysis of the Monterey Plus EIR but supplements the Monterey Plus EIR. The Monterey Plus EIR focused on the transfer of the KFE property, which was fully analyzed in the Monterey Plus EIR. This REIR did not identify any new impacts or changes to impacts caused by the transfer of the KFE property; therefore, the Monterey Plus EIR fully disclosed all impacts caused by the transfer of the KFE property. Consequently, this REIR focuses on the development and continued use and operation of the KWB as a locally owned and operated groundwater banking and recovery project (“KWB activities”).

The Monterey Plus DEIR Section 7.4 identified potential impacts to terrestrial biological resources as a result of the transfer of the Kern Fan Element. Text from DEIR Section 7.4 that discusses KWB activities is copied below and shows revisions to this section. All other text in DEIR Section 7.4 remains unchanged. In addition to the impacts discussed below, to the extent they apply, indirect impacts as a result of population growth are presented in Chapter 8, Growth-Inducing Impacts, and indirect impacts from potential cropping changes are presented in Section 10.1, Cumulative Environmental Impacts.

Table 7.4-1A identifies the potentially affected environmental resources from impacts of KWB activities on terrestrial biological resources.

TABLE 7.4-1A

IMPACTS OF KWB ACTIVITIES PROPOSED PROJECT ELEMENTS ON TERRESTRIAL BIOLOGICAL RESOURCES

Proposed Project Element	Potentially Affected Environmental Resources	Impact Number
Transfer of Kern Fan Element lands, <u>and KWB activities</u>	Terrestrial biological resources with changes in land use and management of KWB Kern Fan Element Lands and construction of recharge ponds on KWB Lands <u>the Kern Fan Element property</u>	7.4-1, 7.4-3

One comment on the Monterey Plus DEIR NOP, in a letter from the Department of Food and Agriculture by Steve Shaffer (Director of the Office of Agricultural and Environmental Stewardship), recommended that the cumulative loss of agricultural land as a result of the Monterey Amendment and the Settlement Agreement be analyzed for the potential impacts to wildlife. Migratory birds and some special-status species have adapted to using agricultural land (due to the loss of natural habitat), and if such land is taken out of production, it may no longer be suitable for use.

There are no designated critical habitat areas or local ordinances protecting terrestrial biological resources that will be affected by KWB activities; ~~the proposed project~~; therefore, these issues will not be addressed in this section.

7.4.1.2 Analytical Method

The following documents were reviewed to describe the environmental setting as it existed in 1995:

- Final EIR for the Artificial Recharge, Storage and Overdraft Correction Program, Kern County, California (Kern Water Bank) (December 1986);¹
- Kern Water Bank (KWB) First Stage Kern Fan Element Draft Supplemental EIR (December 1990);²
- Biological information collected for the 1995 Draft and Final Program EIR for the Implementation of the Monterey Agreement;^{3,4}
- Initial Study and Addendum to Monterey Agreement EIR of the Kern Water Bank Authority Kern Water Bank Habitat Conservation Plan/Natural Community Conservation Plan (June 1997) (1997 Monterey IS and Addendum, see Appendix 7-6a); and
- Kern Water Bank Habitat Conservation Plan/Natural Community Conservation Plan (KWB HCP/NCCP), prepared by KWBA (October 1997) (see Appendix 7-7a).

The following documents were reviewed to describe the environmental setting as it existed in 2014~~03~~:

- A California Natural Diversity Database (CNDDDB) query and U.S. Fish and Wildlife Service (USFWS) official species lists for the following 7.5-minute topographic quadrangle maps, including the Department facility and surrounding quads in an approximately 10-mile radius:
 - For the Kern Fan Element – Lokern, Buttonwillow, Rio Bravo, Rosedale, Stevens, Tupman, East Elk Hills, West Elk Hills, Fellows, Taft, Mouth of Kern, and Millux quads.
- The KWB HCP/NCCP, prepared by the Kern Water Bank Authority (KWBA) (October, 1997) (see Appendix 7-7a); and
- The KWBA HCP/NCCP ~~2004 Annual Compliance Reports and 2005-2006 corresponding Management Plans 1996 through 2013~~⁵ (May 2005).

For the purposes of this report, special-status terrestrial biological resources are defined as those species listed as either threatened or endangered under either the California or Federal ESAs, species identified by either the California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game [CDFG]) or the USFWS as “species of concern” and plant species identified by CDFW in its California Rare Plant Ranks (CRPR) or the California Native Plant Society (CNPS) in their Lists 1A, 1B, or 2 (prior to 2010). Further explanation of these categories is included under the Regulatory Setting Section. In addition, ~~habitats~~ natural communities considered to be rare by ~~CDFW~~ are also considered special-status.

This analysis included a review of the environmental setting, impacts, and mitigation measures related to terrestrial biological resources, to the extent they apply, presented in the 1997 Monterey IS and Addendum (see Appendix 7-6a).

7.4.1.3 Standards of Significance

For the purpose of this REIR, impacts to terrestrial biological resources are considered significant if the KWB activities proposed project would:

- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as endangered, rare, or threatened, as listed in Title 14 of the California Code of Regulations (Section 670.2 or 670.5) or Title 50 of the Code of Federal Regulations (Sections 17.11 or 17.12);
- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the USFWS or ~~California Department of Fish and Game (CDFWG)~~;
- Reduce the number or restrict the range of an endangered, rare, or threatened species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by USFWS or ~~CDFWG~~;
- Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including marshes or vernal pools) through direct removal, filling, hydrological interruption, or other direct means;
- Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with the provisions of an adopted HCP, Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

7.4.2 ENVIRONMENTAL SETTING

7.4.2.1 Physical Setting in 1995

The approximately 19,900 acre Kern Fan Element property is located in Kern County, about 20 miles west of Bakersfield and 10 miles south of Buttonwillow. Interstate 5 and the Kern River both bisect the area. The Kern Fan Element property had historically been subject to periodic flooding from the Kern River, and is able to absorb water at an extremely high rate, retaining it in underground aquifers. The land was used for cattle grazing in the 1880s, and then crop production in the 1930s. It was also explored for gas and oil resulting in numerous wells and pipelines. The Department purchased the land in 1988 with the intention of creating a groundwater bank. In 1995, four special-status plants and eleven special-status animals were known to occur on the Kern Fan Element property (see Table 7.4-2A).

TABLE 7.4-2A

SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES AND THE POTENTIAL TO BE IMPACTED BY THE PROPOSED PROJECT ON KERN FAN ELEMENT PROPERTY IN 1995

Species Name	Status ¹ Federal/State/CNPS		Habitat
	1995	201403	
Plants			
Hoover's woolly-star (eriastrum) <i>Eriastrum hooveri</i>	T/-/4	D/-/4	Alkali sinks, washes. Usually on silty to sandy soils.
Recurved larkspur <i>Delphinium recurvatum</i>	C2/-/1B	SC -/1B	On alkaline soils
San Joaquin woollythreads <i>Monolopia (Lembertia) congdonii</i>	E/-/1B	E/-/1B	Alkaline or loamy plains, sandy soils
Slough thistle <i>Cirsium crassicaule</i>	C2/-/1B	SC -/1B	Sloughs, riverbanks, and marshy areas
Reptiles			
Blunt-nosed leopard lizard ² <i>Gambelia sila</i>	E/E, FP	E/E, FP	Sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief
Birds			
Burrowing owl <i>Athene cunicularia</i>	C2/CSC	SC ,BCC/CS C	Subterranean nester, <u>dependant</u> upon burrowing mammals, Burrow sites typically in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.
Cooper's hawk <i>Accipiter cooperii</i>	-/CSC	-/ CSC	Nests in riparian growths of deciduous trees, as in canyon bottoms of river floodplains, within open, interrupted or marginal woodland.
Loggerhead Shrike <i>Lanius ludovicianus</i>	C2/CSC	SC ,BCC/CS C	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. Typically nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and wash.
Northern Harrier <i>Circus cyaneus</i>	-/CSC	-/CSC	Breeds in shrubby vegetation within marshes, or grasslands.
Swainson's hawk <i>Buteo swainsoni</i>	-/T	SC ,BCC/T	Breeds in stands with few trees in Juniper-sage flats, riparian areas and oak savannahs. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
White-tailed (black shouldered) kite <i>Elanus leucurus</i>	-/*	SC ,MNBMG -/FP	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. General nesting habitat is rolling foothill/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.
American badger <i>Taxidea taxus</i>	-/CSC	-/ SA-CSC (CSC in 2006)	Need friable soils and open, uncultivated ground in drier open stages of most shrub, forest, and herbaceous habitats.
San Joaquin (Nelson's) antelope squirrel <i>Ammospermophilus nelsoni</i>	C2/T	SC -/T	Western San Joaquin Valley on dry, sparsely vegetated loam soils. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E/T	E/T	Needs loose-textured sandy soils for burrowing, and suitable prey base, in annual grasslands or grassy open stages with scattered shrubby vegetation.
Tipton kangaroo rat	E/E	E/E	Needs soft friable soils which escape seasonal flooding

TABLE 7.4-2A

SPECIAL-STATUS SPECIES WITH KNOWN OCCURRENCES AND THE POTENTIAL TO BE IMPACTED BY THE PROPOSED PROJECT ON KERN FAN ELEMENT PROPERTY IN 1995

Species Name	Status ¹ Federal/State/CNPS		Habitat
	1995	201403	
<i>Dipodomys nitratoides nitratoides</i>			within saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley

Notes:

¹Status explanation

Federal

- E Listed as endangered under the Federal Endangered Species Act.
- T Listed as threatened under the Federal Endangered Species Act.
- C2 Category 2 Candidate for which information now in the possession of the USFWS indicated that proposing to list and endangered or threatened is possibly appropriate, but for which persuasive data on biological vulnerability and threat are not currently available to support proposed rules.
- SC Federal Species of Concern. The USFWS decided to no longer maintain C2 and C3 lists, and species formerly categorized as such were informally termed "Species of Concern." The Sacramento Fish & Wildlife Office maintains a list of *Species of Concern*. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing. In 2006, the USFWS stopped maintaining a Federal Species of Concern list.
- D Delisted – Delisted species are monitored for five years after being delisted.
- BCC US Fish and Wildlife Service, Bird of Conservation Concern
- MNBMC US Fish and Wildlife Service, Migratory Nongame Bird of Management Concern-

State

- E Listed as endangered under the California Endangered Species Act.
- T Listed as threatened under the California Endangered Species Act.
- CSC California Special Concern Species – categorized as such because of declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.
- FP Fully Protected – Fully protected species may not be taken or possessed without a permit from the Fish and Game Commission.
- * Taxa listed with an asterisk (*) fall into one or more of the following categories – (1) Taxa that are biologically rare, very restricted in distribution, or declining throughout their range; (2) population(s) in California that are peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California; and (3) taxa closely associated with a habitat that is declining in California (e.g. wetlands, riparian, old growth forest).
- SA Taxa found on the July 2003 Special Animals List, which have no legal or protection status.- No listing.

Other – California Native Plant Society

- 1B Rare, threatened or endangered in California and elsewhere
- 4 Plants of limited distribution.

²Relocated population with no known present occurrence.

Sources:

- USFWS List of Candidate Fauna from California and Nevada as of 31 August 1994 (59 FR 58982).
- Endangered and Threatened Wildlife and Plants 50 CFR 17.11 and 17.12, August 20, 1994.
- State and Federal Endangered Animals for California and Listing Dates, Department of Fish and Game, Revised January 1994.
- California Department of Fish and Game Natural Diversity Data Base Special Animals, December 1992 (The 1994 version could not be located).
- California Department of Fish and Game Natural Diversity Data Base, May, 2003.

Prior to the Department's purchase of the Kern Fan Element property, approximately 17,068 acres of the property was under extensive cultivation (see Revised Appendix E). The remaining property contained 1,515 acres of isolated sensitive native plant communities (valley saltbush scrub, Great Valley mesquite scrub and valley sacaton grassland) and 1,317 acres of non-native grassland, which had been leased for oil recovery facilities. No wetland habitat was present in the project area, except for the canals used to convey agricultural water.

A Memorandum of Understanding was signed between the Department and KCWA on March 25, 1987, that provided for the phase out of all agricultural production on the KFE property by the end of 1993. In

~~fact, one of the tenants' leases was terminated in 1989. Then in 1991, at the peak of the drought, all the remaining tenant leases were terminated, and thereafter the agricultural lands were fallowed and introduced annual grasses and forbs colonized the KFE property. After the Department acquired the property, it continued to be farmed by tenants for several years. The Department gradually took the Kern Fan Element lands out of production and by 1995, approximately 16,000 acres of the Kern Fan Element consisted of fallow farmland that had been previously irrigated; 288 acres of actively irrigated farmland; and approximately 2,690 acres of native and disturbed vegetation, including open areas, and land maintained under dry farming for weed management. The remaining 490 acres consisted of roads, canals, and oil and gas facilities.⁶~~

7.4.2.2 Changes in Physical Setting between 1996 and 2014⁰³

~~Changes in the physical setting are described below.~~

~~The Kern Fan Element property was transferred to the Kern County Water Agency and then to the KWBA in 1995. The KWB activities are discussed in more detail in the impact analysis below. The USFWS and CDFG approved ~~an~~the KWB HCP/NCCP for the KWB Lands in October 1997 (Appendix 7-7a). ~~The~~s KWB HCP/NCCP is discussed in more detail in 7.4.2.3, Changes in Regulatory Setting between 1996 and 2014.~~

~~Under the KWB HCP/NCCP, KWBA has authorization to incidentally take (including harm or harass) 161 covered species that are listed or may be listed in the future under the federal Endangered Species Act (FESA)(Appendix 7-7e). These include the species that were known to occur on the site in 1995, which are listed in Table 7.4-2A below. Since the development of the KWB, which began in 1996, an additional 16 special-status plants and animals have recorded occurrences on the KWB Lands (Table 7.4-3A). Numerous other species, particularly waterfowl, have been documented on the KWB Lands. All but six of these species (Horn's milk-vetch, brown pelican, tundra swan, Lawrence's goldfinch, California thrasher, and yellow-headed blackbird) are covered under the KWB HCP/NCCP.~~

7.4.2.3 7.4.2.4 Regulatory Setting in 1995

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) prohibits "take" of federally-listed threatened or endangered wildlife species, without either a Section 7 or 10 permit. "Take" as defined, includes actions that involve harming, pursuing, possessing, or harassing individuals of a protected species, as well as "such acts as may include significant habitat modification or degradation" (50 CFR §17.3). For listed plants, the FESA does not strictly prohibit take but does require compliance with state and local regulations. Species identified as candidates for listing in either Category 1 or 2⁷ do not have the full protection of the FESA; however, USFWS advises project applicants that a Category 1 or 2 species could be elevated to listed status at any time.

Under the FESA, the Secretary of the Interior and the Secretary of Commerce, jointly have the authority to list a species as threatened or endangered (16 United States Code [USC] 1533[c]). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether the project would have a potentially significant impact on any federally-listed threatened or endangered species, on any species proposed to be listed under FESA, or would result in the destruction or adverse modification of critical habitat (16 USC 1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation.

TABLE 7.4-3A

**ADDITIONAL SPECIAL-STATUS PLANTS AND ANIMALS RECORDED ON
KERN WATER BANK LANDS SINCE 1995**

Species	Status ¹
Plants	
Horn's milk-vetch <i>Astragalus hornii</i> var. <i>hornii</i>	-/-1B
Amphibians	
Western spadefoot <i>Scaphiopus hammondii</i>	-/CSC
Reptiles	
Western pond turtle <i>Emys marmorata</i>	-/CSC
California horned lizard <i>Phrynosoma coronatum frontale</i>	-/CSC
Birds	
Brown pelican <i>Pelecanus occidentalis</i>	D/FP
Lawrence's goldfinch <i>Carduelis lawrencei</i>	BCC/-
Black tern <i>Chlidonias niger</i>	-/CSC
Tricolored blackbird <i>Agelaius tricolor</i>	BCC/C
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	-/CSC
Mammals	
Buena Vista Lake shrew <i>Sorex ornatus relictus</i>	E/CSC
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	-/CSC
Note: 1. Federal Status/State Status/California Native Plant Society Designation Federal: E = Listed as endangered under the Federal Endangered Species Act (FESA); T = Listed as threatened under the FESA; D = Delisted; BCC = Bird of Conservation Concern; - = No listing State: E = Listed as endangered under the California Endangered Species Act (CESA); T = Listed as threatened under CESA); C = Candidate for listing under CESA; CSC = California Special Concern Species; FP = Fully protected species may not be taken or possessed without a permit from the Fish and Game Commission; - = No listing. California Native Plant Society Rare Plant Rank: 1B = Rare, threatened or endangered in California and elsewhere Source: Compiled by AECOM 2015. Based on KWB HCP/NCCP annual reports.	

Projects that would result in “take” of any federally-listed threatened or endangered species are required to obtain authorization from the USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitat in non-federal activities.

Federal Regulation of Activities in Wetlands

The regulations and policies of various federal agencies (e.g., the United States Army Corps of Engineers [Corps], United States Environmental Protection Agency [EPA], USFWS, and the National Marine Fisheries Service [NMFS]) mandate that the filling or excavating of wetlands be avoided unless

it can be demonstrated that no practicable alternatives exist. The Corps has primary federal responsibility for administering permits to fill jurisdictional waters of the U.S. under the Rivers and Harbors Act (Sections 9 and 10), Section 404 of the Clean Water Act and a Memorandum of Understanding with the EPA. Most waters of the U.S. are defined by list (e.g., lakes, ponds, rivers) but also include navigable waterways, their tributaries (including intermittent streams), and wetlands. The EPA, USFWS, NMFS, and several other agencies provide comment on Corps permit applications. The EPA has provided the primary criteria for evaluating the biological impacts of Corps permit actions in wetlands.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFWG has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code 2050 *et seq.*). Listed wildlife species may not be “taken” without adequate mitigation and compensation. Under 1995 conditions, “take” meant to hunt, pursue, catch, capture, or kill or attempt to do so; it did not prohibit indirect harm by way of habitat modification. Listed plants could not be taken unless advance notice and request to salvage were given to CDFWG. Typically, CDFWG implemented endangered species protection by entering into management agreements (Section 2081 management agreements) with project proponents.

CDFWG also maintains a list of “species of special concern”, which are species that the CDFWG has considered to be indicators of regional habitat changes, or are considered to be potential future protected species. Species of special concern do not have any special legal status, but CDFWG affords these species special consideration when evaluating proposed projects.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA section 15380 provides that a species not listed on the federal or state lists of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Guidelines issued by the Director of CDFWG state that CNPS List 1B plants fulfill these criteria and therefore should be included in environmental impact reports and mitigation. CDFWG guidelines do not carry the obligations of law or regulation, but CDFWG views this policy as a means to avoid project delays in addressing species issues of which the applicant was not formerly notified. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Fish and Game Code - Sections 3503, 3503.5, 3513

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as

designated in the Migratory Bird Treaty Act. These regulations could require that elements of KWB activities ~~the proposed Project~~ (particularly vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW~~G~~ and/or USFWS.

CDFW~~G~~ Streambed Alteration Agreement

Sections 1600-1607 of the California Fish and Game Code prohibit alterations of any streams, including intermittent and seasonal channels and many artificial channels without a permit from CDFW~~G~~. The limit of CDFW~~G~~ jurisdiction is (subject to the judgment the Department), up to the 100-year flood level.

California Native Plant Society (CNPS)

Vascular plants listed as rare or endangered by the CNPS (Skinner and Pavlik, 1995),⁸ but which have no designated status or protection under federal or state-endangered species legislation, are defined as follows:

- List 1A Plants Believed Extinct.
- List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- List 3 Plants About Which More Information is Needed – A Review List.
- List 4 Plants of Limited Distribution – A Watch List.

In general, plants appearing on CNPS List 1 are considered to meet CEQA section 15380 criteria.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) requires that each of the state's nine regional water quality control boards (RWQCBs) prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The jurisdiction of RWQCBs includes federally protected waters as well as areas that meet the definition of "waters of the state." "Waters of the state" is defined as any surface water or groundwater, including saline waters, within the state's boundaries. RWQCBs have the discretion to take jurisdiction over areas not federally regulated under Section 401, provided they meet the definition of waters of the state. Typically, RWQCBs require mitigation requiring no net loss of wetlands functions and values of waters of the state. If KWB Lands support aquatic features that that do not qualify for federal regulation under Section 401 of the CWA, such features may be subject to protection as waters of the state under the Porter-Cologne Water Quality Control Act.

7.4.2.4 Changes in Regulatory Setting between 1996 and 2014~~03~~

Federal

Federal Endangered Species Act

No change to the FESA occurred between 1996~~5~~ and 2014~~03~~, though the definition of "take" has been further refined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt

to engage in such conduct”, where “harm” includes significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 CFR 17.3). Project-related impacts to listed threatened or endangered species, species proposed for listing or their habitats are still considered significant and would require mitigation. The USFWS no longer tracks candidate species, though in 2003, these remained on the CDFWG Special Animals list as “federal species of concern” and are considered rare under CEQA section 15380. As of May 2006, the USFWS no longer maintains the “federal species of concern” lists although many of these species remain on the CDFWG Special Animals list. Table 7.4-53 lists each species whose status has changed since 1995 and explains the change. Information on species known to occur in the region, but not impacted by KWB activities~~the proposed project~~, can be found in DEIR Appendix J (Document B, Volume II). Known occurrences of special-status species and plants for KWB Lands are listed in Table 7.4-2A and Table 7.4-3B.

Federal Regulation of Activities in Wetlands

No changes to regulation of activities in wetlands have occurred between 1996~~5~~ and 2003-2014 in a way which would change the regulatory requirements of the ~~proposed project~~ KWB activities. However, in 2008, the Corps and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by the Corps (33 CFR 332). The regulations establish a preference for using mitigation banks. Mitigation banks provide established wetland habitats that have already met success criteria, thereby reducing some risks and uncertainties of compensatory mitigation involving creation of new wetlands that cannot yet demonstrate functionality at project implementation. The regulations also establish a preference for providing compensatory mitigation within the affected watershed. Ideally, compensatory mitigation would take place at a mitigation bank in the same watershed as the waters to be replaced. If mitigation banks are not available in the affected watershed, then compensatory mitigation involving creation or restoration in the affected watershed may be preferable to using a mitigation bank outside the affected watershed.

Migratory Bird Treaty Act

No changes to the Migratory Bird Treaty Act have occurred between 1996~~5~~ and 2003-2014 in a way that would change the regulatory requirements of the ~~proposed project~~ KWB activities.

State

California Endangered Species Act (CESA)

No change to the CESA has occurred between 1996~~5~~ and 2003-2014 in a way that would change the regulatory requirements of the ~~proposed project~~ KWB activities. CDFWG continues to maintain a list of candidate, threatened and endangered species, as well as species of concern. Table 7.4-3B lists each species whose status has changed since 1995 and identifies the change. Project-related impacts on state endangered or threatened species and species of concern are considered significant under CEQA Guidelines Section 15380, and would require mitigation.

Changes to the state Fish and Game code occurred that limited the duration of the consultation process required under Sections 2090-2096. Regardless of this change, CDFWG still consults with applicants whose projects could impact state-listed species.

TABLE 7.4-3B
SPECIAL-STATUS UPDATES FOR PLANT AND WILDLIFE SPECIES
KNOWN TO OCCUR ON KWB LANDS

Common Name	Scientific Name	1994 Status (Federal/State/CNPS) ¹	2014 Status (Federal/State/CRPR) ¹
Hoover's woolly-star (eriastrum)	<i>Eriastrum hooveri</i>	T/--/CNPS 4	D/--/CNPS 4
Recurved larkspur	<i>Delphinium recurvatum</i>	C2/--/CNPS 1B	/--/CNPS 1B
San Joaquin woollythreads	<i>Monolopia (Lembertia) congdonii</i>	E/--/CNPS 1B	E/--/CNPS 1B
Slough thistle	<i>Cirsium crassicaule</i>	C2/--/CNPS 1B	/--/CNPS 1B
Western spadefoot	<i>Scaphiopus hammondi</i>	C2/CSC	SC/CSC
Blunt-nosed leopard lizard ²	<i>Gambelia sila</i>	E/E, FP	E/E, FP
Western pond turtle	<i>Clemmys marmorata</i>	C2/CSC	SC/CSC
Burrowing owl	<i>Athene cunicularia</i>	C2/CSC	BCC/CSC
California thrasher	<i>Toxostoma redivivum</i>	-/-	-/-
Cooper's hawk	<i>Accipiter cooperii</i>	-/CSC	-/-
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	-/-	SC, BCC/-
Loggerhead shrike	<i>Lanius ludovicianus</i>	C2/CSC	BCC/CSC
Northern Harrier	<i>Circus cyaneus</i>	-/CSC	-/CSC
Swainson's hawk	<i>Buteo swainsoni</i>	-/T	BCC/T
White-tailed (black-shouldered) kite	<i>Elanus leucurus</i>	-/*	-/FP
American badger	<i>Taxidea taxus</i>	-/CSC	-/CSC
Buena Vista Lake shrew	<i>Sorex ornatus relictus</i>	C1/CSC	E/CSC
San Joaquin (Nelson's) antelope squirrel	<i>Ammospermophilus nelsoni</i>	C2/T	-/T
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E/T	E/T
Tipton kangaroo rat	<i>Dipodomys nitratooides nitratooides</i>	E/E	E/E

Notes:

1. Federal Status/State Status/California Native Plant Society Designation as described below

Federal:

- E Listed as endangered under the Federal Endangered Species Act.
T Listed as threatened under the Federal Endangered Species Act.
C2 Category 2 Candidate for which information now in the possession of the USFWS indicated that proposing to list and endangered or threatened is possibly appropriate, but for which persuasive data on biological vulnerability and threat are not currently available to support proposed rules.
SC Federal Species of Concern. The USFWS decided to no longer maintain C2 and C3 lists, and species formerly categorized as such were informally termed "Species of Concern." The Sacramento Fish & Wildlife Office maintains a list of *Species of Concern*. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing.
D Delisted – Delisted species are monitored for five years after being delisted.
BCC US Fish and Wildlife Service, Bird of Conservation Concern.
MNBMC US Fish and Wildlife Service, Migratory Nongame Bird of Management Concern.
- No listing.

State:

- E Listed as endangered under the California Endangered Species Act.
T Listed as threatened under the California Endangered Species Act.
CSC California Special Concern Species – categorized as such because of declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.
* Taxa listed with an asterisk (*) fall into one or more of the following categories – (1) Taxa that are biologically rare, very restricted in distribution, or declining throughout their range; (2) population(s) in California that are peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California; and (3) taxa closely associated with a habitat that is declining in California (e.g. wetlands, riparian, old growth forest).
SA Taxa found on the July 2003 Special Animals List, which have no legal or protection status.
- No listing.

Other:

- CNPS/CRPR 1B – Plants that are rare, threatened or endangered in the state of California.
CNPS/CRPR 4 – Plants of Limited Distribution – A Watch List.

2. Relocated population with no known present occurrence.

Sources:

USFWS List of Candidate Fauna from California and Nevada as of 31 August 1994 (59 FR 58982).

TABLE 7.4-3B

**SPECIAL-STATUS UPDATES FOR PLANT AND WILDLIFE SPECIES
KNOWN TO OCCUR ON KWB LANDS**

Common Name	Scientific Name	1994 Status (Federal/State/CNPS) ¹	2014 Status (Federal/State/CRPR) ¹
<p>Endangered and Threatened Wildlife and Plants 50 CFR 17.11 and 17.12, August 20, 1994. State and Federal Endangered Animals for California and Listing Dates, Department of Fish and Game, Revised January 1994. California Department of Fish and Game Natural Diversity Data Base Special Animals, December 1992 (The 1994 version could not be located). California Department of Fish and Game Natural Diversity Data Base, May, 2003.</p>			

CEQA Guidelines Section 15380

~~No change to CEQA Guidelines Section 15380, subsection (d) was amended in 2005, has occurred between 1995 and 2003.~~

CDFW Lake or Streambed Alteration Agreement

Since 1995, the California Fish and Game Code that addresses the CDFW Lake or Streambed Alteration Agreements has been changed to include modifications to lakes. As a result of a 1999 Mendocino County court ruling, CDFW is required to meet CEQA requirements prior to issuing a lake or streambed alteration agreement. In addition, the Code was replaced in January 2004 with the new Sections 1600-1616, which lays out the timelines differently, extends the duration of agreements to five years with an option for longer terms, and raises the maximum fee that can be collected from \$2,400 to \$5,000.

Fish and Game Code – Sections 3503, 3503.5, 3513

No change to Fish and Game Code Sections 3503, 3503.5, 3513 has occurred between 1996 and 20032014.

Fish and Game Code—Sections 3511, 4700, 5050, and 5515

Four sections of the California Fish and Game Code—Sections 3511, 4700, 5050, and 5515—list 37 fully protected species. These statutes prohibit take or any possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. An exception is provided where, at the time of plan approval, CDFW may authorize by permit the taking of any covered species, including species designated as fully protected species pursuant to Sections 3511, 4700, 5050, or 5515, whose conservation and management is provided for in a NCCP approved by CDFW pursuant to Section 2835. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects. Activities associated with a project that could result in impacts on fully protected species that are not covered by a permit authorized pursuant to Section 2835 would be subject to the California Fish and Game Code take prohibition.

California Native Plant Society (CNPS)

No change to the CNPS has occurred between 1996 and 2014 in a way that would change the regulatory requirements for species known to occur on KWB Lands. However, in 2010, CDFW changed the name of the CNPS List to the California Rare Plant Rank (CRPR) in an effort to clarify that these plant rank assignments are made collaboratively in a process managed jointly by CDFW and CNPS and are not solely the work of CNPS. Together, CNPS and CDFW with a group of over 300 botanical

experts from government, academia, non-governmental organizations, and the private sector assign plants to the CRPR system in an effort to categorize degrees of concern. The more recent online inventory was released in December 2010.

Vascular plants listed as rare or endangered, but which have no designated status or protection under federal or state-endangered species legislation, are defined as follows:

- List 1A Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere
- List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
- List 2A Plants Presumed Extirpated in California but Common Elsewhere
- List 2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
- List 3 Plants About Which More Information is Needed—A Review List
- List 4 Plants of Limited Distribution—A Watch List

California Native Plant Protection Act

The California Fish and Game Commission can designate plants as rare or endangered. As under federal law, listed plants have considerably less protection than fish and wildlife under state law. The California Native Plant Protection Act (California Fish and Game Code Section 19000 et seq.) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, or road, or other right-of-way, provided that the owner first notifies CDFW and gives the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed.

Other Statutes, Codes, and Policies Affording Limited Species Protection

~~The sixth edition of CNPS's Inventory of Rare and Endangered Plants of California was published in August 2001. This edition included non-vascular plants (including mosses and liverworts) and more than 300 newly-described plants. While a plant's status may have changed between 1995 and 2003 due to new information, CNPS List 1 or 2 are now considered to meet CEQA section 15380 criteria and effects on these species are considered significant in this EIR. Table 7.4-3 lists each species whose status has changed since 1995 and explains the change. Information on species known to occur in the region, but not impacted by the proposed project can be found in Appendix J.~~

Kern Water Bank (KWB) Habitat Conservation Plan/Natural Communities Conservation Plan (KWB HCP/NCCP)

The USFWS and CDFG approved the KWB HCP/NCCP in October 1997 (Appendix 7-7a). The federal and state HCP and NCCP programs seek to make the permit application process more efficient, while still complying with current federal, state and county laws that protect threatened or endangered species. The goal is to conserve plant and wildlife species by preserving their natural communities. The KWB HCP/NCCP serves as an HCP pursuant to Section 10(a)(1)(B) of the 1973 FESA, as well as a Natural Communities Conservation Plan (NCCP) under the California NCCP Act of 2001. It allows the incidental "take" of selected species in areas outside of preserve boundaries, while guaranteeing that natural communities

The KWB HCP/NCCP documents a plan to accomplish both water conservation and environmental objectives by:

1. Allowing the development of water recharge and recovery facilities;
2. Preserving compatible upland habitat and other sensitive areas of natural habitat and rare plants;
3. Conserving species listed as threatened or endangered, pursuant to federal and state environmental laws (listed species as well as other sensitive species);
4. Re-creating intermittent wetland¹/rangeland habitat;
5. Providing a conservation bank for third parties; and
6. Permitting farming.

The KWB HCP/NCCP planning area comprises the entire approximately 19,900-acre KWB Lands Kern Fan Element property. A breakdown of permitted land uses is shown in Table 7.4-4. The KWB HCP/NCCP (Appendix 7-7a and 7-7e) allows for the incidental take of up to 161 rare, threatened or endangered species with documented occurrences or potential habitat in the project area that may be affected by KWB activities ~~the proposed project~~, or species that do not currently occur and for which habitat does not currently exist in the project area, but for which habitat may be created in the future.

Land Uses on the Kern Water Bank Lands	Area in Acres ¹
Recharge Ponds	5,900 ²
Other Banking Facilities	481
Compatible Habitat	5,592 ²
Sensitive Habitat	960
Department Mitigation Land	530
Farming	3,170
Conservation Bank ³	3,267
Total	19,900
Notes: 1. Administrative modification will allow for a shift of up to 559 acres of Compatible Habitat and 95 acres of Sensitive Habitat acres to Recharge Ponds or Other Water Banking Facilities as described in Section V.D. of the habitat conservation plan. 2. Kern Water Bank Authority Mitigation Land—146 acres of Recharge Ponds and 489 acres of Compatible Habitat totaling 635 acres will be covered by a conservation easement. 3. Included potential commercial development zone of up to 490 acres, which was precluded rescinded by the <u>Settlement Agreement, Monterey Agreement</u> . Source: Kern Water Bank Habitat Conservation Plan/Natural Community Conservation Plan, 1997 (see Appendix 7-7a).	

7.4.3 IMPACTS AND MITIGATION MEASURES

7.4-3 Implementation of the KWB activities ~~proposed project~~ could potentially affect special-status terrestrial biological resources on the ~~Kern Fan Element property~~ KWB Lands due to changes in land use and management.

¹ Periodic recharge operations result in the intermittent wetting and drying of recharge ponds. This mimics the cyclic pattern of intermittent wetlands that dominated this area prior to agricultural development. References to “intermittent wetlands” throughout this section refer to this kind of activity.

1996 — 2003¹⁴

The Monterey Amendment called for ownership of the Kern Fan Element property to be transferred from the Department to the KCWA, which occurred in 1995⁶. In 1995, the KCWA received interim permits/authorizations from the USFWS and CDFG to initiate water banking to take advantage of a high availability of water due to a heavy snow pack in the Sierras. As a condition of the interim permit, KCWA was required to set aside permanent habitat mitigation land, which had moderate habitat value, or natural vegetation, until the long term HCP could be implemented on KWB Lands in the Kern Fan Element.⁹ The interim project was carried out in two stages. The first stage resulted in the rehabilitation of disused canals and inundation of approximately 1,500 acres of former agricultural land. Pre-construction surveys were conducted, and revealed poor habitat values throughout the Stage 1 area, and no suitable habitat for listed species.

The second stage resulted in the inundation of approximately 1,400 acres of grassland and fallow agricultural land, which had the potential to support listed species. Biological surveys were conducted in all areas proposed for disturbance by either construction or flooding and 58 potential San Joaquin kit fox dens were found to be unoccupied and destroyed, and the animals did not return prior to construction.¹⁰ Approximately 300 potential Tipton kangaroo rat burrows were located during surveys, but were not monitored for the presence of Tipton kangaroo rat. If any of these burrows were inhabited, then a take may have occurred if the animals were unable to escape.¹¹ Approximately one-quarter to one-third of a known population of San Joaquin woolly threads were inadvertently covered with excavated soils during project construction.¹² The location of this plant was not identified prior to construction, but upon discovering the damage, the area was flagged and avoided. Construction of the recharge basins resulted in the loss of potential San Joaquin kit fox and Tipton kangaroo rat habitat, the potential take of Tipton kangaroo rat, and the destruction of a portion of the San Joaquin woolly thread population. This was not fully mitigated for prior to project construction, but has been mitigated for through post-construction participation in the KWB HCP/NCCP.

Therefore, Stage 2 project activities would have resulted in significant impacts on special-status species, but these potential impacts were reduced to less-than-significant levels by implementing the KWB HCP/NCCP.

Since 1996, the KWBA has been responsible for land management of KWB Lands the Kern Fan Element property. The KWB Lands have been managed in accordance with a KWB HCP/NCCP approved by USFWS and CDFG in 1997 (see Appendix 7-7a). The KWB HCP/NCCP documents a plan to accomplish both water conservation and environmental objectives, mitigating project-specific impacts to less than significant at a regional level. The primary water conservation objective is the storage of water in aquifers during times of surplus for later recovery during times of shortage. The primary environmental objective is to set aside large areas of the Kern Fan Element property for endangered, threatened, and other sensitive species and to implement a program to protect and enhance the habitat. The KWB (a) has provided substantial and important benefits for 10 endangered and threatened species and other species of concern in the southern San Joaquin Valley, (b) is an important component of the strategy adopted by the USFWS to protect and recover endangered and threatened species in the southern San Joaquin Valley, and (c) is providing important wintering habitat for migratory birds by reestablishing intermittent wetland habitat on the alluvial fan of the Kern River lost as a result of regulation of Kern River flood flows.¹³

Under The KWB HCP/NCCP resulted in, the approximately 19,900-acre KWB Lands Kern Fan Element property was being divided up for different land uses (see Table 7.4-34), described as follows.

- Recharge Basins and Other Banking Facilities – Permanent operation of the banking facilities included the flooding of basins, constructing facilities for recovery of the water from underground aquifers and maintenance of all project facilities.

- KWBA Mitigation Parcel – a 635-acre conservation easement has been established for the KWBA. This easement will be managed by KWBA in accordance with the management plan established for the area.
- Compatible Habitat – This habitat is largely fallowed agricultural land that has become established as non-native annual grassland that has been preserved and managed around the banking facilities. It will provide upland habitat for San Joaquin kit foxes and other upland species.
- Sensitive Habitat – Three areas of sensitive habitat containing remnant native saltbush and valley sink scrub habitat have been identified. They are comprised of historic upland habitat and non-farmed locations on KWB Lands ~~the Kern Fan Element property~~ and will benefit native upland species. These areas will be protected throughout the life of the permit.
- Department Mitigation Land – A 530-acre conservation easement has been established on KWB Lands ~~the Kern Fan Element property~~ to mitigate other projects carried out by the Department prior to the transfer of this land to the KCWA. This easement will be managed by KWBA in accordance with the management plan established for the area.
- Farming – 3,170 acres of the project site may be farmed in a manner appropriate to soil conditions found on site. The land may also be used for water recharge and recovery purposes, including recharge basins, leveesberms, and related uses.
- Conservation Bank – 3,267 acres of potential and occupied habitat has been designated for a conservation bank. Under the KWB HCP/NCCP, KWBA may use, or sell up to 490 acres of this habitat for commercial development. Much of this land was pre-approved mitigation land by CDFG and is adjacent to other land preserved in the area. KWBA can use or sell up to 3,267 conservation credits to landowners, developers and others for mitigation for projects within the Master Permit Credit Area.

Between 1998 and 2003, the KWBA built an additional 4,080 acres of shallow recharge basins on KWB Lands ~~the Kern Fan Element property~~. Some of the acres were located within an area designated for farming.¹⁴ Of the original 3,267 acres of available conservation credits, 1,289,744 acres of conservation credits have been sold as of December 31, 201405.

Several measures were implemented in accordance with the KWB HCP/NCCP, to reduce impacts on native or migratory wildlife using ~~the Kern Fan Element property~~ KWB Lands, including:

- Maintaining water levels constant, to the extent possible to prevent impacts on birds nesting in the recharge basins;
- Slowly refilling basins and canals that have been idle for more than two years, so that any covered animals will be able to escape before drowning;
- Constructing shallow canal side slopes to allow animals to escape from the interior and extending internal access roads across new canals, which would provide access for animals to cross the canal when wet;
- Surveying unused canals that will be used in the near future, prior to the burrowing owl nesting season. Any burrows found will be collapsed, in consultation with the Resource Agencies, to prevent nesting in those locations;
- Vegetation removal from roadways, turnouts, interbasin structures, road crossings and control structures will be accomplished by burning, motor grading (used minimally), mowing, herbicide or hand. Vegetation removed from canals and basins will be accomplished by hand control, lightweight equipment (weed-eaters), grazing, mowing and burning; and

- Complying with the “Interim Measures for Use of Rodenticides in Kern County,” in order to prevent damage to facilities from rodents and to prevent the poisoning of listed species.

A Vegetation Management Plan as part of the KWB HCP/NCCP (Appendix 7-7c) was created to describe cost effective vegetation management and restoration practices for the long-term adaptive management and enhancement of the Kern Water Bank. Protection of existing and newly established sensitive habitats, vegetation management of compatible habitat using effective, low-cost adaptive methods and exotic pest plant control are primary goals under this management plan.

Periodic recharge operations result in the intermittent wetting and drying of recharge ponds. This mimics the cyclic pattern of intermittent wetlands that dominated this area prior to agricultural development. About 17,000 of the approximately 19,900 acres that compose the KWB Lands were farmed intensively before 1991. Now, the water conservation activities of the KWB are re-creating habitat along the recharge ponds, where marsh-like environments are established during recharge periods and create ideal habitat for waterfowl, shorebirds, raptors, and other native and migrating birds. Willows, cottonwoods, sedges, and other wetland vegetation have emerged along the edges of the recharge basins and earthen berms. As of 2014, more than 66 species of waterfowl have been sighted on KWB Lands, including Caspian tern, white-faced ibis, double-crested cormorant, Barrow’s goldeneye, purple martin, tricolored blackbird, and American white pelican.¹⁵ Many of these species have reproduced successfully on KWB Lands.¹⁶ By expanding available habitat for numerous species, recharge operations have result in nearly doubling the number of special-status species that have been documented to occur on KWB Lands (see Tables 7.4-2A and 7.4-4). The KWB HCP/NCCP and its Operations Manual, Vegetation Management Plan, and Waterbird Management Plan (see Appendices 7-7a, 7-7b, 7-7c, and 7-7d, respectively) provide ongoing management direction for KWB Lands.

Further, KWB activities expanded and protected riparian and other sensitive habitats, such as native saltbush and valley sink scrub habitat, on KWB Lands. KWB development also resulted in the conversion of intensively farmed lands to annual grassland habitat that supports numerous plant and wildlife species.

Vegetation management in upland areas is focusing on regenerating native grasses and plants that help to promote the threatened and endangered species associated with this area. This upland habitat is supporting large populations of raptors, kangaroo rats, rabbits, badgers, bobcats, and coyotes. Of particular importance are the populations of Tipton kangaroo rats, burrowing owls, and tricolored blackbirds. On occasion, San Joaquin kit fox has been observed on the property. Studies have suggested that the abundance of coyotes, a predator of the kit fox, may be suppressing kit fox populations.¹⁷

Under the KWB HCP/NCCP, the KWBA has authorization to incidentally take (including harm or harass) 161 covered species that are listed, or may be listed in the future under FESA (Appendix 7-7e). Of these species, ~~fourteen~~ 25 special-status plants and animals have recorded occurrences on ~~KWB Lands~~ the Kern Fan Element property. Since the approval of the KWB HCP/NCCP, one incident of take of three individual animals has been reported or is known to have occurred on the KFE property; in 1999, during the construction of the KWB Canal, three Tipton kangaroo rats were captured and temporarily relocated to avoid harming them.¹⁸ After construction was complete, they were reintroduced into the area they had originally inhabited. ~~no take has been reported or is known to have occurred in the Kern Fan Element property.¹⁹~~

In addition to the KWB HCP/NCCP, ~~the 1997 Montereyan IS~~ Initial Study and Addendum ~~were~~ prepared for the ~~KWBern Water Bank~~, which included mitigation measures to reduce impacts on terrestrial biological resources (see Appendix 7-6a).

Therefore, the impact of KWB activities from 1996 to 2014 with regard to terrestrial biological resources was *less than significant*.

In addition, KWB activities, through implementation of the KWB HCP/NCCP, resulted in a benefit to terrestrial biological resources.

Mitigation Measures

None required.

Future Impacts 2015 – 2030

~~As noted under above, the KWBA manages KWB Lands ~~land within the Kern Fan Element property~~ in accordance with a KWB HCP/NCCP, approved by the USFWS and CDFG in 1997. Near-term future KWB activities include construction of approximately 190 acres of recharge ponds and three wells under the ongoing Integrated Regional Water Management (IRWM) program (Kern Water Bank Recharge and Recovery Project). Longer-term future construction of approximately 862 acres of additional recharge ponds and associated facilities is anticipated as part of full build-out. In addition to the new recharge ponds, wells, and associated facilities, other potential ground-disturbing activities could include: fencing, constructing replacement recovery wells, installing and replacing pipeline, and installing weir boxes. Maintenance of existing and new basins, wells, and ancillary facilities would also take place. The IRWM program ponds have been sited. The locations of additional ponds are approximate but will be consistent with KWB HCP/NCCP requirements; final locations and areas will be determined as these facilities are designed. ~~As of December 31, 2004, 4,699 acres of recharge basins²⁰ have been constructed with an additional 1,201 acres to be developed. In addition, the KWBA constructed 2,415 acres of recharge basins on lands designated for farming, and constructed 258 acres of other banking facilities, with approximately 289 more acres that could be developed.~~~~

~~Because KWB Lands ~~are the Kern Fan Element property~~ is under a HCP/NCCP, the KWBA is required to follow specific guidelines to prevent take of special-status species and to enhance and preserve the natural habitat currently present. Under the conditions of the KWB HCP/NCCP, the KWBA is required to prepare annual reports summarizing activities within KWB Lands ~~the Kern Fan Element property~~ including updates on the water supply management and related activities; any amendments to the HCP/NCCP; a summary of any take occurrences; land and habitat management and mitigation measures; monitoring programs and studies; mitigation measures and cooperation with wildlife agencies; and the status of conservation credits. An independent study regarding the impacts related to the transfer, development, and operation of the KWB in light of the Kern Environmental Permits, documented that the KWB is operating as intended and within the confines of the KWB HCP/NCCP. The KWB HCP/NCCP requires that KWB activities continue to follow the KWB HCP/NCCP requirements for 75 years from 1997.~~

~~Under the Settlement Agreement, additional restrictions have been placed on allowable uses of KWB Lands ~~the Kern Fan Element property~~. The KWBA will retain title to KWB Lands ~~the Kern Fan Element property~~. The KWBA shall continue to use the property for operation of a water bank and other uses authorized by the KWB HCP/NCCP, so long as such use remains legally and economically feasible. If KWBA determines use of the property as a water bank becomes legally or economically infeasible, and the property cannot feasibly be used for SWP purposes provided in California Water Code §12930 et seq. or if DWR and KWBA are unable to agree on terms and conditions for such SWP use, then the KWBA may transfer or develop the property for another purpose provided that no unmitigable adverse environmental impacts result from the new use. Any net proceeds of land transfer or development will be used by the KWBA for water management purposes. Furthermore the 490 acres, designated as a "Commercial Development Zone" in the KWB HCP/NCCP, may not be developed and are now included~~

in the conservation bank land use component. Provided that there is enough development within the Master Permit Credit Area, KWB activities ~~the proposed project~~ would insure the complete build out of the conservation bank, thus protecting a total of 3,267 acres of potential or occupied habitat.

Periodic recharge operations result in the intermittent wetting and drying of recharge ponds. This mimics the cyclic pattern of intermittent wetlands that dominated this area prior to agricultural development.

It is expected that the implementation of the mitigation measures and the KWB HCP/NCCP, in particular, will continue to result in a beneficial impact on terrestrial biological resources from KWB activities. While ~~no~~ minimal incidental take has occurred since the creation of the Kern Water Bank (with exception of San Joaquin woolly threads), it is possible that KWB activities ~~proposed project~~ could result in take during construction, operation, and maintenance, through collapsed burrows, road kills, crushing ~~ing~~ by grading equipment, harassment, habitat loss, drowning, etc. Special-status plants could also be adversely affected during future KWB construction of new facilities and continued operation and maintenance. This would result in a potentially significant impact on special-status terrestrial wildlife.

Therefore, the impact of KWB activities from 2015 to 2030 with regard to terrestrial biological resources could be **potentially significant**.

Mitigation Measures

The ~~proposed project~~ would result in impacts to terrestrial biological resources on the Kern Fan Element property that would be reduced to **less than significant** through the following mitigation measures currently implemented by the KWBA. These measures were outlined in the Initial Study and Addendum to Monterey Amendment EIR of the KWBA, Kern Water Bank HCP/NCCP. Mitigation Measure 7.4-3 would reduce potentially significant impacts of KWB activities to terrestrial biological resources to less than significant. The use of a biological monitor, and special construction activities and on-going practices, will result in a heightened awareness and education regarding sensitive biological resources, which will reduce the potential for impacts on special-status species. In addition, the use of a project representative as a liaison between the KWBA and the resource agencies will expedite notification regarding any take of a listed animal.

Mitigation Measure 7.4-3 has terms largely excerpted directly from the KWB HCP/NCCP and the 1997 Monterey IS and Addendum, which KWBA is obligated to implement (See Section 7.0.4.2.1, KWB HCP/NCCP Permits; Section 7.0.4.3.1, 1997 Monterey Initial Study and Addendum; and Section 7.0.4.3.2, 2016 KWBA Resolution). Therefore, future KWB activities from 2015 to 2030 with regard to terrestrial biological resources would be **less than significant, with mitigation**.

In addition, KWB activities, through implementation of the KWB HCP/NCCP, are likely to result in a benefit to terrestrial biological resources.

7.4-3 *KWBA will implement the following terms required of KWBA as specified in the 1997 Monterey IS and Addendum (Appendix 7-6a), 2016 KWBA Resolution, and KWB HCP/NCCP, including Appendix A (Kern Water Bank Operations Manual), Appendix C (Kern Water Bank Vegetation Management Plan, and Appendix D (Kern Water Bank Waterbird Management Plan) (see Appendices 7-7a, 7-7b, 7-7c, and 7-7d, respectively):*

a) *Biological Monitor*

A qualified biologist shall monitor all ground disturbing activities during construction in the Sensitive Habitat Sector and will oversee measures undertaken to reduce the take of listed species.

b) *Construction Practices*

- i. *Delineation of Disturbance Areas – During construction, KWBA shall clearly delineate disturbance area boundaries by stakes, flagging, or by reference to terrain features, as provided in the KWB HCP/NCCP directed by CDFG and USFWS to minimize degradation or loss of adjacent wildlife habitats during operation.*
- ii. *Signage – During construction, KWBA shall post signs and/or place fencing around construction sites to restrict access of vehicles and equipment unrelated to site operations.*
- iii. *Resource Agency Notification – At least 20 working days prior to initiating ground disturbance for project facilities in designated salvage/relocation areas, KWBA shall notify the Fresno Field Office of CDFWG and the Sacramento Field Office of USFWS of its intention to begin construction activities at a specific location and on a specific date. The agencies will have ten working days to notify the KWBA of their intention to salvage or relocate listed species in the construction area. If KWBA is notified, it shall wait an additional five days to allow the salvage/relocation to take place.*
- iv. *Salvage and Relocation – KWBA shall allow time and access to USFWS and/or CDFWG, or their designees, to relocated listed species, at the Resource Agencies' expense, from construction areas prior to disturbance of areas that have been identified by the Resource Agencies as having known populations of the listed species they wish to salvage or relocate.*
- v. *Construction Site Review – All construction pipes, culverts, or similar structures with a diameter of three inches or greater that are stored at a construction site on the Kern Water Bank for one or more overnight periods shall be thoroughly inspected for trapped kit foxes and other animals before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight shall be capped. If during construction a kit fox or other animal is discovered inside a pipe, that section of pipe shall not be moved or, if necessary, shall be moved only once to remove it from the path of construction activity until the animal has escaped.*
- vi. *Employee Orientation – An employee orientation program for construction crews, and others who will work on-site during construction, shall be conducted and shall consist of a brief consultation in which persons knowledgeable in endangered species biology and legislative protection explain endangered species concerns. The education program shall include a discussion of the biology of the listed species, the habitat needs of these species, their status under FESA and CESA, and measures being taken for the protection of these species and their habitats as a part of the project. The orientation program shall be conducted on an as needed basis prior to any new employees commencing work on the Kern Water Bank. Every two years or at the beginning of construction for the Supply/Recovery canal, a refresher course will be conducted for employees previously trained. A fact sheet conveying this information shall also be prepared for distribution to all employees. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be filed at KWBA's office and shall be accessible by CDWFG and USFWS.*
- vii. *Standards for Construction of Canals – Concrete-lined canals will have a side slope of 1.5 to 1 or less and the sides will have a concrete finish which will assist in the escape of*

animals. If canals are determined by CDFWG or USFWS to be substantial impediments to kit fox movement, plank or pipe crossings will be provided across concrete canals in areas identified as having high kit fox activity.

c) *On-Going Practices*

- i. *Equipment Storage - All equipment storage and parking during site development and operation shall be confined to the construction site or to previously disturbed off site areas that are not habitat for listed species.*
- ii. *Traffic Control - KWBA's project representative shall establish and issue traffic restraints and signs to minimize temporary disturbances. All construction related vehicle traffic shall be restricted to established roads, construction areas, storage areas, and staging and parking areas. Project related vehicles shall observe a 25 MPH speed limit in all project areas except on county roads and state and federal highways.*
- iii. *Food Control - All food-related trash items such as wrappers, cans, bottles, and food scraps generated both during construction and during subsequent facility operation shall be disposed of in closed containers and shall be regularly removed from the site. Food items may attract kit foxes onto a project site, consequently exposing such animals to increased risk of injury or mortality.*
- iv. *Dog Control - To prevent harassment or mortality of kit foxes or destruction of kit fox dens or predation on this species; no domestic dogs or cats, other than hunting dogs, shall be permitted on-site.*
- v. *Pesticide Use - Use of rodenticides and herbicides on the site shall be permitted in accordance with the Vegetation Management Plan, which incorporates by reference the Interim Measures for Use of Rodenticides in Kern County, and which will incorporate by reference any other applicable laws, rules, and regulations regarding the use of pesticides as they take effect.*

d) *Project Representatives*

KWBA shall designate a specific individual as a contact representative between KWBA, USFWS, and CDFWG to oversee compliance with protection measures-detailed herein. KWBA shall provide written notification of the contact representative to CDFWG and USFWS within 30 days of issuance of the Permits and the Management Authorizations. Written notification shall also be provided by KWBA to CDFWG and USFWS in the event that the designee is changed.

e) *Notification Regarding Dead, Injured or Entrapped Listed Animals*

Any employee or agent of KWBA who kills or injures a San Joaquin kit fox, blunt nosed leopard lizard, Tipton kangaroo rat, San Joaquin antelope squirrel, or other listed species listed as a threatened or endangered animal under FESA or CESA, or who finds any such animal either dead, injured, or entrapped on the Kern Water Bank shall report the incident immediately to KWBA's representative who shall, in turn, report the incident or finding to USFWS and CDFWG. In the event that such observations are of entrapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape unimpeded. In the event that such, observations are of injured or dead animals, KWBA shall immediately notify USFWS and CDFWG by telephone or other expedient means.

KWBA shall then provide formal notification to USFWS and CDFWG, in writing, within three working days of the finding of any such animal(s). Written notification shall include the date, time, location, and circumstances of the incident.

The USFWS contact for this information shall be the Assistant Field Supervisor for Endangered Species, Sacramento Field Office. The CDFWG contact shall be the Environmental Services Supervisor at the San Joaquin Valley-Southern Sierra Region Headquarters.

USFWS or CDFWG will be notified if any other animal, which is otherwise a listed species, is found dead or injured.

f) Construction of Supply/Recovery Canal

Within 60 days prior to the construction of the supply/recovery canal within the zone marked within the Map of the Kern Water Bank, KWBA shall conduct a limited survey within the area of the Kern Water Bank, which will be affected by that construction, with the sole goal of identifying potential San Joaquin kit fox dens. KWBA shall contact USFWS and CDFWG pursuant to the salvage procedures set forth above if any kit fox dens are found.

g) Take Avoidance Protocol for Fully Protected Species

Although a population of blunt nosed leopard lizards was relocated to the Kern Water Bank, there is no known present occurrence of them. Existing data on the blunt nosed leopard lizard at the Kern Water Bank indicates that populations, if they exist, occur within habitat set asides (either sensitive, compatible, or conservation bank habitat), thus the likelihood of take from project construction, operation, and maintenance is negligible. However, in the future adaptive management measures may expand to areas of suitable habitat.

Three other species, which may be found on the Kern Water Bank, are also state designated fully protected species: American peregrine falcon, Greater sandhill crane, and White-tailed kite. The likelihood of the take of any of these species from project construction, operation, and maintenance is negligible due to their mobility and preferred habitats. ~~However, to avoid any take of these species, the same take avoidance protocol as set out for the blunt nosed leopard lizard shall apply to each of these three species.~~

KWBA will comply with the terms of the NCCP Approval and Take Authorization as it relates to~~Until such time that the KWBA obtains appropriate authorization for take of the state-designated fully protected species (Appendix 7-e) blunt nosed leopard lizard by the Fish and Game Commission, t~~ The following take avoidance protocol shall apply in any areas that contain suitable habitat for fully protected species not covered by authorization for take of state-designated fully protected species identified in this subsection (g) of the blunt nosed leopard lizard:

- i. A qualified biologist shall survey any areas proposed for project related disturbance that contain suitable habitat for fully protected species ~~the blunt nosed leopard lizard~~ to determine the likelihood of presence. ~~Suitable habitat consists of valley and foothill grasslands, saltbush scrubland, iodine bush grassland, and alkali flats.~~
- ii. If these fully protected species blunt nosed leopard lizards are found to occur in areas proposed for project facilities construction or maintenance, ~~consideration of~~ avoidance should take place. ~~first. If avoidance is not practicable, then the blunt nosed leopard~~

~~lizard will be trapped and relocated prior to disturbance at KWBA's expense in accordance with the applicable annual management plan. This work must be done by or under the direction of USFWS staff by persons with appropriate experience and with their own take for scientific purposes permits. This procedure will avoid any violation of state law.~~

The use of a biological monitor, and special construction activities and on-going practices will result in a heightened awareness and education regarding sensitive biological resources, which will reduce the potential for impacts on special-status species. In addition, the use of a project representative as a liaison between the KWBA and the resource agencies will expedite notification regarding any take of a listed animal. While take of a fully protected species is not anticipated, this mitigation outlines avoidance protocol to further reduce the likelihood of said take. Together these mitigation measures and the beneficial net increase of habitat for special-status species through implementation of the HCP/NCCP will reduce any potential impact to a less-than-significant level.

ENDNOTES

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7. Category 1 candidate species are taxa for which the USFWS has sufficient biological information to support a proposal to list as endangered or threatened. Category 2 candidate species are those for which information now in the possession of the USFWS indicates that proposing to list as endangered or threatened is possibly appropriate, but for which persuasive data on biological vulnerability and threat are not currently available to support proposed rules.
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