



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



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Governor's Office of Planning & Research

Sep 29 2020

STATE CLEARINGHOUSE

Pablo Arroyave
San Luis and Delta-Mendota Water Authority
842 6th Street
Los Banos, California 93635

Cassandra Arthur
Bureau of Reclamation
Willows Construction Office
1140 West Wood Street
Willows, California 95988

Subject: B.F. Sisk Dam Raise and Reservoir Expansion Project (Project)
Draft Environmental Impact Report/Supplemental Environmental Impact
Statement
SCH #: 2009091004

Dear Mr. Arroyave and Ms. Arthur:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report/Supplemental Environmental Impact Statement (EIR/SEIS) from the San Luis and Delta-Mendota Water Authority (Authority) and Bureau of Reclamation (Reclamation) for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code may be required.

Water Rights: The use of unallocated stream flows is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water Code § 1225. CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities.

PROJECT DESCRIPTION SUMMARY

Proponent: San Luis and Delta-Mendota Water Authority and Bureau of Reclamation

Objective: In 2005, Reclamation completed a risk analysis of B.F. Sisk Dam that concluded there is justification to take action to reduce risk to the downstream public from a potential severe earthquake. Consequently, Reclamation, in coordination with the California Department of Water Resources, completed the B.F. Sisk Dam Safety of Dams (SOD) Modification Project EIS/EIR in December 2019. The Crest Raise Alternative was selected to be implemented. Raising the crest elevation 12 feet would increase the distance between the water surface and the dam crest to prevent reservoir overtopping and failure in the event of dam deformation from a seismic event.

The Project proposes additional fill material on the dam embankment to raise the dam crest an additional 10 feet above the 12-foot embankment raise under development by the B.F. Sisk Dam SOD Modification Project. The 10-foot embankment raise would support an increase in reservoir storage capacity of 130 thousand acre-feet. Project activities include levee modifications to the banks of the San Luis Reservoir via fill to a section of State Route 152 where it crosses over Cottonwood Bay between milepost MER R5.239 and MER R5.806, fill to State Route 152 at milepost MER R6.295, and fill to raise a levee at Dinosaur Point.

Location: The Project location is the San Luis Reservoir, located approximately 12 miles west of Los Banos, in Merced County, California.

Timeframe: Construction of Project activities is scheduled to start in September 2025 and completed in 8 years. Preconstruction and design activities will begin in 2022.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the Authority and Reclamation in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the CEQA document prepared for this Project.

There are many special-status resources present in and adjacent to the Project area. These resources may need to be evaluated and addressed prior to any approvals that would allow ground-disturbing activities or land use changes. CDFW is concerned regarding potential impacts to special-status species including, but not limited to, the State and federally threatened California tiger salamander (*Ambystoma californiense*), the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), the State endangered foothill yellow-legged frog (*Rana boylei*), the State endangered and fully protected bald eagle (*Haliaeetus leucocephalus*), the fully protected golden eagle (*Aquila chrysaetos*), the State threatened Swainson's hawk (*Buteo swainsonii*), the federally threatened and State species of special concern California red-legged frog (*Rana draytonii*), the State candidate-listed as threatened mountain lion (*Puma concolor*), and tule elk (*Cervus canadensis nannodes*). In order to adequately assess any potential impacts to biological resources, focused biological surveys conducted by a qualified wildlife biologist are recommended during the appropriate survey period(s) in order to determine whether any special-status species may be present within the Project area. Properly conducted biological surveys, and the information assembled from them, are essential to identify any mitigation, minimization, and avoidance measures and/or the need for additional or protocol-level surveys, especially in the areas not in irrigated agriculture, and to identify any Project-related impacts under CESA and other species of concern.

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?

COMMENT 1: California Tiger Salamander (CTS)

Issue: CTS have the potential to occur in the Project site. Aerial imagery shows that the Project site consists of upland habitat, which likely serve as refugia for CTS that are dispersing from and into the area, and aquatic features that may provide CTS breeding habitat.

Specific Impacts: Aerial imagery shows that the proposed Project site has upland habitat for refugia which may function as breeding habitat. Potential ground- and vegetation-disturbing activities associated with Project activities include: collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Evidence impact would be significant: Up to 75% of historic CTS habitat has been lost to urban and agricultural development (Searcy et al. 2013). Loss, degradation, and fragmentation of habitat are the primary threats to CTS in both the Central and San Joaquin valleys. Contaminants and vehicle strikes are also sources of mortality for the species (CDFW 2015, USFWS 2017a). The Project site is within the range of CTS and has suitable habitat (i.e., grasslands interspersed with burrows and vernal pools). CTS have been determined to be physiologically capable of dispersing up to approximately 1.5 miles from seasonally flooded wetlands (Searcy and Shaffer 2011) and have been documented to occur near the Project site (CDFW 2020). Given the presence of suitable habitat within the Project site, ground-disturbing activities have the potential to significantly impact local populations of CTS.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to CTS, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the final Environmental Impact Report (EIR) prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 1: Focused CTS Protocol-level Surveys

While Mitigation Measure TERR-3 of the draft EIR/SEIS states that surveys will be conducted for CTS, CDFW recommends that a qualified biologist conduct

protocol-level surveys in accordance with the USFWS "Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander" (USFWS 2003) at the appropriate time of year to determine the existence and extent of CTS breeding and refugia habitat. The protocol-level surveys for CTS require more than one survey season and are dependent upon sufficient rainfall to complete. As a result, consultation with CDFW and the USFWS is recommended well in advance of beginning the surveys and prior to any planned vegetation- or ground-disturbing activities. CDFW advises that the protocol-level survey include a 100-foot buffer around the Project area in all areas of wetland and upland habitat that could support CTS. Please be advised that protocol-level survey results are viable for two years after the results are reviewed by CDFW.

Recommended Mitigation Measure 2: CTS Avoidance

If CTS protocol-level surveys as described in the above Mitigation Measure 1 are not conducted, CDFW advises that a minimum 50-foot no-disturbance buffer be delineated around all small mammal burrows in suitable upland refugia habitat within and/or adjacent to the Project site. Further, CDFW recommends potential or known breeding habitat within and/or adjacent to the Project site be delineated with a minimum 250-foot no-disturbance buffer. Both upland burrow and wetland breeding no-disturbance buffers are intended to minimize impacts to CTS habitat and avoid take of individuals. Alternatively, the applicant can assume presence of CTS within the Project site and obtain from CDFW a State Incidental Take Permit (ITP) in accordance with Fish and Game Code section 2081 subdivision (b).

Recommended Mitigation Measure 3: CTS Take Authorization

If through surveys it is determined that CTS are occupying or have the potential to occupy the Project site, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization would be warranted prior to initiating ground-disturbing activities to comply with CESA. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081 subdivision (b). As stated above, in the absence of protocol surveys, the Authority can assume presence of CTS within the Project site and obtain an ITP from CDFW.

COMMENT 2: San Joaquin Kit Fox (SJKF)

Issue: The Project has the potential to impact SJKF. The area from around Los Banos Reservoir to the north of San Luis Reservoir has been identified by CDFW and the USFWS as a migratory corridor critical to the continued existence and genetic diversity of the northern kit fox population – with the Santa Nella area being identified as a critical SJKF migratory "pinch-point" within this area (HT Harvey and Associates 2004). The creation of the San Luis Reservoir and O'Neil Forebay

resulted in a large migratory barrier to the north-south migration of SJKF, and busy highways in the area such as State Routes 152 and 33 and Interstate 5, as well as the existing urban development further compounded this problem. As a result, any grassland, shrub land, or dry farmed habitat features in this area that could serve as movement or rest areas for SJKF has very high conservation values for this species. Any loss of these features within the corridor is potentially significant. In addition, SJKF has the potential to occur on the Project site because of the proximity of the Project site to the Santa Nella area. Any take of SJKF without appropriate take authorization would be a violation of Fish and Game Code.

Specific impact: The draft EIR/SIES state that to compensate for the 8-year loss of the Santa Nella area SJKF movement corridor during construction, Mitigation Measure TERR-12 will be implemented which propose construction of a broad (e.g. 80- to 120- foot wide) earthen bridge over the mid-portion of the B.F. Sisk Dam spillway, and finishing the upper portion of State Route 152 causeway at Cottonwood Bay with earthen materials. Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with Project activities include den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

Evidence impact is potentially significant: Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). The Project area consists and is bordered by some of the only remaining undeveloped land in the vicinity. Therefore, subsequent ground-disturbing activities have the potential to significantly impact local SJKF populations.

Recommended Analysis

CDFW recommends the draft EIR/SEIS quantify and describe the direct and indirect potential impacts to SJKF, including any impacts to the SJKF movement corridor and other conservation areas. CDFW recommends the evaluation include the cumulative impacts to SJKF from other existing, planned and potential development from south of the Los Banos Reservoir to north of the San Luis Reservoir that may impact existing upland habitat.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact Shortcoming)

To evaluate potential impacts to SJKF, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the final EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 4: SJKF Surveys

CDFW agree with Mitigation Measure TERR-12 of the draft EIR/SEIS that presence/absence of SJKF be assessed by conducting surveys and implementing den avoidance buffers following the USFWS "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011). Specifically, CDFW advises conducting these surveys in all areas of potentially suitable habitat no less than 14 days and no more than 30 days prior to beginning of ground-disturbing activities.

Recommended Mitigation Measure 5: SJKF Take Authorization

SJKF detection warrants consultation with CDFW to discuss how to avoid take, or if avoidance is not feasible, to acquire an ITP by the Authority prior to ground-disturbing activities, pursuant to Fish and Game Code section 2081 subdivision (b).

COMMENT 3: Foothill Yellow-Legged Frog (FYLF) and California Red-Legged Frog (CRLF)

Issue: FYLF are primarily stream dwelling and requires shallow, flowing water in streams and rivers with at least some cobble-sized substrate; CRLF primarily inhabit ponds but can also be found in other waterways including marshes, streams, and lagoons, and the species will also breed in ephemeral waters (Thomson et al. 2016). FYLF and CRLF have been documented to occur in the vicinity of the Project site (CDFW 2020). The Project site contains habitat that may support both species. Avoidance and minimization measures are necessary to reduce impacts to FYLF and CRLF to a level that is less than significant.

Specific impact: Without appropriate avoidance and minimization measures for FYLF and CRLF, potentially significant impacts associated with the Project's activities include burrow collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs, larvae and/or young, and direct mortality of individuals.

Evidence impact would be significant: FYLF and CRLF populations throughout the State have experienced ongoing and drastic declines and many have been extirpated; historically, FYLF occurred in mountain streams from the San Gabriel River in Los Angeles County to southern Oregon west of the Sierra-Cascade crest (Thomson et al. 2016). Habitat loss from growth of cities and suburbs, invasion of nonnative plants, impoundments, water diversions, stream maintenance for flood control, degraded water quality, and introduced predators, such as bullfrogs are the primary threats to FYLF and CRLF (Thomson et al. 2016, USFWS 2017b). Project activities have the potential to significantly impact both species.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to FYLF and CRLF, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation

measures into the final EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 6: FYLF and CRLF Surveys

Mitigation Measure TERR-3 of the draft EIR/SEIS states that surveys will be conducted for CRLF, and Section 3.7.2.2 states that FYLF is considered unlikely in San Luis Creek. CDFW recommends that a qualified wildlife biologist conduct surveys for FYLF and CRLF in accordance with the USFWS "Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog" (USFWS 2005) to determine if FYLF and CRLF are within or adjacent to the Project area; while this survey is designed for CRLF, the survey may be used for FYLF with focus on stream/river habitat.

Recommended Mitigation Measure 7: FYLF and CRLF Avoidance

If any FYLF or/and CRLF are found during pre-construction surveys or at any time during construction, consultation with CDFW is warranted to determine if the Project can avoid take. CDFW recommends that initial ground-disturbing activities be timed to avoid the period when FYLF and CRLF are most likely to be moving through upland areas (November 1 and March 31). When ground-disturbing activities must take place between November 1 and March 31, CDFW recommends a qualified biologist monitor construction activity daily for FYLF and CRLF.

Recommended Mitigation Measure 8: FYLF Take Authorization

If through surveys it is determined that FYLF are occupying or have the potential to occupy the Project site and take cannot be avoided, take authorization would be warranted prior to initiating ground-disturbing activities. Take authorization for the Authority would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081 subdivision (b).

COMMENT 4: Swainson's Hawk (SWHA)

Issue: SWHA have the potential to forage or nest near or on the Project site. The California Natural Diversity Database shows SWHA occurrences throughout the area near the Project site (CDFW 2020). In addition to annual grasslands, SWHA are known to forage in alfalfa, fallow fields, dry-land and irrigated pasture, rice land (during the non-flooded period), cereal grain crops (including corn after harvest), beet, tomato, and other low-growing row or field crops.

Specific impacts: Without appropriate avoidance and minimization measures for SWHA, potential significant impacts that may result from Project activities include nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct

mortality. Any take of SWHA without appropriate incidental take authorization would be a violation of Fish and Game Code.

Evidence impact is potentially significant: SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley limits their local distribution and abundance (CDFW 2016). The Project as proposed, particularly construction of new facilities, will involve noise, groundwork, and movement of workers that could affect nests and foraging which has the potential to result in nest abandonment and decreased feeding, significantly impacting local nesting SWHA.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to SWHA, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the CEQA document prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 9: SWHA Surveys

CDFW agree with Mitigation Measure TERR-7 of the draft EIR/SEIS that surveys for SWHA will be conducted within 0.5 miles of construction areas. CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the survey methods developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000) prior to project implementation. The survey protocol includes early season surveys to assist the project proponent in implementing necessary avoidance and minimization measures, and in identifying active nest and foraging sites prior to initiating ground-disturbing activities.

Recommended Mitigation Measure 10: SWHA No-disturbance Buffer

CDFW agree with Mitigation Measure TERR-7 of the draft EIR/SEIS that a minimum no disturbance buffer of ½-mile be delineated around active nests if construction cannot be limited to occur outside of the nesting season. CDFW recommends the 0.5-mile buffer be implemented until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

Recommended Mitigation Measure 11: SWHA Foraging Habitat

Mitigation Measure TERR-7 of the draft EIR/SEIS states that SWHA foraging habitat loss within 1 mile of active SWHA nests will be compensated by preserving, in perpetuity, suitable foraging habitat at a ratio of 1:1. CDFW recommends compensation for the loss of SWHA foraging habitat to reduce impacts to SWHA foraging habitat to less than significant based on CDFW's Staff Report Regarding

Mitigation for Impacts to Swainson's Hawks (CDFG, 1994), which recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites and the amount of habitat compensation is dependent on nest proximity. In addition to fee title acquisition or conservation easement recorded on property with suitable grassland habitat features, mitigation may occur by the purchase of conservation or suitable agricultural easements. Suitable agricultural easements would include areas limited to production of crops such as alfalfa, dry land and irrigated pasture, and cereal grain crops. Vineyards, orchards, cotton fields, and other dense vegetation do not provide adequate foraging habitat.

Recommended Mitigation Measure 12: SWHA Take Authorization

CDFW recommends that in the event an active SWHA nest is detected during surveys and the CDFW recommended ½-mile no-disturbance buffer around the nest cannot feasibly be implemented, consultation with CDFW is warranted to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization for the Authority through the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

COMMENT 5: Tule Elk

Issue: Elk are California's largest land mammal and an important wildlife resource whose population growth in recent decades has been of great interest to the public. Prior to non-indigenous settlement, it is estimated the elk population in California was more than 500,000 animals. Non-indigenous settlement decimated California's elk populations. By 1872, only a few tule elk remained in the San Joaquin Valley. Conservation organizations and hunters were able to restore elk to the California landscape. Elk population growth since 1970 has been significant and California now supports approximately 5,700 tule elk (CDFW 2018). CDFW regional biologists have confirmed tule elk within and adjacent to the Project site. The Project has the potential to impact this species.

Specific impact: Tule elk are known to utilize the Project site and adjacent areas, especially below the B.F. Sisk Dam. Potential impacts to tule elk as a result of the Project includes loss of habitat, mortality resulting from vehicle collisions, and entanglement with fences and other structures. Without appropriate mitigation measures for tule elk, potentially significant impacts include loss of habitat.

Evidence impact is potentially significant: Habitat loss resulting from development or conversion to other land uses are the primary threat to tule elk. The Project site is within the range of tule elk and is utilized by tule elk based on CDFW population assessment surveys. As a result, ground-disturbing activities associated

with development of the Project site have the potential to significantly impact local populations of this species.

Recommended Potentially Feasible Mitigation Measure(s)

To evaluate potential impacts to tule elk, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the final EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 13: Tule Elk habitat

The Project as proposed will result in the loss of tule elk habitat. CDFW recommends that tule elk habitat be conserved at a minimum 1:1 ratio to the loss of habitat within the general vicinity of the Project site.

Recommended Mitigation Measure 14: Fencing

Increasing the storage capacity of the San Luis Reservoir may result in realignment to the perimeter fencing. Physical barriers such as fencing, mesh wire, panels, electric fence, and visual barriers (such as landscaping cloth hung between fence poles) have the potential to impact tule elk. CDFW recommends not utilizing physical barriers that may impede tule elk access to water, and foraging areas.

COMMENT 5: Mountain lion

On June 25, 2019, a petition to list the mountain lion (*Puma concolor*), Southern California/Central Coast Evolutionarily Significant Unit (ESU) in Southern and Central California, as Threatened or Endangered pursuant to the California Endangered Species Act (California Fish and Game Code §§ 2050 et seq., "CESA") was submitted to the California Fish and Game Commission. Specifically, the petitioners requested listing as a "threatened species" for the ESU comprised of the following recognized mountain lion subpopulations: 1) Santa Ana Mountains 2) Eastern Peninsular Range 3) San Gabriel/San Bernardino Mountains 4) Central Coast South (Santa Monica Mountains) 5) Central Coast North (Santa Cruz Mountains) 6) Central Coast Central. In April 2020, Fish and Game Commission determined that the petitioned action "may be warranted" and established mountain lion within the proposed ESU as a candidate species under CESA. As a candidate species, mountain lion within the proposed ESU now has all of the protections afforded to an endangered species under CESA.

The Project site is adjacent to the Central Coast North ESU. Therefore, CDFW advises analyzing Project impacts to the subpopulation; CDFW advises including and referencing recent linkage studies on mountain lion that includes these six subpopulations of mountain lions in California. Based on this analysis, CDFW

recommends the final EIR prepared for this Project include robust feasible avoidance, minimization, and mitigation measures to reduce impacts to mountain lion to less than significant.

COMMENT 6: Riparian Impacts

Issue: The increased storage capacity as a result from the additional 10 feet above the 12-foot embankment raise under development by the B.F. Sisk Dam SOD Modification Project will impact riparian habitat and associated species throughout the San Luis Reservoir. A hydrologic study or other information may be needed to identify and analyze the impacts of the removal of riparian woodland around the San Luis Reservoir, and the species supported by these habitats.

Specific Impact: Watershed and habitat protection are vital to the CDFW's management of California's diverse fish, wildlife, and plant resources. The various riparian zones around the San Luis Reservoir (i.e. San Luis Creek) supports riparian woodland habitat and associated annual grassland, and may potentially support several sensitive species listed as threatened or endangered under CESA and the Federal Endangered Species Act (FESA), as well as several State special-status species including California red-legged and foothill yellow-legged frog. CDFW is concerned that the loss of riparian habitat will result in direct and cumulative adverse impacts to these fish and wildlife and other public trust resources.

Recommended Analysis

CDFW recommends a hydrologic study or other information that identify and analyze the impacts to the riparian woodland and aquatic habitats around the San Luis Reservoir and the species supported by these habitats.

Study Plan

Where a project could affect the hydrologic regime of a watershed, the necessary elements to successfully maintain the biological diversity and avoid impacts to threatened and endangered species needs to be identified to facilitate sound management decisions. CDFW recommends the Lead Agency develop and implement a site-specific study to evaluate potential Project-related impacts to riparian habitat and determine appropriate measures to reduce impacts to a less than significant level. Mitigation Measure TERR-16b states that "a wetland mitigation and monitoring plan will be developed with CDFW, USACE, or RWQCB to detail mitigation and monitoring obligations for temporary and permanent impacts to wetlands and other waters due to construction activities and for other CDFW jurisdictional areas. The plan will quantify the total acreage affected; provide for mitigation to wetland or riparian habitat; specify annual success criteria for mitigation sites; specify monitoring and reporting requirements; and prescribe site-specific plans to compensate for wetland losses resulting from the Project consistent with the USACE's no net loss policy."

At a minimum, CDFW recommends the study plan include the following:

1. Analysis of any impacts to flows necessary to maintain the health and perpetuation of aquatic and riparian resources adjacent to the reservoir that result from Project activities.
2. A complete updated (within the last two years) assessment of the flora and fauna within, and adjacent to, the Project footprint with particular emphasis on identifying endangered, threatened, and sensitive species and sensitive habitats. The assessment should be based on the findings of appropriate applicable protocol surveys to determine the presence or absence of special-status species within the Project footprint. These surveys should be conducted on the project site, including adjacent habitats.
3. A quantification of the loss of biological resources that will occur as a result of the inundation of riparian habitat and associated tributaries, and an evaluation of the impacts to resources.
4. A mitigation plan to replace lost plant, fish, and/or wildlife resources including, but not limited to the species or habitats described above. This plan must include a survey which quantifies the loss of resources that will occur as a result of this project. It must also specify measures that will be taken to offset impacts to resources and outline specific mitigation and monitoring programs.

Comment 7: CDFW-Owned and Managed Lands

CDFW Wildlife Areas are acquired for the protection and enhancement of habitat for a wide variety of species and are open to the public for wildlife viewing, hiking, hunting, fishing, and nature tours. The construction and staging activities near CDFW lands could severely limit the wildlife and public use values of these lands as well as alter the way these lands are managed by CDFW. Most Wildlife Areas depend on visitor fees for operation, maintenance and management. CDFW has concerns that Project-related construction and staging activities may negatively impact the number of visitors to Wildlife Areas resulting in reduced revenues; thereby reducing or eliminating the future enhancement of public recreational opportunities and wildlife habitat provided by these areas.

Specific CDFW-owned lands that are in the Project vicinity include Cottonwood Creek Wildlife Area (Upper and Lower), San Luis Reservoir Wildlife Area, O'Neill Forebay Wildlife Area, Volta Wildlife Area, Los Banos Wildlife Area, North Grasslands Wildlife Area and Cañada de los Osos Ecological Reserve. It is of note that the Cottonwood Creek, O'Neill Forebay, and San Luis Reservoir Wildlife Areas were set aside/created as USBR mitigation for the creation of San Luis Reservoir, and these lands appear to be those most likely to be directly impacted by the project. CDFW requests that the final EIR evaluate how construction, staging, and road/highway modification activities may temporarily or

permanently impact public access and use of these Wildlife Areas in addition to potential resource impacts. It is of note that all of these properties are known to support state and federally listed species.

Comment 8: Cumulative Impacts Related to High Speed Rail

The Bay Area to Merced alignment of the High Speed Train is also planned for the project area vicinity. The currently proposed High Speed Train alignment would run along Henry Miller Road to the east of the Project Area and ultimately would tunnel underneath the Cottonwood Creek Wildlife Area, in close proximity to B.F. Sisk Dam and possibly with overlapping staging, traffic, and road use/construction impacts. CDFW recommend that the draft EIR/SEIS evaluate the potential impacts of both the High Speed Train and the proposed Project being constructed simultaneously or in close proximity temporally. CDFW recommends related cumulative impacts to CDFW lands and biological resources also be analyzed and addressed.

Comment 9: Fisheries and Aquatic Resources

The environmental impacts analysis for operations of the Dam Raise Alternative indicates increases in Delta exports during wet and above normal years, with Delta outflows generally decreasing during wetter years and increasing during drier years. However, it is difficult to interpret the model results for operational impacts to water quality and aquatic resources (Appendices D and J2) based on a limited description of the CalSim II analysis. CDFW recommends that the final EIR includes detailed documentation of the CalSim II model assumptions and methodology used to calculate and summarize the modeling results. Additionally, modeling results that include averages should also include estimates of variance to better evaluate the effect on fisheries resources. Fisheries resources respond to the immediate effects experienced rather than averaged effects over long periods of time. The use of long-term summarized averages without variance estimation or documentation of methodology obscures the true proposed Project impacts on fisheries resources.

While hydrodynamic changes can be used as proxies for aquatic habitat conditions, CalSim II should not be used in lieu of life cycle models and other appropriate tools developed to evaluate the effects of operational changes to fisheries and aquatic resources. CDFW recommends the following model analyses to evaluate effects of Project operations on fisheries:

Winter-run Chinook Salmon, Spring-run Chinook Salmon, Delta Smelt, Longfin Smelt:

- Channel Velocity (DSM2-HYDRO)
- Entry into Interior Delta
- Flow Routing into Channel Junctions

Winter-run Chinook Salmon and Spring-run Chinook Salmon:

- Current Sacramento River Temperature Model

- Martin 2017 Temperature Model
- Through-Delta Survival
 - Delta Passage Model
 - Newman 2003 (spring-run only)
 - Perry et al. 2018 STARS
- Life Cycle Models (winter-run only)
 - Interactive Object-oriented Salmon Simulation (IOS)
 - Oncorhynchus Bayesian Analysis (OBAN)
 - NMFS Winter Run Life Cycle Model (NMFS WRLCM)

Longfin Smelt:

- Kimmerer 2009 (outflow)

Delta Smelt and Longfin Smelt (habitat related, quantitative/qualitative analyses):

- Migration impedance and lost reproductive opportunity
- Changes in larval transport
- South Delta facilities-entrainment
- Microcystis
- Reduction in transport of food web materials
- Sediment removal and changes in turbidity

Comment 10: Cumulative Impacts Related to Los Vaqueros Reservoir Expansion

The Los Vaqueros Reservoir Expansion Project is anticipated to be constructed and in operation before completion of the Project. This project could result in long-term changes to Delta operations, provide CVP operational flexibility, and increase refuge water supply deliveries to south-of-Delta refuges. CDFW recommends that the cumulative effects analysis for water quality (Section 5.1.1) and surface water supply (Section 5.1.2) include the Los Vaqueros Reservoir Expansion Project as a reasonably foreseeable project that could contribute to cumulative impacts.

II. Editorial Comments and/or Suggestions

Fully Protected Raptors: The fully protected bald eagle and golden eagle are known to nest and forage in the vicinity of the Project site. Projects within occupied territories have the potential to significantly impact the species. CDFW recommends that focused surveys be conducted by experienced biologists prior to Project implementation. To avoid impact to the species, CDFW recommend incorporating survey protocols developed by CDFW (CDFG, 2010) and the USFWS (USFWS, 2010). Mitigation Measure TERR-8 of the draft EIR/SEIS states that if active nests are identified, a minimum 660-foot to 0.5-mile buffer zone depending upon visibility and severity of the

activity will be implemented. In the event that either species are found within 0.5-mile of the Site, CDFW recommends that a qualified wildlife biologist be on-Site during all ground disturbing/construction related activities and that a 0.5-mile no-disturbance buffer be put into effect. If the 0.5-mile no-disturbance buffer cannot feasibly be implemented, contacting CDFW to assist with providing and implementing additional avoidance measures is advised. CDFW recommend these mitigation measures for fully protected raptor species be addressed in the final EIR prepared for the Project.

Lake and Streambed Alteration: Project activities include levee modifications to the banks of the San Luis Reservoir via fill to a section of State Route 152 where it crosses over Cottonwood Bay between milepost MER R5.239 and MER R5.806, fill to State Route 152 at milepost MER R6.295, and fill to raise a levee at Dinosaur Point. Therefore, the Project is subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires the Authority to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake; or (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent, such as the unnamed stream within the Project site, as well as those that are perennial in nature.

For additional information on notification requirements, please contact our staff in the Lake and Streambed Alteration Program at (559) 243-4593. It is important to note, CDFW is required to comply with CEQA, as a Responsible Agency, when issuing a Lake or Streambed Alteration Agreement (LSAA). If inadequate, or no environmental review, has occurred, for the Project activities that are subject to notification under Fish and Game Code section 1602, CDFW will not be able to issue the Final LSAA until CEQA analysis for the project is complete. This may lead to considerable Project delays.

Water Rights: CDFW recommends the final EIR address whether the Project proponents anticipate applying for the water rights associated with the proposed increase in storage capacity for the reservoir. CDFW recommends the final EIR address how the Project will affect existing water rights including those associated with the Central Valley Project (CVP) and State Water Project (SWP) water supply, pre-1914 appropriative rights, riparian rights, prescriptive rights, and appropriative rights approved under licenses and SWRCB WR Orders.

Project-related diversions to storage may impact riparian, wetland, fisheries and terrestrial (upland) wildlife species and their habitats. As stated previously, CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Given the potential for impacts to sensitive species and their

habitats, it is advised that consultation with CDFW occur well in advance of any SWRCB water right application process.

Federally Listed Species: CDFW recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to, CTS, SJKF, and CRLF. Take under FESA is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground-disturbing activities.

Carried-over Water: The Investor-Directed Storage Subalternative on page 2-10 states, *"Investors could forego delivery of their allocated CVP Project water for delivery in subsequent year(s). This unused CVP Project water would be carried-over to subsequent year(s) and continue to be stored in San Luis Reservoir until investor requests delivery of the water without the risk of "spill."* However, footnote 6 defines carried-over water as *"...Rescheduled Water. Rescheduled Water is defined as allocated CVP water carried over to subsequent water year(s) by the water contractor pursuant to Reclamation's then-current Rescheduling Guidelines. The water contractors, in storing this carried-over supply in San Luis Reservoir, take on a risk of potentially losing it if San Luis Reservoir fills the next year and that supply is "spilled" (converted to CVP supplies for following year's allocation)."* These two statements seem contradictory of each other and CDFW requests clarification on the description of carried-over water and the risk of "spill."

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project

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approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CDFW appreciates the opportunity to comment on the Project to assist the Authority and Reclamation in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). If you have any questions, please contact Jim Vang, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014, extension 254, or by electronic mail at Jim.Vang@wildlife.ca.gov.

Sincerely,



Julie A. Vance
Regional Manager

Pablo Arroyave; Casandra Arthur
San Luis and Delta-Mendota Water Authority; Bureau of Reclamation
September 28, 2020
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cc: State Water Resources Control Board
Division of Water Rights
Post Office Box 2000
Sacramento, California 95812

United States Army Corps of Engineers
San Joaquin Valley Office
1325 "J" Street, Suite #1350
Sacramento, California 95814-2928

ec: Patricia Cole; Patricia_Cole@fws.gov

Annette Tenneboe, Linda Connolly, Lara Sparks, Cristen Langner, Angela
Llaban; CDFW

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Attachment 1

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM
(MMRP)**

PROJECT: B.F. Sisk Dam Raise and Reservoir Expansion Project

SCH No.: 2009091004

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
<i>Before Disturbing Soil or Vegetation</i>	
Mitigation Measure 1: Focused CTS Protocol-level Surveys	
Mitigation Measure 3: CTS Take Authorization	
Mitigation Measure 4: SJKF Surveys	
Mitigation Measure 5: SJKF Take Authorization	
Mitigation Measure 6: FYLF and CRLF Surveys	
Mitigation Measure 8: FYLF Take Authorization	
Mitigation Measure 9: SWHA Surveys	
Mitigation Measure 11: SWHA Foraging Habitat	
Mitigation Measure 12: SWHA Take Authorization	
Mitigation Measure 13: Tule Elk habitat	
<i>During Construction</i>	
Mitigation Measure 2: CTS Avoidance	
Mitigation Measure 7: FYLF and CRLF Avoidance	
Mitigation Measure 10: SWHA No-disturbance Buffer	
Mitigation Measure 14: Fencing	