CALENDAR ITEM C01

Α	3	06/22/17
		W 27081
S	4	M.J. Columbus

GENERAL LEASE - PUBLIC AGENCY USE

APPLICANT:

Sutter Butte Flood Control Agency

PROPOSED LEASE:

AREA. LAND TYPE. AND LOCATION:

Sovereign land in the Feather River, adjacent to Assessor's Parcel Number 025-230-003, near Oroville, Butte County.

AUTHORIZED USE:

Construction, placement, use, and maintenance of a notch, three box culverts with sluice gates, wing walls, grading, berm, cofferdam, removal, and installation of trees and vegetation, and maintenance and construction areas.

LEASE TERM:

20 years, beginning June 22, 2017.

CONSIDERATION:

Public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, 6501.1, 6503, and 6503.5; California Code of Regulations, title 2, sections 2000 and 2003.

Public Trust and State's Best Interests Analysis:

The Sutter Butte Flood Control Agency has applied for a General Lease – Public Agency Use to construct a notch through an existing berm to connect the Feather River to the interior of the Oroville Wildlife Area D-Unit (OWA), reconnecting the river to its historic floodplain. This includes construction of three 16-foot-wide by 10-foot-high box culverts with sluice gates intended to convey flows, construction of wing walls, grading to remove and reconstruct an existing berm, 135-foot-long temporary

cofferdam, adjacent to the Feather River, near the OWA, southeast of the city of Oroville. This is a component of the larger Oroville Wildlife Area Flood Stage Reduction Project (Project) to improve the connectivity of the Feather River to its historic floodplain, reduce flood stages within the main channel, provide more frequently inundated floodplain rearing habitat for juvenile salmonids, reduce the extent of invasive plant species, and plan for future habitat restoration at the OWA.

The construction and placement of a notch, three box culverts with sluice gates, wing walls, grading, berm, cofferdam, removal and installation of trees and vegetation, and maintenance and construction areas are the only portions of the Project extending onto sovereign land. The OWA is a recreation and resource conservation area that is open to the public and owned by the State of California and managed by the California Department of Fish and Wildlife. The Applicant applied for permission from the California Department of Fish and Wildlife to grant them the right to enter and construct improvements on the OWA.

Project construction is expected to begin in the summer of 2017. The inwater work would be limited to June 23 through November 1. Vegetation management and restoration activities would occur between April 15 and November 1, 2018. The Sutter Butte Flood Control Agency's engineers anticipate minimal erosion potential due to moving vessels at the site of the notch connection, because it is located in an isolated backwater side channel off the main channel of the Feather River. However, erosion potential has been considered and, as part of project design, the box culvert structure has been designed with wing walls sized appropriately to address any potential erosion concerns.

The Project proposes to integrate flood protection, ecosystem restoration, and recreation benefits. Specifically, implementation of the overall proposed project would improve recreation facilities for OWA visitors, enhance fish and wildlife habitat, restore native vegetation, improve the connectivity of the Feather River to its historic floodplain, reduce flood stages in the main channel and thereby reduce scour of the stream bed and margins, provide more frequently inundated floodplain rearing habitat for juvenile salmonids, and reduce the extent of invasive plant species.

The project area is not tidally influenced and therefore, would not be subject to sea-level rise. However, as stated in Safeguarding California (California Natural Resources Agency 2014), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms. In rivers, more frequent and powerful

storms can result in increased flooding conditions and damage from storm created debris. Conversely, prolonged droughts could dramatically reduce river flow and water levels, leading to loss of public access and navigability. Climate change will further influence riverine areas by changing erosion and sedimentation rates, and flooding and storm flow, as well as runoff, will likely increase scour, decreasing bank stability at a faster rate. The area is characterized by a highly disturbed floodplain that is hydraulically disconnected from the Feather River during times of low flow. The proposed project's vegetation management, hydraulic improvement, and recreation feature implementation would not affect upstream, local, or downstream water surface levels in the Feather River. Further, because the proposed project would not alter the geometry of the Feather River, it would not cause significant changes to water flow in the river or cause negative hydraulic effects upstream or downstream. Therefore, the proposed project would have a beneficial effect related to alteration of drainage patterns and impedance or redirection of flood flows on the Feather River and would not cumulatively contribute to drainage or flood flow impacts. The proposed Project would provide a more natural flood corridor both in the project area and downstream.

The OWA is a recreation and resource conservation area that is open to the public. Visitors to the upland portion of the project area use it for hunting, wildlife viewing, and fishing. There are no boat ramps or official access points to the river from the project area.

Based on the foregoing, Commission staff believes that the proposed Project is consistent with the Public Trust Doctrine and will not substantially interfere with the Public Trust needs at this location, at this time, or for the foreseeable term of the Project.

The lease includes certain provisions protecting the public's use of the proposed lease area by requiring the Applicant to obtain necessary permits. The lease requires the Applicant to conduct all repair and maintenance work safely and to indemnify the Commission in the event of any liability resulting from the proposed action. The lease also has a limited term of 20 years that allows the Commission flexibility to determine if the Public Trust needs of the area have changed over time. For all the reasons above, Commission staff believes the proposed lease is consistent with the common law Public Trust Doctrine and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

- 1. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction.
- 2. A Mitigated Negative Declaration, State Clearinghouse No. 2016052077, was prepared by the Sutter Butte Flood Control Agency and adopted on August 10, 2016, for this project. The California State Lands Commission staff has reviewed such document.
 - A Mitigation Monitoring Program was adopted by the Sutter Butte Flood Control Agency.
- 3. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the California Environmental Quality Act (CEQA) review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS REQUIRED:

Central Valley Regional Water Quality Control Board California Department of Fish and Wildlife U.S. Army Corps of Engineers U.S. Fish and Wildlife Service National Marine Fisheries Service State Office of Historic Preservation Central Valley Flood Protection Board

EXHIBITS:

- A. Land Description
- B. Site and Location Map
- C. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2016052077, and a Mitigation Monitoring Program were prepared by the Sutter Butte Flood Control Agency and adopted on August 10, 2016, for

this Project and that the Commission reviewed and considered the information contained therein.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease will not substantially impair the public rights to navigation and fishing or substantially interfere with the Public Trust needs and values at this location at this time or for the foreseeable term of the lease, is consistent with the common law Public Trust Doctrine, and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Public Agency Use to the Sutter Butte Flood Control Agency, beginning June 22, 2017, for a term of 20 years, for construction, placement, use, and maintenance of a notch, three box culverts with sluice gates, wing walls, grading, berm, cofferdam, removal and installation of trees and vegetation, and maintenance and construction areas as described in Exhibit A and shown on Exhibit B (for reference purposes only), attached and by this reference made a part hereof; consideration being the public use and benefit, with the State reserving the right, at any time, to set a monetary rent as specified in the lease if the Commission finds such action to be in the State's best interests.

LAND DESCRIPTION

A parcel of submerged lands, situate in the bed of the Feather River, and lying adjacent to the U.S. Government Lot 2, fractional Section 10, T18N, R3E, MDM, as shown on the Official Township Plat approved July 18th, 1871, County of Butte, State of California, and more particularly described as follows:

COMMENCING at a 2 inch brass cap monument marking the common corner between Sections 10,11,14 and 15 of said township, from which a DWR (Department of Water Resources) 1½ inch iron pipe with brass cap designated "ORO-B-63-E" bears South 71°04'39" West 1425.94 feet as shown on that Record of Survey "Portions of Section 10 and 15 Township 18 North, Range 3 East, M.D.M. filed in Book 114 of Maps at Page 14 said County Records; thence North 33°38'26" West 3927.47 feet to the a point on the current left bank of the Feather River also being the POINT OF BEGINNING;

Thence the following eleven (11) courses:

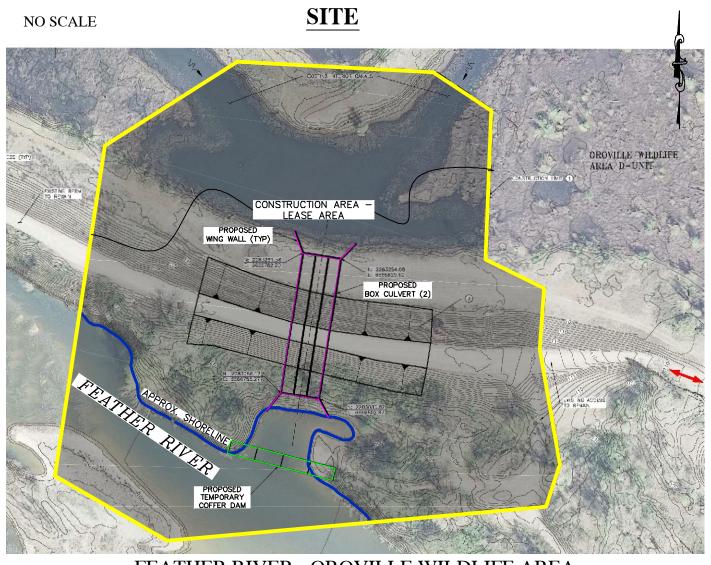
- 1) South 84° 50' 24" West 472.13 feet;
- 2) North 60° 03' 19" West 161.48 feet;
- 3) North 08° 39' 38" East 414.26 feet;
- 4) North 57° 39' 48" East 194.42 feet;
- 5) South 87° 02' 56" East 243.80 feet;
- 0) 00411 01 02 00 2401 2-10:00 100
- 6) South 56° 24' 48" East 86.57 feet,
- 7) South 02° 08' 40" West 184.89 feet;
- 8) South 63° 58' 02" East 81.10 feet:
- 9) South 04° 13' 31" West 75.91 feet;
- 10) South 10° 01' 40" East 145.00 feet;
- 11) South 18° 41' 02" West 55.31 feet to the POINT OF BEGINNING.

EXCEPTING THEREFROM any portion lying landward of the low water mark of said river.

END OF DESCRIPTION

PREPARED 4/21/17 BY THE CALIFORNIA STATE LANDS COMMISSION BOUNDARY UNIT





FEATHER RIVER - OROVILLE WILDLIFE AREA



MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

Exhibit B

W 27081 SUTTER BUTTE FLOOD CONTROL AGENCY GENERAL LEASE -PUBLIC AGENCY USE BUTTE COUNTY



EXHIBIT C CALIFORNIA STATE LANDS COMMISSION MITIGATION MONITORING PROGRAM

OROVILLE WILDLIFE AREA FLOOD STAGE REDUCTION PROJECT

(W27081, State Clearinghouse No. 2016052077)

The California State Lands Commission (Commission) is a responsible agency under the California Environmental Quality Act (CEQA) for the Oroville Wildlife Area Flood Stage Reduction Project (Project). The CEQA lead agency for the Project is the Sutter Butte Flood Control Agency.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on lands within the Commission's jurisdiction. The purpose of a MMP is to discuss feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:¹

In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

The lead agency has adopted an MND; State Clearinghouse No. 2016052077, and adopted a MMP for the whole of the Project (see Exhibit C, Attachment C-1) and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMP prepared by the CEQA lead agency and listed in Table C-1, is incorporated by reference in this Exhibit C. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

Additions to the text of the mitigation measure are <u>underlined</u>; and Deletions of the text of the mitigation measure are shown as strikeout or as otherwise noted.

Oroville Wildlife Area Flood Stage Reduction Project

¹ The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM) ¹	Difference between CSLC MMP and Lead Agency MMP
WQ-3. Effects on Groundwater or Surface Water Quality Resulting from Contact with the Water Table	WQ-MM-1	None
GEO-2. Damage or Destroy Paleontological Resources as a Result of Project Construction	GEO-MM-1	None
NOI-1. Construction Noise Levels in Excess of Thresholds at Nearby Noise Sensitive Land Uses	NOI-MM-1	None
NOI-3. Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project	NOI-MM-1	None
VEG-1. Loss of Special-Status Plant Populations as a Result of Vegetation Management and Project Construction	VEG-MM-1 VEG-MM-2	None
VEG-2. Loss of Special-Status Plant Populations as a Result of Project Operation	VEG-MM-1 VEG-MM-2 VEG-MM-3:	None
WILD-1. Potential Mortality or Disturbance of VELB [Valley Elderberry Longhorn Beetle] and its Habitat (Elderberry Shrubs) as a Result of Vegetation Management and Project Construction	WILD-MM-1 WILD-MM-3 WILD-MM-4	None
WILD-2. Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a Result of Project Operation	WILD-MM-2 WILD-MM-4 WILD-MM-5	None
WILD-3. Potential Mortality or Disturbance of Western Pond Turtle as a Result of Project Construction	WILD-MM-1 WILD-MM-6	None
WILD-4. Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter Snake as a Result of Project Construction	WILD-MM-1 WILD-MM-7 WILD-MM-8 WILD-MM-9 WILD-MM-10 WILD-MM-11	None
WILD-6. Potential Mortality or Disturbance of and Loss of Suitable Nesting Habitat for Swainson's Hawk as a Result of Project Construction	WILD-MM-1 WILD-MM-12 WILD-MM-13 WILD-MM-14	None
WILD-7. Potential Mortality or Disturbance of Nesting Special-Status and Non-Special Status Birds and Removal of Suitable Breeding Habitat as a Result of Project Construction	WILD-MM-12 WILD-MM-14	None
REC-1. Temporary Disruption of Recreation Opportunities during Construction	REC-MM-1	None
HAZ-2. Exposure of the Public or the Environment to the Accidental Release of Hazardous Materials	HAZ-MM-1	None
CUL-1. Change in the Significance of a Unique Archaeological Resource	CUL-MM-1 CUL-MM-2 CUL-MM-3	See below (CUL-MM-3)
CUL-2. Disturbance of Human Remains	CUL-MM-4	See below

¹ See Attachment C-1 for full text of each MM taken from the MMP prepared by the CEQA lead agency.

CUL-MM-3. Construction shall stop if potential cultural resources are encountered. It is possible that previous activities have obscured surface evidence of cultural resources. If signs of an archeological site, such as any unusual amounts of stone, bone, shell, ceramics, glass, or metal are uncovered during grading or other construction activities, work will be halted within 100 feet of the find and the SBFCA will be notified. A qualified archeologist will be consulted for an onsite evaluation. If the site is or appears to be eligible for listing the California Register of Historical Resources or National Register of Historic Places, additional mitigation, such as further testing for evaluation or data recovery, may be necessary.

In the event resources are discovered, SBFCA will retain a qualified archaeologist to assess the find and to determine whether the resource requires further study. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria.

All work will stop in the immediate vicinity of the find. If the find is determined to be an important cultural resource, SBFCA will make available contingency funding and a time allotment sufficient to allow recovery of an archaeological sample or to implement an avoidance measure. Construction work can continue on other parts of the project while archaeological mitigation takes place.

Commission staff shall be notified of any important cultural resources or paleontological specimens discovered on lands under the jurisdiction of the Commission. The final disposition of archaeological and historical resources and paleontological specimens from such lands must be approved by the Commission.

CUL-MM-4. If human remains are discovered during any phase of construction, including disarticulated or cremated remains, the construction contractor will immediately cease all ground-disturbing activities within 100 feet of the remains and notify SBFCA. In accordance with CHSC Section 7050.5, no further disturbance will occur until the following steps have been completed.

- 1) The Butte County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98.
- 2) If the remains are determined by the County Coroner to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours.

A professional archaeologist with Native American burial experience will conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by NAHC. As necessary and appropriate, a professional archaeologist may provide technical assistance to the MLD, including the excavation and removal of the human remains.

If the human remains are Native American and are found on lands under the jurisdiction of the Commission, Commission staff shall also be notified to address any landowner responsibilities.

ATTACHMENT C-1

Mitigation Monitoring Program Adopted by the Sutter Butte Flood Control Agency

Table 1. Mitigation Monitoring and Reporting Program for the Oroville Wildlife Area Flood Stage Reduction Project

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WQ-3: Effects on Groundwater or Surface Water Quality Resulting from Contact with the Water Table	<i>WQ-MM-1</i> : Implement Provisions for Dewatering			Permit to be obtained prior to discharging dewatered effluent to surface water. Ongoing inspections of construction area will occur frequently during construction to verify water	Before discharging any dewatered effluent to surface water, SBFCA or its contractors will obtain a Low Threat Discharge and Dewatering NPDES permit from the Central Valley Regional Water Quality Control Board. Under the dewatering permit, discharging activities involve extensive water quality monitoring in order to adhere to the strict effluent and receiving water quality criteria outlined in the permit. As part of the permit, the permittee will design and implement measures as necessary so that the discharge limits identified in the relevant permit are met. Final selection of water quality control measures will be subject to approval by SBFCA. SBFCA will verify that
				quality control measures are properly implemented and maintained.	coverage under the appropriate NPDES permit has been obtained before allowing dewatering activities to begin. SBFCA or its agent will perform routine inspections of the construction area to verify that the water quality control measures are properly implemented and maintained. SBFCA will notify its contractors immediately if there is a non-compliance issue and will require compliance.
Impact GEO-2: Damage or Destroy Paleontological Resources as a Result of Project Construction	GEO-MM-1: Educate Construction Personnel on Recognizing Fossil Material	SBFCA or its construction contractor	A State-registered professional geologist or qualified professional paleontologist hired by SBFCA	During the construction period.	If substantial fossil remains (particularly vertebrate remains) are discovered during earth disturbing activities, activities will stop immediately until a State-registered professional geologist or qualified professional paleontologist can assess the nature and importance of the find and a qualified professional paleontologist can recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. SBFCA will be responsible for ensuring that recommendations regarding treatment and reporting are implemented.
Impact TRA-1: Temporary Impact on Localized Traffic Patterns	TRA-MM-1: Coordinate Truck Routes	SBFCA or its construction contractor	SBFCA and its construction contractor	Route coordination prior to construction. Repair of damaged roadways (if necessary) after construction.	Prior to construction, SBFCA or its contractor will coordinate truck routes and construction activities with the appropriate City or County departments. The objective of the coordination is to minimize traffic delays resulting from hauling and construction activities by implementing the traffic control plan developed under mitigation measure TRA-MM-2. The contractor will be required to restore roadways damaged by construction activities and construction-related traffic to pre-project conditions.
Impact TRA-1: Temporary Impact on Localized Traffic Impact TRA-2: Temporary Impact on Localized Traffic	TRA-MM-2: Develop and Implement a Traffic Control Plan	nt a Traffic coordination with	SBFCA and its construction contractor	Plan will be developed and approved prior to construction. Plan measures to be implemented during construction.	SBFCA, in coordination with relevant City or County public works departments, will develop and implement traffic control plan(s) for the proposed project. The traffic control plan(s) will describe the methods of traffic control to be used during construction. All on-street construction traffic will be required to comply with the local jurisdiction's standard construction specifications. The plan will reduce the effects of construction on the roadway system in the study area throughout the construction period. Construction contractors will follow the standard construction specifications of affected jurisdictions and obtain the appropriate encroachment permits, it required. The following measures will be included in the traffic control plan.
					1) Construction vehicles would not be permitted to block any roadways or driveways.
					2) Signs and flagpeople will be used as needed to alert motorists, bicyclists, and pedestrians to the presence of haul trucks and construction vehicles at all access points.
					3) Vehicles would be required to obey all speed limits, traffic laws, and transportation regulations during construction.
					4) Construction workers would be encouraged to carpool and park in designated staging areas.
					5) The contractor would be required to repair any roads damaged by construction activities.
					At least one lane of traffic will be maintained at all times along major streets. Safe pedestrian and bicyclist access will be maintained in or around the construction areas at all times. Construction areas will be secured as required by the applicable jurisdiction to prevent pedestrians and bicyclists from entering the work site, and all stationary equipment will be located as far away as possible from areas where bicyclists and pedestrians are present. SBFCA or its contractors will notify and consult with emergency service providers to maintain emergency access and facilitate the passage of emergency vehicles on county streets.

inpact NOI-1: construction Noise evels in Excess of aresholds at Nearby bise Sensitive Land ses inpact NOI-3: abstantial Temporary Periodic Increase in mbient Noise Levels in	NOI-MM-1: Employ Noise- Reducing Construction Practices	SBFCA's construction contractor	SBFCA's construction contractor	Ongoing during construction.	land uses du noise-reduci activities wo	on measure would reduce construction-related impacing non-exempt (for construction) hours, requiring sing enclosures and other practices. After implementing uld be reduced to less than 40 dBA LEQ during non-expenses.	ound control devices on equipment g these practices, noise from const	nt, utilizing cruction
mbient Noise Levels i e Project Vicinity					Butte County	ing hours, and 50 dBA LEQ during non-exempt dayting noise standards by time of day (including non-exemplatte County Noise Standards by Time of Day	ne hours. The table below shows th	
e Project Vicinity	1				Project Con	struction Hours		
	1					aturday: 6:00 a.m. to 8:00 p.m.		
oove Levels Existing ithout the Project					Weekday oi Saturday?		Daytime, Evening, Nighttime Standards Apply?	dBA L _{EQ} Limit
					Applicable I	Noise Limits during Project Construction		
					Weekday	6:00 a.m. to 7:00 a.m.	Nighttime	40
					Weekday	After sunrise, before sunset	Not Applicable	Exempt
					Weekday	After sunset between 7:00 p.m. and 8:00 a.m.	Daytime	50
					Weekday	After sunset and after 7:00 p.m.	Evening	45
					Saturday	6:00 a.m. to 7:00 a.m.	Nighttime	40
					Saturday	7:00 a.m. to 8:00 a.m.	Daytime	50
					Saturday	8:00 a.m. to 6:00 p.m.	Not Applicable	Exempt
					Saturday	6:00 p.m. to 7:00 p.m.	Daytime	50
					Saturday	7:00 p.m. to 8:00 p.m.	Evening	45
					County muni may include, 1)	contractors will comply with construction noise limit cipal code by implementing noise-reducing measures but are not limited to, the following: When construction must occur during non-exempt he daytime, evening or nighttime noise standard at near would not be permitted to block any roadways or driven when construction must occur during non-exempt he	s during project construction. These ours, noise must be less than the ap by residential land uses. Construct veways.	e measures pplicable cion vehicles
						daytime, evening or nighttime noise standard at near Schedule the noisiest construction activities, such as a	- -	and sunset
						on weekdays or between 8:00 a.m. and 6:00 p.m. on v Use best available noise control techniques (e.g., impi		-
					-	intake silencers, ducts, engine enclosures and acousti equipment and trucks used for project construction v	cally attenuating shields or shroud	
						Use hydraulically or electrically powered impact tools breakers, and/or rock drills) used for Project constru		

6)

Use "quiet" gasoline-powered compressors or other electric-powered compressors, and use electric

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
· · · · · · · · · · · · · · · · · · ·		<u> </u>		<u> </u>	rather than gasoline or diesel powered forklifts for small lifting, to the extent feasible.
					7) Locate stationary noise sources, such as temporary generators, as far from nearby receptors as possible, and they shall be muffled and enclosed within temporary enclosures and shielded by barriers, or other measures to the extent feasible.
					8) Install temporary noise barriers eight feet in height around the construction site to reduce construction noise from equipment.
					9) Prohibit trucks from idling along streets serving the construction site.
					Monitor the effectiveness of noise attenuation measures by taking noise measurements during construction activities to ensure compliance with the 40 dBA LEQ, 45 dBA LEQ and 50 dBA LEQ standards during non-exempted hours.
Impact VEG-1: Loss of Special-Status Plant Populations as a Result of Vegetation Management and Project Construction	VEG-MM-1: Retain Qualified Botanists to Conduct Floristic Surveys for Special-Status Plants during Appropriate Identification Periods	SBFCA	A qualified botanist hired by SBFCA.	Prior to construction and during appropriate identification periods for special-status plants.	The botanist will conduct a floristic survey that follows DFW botanical survey guidelines. All plant species observed will be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The guidelines also require that field surveys be conducted when special-status plants that could occur in the area are evident and identifiable, generally during the reported blooming period. To account for different special-status plant identification periods, one or more series of field surveys may be required in spring and summer.
Impact VEG-2: Loss of Special-Status Plant Populations as a Result of Project Operation					If any special-status plants are identified during the surveys, the botanist will photograph and map locations of the plants, document the location and extent of the special status–plant population on a CNDDB Survey Form, and submit the completed Survey Form to the CNDDB. The amount of compensatory mitigation required will be based on the results of these surveys. If no special-status plants are found, the botanist will document the findings in a letter report to SBFCA, DWR, and DFW, and no further mitigation will be required. If special-status plants are found in the project area during the surveys and could be affected by project construction or operation, Mitigation Measure VEG-MM-2 will be implemented.
Impact VEG-1: Loss of Special-Status Plant Populations as a Result of Vegetation	VEG-MM-2: Implement Measures to Avoid or Compensate for Long- Term Effects on Special-	SBFCA	SBFCA	Prior to construction	If special-status plant species are found during the surveys conducted under Mitigation Measure VEG-MM-1, to the extent practicable and in consideration of other design requirements and constraints (e.g., meeting project objectives and needs, avoidance of other sensitive resources), SBFCA will design the project to avoid or minimize potential impacts on special-status plants.
Management and Project Construction Impact VEG-2: Loss of	Status Plants Documented in the Project Area				If special-status plants cannot be avoided, SBFCA will consult with DFW and USFWS (if Federally listed species are found) to determine the appropriate compensatory measures for direct and indirect impacts that could result from project construction or operation.
Special-Status Plant Populations as a Result of Project Operation					Compensatory measures for loss of special-status plants, if required by DFW and/or USFWS, could include preserving and enhancing existing populations, establishment of offsite populations in a preservation area through seed collection or transplantation, and restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. The preservation area will be preserved and managed in perpetuity. A mitigation and monitoring plan will be developed that describes how unavoidable effects on special-status plants will be compensated for, including success criteria for the preservation area populations. Detailed information will be provided to the agencies on the location and quality of the preservation area, the feasibility of protecting and managing the area in perpetuity, and the responsible parties. Other pertinent information also will be provided, to be determined through future coordination with the resource agencies.
Impact VEG-2: Loss of Special-Status Plants as a Result of Project Operation	VEG-MM-3: Monitor Special-Status Plant Populations in the Project Area after Construction	SBFCA	A qualified botanist hired by SBFCA	A minimum of 3 years following construction.	If special-status plant species are found during the surveys conducted under Mitigation Measure VEG-MM-1, annual monitoring of these populations and a nearby reference population will be added to the monitoring efforts proposed for the project for a minimum of 3 years to ensure ongoing viability of the special-status plants. If the number of special-status plants in the project area decrease at a rate that is more than 10% of that observed at the reference population, SBFCA will provide additional compensation as outlined in Mitigation Measure VEG-MM-2.

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-1: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a result of Vegetation Management and Project Construction Impact WILD-3: Potential	WILD-MM-1: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel	SBFCA and the construction crew leader	A qualified biologist hired by SBFCA and the construction crew leader	Prior to construction and during construction if new personnel are added to the construction crew	Before any work occurs in the project area, including grading, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to avoid impacts on sensitive biological resources (e.g., riparian habitat, special-status species, special-status wildlife habitat) and the penalties for not complying with permit requirements. The biologist will inform all construction personnel about the life histories of special-status species with potential for occurrence on site, the importance of maintaining habitat, and the terms and conditions of the biological opinion or other authorizing document. Proof of this instruction will be submitted to USFWS, DFW, or another overseeing agency, as appropriate.
Mortality or Disturbance of Western Pond Turtle as a Result of Project Construction Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter					The training will also cover the restrictions and guidelines that must be followed by all construction personnel to reduce or avoid impacts on special-status species during project construction. The construction crew leader will be responsible for ensuring that crew members adhere to the guidelines and restrictions. Educational training will be conducted for new personnel as they are brought on the job during the construction period. General restrictions and guidelines for vegetation and wildlife that will be followed by construction personnel are listed below. 1) Project-related vehicles will observe the posted speed limit on hard-surfaced roads and a 10 mile-per-hour speed limit on unpaved roads during travel in the project area.
Snake as a Result of Project Construction					 Project-related vehicles and construction equipment will restrict off-road travel to the designated construction area.
Impact WILD-6: Potential Mortality or Disturbance of and Loss of Suitable Nesting Habitat for Swainson's Hawk as a					 All food-related trash will be disposed of in closed containers and removed from the project site at least once a week during the construction period. Construction personnel will not feed or otherwise attract fish or wildlife to the project area. No pets or firearms will be allowed in the project area.
result of Project Construction					To prevent possible resource damage from hazardous materials such as motor oil or gasoline, construction personnel will not service vehicles or construction equipment outside designated staging areas.
Impact WILD-8: Potential Injury, Mortality, or Disturbance of Tree- Roosting Bats and Removal of Roosting Habitat a result of Project Construction					For special-status wildlife, any worker who inadvertently injures or kills a special-status wildlife species or finds one dead, injured, or entrapped will immediately report the incident to the biological monitor. The monitor will immediately notify SBFCA, who will provide verbal notification to the USFWS Endangered Species Office or the local DFW warden or biologist within 3 working days. SBFCA will follow up with written notification to USFWS or DFW within 5 working days.
Impact WILD-1: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a result of Vegetation Management and Project Construction		SBFCA	A qualified biologist with VELB/elderberry experience hired by SBFCA	Prior to construction	Surveys of elderberry shrubs will be conducted within 100 feet of the project footprint by a qualified biologist. Surveys will be conducted in accordance with the 1999 USFWS Conservation Guidelines for VELB. Surveys will consist of counting and measuring the diameter of each stem, and examining shrubs for the presence of VELB exit holes. Survey results and an analysis of the number of elderberry seedlings/cuttings and associated native plants identified during the survey will be submitted to USFWS.
Impact WILD-2: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a Result of Project Operation					

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-1: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a result of Vegetation Management and Project Construction	WILD-MM-3: Implement Measures to Protect VELB and its Habitat during Construction	SBFCA	A qualified biologist with VELB/elderberry experience hired by SBFCA	Prior to construction	According to 1999 USFWS Conservation Guidelines for VELB, complete avoidance of impacts on VELB is assumed when a 100-feet-wide buffer area around elderberry shrubs is established and maintained during construction. Elderberry shrubs and clusters within 100 feet of the construction area that will not be removed will be protected during construction. A qualified biologist (i.e., with elderberry/VELB experience), will mark the elderberry shrubs and clusters that will be protected during construction. Orange construction barrier fencing will be placed along the edges of designated buffer areas. The buffer area distances will be proposed by the biologist and approved by USFWS. No construction activities will be permitted in the buffer areas other than the activities necessary to erect the fencing. Signs will be posted along fencing for the duration of construction and will contain the following information.
					This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.
					When an elderberry shrub's dripline is within 10 feet of the work area, k-rails or concrete blocks will be placed at the dripline to provide additional protection to the shrub from construction equipment and activities. Temporary fences around the elderberry shrubs and k-rails/concrete blocks at shrub driplines will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and later removed, as shown on the plans, as specified in the special provisions, and as directed by the project engineer. Temporary fencing will be 4 feet (1.2 meters) high, commercial-quality woven polypropylene, orange in color.
					Buffer area fences around elderberry shrubs will be inspected weekly by a qualified biologist during ground-disturbing activities and monthly after ground-disturbing activities until project construction is complete or until the fences are removed, as approved by the biological monitor and the resident engineer. The biological monitor will be responsible for ensuring that the contractor maintains the buffer area fences around elderberry shrubs throughout construction. Biological inspection reports will be provided to the project lead and USFWS.
					SBFCA will ensure that the project site will be watered down as necessary to prevent dust from becoming airborne and accumulating on elderberry shrubs in and adjacent to the project site.
Impact WILD-1: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a	WILD-MM-4: Compensate for Impacts on VELB and its Habitat	SBFCA	A qualified biologist with VELB/elderberry experience hired by	Prior to construction. For shrubs that cannot be avoided, transplantation will occur during the	It is expected that the number of blue elderberry and associated riparian native trees/shrubs being installed as part of the riparian plantings will be sufficient to meet the compensatory requirements for any elderberries that are affected by the proposed project. If the restoration plantings are not considered sufficient compensation by USFWS, SBFCA will do the following.
result of Vegetation Management and Project Construction Impact WILD-2: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a Result of Project Operation		SBFCA	SBFCA	shrub's dormant phase (typically November through the first 2 weeks of February)	Before construction begins, SBFCA will compensate for direct impacts on elderberry shrubs by transplanting shrubs that cannot be avoided to a USFWS-approved conservation area or mitigation bank. Elderberry seedlings or cuttings and associated native species will also be planted in the conservation area. Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) will be replaced in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). The numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether the shrub is located in a riparian or non-riparian area. Stock of either seedlings or cuttings will be obtained from local sources. The numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs will be determined based data collected during implementation of Mitigation Measure WILD-MM-2.
					At the discretion of USFWS, shrubs that are unlikely to survive transplantation because of poor condition or location may be exempted from transplantation. In cases where transplantation is not possible, minimization ratios would be increased to offset the additional habitat loss.
					The relocation of the elderberry shrubs will be conducted according to USFWS-approved procedures outlined in their 1999 Conservation Guidelines for VELB. Elderberry shrubs within the project area that cannot be avoided will be transplanted during the shrub's dormant phase (i.e., when it is not flowering or fruiting, typically November through the first 2 weeks of February). A qualified biological monitor will remain onsite while the shrubs are being transplanted.

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-2: Potential Mortality or Disturbance of VELB and its Habitat (Elderberry Shrubs) as a Result of Project Operation	WILD-MM-5: Monitor Elderberries in the Inundation Areas after Construction	SBFCA	A qualified biologist with VELB/elderberry experience hired by SBFCA	Annual monitoring of shrubs in the 2-year flooding area for a minimum of 3 years following construction.	If elderberry shrubs are found in the 2-year flooding area during the surveys conducted under Mitigation Measure WILD-MM-2, annual monitoring of these shrubs will be conducted for a minimum of 3 years to ensure ongoing viability of the plants in this area of increased frequency and depth of inundation. If elderberry mortality is observed after 3 years, SBFCA will provide additional compensation as outlined in Mitigation Measure WILD-MM-4.
Impact WILD-3: Potential Mortality or Disturbance of Western Pond Turtle as a Result of Project Construction	WILD-MM-6: Conduct Preconstruction Surveys for Western Pond Turtle and Monitor Construction Activities if Turtles are Observed	SBFCA	A qualified biologist familiar with different species of turtles, including western pond turtle, hired by SBFCA. If turtles are observed during the surveys, SBFCA will retain a biological monitor in possession of a current DFW scientific collecting permit that includes the capture and relocation of turtles.	One week before and within 24 hours of starting work in suitable aquatic habitat.	One week before and within 24 hours of beginning work in suitable aquatic habitat, a qualified biologist (one who is familiar with different species of turtles) will conduct surveys for western pond turtle. The surveys should be timed to coincide with the time of day and year when turtles are most likely to be active (during the cooler part of the day between 8:00 a.m. and 12:00 p.m. during spring and summer). Prior to conducting the surveys, the biologist should locate the microhabitats for turtle basking (logs, rocks, brush thickets) and determine a location to quietly observe turtles. Each survey should include a 30-minute wait time after arriving onsite to allow startled turtles to return to open basking areas. The survey should consist of a minimum 15 minute observation time per area where turtles could be observed. If western pond turtles are observed during either survey, a biological monitor should be present during construction activities in the aquatic habitat where the turtle was observed and will capture and remove, if possible, any entrapped turtle. The biological monitor will also be mindful of suitable nesting and overwintering areas in proximity to suitable aquatic habitat and periodically inspect these areas for nests and turtles. The biological monitor's DFW scientific collecting permit will include capture and relocation of turtles.
Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter Snake as a Result of Project Construction	WILD-MM-7: Avoid and Minimize Construction Impacts on Giant Garter Snake	SBFCA	A USFWS- and DFW-approved biologist hired by SBFCA that is familiar with giant garter snake	Ongoing during construction. A preconstruction survey of suitable habitat is required no more than 24 hours before the start of construction. Subsequent surveys are required if there is a construction lapse of 2 weeks or more.	The following measures will be implemented to avoid and minimize impacts on giant garter snake and its habitat. 1) To the maximum extent possible, all construction activity in giant garter snake aquatic and upland habitat within 200 feet of aquatic habitat will be conducted during the snake's active period (between May 1 and October 1). During this timeframe, potential for injury and mortality are lessened because snakes are actively moving and avoiding danger. Giant garter snakes are more vulnerable to danger during their inactive period because they are occupying underground burrows or crevices and are more susceptible to direct impacts, especially during excavation. 2) Because the interior channels cannot be dewatered due to the high water table at OWA, grading improvements will be monitored by a USFWS- and DFW-approved biologist during work in and along the channels when they are inundated. 3) For work that cannot be conducted between May 1 and October 1, additional protective measures will be determined during consultation with USFWS and DFW. 4) To reduce the likelihood of snakes entering the construction area, SBFCA will install exclusion fencing and orange construction barrier fencing along the edge of the construction area that is within 200 feet of suitable habitat. The exclusion and barrier fencing will be installed during the active period for giant garter snakes (May 1 to October 1) to reduce the potential for injury and mortality during this activity. The exclusion fencing will consist of 3-foot-tall silt fencing buried 4-6 inches below ground level. One-way escape routes will be installed in the silt fence, or gaps will be left in the fencing during initial clearing and grubbing, to allow snakes to escape from the project area. Sandbags will be placed along the gaps to protect water quality and the gaps will be replaced with fencing once initial ground clearing is complete. To prevent snakes and other ground-dwelling animals from being caught in the orange construction fencing, it will be plac

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
					fencing will ensure that giant garter snakes are excluded from the construction area and that suitable upland and aquatic habitat is protected throughout construction. If the installation of exclusion fencing is not feasible, a full-time biological monitor will be present during all construction activities.
					A USFWS- and DFW-approved biologist will conduct a preconstruction survey in suitable habitat no more than 24 hours before construction. Prior to construction activities each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are both in good working order. If any snakes are observed in the construction area during this inspection or at any other time during construction, the USFWS- and DFW-approved biologist will be contacted to survey the site for snakes. The project area will be re-inspected and surveyed whenever a lapse in construction activity of 2 weeks or more has occurred. If a snake (believed to be a giant garter snake) is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed.
					6) Vegetation clearing within 200 feet of the banks of suitable giant garter snake aquatic habitat will be limited to the minimum area necessary. Avoided giant garter snake habitat within or adjacent to the project area will be flagged and designated as an environmentally sensitive area, to be avoided by all construction personnel.
					7) The movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance.
					To avoid entrapment of giant garter snake, thereby preventing injury or mortality resulting from falling into trenches, all excavated areas more than 1 foot deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or other hard material.
Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter Snake as a Result of Project Construction	WILD-MM-8: Restore Temporarily Disturbed Giant Garter Snake Aquatic and Upland Habitat to Pre-Project Conditions	SBFCA	SBFCA	Upon completion of construction	Upon completion of the construction, SBFCA will restore temporarily affected suitable upland habitat for giant garter snake to pre-project conditions. Restoration of aquatic vegetation and annual grassland will be detailed in a mitigation and monitoring plan that will be reviewed and approved by USFWS prior to the start of construction.
Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter Snake as a Result of Project Construction	WILD-MM-9: Compensate for Permanent Loss of Giant Garter Snake Habitat	SBFCA	SBFCA	Prior to construction	It is anticipated that the 500 acres of water primrose removal would be sufficient to meet the compensatory mitigation requirements for the permanent loss of 2.44 acres of aquatic and 0.64 acre of upland habitats, the temporary disturbance of 33.18 acres of aquatic and 9.78 acres of upland habitats for giant garter snake, and the temporary disturbance of approximately 5,997 linear feet (1,828 meters) of suitable aquatic habitat for giant garter snake. Water primrose removal will substantially enhance the value of aquatic habitat in the project area by increasing open water foraging habitat and improving water quality and prey availability for the species).
					If restoration and enhancement of aquatic habitat is not considered adequate compensation, SBFCA will compensate for the permanent loss of suitable aquatic and upland habitat for giant garter snake by purchasing preservation credits at a USFWS- and DFW-approved mitigation bank. The amount of compensation will be determined through consultation with USFWS and DFW. The habitat at the conservation bank will be protected in perpetuity for giant garter snake.
					Prior to the start of construction, SBFCA will provide funding to the mitigation bank for preservation credits. The transaction will take place through a purchase and sale agreement, and funds must be transferred within 30 days, and before any construction activities are initiated. SBFCA will provide USFWS and DFW with copies of the credit sale agreement and fund transfer.

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable	WILD-MM-10: Implement Additional Measures during Work in Suitable	SBFCA and its construction contractor	A USFWS- and DFW- approved biologist hired by SBFCA that	vegetation clearing for work	SBFCA will implement the following additional protective measures when work must occur during the giant garter snake dormant period (i.e., between October 2 and April 30), when snakes are more vulnerable to injury and mortality.
Habitat for Giant Garter Snake as a Result of Project Construction	Habitat during the Giant Garter Snake Dormant Period		is familiar with giant garter snake	Between May 1 and October 1: exclusion fence installation	1) All vegetation within 200 feet of aquatic habitat will be cleared prior to the giant garter snake hibernation period (i.e., vegetation clearing must be completed by October 1 for work the following winter).
				Between October 2 and April 30: full-time biological monitor during the snake's dormant period	Exclusion fencing will be installed around the perimeter of the work area where construction activities associated with weir installation activities would take place. The fencing will enclose the work area to the maximum extent possible to prevent giant garter snakes from entering the work area. Fencing will be installed during the active period for giant garter snakes (May 1–October 1) to reduce the potential for injury and mortality during fence installation. The USFWS-approved biological monitor will work with the contractor to determine where fencing should be placed and will monitor fence installation. The exclusion fencing will consist of 3-feet-tall erosion fencing buried 4–6 inches below ground level. The exclusion fencing will minimize opportunities for giant garter snake hibernation in the adjacent upland area.
					A USFWS- and DFW-approved biologist will assist the contractor in avoiding disturbance of burrows in upland habitat during both the active and dormant periods. If burrows cannot be avoided, they will be carefully excavated by hand by a USFWS- and DFW-approved biologist. The burrow will be visually examined before hand-excavation begins. Flexible tubing (such as pipe insulation) or empty water bottles will be placed in the burrow to keep it open while the burrow is excavated with hand tools. Once the burrow is excavated to the end of the tube or water bottles, the burrow will be visually examined and then the tubing or water bottles will be reinserted further into the burrow and the next section will be excavated. If a giant garter snake is found inside the burrow, excavation will stop and the biologist will immediately contact USFWS and DFW. A biologist with a 10(a)1(A) permit for giant garter snake will be contacted to relocate the snake to another suitable burrow outside of the work area.
					4) Temporarily disturbed habitat will be revegetated with native species when construction activities are complete.
Impact WILD-4: Potential Mortality or Disturbance of and Loss of Suitable Habitat for Giant Garter Snake as a Result of Project Construction	WILD-MM-11: Monitor Work in Giant Garter Snake Upland Habitat during the Active Period and/or Compensate for Temporary Loss of Suitable Giant Garter Snake Habitat	SBFCA	SBFCA and a qualified biologist hired by SFCA	Prior to and during construction	One or more biological monitors will be present during ground disturbing activities and vegetation removal in upland habitat during the active period and mitigation for temporary effects on upland habitat will be provided at a 0.5:1 ratio or mitigation for temporary effects on upland habitat will be provided at a 1:1 ratio without the monitoring requirement. For the proposed modifications, SBFCA will provide monitoring and compensate for the temporary loss of 0.64 acre of suitable upland habitat for giant garter snake by purchasing credits up to 0.64 acre at a USFWS- and DFW-approved conservation bank. The habitat at the conservation bank will be protected in perpetuity for giant garter snake. Prior to the start of construction, SBFCA will provide funding to the conservation bank for giant garter snake habitat credits. The transaction will take place through a purchase and sale agreement, and funds must be transferred within 30 days, and before any construction activities are initiated. SBFCA will provide the USFWS and DFW with copies of the credit sale agreement and fund transfer.

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-6: Potential Mortality or Disturbance of and Loss of Suitable Nesting Habitat for Swainson's Hawk as a result of Project Construction Impact WILD-7: Potential Mortality or Disturbance of Nesting Special-Status and Non-Special Status Birds and Removal of Suitable Breeding Habitat as a Result of Project Construction	WILD-MM-12: Conduct Vegetation Removal and Riparian Planting Activities Outside of the Breeding Season for Birds	SBFCA	A qualified biologist (with raptor behavior experience)	Vegetation removal/trimming and planting activities should occur between September 1—January 31 to the extent feasible.	To the maximum extent feasible, SBFCA will schedule vegetation (trees, shrubs, ruderal areas) removal/trimming and riparian planting activities during the nonbreeding season of birds (September 1–January 31). If these activities cannot be scheduled in accordance with this timeframe, preconstruction/preactivity surveys for nesting birds and additional protective measures will be implemented (see Mitigation Measure WILD-MM-13). SBFCA will not remove trees with active Swainson's hawk or other active raptor nests. Because white-tailed kite is fully protected, removal of trees with active nests and activities that may result in loss of white-tailed kites is prohibited.
Impact WILD-6: Potential Mortality or Disturbance of and Loss of Suitable Nesting Habitat for Swainson's Hawk as a result of Project Construction	WILD-MM-13: Conduct Focused Surveys for Nesting Swainson's Hawk Prior to Construction and Implement Protective Measures during Construction	SBFCA	A qualified biologist (with raptor behavior experience)	During the survey period (Feb-July) prior to the start of construction. During construction, daily onsite monitoring during the breeding season (February 1–August 31) will be required for active nests found during the surveys.	Prior to the start of construction, focused surveys for Swainson's hawk will be conducted in the project area and in a buffer area up to 0.25 mile around the project area. The size of the buffer area surveyed will be based on the type of habitat present and line of sight from the construction area to surrounding suitable breeding habitat. Buffer areas containing unsuitable nesting habitat and/or with an obstructed line of sight to the project area will not be surveyed. Biologists will focus on suitable nest trees within and immediately adjacent to the project area that have the highest likelihood for disturbance. The number of surveys needed to determine the status of nesting will be dependent on the conditions during the surveys and behavior of the hawks. If needed, biologists will coordinate with DFW regarding the extent and number of surveys. Surveys would generally be conducted between February and July. Survey methods and results will be reported to DFW. If active nests are found, SBFCA will maintain a 0.25-mile buffer or other distance determined appropriate through consultation with DFW, between construction activities and the active nest(s) until it has been determined that young have fledged. In addition, a qualified biologist (experienced with raptor behavior) will be present on site (daily) during construction activities occurring during the breeding season to watch for any signs of stress. If nesting birds are observed to exhibit agitated behavior indicating that they are experiencing stress, construction activities will cease until the qualified biologist, in consultation with DFW, determines that young have fledged.

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact WILD-6: Potential Mortality or Disturbance of and Loss of Suitable Nesting Habitat for Swainson's Hawk as a result of Project Construction Impact WILD-7: Potential Mortality or Disturbance of Nesting Special-Status and Non-Special Status Birds and Removal of Suitable Breeding Habitat as a Result of Project Construction	WILD-MM-14: Conduct Nesting Surveys for Special-Status and Non- Special Status Birds and Implement Protective Measures during Construction	SBFCA	A qualified wildlife biologist	Prior to construction, multiple surveys between February 1 and June 1. During construction, nodisturbance buffers will be required until the end of the breeding season (approximately September 1) for active nests.	SBFCA will retain qualified wildlife biologists with knowledge of the relevant species to conduct nesting surveys before the start of construction. A minimum of three separate surveys will be conducted between February 1 and June 1. Surveys will include a search of all suitable nesting habitat (trees, shrubs, ruderal areas, field crops) in the areas affected by vegetation management activities and by construction of hydraulic improvements and recreation features. For tricolored blackbird, multiple surveys will be conducted March through May to determine if a colony is nesting or near the construction area. In addition, a 500-feet-wide area around the affected areas will be surveyed for nesting raptors, and a 50-feet-wide buffer area will be surveyed for other nesting birds. If no active nests are detected during these surveys, no additional measures are required. If active nests are found in the survey area, no-disturbance buffers will be established around the nest sites to avoid disturbance or destruction of the nest site until the end of the breeding season (approximately September 1) or until a qualified wildlife biologist determines that the young have fledged and moved out of the project area (this date varies by species). The extent of the buffer areas will be determined by the biologist in coordination with USFWS and DFW and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species. Larger buffer areas or other protective measures may be required for state-listed and candidate species (e.g., bald eagle, bank swallow, tricolored blackbird) to ensure that mortality does not occur if SBFCA does not obtain an incidental take permit for these species. If it is determined that a breeding colony of tricolored blackbird may be affected by the project, SBFCA will consult with DFW to obtain the necessary take pe
Impact WILD-8: Potential Injury, Mortality, or Disturbance of Tree- Roosting Bats and Removal of Roosting Habitat a result of Project Construction	WILD-MM-15: Identify Suitable Roosting Habitat for Bats and Implement Avoidance and Protective Measures	SBFCA	A qualified wildlife biologist	Tree trimming/removal must be completed between September 15 and October 30. If trimming/removal is required outside that timeframe, additional measures apply.	If tree removal/trimming cannot be conducted between September 15 and October 30, qualified biologists will examine trees to be removed or trimmed for suitable bat roosting habitat before removal/trimming. High-quality habitat features (large tree cavities, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, etc.) will be identified and the area around these features searched for bats and bat sign (guano, culled insect parts, staining, etc.). Riparian woodland, orchards, and stands of mature broadleaf trees should be considered potential habitat for solitary foliage-roosting bat species. If habitat cannot be adequately surveyed and/or if DFW requires identification of bat species in the project area, passive monitoring using full spectrum bat detectors may be needed. Survey methods should be discussed with DFW prior to the start of surveys. Measures to avoid and minimize impacts to sensitive bats species will be determined in coordination with DFW and may include the following. 1) Tree removal will be avoided between April 1 and September 15 (the maternity period) to avoid impacts on pregnant females and active maternity roosts (whether colonial or solitary). 2) All tree removal will be conducted between September 15 and October 30, which corresponds to a time period when bats have not yet entered torpor or would be caring for nonvolant young. 3) Trees will be removed in pieces rather than felling an entire tree. 4) If a maternity roost is located, whether solitary or colonial, that roost will remain undisturbed until September 15 or a qualified biologist has determined the roost is no longer active. If avoidance of nonmaternity roost trees is not possible, and tree removal or trimming must occur between October 30 and August 31, qualified biologists will monitor tree trimming/removal. If possible, tree trimming/removal should occur in the late afternoon or evening when it is closer to the time that bats would normally arouse. Prior to removal/trimming, each tree will be sha

Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details	
Impact REC-1: Temporary Disruption of Recreation Opportunities during Construction	REC-MM-1: Post Notices of Construction Activities	SBFCA and its construction contractor	SBFCA	Prior to construction	SBFCA will ensure that the contractor posts notice of construction activities and intended days of construction area closure at least 30 days in advance of closures in and near formal recreation facilities. SBFCA will de Public Information Officer for this project. Appropriate signage will be posted adjacent to access roads; si be at least 3 square feet in size; inform visitors of the current conditions, road closures, and access limitar and provide a contact (Public Information Officer) for questions regarding project construction. SBFCA we ensure that the construction area is fenced off to preclude public access.	signate a gns will tions;
Impact HAZ-2: Exposure of the public or the environment to the accidental release of hazardous materials	HAZ-MM-1: Soil Testing and Contaminant Safety Plan	SBFCA and its construction contractor	SBFCA	Prior to ground-disturbance activities.	SBFCA will implement the following measures at the notch connection to the Feather River before ground disturbing activities begin, in order to reduce health hazards associated with potential exposure to hazar substances.	
					1) Prior to disturbance of study area soils, shallow soils samples will be taken at each site of proground disturbance within the study area and analyzed to determine the presence of any contaminated soils with concentrations above worker safety thresholds established by the R Water Quality Control Board (RWQCB).	-
					2) Prior to disturbance of study area soils, shallow soils samples will be taken at each site of proground disturbance within the study area and analyzed to determine the presence of any contaminated soils with concentrations above worker safety thresholds established by the R	-
					3) Prior to disturbance of study area soils, shallow soils samples will be taken at each site of proground disturbance within the study area and analyzed to determine the presence of any contaminated soils with concentrations above worker safety thresholds established by the R	
					4) SBFCA or its contractor will be responsible for reporting the test results of any soil with haza material content to the Certified Unified Program Agency (CUPA) (Butte County Public Healt Department), the RWQCB, California Department of Toxic Substances Control (DTSC), and all appropriate Federal, state or local regulatory agencies within 21 days of the completion of teaccompanied by a map showing the excavation location.	ardous h l other
					5) Any soils with chemicals exceeding the RWQCB Environmental Screening Levels for commer or hazardous waste limits will be characterized, removed, and disposed of offsite at a license hazardous materials disposal site.	
					SBFCA will prepare a site plan that identifies any necessary remediation activities appropriately proposed land uses, including excavation and removal of contaminated soils, and redistributed clean fill material on the project site. The plan will include measures that ensure the safe tractuse, and disposal of contaminated soil and building debris removed from the site, as well as other hazardous materials. In the event that contaminated groundwater is encountered during excavation activities, the contractor will report the contamination to the appropriate regulated agencies, dewater the excavated area, and treat the contaminated groundwater to remove contaminants before discharge into the sanitary sewer system. The contractor will be required comply with the plan and applicable Federal, state, and local laws.	cion of nsport, any ng site cory
					7) SBFCA or its contractor will notify the appropriate Federal, state, and local agencies if evider previously undiscovered soil or groundwater contamination is encountered during construct activities. Any contaminated areas will be cleaned up in accordance with the recommendation CUPA (Butte County Public Health Department), RWQCB, DTSC, or other appropriate Federa or local regulatory agencies.	tion ons of the
					SBFCA or its contractor will prepare a worker health and safety plan before the start of cons activities that identifies, at a minimum, all contaminants that could be encountered during construction activity; all appropriate worker, public health, and environmental protection ed and procedures to be used during project activities; emergency response procedures; the moreoute to the nearest hospitals; and a site safety officer. The plan will describe actions to be tashould hazardous materials be encountered onsite, including protocols for handling hazardous materials and preventing their spread, and emergency procedures to be taken in the event of	quipment ost direct iken ous

Oroville Wildlife Area Flood Stage Reduction Project

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Mitigation Monitoring and Reporting Program

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Project Impact	Mitigation Measure	Responsibility for Implementation	Responsibility for Monitoring	Monitoring Schedule	Monitoring Details
Impact CUL-1: Change in the Significance of a Unique Archaeological Resource	CUL-MM-1: Implement Measures to Protect Known Archaeological Resources	SBFCA and its construction contractor	A qualified archaeologist hired by SBFCA	Prior to and during construction.	 No project-related work, including staging or any ground-disturbing activities, shall take place in or within 50 feet of archaeological sites P-04-2849, P-04-2684, P-04-465, and P-04-1480. Environmentally Sensitive Area (ESA) fencing shall be installed around the known boundaries of P-04-2849, P-04-2684, P-04-465, and P-04-1480 that are within 50 feet of areas of ground disturbance. Installation shall take place under direct supervision of a qualified archaeologist. A qualified archaeologist will intermittently inspect the archaeological site and the integrity of the ESA fencing throughout the duration of the project.
Impact CUL-1: Change in the Significance of a Unique Archaeological Resource	CUL-MM-2: Conduct Mandatory Cultural Resources Awareness Training for All Project Personnel	SBFCA and its construction contractor	A qualified archaeologist hired by SBFCA	Before any ground- disturbing work and during the construction period if new personnel are added to the construction crew	Before any ground-disturbing work (including vegetation clearing, grading, and equipment staging) commences, a qualified archaeologist will conduct a mandatory cultural resources awareness training for all construction personnel. The training will cover the cultural history of the area, characteristics of archaeological sites, applicable laws, and the avoidance and minimization measures to be implemented. Proof of personnel attendance will be provided to overseeing agencies as appropriate. If new construction personnel are added to the proposed project, the contractor will ensure that the new personnel receive the mandatory training before starting work.
Impact CUL-1: Change in the Significance of a Unique Archaeological Resource	CUL-MM-3: Implement Measures to Protect Previously Unidentified Cultural Resources	SBFCA and its construction contractor	A qualified archaeologist hired by SBFCA	During construction	Construction shall stop if potential cultural resources are encountered. It is possible that previous activities have obscured surface evidence of cultural resources. If signs of an archeological site, such as any unusual amounts of stone, bone, shell, ceramics, glass, or metal are uncovered during grading or other construction activities, work will be halted within 100 feet of the find and the SBFCA will be notified. A qualified archeologist will be consulted for an onsite evaluation. If the site is or appears to be eligible for listing the California Register of Historical Resources or National Register of Historic Places, additional mitigation, such as further testing for evaluation or data recovery, may be necessary.
					In the event resources are discovered, SBFCA will retain a qualified archaeologist to assess the find and to determine whether the resource requires further study. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria.
					All work will stop in the immediate vicinity of the find. If the find is determined to be an important cultural resource, SBFCA will make available contingency funding and a time allotment sufficient to allow recovery of an archaeological sample or to implement an avoidance measure. Construction work can continue on other parts of the project while archaeological mitigation takes place.
Impact CUL-2: Disturbance of Human Remains	CUL-MM-4: Implement Measures if Construction Activities Inadvertently Discover or Disturb Human Remains	SBFCA and its construction contractor	A professional archaeologist with Native American burial experience	During construction	If human remains are discovered during any phase of construction, including disarticulated or cremated remains, the construction contractor will immediately cease all ground-disturbing activities within 100 feet of the remains and notify SBFCA. In accordance with CHSC Section 7050.5, no further disturbance will occur until the following steps have been completed.
					 The Butte County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined by the County Coroner to be Native American, the Coroner shall notify
					the Native American Heritage Commission (NAHC) within 24 hours. A professional archaeologist with Native American burial experience will conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by NAHC. As necessary and appropriate, a professional archaeologist may provide technical assistance to the MLD, including the excavation and removal of the human remains.