March 10, 2023

Alexander Bussaus
Barnett Southern Corporation, Inc
106 N. Alexander Ave.
Washington, GA 30673

SUBJECT: Summary of Results from Listed Species Biological Evaluation and California Red-legged Frog Habitat Assessment for Flood Debris Cleanup at Twitchell Reservoir

Dear Mr. Bussaus,

This letter report summarizes the biological resources present within the proposed impact area at Twitchell Reservoir, located along the boundary between Santa Barbara and San Luis Obispo Counties, California. This report analyzes the potential for federally and state listed species and their suitable habitat to be present in the Study Area.

Project Location and Background

Twitchell Reservoir is situated at the confluence of the Huasna and Cuyama Rivers, approximately 6-miles northeast of the City of Santa Maria, California (Attachment A – Figure 1). The reservoir supplies an estimated 20,000 acre-feet of recharge to the Santa Maria Groundwater Basin annually and provides flood protection for northern Santa Barbara County. Excess water in the Twitchell Reservoir is discharged through a single discharge tunnel under Twitchell Dam. Recent historic rain events have resulted in extreme sedimentation around the tunnel's intake structure, blocking flow through the discharge tunnel and interfering with attempts to discharge excess water.

The proposed Project would involve removing this sediment from the reservoir's lower basin in the area next to the existing intake structure with the objective of restoring the discharge tunnel to its original working condition. This would involve dredging the area (ca. 6.5-acres) with a crane-supported clamshell, mounted on a barge. Excavated sediment would then be placed in closed-top containers and transported by boat to a docking area on the north end of the reservoir. From this docking area, the excavated sediment will be transported approximately 0.2-miles to two stockpile locations (ca. 25-acres total) where sediments will be spread out and allowed to dry. Heavy equipment will be used to prepare both stockpile locations prior to the arrival of sediments.

The docking area and stockpile locations will be accessed using an existing access road connected to California State Route 166, 0.5-miles east of Huasna Bridge. This 0.5-mile long existing access road will be graded and widened to allow for equipment and vehicle access. A single laydown area, adjacent to the access road, has been proposed for use during the Project. This laydown area (ca. 3.5-acres) would be graded and is intended to stage equipment and office trailers.

At the time of the survey activities for this assessment, an access road had been established between the entrance gate on State Route 166 to the dock location. Vehicle parking, equipment parking, bin handling areas, and laydown areas were also established. The developed road and work areas consisted of graded native soils overlaid with road base and crushed rock. The dock feature was installed with barges docked and the clamshell excavator secured to the barge.

Methods

For the purpose of this report, we define the Study Area as the Project area (including laydown area, both stockpile locations, access road, and docking area) buffered by 300 feet.

Desktop Review

A database and literature review were conducted using standard biological references pertaining to the status and occurrence of special-status biological resources (including plant and wildlife species and critical habitats). These references included the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPac) database project planning tool (USFWS 2023a), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2023), and the CNPS Rare Plant Inventory (RPI; CNPS 2023). A list of potentially occurring special-status biological resources was then prepared (Attachment B). This list includes state and federally listed plant and wildlife species as well as designated critical habitats with known occurrence records within a nine-quadrangle (i.e., U.S. Geological Survey quadrangle maps) search window. A nine-quadrangle search window was conservatively selected due to the rural nature of the Study Area and the potentially limited availability of database records within smaller search areas.

Field Survey

Field surveys of the proposed laydown area, two stockpile locations, access road, and docking area were conducted on February 24, 2023, and March 1, 2023 by Kleinfelder biologists Wayne Vogler and Wyatt Petersen. Field surveys were conducted on foot and focused on detecting the presence of special-status plant and wildlife species; detecting signs of habitat utilization by special-status wildlife species; and documenting habitat elements that may support special-status plant and wildlife species. All wildlife species observed, including any sign (e.g., scat, tracks, feathers, burrows), were recorded. All plant species observed were identified to the lowest taxon and recorded to determine sensitive or special-status classification. Efforts were made to identify the vegetative form of plant species with blooming periods that did not overlap the survey dates. Photographs were taken to document site conditions throughout the proposed work areas (Attachment C).

Life History Accounts

The following provides an account of the life history of those species with habitat elements and range that overlaps the project area. As discussed in the following and evaluated within Attachment B, several floral and faunal species were considered. However, only the California red-legged frog's, California condor's,

and the California spotted owl's range encompasses the project area and the project area contains habitat elements consistent with these species.

California Red-legged Frog

The California red-legged frog is federally listed as threatened and is a CDFW Species of Special Concern (CDFW 2017b). The USFWS-issued *Recovery Plan for the California Red-legged Frog* established seven recovery units throughout the range of this species; the Project occurs within the Northern Transverse Ranges and Tehachapi Mountains Recovery Unit, which encompasses all of Santa Barbara County and portions of San Luis Obispo, Ventura, Kern, and Los Angeles Counties (USFWS 2008). Endemic to California and Baja California, California red-legged frog has been extirpated from 70 percent of its former range (USFWS, 2008).

The California red-legged frog is a highly aquatic, generally nocturnal species that is rarely found far from suitable aquatic habitat. Suitable aquatic habitat generally consists of quiet, still waters at least 18 inches deep, with sufficient emergent and overhanging vegetation to provide cover. Streams, pools, ponds, backwaters, marshes, dune ponds, and manmade structures including stock ponds which contain still or slow-moving water all may be utilized. Adjacent upland habitat is utilized for sheltering, particularly during the drier summer months, as well as foraging and as transitory habitat when migrating between ponds. California red-legged frog may make use of upland refugia during dispersal and during dry periods between rains; these refugia may include spaces under large rocks or organic debris such as downed logs, industrial debris and agricultural features, soil cracks and small mammal burrows. Dispersal and terrestrial forays generally occur at night and are usually associated with rain events (USFWS, 2008).

California red-legged frog breeding generally occurs November through April, with the peak of egg production in March (USFWS, 2008). Eggs are fertilized as they are attached to a brace within a surface water body. A brace is emergent vegetation such as bulrushes or cattails, or roots and twigs. Egg masses float on the surface of the water. Eggs require approximately 20 to 22 days to develop into tadpoles and between 11 to 20 weeks tadpoles develop into terrestrial frogs. Tadpole development is highly temperature dependent.

The diet of California red-legged frog is highly variable with invertebrates found to be the most numerous food item. Pacific chorus frogs (*Pseudacris regilla*) and California mice (*Peromyscus californicus*) are also common prey items for larger frogs (USFWS, 2008).

Preferred breeding habitat consists of deep (greater than 2 feet) still or slow-moving water, with dense, shrubby riparian or emergent vegetation. Rarely, California red-legged frogs have been documented to breed in shallow streams and areas with little emergent vegetation.

California red-legged frogs have been documented to travel up to 1.6 kilometers (one mile) via terrestrial habitats (USFWS, 2008). California red-legged frogs have been observed to make straight-line, point to point migrations over long distances rather than using corridors for movement between aquatic habitats.

During dry periods, California red-legged frogs are rarely found far from water. Receding water will sometimes inspire California red-legged frog dispersal to remaining aquatic habitats.

Bulger et. al. (2003) studied California red-legged frog terrestrial movements. Their research found two purposes for California red-legged frog terrestrial movement: forays into the surrounding terrestrial habitats returning to the same aquatic habitat and migration between aquatic sites. They found during summer months the terrestrial forays remained in closer proximity to the aquatic site (< 5 meters); winter forays were greater distance from aquatic sites (up to 130 meters). California red-legged frogs remained close to aquatic habitats during the breeding season. Most adults (75%) remained at permanent aquatic sites throughout the year. Those individuals migrating from summer aquatic habitat to breeding habitat returned to the same summer aquatic habitat (3 of 5 individuals). Migration routes were not preferential to available obvious migration corridors. The migration distances ranged from 200 to 2,800 meters. Observed movements were highly oriented toward target sites and usually tended to an approximate straight line between the source and target areas. Migrating adults were observed to use a variety of habitat types including coniferous forest (900 meters distance travelled), grass/scrub rangeland (1,700 meters distance travelled), and agricultural land of both recently tilled fields and mature crops (500 meters distance travelled).

Tatarian (2008) found that the majority of California red-legged frogs remained at their source pool over forays into adjacent terrestrial habitat or dispersal to nearby pools. Further, all movements of California red-legged frogs from their source aquatic habitat occurred after the first 0.5 centimeters of rain of the season. When California red-legged frogs were using terrestrial areas, more were found associated with natural (large logs, boulders) or atypical cover items (barn doors) than in the open or vegetation as the sole cover type. Daytime shelters are important because they provide California red-legged frogs the opportunity for thermal regulation and protection from desiccation and predators. Tatarian found that California red-legged frogs usage of squirrel burrows was selective to xeric conditions; more frequently California red-legged frogs would bypass nearer squirrel burrows for more distant cover types.

If aquatic habitat is not available, California red-legged frogs may seek summer habitat refugia. In riparian areas, this summer habitat may include moist spaces under rocks and organic debris. Agricultural features such as drains, watering troughs, abandoned sheds, or hay ricks may provide refuge for California red-legged frogs through summer. Kleinfelder biologists have observed California red-legged frogs using voids behind concrete bridge footings for summer refugia.

California red-legged frogs are highly sensitive to elevated salinity levels in water. Jennings and Hayes (1990) found that 100 percent mortality occurs when California red-legged frog eggs are exposed to salinity levels greater than 4.5 parts per thousand. Salinity levels greater than 7.0 parts per thousand leads to larvae mortality. It has been observed that when water bodies have temperatures greater than 70 degrees Fahrenheit and lacking deeper cool portions, California red-legged frogs are generally absent (USFWS, 2008).

California Condor

The California condor (*Gymnogyps californianus*) is listed as Endangered under both the Federal and California state Endangered Species Acts and is listed as a CDFW Fully Protected species. In the 1980s, the species was on the verge of extinction and the last wild individuals were captured as part of a captive breeding program to safeguard its existence. Following this program's success, the USFWS began releasing captive-raised condors back into the wild at sites in central and southern California; the nearest of which, Bitter Creek National Wildlife Refuge, is located just 50-miles east-southeast of the Study Area (USFWS, 1996). Today the species' population is growing, and it now occurs locally in large portions of Los Padres National Forest and surrounding lands, with recent public records as close as 28-miles from the Study Area (eBird 2021).

California condors are obligate scavengers, feeding primarily on carcasses belonging to large mammals such as deer, elk, livestock, and marine mammals (USFWS 1996). To find these carcasses, the species flies large distances, sometimes more than 100 miles in a single day (USFWS 1996). Their natural habitat includes rocky, open-country scrubland, coniferous forest, and oak savanna. The species does not construct nests and instead utilizes natural cavities in ledges on cliffs and rocky outcrops in remote mountainous areas (USFWS 1996). California condors breed once every other year, nesting typically between January and April (USFWS 1996). Only a single egg is laid at time. Eggs hatching after approximately two months of incubation and nestlings fledge after approximately 6 months (USFWS 1996).

Due to the species' nesting behavior, nesting areas are often distinct from foraging areas, which typically include open grasslands and oak savannas, and the species is known to travel great distances between the two (Meretsky and Snyder, 1992). Breeding pairs tend to forage close to their nests, often within 44-miles, but have been known to range as far as 112-miles away in search of food (Meretsky and Snyder, 1992). Unpaired adults and immature birds without nests to attend to may range even further, with some documentation of individuals flying over 125-miles in a single day (Meretsky and Snyder, 1992).

California Spotted Owl

On February 23, 2023, the USFWS proposed to list the California spotted owl (*Strix occidentalis occidentalis*) Coastal-Southern California distinct population segment (DPS) as Endangered under the Federal Endangered Species Act (USFWS 2023c). The Coastal-Southern California DPS includes all California spotted owls in the vicinity of the Coast, Transverse, and Peninsular Mountain ranges from Monterey County in the north to San Diego County in the south, and south of the Tehachapi Pass within Kern County (USFWS 2023c).

In southern California, California spotted owls are known to primarily occur in live oak-bigcone Douglas-fir forest and mixed conifer forest (Gutiérrez et al. 2017), though individuals have been observed in coast live oak monotypic woodlands where they may exist transiently in extremely low population densities (W. Petersen, pers. comm.). The species is little studied in the Coastal and Transverse Ranges, and most

available information either comes from the Sierra Nevada or San Bernadino/San Gabriel Mountains. Regardless of the region, studies repeatedly indicate probability of site use is highly associated with the amount of closed-canopy forest cover in a given area (e.g., LaHaye et al. 1997; Smith et al., 2022). The species has large home ranges, sometimes exceeding 1,000-acres, that are centered around roosting and nesting sites. The species nests in trees and breeding season begins in mid-February and juvenile dependency may last through mid-September (Gutiérrez et al. 2017). Typically, pairs raise only a single brood of 1 to 4 young per year (Gutiérrez et al. 2017). Nesting habitat elsewhere in the species' range is associated with medium to large trees (> 12 inch diameter at breast height) and high canopy cover (> 70%; e.g., LaHaye et al., 1997; Blakesley et al., 2005). Foraging for small mammals occurs at night in areas surrounding the roosting or nesting site, with optimal foraging habitat including habitat mosaics. Such mosaics, with a mixture of vegetation types and seral stages, are associated with higher reproductive output and survival in other spotted owl populations, presumably due to higher prey availability at forest edges (Franklin et al. 2000).

Results

Environmental Setting

There were four cover types/vegetation communities present within the Study Area (Attachment A – Figure 2). The following are descriptions of the cover types/vegetation communities present:

Developed. Portions of the Study Area contain cleared areas, bare soil, unimproved roadways/paths, and paved roadways. These areas included the existing access road, State Route 166, and associated turnouts and shoulders.

California Annual Grassland. The dominant existing vegetation throughout the Study Area was annual grasses typical of cattle grazing lands in northern Santa Barbara and southern San Luis Obispo counties. This vegetation type most closely corresponds to the wild oats and annual brome grasslands association as described in the Manual of California Vegetation (Sawyer et al., 2009) which is semi-natural and not sensitive. In some areas, ruderal species dominate, especially red stemmed filaree (*Erodium circutarium*). Scattered individual oak trees (coast live oak *Quercus agrifolia* and blue oak *Quercus douglasii*) are also present within the grassland area, particularly along the small gully near an ephemeral stock pond.

California sagebrush scrub. Scrub habitat can be found along steep slopes and previously disturbed areas beyond the project area between the access road and State Route 166, near the docking area, near the artificial berm impounding the ephemeral stock pond, and on hummock slopes and tops east of the proposed laydown area. Vegetation is dominated by California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and poison oak (*Toxicodendron diversilobum*).

Mixed Oak Forest and Woodland. Stands of mixed oak woodland consisting of coast live oak and blue oak found along western boundary of the Study Area.

Special-status Species

No special-status vegetation communities, plant species, or wildlife species were observed during the field survey of the laydown areas. The IPaC, CNDDB, and CNPS IRP resource lists were generated and the potential for special-status species to occur at the Project Area was assessed (Attachment B). The CNDDB results are located in Attachment A – Figure 3, and the IPac and CNPS RPI results can be found in Attachments D and E, respectively.

Flora

A desktop review identified 8 special-status plant species with occurrences within a nine-quadrangle search area around the Project site. These species include California jewelflower (Federally Endangered FE, State Endangered SE; *Caulanthus californicus*), Chorro Creek bog thistle (FE, SE; *Cirsium fontinales var. obispoense*), Gambel's watercress (FE, State Threatened ST; *Rorippa gambelli*), La Graciosa thistle (FE, ST; *Cirsium loncholepis*), marsh sandwort (FE, SE; *Arenaria paludicola*), Pismo clarkia (FE, State Rare SR; *Clarkia speciosa ssp. immaculata*), salt marsh bird's-beak (FE, SE; *Cordylanthus maritimus ssp. maritimus*), and spreading navarretia (Federally Threatened FT; *Navarretia fossalis*).

These species are listed on the Potential to Occur table (Attachment B). Based on a review of the habitat requirements of each species and the habitat present no sensitive or special-status plant species were determined to have a potential to occur within the Project Area.

No state- or federally listed plant species, suitable habitat, or critical habitat were observed.

Fauna

A desktop review identified 20 special-status wildlife species with occurrences within a nine-quadrangle search area around the Project site. These species include Arroyo toad (Federally Endangered FE; *Anaxyrus californicus*), foothill yellow-legged frog (Federally Proposed Endangered FPE; *Rana boylii*), California tiger salamander (Federally Threatened FT, State Endangered SE; *Ambystoma californiense*), California red-legged frog (FT; *Rana draytonii*), California Ridgway's rail (FE, SE, State Fully Protected SP; *Rallus obsoletus obsoletus*), California condor (FE, SE; *Gymnogyps californianus*), California least tern (FE, SE, FP; *Sterna antillarum browni*), California spotted owl (*Strix occidentalis occidentalis*), least Bell's vireo (FE, SE; *Vireo bellii pusillus*), marbled murrelet (FT, SE; *Brachyramphus marmoratus*), southwestern willow flycatcher (FE, SE; *Empidonax traillii extimus*), tricolored blackbird (State Threatened ST; *Agelaius tricolor*), western snowy plover (FT; *Charadrius nivosus nivosus*), yellow-billed cuckoo (FT, SE; *Coccyzus americanus occidentalis*), giant kangaroo rat (FE, SE; *Dipodomys ingens*), San Joaquin kit fox (FE, ST; *Vulpes macrotis mutica*), steelhead (FT; *Oncorhynchus mykiss irideus* population 9), tidewater goby (FE; *Eucyclogobius newberryi*), monarch butterfly (California overwintering population; Federal Candidate FC; *Danaus plexippus*), and vernal pool fairy shrimp (FT, *Branchinecta lynchi*). A detailed list of these species, including general habitat requirements and the potential to occur determination, is provided in Attachment B.

One species was determined to have moderate potential to occur, the California red-legged frog. Two species were determined to have a low potential to occur, the California condor and California spotted owl. The remaining species evaluated in Attachment B are not expected to occur.

Nesting and home ranges of California condors are not known to occur in the area currently, but individuals are wide-ranging, and populations are recovering. Thus, there is potential for flyovers by this species.

One California spotted owl occurrence falls within 5-miles of the Study Area. This species inhabits forests and woodlands at moderate to high elevations. Given the Study Area's limited tree cover, this species is not expected to occur. However, proximity to potentially suitable habitat in the surrounding area (e.g., oak woodland across State Route 166) combined with the species tendency towards large home ranges (> 1000-acres) allows for the potential for transient occurrence within the Study Area, particularly at night when the species forages.

USFWS-designated Critical Habitat occurred within a nine-quadrangle search area for California condor, California tiger salamander, and California red-legged frog. However, separate queries revealed no Critical Habitats overlapped the Study Area itself and no Critical Habitats occurred within the Huasna Peak quadrangle (which contains the Study Area).

No sensitive or special-status species, or their sign, were observed during field surveys. Common wildlife species observed included mallard (*Anas platyrhynchos*), northern flicker (*Colaptes auratus*), red-tailed hawk (*Buteo jamaicensis*), song sparrow (*Melospiza melodia*), western bluebird *(Sialia mexicana*), white-crowned sparrow (*Zonotrichia leucophrys*), yellow-rumped warbler (*Setophaga coronata*), and a coyote skull (*Canis latrans*). Evidence of former cattle grazing (scat) was common, although no individuals were observed within the Study Area.

USFWS Guideline Elements for California Red-legged Frog Site Assessments

A site assessment following the USFWS *Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (August 2005) was performed to evaluate the existence of California red-legged frog habitat and/or the likelihood of California red-legged frog presence within the Study Area. The current and historical range of California red-legged frog was considered in relation to the Study Area. Through a review of CNDDB records and previous reports, the presence of California red-legged frog within the Study Area or a 1.6-kilometer radius was considered.

Element 1. Is the site within the current or historic range of the California red-legged frog?

The Study Area is within the current known range of the California red-legged frog (USFWS 2023b).

No critical habitat designated by the USFWS for the California red-legged frog occurs within the Study Area. The nearest designated critical habitat unit (STB-1) for California red-legged frog occurs approximately 9 miles southeast of the Study Area. As no impacts to critical habitat units are anticipated

due to Project-related activities, this and other designated critical habitat units are not discussed further in this assessment.

Element 2. Are there known records of California red-legged frogs at the site or within a 1.6-kilometer radius?

There are no known records of California red-legged frogs within 1.6-kilometers of the Study Area (CDFW 2023). The nearest record is approximately 3.5-kilometers south of the Study Area (Appendix A - Figure 3). This record is located near the Twitchell Dam spillway. Additional records are available approximately 4.4-kilometers south of the Study Area in the Cuyama River and approximately 9.1-kilometers west of the Study Area along Wineman Road.

Element 3. What are the habitats within the project site and within 1.6-kilometers of the project boundary?

At the time of this assessment, Twitchell Reservoir was near capacity due to recent storm events in California. There was thus newly suitable aquatic breeding habitat bordering and later encompassing part of the Study Area (Attachment A – Figure 4). Hydrophytic vegetation was not present along the newly elevated shorelines but inundated upland vegetation can provide structure for egg mass attachment. Because these conditions are novel, robust fish populations, if any occur, are not anticipated within Twitchell Reservoir and egg-mass, juvenile, or adult predation by fish is not anticipated. However, water levels could be variable over a short-duration based on precipitation events and reservoir outflows. Therefore, there is potential for water levels to fluctuate significantly, resulting in a loss of egg viability. In addition to the reservoir, there exists an ephemeral stock pond in the middle of the Study Area. At the time of this assessment, this approximately 0.4-acre stock pond was inundated with surface runoff (Attachment A – Figure 2; Appendix C – Photographs 12, 19, 20, 21). A review of historical aerial imagery indicates the feature is ephemeral in nature, though hydroperiod length was indeterminable. Few small mammal burrows were present along the bank and vegetation present included coast live oak, blue oak, and annual grasses. This feature represents may be used by dispersing individuals as temporary refugia and is potentially suitable aquatic breeding habitat. No amphibian activity was seen or heard during site visits on February 24, 2023 and March 1, 2023.

Given the recent surge in water level, Kleinfelder conducted a review of aerial photographs of the Study Area to identify potential pre-storm habitat features within one mile of the Study Area. Four intermittent, semi-persistent pools (0.35-0.85 acres each) were identified within a typically dry channel near the junction of Alamo Creek and Cuyama River, each approximately 0.25-0.4 miles east of the Study Area (Attachment A – Figure 4). These features possess unknown hydroperiods and are of unknown depth with banks of unknown slope. Herbaceous vegetation is present in aerial imagery and these features appear visibly like known breeding habitat elsewhere. A thorough investigation of these features would not be possible until after water levels in the reservoir recede. Other pre-storm habitats surrounding the Study Area include rugged mountainous grazing lands consisting of a mosaic of grasslands, scrub, and oak

woodlands; and non-native grass and scrub dominated valley bottoms, including dry riverbeds and the reservoir basin.

Element 4. Report the results of the site assessment

The nearest known California red-legged frog occurrence is downstream of the reservoir dam, approximately 3.5-kilometers south of the Study Area. Although no records exist within one mile of the Study Area, seemingly suitable semi-permanent aquatic habitat approximately 0.24-0.0 miles east of the Study Area is visible in historic aerial imagery. These features are, however, under at least 20-feet of flood water due to ongoing storm events in California. Current, potentially suitable breeding habitat was identified along the shoreline of Twitchell Reservoir and an ephemeral stock pond with unknown hydroperiod located in the middle of the Study Area. Substrate and braces for egg-mass attachment in the form of recently inundated upland vegetation are present along the shoreline but limited to grasses and a fallen tree in the stock pond. Water levels in the reservoir are expected to be variable over a short-duration based on precipitation events and reservoir outflows and significant fluctuations may result in loss of egg viability.

California Condor and California Spotted Owl Potential to Occur Discussion

California Condor

California condors nest in natural cavities in ledges on cliffs and rocky outcrops. These features are not present within the Study Area, nor are they present within the Study Area's immediate vicinity. Therefore, nesting condors are not expected to occur. California condors are however known to forage in habitats like those within the Study Area (i.e., open grasslands and oak savanna), sometimes at distances exceeding 100 miles from their roosts or nests (Meretsky and Snyder, 1992). Therefore, the Study Area is well within the range of known condor populations in the Los Padres National Forest and there is potential for fly-overs by foraging individuals. Since no livestock are present within the Study Area, and deer are expected to avoid the active work area, no opportunities for condors to forage within the Study Area are expected.

California Spotted Owl

California spotted owl site use is highly correlated with canopy cover (Smith et al., 2022). Since the dominant vegetation type present within the Study Area is annual grasslands, the species is not expected to use the Study Area for nesting. Foraging habitat, however, is more liberal and may be characterized by a mosaic of vegetation in proximity to nesting habitat (Gutiérrez et al. 2017). Spotted owls are known to forage in areas with high-contrast woodland edges, presumably due to higher small mammal abundance and diversity in mosaic habitats. Although no spotted owls nor nests were observed within the Study Area, there are small oak woodlands in the hills to the north of the Study Area. Available literature suggests these are of marginal suitability for the species (Gutiérrez et al. 2017), but the species has been observed in similar habitat elsewhere on the Central Coast (W. Petersen, pers. Comm.). If a breeding pair was present in these oak woodlands to the north, they could potentially forage at night within the Study Area. However, this is not expected, at least not regularly, given the openness of the Study Area and because

such excursions would risk predation by the larger great horned owl which are commonly found in more open habitats like the Study Area (Gutiérrez et al. 1995). Moreover, any such spotted owl occurrences would take place outside of normal work hours, limiting the potential for impacts to this species.

Avoidance and Minimization Measures

CDFW has developed statewide Best Management Practices (BMP) for use with flood debris removal and management activities associated with the 2023 Atmospheric River Storm Events. To minimize or avoid any unanticipated impacts to special-status species with potential to occur, the following CDFW BMPs should be implemented:

- Construction monitoring. Project activities should be monitored daily by a biological monitor (Designated Construction Monitor). The qualified biologist should either be on-site or be available to arrive on site within two hours during all Project activities. Should a Project site have a listed species that may be impacted during operations and the qualified biologist cannot be present on-site, either the Operations Chief, Debris Group Supervisor, or their designee with training in application of BMPs may act as Designated Construction Monitor until the qualified biologist is available.

- Daily Clearance Survey. Before the start of daily project activities, the qualified biologist or designated construction monitor should survey the project area to ensure no new active nests, nest cavities, roosts, dens, egg masses, or redds have become established, including surveying any excavated areas within the project area to ensure trapped fish or wildlife are allowed an opportunity to escape. This includes inspecting around and inside any open-ended pipes or infrastructure elements stored on the project site that will be moved or utilized during project activities.

- Detection of Wildlife. When wildlife is encountered during project activities, the wildlife should be allowed to leave the project area unharmed. If any CESA-listed or Fully Protected wildlife is encountered, the qualified biologist or designated construction monitor should be notified, and the detection reported to the CDFW Cal OES contact by the Operations Chief, Debris Group Supervisor, or designee. If the wildlife is discovered to be caught in any pits, ditches, or other types of excavations, the qualified biologist should evaluate if it is unable to escape on its own, and if not, then the qualified biologist should capture and release it outside the project area into the most suitable habitat near the project area. Project activities should not be ceased if the observed wildlife is birds flying over or through the project area.

    - When detected wildlife occurs in active nests, dens, roosts, roost trees, egg masses, redds, and/or nest cavities a buffer should be established between ongoing project activities and the detection site so the wildlife are not disturbed, and it can be identified to species. The buffer should be delineated by temporary fencing or markers and remain in effect throughout project activities or until active nests, dens, roosts, roost trees,

location of egg masses, redds, and/or nest cavities is/are no longer active, as determined by the qualified biologist. The buffer(s) should be determined by the qualified biologist and based on the life history of the species detected, including their sensitivity to noise, vibration, ambient levels of human activity and general disturbance, the current site conditions (screening vegetation, terrain, etc.), and the various project-related activities necessary to implement the project. If feasible, consider leaving some larger diameter snags and/or downed logs nearby that may provide food source and shelter for wildlife.

  - When detected wildlife is determined to not be a CESA-listed or Fully Protected Species and a buffer is not feasible while allowing work to continue, and the species is not protected by federal regulations, the qualified biologist may attempt to safely capture and relocate the wildlife to outside the project area if capture is feasible and will not endanger the wildlife.
  - When detected wildlife is determined to be a CESA-listed or Fully Protected species or evidence of their active presence is identified, the detection site should be buffered and all project activities at and immediately adjacent to the detection site should cease until consultation between the Operations Chief, Debris Group Supervisor, or designee and the CDFW Cal OES contact occurs

- Tree Removal with Active Bat Roost. When a tree with an active bat roost is selected for removal, the tree should be removed using a two-step removal process. The limbs of the tree should be removed and left on the ground while the trunk is left in place during the first day, and during the following day the trunk should be removed. This process will allow the bats the opportunity to vacate the roost during the night prior to the trunk removal.
- Rock Outcrops and Downed Logs. When rock outcroppings and downed logs that may provide shelter for wildlife are present within the project area, a buffer should be installed to exclude the feature from the area where active work is being performed. If downed logs and/or boulders must be removed, the qualified biologist with a designated construction monitor should survey the area prior to start of removal activities. Wildlife discovered should be allowed to move out of the area by their own volition, if they do not, then the qualified biologist should capture and release the wildlife outside the project area into the most suitable habitat near the project area.
- Escape Ramp in Trench. At the end of each workday, an escape ramp should be placed at each end of any open excavation to allow wildlife that may become trapped to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees and has enough traction to allow wildlife to escape.
- Injured Wildlife. If any injured wildlife is found within the project site, the qualified biologist should arrange with a CDFW-qualified wildlife rescue and rehabilitation facility to temporarily hold and care for the wildlife.

- In addition to the measures presented in the EPP, during project scoping the Operations Chief, Debris Group Supervisor, or their designee should reference the most current version of 2023 CDFW Statewide Flood Impacted Habitat and Special Status Species Protective Measures. This document contains specific habitat and impact information, as well as additional species-specific BMPs for use during project activities. Contact the appropriate CDFW Cal OES contact or Jason Faridi at Jason.Faridi@wildlife.ca.gov for the most current version.

Summary and Conclusions

One listed species, California red-legged frog, was determined to have moderate potential to occur within the Study Area. Given the abundance of aquatic habitat along the reservoir and riverbanks, potential upland refuge sites in the Study Area are not expected to be favorable over aquatic habitat. Therefore, this species' potential to occur within the Study Area is expected to be limited to individuals dispersing overland. Dispersing individuals, if present, are likely to take refuge in the ephemeral stock pond and work in this feature should be avoided. And while the novel aquatic habitat along the reservoir edge and riverbanks may present appealing aquatic habitat to the species, this habitat's long-term suitability for breeding is unknown as water levels could vary significantly over short periods depending on precipitation events and reservoir outflows.

Two other species were determined to have low potential to occur, the California condor and California spotted owl. With regards to condors, this potential is expected to be limited to rare flyovers as no nesting habitat is present and impacts are not expected since livestock have been removed from the Study Area and the presence of large mammal carrion, which might attract the species, is not anticipated. California spotted owls are also not expected to be significantly impacted as their potential to occur is expected to be limited to rare flyovers during the night and proposed Project activities will be limited to the grassland areas and do not include tree removal; thus potential roosting or nesting sites are not expected to be permanently impacted.

For the remaining species identified by our database query, there is either no suitable habitat present or the Study Area is located outside of the species' known range.

CDFW has prepared and recommended BMPs in association with flood debris removal and management activities associated with the 2023 Atmospheric River Storm Events. These practices and the project-specific measures of the Environmental Protection Plan (EPP) have been designed to avoid and minimize effects to listed species during emergency debris removal.

Kleinfelder appreciates the opportunity to support Barnett Southern Corporation's project. If you have any questions or clarifications, please feel free to contact Mr. Wayne Vogler at (805) 235-9363.

Sincerely,

KLEINFELDER

Attachments: A - Figures
B - Potential to Occur Table
C - Photograph Log
D - USFWS IPac Results
E - CNPS List

Wayne Vogler
Senior Biologist

References

Blakesley, J.A.; Noon, B.R.; Anderson, D.R. 2005. Site occupancy, apparent survival, and reproduction of California spotted owls in relation to forest stand characteristics. Journal of Wildlife Management. 69(4): 1554–1564.

Bulger, J.B., N.J. Scott, and R.B. Seymour. 2003. Terrestrial Activity of adult California Red-legged Frogs *Rana aurora draytonii* in coastal forest and grasslands. Biological Conservation 110:85-95.

California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB). Accessed March 2023.

California Native Plant Society (CNPS). 2023. Inventory of Rare, Threatened, and Endangered Plants. California Native Plant Society. Available on the World Wide Web at: http://www.rareplants.cnps.org/. Accessed March 2023.

eBird. 2021. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: https://ebird.org/checklist/S93177688. (Accessed: March 9, 2023).

Franklin, A.B.; Gutiérrez, R.J.; Burnham, K.P. 2000. Climate, habitat quality, and fitness in northern spotted owl population in northwest California. Ecological Monographs. 70: 539–590.

Gutiérrez, R.J.; Franklin, A.B.; LaHaye, W.S. 1995. Spotted owl (Strix occidentalis). In: Poole, A.; Gill, F., eds. The birds of North America No. 179: life histories for the twenty-first century. Washington, DC: The Philadelphia Academy of Sciences and The American Ornithologists' Union.

Gutiérrez, R.J.; Manley, Patricia N.; Stine, Peter A., tech. eds. 2017. The California spotted owl: current state of knowledge. Gen. Tech. Rep. PSW-GTR-254. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 294 p.Halstead, B.J., P.M. Kleeman. 2017. Frogs on the Beach: Ecology of California Red-legged Frogs (*Rana draytonii*) in Coastal Dune Drainages. Herptological Conservation and Biology 12:127-140.

LaHaye, W.S.; Gutiérrez, R.J.; Call, D.R. 1997. Nest-site selection and reproductive success of California spotted owls. Wilson Bulletin. 109: 42–51.

Meretsky, V. J. (1992). Range use and movements of california condors. The Condor, 94(2), 313–335. https://doi.org/10.2307/1369205

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA. 1300 pp.

Smith, R.B.; LaHaye, W.S.; Gutiérrez, R.J.; Zimmerman, G.S. 2002. Spatial habitat characteristics of an insular spotted owl (Strix occidentalis) population in southern California. In: Newton, I.; Kavanagh, R.; Olson, J.; Taylor, I., eds. Ecology and conservation of owls. Collingwood, Victoria, Australia: CSIRO Publishing

Tartarian, P.J., 2008. Movement patterns of California Red-legged Frogs (*Rana draytonii*) in an inland California environment. Herpetological Conservation and Biology 3:155-169.

U. S. Fish and Wildlife Service (USFWS). 1996. California Condor recovery plan.

2008. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). Region 1, U.S. Fish and Wildlife Service, Portland, Oregon. 180 pp.

2023a. Information for Planning and Conservation (IPaC). Accessed March 2023. https://ipac.ecosphere.fws.gov/location/index.

2023b. Environmental Conservation Online System website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. https://ecos.fws.gov/ecp/species/2891. Accessed March 2023.

2023c. Endangered and Threatened Wildlife and Plants; California Spotted Owl; Endangered Status for the Coastal-Southern California Distinct Population Segment and Threatened Status With Section 4(d) Rule for the Sierra Nevada Distinct Population Segment. Federal Register 88 (36), 11600-11639.

Attachment

A

Figures

Source: Bing Maps

0 1.5 3 Miles

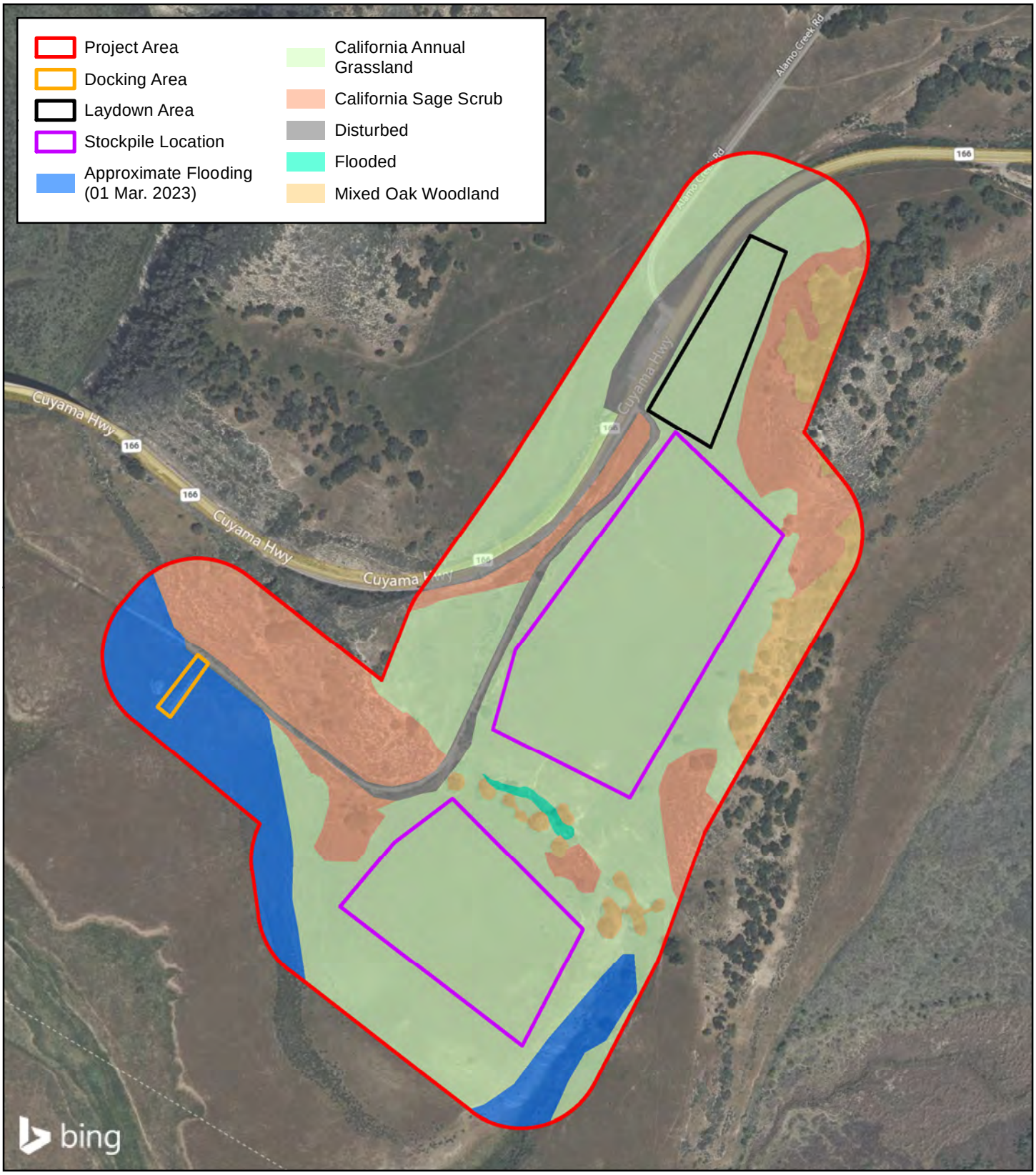
0 2.5 5 Kilometers

N

Scale 1:190,080
1 in = 3 miles

Figure 1: Regional Vicinity
Southern Corporation Twitchell Reservoir Debris Cleanup
San Luis Obispo County, California

KLEINFELDER
Bright People. Right Solutions.



Source: Bing Maps

0 250 500 Feet

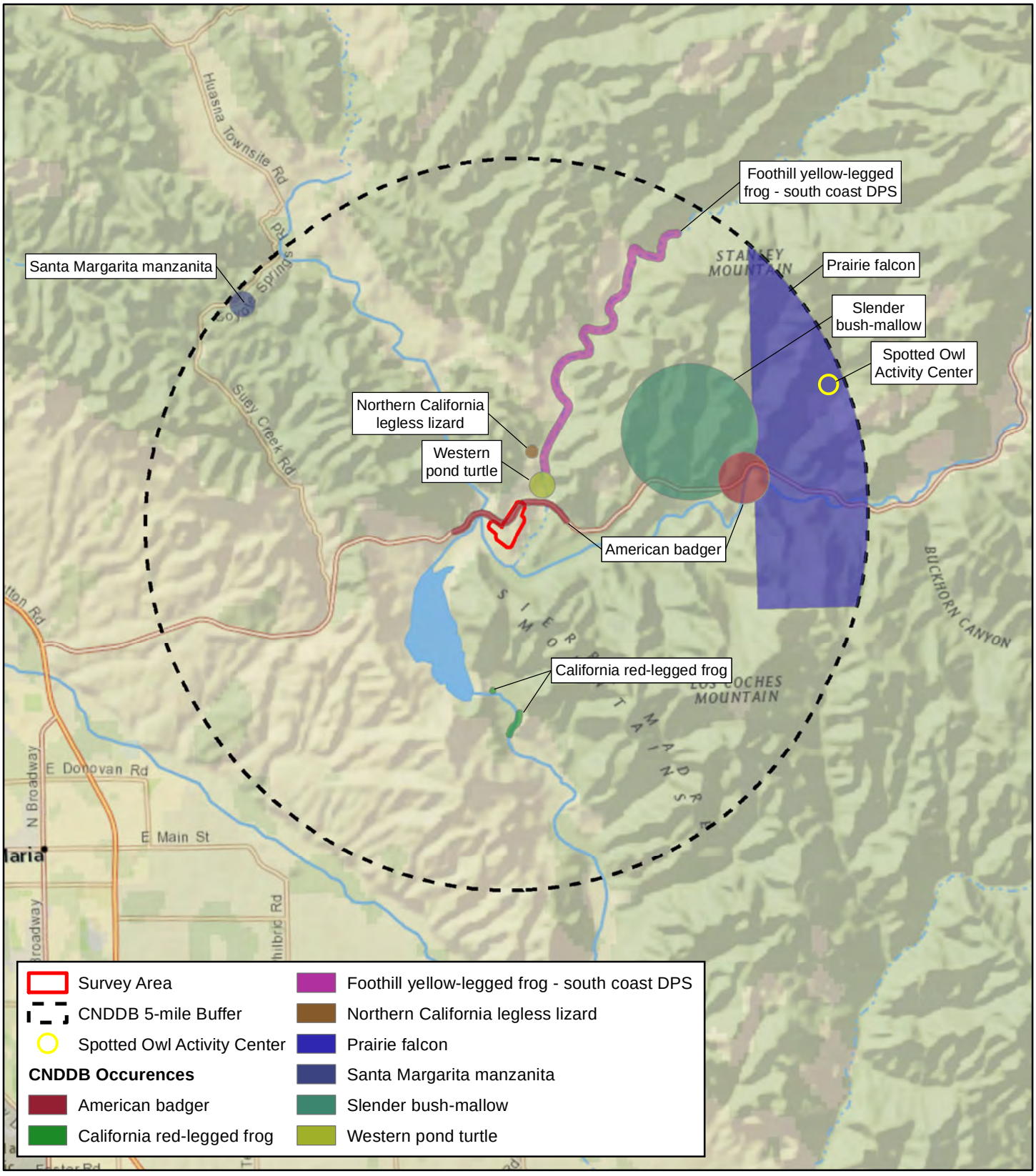
0 75 150 Meters

N

Scale 1:6,000
1 in = 500 feet

Figure 2: Vegetation Communities
Southern Corporation Twitchell Reservoir Debris Cleanup
San Luis Obispo County, California

KLEINFELDER
Bright People. Right Solutions.



Source: CDFW CNDDB (2023)

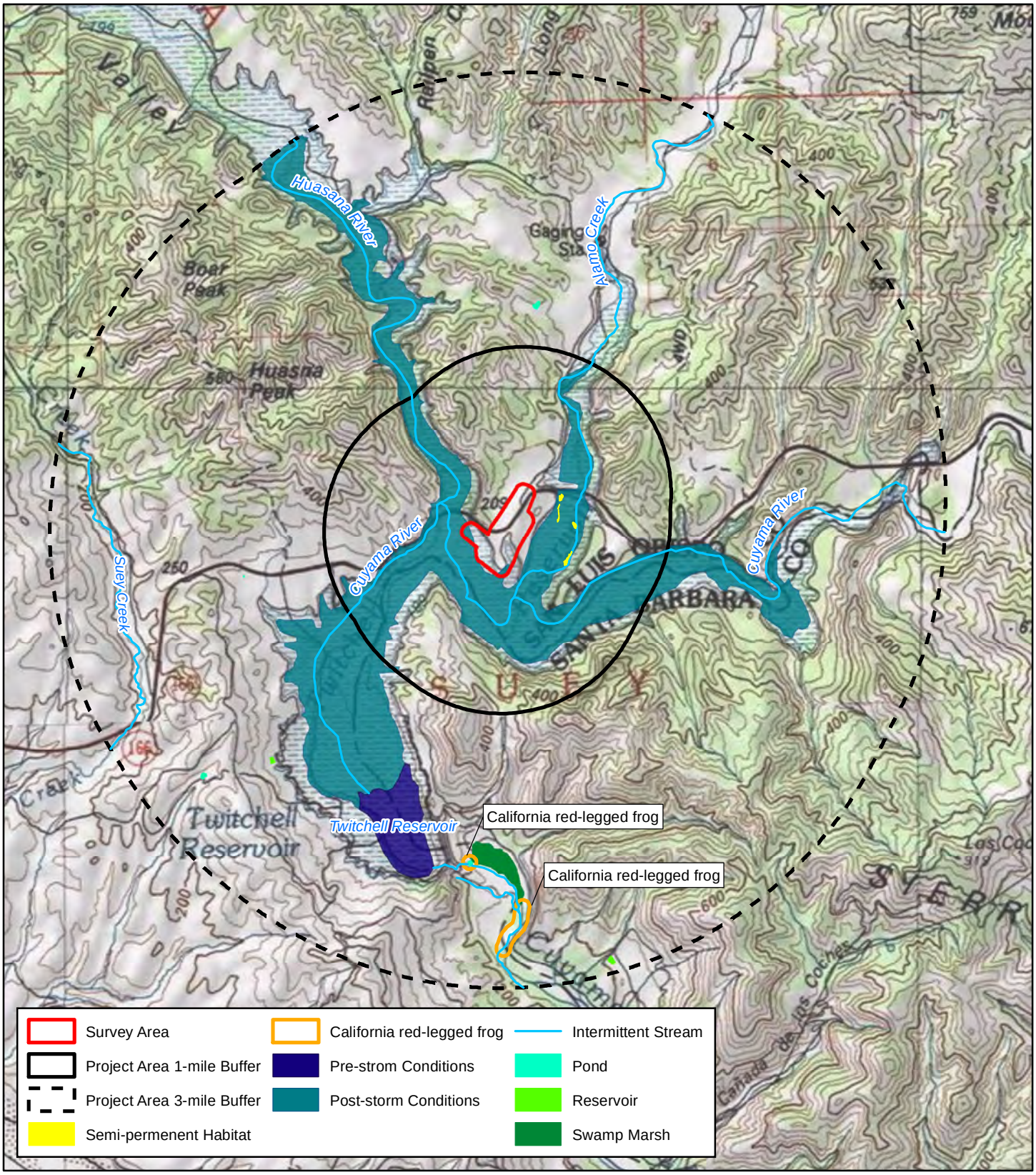
0 1 2 Mile
0 1.5 3 Kilometers

N

Scale 1:126,720

Figure 3: CNDDB Occurrences
Barnett Southern Corporation
Twitchell Reservoir Debris Cleanup
San Luis Obispo County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: HUASNA PEAK (1974) and TWITCHELL DAM (1982)
Legal Description: SUEY Land Grant
Source: National Hydrography Dataset (NHD), U.S. Geological Survey

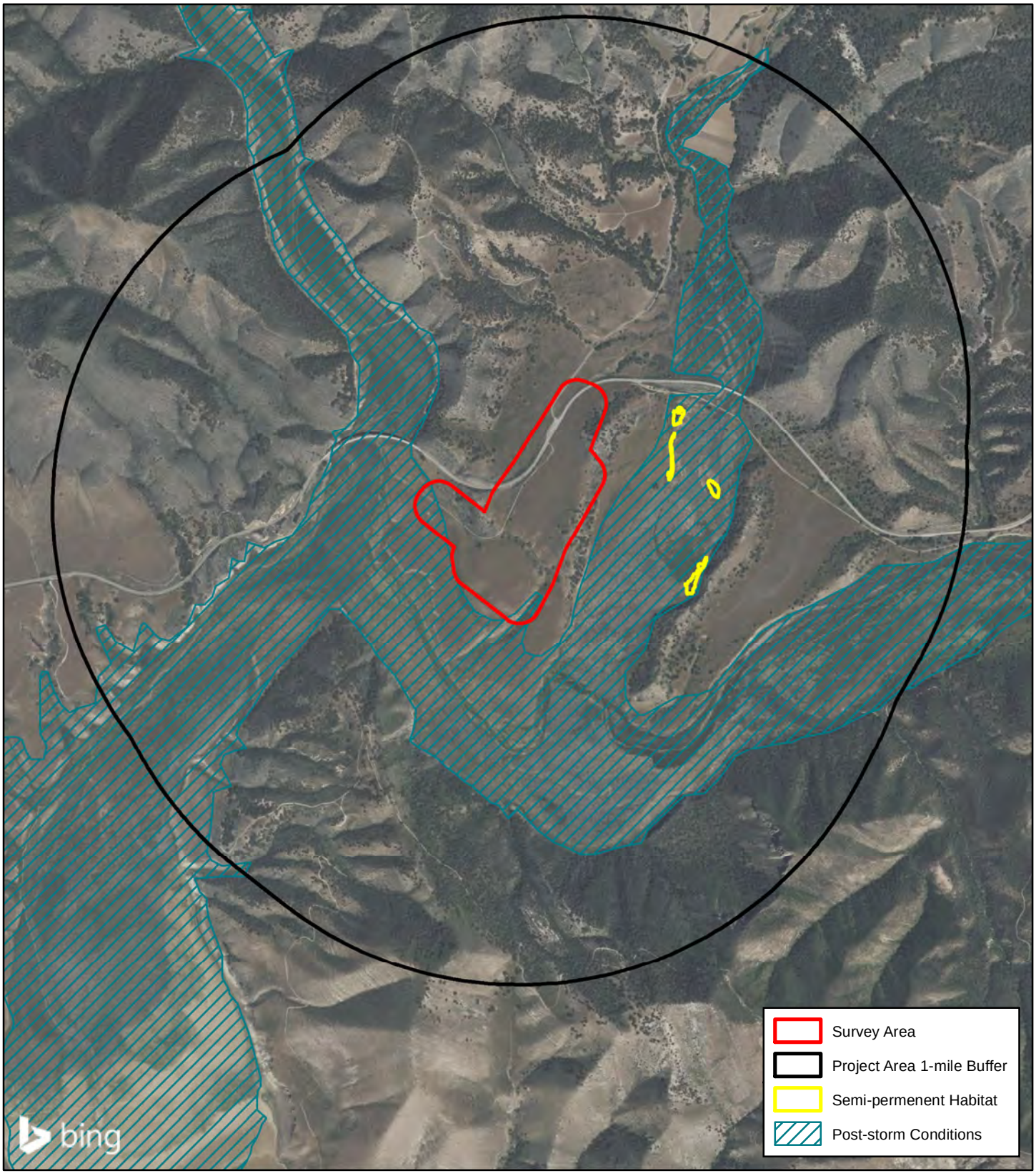
0 0.5 1 Mile
0 0.75 1.5 Kilometers

N

Scale 1:63,360

Figure 4: California Red-legged Frog Occurrence and Habitat
Barnett Southern Corporation
Twitchell Reservoir Debris Cleanup
San Luis Obispo County, California

KLEINFELDER
Bright People. Right Solutions.



Source: Bing Maps

0 1,000 2,000 Feet

0 300 600 Meters

N

Scale 1:24,000

Figure 5: California Red-legged Frog Habitat within 1.6-kilometers
Barnett Southern Corporation
Twitchell Reservoir Debris Cleanup
San Luis Obispo County, California

KLEINFELDER
Bright People. Right Solutions.

Attachment

B

Potential to Occur Tables

145 South Gray Street, Suite 201, Orcutt, CA 93455 **p |** 805.235.9363

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
PLANTS				
California jewelflower	*Caulanthus californicus*	FE / SE	Flats, slopes, generally in non-alkaline grassland in San Joaquin Valley and adjacent eastern slopes of Central Coast Range. Flowers: Feb-Apr. Elevation: 70-1000 m.	*Not Expected.* Suitable habitat not present.
Chorro Creek bog thistle	*Cirsium fontinales var. obispoense*	FE / SE	Serpentine seeps and streams of Outer South Coast Ranges. Flowers: Apr-Oct. Elevation: < 350 m.	*Not Expected.* Suitable habitat not present within Study Area.
Gambel's watercress	*Rorippa gambelli*	FE / ST	Marshes, streambanks, lake margins along Central Coast. Flowers: May-Aug. Elevation: < 350 m.	*Not Expected.* Suitable habitat not present within Study Area. Any previously suitable habitat within the reservoir itself is now flooded.
La graciosa thistle	*Cirsium loncholepis*	FE / ST	Found in a variety of habitats, but typically associated with marshes and dune wetlands along the Central Coast. Flowers: May-Aug. Elevation: < 50 m	*Not Expected.* Suitable habitat not present.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
Marsh sandwort	*Arenaria paludicola*	FE / SE	Wet meadows and marshes along the Central Coast. Flowers: May-Aug. Elevation: < 300 m.	*Not Expected.* Suitable habitat not present.
Pismo clarkia	*Clarkia speciosa ssp. immaculata*	FE / SR	Sandy coastal hills along Central Coast. Flowers: May-Jul. Elevation: < 100 m.	*Not Expected.* Suitable habitat not present.
Salt marsh bird's-beak	*Cordylanthus maritimum ssp. maritimum*	FE / SE	Coastal salt marsh. Flowers: May-Oct. Elevation < 10 m.	*Not Expected.* Suitable habitat not present.
Spreading navarretia	*Navarretia fossalis*	FT / -	Vernal pools and ditches, alkali soils. Flowers: Apr-Jun. Elevation: 30-1300 m.	*Not Expected.* Suitable habitat not present.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
WILDLIFE				
Arroyo toad	*Anaxyrus californicus*	FE / -	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash.	*Not Expected to Occur.* Suitable habitat not present within Study Area, but habitat may have been present in now flooded portions of Huasna River, Cuyama River, and Alamo Creek adjacent to the Study Area.
Foothill yellow-legged frog	*Rana boylii*	FP / -	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	*Not Expected to Occur.* Suitable habitat not present within Study Area and outside extant range.
California tiger salamander	*Ambystoma californiense*	FT / SE	Inhabits annual grassland habitat and the grassy understory of valley-foothill hardwood habitats. Breeds in vernal pools and other temporary waters features, generally absent of vertebrate predators.	*Not Expected to Occur.* Outside of the species known distribution.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
California red-legged frog	*Rana draytonii*	FT / -	Found in woodlands, shrublands, and grasslands near perennial and near-perennial streams and ponds.	*High Potential to Occur.* Study area encompasses suitable upland habitat surrounded by aquatic habitat (Huasna and Cuyama Rivers).
California Ridgway's rail	*Rallus obsoletus obsoletus*	FE / SE, SFP	Coastal saltmarsh swamps with dense vegetation.	*Not Expected.* Suitable habitat not present.
California condor	*Gymnogyps californianus*	FE / SE	Forages in open grasslands. Nests in chaparral and forested mountains.	*Low Potential to Occur*. Suitable foraging habitat is present. Species is not known to occur in area currently. However, population is recovering, and species is wide-ranging.
California least tern	*Sterna antillarum browni*	FE / SE, SFP	Forages along various aquatic habitats, including oceans, bays, estuaries, rivers, streams, marshes, ponds, and reservoirs. Nests in colonies primarily on sandy coastal beaches.	*Not Expected.* Suitable breeding habitat not present. Species not typically found far from coastline.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
California spotted owl	*Strix occidentalis occidentalis*	FP / -	Thickly wooded canyons, woodlands, and forests. Foundi n oak woodlands along the Central and South Coast regions of California	*Low Potential to Occur.* Suitable habitat not present. Elevation and tree cover too low at Study Area. However, species has large home ranges that can exceed 1000-acres. Incidental occurrences not outside the realm of possibility, particularly along eastern boundary of Study Area.
Least Bell's vireo	*Vireo bellii pusillus*	FE / SE	Occurs in a variety of habitats. Primarily found in willow-dominated riparian habitats, but also in oak woodlands, chaparral, and mesquite thickets near streams. Avoids open habitats, such as grasslands.	*Not Expected*. No suitable habitat.
Marbled Murrelet	*Brachyramphus marmoratus*	FT / SE	Forages at sea, often near shorelines. Nests in moist costal coniferous forests.	*Not Expected*. No suitable habitat.
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE / SE	Dense riparian vegetation with cottonwood, willow, and/or tamarisk. Standing water, streams, saturated soils.	*Not Expected.* Suitable riparian vegetation is not present within Study Area.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
Tricolored blackbird	*Agelaius tricolor*	- / ST	Colonial species using wetlands, marshes and agricultural fields for foraging and nesting.	*Not Expected*. Marginal isolated foraging habitat present within Study Area. Nesting habitat may have been present in now flooded portions of Twitchell Reservoir adjacent to the Study Area.
Western snowy plover	*Charadrius nivosus nivosus*	FT / -	Open, sandy habitats adjacent to water, including ocean beaches, and barren shores of inland saline lakes. May also use wastewater ponds, reservoir margins, and gravel bars in rivers.	*Not Expected.* No suitable habitat present.
Yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT / SE	Dense wooded habitats near water and other riparian areas. Locally found near dense willow thickets and cottonwood stands.	*Not Expected.* No suitable habitat present.
Giant kangaroo rat	*Dipodomys ingens*	FE / SE	Prefers gently sloped annual grasslands with sandy soils, but remaining populations also found in shrub habitats on a variety of soils and steeper slopes.	*Not Expected.* Not within the species' known distribution. No suitable habitat present.

Common Name	Scientific Name	Status Fed/State*	General Habitat Description	Potential to Occur
San Joaquin kit fox	*Vulpes macrotis mutica*	FE / ST	Open habitats, including deserts and grasslands.	*Not Expected.* Not within the species' known distribution. No suitable habitat present.
Steelhead	*Oncorhynchus mykiss irideus* population 9	FT / -	Freshwater rivers, streams, and lakes; estuaries; and oceans.	*Not Expected.* Study area is located upstream of Twitchell Dam.
Tidewater goby	*Eucyclogobius newberryi*	FE / -	Found in brackish lagoons, estuaries, and coastal marshes.	*Not Expected*. No suitable habitat present.
Monarch butterfly (overwintering population)	*Danaus plexippus*	FC / -	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	*Not Expected*. No suitable habitat present.
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT / -	Small ephemeral wetlands that fill seasonally with rainwater and devoid of fish	*Not Expected*. No suitable habitat present.

*****FT = Federal listed threatened species

FE = Federal listed endangered species

FC = Candidate for federal-listing as threatened or endangered.

FP = Proposed for federal-listing as threatened or endangered.

SE = State-listed endangered species

ST = State-listed threatened species

SR = State-listed rare species

SFP = California "Fully Protected" species

Attachment

C

Photograph Log

Photograph 1. View from east of gate, facing northwest across State Route 166.

Photograph 2. View from east of gate, facing southwest towards Study Area entrance.

Photograph 3. View from east of gate, facing southeast towards California sagebrush covered slope.

Photograph 4. View from east of gate, facing northeast across proposed laydown area.

Figure 5. View of proposed stockpile location, taken from base of California sagebrush covered slope, facing southeast.

Figure 6. View of proposed stockpile location, taken from base of California sagebrush covered slope, facing northwest.

Figure 7. View of scatted oaks along Study Area's eastern boundary, facing southeast.

Figure 8. View of proposed stockpile location, taken from southeast corner of northern stockpile location, facing northwest.

Figure 9. View of proposed stockpile location, taken from southeast corner of northern stockpile location, facing northeast towards California sagebrush covered slope.

Figure 10. View of access road, taken approximately half-way to southern proposed stockpile location, facing southwest.

Figure 11. View of access road, taken approximately half-way to southern proposed stockpile location, facing northeast.

Figure 12. Distant view of ephemeral stock pond, now inundated, with scattered blue oak trees. Taken from access road, facing southeast.

Figure 13. View of southern proposed stockpile location, taken from bend in access road, facing south towards Cuyama River.

Figure 14. View of southern proposed stockpile location, taken from bend in access road, facing east.

Figure 15. View of bend in access road, facing northeast.

Figure 16. View from southern proposed stockpile location, facing southwest towards access Cuyama River.

Figure 17. View from southern proposed stockpile location, facing northeast towards access road.

Figure 18. View from southern proposed stockpile location, facing northwest towards Twitchell Reservoir. Debris cleanup barge and Huasna Bridge in background.

Figure 19. Eastern end of ephemeral stock pond, bound by an artificial berm.

Figure 20. Water within ephemeral stock pond overflowing artificial berm.

Figure 21. Ephemeral stock pond, facing east.

Figure 22. View of California sagebrush, coyotebrush, and posion oak dominated slope adjacent to access road. Facing northeast.

Figure 23. View of access road, emergency trailer, and barge. Taken from bend in access road, facing northwest.

Figure 24. View of recently flooded docking area.

KLEINFELDER
Bright People. Right Solutions.

Attachment

D

USFWS iPac Results

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Luis Obispo and Santa Barbara counties, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958
FW8VenturaSection7@FWS.Gov

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Giant Kangaroo Rat Dipodomys ingens Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6051	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Clapper Rail Rallus longirostris obsoletus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo Vireo bellii pusillus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Yellow-billed Cuckoo Coccyzus americanus — Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/3911

Amphibians

NAME	STATUS

Arroyo (=arroyo Southwestern) Toad Anaxyrus californicus — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/3762

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Foothill Yellow-legged Frog Rana boylii — Proposed Endangered

No critical habitat has been designated for this species.

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Crustaceans

NAME	STATUS

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Jewelflower Caulanthus californicus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4599	Endangered
Gambel's Watercress Rorippa gambellii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4201	Endangered
Marsh Sandwort Arenaria paludicola Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Spreading Navarretia Navarretia fossalis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1334	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle *Haliaeetus leucocephalus* — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* — Breeds Apr 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

Bullock's Oriole *Icterus bullockii* — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull *Larus californicus* — Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher *Toxostoma redivivum* — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe *Aechmophorus clarkii* — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat *Geothlypis trichas sinuosa* — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle *Aquila chrysaetos* — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch *Carduelis lawrencei* — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Marbled Godwit *Limosa fedoa* — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker *Picoides nuttallii* — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse *Baeolophus inornatus* — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher *Contopus cooperi* — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher *Limnodromus griseus* — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird *Agelaius tricolor* — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe *aechmophorus occidentalis* — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the

probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

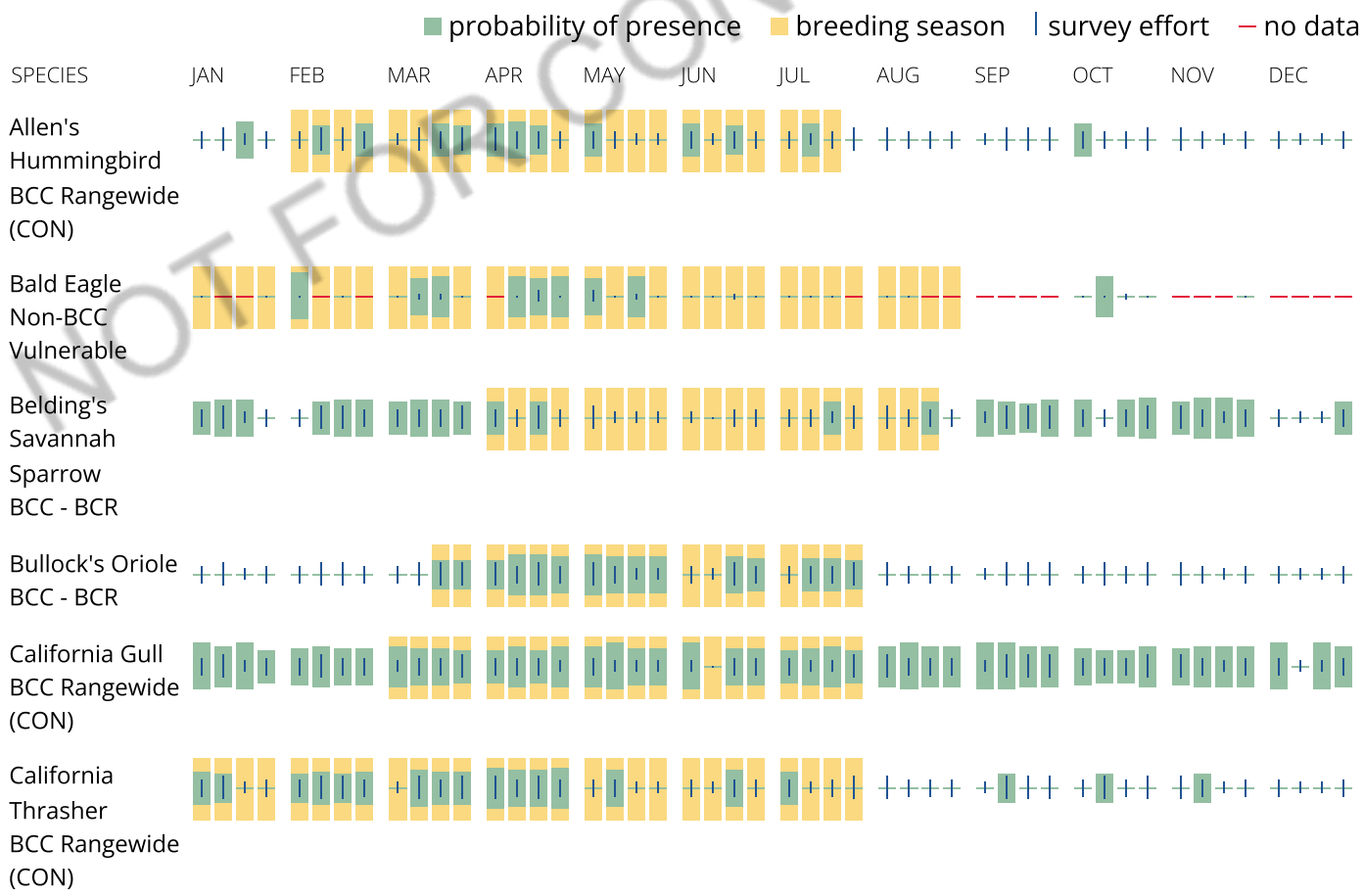
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

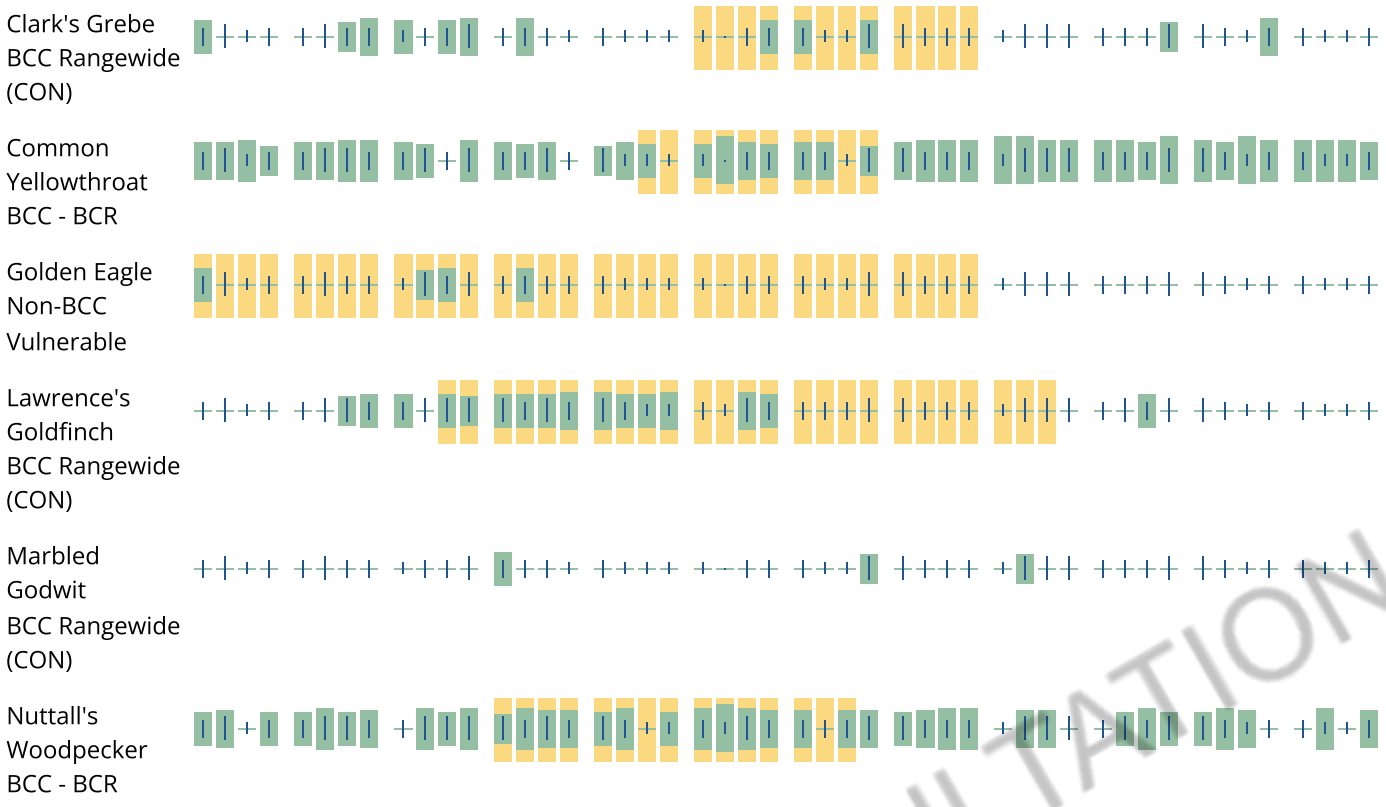
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

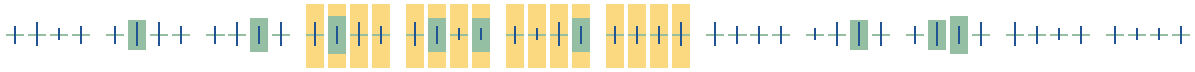
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Yellow-billed Magpie
BCC Rangewide (CON)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is

the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

KLEINFELDER
Bright People. Right Solutions.

Attachment

E

CNPS List

CNPS Rare Plant Inventory

California Native Plant Society

Search Results

0 matches found. Click on scientific name for details

Search Criteria: Fed List is one of [**FE:FT:FC**] **or** State List is one of [**CE:CT:CC**] , Quad is one of [**3512013**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
No data available in table												

Showing 0 to 0 of 0 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 28 February 2023].