

PROPOSED CENTRAL SAN SOLAR PANEL ARRAY PROJECT
 MITIGATED NEGATIVE DECLARATION UPDATES – JANUARY 2022

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact | Not Applicable |
|--|--------------------------------|---|------------------------------|-------------------------------------|--------------------------|
| III. BIOLOGICAL RESOURCES— | | | | | |
| Would the project: | | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and WildlifeGame or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Existing Conditions

The discussion below is summarized from the Biological Assessment¹ prepared by [Mr. Michael Marangio](#) and Special Status Species Assessment² co-authored by Mr. Gary Deghi with Huffman-Broadway Group, Inc., (HBG), and Dr. Mark Jennings with Rana Resources. The Biological Assessment and Special Status Species Assessment reports are supporting technical documents, which are not reproduced herein.

The biological assessment and subsequent supplemental special-status species assessment were performed to assess existing conditions, habitat and biological resources on a contiguous 19-acre area within the Lagiss parcel. This 19-acre area contains the project site. Pedestrian surveys were performed on January 21, 2020, and again on May 15, 2020.

Vegetation—In general, the project site has a cover of non-native grasslands consisting of typical grass species for grazing cattle and horses. The Lagiss parcel has been planted with introduced annual grasses to provide forage for grazing cattle. A couple other plants were observed in January 2020, including scattered invasive stinkweed (*Dittrichia graveolens*) and storksbill (*Erodium* sp.). To the east of the project site, but not on the project site, other observed vegetation includes California Buckeye (*Aesculus californica*) and oaks (*Quercus* spp.), located in a band growing on an east-facing slope upslope from Conco Road.

¹ Marangio, Michael, 2020. *Biological Assessment for Future Solar Panel Array in District-owned Area 6*, prepared for Central Contra Costa Sanitary District, April 30, 2020, (25 pp.).

² Huffman-Broadway Group, Inc., 2020. *Special Status Species Assessment for Central Contra Costa Sanitary District’s [Proposed] Solar Array, Contra Costa County, California*, prepared M. Papineau, June 4, 2020, (10 pp.).

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Wildlife—The project site has suitable habitat for a number of wildlife species such as Coyote (*Canis latrans*) and Meadowlark (*Sturnella neglecta*). Wildlife species that were observed included flocks of Brewers Blackbird (*Euphagus cyanocephalus*), Red-shouldered Hawk (*Buteo jamaicensis*), American Crow (*Corvus brachyrhynchos*), California Ground Squirrel (*Otospermophilus beecheyi*), and Black-tailed Hare (*Lepus californica*).

Species presence is influenced by other adjoining or nearby habitat that is located off the project site. The adjoining band of mature trees provides habitat nesting, roosting, or perching. During the January 2020 field survey, bird species including Bushtit (*Psaltiparus minimus*) were observed in the band of Buckeye and Oak trees.

In the nearby ponded area located northwest and north of the project site, still within the Lagiss parcel, the biologist in January 2020 observed Canada Geese (*Branta canadensis*), several Great Egrets (*Casmerodius albus*), Killdeer (*Charadrius vociferus*), and Pacific treefrog (*Pseudacris regilla*). Palustrine wetlands, which may include flowing waters over part of the year on an intermittent basis, are mapped north of the project site.³ Surface water is present for short periods during the growing season. By May 2020, much of the ponded area had dried up.

Farther north, across the BNSF railroad tracks is Pacheco Slough. Pacheco Slough is located off the Lagiss parcel at distance from the project site. Pedestrian survey of Pacheco Slough ~~of or~~ Pacheco Creek was not within the scope of the [initial Biological Assessment \(Marangio, 2020\) January 2020 or May 2020 surveys](#).

Wetlands and Other Waters of the U.S.—The project site has no wetlands or other waters of the U.S., termed generally as “jurisdictional waters.” Two nearby wetlands include: 0.29 acre wetland partly on the north end of the Lagiss parcel and 1.96 acres of freshwater emergent wetland located south of Austen Way (extended).

During the May 2020 field survey conducted by Mr. Gary Deghi (HBG) with Dr. Mark Jennings, much of the seasonal pond previously observed [north of the project site](#) in January 2020 had dried up. The ground in this area, which is located generally on the Lagiss parcel north of the project site, was observed to contain both brackish water plants and persistent emergent, although the source of seasonal ponding appears to be stormwater runoff.

The U.S. Fish and Wildlife Service (USFWS) Wetlands Mapper tool for the National Wetlands Inventory shows this area located adjacent to and north of the project site as “R4SBA,” where the “R” is the system notation for riverine wetlands. The system “R” means riverine, the subsystem “4” means intermittent, and the class “SB” means StreamBed. The water regime “A” means temporary flooded. Wetlands Mapper shows a channel-shaped wetland of 0.29 acre but seems to miss 1) the persistent emergent vegetation in part and nearby trees and 2) absence of a channel. Riverine systems are characterized by absence of such vegetation. Part of the observed wetland could be better classified as Palustrine. Palustrine wetlands may include flowing waters over part of the year on an intermittent basis. Surface water is present for short periods, but the water table lies well below the ground surface for most of the year.

According to USFWS, the palustrine ecosystem⁴ includes all non-tidal wetlands that are dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, plus all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 percent. Palustrine wetlands include freshwater wetlands and inland saline or alkaline wetlands protected from tidal influence by intervening

³ U.S. Fish and Wildlife Service (USFWS) Wetlands Mapper, a mapping tool for the National Wetlands Inventory. <https://www.fws.gov/wetlands/data/mapper.html>

⁴ USFWS, 2021. Classification of Wetlands and Deepwater Habitats of the United States: Palustrine System <https://www.fws.gov/wetlands/documents/classwet/palustri.htm>

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uplands. The palustrine ecosystem also includes wetlands lacking the above-listed vegetation, but with all of the following four characteristics:

- 1) small area (less than 20 acres);
- 2) absence of active wave-formed or bedrock shoreline features;
- 3) shallow water depth (less than 6.5 feet at low water); and,
- 4) low water salinity due to ocean-derived salts (less than 0.5 percent).

HBG's field review on May 15, 2020, indicates that vegetation in this off-site wetland area on the Lagiss parcel includes several patches of pickleweed (*Salicornia subterminalis*), brass buttons (*Cotula coronopifolia*), spear saltbush (*Atriplex patula*) and alkali heath (*Frankenia salina*). These plant species normally occur in brackish marshes with high salinity. Portions of the wetland support persistent emergents such as reeds, yet soils in other shallower portions subject to seasonal ponding have such high salt content that they still support pickleweed. Hence, there is an apparent contradiction.

HBG and Dr. Jennings examined the off-site area, historical topographic maps, and aerial photographic images. Based upon this information, Dr. Jennings interprets that the current condition of the wetland next to the project site was altered by historic filling for the Burlington Northern Santa Fe Railroad (BNSF) bed. Before the BNSF railroad bed was filled and elevated, the low-lying area on the northern end of the Lagiss parcel was part of a larger brackish marsh connected to Pacheco Slough. The area was subject to annual flooding by the waters of Pacheco Creek and Suisun Bay.

The existing BNSF (formerly, ATSF) railroad was not shown on an old USGS topographic map in 1898 (Vine Hill 7.5-minute series) but was shown in 1901 (Carquinez 15-minutes series). After the railroad track was placed *circa* 1899-1900, subsequent improvements to the ATSF railroad were made over time. By 1940 (Vine Hill 7.5-minute series), the rail alignment shown north of the Lagiss parcel was straighter, which is a sign of track realignment through the area. Filling to elevate the track and ballast created a barrier that cut off Pacheco Slough from in the remainder of the floodplain south of the tracks. Extensive fill was imported to elevate the ATSF railroad bed and ballast to approximately 10 feet above msl. This disconnected the former tidal marsh and left a palustrine wetland, with patches of remnant brackish marsh vegetation still evident today (Jennings, 2020).

The importance of this history is that the historical condition was brackish marsh unsuitable for California tiger salamander. While freshwater could provide suitable habitat for the protected California tiger salamander, brackish water is incompatible with its lifecycle (Jennings, 2020).

Special Status Species—Michael Marangio conducted a search of California Natural Diversity Data Base (CNDDDB), California Native Plant Society (CNPS) list, and USFWS records for potential occurrence for special status animals and plants and natural communities within 5 miles of the project site. The CNDDDB indicates a total of 27 special-status animal species and 25 special-status plant species, recorded as present in the region surrounding the project site. The USFWS list for the Vine Hill and Walnut Creek 7.5-minute quadrangles indicates thirteen (13) special-status animal species and one (1) special-status plant species, recorded as present in the quadrangles. The National Marine Fisheries Service (NMFS) list was not researched, because there is no aquatic habitat on the project site.

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Plants (see [Figure 3](#))

Special-status plant species or natural communities are not known to occur on the project site, but special-status plant species do occur in the vicinity. The project site does not represent high quality habitat for special-status plants. Special status plant species known to occur generally in the vicinity require habitat conditions that are not found at the project site.

Seven (7) native special status grassland plants including Bent-flowered fiddleneck, Big tarplant, Congdon's tarplant, Fragrant Fritillary, Contra Costa Goldfields, Mt. Diablo fairy lantern, and saline clover historically were found in grasslands in the region. These would not be expected to be present on the project site today, in view of the degree of ground disturbance caused by grazing. Other plants including Bolander's water hemlock, Mason's lilaeopsis, Delta mudwort, Slender-leaved pondweed, and Suisun marsh aster are associated with aquatic habitats that are not present on the project site.

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Birds (see Figure 4)

Local birds that are designated as special-status species include Tricolored Blackbird, Western Burrowing Owl, Saltmarsh common yellowthroat, and Song Sparrow. CNDDDB data indicate that Western burrowing owls have been observed [0.8 mile north of the project site near the Walnut Creek flood control channel in 1991](#), [1.6 miles south of the project site at Buchanan Field Airport in 2008](#), [and 4.4 miles northeast of the project site near Port Chicago Highway in 2016](#). ~~1-mile south, 1-mile north, and 2 miles west of the project site.~~ The project site appears to be [of high valuesuitable](#) for nesting western burrowing owls as evidenced by CNDDDB records, the presence of open grasslands, and observations of numerous ground squirrel burrows on the project site.

Burrowing owl (*Athene cunicularia*)

This small owl is a state Species of Special Concern and is currently listed by the USFWS as a National Bird of Conservation Concern. Like other raptors and birds in general, the western burrowing owl is protected under California Fish and Game Code 3503.5 and the federal Migratory Bird Treaty Act.

Burrowing owls (BUOW) typically are observed on the ground, at or near a burrow, or on elevated areas such as dirt mounds or fence posts that are used as perches. They use burrows that are dug by California ground squirrels (*Otospermophilus beecheyi*) for shelter and nesting. Nesting starts in early April and continues for 4 months or through July. Numerous ground squirrel burrows were observed scattered over some of the project site and additional surveyed area on January 31, 2020, and May 15, 2020. The May 2020 survey was during nesting season. However, evidence of nesting owls was not observed during the May 15, 2020.

CNDDDB data indicate that ~~w~~Western burrowing owls have been observed ~~1.64~~ mile south, ~~0.81~~ mile north, and ~~4.4 miles northeast 2 miles west~~ of the project site. The [19-acre survey areaDesignated Area](#) appears to be [suitableof high value](#) for nesting western burrowing owls as evidenced by CNDDDB records, the presence of open grasslands, and observations of numerous potential owl nesting sites in ground squirrel burrows.

California ground squirrel burrows are especially concentrated on the southwest-facing slope of the Lagiss parcel [downslope from the project site](#). These provide suitable nesting and wintering sites for the burrowing owls. The non-native grasslands throughout much of the area constitute suitable foraging habitats for the species. Neither field reconnaissance found burrowing owl to be present on the project site or adjoining area; therefore, it is not likely that burrowing owl is currently present. However, burrowing owls could take up residence at any time.

California Ridgeway's Rail (*Rallus longirostris obsoletus*)

California Ridgeway's Rail forage in marsh vegetation in and along creeks and mudflat edges. The project site does not contain suitable marsh habitat for this species.

Black Rail (*Laterallis jamaicensis*)

Black Rail forage in marsh vegetation in and along creeks and mudflat edges. The project site does not contain suitable marsh habitat for this species.

Tricolored blackbird (*Agelaius tricolor*)

Tricolored blackbirds breed and nest in reeds in freshwater marshes. The project site does not contain suitable habitat.

Song Sparrow (*Melospiza melodia maxillaris*)

Its habitat includes cattails, tules and other sedges, generally near the edges of sloughs. The project site does not contain suitable habitat.

Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)

Saltmarsh common yellowthroat nest in willows and need habitat located at the margins of marshes. The project site does not contain suitable habitat.

Bird Nesting

Raptors and other native North American birds that are protected under the Federal Migratory Bird Treaty Act (16U.S.C 703-7110)⁵ may nest on or adjacent to the project site. Disturbing nests during the nesting season potentially could result in abandonment and mortality of young.

Reptiles & Amphibians (see [Figure 5](#))

California tiger salamander (*Ambystoma californiense*)

The California tiger salamander (CTS) is listed as federal and state threatened. It is an amphibian that spends most of its time underground in burrows of ground squirrels and other small mammals. Adults are nocturnal, emerging from their underground retreats for only a few weeks each year. Following heavy winter rains (normally December-February) adults migrate to mate and lay their eggs in seasonal freshwater wetlands, slow moving streams, ponds (including stock ponds), and ephemeral vernal pools.

Dry land farming, which dates back to the 1890s on the Lagiss parcel, urban development, and construction of State Highway 4, preclude any potential CTS colonization movements in the vicinity of the project site. The final ruling in the Federal Register to list the CTS as a federally listed threatened species states as follows:

“...the California tiger salamander generally does not occur west of Interstate Highway 680, south of Interstate Highway 580, or north of State Highway 4 in Contra Costa or Alameda Counties.”

Western pond turtle (*Actinemys marmorata*)

Western pond turtle (WPT) is designated as both a federal and state species of special concern. Western Pond Turtle is a California native species of turtle. It is generally associated with fresh and brackish water aquatic habitats including rivers, ponds, and lakes, but it will leave water to search for food, locate water, or lay their eggs in the spring. Females create nests in sunny grassy areas adjacent to streams or ponds. In the vicinity, WPT are recorded as being sited several hundred feet north of the project site in the aquatic habitat of Pacheco Creek.

WPT is known to use upland habitats for estivation and nesting in areas of heavy duff,⁶ during the warm summer months and during wintertime when streams and rivers flood. Suitable upland habitat for estivation was not observed on the project site or adjoining land (Jennings, 2020).

WPT likely are present north of the BNSF railroad, in Pacheco Creek, where they would nest along the streambanks, but not on the project site. The BNSF railroad is a manmade barrier to movements of WPTs, which would have to climb a 10-foot tall berm and cross over two rails to reach the south side (Jennings, 2020).

Alameda Whipsnake (*Masticophis lateralis*)

A number of observations have been noted on the CNDDDB about 8.8 miles to the southeast (CNDDDB 2020). Extensive grasslands and absence of shrub habitat on the project site and in the surrounding area are not suitable for the Alameda Whipsnake.

California red-legged Frog (*Rana draytonii*)

The California red-legged frog (CRLF) is listed by the USFWS as Threatened and is classified by the CDFW as State Threatened and Federally Endangered. It breeds primarily in ponds, but also breeds in slow-moving streams, or in deep pools in intermittent streams. None of the required breeding habitat is found on the project site. Observations of CRLF are not noted on the CNDDDB to a distance of 5 miles from the project site.

⁵ No matter how common or how rare, all native North American birds are protected under the Migratory Bird Treaty Act.

⁶ Duff is a decomposing organic material layer on top of mineral soil, which is decomposed to the point that there is no identifiable whole organic material (*e.g.*, pine needles, grass, leaves, twigs, etc).

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Mammals (see Figure 6)

Special status mammalian species are not listed as being found near the project site.

Insects (see Figure 7)

Special status insect species are not listed as being found near the project site.

Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

A Special Status Species Assessment was conducted by a species expert for burrowing owl (BUOW), California tiger salamander (CTS), and Western pond turtle (WPT). For the two species having a remote possibility of occurring on the project site, this assessment determined that habitat within the project site is unsuitable for CTS and WPT. For BUOW, species presence was not apparent at the times of surveys in January and May 2020, but observed habitat is suitable and abundant especially [off-site](#) on the southwest-facing slope of the Lagiss parcel.

The project site appears to be [of high valuesuitable](#) for nesting burrowing owls as evidenced by CNDDDB records, the presence of open grasslands, and observations of numerous potential owl nesting sites in ground squirrel burrows. Burrowing owl can occupy a burrow for nesting or wintering. This means that burrowing owl could take up residence any time of the year. The best way to ascertain potential presence or absence of burrowing owl and the need for avoidance or mitigation, therefore, is by pre-construction survey, immediately before construction.

Mitigation measure III-1

BUOW avoidance surveys (also termed “pre-construction surveys”) shall be conducted no [moreless](#) than two (2) weeks prior to any ground disturbance. [In addition, perform three \(3\) supplemental BUOW surveys by a qualified biologist during the February 1 through August 31 nesting season immediately preceding project construction. The target of the surveys will be expanded to include adjacent land within approximately 500 feet of the project site or to the limit of Central San’s fee-owned land.](#)

-Multiple surveys may be necessary, based upon the schedule and work progress. BUOW avoidance surveys are recommended for ground mount installation, perimeter service road and access driveway construction, utility trench excavation, and equipment pads.

If installation of ground mounts for arrays are staggered over an elapsed time of one month or longer, it is recommended that separate surveys be performed for each array. Avoidance surveys shall be conducted by a qualified biologist following Burrowing Owl Survey Protocol methods. Based upon the pre-construction survey findings, if burrowing owls are found on or next to the project site, one of the following additional mitigation measures shall be implemented:

Mitigation measure III-2A

If burrowing owls are found to occupy an area of construction or an area proximate to the construction during September 1 to January 31 (non-breeding season):

In this event, occupied burrows and additional buffer zone shall be fenced per the CDFW Staff Report on Burrowing Owl Mitigation. The fenced area shall not be entered or disturbed. Work can proceed outside the fenced area.

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Only as a last resort, if avoidance is not possible/practical, passive relocation may be implemented in accordance with a Burrowing Owl Exclusion Plan⁷ submitted to and approved by CDFW. If passive relocation is recommended by the qualified biologist, the qualified biologist will implement passive relocation in accordance with the plan approved by CDFW. Work can proceed outside the restricted area and can resume inside the restricted area only after certification of BUOW relocation. BUOW relocation has attendant requirements for owl banding, long-term monitoring relative to success criteria, and reporting.

Mitigation measure III-2B

This is a contingency measure intended to address the situation in which the construction schedule is advanced or delayed and overlaps BUOW nesting season. If burrowing owls are found to occupy an area of construction or an area proximate to the construction during February 1 to August 31 (breeding season):

This event is not anticipated in view of the proposed project construction schedule, which is September 1 through January 31. However, necessary actions under this contingency are described below, in case an adjustment to the proposed construction schedule becomes necessary.

If burrowing owls are found, ground-disturbing activities will follow the Burrowing Owl Consortium's burrowing owl avoidance guidance.⁸ Avoid occupied burrows and additional buffer zone will be avoided, without disturbance during the entire nesting season. Occupied burrows and additional buffer zone will be fenced, posted, and avoided, without disturbance during the entire nesting season. A qualified biologist shall initially inspect the exclusion fence and posting and, thereafter, shall periodically inspect compliance. Based upon personal reconnaissance of the site, the qualified biologist shall certify when it is feasible to resume work at the end of the nesting season.

Mitigation measure III-3

If BUOW are found on the site, Central San will provide compensatory mitigation in the approximate amount of 8.2 acres of the Lagiss parcel or else 8.2 acres off site in a conservation bank. The quality of the compensatory mitigation land will be BUOW-foraging habitat if nesting is not observed. Otherwise, if nesting owls or indirect signs of nesting are observed during the surveys, the conservation land to be provided will have suitable nesting habitat.

For the "on-site" mitigation option, conservation land on the Lagiss parcel will be placed into a conservation easement for the benefit of BUOW. On-site mitigation land on the Lagiss parcel has habitat suitable for nesting BUOW. Long-term monitoring and conservatorship by a Conservator approved by CDFW would be funded by endowment paid by Central San. For optional off-site mitigation, mitigation credits would be purchased in a conservation bank as BUOW-foraging credits, functional equivalent CTS credits, BUOW-nesting credits or credits approved by CDFW as BUOW nesting habitat credits.

For the case of on-site mitigation (only), the Conservator would perform annual BUOW nesting season surveys to check for actual presence of BUOW. Findings and photographs would be communicated annually to CDFW. Special-status species or natural communities detected during the surveys would be reported to the CNDDDB. For the case of off-site mitigation, credit purchase would be reported and there would be no recurring monitoring or reporting actions.

Mitigation measure III-4

⁷ See CDFW's *Staff Report on Burrowing Owl Mitigation*, Appendix E, March 7, 2012.
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline>

⁸ See Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines*, April 1993, pp. 7-9.
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83842&inline>

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Potential collision- or electrocution-induced mortality on birds or bats caused by the proposed project is speculative. The tallest proposed structures include chain link fence topped with barbed wire. Tie-in power line would be underground. Overhead power lines and guy wires are not proposed. As a contingency measure, if bird or bat mortality is observed, a Bird and Bat Conservation Strategy (BBCS) will be developed and implemented. A qualified biologist will be retained to monitor bird and bat mortality for the initial start-up period of two years. If the null result is observed, monitoring will be reduced or phased out.

Residual effect: Less than significant with mitigation measures III-1 and III-2A ~~or~~ 2B incorporated.

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Mitigation monitoring and reporting

Verify compliance with required mitigation measures III-1, III-2A or III-2B and ensure their implementation by the System Operator. Conduct follow-up monitoring, and implement mid-course corrections, if necessary, to protect burrowing owls. Refer to CEQA Guidelines Section 15097 and the CEQA Guidelines for additional guidance on mitigation, monitoring and reporting. (Less than significant with mitigation incorporated)

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Wetlands and other waters of the U.S. are regulated by state and federal agencies and would be considered sensitive natural communities as defined by CEQA. Such wetlands and other waters of the U.S. are not present on the project site. With implementation of the recommended mitigation measures, erosion and potential sedimentation of the wetland could be avoided. (Less than significant impact with mitigation incorporated)

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The proposed project would erect solar PV panels and related equipment on an 8-acre uplands site without wetlands or vernal pools. Limited aggregate materials would be imported for construction of a permeable service road and access driveway from Blum Road. Drainage runoff volume and rate would remain nearly the same as existing. Potential impact to wetlands through direct removal, filling, or hydrological interruption, therefore, would not result from implementation of the proposed project. (No impact)

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The proposed project would be located on the Lagiss parcel, whose existing use is for cattle grazing. The proposed project would add solar PV panels and equipment, a perimeter service road, and perimeter security fence on 8.2 acres within the 48-acre Lagiss parcel. This would not interfere with the movement of significant native and resident wildlife populations. Native wildlife nursery sites were not found to be present on the project site in January and May 2020, so none would be impacted by the project. (No impact)

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

There is an existing stand of native trees including California buckeye and oaks along the eastern edge of the Lagiss parcel. The proposed project adjoins this off-site stand of tree; however, the proposed project does not propose and would not otherwise cause removal of the trees or result in loss of trees due to compaction over the root zone. (No Impact)

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The nearest adopted Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is the East Contra Costa County HCP/NCCP. The habitat inventory and conservation area within the influence of this plan is at substantial distance east of the project site. The inventory area does not continue west of Highway 242.

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The Lower Walnut Creek Restoration Project has received final approval by BCDC. The proposed project would not interfere with conservation goals of the LWC Restoration Project and would not physically interfere with construction of that restoration project. (No impact)

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|--|--------------------------------|---|-------------------------------------|-------------------------------------|--------------------------|
| XXI. MANDATORY FINDINGS OF SIGNIFICANT EFFECTS—Would the project: | | | | | |
| a) Have the potential to degrade substantially the quality of the environment, reduce substantially the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce substantially the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have impacts that would be individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

The proposed project would convert approximately 8.2 acres of land currently used for cattle grazing to a solar PV use. Records searches of the CNDDDB and NWIC cultural resource inventory were conducted to check for known resources recorded by others. Pedestrian surveys were performed on the project site to characterize habitat suitability for protected species of plant or animal and look for surficial evidence of cultural resources.

Certain species of birds were identified that potentially could be present seasonally, which were not actually observed during reconnaissance of the project site. In particular, the burrowing owl (*Athene cunicularia*) may be present seasonally. Burrowing owl for refugia and seasonal nesting use ground squirrel burrows, which were numerous on the project site [and off-site downslope area](#). Suitability of habitat on the project site for other rare, endangered or threatened species was considered and was determined not to be suitable.

Cultural resource sites have been recorded in the area. Historical resource scatters were identified during past investigation performed for SFPP petroleum product pipeline replacement. Pedestrian survey was performed on the project site to evaluate the potential presence or absence of archaeological or historical resources. Surficial evidence of cultural resources on the project site was not found. The proposed project, therefore, would not eliminate an important example of major periods of California history or prehistory.

Assessments of biological and cultural resources indicate that the proposed project would have less-than-significant effects upon biological and cultural resources with incorporation of the recommended mitigation measures. In particular, the proposed project would not substantially reduce the habitat of a fish or wildlife species, with incorporation of the recommended mitigation measure for burrowing owl. The proposed project would not cause a fish or wildlife population to drop below self-sustaining levels,

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threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. (Less-than-significant with mitigation incorporated)

*b) Have impacts that would be individually limited, but cumulatively considerable?
("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

The proposed project could have individually limited air quality, [biological](#), noise, vibration, and transportation effects during its construction. [Potential overlap of the construction of Central San's proposed solar PV project with construction of other local projects was considered. Potentially overlapping projects include the following:](#)

- [and the State Route 4/I-680 interchange project: also was considered.](#) Phase 3 improvements include approximately four miles of a new travel lane in each of the eastbound and westbound directions between Martinez and Concord. Construction of the State Route 4/I-680 interchange project's Phase 3 improvements began in 2020 and is expected to be completed in 2021. [Temporary nighttime closures in 2020 diverted westbound or eastbound traffic onto Imhoff Drive between Solano Way and Pacheco Boulevard. Additional closures with traffic diversions are not planned by Caltrans during 2021. Construction of Central San's proposed solar panel array project, therefore, is not expected to have a cumulative effect in conjunction with construction of Phase 3 of the State Route 4/I-680 interchange improvements project.](#)

~~As discussed herein, these effects could be caused by non-road, diesel-powered equipment, travel by workers and haul trucks during a relatively short period September 2021–February 2022. Individually, with mitigation incorporated, none of the individual construction effects evaluated herein would be significant.~~

- [Lower Walnut Creek Restoration Project:](#) Contra Costa County Flood Control and Water Conservation District (FCWCD) is lead agency, and the applicant is the State Lands Commission. [This project includes levee modification and levee breach along Walnut Creek to restore a more naturally-functioning wetlands. Phase 1 construction could begin as early as in May 2021, with subsequent seasonally-phased construction of subsequent phases after Phase 1, 2 and separate public access and amenities is expected during 2022–2023.⁹ Overlap of the construction of Central San's proposed solar PV project and FCWCD's LWS Restoration Project during 2022 is minor due to expected completion of the major earthwork during Phase 1 in 2021 September 2021–January 2022 was considered.](#)
- [Shortcut Pipeline \(SCPL\) Replacement:](#) The Shortcut Pipeline Replacement is a proposed project of the Contra Costa Water District, which entails replacement of approximately 2500 lineal feet of aging water pipe. The segment of proposed replacement spans Walnut Creek, north of the solar project site. Horizontal direction drilling would be used. The pipeline construction schedule potentially could overlap the construction of Central San's proposed solar PV project.

~~Emissions of criteria air pollutants and ozone precursors during construction of the proposed project are estimated to be offset by emissions avoided for powering the utility grid. Emissions of GHGs during construction of the proposed project also are estimated to be offset by GHG emissions avoided for powering the utility grid. Basic mitigation measures would be implemented to control dust on the project site, and anti-trackout measures would be designed and implemented to mitigate potential trackout of soil onto Blum Road and re-entrained road dust. Individual air quality effects of the Central San's proposed solar PV project, therefore, would be less than significant with mitigation measures incorporated.~~

⁹ [FCWCD, 2019. Final Initial Study/Notice of Intent to Adopt a Mitigated Negative Declaration \(MND\) for the Lower Walnut Creek Restoration Project, dated October 2019.](#)

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~~Final Initial Study/Notice of Intent to Adopt a Mitigated Negative Declaration (MND) for the Lower Walnut Creek Restoration Project, dated October 2019, addresses individual construction phase effects. The lead agency is Contra Costa County FCWCD, and the applicant is the State Lands Commission. The project was approved and the MND was adopted by FCWCD. FCWCD filed for an application for BCDC Permit to construct its project in October 2020.~~

~~San Francisco BCDC approved the staff recommendation to grant a permit for FCWCD's Lower Walnut Creek (LWC) Restoration Project on November 19, 2020. Phase 1 construction could begin as early as May 2021, with subsequent seasonally-phased construction of Phase 2 and separate public access and amenities during 2022-2023. Overlap of the construction of Central San's proposed solar PV project and FCWCD's LWS Restoration Project during September 2021-January 2022 was considered and potential cumulative effects of construction of the above-listed projects were evaluated.~~

~~Potential overlap of the construction of Central San's proposed solar PV project and the State Route 4/I-680 interchange project also was considered. Phase 3 improvements include approximately four miles of a new travel lane in each of the eastbound and westbound directions between Martinez and Concord. Construction of the State Route 4/I-680 interchange project's Phase 3 improvements began in 2020 and is expected to be completed in 2021. Temporary nighttime closures in 2020 diverted westbound or eastbound traffic onto Imhoff Drive between Solano Way and Pacheco Boulevard. Additional closures with traffic diversions are not planned by Caltrans during 2021. Construction of Central San's proposed solar panel array project, therefore, is not expected to have a cumulative effect in conjunction with construction of the State Route 4/I-680 interchange improvements project.~~

Biological Effect

None of the above-listed projects is expected to have an adverse effect on burrowing owl. Replacement of the SCPL is expected to disturb approximately 8.53 acres of annual grassland on a temporary basis for the construction staging. Replacement of the SCPL would not result in permanent loss of any grassland. In conjunction with the proposed project, temporary and permanent depletion of grassland acreage is minor compared to the acreage of grasslands in the area. The affected acreage of grassland is not cumulatively considerable. The expected effect of proposed temporary and permanent uses of grassland habitat on the burrowing owl's range and population is less-than-significant. (Less than significant)

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Cumulative GHGs

Emissions of GHGs during construction of the proposed project also are estimated to be offset by GHG emissions avoided for powering the utility grid. Individual air quality effects of the Central San's proposed solar PV project, therefore, would be less-than-significant with mitigation measures incorporated.

Construction of the LWC Restoration Project, for all phases combined, would emit approximately 1,500 MT CO_{2e}, which has been rounded from the reported 1,527 MT CO_{2e}. In combination with the Central San's proposed solar PV project, cumulative GHG emitted for construction of both projects would be approximately 1,700 MT CO_{2e} (rounded). Cumulative GHG emissions for the construction would be offset by avoided emissions, which for Central San's proposed solar PV project are estimated to be 1,300 MT CO_{2e}/year in the first full year of operation.

Operation of the LWC Restoration Project would emit approximately 50 MT CO_{2e}/year (rounded from the reported 52 MT CO_{2e}/year). Operations GHG emission were estimated for the LWC Restoration Project using CalEEMod and assumed operation of approximately 12 acres of city park. The two projects combined would emit less than 100 MT CO_{2e}/year, beginning in 2024. This is well below the BAAQMD's recommended threshold of significant effect, which is 1,100 MT CO_{2e}/year. (Less than significant)

Cumulative Criteria Air Pollutant and Ozone Precursors

Emissions of criteria air pollutants and ozone precursors during construction of the proposed project are estimated to be offset by emissions avoided for powering the utility grid. Individual air quality effects of the Central San's proposed solar PV project, therefore, would be less-than-significant with mitigation measures incorporated.

Phase 1 of the LWC Restoration Project ~~will not~~ ~~could~~ overlap with construction of Central San's proposed solar PV project during September 2022~~4~~-January 2023~~2~~.¹⁰ Phase 1 includes restoration of the North Reach and South Reach. The overall schedule for Phase 1 of the LWC Restoration, ~~May 2021 through January 2022, is longer than t precedes~~ the schedule for construction of Central San's proposed solar PV project.

To evaluate potential cumulative daily emissions, emissions during the period of overlapping construction were added. This enabled comparison of average daily emissions of the two construction projects with the BAAQMD's daily emission thresholds of significant effect.

Construction of ~~subsequent phases after Phase 1~~ ~~Phase 1~~ of the LWC Restoration Project could emit ~~0.8 lbs/day ROG (0.024 ton total)~~ ~~2.1 lbs/day ROG~~ and ~~10.1 lb/day NOx (0.304 ton total)~~ ~~35.5 lbs/day of NOx~~, averaged ~~60 over 105 work~~ days. The proposed solar PV project is estimated to emit 1.8 lbs/day ROG and 17.6 lbs/day NOx. Combined, cumulative average daily emissions would be approximately ~~2.64~~ lbs/day ROG and ~~2853~~ lbs/day NOx (rounded). Combined ozone precursor emissions, therefore, would be lower than the BAAQMD's threshold, which is 54 lbs/day for each. (Less than significant)

Cumulative PM Exhaust

Construction of ~~subsequent phases after~~ Phase 1 of the LWC Restoration Project could emit ~~0.75~~ ~~32~~ lbs/day PM₁₀ exhaust and ~~0.2974~~ lbs/day of PM_{2.5} exhaust, averaged over ~~60~~ ~~105~~ workdays. The proposed solar PV project is estimated to emit 1.32 lbs/day PM₁₀ exhaust and 0.88 lbs/day PM_{2.5} exhaust. Combined, cumulative average daily emissions from the two construction projects would be approximately ~~1.62~~ lbs/day PM₁₀ (exhaust) and ~~1.26~~ lbs/day PM_{2.5} (exhaust), both being rounded. Combined emissions, therefore, would be lower than the BAAQMD's thresholds, which are 82 lbs/day for PM₁₀ exhaust and 54 lbs/day for PM_{2.5} exhaust. (Less than significant)

¹⁰ Appendix A of Final Initial Study/Notice of Intent to Adopt a MND for the LWC Restoration Project (Contra Costa County FCWCD, October 2019), lists construction tasks 1–22 with a timeline. Tasks not having potential overlap with Central San's construction of the proposed solar PV project were identified as follows: 2, 4, 7–9, 14, and 16–22.

Cumulative PM (Dust)

Phase 1 of the LWC Restoration Project ~~Both projects~~ would emit fugitive PM especially during earthwork on dry upland soil. The BAAQMD does not recommend a threshold of significant effect for fugitive dust. Instead, BAAQMD has adopted basic mitigation measures to minimize fugitive PM and anti-trackout Regulation 6, Rule 6. Compliance with the basic mitigation measures (see Table 8) and Rule 6 is adequate to minimize the potential adverse effects of fugitive PM to less-than-significant effects.

Unmitigated, construction of subsequent phases after Phase 1 of the LWC Restoration Project in combination with construction of the proposed solar PV project could emit fugitive PM₁₀ in the average daily amount of approximately 10 lbs/day (rounded). This estimate is for both on-site equipment and earthwork and off-site haul and worker travel, without basic mitigation measures (Table 8). – Basic mitigation measures would be implemented to control dust on the project site, and anti-trackout measures would be designed and implemented to mitigate potential trackout of soil onto Blum Road and re-entrained road dust. With basic mitigation measures, the combined PM dust emissions of the two construction projects would be reduced by 50-55 percent, to approximately 5 lbs/day. (Less than significant with mitigation incorporated)

Cumulative Noise

Both projects would generate noise during construction. Neither project would entail impulsive noise, such as that from pile driving, or other special noise from unusually noisy construction equipment or processes (*e.g.*, hoe pack, hoe ram, pavement breaker, hydraulic hammer, jackhammer, blasting).

The shortest separation distance between the South Reach of the LWC and Central San's proposed solar PV project is approximately 0.44 mile. Over this 2,600-foot distance, construction equipment noise originating in the South Reach would attenuate by at least –34 dBA. Separation distances between the South Reach and the nearest sensitive receivers are even longer—3,500 feet to Blum Road/Explorer Way residences and 3,900 feet to Blum Road/Austen Way residences. Over these longer distances, construction equipment noise originating in the South Reach would attenuate by at least –37 to –39 dBA.

During less noisy construction on Central San's proposed solar PV project site, noise from the more distant South Reach construction site could contribute cumulatively at sensitive receivers. A low to moderate construction noise scenario is defined here as construction noise level in the range 73–77 dBA on Central San's proposed solar PV project site and a noise level of 88 dBA¹¹ in the South Reach, both at 50 feet from working equipment. Noise at 88 dBA in the South Reach would drop by –37 to –39 dBA, to 51 dBA residential receivers near Blum Road/Explorer Way and to 49 dBA at residential receivers along Austen Way. Construction noise level in the range 73–77 dBA on Central San's proposed solar PV project site would drop to 51–55 dBA at receivers near Blum Road/Explorer Way and to 47–51 dBA at receivers along Austen Way. Cumulative equipment noise from both construction sites combined would be in the range 51–56 dBA at the nearest residential receivers. Cumulative construction noise levels would be 53–56 dBA at receivers near Blum Road/Explorer Way and 51–53 dBA at receivers along Austen Way.

During periods of low to moderate construction noise on Central San's proposed solar PV project site, concurrent construction of the two projects could add up to +2 dBA to construction noise levels and up to +3 dBA to ambient daytime noise levels, both at the receivers near Blum Road/Explorer Way and along Austen Way. Cumulative ambient noise levels would remain near the existing daytime ambient L_{eq}, which is approximately 54–55 dBA. Under a low to moderate construction noise scenario, the two construction projects would not add more than approximately +3 dBA to the

¹¹ Table 4 presents maximum noise levels at a distance of 50 feet from common construction equipment. Other lower noise levels are possible when equipment is not under typical load or is idling.

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existing daytime ambient L_{eq} . Cumulative noise levels at the property lines would not approach or exceed 75 dBA. Under a low to moderate construction noise scenario, therefore, the projects do not have a significant cumulative effect.

During noisier construction on Central San's proposed solar PV project site, noise from the closer solar PV construction site would dominate. A high construction noise scenario is defined here as construction noise level in the range 78–82 dBA on Central San's proposed solar PV project site and construction noise level of 80 dBA in the South Reach, both at 50 feet from working equipment. Construction noise levels from equipment working on the two sites would combine as 52–60 dBA at the nearest residential receivers. Combined construction noise levels would be 56–60 dBA at the nearest receivers at Blum Road/Explorer Way and 52-56 dBA at receivers along Austen Way.

During periods of high construction noise on Central San's proposed solar PV project site, combined construction noise from the two projects would add less than +0.5 dBA to the construction noise level from only the proposed solar PV project. High construction noise on Central San's proposed solar PV project site could add up to +7 dBA to the existing daytime ambient L_{eq} . Cumulative noise levels at the property lines would not approach or exceed 75 dBA; therefore, the projects under a high construction noise scenario do not have a significant cumulative effect.

For the low to moderate construction noise scenario, at the nearest residential receivers, concurrent or overlapping construction of the LWC Restoration Project and proposed solar PV project could add up to +3 dBA to the existing daytime L_{eq} , which is approximately 54–55 dBA. For the high construction noise scenario, at the nearest residential receivers, concurrent or overlapping construction of the two projects could add to the existing daytime ambient L_{eq} up to +7 dBA. The former is a potential cumulative effect resulting from concurrent or overlapping constructing of both projects. The latter is a potential individual effect resulting from construction of the proposed solar PV project. It is an "individual" effect because it would accrue without any overlap with construction in the South Reach of LWC. At the property lines of the nearest residences, cumulative noise from mobile non-road construction equipment and non-construction sources would not approach or exceed 75 dBA, which is the applicable threshold of significant effect. Therefore, the potential cumulative effect construction noise is be less-than-significant. (Less than significant)

Cumulative Groundborne Vibration

Because vibration attenuates rapidly with increasing distance from the source of vibration, there is rarely a cumulative increase in ground vibration from the presence of multiple trucks or multiple pieces of non-road construction equipment. In general, more trucks or more equipment result in more episodes or more vibration peaks over a given window of time, but do result in higher amplitudes.¹²

Worker and haul traffic for construction in the South Reach of the LWC Restoration Project would be routed differently on Imhoff Drive and Conco Road. Therefore, there would not be a cumulative vibration effect on the northern segment of Blum Road, north of Imhoff Drive. (No impact)

c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

A variety of potential effects on people were considered, including exposure to noise or vibration; exposure to particulate matter (PM); exposure to electromagnetic fields (EMF); inadequate emergency response or emergency access; and, added risk of flooding, for example. Effects were determined to be less-than-significant or less-than-significant with implementation of the recommend mitigation measures. (Less-than significant)

¹² Caltrans, 2020. *Transportation and Construction Vibration Guidance Manual*, Final Report, CT-HEANP-RT-20-365.01.01, April 2020, 190 pp.).