

3.3 BIOLOGICAL RESOURCES

This section addresses common and sensitive biological resources that could be affected by implementation of the New Zoo at Elk Grove Project (Project). Data reviewed in preparation of this analysis included:

- ▶ Results of California Natural Diversity Database (CNDDDB) record search of the Elk Grove, Carmichael, Galt, Sacramento West, Florin, Courtland, Bruceville, Sacramento East, and Clarksburg U.S. Geological Survey (USGS) 7.5-minute quadrangles (CNDDDB 2023);
- ▶ Results of California Native Plant Society (CNPS), Inventory of Rare Plants search of the Elk Grove, Carmichael, Galt, Sacramento West, Florin, Courtland, Bruceville, Sacramento East, and Clarksburg Dam USGS 7.5-minute quadrangles (CNPS 2023);
- ▶ A list of species obtained from U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, that are known or expected to be on or near the Project location or could be affected by projects in this location (USFWS 2023);
- ▶ Results of a biological survey conducted by Dokken Engineering (Dokken) biologists Scott Salembier and Vincent Chevreuil on January 26, 2022 (Dokken 2022);
- ▶ And aerial imagery of the Project site and region.

In addition, a biologist from Ascent Environmental conducted a reconnaissance-level survey of the Project site on July 7, 2023, to evaluate biological resource conditions.

The City of Elk Grove General Plan Update EIR (2019), 2023 City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled Standards [VMT] Subsequent EIR (State Clearinghouse No. 2022020463), and previously prepared environmental documents that evaluated the Project site or surrounding areas were also reviewed, including:

- ▶ Southeast Policy Area Strategic Plan (adopted June 2014 – referred to as Southeast Policy Area in the General Plan) and EIR (State Clearinghouse 2013042054).
- ▶ Laguna Ridge Specific Plan (adopted June 2004 and amended December 2019 – referred to as the Laguna Ridge Policy Area in the General Plan) and EIR (State Clearinghouse 2000082139).
- ▶ Lent Ranch Marketplace Special Planning Area (various Districts approved June 2001, June 2008, December 2008, and October 2014 – referred to as the Lent Ranch Policy Area in the General Plan) and EIR (State Clearinghouse 1997122002).
- ▶ Sterling Meadows Tentative Subdivision Map (approved May 2008) and EIR (State Clearinghouse 1999122067), referred to as the SouthPoint Policy Area in the General Plan.

Comments were received from the California Department of Fish and Wildlife (CDFW), in response to the notice of preparation regarding a complete assessment of flora and fauna; assessment of direct, indirect, and cumulative impacts to biological resources; minimization and avoidance mitigation for all impacts; impacts to Swainson's hawk; identification of aquatic features on the Project site; and recommendations of a nesting bird avoidance strategy and consideration of available planting. These issues are considered below.

3.3.1 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to

ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Clean Water Act

Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1344) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Many surface waters and wetlands in California meet the criteria for waters of the United States. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold State water quality standards.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities.” A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from CDFW is required for projects that could result in the “take” of a plant or animal species that is listed by the State as threatened or endangered. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species but does not include “harm” or “harass,” as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of State-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

California Fish and Game Code Sections 3503 and 3503.5—Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Fully Protected Species under the California Fish and Game Code

The regulation of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take, except under specific conditions for the following kinds of projects:

- ▶ A maintenance, repair, or improvement project to the State Water Project, including existing infrastructure, undertaken by the Department of Water Resources.
- ▶ A maintenance, repair, or improvement project to critical regional or local water agency infrastructure.
- ▶ A transportation project, including any associated habitat connectivity and wildlife crossing project, undertaken by a State, regional, or local agency, that does not increase highway or street capacity for automobile or truck travel.
- ▶ A wind project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California-based balancing authority.
- ▶ A solar photovoltaic project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California-based balancing authority.

Lake and Streambed Alteration - California Fish and Game Code Section 1602

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1600 et seq. of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake designated by CDFW without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity. The removal or treatment of vegetation from the bed or banks of lake and stream features is considered a substantial change and is regulated under Section 1602. CDFW's jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.), waters of the State fall under the jurisdiction of the appropriate RWQCB. RWQCBs must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The Regional Water Quality Control Boards jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the State." "Waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The Regional Water Quality Control Board has the discretion to take jurisdiction over areas not federally protected under Section 401 of the CWA provided they meet the definition of waters of the State. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than does the CWA. In addition, waters of the State cover a broader range of aquatic habitats than the CWA, including ephemeral streams and wetlands and isolated wetlands. Actions that affect waters of the State, including wetlands, must meet the Regional Water Quality Control Board's waste discharge requirements.

LOCAL

City of Elk Grove General Plan Policies

The City of Elk Grove General Plan Update was adopted in January 2019 and the General Plan Amendments were adopted in December 2023. The City of Elk Grove General Plan Community and Resource Protection chapter (City of Elk Grove 2019) includes policies and actions aimed at reducing development impacts on native and nonnative habitats, plants, and animals. The Community and Resource Protection element ensures careful management and protection of the City's natural heritage. The following General Plan policies are applicable to the Project:

- ▶ **Policy NR-1-2:** Preserve and enhance natural areas that serve, or may potentially serve, as habitat for special-status species. Where preservation is not possible, require that appropriate mitigation be included in the project.

- **Standard NR-1.2a:** Require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain special-status plant and animal species.
- **Standard NR-1.2b:** Require development projects to retain movement corridor(s) adequate (both in size and in habitat quality) to allow for the continued wildlife use based on the species anticipated in the corridor.
- ▶ **Policy NR-1-3:** Support the establishment of multipurpose open space areas to address a variety of needs, including but not limited to maintenance of agricultural uses, wildlife habitat, recreational open space, aesthetic benefits, and flood control. To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the City, and provide an open space resource close to the urbanized areas of Elk Grove.
- ▶ **Policy NR-1-4:** Avoid impacts to wetlands, vernal pools, marshland, and riparian (streamside) areas unless shown to be technically infeasible. Ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, restoration onsite or through creation of riparian habitat corridors, or purchase of credits from a qualified mitigation bank.
- ▶ **Policy NR 1-5:** Recognize the value of naturally vegetated stream corridors, commensurate with flood control and public desire for open space, to assist in removal of pollutants, provide native and endangered species habitat, and provide community amenities.
- ▶ **Policy NR-1-6:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.
 - **Standard NR 1-6a:** Stream crossings shall be minimized and be aesthetically compatible with the natural appearance of the stream channel. The use of bridges and other stream crossings with natural (unpaved) bottoms shall be encouraged to minimize impacts to natural habitat.
 - **Standard NR 1-6b:** Uses in the stream corridors shall be limited to recreation and agricultural uses compatible with resource protection and flood control measures. Roads, parking, and associated fill slopes shall be located outside of the stream corridor, except at stream crossings.
 - **Standard NR 1-6c:** Open space lands within a stream corridor shall be required to be retained as open space as a condition of development approval for projects that include a stream corridor. Unencumbered maintenance access to the stream shall be provided.
 - **Standard NR 1-6d:** To the extent possible, retain natural drainage courses in all cases where preservation of natural drainage is physically feasible and consistent with the need to provide flood protection. Where a stream channel is to be created, such man-made channels shall be designed and maintained such that they attain functional and aesthetic attributes comparable to natural channels.

City of Elk Grove Municipal Code Chapter 19.12 Tree Preservation and Protection

Chapter 19.12 of the Elk Grove Municipal Code (EGMC), Tree Preservation and Protection, strives to protect and preserve trees of local importance, including coast live oak, valley oak, blue oak, interior live oak, oracle oak, California sycamore, and California black walnut with a single trunk 6 inches diameter at breast height (dbh) or greater or multiple trunks with a combined dbh of 6 inches or greater. EGMC Chapter 19.12 requires mitigation for the removal of trees of local importance with dimensions described above, trees that have been selected for preservation, all portions of adjacent off-site native trees that have driplines that extend onto a project site, and all off-site native trees that may be impacted by utility installation and/or improvements associated with a project. Current policies require that every inch lost will be mitigated by an inch planted or equivalent credit obtained from a tree mitigation bank.

City of Elk Grove Municipal Code Chapter 16.130: Swainson's Hawk Impact Mitigation Fees

EGMC Chapter 16.130 addresses impacts from typical urban development projects and requires mitigation for the loss of Swainson's hawk habitat at a 1:1 ratio or other ratio that may be approved through future revisions to Chapter 16.130. Mitigation can be achieved, if available, through purchase of City-owned credits for projects of 40 acres or

less. For projects larger than 40 acres, options for achieving mitigation through the code include the direct transfer to the City of a Swainson's hawk habitat conservation easement along with an easement monitoring endowment, the purchase of credits at a CDFW-approved conservation bank, or "other means" of mitigating significant impacts on Swainson's hawk foraging habitat deemed appropriate by the City Council. If mitigated through a conservation easement, the easement area must be surveyed to determine if it contains foraging habitat suitable for Swainson's hawk and similar in habitat quality to habitat lost.

3.3.2 Environmental Setting

The Project site is located at the northwest intersection of Kammerer Road and Lotz Parkway in the City of Elk Grove. The site falls within the U.S. Geological Survey 7.5-minute quadrangles Florin and Bruceville. The Project site is an irrigated pasture surrounded by single-family residences to the east, agriculture to the south and west, and active construction of a new residential subdivision to the north. The Project site is heavily modified from its natural habitat condition and is routinely disturbed by human activity. It is currently and has historically been used for cattle grazing from April to December, and the vegetation is mowed and bailed for hay periodically.

VEGETATION AND WILDLIFE

Based on the reconnaissance site survey conducted by Ascent biologist Tammie Beyerl on July 7, 2023, habitat within the Project site consists primarily of irrigated pasture comprised of a mixture of native and nonnative perennial grasses and forbs. Characteristic plant species observed in the irrigated pasture include rye grass (*Festuca perennis*), Kentucky blue grass (*Poa pratensis*), dallisgrass (*Paspalum dilatatum*), bird's-foot trefoil (*Lotus corniculatus*), red clover (*Trifolium pratense*), white clover (*T. repens*), and curly dock (*Rumex crispus*). There are scattered patches of Himalayan blackberry (*Rubus armeniacus*) in the southern portion of the Project site. Other shrubs are not present.

Along the fence lines on all sides of the Project site, beyond the irrigated pasture boundaries, there is a narrow strip of vegetation dominated by weedy, nonnative annual grasses and forbs including soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), rose clover (*Trifolium hirtum*), and shortpod mustard (*Hirschfeldia incana*). The Shed C Channel, an excavated agricultural drainage channel, runs along the northern boundary of the Project site and irrigation ditches that deliver water from Shed C Channel to the pastures run along the perimeter of each pasture. Sparse cover (less than 5 percent) of nonnative hydrophytes, including tall flatsedge (*Cyperus eragrostis*), narrowleaf plantain (*Plantago lanceolata*), and dallisgrass, is sporadically present on the edges of the ditches; however, they are mostly unvegetated. Two small Chinese pistache (*Pistacia chinensis*) trees are present along the western fence line, and two larger trees, a cottonwood (*Populus* sp.) and a pine (*Pinus* sp.), are present in the southeast corner of the site where there is a dilapidated mobile home, livestock pens, and wooden frames of other structures. No other trees are present on the site and there are very few trees in the surrounding area. Small rodent burrows were found throughout the irrigated pasture and some larger, and ground squirrel-sized burrows were observed within an earthen berm that parallels the south side of the Shed C Channel. Vegetation on the earthen berm is dominated by dense cover of blessed milkthistle (*Silybum marianum*), but there are barren areas on the berm as well.

Irrigated pastures tend to support large rodent populations and therefore provide good foraging habitat for Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and more common raptors, such as great horned owl (*Bubo virginianus*) and red-tailed hawk (*Buteo jamaicensis*). Small rodent burrows were found throughout the irrigated pastures and ground squirrel burrows were observed within an earthen berm that parallels the south side of the Shed C Channel. During a 2022 biological survey by Dokken Engineering, burrowing owl (*Athene cunicularia*) and white-tailed kite were observed within the Project site (Dokken 2022). Additional wildlife species observed during the 2022 Dokken surveys and the 2023 Ascent biological reconnaissance survey include, American crow (*Corvus brachyrhynchos*), Say's phoebe (*Sayornis saya*), black phoebe (*Sayornis nigricans*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferus*), Lincoln's sparrow (*Melospiza lincolni*), and ground squirrel (*Otospermophilus beecheyi*), all of which are common species to the Elk Grove area. In general, irrigated pastures, especially those surrounded by suburban development, like the Project site, do not provide high-quality habitat for

most wildlife species because of an overall lack of native vegetation and natural communities, and a high level of noise and visual disturbance from human activities (e.g., traffic, anthropomorphic noise and light pollution). Additionally, the irrigated pasture is periodically mowed for hay.

SENSITIVE BIOLOGICAL RESOURCES

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, State, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- ▶ officially listed by California or the federal government as endangered, threatened, or rare;
- ▶ a candidate for State or federal listing as endangered, threatened, or rare;
- ▶ taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- ▶ species identified by CDFW as Species of Special Concern;
- ▶ species listed as Fully Protected under the California Fish and Game Code;
- ▶ species afforded protection under local planning documents; and
- ▶ taxa considered by the CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1 or 2, defined as follows:
 - CRPR 1A - Plants presumed to be extinct in California;
 - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A– Plants presumed to be extinct in California, but more common elsewhere;
 - CRPR 2B - Plants that are rare, threatened, or endangered in California but more common elsewhere;

The term “California species of special concern” is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW’s fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA. However, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Table 3.3-1 provides a list of special-status species with potential to occur in the Project vicinity. The list was developed through a review of biological studies previously conducted in the area, as listed at the beginning of this Biological Resources section, and observations made during the July 7, 2023, site surveys. CDFW’s CNDDDB (CNDDDB 2023), a statewide inventory of the locations and conditions of the State’s rarest plant and animal taxa and vegetation types, was reviewed for specific information on documented observations of special-status species previously recorded in the Project vicinity. A nine-quad search radius around the Project site was used to identify potential special-status species. The CNDDDB is a positive sighting database consisting of observation data voluntarily provided to CNDDDB. Lack of occurrence data at a particular location is not evidence of species absence and CNDDDB does not constitute an exhaustive inventory of every resource.

The species list in Table 3.3-1 includes special-status wildlife species with both scientific and common names, legal status, description of habitat preference, and the potential for the species to occur on the Project site. No special-status plant species are included because there are no native vegetation communities or habitat types suitable for special-status plant species on the Project site. Most of the special-status species identified in Table 3.3-1 have little or no potential for occurrence because the habitat elements they require either were never present or are no longer

found on the site. Special-status wildlife species that could occur on or adjacent to the Project site are evaluated in this EIR and discussed in further detail below.

Table 3.3-1 Special-Status Wildlife Species Known or Expected to Occur in the Vicinity of the Project Area and Their Potential for Occurrence in the Project Area

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Amphibians and Reptiles				
California tiger salamander - central California DPS <i>Ambystoma californiense</i> pop. 1	FT	ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur. The Project site does not contain vernal pool or seasonal wetland habitat suitable for this species.
Giant Gartersnake <i>Thamnophis gigas</i>	FT	ST	Marsh, swamp, riparian scrub, and wetlands. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. Irrigation canals on the Project site lack riparian and emergent vegetation and consistency of flowing water during the snake's active season. Therefore, habitat conditions are not suitable for this species. Aside from the Shed C Channel, the irrigation ditches are too narrow and shallow to support a sufficient prey base for giant garter snake and lack vegetation or other refugia. Further, the irrigation ditches are routinely filled, dredged and recontoured. Additionally, there has been a lack of species observations in the Elk Grove area over the past 20 years and on-site ditches do not have a hydrological connection to waterways that are known to support this species.
Western pond turtle <i>Emys marmorata</i>	—	SSC	Ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000-foot elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying.	Not expected to occur. The irrigation ditches and Shed C Channel on the Project site do not contain basking sites or aquatic vegetation suitable for this species.
Western spadefoot <i>Spea hammondi</i>	—	SSC	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, and wetlands. Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not expected to occur. The Project site does not contain vernal pool or wetland habitat suitable for this species and there is no aquatic breeding habitat suitable for this species in proximity to the Project site.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Birds				
Bank swallow <i>Riparia riparia</i>	—	ST	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not expected to occur. The Project site does not contain riparian habitat and vertical cliffs suitable for this species.
Burrowing owl <i>Athene cunicularia</i>	—	SSC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils. Suitable burrow sites consist of short, herbaceous vegetation with only sparse cover of shrubs or taller herbs (Schuford and Gardali 2008: 221)	Known to occur. Open habitat with low-growing vegetation suitable for this species is present in the Project area. Burrowing owl was observed on the Project site during a 2022 biological survey (Dokken 2022).
California black rail <i>Laterallus jamaicensis coturniculus</i>	—	ST; FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not expected to occur. The Project site does not contain marsh or wetland habitat suitable for this species.
Tricolored blackbird <i>Agelaius tricolor</i>	—	ST; SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	May occur. Blackberry thickets on the Project site may provide marginally suitable nesting habitat for this species, and grassland habitats support insect populations for foraging.
Golden eagle <i>Aquila chrysaetos</i>	—	FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Not expected to occur. The Project site does not contain mountain or cliff habitat suitable for this species.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Greater sandhill crane <i>Grus canadensis tabida</i>		ST, FP	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. Typically nests in mounds of wetland plants or hummocks in remote portions of extensive wetlands.	May occur. The irrigated pasture on the Project site provides winter foraging habitat for this species. Sandhill cranes are known to winter in the area between Elk Grove and Galt.
Lesser sandhill crane <i>Grus canadensis canadensis</i>		SSC	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands.	May occur. The irrigated pasture on the Project site provides winter foraging habitat for this species. Sandhill cranes are known to winter in the area between Elk Grove and Galt.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	Riparian forest, riparian scrub, riparian woodland. Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, coyote brush, mesquite.	Not expected to occur. The Project site does not contain riparian habitat suitable for this species.
Loggerhead shrike <i>Lanius ludovicianus</i>		SSC	Forages in grasslands and agricultural fields, and nests in scattered shrubs and trees.	May occur. Blackberry shrubs and small shrubs on the Project site provide suitable nesting habitat for this species.
Northern harrier <i>Circus cyaneus</i>		SSC	Uses a variety of open grassland, wetland, and agricultural habitats. Breeding habitats include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes; and dry upland habitats, such as grassland, cropland, drained marshland, and shrub-steppe in cold deserts. Nests on the ground within patches of dense, often tall, vegetation in undisturbed areas.	May occur. The irrigated pasture on the Project site provides foraging habitat for this species, and they could nest in herbaceous vegetation in portions of the Project site.
Purple martin <i>Progne subis</i>	—	SSC	Broadleaved upland forest, lower montane coniferous forest. Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	Not expected to occur. The Project site does not contain coniferous forest or woodland habitat or human-made structures suitable for nesting by this species.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Song sparrow ("Modesto" population) <i>Melospiza melodia</i> pop. 1	—	SSC	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Forages primarily on exposed ground or in leaf litter.	Not expected to occur. The Project site does not contain riparian or emergent marsh habitat suitable for this species.
Swainson's hawk <i>Buteo swainsoni</i>	—	ST	Forages in grasslands and agricultural lands; nests in riparian and isolated trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The irrigated pasture on the Project site provides foraging habitat for this species, and power poles in the area may provide opportunity for perching. There are no nesting substrates suitable for this species on the Project site, but many known nest sites are documented within 1 mile of the Project site (CNDDDB 2023).
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not expected to occur. The Project site does not contain riparian habitat or river systems suitable for this species.
White-tailed kite <i>Elanus leucurus</i>	—	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Known to occur. The Project site contains open grassland habitat suitable for this species and nearby trees provide suitable nesting habitat. Additionally, white-tailed kite was observed foraging on the Project site during a 2022 biological survey (Dokken 2022).
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	—	SSC	Marsh and swamp, wetland. Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	Not expected to occur. The Project site does not contain marsh or wetland habitat suitable for this species.
Fish				
Chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> pop. 11	FT	ST	Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps greater than 27 Celsius are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Chinook salmon - Sacramento River winter-run ESU <i>Oncorhynchus tshawytscha</i> pop. 7	FE	SE	Sacramento/San Joaquin flowing waters. Sacramento River below Keswick Dam. Spawns in the Sacramento River, but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 Celsius for spawning.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Delta smelt <i>Hypomesus transpacificus</i>	FT	SE	Estuary. Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities greater than 10 parts per trillion. Most often at salinities less than 2 parts per trillion.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Green sturgeon - southern DPS <i>Acipenser medirostris</i> pop. 1	FT	—	Aquatic, estuary, marine bay, Sacramento/San Joaquin flowing waters Spawning site fidelity. Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles. Spawning occurs primarily in cool (11–15 Celsius) sections of mainstem rivers in deep pools (25–30 feet) with substrate containing small to medium sized sand, gravel, cobble, or boulder.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC	ST; SSC	Estuary. Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per trillion, but can be found in completely freshwater to almost pure seawater.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Sacramento perch <i>Archoplites interruptus</i>	—	SSC	Sacramento/San Joaquin flowing or standing waters. Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	—	SSC	Estuary, freshwater marsh, Sacramento/San Joaquin flowing waters. Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	FT	—	Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. Irrigation canals on the Project site lack aquatic vegetation, gravel beds, or other habitat features suitable for this species.
Invertebrates				
Crotch bumble bee <i>Bombus crotchii</i>	—	SC	Found primarily in California: Mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground. Bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queen.	Not expected to occur. The Project site consists of irrigated pasture, which provides potentially suitable habitat for this species in spring and summer when floral resources are present. Cattle grazing reduces available nectar and pollen sources, and the vegetation is typically harvested for hay by end of summer. Therefore, the site does not contain adequate nectar sources to support this species throughout the colony season. Additionally, while the Project site is within this species' historic range, crotch bumble bee has recently undergone a dramatic decline in abundance and distribution and is no longer present across much of its historic range (Xerces Society 2018), especially within the Central Valley.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	—	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberry stems 2-8 inches in diameter; some preference shown for "stressed" elderberry shrubs.	Not expected to occur. The Project site does not contain blue elderberry shrub habitat suitable for this species.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The Project site does not contain vernal pool habitat suitable for this species.

Species ¹	Listing Status ^{2F} ederal	Listing Status ² State	Habitat	Potential for Occurrence ³
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE	—	Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not expected to occur. The Project site does not contain vernal pool habitat suitable for this species.
Mammals				
Western red bat <i>Lasiurus blossevilli</i>	-	SSC	Roosts primarily in trees with dense canopies, often in edge habitats adjacent to streams or open fields, and orchards in the Central Valley; strongly associated with intact mature riparian forest.	Not expected to occur. The Project site does not contain riparian trees or orchards suitable for this species.
American badger <i>Taxidea taxus</i>	—	SSC	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog and fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not expected to occur. The Project site does not contain shrub, grassland, or forest habitat suitable for this species. American badger is not known to use agricultural lands.

1 As determined in the *California Building Industry Association v. Bay Area Air Quality Management District* an EIR is not required to evaluate the Project's impacts on its future residents (i.e., endangered or threatened species that would be housed at the New Zoo).

2 Legal Status Definitions

Federal:

FE Federally Listed as Endangered (legally protected)

FT Federally Listed as Threatened (legally protected)

State:

SSC Species of Special Concern (no formal protection other than CEQA consideration)

SE State Listed as Endangered (legally protected)

ST State Listed as Threatened (legally protected)

FP Fully Protected (legally protected)

3 Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available; however, there are little to no other indicators that the species might be present.

Known to occur: Species has been documented within the treatment site.

Sources: CNDDDB 2023; Dokken 2022; USFWS 2023; Schuford and Gardali 2008; Xerces Society 2018.

US Fish and Wildlife Service: Birds of Conservation Concern

The USFWS's Birds of Conservation Concern 2021 list identifies migratory and non-migratory bird species that represent the agencies highest conservation priority besides those bird species that designated as threatened or endangered under the federal ESA. Twelve Birds of Conservation Concern were identified as potentially occurring in the project vicinity from a review of the USFWS IPaC report and they are: bald eagle, Belding's savannah sparrow,

Bullock's oriole, California gull, common yellowthroat, Nuttall's woodpecker, oak titmouse, short billed dowitcher, tricolored blackbird, western grebe, wrenit, and yellow-billed magpie. All these birds, are protected by California Fish and Game Code or the Migratory Bird Treaty Act described in the Regulatory Setting section above. The Belding's savannah sparrow is a subspecies of the protected Savannah sparrow, neither of which are expected to occur at the Project site. Bald eagle and golden eagle have additional protection under the Bald and Golden Eagle Protection Act of 1940 and golden eagle is a California fully protected species included in Table 3.3-1. Bald eagle is unlikely to occur on or near the Project site due to the lack of suitable nesting habitat. Tricolored blackbird is listed as threatened under CESA and is include in Table 3.3-1. Oak titmouse, wrenit, and yellow-billed magpie are not likely to occur in the Project site because their specific habitat requirements are not met onsite. The Project site is out of range, or out of range for migration/breeding seasons of the remaining bird species of conservation concern.

Riparian Habitat and Sensitive Natural Communities

Sensitive natural communities are those native plant communities defined by CDFW as having limited distribution statewide or within a county or region and that are often vulnerable to environmental effects of projects (CDFW 2018). These communities may or may not contain special-status plants or their habitat (CDFW 2018). CDFW designates sensitive natural communities based on their State rarity and threat ranking using NatureServe's Heritage Methodology. Natural communities with rarity ranks of S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable, are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents (CDFW 2018). Lakes, streams, and associated riparian habitat are protected under California Fish and Game Code Section 1602 regardless of whether or not the riparian vegetation alliance is a designated sensitive natural community. There are no riparian habitats or vegetation alliances designated as sensitive natural communities on the Project site.

State and Federally Protected Wetlands

The Environmental Protection Agency (EPA) and USACE define wetlands as "Those areas that are saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Wetlands must typically exhibit three parameters: (1) wetland hydrology, (2) hydrophytic vegetation, and 3) hydric soils, to meet the federal definition of a wetland. Pursuant to the Revised Definition of Waters of the United States issued by USACE and the U.S. Environmental Protection Agency on August 29, 2023, wetlands are not waters of the United States unless they have a continuous surface connection to other waters of the United States (e.g., traditional navigable waters, waters used in interstate or foreign commerce, territorial seas, interstate waters).

The State Water Resources Control Board has adopted the following definition of wetlands: "An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

Aquatic resources on the Project site consist of the Shed C Channel, an agricultural drainage channel, and smaller irrigation ditches used to water the on-site pastures. None of these features meet either the federal or State definition of wetlands. Irrigation ditches excavated in and draining only uplands that do not flow relatively permanently are exempt from regulation under the Clean Water Act and Porter-Cologne Act.

In 2014, a Storm Water Drainage Master Plan was prepared and approved for the Project site and surrounding development area (City of Elk Grove 2014). This plan calls for improvements to the Shed C watershed to provide for flood control, stormwater quality treatment, and mitigation for changes in hydrology as the Southeast Plan Area, including the Project site, develops. The existing Shed C Channel is an agricultural drainage ditch that was created through extensive modification of historic seasonal drainage channels. The current channel alignment is straight with steep, uniform side slopes and is maintained free of vegetation. The Storm Water Drainage Master Plan includes replacing the existing Shed C Channel with a multifunctional drainage corridor with a stable low-flow channel and meanders within a larger floodway corridor that will provide flood conveyance as well as wetland habitat (City of Elk Grove 2014). The Shed C Channel improvements were already approved and are currently under construction to the

north of the Project with permits and approvals secured. The Project requires changes to the permits to move the water retention basin to serve the Project site. The new location would require an amendment to the SouthEast Policy Area Shed C permit for the revised basin location. The environmental impacts of ground disturbance and general development of the new basin location site were addressed in the SouthEast Area Policy EIR (State Clearinghouse 2013042054). Movement and amending the basin permit would occur as part of ongoing refinements to the Storm Water Drainage Master Plan and would be covered through modification to existing State and federal permits. Therefore, there are no State or federally protected wetlands on the Project site and no impacts to waters of the State or waters of the United States from the Project.

3.3.3 Impacts and Mitigation Measures

METHODOLOGY

This impact evaluation is based on data collected during a reconnaissance-level field survey conducted on July 7, 2023, review of aerial imagery, and information from several previously completed documents that address biological resources in the Project vicinity, as well as species lists and records obtained from the CNDDDB and IPaC.

THRESHOLDS OF SIGNIFICANCE

An impact on biological resources would be significant if implementation of the Project would:

- ▶ have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ 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 CDFW or USFWS;
- ▶ 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;
- ▶ 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;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

Special-Status Plants

The Project site does not contain habitat suitable for special-status plant species; therefore, Project implementation would not result in any impact on special-status plants. This issue is not discussed further.

Riparian Habitat or Other Sensitive Natural Communities

No sensitive natural communities and no riparian habitat are located in or immediately adjacent to the Project site or off-site improvement areas. Therefore, Project implementation would not result in any impact on these resources. This issue is not discussed further.

State or Federally Protected Wetlands

The Project site does not contain aquatic resources that meet the State or federal definition of a wetland or other water. Therefore, no impact on such resources would occur. This issue is not discussed further.

Wildlife Movement Corridors or Nurseries

According to the California Essential Habitat Connectivity Project, the Project site is not located in a Natural Landscape Block or Essential Habitat Connectivity Area (Spencer et al. 2010; CDFW 2023), because the site does not provide an important connection between any areas of natural habitat that would be isolated if the connection were lost. Although wildlife may use the Project site for nesting and roosting or may pass through the site occasionally, there is no evidence that the site functions as a significant wildlife movement corridor or wildlife nursery site, because the site and the area surrounding it lack natural habitat. Therefore, implementing the Project would not interfere substantially with the movement of any native resident or migratory wildlife species, and no impact would occur. This issue is not discussed further.

Consistency with Habitat Conservation Plans

The Project site is not within the plan area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan; therefore, no impact regarding consistency with such plans would occur. This issue is not discussed further.

Consistency with Local Policies or Ordinances

The Project site does not contain trees protected under Chapter 19.12 of the EGMC, Tree Preservation and Protection (See Section 3.3.1, "Regulatory Setting"). The Project has been designed for consistency with Elk Grove General Plan policies relevant to biological resources; therefore, no impact would occur. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Result in Disturbance to or Loss of Special-Status Wildlife Species and Habitat

Project implementation would include development activities, such as ground disturbance and construction of new buildings, that could result in disturbance to several special-status bird species if they are present. Implementing the Project may result in injury, mortality, reduced breeding productivity, and loss of species habitat for special-status birds. Implementation of Mitigation Measures 3.3-1a through 3.3-1c would reduce the significant impact on Swainson's hawk, white-tailed kite, other raptors, tricolored blackbird, loggerhead shrike, common native nesting birds, burrowing owl, greater sandhill crane, and lesser sandhill crane related to construction and off-site improvement activities because it would require preconstruction surveys and implementation of avoidance measures (e.g., no-disturbance buffers) to prevent injury or mortality, disturbance, and nest abandonment if active nests are determined to be present on or near the Project site or in off-site improvement areas. These mitigation measures would reduce the impacts to a **less-than-significant** level.

Several special-status bird species have potential to occur on or immediately adjacent to the Project site and could be affected by Project construction activities. As shown in Table 3.3-1 the following special-status species may occur on or around the Project site: burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, tricolored blackbird, loggerhead shrike, greater sandhill crane, and lesser sandhill crane. In addition, common native birds and raptor species that do not meet the definition of special-status species but are protected by the California Fish and Game Code and the federal MBTA may also nest on or near the Project site. Project activities (e.g., vegetation clearing, ground disturbance, staging, heavy equipment use, building construction) may result in direct loss of special-status or otherwise protected wildlife species, loss of habitat, loss of or disturbance to nests, or disturbance leading to abandonment of active nests.

Burrowing Owl

Open pastureland and areas with burrowing mammals on the Project site may provide habitat suitable for burrowing owls. A burrowing owl observed on-site during a biological survey in 2022 has the potential to occupy the site during Project construction. Burrowing owls need burrows at all times to survive, and displacing individuals from their burrows can result in indirect impacts, such as predation, increased energy demands, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction.

Project activities (e.g., ground disturbance, staging, heavy equipment use) may result in direct loss of burrowing owls or active burrows if they are present on the Project site at the time of construction. Implementation of Mitigation Measure 3.3-1a (which is based on adopted Mitigation Measure 3.11-5 from the General Plan Amendments and Update of VMT Standards Subsequent EIR) would reduce the significant impact on burrowing owl related to construction activities because it would require focused preconstruction surveys, implementation of avoidance measures (e.g., protection buffers), consultation with CDFW, and implementation of mitigation for loss of occupied habitat. Implementation of Mitigation Measure 3.3-1a would reduce this impact to **less than significant**.

Swainson's Hawk, White-Tailed Kite, Northern Harrier, Tricolored Blackbird, Loggerhead Shrike, and Other Nesting Birds

Swainson's hawks most commonly occur in grasslands, low shrublands, and agricultural habitats that include large trees for nesting. Although the most important foraging habitat for Swainson's hawks lies within a 1-mile radius of each active nest (City of Sacramento et al. 2003), Swainson's hawks have been recorded foraging up to 18.6 miles from nest sites (Estep 1989). Any habitat within the foraging distance may provide food at some time in the breeding season that is necessary for reproductive success. Nests are found in riparian woodlands, roadside trees, trees along field borders, and isolated trees. Prey abundance and accessibility are the most important features determining the suitability of Swainson's hawk foraging habitat. Swainson's hawks feed primarily on small rodents but also consume insects and birds. Irrigated pastures such as those on the Project site support rodents and therefore provide suitable foraging habitat for Swainson's hawks. Although no trees suitable for Swainson's hawk nests are located on the Project site, trees that provide potentially suitable nest sites for this species are located within 0.05 mile of the Project site and could be disturbed by Project construction activities, resulting in nest abandonment and death of dependent young.

White-tailed kites commonly forage in grassland and agricultural habitats, including irrigated pastures like those on the Project site, and a white-tailed kite was observed foraging on the Project site during surveys conducted by Dokken Engineering in 2022. White-tailed kites are sensitive to human disturbance and construction activities, and it is necessary to ensure that nesting individuals are not present in the vicinity of construction sites. Although no trees suitable for white-tailed kite nests are located on the Project site, trees that provide potentially suitable nest sites for this species are located within 1,000 feet of the Project site and could be disturbed by Project construction activities.

Tricolored blackbirds nest in large colonies and may forage up to approximately 3 miles from nest sites. However, they mainly forage within 1 to 1.5 miles of an active nest colony. Tricolored blackbirds are known to nest in blackberry thickets, which can be found on the Project site. Loggerhead shrike could nest in any of the small trees on the Project site or in the blackberry thickets.

Northern harrier, Cooper's hawk, ferruginous hawk, red-tailed hawk, and great horned owl are other raptor species known to occur in this portion of the City of Elk Grove that could nest on or near the Project site. Northern harrier could potentially nest on the ground in the Project site's irrigated pasture vegetation.

Loss of common migratory birds and raptors (those not meeting the definition of special-status species provided in Section 3.3.1) are protected under California Fish and Game Code Section 3503 and the MBTA. Common migratory birds could nest on the ground, in the blackberry thickets, or in trees on or near the Project site.

If ground-disturbing activities occur during the nesting bird season (generally February 1 through August 31), Project construction could result in direct and indirect impacts on special-status and other nesting birds, including the loss of nests, eggs, and young through direct removal of nesting substrates or visual or noise disturbances that cause adults to abandon nests and young. Construction activities, such as grading, vegetation removal, and other activities that result in an increase in human activity (including noise), during the nesting season may result in disturbance or abandonment of nests of special-status bird species, which could result in mortality of eggs and young and reduced reproductive success.

Implementation of Mitigation Measure 3.3-1b (which is based on adopted Mitigation Measure 3.11-6 and 3.11-7 from the General Plan Amendments and Update of VMT Standards Subsequent EIR) would reduce significant Project-related impacts on Swainson's hawk and other nesting birds because it would require preconstruction surveys for nesting birds and nesting raptors before the start of construction during the nesting bird season, establishment of

avoidance buffers, and monitoring of active nests. These requirements would ensure that nesting bird and raptor species, including Swainson's hawk and white-tailed kite, are not disturbed during nesting, and Project construction would not result in nest abandonment and loss of eggs or young if nests are detected. Mitigation Measure 3.3-1c (which is based on adopted Mitigation Measure 3.11-8 from the General Plan Amendments and Update of VMT Standards Subsequent EIR) would address the potential loss of Swainson's hawk foraging habitat, and foraging habitat for other raptors such as white-tailed kite, by requiring acquisition and maintenance of foraging habitat for Swainson's hawk. These mitigation measures would reduce this impact to a **less-than-significant** level.

Sandhill Crane

Greater sandhill crane and lesser sandhill crane may occasionally use the irrigated pasture habitat on the Project site for foraging or loafing (i.e., behaviors not connected with breeding or feeding, such as resting or preening). However, the habitat on the Project site is marginal because of its patchy nature and relatively high level of disturbance from surrounding urban and suburban development. Sandhill crane species are known to occur in large numbers within Stone Lakes National Wildlife Refuge, located west of the Project site, and Cosumnes River Preserve, located south of the Project site, where large areas of habitat suitable for the species (e.g., marsh, grassland) are present. Sandhill cranes wintering in the area make daily flights between their nighttime roost sites at Stone Lakes and Cosumnes River Preserve to forage in open grasslands, pastures, and grain fields throughout the Elk Grove area during the day. Construction activities and land conversion within the irrigated pasture on the Project site would not result in a substantial reduction in high-quality suitable habitat for sandhill cranes in the region. Therefore, the impact on greater sandhill crane and lesser sandhill crane would be **less than significant**.

Mitigation Measures

Mitigation Measure 3.3-1a: Conduct Take Avoidance Survey for Burrowing Owl, Implement Avoidance Measures, and Compensate for Loss of Occupied Burrows

The New Zoo shall implement the following measures to reduce impacts on burrowing owl:

- ▶ A qualified biologist shall conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 500 feet of the Project site. To ensure accuracy and the most up-to-date information, surveys shall be conducted before the start of construction activities and in accordance with Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which recommends at least three surveys conducted at least 3 weeks apart.
- ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the City, and no further mitigation shall be required.
- ▶ If an active burrow is found during the nonbreeding season (September 1 through January 31), the applicant shall consult with CDFW regarding protective buffers to be established around the occupied burrow and maintained throughout construction. The buffer shall be a minimum of 150 feet around the active, nonbreeding burrow but may be reduced in consultation with CDFW. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of the Staff Report. Burrowing owls shall not be excluded from occupied burrows until the Project burrowing owl exclusion plan is approved by CDFW and only during the nonbreeding season. The exclusion plan shall include methods for determining burrow vacancy, type and timing for scoping burrows, what will determine excavation timing, a monitoring plan for determining exclusion has been successful, remedial measures to prevent owl reuse and avoid take, and a burrowing owl mitigation and management plan (see below).
- ▶ If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a protective buffer at a minimum of 650 feet unless a qualified biologist verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer may be adjusted depending on the time of year and level of disturbance as outlined in the Staff Report (CDFG 2012: 9). The size of the buffer may be reduced if a broad-scale, long-term monitoring program acceptable to CDFW is

implemented so that burrowing owls are not adversely affected. After the fledglings are capable of independent survival, the owls can be evicted, and the burrow can be destroyed in accordance with the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of the Staff Report.

- ▶ If burrowing owls are excluded from burrows and the burrows are destroyed as a result of Project construction activities, the applicant shall mitigate the loss of occupied habitat such that habitat acreage and the number of burrows are replaced through permanent conservation of comparable or better habitat at a 1:1 mitigation ratio with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The applicant shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards, among others:
 - Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat; disturbance levels; potential for conflicts with humans, pets, and other wildlife; density of burrowing owls; and relative importance of the habitat to the species throughout its range.
 - Where available, mitigation lands shall be provided adjacent or proximate to the development area so that displaced owls can relocate with reduced risk of injury or mortality, depending on the availability of habitat sufficient to support displaced owls that may be preserved in perpetuity.
 - If habitat suitable for burrowing owl is not available for conservation adjacent or proximate to the development area, mitigation lands shall be secured off-site and shall aim to consolidate and enlarge conservation areas outside of planned development areas and within foraging distance of other conservation lands. Alternatively, mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. Alternative mitigation sites and acreages may also be determined in consultation with CDFW. If burrowing owl habitat mitigation is completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and whether the numbers are maintained over time. Measures of success, as suggested in the Staff Report, shall include site tenacity, the number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Mitigation Measure 3.3-1b: Conduct Focused Surveys for Swainson's Hawk, White-Tailed Kite, Northern Harrier, Tricolored Blackbird, Loggerhead Shrike, and Other Nesting Birds

The Project applicant shall implement the following measures to reduce impacts on special-status and other tree-nesting birds:

- ▶ To minimize the potential for loss of nesting birds protected under the Migratory Bird Treaty Act or California Fish and Game Code Section 3503, Project construction activities (e.g., tree removal, vegetation clearing, ground disturbance, staging) shall be conducted during the nonbreeding season (approximately September 1 through January 31, as determined by a qualified biologist), when possible. If Project construction activities are conducted during the nonbreeding season, no further mitigation shall be required.
- ▶ Within 14 days before the onset of Project construction activities during the breeding season (approximately February 1 through August 31, as determined by a qualified biologist), a qualified biologist familiar with birds of California and with experience conducting nesting bird surveys shall conduct focused surveys for Swainson's hawk, white-tailed kite, tricolored blackbird, northern harrier, loggerhead shrike, and other nesting birds protected under the Migratory Bird Treaty Act or California Fish and Game Code Section 3503. Surveys shall be conducted in accessible areas (i.e., not including private property) within 1,000 foot buffer of the Project site for Swainson's hawk and white-tailed kite, within 500 feet of the site for nonraptor native bird nests.
- ▶ If no nests are found, the qualified biologist shall submit a report documenting the survey methods and results to the City, and no further mitigation shall be required.

- ▶ For Project activities that begin between March 1 and September 15, the qualified biologists shall conduct additional preconstruction surveys for nesting raptors and birds no more than 10 days before implementation of Project activities to identify active nests on and within a 1,000 foot buffer of the Project site. The surveys shall be conducted within 14 days before the beginning of any construction activities between March 1 and September 15.
- ▶ Impacts on nesting Swainson's hawk, white-tailed kite, and other raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. No Project activity shall commence in the buffer areas until a qualified biologist has determined, in consultation with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.5-mile-wide buffer for Swainson's hawk and 500-foot-wide buffer for other raptors, but the size of the buffer may be adjusted if a qualified biologist, in consultation with CDFW, determines that such an adjustment would not be likely to adversely affect the nest. The appropriate no-disturbance buffer for other nesting birds (i.e., species other than Swainson's hawk and burrowing owl) shall be determined by a qualified biologist based on site-specific conditions, the species of nesting bird, the nature of the Project activity, visibility of the disturbance from the nest site, and other relevant circumstances.
- ▶ Monitoring of all active nests by a qualified biologist during construction activities shall be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined appropriate by a qualified biologist to avoid adverse effects on the nest(s).
- ▶ Trees containing white-tailed kite or other raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1) unless otherwise authorized by CDFW.

Mitigation Measure 3.3-1c: Mitigate Loss of Swainson's Hawk Foraging Habitat in Accordance with the City of Elk Grove Swainson's Hawk Impact Mitigation Fee Program

The Project applicant shall implement the following measures to mitigate the potential loss of Swainson's hawk foraging habitat:

- ▶ The Project applicant shall acquire conservation easements or other instruments to preserve suitable foraging habitat for Swainson's hawk. The location of the mitigation parcels, as well as the conservation instruments protecting them, shall be approved by the City.
- ▶ The amount of land preserved shall be at a ratio provided in Chapter 16.130, Swainson's Hawk Mitigation Fees of the Elk Grove Municipal Code, for each acre developed at the Project site. In deciding whether to approve the land proposed for preservation, the City shall consider the benefits of preserving lands in proximity to other protected lands. The preservation of land shall be secured before any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first.
- ▶ The Project applicant shall implement the following minimum conservation easement content standards, or such other requirements as may be updated by the City Council from time to time and as provided in Chapter 16.130:
 - The land to be preserved must be found to be suitable Swainson's hawk foraging habitat as determined by the City based on substantial evidence.
 - The land shall be protected through either fee title or a conservation easement ("legal agreement") acceptable to the City.
 - The legal agreement shall be recordable and contain an accurate legal description of the mitigation land.
 - The legal agreement shall prohibit any activity that in the sole discretion of the City substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.

- If the land's suitability as foraging habitat is related to existing agricultural uses on the land, the legal agreement shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document and retain such water rights for ongoing use on the mitigation land.
 - Mitigation monitoring fees shall be paid to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the City or a third-party receiving entity approved by the City, not to exceed 10 percent of the easement price or a different amount approved by the City Council.
 - Interests in mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land without the prior written approval of the City.
 - The City shall be named a beneficiary under any legal agreement conveying the interest in the mitigation land to an entity acceptable to the City, and the City shall receive indemnification and defense, and in any legal agreement.
 - If any qualifying entity owning an interest in mitigation land ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall be transferred to another entity acceptable to the City or to the City.
- Before committing to the preservation of any land, the applicant shall obtain approval of the land proposed for preservation. This mitigation measure may be fulfilled in combination with a mitigation measure imposed on the Project requiring the preservation of agricultural land as long as the agricultural land is suitable Swainson's hawk habitat as determined by the City in its sole discretion.

Mitigation Measure 3.3-1d: Conduct Worker Environmental Awareness Program

The New Zoo shall retain a qualified biologist to conduct an environmental awareness training program for construction crews before Project construction. The awareness program shall include a brief review of the special-status species with the potential to occur on the Project site (including their life history, habitat requirements, and photographs of the species). The training shall identify the portions of the Project site in which the species may occur, as well as their legal status and protection. The program shall also cover the relevant permit conditions and mitigation measures that must be followed by all construction personnel to reduce or avoid effects on these resources during Project construction. The training shall emphasize the role that the construction crew plays in identifying and reporting any special-status species observations to the onsite biologist. Training shall identify the steps to be taken if a special-status species is found within the construction area (i.e., notifying the crew foreman, who will inform the designated biologist). An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions shall be provided to each crew member. The crew foreman shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs shall be conducted for new personnel as they are brought on the job during the construction period.

Significance after Mitigation

Less than significant.

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