Exhibit C

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Elkhorn Slough Foundation - Hix House Removal Project

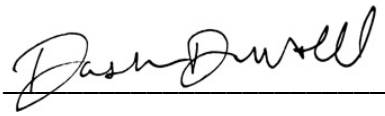
BIOLOGICAL SURVEY

Location: 74 Strawberry Road, Royal Oaks (APN 131-111-014-000)

Date: July 7, 2023

Elkhorn Slough Foundation

Authored by:



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SITE DESCRIPTION

The project site is located at 74 Strawberry Road, Royal Oaks, CA 95076 near the eastern edge of the Elkhorn Slough. This 1.2-acre parcel is referred to as the "Hix" property, and was purchased by the Elkhorn Slough Foundation (ESF) in 2013. Elevation ranges from approximately 12 to 87 feet above mean sea level. Private parcels bound it to the south and east, public land sits to the west, and a county roadway lies to the north. A 1,625 square foot manufactured home sits on the northern edge of the property with a domestic well to the southwest of the driveway access from Strawberry Road. Ruderal grasses and forbs, with a few scattered landscape plantings and a large eucalyptus tree, dominate the area around the house and into the slight depression to the south of the home site. The southern third of the property slopes upward steeply and contains a mix of oak woodland and scrub vegetation.

The property to the west is owned by the California Department of Fish and Wildlife and is part of the Elkhorn Slough National Estuarine Research Reserve (ESNERR). The Hix property was purchased by ESF with the goal of eventually transferring it to become part of ESNERR as well. Though the Hix parcel does not contain identified wetland, it would function as an excellent buffer to protect the high-quality wetlands of Strawberry Marsh downstream, and, after habitat restoration, could serve as important dispersal and summer habitat for endangered amphibians that use the wetlands for breeding.

The manufactured home will be demolished and septic tank removed. With input from the contractor, a project area of 16,816 feet was designated (Figure 1). All work will occur within the project area, and any disturbance will be contained within that same area. This includes the driveway, house, and septic tank.

Figure 1. Project Area

SURVEY METHODS

A search of the California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) online database was conducted to identify any special status species within 1-mile radius of the project site. Each individual species' habitat needs were researched. The project site was surveyed for habitat and vegetation species on August 8, 2022 and May 23, 2023. Natural habitats were classified to the alliance level according to the California Native Plant Society's Manual of California Vegetation Online classification system. All vegetation was surveyed within 50ft of the project area and identified to species level where possible.

SURVEY RESULTS

The CNNDB search revealed five animal species and ten plant species reported within a 5-mile radius of the project site. The results are shown in Table 1. None of the recorded occurrences were located within the project area itself, though several were reported at the neighboring Elkhorn Slough Ecological Reserve.

Name (*Scientific*/Common)	CNDDB Ranks	Listing Status (Fed/State)
Wildlife		
Agelaius tricolor tricolored blackbird	G1G2 S1S2	None Threatened
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	G2G3T3 S3	Threatened Threatened
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	G5T1T2 S1S2	Endangered Endangered
Rallus obsoletus obsoletus California Ridgway's rail	G3T1 S1	Endangered Endangered
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None
Plants		
Arctostaphylos hookeri ssp. hookeri Hooker's manzanita	G3T2 S2	None None
Arctostaphylos pajaroensis Pajaro manzanita	G1 S1	None None
Centromadia parryi ssp. congdonii Congdon's tarplant	G3T2 S2	None None
Chorizanthe pungens var. pungens Monterey spineflower	G2T2 S2	Threatened None
Cordylanthus rigidus ssp. littoralis seaside bird's-beak	G5T2 S2	None Endangered
Ericameria fasciculata Eastwood's goldenbush	G2 S2	None None
Fritillaria liliacea fragrant fritillary	G2 S2	None None
Holocarpha macradenia Santa Cruz tarplant	G1 S1	Threatened Endangered
Piperia yadonii Yadon's rein orchid	G1 S1	Endangered None
Rosa pinetorum pine rose	G2 S2	None None

Table 1. CNDDB Search Results

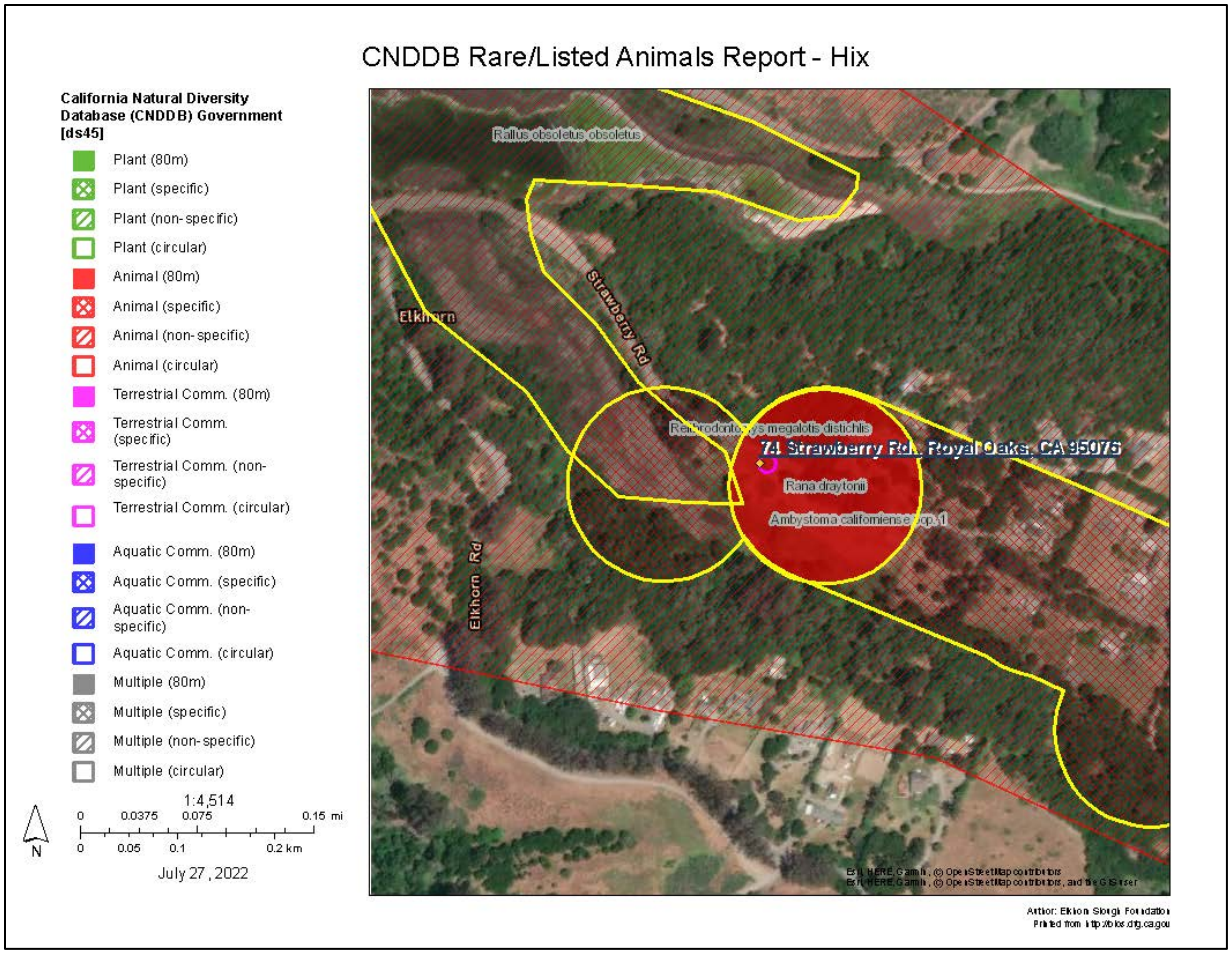

Figure 2. CNDDB animals map for the Hix property

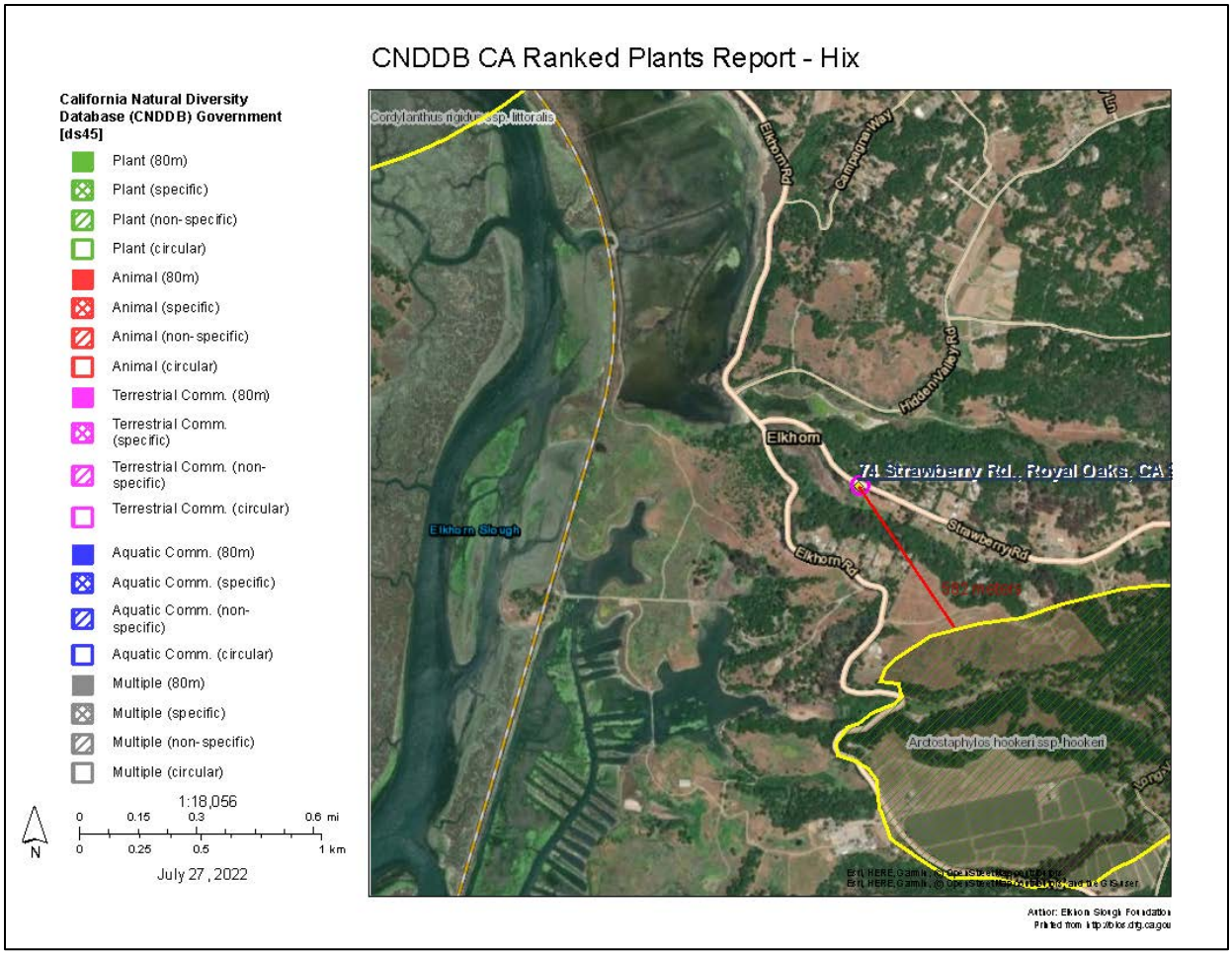

Figure 3. CNDDB plants map for the Hix property

Vegetation surveys showed the property is dominated by two habitat types: *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance and *Quercus agrifolia* Forest & Woodland Alliance. The house removal project was determined to occur solely within the *Avena* spp. habitat area (Figure 4). Though nonnative, invasive plants dominate this habitat type, a botanical survey (following CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*) was conducted at the project area. The resulting plant list is shown in Table 2.

*Figure 4. Detail from enhanced lifeform vegetation map of Elkhorn Slough Watershed. Project site shown in red. Light colored area labelled "*herbaceous vegetation*" was determined to be Avena spp. - Bromus spp. Herbaceous Semi-Natural Alliance. Dark green area is Quercus agrifolia Forest & Woodland Alliance.*

Hix Project Vegetation Survey		
Species	Common Name	Native?
Amaryllis belladonna	Naked ladies	n
Avena barbuta	Wild oats	n
Baccharis pilularis ssp. *consanguinea*	Coyote brush	y
Brassica nigra	Black mustard	n
Briza maxima	Rattlesnake grass	n
Bromus diandrus	Ripgut brome	n
Bromus hordeaceus	Soft chess	n
Carduus pycnocephalus	Italian thistle	n
Carpobrotus edulis	Ice plant	n
Citrus limon	Lemon tree	n
Conium maculatum	Poison hemlock	n
Cyperus eragrostis	Flat sedge	y
Ehrharta erecta	Panic veldtgrass	n
Erigeron canadensis	Horseweed	y
Erodium botrys	Broad leaf filaree	n
Erodium cicutarium	Redstem filaree	n
Eucalyptus globulus	Blue gum eucalyptus	n
Festuca myuros	Rat-tail fescue	n
Holcus lanatus	Velvet grass	n
Hordeum marinum	Mediterranean barley	n
Lolium sp.	Italian ryegrass	n
Malva parviflora	Cheeseweed	n
Medicago polymorpha	Burr clover	n
Opuntia ficus-indica	Prickly pear	n
Phalaris aquatica	Harding grass	n
Plantago lanceolata	English plantain	n
Raphanus raphanistrum	Wild radish	n
Rumex acetosella	Sheep sorrel	n
Silybum marianum	Milk thistle	n
Toxicodendron diversilobum	Poison oak	y
Urtica dioica ssp. *holosericea*	Stinging nettle	y
Vicia sativa	Common vetch	n
Vinca major	Periwinkle	n

Table 2. Vegetation survey results

PROJECT IMPACT ANALYSIS

This project will demolish and remove the manufactured home and septic tank from the Hix property. The project area contains highly degraded habitat and no impacts to sensitive species or habitats are likely. The potential for impacts to each of the listed species found in the CNDDB search is discussed below.

Agelaius tricolor (tricolored blackbird):
Tricolored blackbirds are associated with emergent freshwater marshes and agricultural operations, particularly dairy farms. While there is nearby freshwater marsh, any use of the Hix property by blackbirds would be fleeting at best, and activities from this project are unlikely to impact the species.

Ambystoma californiense (California tiger salamander):
Tiger salamanders need underground refuges, particularly ground squirrel burrows, and vernal pools or other seasonal water sources for breeding. While no breeding habitat exists in the project area, there is potential for the animals to take temporary cover in the homesite area, and underground refuges could exist in the excavation area of the septic tank. Impacts to the species could theoretically occur without the proper mitigation measures in place.

Ambystoma macrodactylum croceum (Santa Cruz long-toed salamander):
Santa Cruz long-toed salamanders are generally restricted to oak woodlands and riparian habitat in southern Santa Cruz County and northern Monterey County. They require thick upland native vegetation and animal burrows for refuge. Aquatic larvae prefer shallow water with clumps of vegetation. While no breeding habitat exists in the project area, there is potential for the animals to take temporary cover in the homesite area, and, while unlikely for this species, it is possible underground refuges could exist in the excavation area of the septic tank. Impacts to the species could theoretically occur without the proper mitigation measures in place.

Rallus obsoletus obsoletus (California Ridgway's rail):
Ridgway's rails spend most of their time in dense vegetation surrounding marshes and swamps. They feed in mudflats. Neither habitat is present at the project site, and, due to the secretive nature of the birds, their presence is unlikely in the surrounding, human-dominated landscape. Therefore, impacts to the species are unlikely to occur.

Rana draytonii (California red-legged frog):
Red-legged frogs generally need permanent, deep water with dense riparian vegetation for breeding and feeding. This habitat is not present on the site, though it is sometimes present at the ESNERR property to the west, and another site several properties to the east. Project activities will not impact any individuals present on the neighboring properties.

Arctostaphylos hookeri ssp. hookeri (Hooker's manzanita):
Hooker's manzanita occurs in maritime chaparral habitats, generally sandy soils on ridges. None of this habitat is present on the site and no individuals were observed in the project area.

Arctostaphylos pajaroensis (Pajaro manzanita):
Pajaro manzanita occurs in maritime chaparral habitats, generally sandy soils on ridges. None of this habitat is present on the site and no individuals were observed in the project area.

Centromadia parryi ssp. congdonii (Congdon's tarplant):
Congdon's tarplant occurs on seasonal wetlands on heavy clay, saline, or alkaline soils in grasslands and disturbed sites; typically growing in colonies, most common in areas that retain water for a longer period of time and in areas that have a lower density of competing non-native annual grasses. No seasonal wetlands exist on the site and density of nonnative annuals grasses is very high. Negative impacts to the species are unlikely, and soil disturbance could have a potential benefit by exposing seeds of this annual species if any were present.

Chorizanthe pungens var. pungens (Monterey spineflower):
Monterey spineflower primarily grows in openings of coastal dune, dune scrub, and chaparral in sandy soils where competition with other species is low. None of this habitat exists at the project site. As an annual herb, periodic disturbance can be beneficial by removing competition and shade, so if any seedbank did exist at the site, any impacts would likely be beneficial.

Cordylanthus rigidus ssp. littoralis (seaside bird's-beak):
Seaside bird's-beak grows on young marine sand deposits along the coast or inland on older elevated marine terraces with sandy soils, and occasionally in loose residual soils in adjacent sites; maritime chaparral; edges of oak woodland. This habitat is not present at the study site. As an annual herb, periodic disturbance may be beneficial, but very little is known about this species' needs.

Ericameria fasciculata (Eastwood's goldenbush):
Grows on sandy, inland, pre-Flandrian sand deposits overtopping leached Aromas Sands Formation parent material; mesas and hillsides adjacent to maritime chaparral and in gaps between shrubs, along edges of coast live-oak woodland, and in edges between chaparral and coastal sage scrub; under canopy and in association with Gowen cypress; disturbed edges of graded roadways. None of this habitat exists at the project site.

Fritillaria liliacea (fragrant fritillary):
Occurs in heavy soils on open hillsides near the coast in coastal prairie, coastal bluff scrub, and coastal scrub habitats. Often associated with serpentine soils. None of this habitat exists at the project site.

Holocarpha macradenia (Santa Cruz tarplant):
Occurs in open coastal terrace prairie habitat along the coast. It generally needs mowing and/or grazing to maintain habitat and prevent encroachment of weeds. This site is not coastal terrace

and has very tall, unmanaged weeds meaning presence of tarplant is highly unlikely, and none were observed during vegetation surveys.

Piperia yadonii (Yadon's rein orchid):
Yadon's rein orchid is limited to maritime chaparral habitats in the Elkhorn Slough region, generally poor, sandy soils on ridges. None of this habitat is present on the site and no individuals were observed in the project area.

Rosa pinetorum (pine rose):
Grows in seasonally moist areas in openings in native Monterey pine forest or woodland, occasionally in maritime chaparral. None of these habitat types are present in the project area.

MITIGATION AND MONITORING REQUIREMENTS

The main potential impact to listed species and natural resources would be through accidental disturbance of California tiger salamanders and Santa Cruz long-toed salamanders taking temporary shelter within the project area. For this reason, the mitigation requirements will focus strictly on those two species. These mitigation requirements were developed with input from Chad Mitcham, United States Fish and Wildlife Service Senior Biologist, and leader of the recovery effort for the Santa Cruz long-toed salamander.

1. Work may only occur outside of amphibian migration season (from first 1.5" of rain during wet season, through the end of July).
2. Within a maximum of 72 hours before commencing work, entire project area will be surveyed for amphibians by a qualified biologist, including within structure, downed wood, or other potential cover. Small mammal burrows will be avoided to the maximum extent practicable.
3. Prior to moving vehicles and equipment each morning, onsite personnel will look under vehicles and equipment for special status amphibians.
4. A qualified biologist will be onsite for any earth moving activities, such as removing foundation or septic tank. Areas that contain potential refugia for special status species will be surveyed by a qualified biologist concurrent with work activities.
5. After construction, all areas of bare soil will be covered with weed-free rice straw to prevent erosion and escape of sediment to downstream wetlands. Locally collected seed mix consisting of meadow barley (*Hordeum brachyantherum*), blue wild rye (*Elymus glaucus*), mugwort (*Artemisa douglasiana*) and other suitable species shall be spread across the disturbed areas to encourage native revegetation.
6. If a California tiger salamander or Santa Cruz long-toed salamander is observed during project activities, work that could impact the species will cease and the U.S. Fish and Wildlife Service immediately contacted.

REFERENCES

California Department of Fish and Wildlife (CDFW). 2022. *Natural Diversity Data Base* (CNDDB). RareFind Version 5. Sacramento, California.

California Native Plant Society (CNPS). 2023. *Inventory of Rare and Endangered Plants* (online edition).

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