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Biological Investigation Report:

Humboldt County APN 505-121-031

Survey Dates: March 18 and March 21, 2019

Prepared for

Open Door Community Health Centers

Arcata, Ca 95521

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Introduction

The Study Area includes approximately 1.936-acres on one parcel: Humboldt County APN 505-121-031. The purpose of this Report is to review the project area (described below) in sufficient detail to determine potential impacts to wildlife species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) or designated as sensitive by the California Department of Fish and Wildlife (CDFW); these species are hereinafter referred to as special status species. This Report also reviews potential impacts to any plant species that are listed, candidates for listing, or proposed for listing under the ESA, CESA and the California Native Plant Protection Act and or meet the definition of rare or endangered under the California Environmental Quality Act (CEQA), hereinafter referred to as special status plants. Furthermore, this report reviews existing or potential impacts to sensitive natural communities.

Background: Historic Land Use

The project area includes one currently vacant and undeveloped parcel in Arcata, California. A 2009 Geologic Report from SHN (Eureka, CA) found that the Study Area was historically leveled via the placement of a significant amount of fill, and the site was heavily used as a log deck and loading area supporting a lumber mill along the old rail line along the southern boundary. The historic landform, prior to filling, was found to be a south-facing low gradient slope above the Jolly Giant Creek drainage. Fill consisting of sand, clays, gravels, and river cobble was placed over most of the site. The fill depth varies from 2 feet at the northern border to over 10 feet at the southern border, with a high concentration of gravels and river cobbles in the upper 2 to 4 feet. The SHN report is available upon request.

The western portion of the Study Area has recently served as a temporary holding site for soils excavated from a construction site on the adjacent property to the west. Several storage containers were also being stored there temporarily.

The area directly to the north of the site is densely developed, mostly with single or multiple family residences. To the south lies sports fields associated with Arcata High School and Shay Park.

Wildlife

Pre-field Review

Prior to initiating field surveys, a query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB 2019) for wildlife species occurrences within a nine-quad topographical map area of the project area was conducted. This provides a comprehensive target species list from which to determine habitat, presence, or sign of species, as well as any known locations for special status species in the general area (Table 1). Migratory

birds are protected under the Migratory Bird Treaty Act (1918), making it illegal to take any bird, active nest, or eggs of any native bird species.

Table 1.Wildlife species within a nine-quad area of Arcata North USGS 7.5' quadrangle.

Common Name	Scientific Name	Federal/State Listing
bald eagle	*Haliaeetus leucocephalus*	State Endangered
American peregrine falcon	*Falco peregrinus anatum*	Fully Protected
Cooper's hawk	*Accipiter cooperii*	Watch List
sharp-shinned hawk	*Accipiter striatus*	Watch List
merlin	*Falco columbarius*	Watch List
northern harrier	*Circus cyaneus*	Species of Special Concern (SSC)
white-tailed kite	*Elanus leucurus*	Fully Protected
osprey	*Pandion haliaetus*	Watch List
short-eared owl	*Asio flammeus*	Species of Special Concern
western snowy plover	*Charadrius alexandrinus nivosus*	Federally Threatened
mountain plover	*Charadrius montanus*	Species of Special Concern
yellow rail	*Coturnicops noveboracensis*	Species of Special Concern
California Ridgway's rail	*Rallus obsoletus obsoletus*	Federally Endangered, State Endangered
long-billed curlew	*Numenius americanus*	Watch List
Vaux's swift	*Chaetura vauxi*	Species of Special Concern
bank swallow	*Riparia riparia*	State Threatened
yellow-breasted chat	*Icteria virens*	Species of Special Concern
black-capped chickadee	*Poecile atricapillus*	Watch List
Bryant's savannah sparrow	*Passerculus sandwichensis alaudinus*	State Special Concern
olive -sided flycatcher	*Contopus cooperi*	State Special Concern
willow flycatcher	*Epidonax traillii*	State Endangered
white-footed vole	*Arborimus albipes*	Species of Special Concern
Sonoma tree vole	*Arborimus pomo*	Species of Special Concern
fisher- West Coast DPS	*Pekania pennanti*	State Threatened
Townsend's big-eared bat	*Corynorhinus townsendii*	Species of Special Concern
western pond turtle	*Emys marmota*	Species of Special Concern
Pacific tailed frog	*Ascaphus truei*	Species of Special Concern
northern red-legged frog	*Rana aurora*	Species of Special Concern
foothill yellow-legged frog	*Rana boylii*	State Candidate Threatened, SSC
southern torrent salamander	*Rhyacotriton variegatus*	Species of Special Concern
Del Norte salamander	*Plethodon elongatus*	Watch List

Field Survey

Preconstruction surveys to determine use of the area by State or Federally listed species, migratory birds, or any other wildlife species were conducted on Thursday, March 21, 2019. Due to the limited extent of the project area, it was determined that two surveys conducted in the early morning and early evening would be adequate to determine use by birds and wildlife in the

area. Each survey was conducted for approximately 90 minutes (0725, 1715) by NRM biologist Michelle McKenzie on a mostly sunny day with little to no wind (57°F / 14°C).

Survey Results

During these two surveys, no State or Federally listed species were detected, and no habitat capable of supporting listed species was observed. In addition, this highly disturbed area, immediately adjacent to a current construction site, is proximate to more optimal habitat for migratory songbirds in the Jolly Giant creek watercourse.

Birds were observed moving between the riparian vegetation along Jolly Giant creek and vegetation remaining on the perimeter of the parcel. These birds (Table 2) were exhibiting foraging behavior and none were observed singing, a sign of a territorial or nesting male. A single treefrog was heard calling from the cut berry bramble area, approximately two feet in the parcel from Foster Avenue.

In conclusion, the remaining vegetation at the parcel does not appear to have nesting birds present and should be removed within 7 days of surveys. In the event the vegetation cannot be removed within this time frame, the wildlife biologist requests to be present immediately prior to removal to ensure no birds have moved in to the area.

Table 2. Species observed during surveys in project area, conducted on March 21, 2019

Common Name	Scientific Name	Federal/State Listing
common raven	*Corvus corax*	None
American crow	*Corvus brachyrhynchos*	None
Allen's hummingbird	*Selasphorus sasin*	None
ruby-crowned kinglet	*Regulus calendula*	None
dark-eyed junco	*Junco hyemalis*	None
song sparrow	*Melospiza melodia*	None
Stellar's jay	*Cyanocitta stelleri*	None
European starling	*Sturnus vulgaris*	None
northern Pacific treefrog	*Pseudacris regilla*	None

Vegetation and Sensitive Plant Species

Pre-field Review

The purpose of this report is to review the proposed project in sufficient detail to review potential impacts to any plant species that are listed, candidates for listing, or proposed for listing under the FESA, CESA and the California Native Plant Protection Act and or meet the definition of rare or endangered under the California Environmental Quality Act (CEQA), hereinafter referred to as special status plants. Species with the potential to occur near the project area are listed in Table 3.

The current inventories of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019a), and the California Natural Diversity Database (CNDDB) were consulted to determine which special status plant species may occur within the project area and to compile a target species list. A nine-quad query of CNDDB and CNPS Inventory records resulted in 66 listed vascular and nonvascular plant species (Table 3). These scoping strategies are consistent with California Department of Fish and Wildlife protocols (CDFW 2018a) and the California Environmental Quality Act (State of California 2001). The following resources were consulted:

California Department of Fish and Wildlife (CDFW):

- California Natural Communities List (CDFW 2018d)
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2018c)
- Special Vascular Plants, Bryophytes, Lichens List (CDFW 2019)
- California Natural Diversity Database (CNDDB) Query (CNDDB 2019)

Other Sources:

- The Jepson Manual, 2nd Edition (Baldwin et al. 2012)
- Jepson eFlora (Jepson Flora Project 2019)
- The California Native Plant Society's Online Inventory of Rare and Endangered Plants of California (CNPS 2019a)
- A Manual of California Vegetation (Sawyer et al. 2009)
- Consortium of California Herbaria (CCH 2019)
- Calflora online database (Calflora 2019)

Botanical taxonomy and nomenclature conform to *The Jepson Manual, 2nd Edition* (Baldwin et al. 2012) and recent circumscriptions in the Jepson eFlora (Jepson Flora Project 2019). Common names of plant species are derived from The Calflora Database (Calflora 2019). Nomenclature for special-status plant species conforms to the *Inventory of Rare and Endangered Plants of California* (CNPS 2019) and *Special Vascular Plants, Bryophytes and Lichens List* (CDFW 2019). Vegetation communities described herein conform to *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and/or *A Manual of California Vegetation* (Sawyer et al. 2009), where appropriate.

Table 3. Sensitive Plants known to occur within a 9-quadrangle area surrounding project site. Data from CNPS Rare Plant Inventory (CNPS 2019A).

Scientific Name	Common Name	Lifeform	CRPR*	SRank*	CESA*	FESA*	Blooming Period	Habitat	Elevation Low (m)	Elevation High (m)
Abronia umbellata var. breviflora	pink sand-verbena	perennial herb	1B.1	S2	None	None	Jun-Oct	Coastal dunes	0	10
Angelica lucida	sea-watch	perennial herb	4.2	S3	None	None	May-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	0	150
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	perennial herb	1B.2	S2	None	None	(Apr)Jun-Oct	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	0	30
Astragalus rattanii var. rattanii	Rattan's milk-vetch	perennial herb	4.3	S4	None	None	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest	30	825
Astragalus umbraticus	Bald Mountain milk-vetch	perennial herb	2B.3	S2	None	None	May-Aug	Cismontane woodland, Lower montane coniferous forest	150	1250
Bryoria pseudocapillaris	false gray horsehair lichen	fruticose lichen (epiphytic)	3.2	S2	None	None		Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast)	0	90
Bryoria spiralifera	twisted horsehair lichen	fruticose lichen (epiphytic)	1B.1	S1S2	None	None		North Coast coniferous forest (immediate coast)	0	30

Calamagrostis bolanderi	Bolander's reed grass	perennial rhizomatous herb	4.2	S4	None	None	May-Aug	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Meadows and seeps (mesic), Marshes and swamps (freshwater), North Coast coniferous forest	0	455
Cardamine angulata	seaside bittercress	perennial herb	2B.2	S3	None	None	(Jan)Mar-Jul	Lower montane coniferous forest, North Coast coniferous forest	25	915
Carex arcta	northern clustered sedge	perennial herb	2B.2	S1	None	None	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	60	1400
Carex buxbaumii	Buxbaum's sedge	perennial rhizomatous herb	4.2	S3	None	None	Mar-Aug	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps	3	3300
Carex lenticularis var. limnophila	lagoon sedge	perennial herb	2B.2	S1	None	None	Jun-Aug	Bogs and fens, Marshes and swamps, North Coast coniferous forest	0	6
Carex leptalea	bristle-stalked sedge	perennial rhizomatous herb	2B.2	S1	None	None	Mar-Jul	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps	0	700
Carex lyngbyei	Lyngbye's sedge	perennial rhizomatous herb	2B.2	S3	None	None	Apr-Aug	Marshes and swamps (brackish or freshwater)	0	10
Carex praticola	northern meadow sedge	perennial herb	2B.2	S2	None	None	May-Jul	Meadows and seeps (mesic)	0	3200

Carex viridula ssp. viridula	green yellow sedge	perennial herb	2B.3	S2	None	None	(Jun)Jul-Sep(Nov)	Bogs and fens, Marshes and swamps (freshwater), North Coast coniferous forest (mesic)	0	1600
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	annual herb (hemiparasitic)	1B.2	S2	None	None	Apr-Aug	Marshes and swamps (coastal salt)	0	3
Castilleja litoralis	Oregon coast paintbrush	perennial herb (hemiparasitic)	2B.2	S3	None	None	Jun-Jul	Coastal bluff scrub, Coastal dunes, Coastal scrub	15	100
Castilleja mendocinensis	Mendocino Coast paintbrush	perennial herb (hemiparasitic)	1B.2	S2	None	None	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Coastal dunes, Coastal prairie, Coastal scrub	0	160
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	annual herb (hemiparasitic)	1B.2	S2	None	None	Jun-Oct	Marshes and swamps (coastal salt)	0	10
Chrysosplenium glechomifolium	Pacific golden saxifrage	perennial herb	4.3	S3	None	None	Feb-Jun(Jul)	North Coast coniferous forest, Riparian forest	10	455
Collinsia corymbosa	round-headed Chinese-houses	annual herb	1B.2	S1	None	None	Apr-Jun	Coastal dunes	0	20
Coptis laciniata	Oregon goldthread	perennial rhizomatous herb	4.2	S3?	None	None	(Feb)Mar-May(Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)	0	1000
Discelium nudum	naked flag moss	ephemeral moss	2B.2	S1	None	None		Coastal bluff scrub (soil, on clay banks)	10	50
Empetrum nigrum	black crowberry	perennial evergreen shrub	2B.2	S1?	None	None	Apr-Jun	Coastal bluff scrub, Coastal prairie	10	200

Epilobium septentrionale	Humboldt County fuchsia	perennial herb	4.3	S4	None	None	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest	45	1800
Erigeron bloomeri var. nudatus	Waldo daisy	perennial herb	2B.3	S3	None	None	Jun-Jul	Lower montane coniferous forest, Upper montane coniferous forest	600	2300
Erysimum menziesii	Menzies? wallflower	perennial herb	1B.1	S1	CE	FE	Mar-Sep	Coastal dunes	0	35
Erythronium oregonum	giant fawn lily	perennial bulbiferous herb	2B.2	S2	None	None	Mar-Jun(Jul)	Cismontane woodland, Meadows and seeps	100	1150
Erythronium revolutum	coast fawn lily	perennial bulbiferous herb	2B.2	S3	None	None	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	0	1600
Fissidens pauperculus	minute pocket moss	moss	1B.2	S2	None	None		North Coast coniferous forest (damp coastal soil)	10	1024
Gilia capitata ssp. pacifica	Pacific gilia	annual herb	1B.2	S2	None	None	Apr-Aug	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	5	1665
Gilia millefoliata	dark-eyed gilia	annual herb	1B.2	S2	None	None	Apr-Jul	Coastal dunes	2	30
Glehnia littoralis ssp. leiocarpa	American glehnia	perennial herb	4.2	S3	None	None	May-Aug	Coastal dunes	0	20
Hesperevax sparsiflora var. brevifolia	short-leaved evax	annual herb	1B.2	S2	None	None	Mar-Jun	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie	0	215
Juncus nevadensis var. inventus	Sierra rush	perennial rhizomatous herb	2B.2	S1	None	None	Jul-Nov	Bogs and fens	0	10

Lasthenia californica ssp. macrantha	perennial goldfields	perennial herb	1B.2	S2	None	None	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub	5	520
Lathyrus japonicus	seaside pea	perennial rhizomatous herb	2B.1	S2	None	None	May-Aug	Coastal dunes	1	30
Lathyrus palustris	marsh pea	perennial herb	2B.2	S2	None	None	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	1	100
Layia carnosa	beach layia	annual herb	1B.1	S2	CE	FE	Mar-Jul	Coastal dunes, Coastal scrub (sandy)	0	60
Lilium kelloggii	Kellogg's lily	perennial bulbiferous herb	4.3	S3	None	None	May-Aug	Lower montane coniferous forest, North Coast coniferous forest	3	1300
Lilium occidentale	western lily	perennial bulbiferous herb	1B.1	S1	CE	FE	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	2	185
Listera cordata	heart-leaved twayblade	perennial herb	4.2	S4	None	None	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	5	1370

Lycopodiella inundata	inundated bog club-moss	perennial rhizomatous herb	2B.2	S1?	None	None	Jun-Sep	Bogs and fens (coastal), Lower montane coniferous forest (mesic), Marshes and swamps (lake margins)	5	1000
Lycopodium clavatum	running-pine	perennial rhizomatous herb	4.1	S3	None	None	Jun-Aug(Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	45	1225
Lycopus uniflorus	northern bugleweed	perennial herb	4.3	S4	None	None	Jul-Sep	Bogs and fens, Marshes and swamps	5	2000
Mitellastra caulescens	leafy-stemmed mitrewort	perennial rhizomatous herb	4.2	S4	None	None	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	5	1700
Monotropa uniflora	ghost-pipe	perennial herb (achlorophyllous)	2B.2	S2	None	None	Jun-Aug(Sep)	Broadleafed upland forest, North Coast coniferous forest	10	550
Montia howellii	Howell's montia	annual herb	2B.2	S2	None	None	(Jan-Feb)Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools	0	835
Oenothera wolfii	Wolf's evening-primrose	perennial herb	1B.1	S1	None	None	May-Oct	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	3	800

Packera bolanderi var. bolanderi	seacoast ragwort	perennial rhizomatous herb	2B.2	S2S3	None	None	(Jan-Apr)May-Jul(Aug)	Coastal scrub, North Coast coniferous forest	30	650
Piperia candida	white-flowered rein orchid	perennial herb	1B.2	S3	None	None	(Mar)May-Sep	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	30	1310
Pityopus californicus	California pinefoot	perennial herb (achlorophyllous)	4.2	S4	None	None	(Mar-Apr)May-Aug	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	15	2225
Pleuropogon refractus	nodding semaphore grass	perennial rhizomatous herb	4.2	S4	None	None	(Mar)Apr-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	0	1600
Polemonium carneum	Oregon polemonium	perennial herb	2B.2	S2	None	None	Apr-Sep	Coastal prairie, Coastal scrub, Lower montane coniferous forest	0	1830
Ribes laxiflorum	trailing black currant	perennial deciduous shrub	4.3	S3	None	None	Mar-Jul(Aug)	North Coast coniferous forest	5	1395
Romanzoffia tracyi	Tracy's romanzoffia	perennial herb	2B.3	S2	None	None	Mar-May	Coastal bluff scrub, Coastal scrub	15	30
Sidalcea malachroides	maple-leaved checkerbloom	perennial herb	4.2	S3	None	None	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	0	730

Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	perennial rhizomatous herb	1B.2	S2	None	None	(Apr)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	15	880
Sidalcea oregana ssp. eximia	coast checkerbloom	perennial herb	1B.2	S1	None	None	Jun-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	5	1340
Silene scouleri ssp. scouleri	Scouler's catchfly	perennial herb	2B.2	S2S3	None	None	(Mar-May)Jun-Aug(Sep)	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	0	600
Spergularia canadensis var. occidentalis	western sand-spurrey	annual herb	2B.1	S1	None	None	Jun-Aug	Marshes and swamps (coastal salt)	0	3
Tiarella trifoliata var. trifoliata	trifoliate laceflower	perennial rhizomatous herb	3.2	S2S3	None	None	(May)Jun-Aug	Lower montane coniferous forest, North Coast coniferous forest	170	1500
Trichodon cylindricus	cylindrical trichodon	moss	2B.2	S2	None	None		Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest	50	2002
Usnea longissima	Methuselah's beard lichen	fruticose lichen (epiphytic)	4.2	S4	None	None		Broadleafed upland forest, North Coast coniferous forest	50	1460
Viola palustris	alpine marsh violet	perennial rhizomatous herb	2B.2	S1S2	None	None	Mar-Aug	Bogs and fens (coastal), Coastal scrub (mesic)	0	150

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***Listing codes are as follows:**

CRPR (California Rare Plant Rank)

1B = rare, threatened, or endangered in CA and elsewhere; CRPR 2B = rare, threatened, or endangered in CA, but more common elsewhere; CRPR 3 = plants about which more information is needed; a review list; CRPR 4 = of limited distribution or infrequent throughout a broader area in California. Ranks at each level also include a threat rank and are determined as follows: 0.1-Seriously threatened in California; 0.2-Moderately threatened in California; 0.3-Not very threatened in California (CNPS 1, 2018).

SR (State Rank)

S1: Fewer than 6 viable occurrences worldwide/ statewide, and/ or up to 518 hectares; S2: 6-20 viable occurrences worldwide/ statewide, and/ or more than 518-2,590 hectares; S3: 21-100 viable occurrences worldwide/ statewide, and/or more than 2,590-12,950 hectares; S4: Greater than 100 viable occurrences worldwide/ statewide, and/or more than 12,950 hectares; S5: Demonstrably secure because of its worldwide/ statewide abundance. Additional Threat Ranks: 0.1=Very threatened; 0.2=Threatened; 0.3= No current threat known.

CESA (California Endangered Species Act)

SE = State Listed – Endangered; ST = State Listed – Threatened; SR = State Listed – Rare; SC = State Candidate for Listing.

FESA (Federal Endangered Species Act)

FE = Federally Listed – Endangered; FT = Federally Listed – Threatened; FPE = Federally Proposed – Endangered; FPT = Federally Proposed – Threatened; FC = Federal Candidate for Listing.

Field Survey

On March 18, 2019, NRM botanist Claire Brown conducted a site visit to assess the proposed project area for the presence of sensitive plant species and sensitive natural communities (herein survey area, see Figure 1). Claire has a B.S. in Ecology and Evolutionary Biology from the University of Tennessee, has six years of experience surveying vegetation and rare plants in California, and two years of experience conducting rare plant surveys on the North Coast. This survey was floristic in nature and followed the 2018 California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018b). The timing of the survey was such as to capture appropriate phenology (for positive identification and detection) of target species with potential to occur at the site elevation and within habitat types present. This target list includes Howell's montia (*Montia howelii*). Howell's montia is known to occur in highly modified habitats which retain surface moisture and low vegetative cover in the spring, but the severity of alteration at this site limits potential for other sensitive species (Table 3) to occur. The survey area was covered comprehensively over 1.5 hours.

Reference Populations

A reference population of Howell's montia (CNDDB element code PDPOR05070, occurrence number 104) was visited on March 8, 2019. This population is located less than 0.25 miles away from the project site and at an almost equal elevation. The phenology of this population indicated that conditions should have been favorable for detection, if present.

Survey Results

Sensitive Species

No sensitive plant species were found within the survey area. The compacted, gravelly and muddy areas with low vegetative cover did constitute potential habitat for Howell's montia

(*Montia howellii* CRPR 2B.2), but no plants were detected. A floristic list of species observed is found in Appendix A.

Discussion of Negative Findings

A film of surface moisture similar to that associated with the nearby reference population was present within the survey area, indicating that hydrological conditions should have been favorable for Howell's montia to be detectable if present. Howell's montia is thought to occur in disturbed and previous impacted habitats such as roads and parking lots because its seeds are carried on tires (vehicular traffic), or potentially on gravels used for road surfacing or fills. This site, while close to a known population, appears to not have had these seeds carried in.

The site is highly manipulated and disturbed, and is not potential habitat for any other sensitive plant species (Table 3).

Vegetation and Sensitive Natural Communities

The majority of the Study Area is vegetated by a ruderal community of non-native weedy grasses and forbs, including many Cal-IPC ranked invasive species (Cal-IPC 2019). These include (with Cal-IPC Rank) Italian ryegrass (*Festuca perennis*, Moderate), a bentgrass species (*Agrostis capilaris* c.f.,), sweet vernal grass (*Anthoxanthum odoratum*, Limited), annual bluegrass (*Poa annua*) and English plantain (*Plantago lanceolata*, Limited). Some pennyroyal (*Mentha,* Moderate) is present scattered across the southern portion of this open area. This vegetation type is associated with what appears to be the most heavily compacted and recently driven-upon portions of the site. The north, south and east perimeters of the site, where soils are apparently less compacted, are vegetated by ruderal scrub vegetation such as coyote brush (*Baccharis pilularis*), Himalayan blackberry (*Rubus armeniacus*, High), wild carrot (*Daucus carota*) and fennel (*Foeniculum vulgare*, Moderate). These ruderal community types occupy approximately 80 percent of the project footprint. See Figure 1.

The western portion of the study area slopes down to a low point at the southwest corner. This area is dominated by an overstory of what comprises a small patch of North Coast Riparian Scrub (Holland 1986) including Sitka willow (*Salix sitchensis*), coastal willow (*Salix hookeriana*) and red alder (*Alnus rubra*). This patch, at approximately 0.09 acres, is too small to meet the minimum mapping units size standard (0.25 acres) specified by the Survey of California Vegetation classification and mapping Standards for mapping sensitive natural communities (CDFW 2018a). However, this patch could constitute an inclusion of the *Salix sitchensis* Provisional Shrubland Alliance (S3?) in a matrix of developed land and ruderal communities (CNPS 2019b). No Rapid Assessment form was completed due to the small size of the population. A dense thicket of elm-leaf blackberry (*Rubus ulmifolius*, Not Listed) creates an understory to the willows and alders, but also dominates the slope transition up to the main portion of the site. This species is not listed by Cal-IPC, but is behaving invasively in this context, and is known as an invasive species by the Global Invasive Species Database and the U.S. Forest Service (PIER 2018; GISD 2005) (Small (<1 square meter) patches of Pacific rush (*Juncus effusus ssp. pacificus*) are found in the lowest-

elevation area. This vegetation type occupies approximately 20 percent of the project footprint. See Figure 1.

An approximately 8-foot wide swath running north-south along the western border had been recently mowed at the time of the investigation (in association with neighboring construction) and was unvegetated.

Figure 1. Vegetation Communities Map

Potential Impacts to Vegetation Communities

The proposed project footprint will impact 100 percent of the vegetation within the project footprint. The ruderal herbaceous and scrub community is composed of non-native, invasive and common native species that do not comprise a sensitive community or potential habitat for most sensitive plant species. The ruderal scrub offers little habitat value to wildlife or migratory birds due to lack of consistent cover, high levels of adjacent human activity from surrounding residential areas. See wildlife section.

The patch of North Coast Riparian Scrub vegetation is associated with a potential wetland feature (see report). However, this vegetation type appears to have formed in a previously disturbed site, as the shrubs and trees are rooted in what appears to be historic fill material. While the assemblage of dominant species may comprise a small inclusion of a provisional sensitive natural community alliance (S3?) (CDFW 2018d), potential impacts to this vegetation type are to be addressed as part of a wetland mitigation process.

Invasive Species

As described above, many of the dominant species within the vegetation community types found within the project area are ranked as invasive by Cal-IPC or are otherwise known to be invasive (PIER 2018; GISD 2005). As this project proposes to remove all existing vegetation for the development of a structure with maintained landscaping, the project would decrease the local populations of these species. Therefore, the project is unlikely to contribute to the propagation or spread of invasive species

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Appendix X. Plant Species Identified on-site.

Scientific Name	**Common Name**	**Lifeform**	**Status**	**Family**
Agrostis capillaris	Colonial bentgrass	Perennial grass	non-native	POACEAE
Allium triquetrum	White flowered onion	Perennial herb (bulb)	invasive	ALLIACEAE
Alnus rubra	Red alder	Tree, Shrub	native	BETULACEAE
Anthoxanthum odoratum	Sweet vernal grass	Annual, Perennial grass	invasive	POACEAE
Baccharis pilularis ssp. pilularis	Coyote brush	Shrub	native	ASTERACEAE
Briza maxima	Rattlesnake grass	Annual grass	invasive	POACEAE
Conium maculatum	Poison hemlock	Perennial herb	invasive	APIACEAE
Cortaderia jubata	Andean pampas grass	Perennial grass	invasive	POACEAE
Cynosurus echinatus	Dogtail grass	Annual grass	invasive	POACEAE
Cyperus eragrostis	Tall cyperus	Perennial grasslike herb	native	CYPERACEAE
Dactylis glomerata	Orchardgrass	Perennial grass	invasive	POACEAE
Daucus carota	Carrot	Perennial herb	invasive	APIACEAE
Dipsacus fullonum	Wild teasel	Perennial herb	invasive	DIPSACACEAE
Festuca perennis	Italian rye grass	Annual, Perennial grass	invasive	POACEAE
Foeniculum vulgare	Fennel	Perennial herb	invasive	APIACEAE
Geranium dissectum	Wild geranium	Annual herb	invasive	GERANIACEAE
Helminthotheca echioides	Bristly ox-tongue	Annual, Perennial herb	invasive	ASTERACEAE
Hordeum sp.	barley			POACEAE
Hypochaeris radicata	Hairy cats ear	Perennial herb	invasive	ASTERACEAE
Juncus effusus ssp. pacificus	Pacific rush	Perennial grasslike herb	native	JUNCACEAE
Lythrum sp.	Loosestrife	Annual Herb		LYTHRACEAE
Medicago polymorpha	California burclover	Annual herb	invasive	FABACEAE
Mentha pulegium	Pennyroyal	Perennial herb	invasive	LAMIACEAE
Montia fontana	Water montia	Annual herb	native	MONTIACEAE
Parentucellia viscosa	Yellow parentucellia	Annual herb	invasive	OROBANCHACEAE
Plantago lanceolata	Ribwort	Perennial herb	invasive	PLANTAGINACEAE
Poa annua	Annual blue grass	Annual grass	non-native	POACEAE
Raphanus sativus	Jointed charlock	Annual, Biennial herb	invasive	BRASSICACEAE
Rubus armeniacus	Himalayan blackberry	Shrub	invasive	ROSACEAE
Rubus ulmifolius	Elmleaf blackberry	Vine, Shrub	non-native	ROSACEAE
Rumex acetosella	Sheep sorrel	Perennial herb	invasive	POLYGONACEAE
Rumex crispus	Curly dock	Perennial herb	invasive	POLYGONACEAE
Rumex obtusifolius	Broadleaf dock	Perennial herb	non-native	POLYGONACEAE
Salix hookeriana	Coastal willow	Tree, Shrub	native	SALICACEAE
Salix sitchensis	Coulter willow	Tree, Shrub	native	SALICACEAE
Trifolium sp.	Clover	Annual herb		FABACEAE
Trifolium subterraneum	Subterranean clover	Annual herb	non-native	FABACEAE