

TECHNICAL MEMORANDUM

Hartley Street Biological, Wetlands, and Stream Classification Survey
Lakeport, California

Date: June 17, 2019

Project No.: 7184.04

Prepared For: City of Lakeport

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Reviewed By: Elizabeth Burks, AICP, Planning Director



Attachments Appendix A:

Figure 1: Location Map

Appendix B:

Site Photos

Appendix C:

List of Plant Species Encountered

1.0 INTRODUCTION

The City of Lakeport (CLIENT) has requested professional services from LACO Associates (LACO) related to preparation of plans and special studies to support the Hartley Street Pedestrian Improvement Project (Project). The Project involves roadway widening and the installation of concrete sidewalk, curb, and gutter, and Americans with Disabilities Act (ADA)-compliant ramps along an approximately 2,800-foot length portion of Hartley Street, within the City of Lakeport (City), from the Anastasia Drive intersection, south to 20th Street (Site; see Figure 1). In addition, an approximately 200-foot-long stretch of Hartley Street beginning at Anastasia Drive would also be repaved. Funding for the Project is from a Safe Routes to Schools grant from the Lake County Transportation Commission, awarded in 2017. The following special study is the biological, wetlands, and stream classification survey.

LACO's Senior Environmental Scientist completed one mid-season (April 2019) field survey to identify any potentially sensitive or special status species or habitat areas located on the Project Site, including stream drainages, riparian, and wetland areas.

2.0 METHODS

A biological survey was conducted by LACO's Senior Environmental Scientist, Gary Lester, at the Project Site on April 22, 2019, involving a total of approximately 3 hours of survey time. Mr. Lester is qualified to conduct plant surveys as he has an undergraduate degree in botany and has received training in recognition of local

flora and fauna, plant identification, and survey protocols. Additionally, Mr. Lester has conducted sensitive plant surveys, biological site investigations, and wildlife surveys professionally for over 25 years.

Prior to and during the survey, a number of resources were consulted to determine potential areas of sensitive plant and wildlife species occurrence in the vicinity of the Project Site, including: California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDDB) for the Lakeport quadrangle (CDFW, 2019), U.S. Geological Survey's (USGS) 7.5-minute Lakeport quadrangle topographic map, and aerial photography.

The biotic site survey was conducted following protocol developed by CDFW (2018). The intuitively controlled survey included sampling the identified potential habitat at a moderate to high coverage (60% to 100%). Plants were identified to the lowest taxonomic level (genus or species) necessary for rare plant identification, following the scientific nomenclature of the Jepson Manual (Baldwin, et. al., 2012).

3.0 ENVIRONMENTAL SETTING

The Project Site encompasses an approximately 3,000-foot-long stretch of Hartley Street in Lakeport, California. The Project Site is within the northern portion of the City, approximately 0.45 miles west of Clear Lake, approximately 0.5 miles east of Highway 29, and approximately 0.5 miles north of the Lake County Courthouse. Elevations at the Project Site range between approximately 1,342 feet and 1,420 feet above mean sea level. The Project Site is a residential street that services Lakeport homes and runs adjacent to Clear Lake High School, with Terrace Middle School and Lakeport Elementary School further to the east. Soils are mapped by Natural Resources Conservation Services (NRCS) as Wappo soils, primarily a deep brown loam originating from alluvial sources (NRCS, 1997).

The Project Site lies in the Clear Lake drainage with associated blue oak and ruderal grassland habitats located on the Project Site (Appendix B, Photos 1-2). The blue oak habitat (Appendix B, Photo 1) vegetation at the Project Site is dominated by canopy trees, including: blue oak (*Quercus douglasii*), California bay (*Umbellularia californica*), valley oak (*Quercus lobata*), and northern California black walnut (*Juglans hindsii*). The understory vegetation associated with the oak woodland includes common manzanita (*Arctostaphylos manzanita*), blue dicks (*Dichelostemma congesta*), and coyote brush (*Baccharis pilularis*). Adjacent to the blue oak habitat are disturbed ruderal grassland habitats, dominated by non-native grasses (Appendix B, Photo 2): soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), silver hair grass (*Aria caryophyllea*), ripgut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and annual dogtail grass (*Cynosurus echinatus*), with widely scattered native perennials including common fiddleneck (*Amsinckia menziesii*), poison oak (*Toxicodendron diversilobum*), mule's ears (*Wyethia angustifolia*), curly dock (*Rumex crispus*), and blow-wives (*Achyrachaena mollis*), annual lupine (*Lupinus bicolor*), and California centaury (*Zeltnera venusta*).

4.0 SENSITIVE PLANT SPECIES ANALYSIS

4.1 Potential Sensitive Plant Species Present

Based on the species identified in the CNDDDB records, the range of habitats present, and the geographical range of the various sensitive species, the species considered most likely to occur in the vicinity of the Project Site are presented in Table 1. No special habitats (such as freshwater ponds, thermal springs or serpentine outcrops) are present at the Project Site, eliminating sensitive species specific to those types of habitats. The

sensitive plant species listed in Table 1 have the potential to occur at the Project Site based on habitat and known population's proximity nearby.

Table 1. Sensitive Plant Species Occurring within the Vicinity (Including State and Federal Threatened, Endangered, or State Species of Concern)

Plant Species	Status ²	Habitat	Occurrence at the Project Site ¹
Konocti manzanita (<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>)	CNPS 1B.3	Lower montane coniferous forest, volcanic soils (225-1,830m)	Absent. No suitable habitat occurs at the Project Site (obsidian slopes, McMinn, 1939).
Bent-flowered fiddleneck (<i>Amsinckia lunaris</i>)	CNPS 1B.2	Often serpentine, open oak/pine woodland (280-1,010m)	Absent. Suitable soils (serpentine) or habitat (open oak/pine woodland) do not occur at the Project Site.
Mayacamas popcornflower (<i>Plagiobothrys lithocaryus</i>)	CNPS 1A	Chaparral, cismontane woodland, grasslands (150-1,250m)	Absent. There is no suitable habitat for this species (moist sites), historic record only. There are no known occurrences at the Project Site
Serpentine cryptantha (<i>Cryptantha dissita</i>)	CNPS 1B.2	Chaparral, serpentine outcrops (135-735m)	Absent. There is no suitable habitat at the Project Site
glandular western flax (<i>Hesperolinon adenophyllum</i>)	CNPS 1B.2	Chaparral, cismontane woodlands, usually serpentine, (425-1,345m)	Absent. No suitable soils occur at the Project Site.
Burke's goldfields (<i>Lasthenia. burkei</i>)	FE/CE CNPS 1B.1	Vernal pools, (15-600m)	Absent. No suitable habitat (vernal pools) occurs in the Project Site.
Colusa layia (<i>Layia septentrionalis</i>)	CNPS 1B.2	Chaparral, cismontane woodlands, usually serpentine, (100-900m)	Absent. No suitable soils (gravelly or serpentine) occur at the Project Site.
Beaked tracyina (<i>Tractina rostrata</i>)	CNPS 1B.2	Chaparral, cismontane woodland (55-855m)	Absent. No suitable native grassland occur at the Project Site.

¹ OCCURRENCE DESIGNATIONS:

Present: Species observed at the Project site at time of field survey or during recent past.

Likely: Species not observed at the Project site, but it may be reasonably expected to occur there on a regular basis.

Possible: Species not observed at the Project site, but it could occur there from time to time.

Unlikely: Species not observed at the Project site, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed at the Project site and precluded from occurring there because habitat requirements not met.

²STATUS CODES:

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CSC	California Species of Special Concern
CNPS	California Native Plant Society Listing		
D/FD	Delisted or proposed Federal delisting		

5.0 SENSITIVE ANIMAL SPECIES ANALYSIS

5.1 Potential Sensitive Animal Species Present

According to CNDDDB records of Lakeport Quad species lists (CDFW, 2019) and the U.S. Fish and Wildlife (USFWS) Information for Planning and Consultation (IPaC, 2019), the species considered most likely to occur in the vicinity of the proposed Project Site are listed in Table 2. Only ruderal grassland, Class III drainage, and blue oak woodland habitats were found to be present on-site, eliminating many of the sensitive species specific to other types of habitats.

Table 2. Sensitive Animal Species Potentially Present at the Proposed Project Site

Species	Common Name	Fed/State List	Preferred Habitat/Potential Occurrence
<i>Taxidea taxus</i>	American badger	None	Open ground/Limited habitat
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	None	Nests in tall trees on lake margins/Unlikely, few suitable trees
<i>Ardea herodias</i>	Great Blue Heron	None	Nests in tall trees on lake margins/Unlikely, few suitable trees
<i>Agelaius tricolor</i>	Tricolored Blackbird	None	Colonial nester/Unlikely, few suitable trees
<i>Dryobates nuttallii</i>	Nuttall's Woodpecker	None	Oak woodlands/IPaC BSS, species observed
<i>Baeolophus inornatus</i>	Oak Titmouse	None	Oak woodlands/IPaC BBS, species observed
<i>Pandion haliaetus</i>	Osprey	None	Nests in large tree or snags/Known City nesting species
<i>Chamaea fasciata</i>	Wrentit	None	Diverse dense cover/IPaC BBS, species observed

6.0 RESULTS

The biological survey encompassed the Project Site, focusing on the proposed roadside footprint expansion (Appendix A, Figure 1). No sensitive plant species were observed during the field survey. Three sensitive birds were observed within the project boundaries, including Nuttall's woodpecker, oak titmouse, and wrentit. A species list of plants found during the survey of the Project Site is provided in Appendix C.

In addition, one Class III drainage was observed in proximity of the Project Site, found adjacent to Hartley Street, north of Boggs Lane.

6.1 Bird Species Observed

Bird species observed at the Project Site comprise primarily common occurring species expected in upland habitats near and around Lakeport, although three bird species of special concern were also observed at the Project boundaries. Year-round resident and summer resident bird species observed were American Crow (*Corvus brachyrhynchos*), California Scrub-Jay (*Aphelocoma californica*), Tree Swallow (*Tachycineta bicolor*), Cliff Swallow (*Petrochelidon pyrrhonota*), Anna's Hummingbird (*Calypte anna*), Wilson's Warbler

(*Cardellina pusilla*), White-breasted Nuthatch (*Sitta canadensis*), Northern Mockingbird (*Mimus polyglottos*), Pileated Woodpecker (*Dryocopus pileatus*), Bullock's Oriole (*Icterus bullockii*), House Finch (*Haemorrhous mexicanus*), Acorn Woodpecker (*Melanerpes formicivorus*), Black Phoebe (*Sayornis nigricans*), Lesser Goldfinch (*Spinus psaltria*), Nuttall's Woodpecker, Wrentit, Oak Titmouse, Orange-crown Warbler (*Oreothlypis celata*), California Towhee (*Pipilo maculatus*), Spotted Towhee (*Melospiza crissalis*), Golden-crowned Sparrow (*Zonotrichia atricapilla*), Eurasian Starling (*Sturnus vulgaris*), Red-winged Blackbird (*Agelaius phoeniceus*), Brewer's Blackbird (*Euphagus cyanocephalus*), Eurasian Collared-Dove (*Streptopelia decaocto*), and Mourning Dove (*Zenaidura macroura*). The oak titmouse, Wrentit, and Nuttall's woodpecker are recognized bird species of special concern by CDFW (IPac, 2019). All three are year-round residents and potential on-site breeders. Potential breeding season construction impacts are addressed under Section 7.0, Conclusions and Recommendations, below.

6.2 Stream Classification/Wetland Survey Results

The following descriptions are provided based on field observations of adjacent Hartley Street habitats.

Class III Drainage

A Class III (seasonal) drainage occurs near the junction of Boggs Lane and Hartley Street and heads north on the west side of Hartley Street. The Class III drainage borders Hartley Street for approximately 400 feet (Appendix B, photos 3 and 4). The drainage ultimately passes under Hartley Street through a culvert and proceeds towards Clear Lake (Appendix B, photos 5 and 6). The drainage has a defined erosional channel approximately 1 to 4 feet wide with a discontinuous overstory canopy consisting of interior live oak, blue oak, valley oak, coyote brush, and bitter cherry. No distinct stream bank (riparian) or stream bed (wetland indicators) vegetation was observed. The slope over an approximately 400-foot distance above the culvert is approximately 5 to 10 percent; bank height is approximately 1 to 3 feet; and streambed material primarily consists of streamflow smoothed, gravels and anchored boulders. The eventual receiving waters to the drainage is Clear Lake.

No other natural streams having defined channels were located within or along the Hartley Street project area. There are other storm drainages (curbs, gutters, drop-inlets), and apparent storm-related erosional features located along Hartley Street; however, those features would not constitute natural stream channels.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Due to the presence of the Class III drainage beside Hartley Street north of Boggs Lane, prior to any road widening in this section, the City should apply for and have a Streambed Alteration Agreement approved by CDFW. Due to the presence of known sensitive bird species in the adjacent blue oak woodland within the Project boundaries, any proposed heavy vegetation (limbs over 6" in diameter) removal shall be conducted in the non-nesting season (August 1-March 1). If any removal of heavy vegetation is proposed during the nesting season, then a qualified biologist shall determine the presence of vulnerable nests (within 100 feet for passerines, 300 feet for raptors from the heavy vegetation removal). Any active nests within the above-mentioned distances shall be allowed to complete their nesting or until the biologist determines that they are no longer active before removal.

8.0 REFERENCES

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti and D. H. Wilken. 2012. The Jepson Manual: Vascular Plants of California. University of California Press. Berkeley CA.
- California Department of Fish and Wildlife. March 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Sacramento, CA.
- California Department of Fish and Wildlife. May 2019. California Natural Diversity Data Base (CNDDB). Lakeport. Sacramento, CA.
- California Native Plant Society. 2019. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, Lakeport Quad. Sacramento, CA. Available online at <http://www.rareplants.cnps.org/>. Accessed May 2019.
- Natural Resources Conservation Service. February 1997. United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for [CA033 Lake County, California]. Available online at <http://soildatamart.nrcs.usda.gov>. Accessed May 2019.
- US Geological Service, Lakeport (1993) 7.5-minute quadrangle map. Denver, CO.

APPENDIX A

Figure 1: Location Map

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APPENDIX B

Site Photos



Photo 1 – Adjacent blue oak woodland habitat



Photo 2 – Adjacent ruderal grassland habitat



Photo 3 – Adjacent Class III drainage



Photo 4 - Adjacent Class III drainage



Photo 5 – Class III road crossing (west side)



Photo 6 – Class III road crossing (east side)

APPENDIX C

List of Plant Species Encountered

Species	Common Name	Fed/State List	Native / Non-Native
<i>Achillea millefolium</i>	yarrow	none	Native
<i>Acmispon micranthus</i>	bird's-foot trefoil	none	Native
<i>Aesculus californica</i>	California buckeye	none	Native
<i>Aira caryophylla</i>	silver hair grass	none	Non-Native
<i>Amsinckia menziesii</i>	common fiddleneck	none	Native
<i>Anagallis arvensis</i>	scarlet pimpernel	none	Non-Native
<i>Anaphalis margaritacea</i>	pearly everlasting	none	Native
<i>Ancistrocarphus filagineus</i>	woolly fishhooks	none	Native
<i>Anthriscus caucalis</i>	bur-chervil	none	Non-Native
<i>Arbutus menzeisii</i>	Pacific madrone	none	Native
<i>Arctostaphylos manzanita</i>	common manzanita	none	Native
<i>Avena barbata</i>	slender oat grass	none	Non-Native
<i>Baccharus pilularis</i>	coyote brush	none	Native
<i>Brassica niger</i>	black mustard	none	Non-Native
<i>Brassica rapa</i>	field mustard	none	Non-Native
<i>Briza minor</i>	small quaking grass	none	Non-Native
<i>Bromus catharticus</i>	rescue grass	none	Non-Native
<i>Bromus diandrus</i>	ripgut grass	none	Non-Native
<i>Bromus hordeaceus</i>	soft chess	none	Non-Native
<i>Bromus madritensis</i>	foxtail chess	none	Non-Native
<i>Carduus pycnocephalus</i>	Italian thistle	none	Native
<i>Castilleja lineariloba</i>	pale owl's clover	none	Native
<i>Centaurea solstitialis</i>	yellow star-thistle	none	Non-Native
<i>Centaurium tenuiflorum</i>	slender centaury	none	Non-Native
<i>Cerastium glomeratum</i>	common chickweed	none	Non-Native
<i>Claytonia perfoliata</i>	miner's lettuce	none	Non-Native
<i>Collomia heterophylla</i>	varied-leaved collomia	none	Native
<i>Crassula connata</i>	pygmy-weed	none	Native
<i>Croton setigerus</i>	turkey-mullein	none	Native
<i>Cynosurus enchinatus</i>	annual dogtail	none	Non-Native
<i>Cytisus scoparius</i>	Scotch broom	none	Non-Native
<i>Daucus carota</i>	Queen Anne's lace	none	Non-Native
<i>Dichelostemma capitatum</i>	blue dicks	none	Native
<i>Elymus glaucus</i>	wild blue rye	none	Native
<i>Erigeron canadensis</i>	horseweed	none	Native
<i>Eriogonum nudum</i>	naked buckwheat	none	Native
<i>Eriodictyon californicum</i>	yerba santa	none	Native
<i>Erodium cicutarium</i>	redstem filaree	none	Non-Native
<i>Eriophyllum lanatum</i>	Oregon sunshine	none	Native
<i>Festuca californica</i>	California fescue	none	Native
<i>Festuca perennis</i>	perennial ryegrass	none	Native
<i>Galium aparine</i>	goose grass	none	Native
<i>Galium californicum</i>	California bedstraw	none	Native
<i>Geranium dissectum</i>	cut-leaf geranium	none	Non-Native

Species	Common Name	Fed/State List	Native / Non-Native
<i>Helminthotheca echinoides</i>	bristly ox-tongue	none	Non-Native
<i>Heteromeles arbutifolia</i>	toyon	none	Native
<i>Hordeum marinum</i>	Mediterranean barley	none	Non-Native
<i>Hypochaeris glabra</i>	annual cat's ear	none	Non-Native
<i>Hypochaeris radicata</i>	perennial cat's ear	none	Non-Native
<i>Juglans hindsii</i>	Northern California black walnut	none	Native
<i>Lomatium dasycarpum</i>	woolly lomatium	none	Native
<i>Lupinus bicolor</i>	annual lupine	none	Native
<i>Madia elegans</i>	common tarweed	none	Native
<i>Medicago arabica</i>	spotted burclover	none	Non-Native
<i>Montia fontana</i>	water chickweed	none	Native
<i>Pentagramma triangularis</i>	goldenback fern	none	Native
<i>Pinus sabinata</i>	foothill pine	none	Native
<i>Plantago lanceolata</i>	English plantain	none	Non-Native
<i>Poa annua</i>	annual bluegrass	none	Non-Native
<i>Poa bulbosa</i>	bulbous bluegrass	none	Non-Native
<i>Polygala californica</i>	California milkwort	none	Native
<i>Polygonum aviculare</i>	knotweed	none	Native
<i>Prunella vulgaris</i>	self-heal	none	Non-Native
<i>Prunus emarginata</i>	bitter cherry	none	Native
<i>Pseudotsuga menziesii</i>	Douglas-fir	none	Native
<i>Pteridium aquilinum</i>	bracken fern	none	Native
<i>Quercus douglasii</i>	blue oak	none	Native
<i>Quercus lobata</i>	valley oak	none	Native
<i>Quercus wislizeni</i>	interior live oak	none	Native
<i>Ranunculus occidentalis</i>	western buttercup	none	Native
<i>Raphanus sativus</i>	wild radish	none	Non-Native
<i>Rubus armenicus</i>	Himalaya blackberry	none	Non-Native
<i>Sanicula crassicaulis</i>	Pacific sanicle	none	Native
<i>Senecio vulgaris</i>	common groundsel	none	Non-Native
<i>Sonchus oleraceus</i>	sow thistle	none	Non-Native
<i>Toxicodendron diversilobum</i>	poison oak	none	Native
<i>Trifolium willdenovii</i>	tomcat clover	none	Native
<i>Triteleia laxa</i>	Ithuriel's spear	none	Native
<i>Umbellularia californica</i>	California bay	none	Native
<i>Vicia hirsuta</i>	annual vetch	none	Non-Native
<i>Vicia villosa</i>	hairy vetch	none	Non-Native
<i>Vulpia bromoides</i>	smooth brome	none	Native
<i>Wyethia mollis</i>	woolly mule-ears	none	Native
<i>Yabea microcarpa</i>	sock-destroyer	none	Native