BCPUD 31 Wharf Road Well Project

Coastal Development Permit Application

Bolinas, Marin County, California

Prepared for:

Bolinas Community Public Utilities District
270 Elm Road
Bolinas, CA 94924

Attn: Jennifer Blackman
jblackman@bcpud.org

Prepared by:

WRA, Inc.
2169 G East Francisco Boulevard
San Rafael, CA 94901

Attn: Leslie Lazarotti
lazarotti@wra-ca.com

December 2023

WRA#27283-4

Contents

List of Preparers

Leslie Lazarotti Principal in Charge

List of Acronyms

BCC	USFWS Birds of Conservation Concern
BGEPA	Bald & Golden Eagle Protection Act
BIOS	Biogeographic Information & Observation System
BRA	Biological Resources Assessment

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1.0 PLANNING PERMIT APPLICATION

COUNTY OF MARIN

COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION

General Planning Permit Application

To be completed by planning department staff:

Date Received: _____ Project ID Number: _____ Received By: _____

PLANNING PERMITS

Property Development

- ☒ Coastal Permit
- ☐ Design Review
- ☐ Floating Home Exception
- ☐ Housing Compliance Review: Form Based
- ☐ Housing Compliance Review: SB 9
- ☐ Housing Compliance Review: SB35
- ☐ Residential Accessory Dwelling Unit
- ☐ Tree Removal Permit
- ☐ Site Plan Review
- ☐ Variance

Property Use

- ☐ Conditional Use Permit
- ☐ Homeless Shelter Permit
- ☐ Master Use Permit
- ☐ Temporary Use Permit

Lot Modification

- ☐ Certificate of Compliance
- ☐ Lot Line Adjustment
- ☐ Master Plan
- ☐ Merger
- ☐ Map Plan Check
- ☐ Tentative Map
- ☐ Tentative Map Waiver
- ☐ Urban Lot Split

Policy

- ☐ Community or Countywide Plan Amendment
- ☐ Rezoning

Signs

- ☐ Sign Review
- ☐ Sign Permit/Temporary

Amendment/Extension/Renewals

- ☐ Planning Permit Amendment
- ☐ Use Permit Renewal
- ☐ Planning Permit Extension

List the Planning Permit number(s) to be amended, extended, or renewed: _____

PROJECT DESCRIPTION – Please attach an addendum to this application if more space is needed.

The project involves connecting an existing groundwater well at the site to the BCPUD's water distribution system as an emergency source of supply during droughts via approximately 270 feet of piping to be installed from the well head and treatment unit to the BCPUD's water main in Wharf Road. An on-site chlorination unit, housed inside a small shed (approximately 80 square feet in size), and a 4,600-gallon water storage tank will also be installed approximately 60 feet to the southwest of the well pad. As a security measure, the shed and water storage tank, as well as the existing well pad, will be surrounded by chain link fencing with locked gates accessible only to BCPUD staff and authorized agents.

PROPERTY INFORMATION

Assessor Parcel Number(s): 193-061-03 Zoning District: C-RA-B2

Property Address: 31 Wharf Road City: Bolinas Zip: 94924

Property Owner of Record (*current tax roll year*): Bolinas Community Public Utilities District

APPLICATION CONTACTS

Property Owner (P.O.) Contact Name: Jennifer Blackman

P.O. Mailing Address: 270 Elm Road City: Bolinas Zip: 94924

P.O. Phone: 415.868.1224 P.O. Email: jblackman@bcpud.org

Primary Applicant (P.A.) Contact Name: Leslie Lazarotti

P.A. Mailing Address: 2169-G East Francisco Blvd City: San Rafael Zip: 94901

P.A. Phone: 415.699.0236 P.A. Email: lazarotti@wra-ca.com

Additional Contact Name: N/A

Additional Contact Phone: N/A Additional Contact Email: N/A

For Lot Line Adjustments:

Additional Property Owner (P.O.) Name: N/A

Additional P.O. Phone: N/A Additional P.O. Email: N/A

Additional Property Owner (P.O.) Name: N/A

Additional P.O. Phone: N/A Additional P.O. Email: N/A

Additional Property Owner (P.O.) Name: N/A

Additional P.O. Phone: N/A Additional P.O. Email: N/A

ADDITIONAL PERMIT INFORMATION

Required: Standard project data for all project types is included on sheet: _____

Required: For projects including buildings and additions, the existing and proposed topographic contours of the site underlying the roof plan with roof ridge and corner elevations are shown on sheet: _____

Required: For projects including buildings and additions, additions are shown as shaded on sheet: _____

Check any of the following that applies:

☐ This application is for a new Telecommunications Facility and includes a completed copy of the Telecommunications Policy Plan Application Requirements Checklist.

☐ This application is related to a pending building permit and the tracking number is: _____

☐ This application is related to a Code Compliance violation and the case number is: _____

REQUIRED INFORMATION - To be completed by applicant

The information requested to be included in this application are in addition to the information required pursuant to the Planning Application Submittal Checklist. Additional information may be requested. Definitions for the items required below are available in the Marin County Development Code Section 22.130.030.

Lot Development Data

Required Project Data	Existing	Proposed
Lot Area (square feet)	**80,586**	**Unchanged**
Building Area (square feet)	N/A	**159 (shed and tank)**
Floor Area (square feet)	N/A	**159**
Area of Disturbance (square feet)		**n/a**
Lot Coverage - Impervious (square feet)		**159**
Lot Coverage – Pervious (square feet)	**80,427**	**80,427**
Grading – Cut (cubic yards)	-	**N/A**
Grading – Fill (cubic yards)	-	**N/A**
Grading – Off-haul (cubic yards)	-	**N/A**
Number of Parking Spaces	0	0
Number of lots (subdivisions only)	N/A	N/A

Primary Building Data

Required Project Data	Existing	Proposed
Maximum Building Height (feet)	**N/A**	**N/A**
Setback distance – Front property line (feet)	**N/A**	**N/A**
Setback distance – Left side property line (feet)	**N/A**	**N/A**
Setback distance – Right side property line (feet)	**N/A**	**N/A**
Setback distance – Rear property line (feet)	**N/A**	**N/A**

Accessory Building Data

Required Project Data	Existing	Proposed
Maximum Building Height (feet)	N/A	**8** N/A
Setback distance – Front property line (feet)	N/A	**124** N/A
Setback distance – Left side property line (feet)	N/A	**4** N/A
Setback distance – Right side property line (feet)	N/A	**164** N/A
Setback distance – Rear property line (feet)	N/A	**195** N/A

Lot Line Adjustments

Required Project Data	Assessor Parcel Number	Existing Area (sqft)	Proposed Area (sqft)
Affected Lot 1	N/A	N/A	N/A
Affected Lot 2	N/A	N/A	N/A
Affected Lot 3	N/A	N/A	N/A
Affected Lot 4	N/A	N/A	N/A

CERTIFICATIONS AND SIGNATURES

The property involving this permit request may be subject to deed restrictions called Covenants, Conditions and Restrictions (CC&Rs) which may restrict the property's use and development. These deed restrictions are private agreements and are NOT enforced by the County of Marin. Consequently, development standards specified in such deed restrictions are NOT considered by the County when granting permits. I understand that it is my responsibility to determine if the property is subject to deed restrictions and if so, I certify that I have contacted the appropriate homeowner's association and adjacent neighbors about the project prior to proceeding with construction. Following this procedure will minimize the potential for disagreement among neighbors and possible litigation.

I hereby authorize employees, agents, and/or consultants of the County of Marin to enter upon the subject property upon reasonable notice, as necessary, to inspect the premises and process this application. I understand that in cases where the development site is large or cannot be easily seen or accessed from the nearest public road, the Community Development Director may determine that a publicly noticed site inspection by the decision maker is necessary. In this instance, I hereby authorize the conduct of such inspections of the premises upon reasonable notice.

I hereby certify that I have read this application form and that to the best of my knowledge, the information in this application form and all the related exhibits submitted with it are complete and accurate. I understand that any misstatement or omission of the requested information or of any information subsequently requested shall be grounds for rejecting the application, deeming the application incomplete, denying the application, suspending or revoking a permit issued on the basis of these or subsequent representations, or for the seeking of such other and further relief as may seem proper to the County of Marin.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this application was signed in

Bolinas, California
City and state in which the application was signed

Jennifer Blackman	Jennifer Blackman	December 14, 2023
Signature of Property Owner	Print Property Owner name	Date of Signature
Signature of Applicant if different from owner	Print Applicant Name	Date of Signature

For Lot Line Adjustments

Signature of Additional Property Owner	Print Property Owner name	Date of Signature
Signature of Additional Property Owner	Print Property Owner name	Date of Signature
Signature of Additional Property Owner	Print Property Owner name	Date of Signature

STATE OF CALIFORNIA HAZARDOUS WASTE AND SUBSTANCES SITE LIST (C.G.C.§ 65962.5)

This section is to be completed by the applicant. Pursuant to California Government Code Section 65962.5(e), before a local agency accepts as complete an application for any development project, the applicant shall consult the latest State of California Hazardous Waste and Substances Sites List (dtsc.ca.gov/dtscs-cortese-list/) on file with the Planning Division and submit a signed statement indicating whether the project is located on a site which is included on the List.

Statement: I have consulted the latest State of California Hazardous Waste and Substances List on file with the Planning Division, and I have determined that the project site (select by checking) ☐ **is** (or) ☒ **is not** included on the List.

Date of List consulted: October 25, 2023 Source of the listing: www.envirostor.dtsc.ca.gov

COPYRIGHT MATERIALS RELEASE

To the extent that your application submittal packet includes plans or drawings prepared by a licensed, registered or certified professional, as defined pursuant to the California Health and Safety Code Section 19851 or Business and Professions Code Section 5536.25, such as a licensed engineer, architect or other design professional, the County must first obtain the signature release and permission of said professional prior to publication or reproduction of any such plans or drawings. Such drawings and plans may also be protected by copyright laws. The County of Marin hereby requests permission to reproduce and publish plans and drawings submitted with your application packet for purposes of more effectively and efficiently facilitating the entitlement review process, including making plans and drawings available on the County's website for public review and providing electronic reproductions to the County's review boards and commissions. The purpose of this request is limited solely to the purpose of facilitating the timely review of this application, and the plans and drawings will not be utilized by the County for other purposes. To assist the County in this process, please provide below the signatures of all of those who have prepared plans and drawings to be submitted with this application agreeing to publication or reproduction of any such plans or drawings by the County.

Engineer/Surveyor Name: Allan Richards
Engineer/Surveyor Phone Number: 415-457-0701
Engineer/Surveyor Email Address: allanr@stetsonengineers.com

_____
Engineer/Surveyor's Signature Authorizing Publication and Reproduction of Plans/Drawings

Architect/Designer Name: _____
Architect/Designer Phone Number: _____
Architect/Designer Email Address: _____

_____
Architect/Designer Signature Authorizing Publication and Reproduction of Plans/Drawings

Landscape Architect Name: _____
Landscape Architect Phone Number: _____
Landscape Architect Email Address: _____

_____
Landscape Architect Signature Authorizing Publication and Reproduction of Plans/Drawings

2.0 PROJECT PLANS

NOTES:

1. APN BOUNDARIES (FROM MARINMAP.ORG) ARE APPROXIMATE AND FOR GENERAL ILLUSTRATION ONLY.

SCALE (FEET)
0 50 100 200

N
W E
S

ABBREVIATIONS:

APPROX.	APPROXIMATE
(E)	EXISTING
HDPE	HIGH DENSITY POLYETHYLENE
(N)	NEW
(TW)	TREATED WATER (POTABLE)

LEGEND:

- (E) POTABLE WATER PIPE
- (N) POTABLE WATER PIPE
- (N) RAW WATER PIPE
- SS SANITARY SEWER PIPE
- CHLORINATION SYSTEM
- PUMP (TYPE VARIES)
- APPROX. PARCEL BOUNDARY

DESIGNED: A.R.	No.	DATE	REVISION	BY	APPROVED
	1	11-8-2023	RELOCATION OF WELL TREATMENT EQUIPMENT		
DRAFTED: G.T.					
CHECKED: A.R.					

STETSON ENGINEERS INC.
Stetson Engineers Inc.
2171 E. Francisco Blvd., Suite K
San Rafael, CA. 94901
(415) 457-0701

WORKING DRAFT

BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT
WHARF ROAD WELL TIE-IN

FIGURE 1
OVERVIEW MAP

DATE: NOVEMBER 14, 2023
SCALE: AS INDICATED
PROJECT No.: 2665-003

SHEET 1 OF 3

F:\DATA\2665\Well Projects (Wharf and RR Wells)\003 - Wharf Road Well\CAD\Wharf Road Well Tie-in Figures (v6).dwg

APN: 193-061-03
BOLINAS COMMUNITY LAND TRUST
(APPROXIMATED)

FIGURE 3
EXTENT

R150'

(E) WHARF ROAD
WELL

SANITARY SEWER
LIFT STATION
(APPROX. LOCATION)

APPROX. ALIGNMENT OF (E)
POTABLE WATER PIPELINE

APPROX. ALIGNMENT OF
(E) SANITARY SEWER PIPE

Wharf Road

SS

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SCALE (FEET)
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BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT
WHARF ROAD WELL TIE-IN

FIGURE 2
TIE-IN SITE PLAN

DATE: NOVEMBER 14, 2023
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F:\DATA\2665\Well Projects (Wharf and RR Wells)\003 - Wharf Road Well\CAD\Wharf Road Well Tie-In Figures (v6).dwg

(N) CONNECTION TO POTABLE WATER PIPELINE

Wharf Road

SS

R150'

(N) TREATED WATER PIPELINE 2" DIA

(E) WATER SYSTEM MAIN PIPELINE (APPROX. LOCATION)

(E) SANITARY SEWER PIPELINE (APPROX. LOCATION)

(E) WHARF ROAD WELL

GATE

TW

(N) SHED FOR WELL/PUMP CONTROLS AND CHLORINATION SYSTEM

(N) TW TANK

(N) CHAIN-LINK FENCE

APN: 193-061-03
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(APPROXIMATED)

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FIGURE 3
TIE-IN DETAIL PLAN VIEW

DATE: NOVEMBER 14, 2023
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SHEET 3 OF 3

F:\DATA\2665\Well Projects (Wharf and RR Wells)\003 - Wharf Road Well\CAD\Wharf Road Well Tie-In Figures (v6).dwg

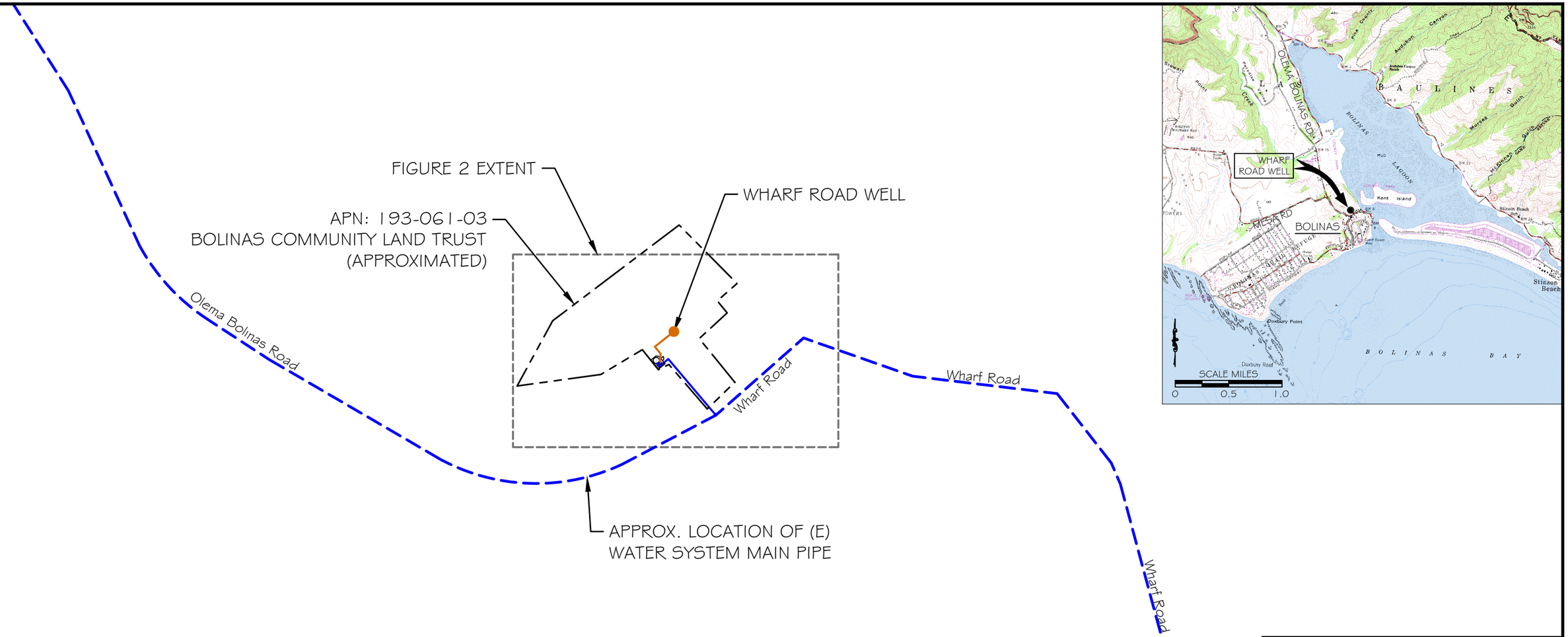

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FIGURE 2
TIE-IN SITE PLAN

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SHEET
2 OF 3

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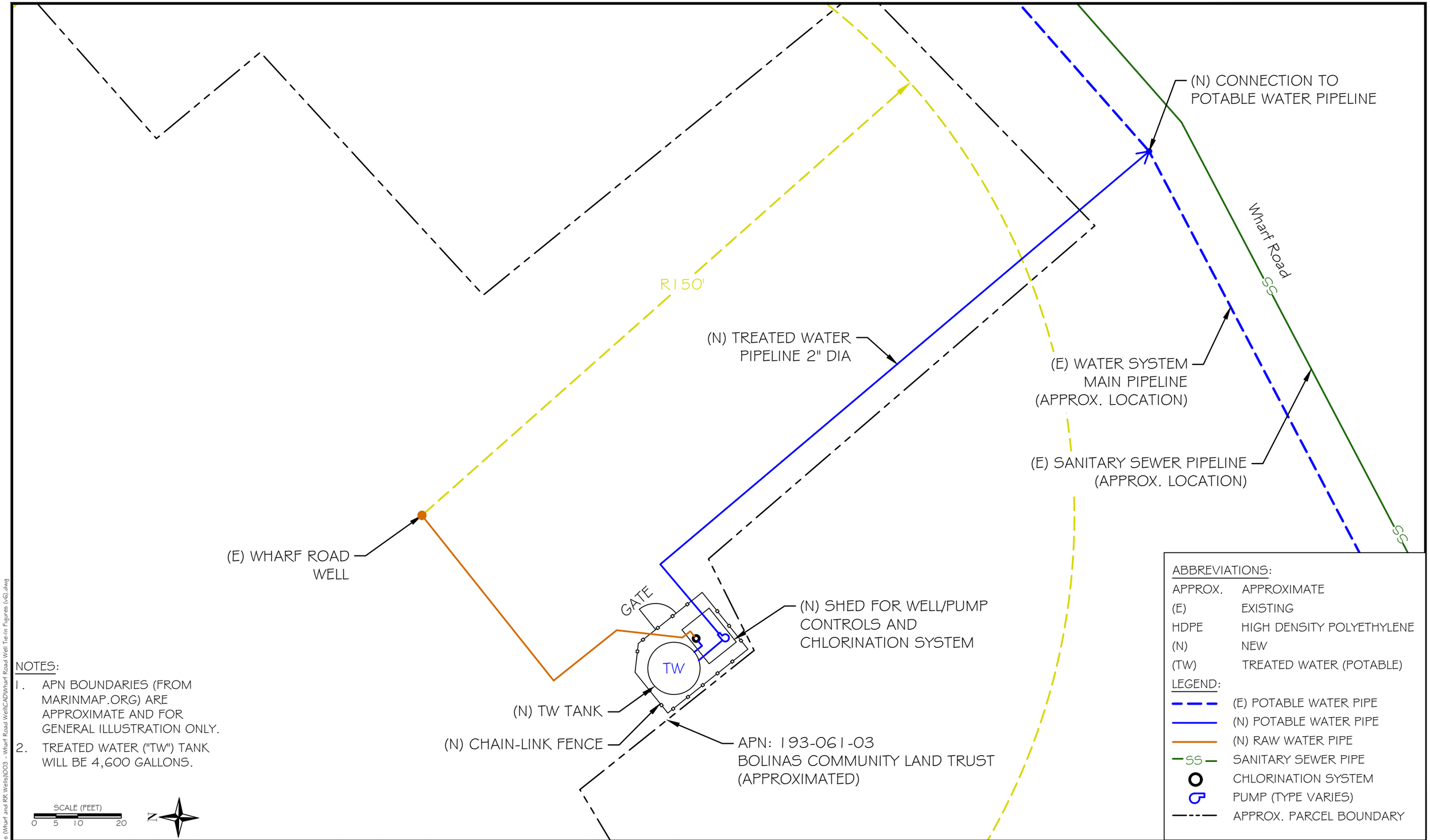

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WHARF ROAD WELL TIE-IN

FIGURE 3
TIE-IN DETAIL PLAN VIEW

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3.0 PROJECT DESCRIPTION

In response to water supply challenges posed by the drought in recent years, the Bolinas Community Public Utility District (BCPUD) applied to and received approval from the State Water Resources Control Board Division of Drinking Water (DDW) to supplement the district surface water supply using two existing supply wells. One of the wells, the 31 Wharf Well is located as indicated on Figure I. In-concert with the application to DDW, the BCPUD applied for and received project funding from the California Department of Water Resources (DWR) through the Small Communities Drought Relief Program. Subsequent to receiving DDW approval and DWR funding, BCPUD engaged with the County of Marin Community Development Agency regarding compliance with permit application requirements of the Local Coastal Program (LCP).

The existing well is located on land owned by the Bolinas Community Land Trust (BCLT); BCPUD's use of the well has been coordinated via a licensing agreement with BCLT. The project involves connecting an existing groundwater well at the site to the BCPUD's water distribution system as an emergency source of supply during droughts. This action will be completed by installing approximately 270 feet of piping from the well head and treatment unit to the BCPUD's water main in Wharf Road. An on-site chlorination unit, housed inside a small shed (approximately 80 square feet in size), and a 4,600-gallon water storage tank will also be installed approximately 60 feet to the southwest of the well pad. As a security measure, the shed and water storage tank, as well as the existing well pad, will be surrounded by chain link fencing with locked gates accessible only to BCPUD staff and authorized agents.

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4.0 BIOLOGICAL SITE ASSESSMENT AND CONSISTENCY MEMO

2169 G East Francisco Blvd.
San Rafael, CA 94901
info@wra-ca.com

September 1, 2023

Jennifer Blackman
Bolinas Community Public Utility District
270 Elm Road P.O. Box 390
Bolinas, CA 94924
jblackman@bcpud.org

Re: Biological Site Assessment Consistency Review, BCPUD 31 Wharf Road Well Project, Bolinas, Marin County, California

Dear Jennifer:

This letter provides the results of a Biological Site Assessment (BSA) update performed by WRA, Inc. (WRA) for the 31 Wharf Road Well Project (Project) located in Bolinas, California (APN 193-061-03; **Figure 1** and **Figure 2**). WRA previously prepared a BSA for the Project Site in 2020. To support the Project's Coastal Development Permit Application, an updated site evaluation was necessary to document any potential changes to existing conditions documented in the 2020 BSA. WRA reviewed the 2020 BSA and conducted a field visit to evaluate current site conditions and determine whether any modifications to the BSA are necessary. This assessment also considered any recent regulatory changes that may be applicable to the Project. The results of this assessment and any recommended revisions are outlined below.

METHODS

On August 8, 2023, WRA biologists Ivy Poisson and Tommy Dryer traversed the Project Site and surrounding 100 feet (Study Area). During the site visit, WRA staff field-verified: (1) existing conditions, (2) land cover types (e.g., terrestrial communities, aquatic resources), (3) sensitive aquatic features (e.g., wetlands) present, and (4) potential to support special-status plant and wildlife species.

Prior to the site visit, WRA conducted a desktop review of existing documents and relevant databases to determine if any new occurrences of special-status species had been documented in the vicinity of the Study Area since 2020. Database searches for special-status species focused on the Inverness, San Geronimo, Novato, Double Point, Bolinas, San Rafael, and Point Bonita following 7.5-minute quadrangles. Resources re-reviewed included the following:

- California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB) records for the Bolinas 7.5-minute quadrangle (CDFW 2023),
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Species Lists (USFWS 2023),
- California Native Plant Society (CNPS) Inventory records (CNPS 2023a),
- Contemporary aerial photographs (Google Earth 2023)

The conclusions of this report are based on conditions observed at the time of the 2023 site visit and regulatory policies and practices in place at the time the report was prepared; changes that may occur in the future regarding conditions, policies, or practices may affect the conclusions presented in this assessment.

RESULTS

Existing Conditions and Land Cover Mapping

Land cover types observed during the 2023 site visit are consistent with those characterized in the 2020 report. The Study Area remains partially developed/disturbed with an unpaved parking area and a small storage shed located on the flat, northern portion of the parcel. The steep hillside to the south is comprised of mixed coast live oak (*Quercus agrifolia*) woodland and common velvet grass (*Holcus lanatus*) grassland. The dominant species as described in these land cover types in the 2020 BSA remains unchanged and are still applicable to site observations in 2023.

The only sensitive land cover type, i.e., an environmentally sensitive habitat area (ESHA), in close proximity of the Study Area includes a seasonal wetland seep. As discussed in the BSA, the proposed Project will be located greater than 100 feet from this ESHA. No indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, or topographic depressions/swales were observed within the Study Area in 2023.

Special-status Plant Species

The 2020 BSA determined that five special-status plant species have a moderate potential to occur within the Study Area but were not observed during appropriately timed surveys. Fourteen (14) new records of special-status plants were documented during the 2023 database search using the same search parameters as the 2020 BSA; all of these species have no potential or are unlikely to occur within the Study Area. The results are shown in the table below.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**
marsh sandwort ***Arenaria paludicola***	FE, SE, Rank 1B.1	Marshes and swamps (brackish, freshwater). Elevation ranges from 10 to 560 feet (3 to 170 meters). Blooms May-Aug.	**No Potential.** The Study Area does not contain marsh/swamp habitat to support this species.
pink star-tulip ***Calochortus uniflorus***	Rank 4.2	Coastal prairie, coastal scrub, meadows and seeps, north coast coniferous forest. Elevation ranges from 35 to 3510 feet (10 to 1070 meters). Blooms Apr-Jun.	**No Potential.** The Study Area does not contain coastal prairie, meadows/seeps, and north coast coniferous forest habitat to support this species.
Mt. Saint Helena morning-glory ***Calystegia collina* ssp. *oxyphylla***	Rank 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 915 to 3315 feet (279 to 1010 meters). Blooms Apr-Jun.	**No Potential.** The Study Area does not contain serpentine soils to support this species.
bristly sedge ***Carex comosa***	Rank 2B.1	Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland. Elevation ranges from 0 to 2050 feet (0 to 625 meters). Blooms May-Sep.	**No Potential.** This Study Area does not contain standing water or saturated habitat to support this obligate species.
Franciscan thistle ***Cirsium andrewsii***	Rank 1B.2	Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub. Elevation	**Unlikely**. This Study Area does not contain drainages or seeps to support this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**
		ranges from 0 to 490 feet (0 to 150 meters). Blooms Mar-Jul.	
Mt. Tamalpais thistle ***Cirsium hydrophilum* var. *vaseyi***	Rank 1B.2	Broadleafed upland forest, chaparral, meadows and seeps. Elevation ranges from 785 to 2035 feet (240 to 620 meters). Blooms May-Aug.	**No Potential.** The Study Area does not contain serpentine soils to support this species.
silverskin lichen ***Dermatocarpon meiophyllizum***	Rank 2B.3	Coastal prairie, lower montane coniferous forest, north coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Elevation ranges from 970 to 11465 feet (295 to 3495 meters). Blooms .	**Unlikely.** The Study Area does not contain large rocks or rock outcrops to support this saxicoline lichen.
western dichondra ***Dichondra occidentalis***	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 165 to 1640 feet (50 to 500 meters). Blooms (Jan)Mar-Jul.	**Unlikely.** Although the Study Area contains valley and foothill grassland, this species' native range is typically constrained to southern California. This species has one documented occurrence in Marin County, as a checklist, and has poor locational data.
swamp harebell ***Eastwoodiella californica***	Rank 1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, marshes and swamps (freshwater), meadows and seeps, north coast coniferous forest. Elevation ranges from 5 to 1330 feet (1 to 405 meters). Blooms Jun-Oct.	**No Potential.** The Study Area does not contain bogs/fens, closed-cone coniferous forest, coastal prairie, marshes/swamps, meadows/seeps, and north coast coniferous forest to support this species.
streamside daisy ***Erigeron biolettii***	Rank 3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest. Elevation ranges from 100 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct.	**No Potential.** The Study Area does not contain creeks or streams that would support this species.
island tube lichen ***Hypogymnia schizidiata***	Rank 1B.3	Chaparral, closed-cone coniferous forest. Elevation ranges from 1180 to 1330 feet (360 to 405 meters). Blooms .	**No Potential.** The Study Area does not contain chaparral or closed-cone coniferous forest habitats.
coast iris ***Iris longipetala***	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Elevation ranges from 0 to 1970 feet (0 to 600 meters). Blooms Mar-May(Jun).	**No Potential**. This site does not contain heavy soils (clay) to support this species.
southwestern spiny rush ***Juncus acutus* ssp. *leopoldii***	Rank 4.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt), meadows and seeps (alkaline seeps). Elevation ranges from 10 to 2955 feet (3 to 900 meters). Blooms (Mar)May-Jun.	**No Potential.** The Study Area does not contain alkaline or saline seeps.
marsh zigadenus ***Toxicoscordion fontanum***	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, marshes and swamps, meadows and seeps. Elevation ranges from 50 to 3280 feet (15 to 1000 meters). Blooms Apr-Jul.	**No Potential.** The Study Area does not contain vernally moist or marshy areas.

In addition, there were no observed changes to habitat conditions within the Study Area that would affect the outcome of the special status plant potential evaluation. No special-status plant species were documented in the immediate vicinity of the Study Area between 2020 and 2023 (CNDDB 2023).

Special-status Wildlife Species

No additional impacts to special-status wildlife species were identified. Existing habitat conditions within the Study Area and immediate vicinity have not been modified to alter the suitability for any special-status wildlife species that are known to occur in the region. No special-status wildlife species were documented in the immediate vicinity of the Study Area between 2020 and 2023 (CNDDB 2023).

No special-status wildlife species were detected during the site visit on August 8, 2023. No rookery sites were observed within the Study Area or immediate vicinity.

CONCLUSIONS AND RECCOMENDATIONS

Based on the results of the 2023 site visit, no significant modifications have occurred since the BSA was previously prepared in 2020. Therefore, the ability of the Study Area to provide suitable habitat for special-status plant and wildlife species identified within the BSA remains unchanged. It is WRA's understanding that currently proposed Project activities may deviate from what was previous described in the document. This assessment assumes that Project activities will not result in the removal of trees, as stated in the BSA. So long as tree and vegetation removal are not proposed, the existing BSA is still applicable to the current site and approved for use as support for the Project's Coastal Development Permit application.

If the Project will result in the removal of trees or vegetation, the following additional measures are recommended:

Nesting Birds

- To the extent feasible, Project-related activities should be avoided during the nesting bird season, generally defined as February 1 – August 31. If Project work must occur during the nesting bird season, pre-construction nesting bird surveys be conducted within 7 days of ground disturbance to avoid disturbance to active nests, eggs, and/or young of nesting birds. These surveys would determine the presence or absence of active nests that may be affected by Project activities. It is recommended that any trees and shrubs in or adjacent to the Project Area that are proposed for removal and that could be used as avian nesting sites be removed during the non-nesting season (September 1 through January 31).
- If an active nest is located, a no disturbance buffer shall be established around the nest until all young have fledged or the nest otherwise becomes inactive (e.g., due to predation). Suggested buffer zone distances differ depending on species, location, baseline conditions, and placement of nest and will be determined and implemented in the field by a qualified biologist.

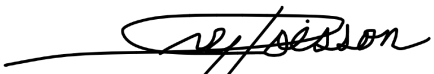
Roosting Bats

- It is recommended that the removal or trimming of all trees with a diameter at breast height greater than 16 inches occur outside of the bat maternity season (October through March). If such is not feasible, WRA recommends that bat roost assessment be performed by a qualified biologist no more than 30 days prior to removal to determine if roosting bats are

present. If special-status bat species or maternity roosts of any species are detected during these surveys, the roost trees and a no-disturbance buffer of no less than 100-feet should be avoided until maternity activities have ceased. Irrespective of time of year, all felled trees should remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape.

Please contact me with any questions.

Sincerely,



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ATTACHMENTS

Attachment 1. Biological Site Assessment (2020)

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[CDFW] California Department of Fish and Wildlife. 2023. Natural Diversity Database, Wildlife and Habitat Data Analysis Branch (CNDDB). Sacramento, California. Accessed: August 2023.

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WRA, Inc. 2020. Biological Site Assessment for 31 Wharf Road, Bolinas, Marin County (APN: 193-061-03) for Bolinas Community Land Trust. Dated September 2020.

Biological Site Assessment

31 Wharf Road
Bolinas, Marin County (APN: 193-061-03)

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EXECUTIVE SUMMARY

This report details the regulatory background, methods, results, and recommendations of a Biological Site Assessment (BSA) for the proposed development of a property located at 31 Wharf Road, Bolinas, Marin County, California (Study Area). The assessment and survey are required by the County of Marin for a multi-unit affordable housing with commercial space and parking spaces (Proposed Project). WRA, Inc. performed the assessment and survey on April 9 and July 27, 2020 to address the potential and actual presence of sensitive natural resources.

The Study Area is composed of developed and disturbed areas, mixed coast live oak woodland, a small patch of grassland, and a seasonal wetland seep. The latter land cover type is the only sensitive type, i.e. an environmentally sensitive habitat area (ESHA). The Proposed Project will be located greater than 100 feet from this ESHA.

Five special-status plants were determined to have the potential to occur within the Study Area; however, a protocol-level rare plant survey was conducted and resulted in negative detections. Therefore, the Proposed Project will not impact special-status plants.

Eight special-status wildlife, as well as non-status nesting birds, were determined to have the potential to occur within the Study Area; however, these species, if present, would occur within trees. The Proposed Project will not remove any trees, and vegetation alteration is minimal. Therefore, the Proposed Project will not impact special-status wildlife or non-status nesting birds.

The Study Area does not contain Critical Habitat, Essential Fish Habitat, and significant wildlife corridors; therefore, the Proposed Project will not impact such.

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LIST OF PREPARERS

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Aaron Arthur – Associate Plant Biologist

DEFINITIONS

Study Area: The area throughout which the assessment was performed; approximately 1.85 acres spanning across the entirety of the parcel of APN: 193-061-03.

Project Area: The area encompassing the proposed project; the area evaluated for potential impacts to sensitive biological resources; approximately 0.21 acre where the clustered development has been sited

LIST OF ABBREVIATIONS & ACRONYMS

BGEPA	Bald and Golden Eagle Protection Act
BIOS	Biogeographic Information and Observation System
BRRS	Biological Resources Reconnaissance Survey
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
County	County of Marin
Corps	U.S. Army Corps of Engineers
CSRL	California Soils Resources Lab
CWA	Clean Water Act
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	(Federal) Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
LCP	Local Coastal Program
Magnusen-Stevens Act	Magnuson-Stevens Fishery Conservation & Management
MBTA	Migratory Bird Treaty Act
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OHWM	Ordinary High Water Mark
Rank	California Rare Plant Ranks
RHA	Rivers and Harbors Act
RWQCB	Regional Water Quality Control Board
SCA	Stream Conservation Area
SSC	Species of Special Concern
SFP	State Fully Protected Species
SWRCB	State Water Resource Control Board
TOB	Top of Bank
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WCA	Wetland Conservation Area
WRA	WRA, Inc.

1.0 INTRODUCTION

On April 9 and July 27, 2020, WRA conducted a biological site assessment (BSA) at the site of a proposed residential development located on 9 Wharf Road, Bolinas, in unincorporated Marin County, California, Assessor's Parcel Number 193-061-03 (Study Area, Figure 1). The purpose of this assessment is: (1) to gather information necessary to complete a review of biological resources adequate for use for the California Environmental Quality Act (CEQA), to determine whether the property supports any sensitive habitats or species, and (2), if applicable, to assess potential impacts to any sensitive natural resources as required by the Marin County Community Development Agency, Planning Division. The Study Area includes the entirety of the one subject parcel.

This report describes the results of the site visit for which the Study Area was assessed concerning: (1) presence of early-season special-status plants; (2) potential to support special-status species (plants and wildlife); and (3) the presence of other biological resources protected by local, state, and federal laws and regulations including a delineation of wetlands and non-wetland waters for California Coastal Commission (CCC), U.S. Army Corps of Engineers (Corps), and Regional Water Quality Control Board (RWQCB) jurisdiction. This report also contains an evaluation of potential impacts to special-status species and potentially regulated habitats that may or may not occur as a result of the proposed project.

The Study Area supports one sensitive land cover type: seasonal wetlands. A botanical survey resulted in negative findings of special-status plants, but the Study Area does have the potential to support special-status wildlife.

The Proposed Project consists of the construction of a multiple-unit affordable housing development (see Section 6.1). The Proposed Project is not anticipated to impact sensitive natural resources.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the BSA, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act, and the Coastal Zone Management Act; state regulations such as the Porter-Cologne Act, California Coastal Act, the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program, and the California Environmental Quality Act (CEQA); or local ordinances or policies such as city or county tree ordinances, Local Coastal Programs (LCPs), Special Habitat Management Areas, and General Plan Elements.

2.1.1 Waters of United States

The United States Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

2.1.2 Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit, but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

2.1.3 Streams, Lakes, and Riparian Habitats

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as "a body of water that flows at least periodically or intermittently through

a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). "Riparian" is defined as "on, or pertaining to, the banks of a stream." Riparian vegetation is defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

2.1.4 Environmentally Sensitive Habitat Areas

Environmentally sensitive habitat areas (ESHAs) are defined in California Coastal Act (CCA) Section 30107.5 and protected under section 30240 and include wetlands, rivers, streams and lakes, and riparian areas. For the purposes of this report, WRA has taken into consideration any areas that may meet the definition of any ESHA defined by the CCA, listed in the *Statewide Interpretive Guidelines for Identifying and Mapping Wetlands and Other Wet Environmentally Sensitive Habitat Areas* ("California Coastal Commission guidelines", CCC 1981), or the Marin County Local Coastal Program (LCP) (Marin County 1979).

The CCA defines an ESHA as follows:

> *"Environmentally sensitive habitat area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. "*

The CCC Guidelines discuss the various definitions for specific types of ESHAs, including wetlands, streams and riparian areas. Many of these definitions are synonymous with the definitions described above. Additional definitions are provided below.

<u>Coastal Act Wetlands</u>

The Coastal Act defines wetlands as:

> "*Wetland means land within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens".*
>
> (Public Resources Code § 30121)

CCC Administrative Regulations (Section 13577 (b)) provide a more explicit definition:

> *"Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats."*

The Coastal Act defines the upland limit of wetlands as:

> *(1) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; (2) the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric; or (3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not."*

Coastal Act Streams and Rivers

The Marin County LCP provides special protections for USGS blue-line streams, and establishes buffers to protect streams from the impacts of adjacent uses including development impacts from construction and post-construction activities within the LCP Unit II Area. Stream buffers are defined by the LCP as: "the area covered by riparian vegetation on both sides of the stream and the area 50 feet landward from the edge of the riparian vegetation." The LCP also states that in no case shall the stream buffer be less than 100 feet in width, on either side of the stream, as measured from the top of the stream banks."

Coastal Act Riparian Habitats

While riparian vegetation is not defined specifically in the California Coastal Act, it is defined by the LCP as the stream itself and the riparian vegetation growing adjacent to it. Common plant genera associated with this vegetation type in Unit II of the Coastal Zone within Marin County include maple (*Acer* spp.), alder (*Alnus* spp.), ash (*Fraxinus* ssp.), and willow (*Salix* spp.). For the purposes of determination of status under the Coastal Act, we define riparian habitat as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). This definition is synonymous with the CDFW definition described above.

2.1.5 Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2020a). Sensitive plant communities are also identified by CDFW (CNPS 2020b). CNDDB vegetation alliances are ranked 1 through 5

based on NatureServe's (2015) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

2.1.6 Marin County Sensitive Resources

In Marin County, a sensitive resource includes "jurisdictional wetlands, occurrences of special-status species, occurrences of sensitive natural communities, wildlife nurseries and nesting areas, and wildlife movement corridors. The County development review process typically requires a site assessment by qualified professionals to confirm whether any sensitive resources could be affected . . ."

Marin County Stream Conservation Areas

In Marin County, a Stream Conservation Area (SCA) is designated along all natural watercourses supporting riparian vegetation for a length of 100 feet or more. The SCA consists of the watercourse itself between the tops of the banks and a strip of land extending laterally outward from the top of both banks. For those ephemeral streams that do not meet these criteria, a minimum 20-foot development setback shall be required. Development activities that may occur within a SCA are closely regulated by the County and require consideration of impacts of proposed developments on species and habitats during the environmental review process.

Marin County Wetland Conservation Areas

In Marin County, a Wetland Conservation Area (WCA) is designated around all Corps jurisdictional wetlands. The WCA consists of the wetland itself and a strip of land extending laterally outward from the wetland for a distance of 100 feet or as deemed appropriate by a qualified biologist to avoid impacts and protect the wetland. Development activities that may occur within a WCA are closely regulated by the County and require consideration of impacts of proposed developments on species and habitats during the environmental review process.

2.2 Special-status Species

2.2.1 Plants and Wildlife

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates, are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA.

Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1, 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded little or no protection under CEQA, but are included in this analysis for completeness. Plant species with a CNPS Rare Plant Rank of 1 through 2 are also considered as ESHAs.

In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). Under these laws, destroying active bird nests, eggs, and/or young is illegal.

Bat species designated as "High Priority" by the Western Bat Working Group (WBWG) are afforded legal protection under Section 15380(d) of the CEQA Guidelines. Species designated "High Priority" are defined as "imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats. California Fish and Game Code continues to protect non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. Relevant regulations include CFGC Section 86; 2000; 2014; 3007; 4150, along with Title 14 of California Code of Regulations.

Special-status species and their habitats are also defined as ESHAs by the California Coastal Act.

2.2.2 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Critical habitat is a term defined in the ESA as a specific and formally-designated geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. Note that designated critical habitat areas that are currently unoccupied by the species but which are deemed necessary for the species' recovery are also protected by the prohibition against adverse modification.

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) provides for conservation and management of fishery resources in the U.S. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g. eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

3.0 STUDY AREA SETTING

The following subsections summarize the physical and biological characteristics of the entire Study Area.

3.1 Topography and Soils

The Study Area is composed of one parcel located at 9 Wharf Road, Bolinas, Marin County. The property is historically coastal valley less than a quarter-mile from the Pacific Ocean. The predominant aspect is westerly, slopes range from 0 to 50 percent and elevations range from 11 to 120 feet above sea level. According to the *Soil Survey of Marin County* (USDA 1985), the Study Area is underlain by two mapping units: Xerorthents-Urban Land Complex, 0 to 9 percent slopes and Tomales-Steinbeck Loams, 30 to 50 percent slope. The parent series of these mapping units are detailed below.

Tomales Series: This series consists of deep loam soils formed on strongly weathered sandstone located on rolling hills at elevations ranging from 0 to 800 feet (USDA 1985, CSRL 2020). These soils are not considered hydric and are moderately well drained, with medium to rapid runoff, and very slow permeability (CSRL 2020, USDA 1985, USDA 2017). Native and naturalized vegetation includes annual grasses and coyotebush (*Baccharis pilularis*), and typical land uses are predominantly rangeland, watershed, and wildlife habitat (USDA 1985).

Steinbeck Series: This series consists of deep loam soils formed in residuum weathered from sandstone situated on rolling hills at elevations ranging from 0 to 1,500 feet (USDA 1985, CSRL 2020). These soils are not considered hydric, and are well-drained with medium runoff, and moderate permeability (USDA 1985, USDA 2017). Native and naturalized vegetation include a mix of grasses and forbs, while predominant land uses include rangeland (USDA 1985).

Xerorthents: This order consists of areas where fill covers native soils, located on valley floors, cut toe slopes, and tidelands. Permeability and drainage varies depending on fill material used and native soil series (USDA 1985).

Urban Land: This mapping unit consists of areas covered by roads, driveways, houses, parking lots and other structures. Beneath these structures are rock fragments and soil material that is similar to that of the Xerorthents. Runoff is rapid (USDA 1985).

3.2 Climate and Hydrology

The Study Area is located within the maritime fog zone of Marin County where summer temperatures are buffeted by fog, and fog drip contributes to annual rainfall totals. Winter “tule” fog is common in the Study Area, and summer “coastal” fog emerges with increased interior temperatures. The average annual maximum temperature of Point Reyes Lighthouse (CA047027) is 61.0 degrees Fahrenheit, while the average annual minimum temperature is 54.1 degrees Fahrenheit. Predominantly, precipitation falls as rainfall with an annual average of 17.05 inches. Precipitation bearing weather systems are predominantly from the west and south with the majority of rain falls between November and March, with a combined average of 13.45 inches (WRCC 2020).

The local watershed is Drakes Bay-Frontal Pacific Ocean (HUC 12: 1805000050403) and the regional watershed is Tomales Bay-Drakes Bay (HUC 8: 18050005). There are no mapped blue line streams in the Study Area according to the 7.5-minute quadrangle (USGS 2018), nor are there other aquatic features on the National Wetlands Inventory (NWI) (USFWS 2020a). However, there is one stream mapped on the California Aquatic Resources Inventory (CARI) (SFEI 2020), along Wharf Road.

3.3 Land Cover and Land Use

The Study Area is located in the town of Bolinas, situated between two developed parcels. The Study Area is partially developed with an unpaved parking area and outbuildings located on the flat portion. The steep southern slope is coast live oak woodland, common velvet grass grassland, and seasonal wetland seep. There is no observable evidence that the Study Area was historically utilized for intensive agriculture (row crops), timbering, or quarrying/mining. Vegetation is detailed in Section 5.0.

4.0 METHODS

Prior to the site visits, WRA biologists reviewed the following literature and performed database searches to assess the potential for sensitive natural communities (e.g., wetlands) and special-status species (e.g., endangered plants):

- *Soil Survey of Marin County, California* (USDA 1985)
- Bolinas 7.5-minute quadrangle (USGS 2018)
- Contemporary aerial photographs (Google Earth 2020)
- Historical aerial photographs (Historical Aerials 2020)
- National Wetlands Inventory (USFWS 2020a)
- California Natural Diversity Database (CNDDB, CDFW 2020a)
- California Native Plant Society Electronic Inventory (CNPS 2020a)
- Consortium of California Herbaria (CCH 2020)
- California Aquatic Resource Inventory (SFEI 2020)
- USFWS List of Federal Endangered and Threatened Species (USFWS 2020b)
- *eBird* Online Database (Cornell 2020)
- CDFW Publication, *California Bird Species of Special Concern in California* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *The Marin County Breeding Birds Atlas* (Shuford 1993)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009)
- *A Manual of California Vegetation Online* (CNPS 2020b)
- *Preliminary Descriptions of the Terrestrial Natural Communities* (Holland 1986)
- *California Natural Community List* (CDFW 2018a)

Database searches (i.e., CNDDB, CNPS) focused on the Inverness, San Geronimo, Novato, Double Point, Bolinas, San Rafael, and Point Bonita USGS 7.5-minute quadrangles.

On April 9, 2020, biologists with 40-hour Corps wetland delineation training and experience with the flora and fauna of coastal Marin County traversed portions of the Study Area on foot to determine: (1) plant communities present within the Study Area, (2) if existing conditions provided suitable habitat for any special status plant or wildlife species, and (3) determine the approximate location and extent of ESHAs, including wetlands, streams and riparian areas which may be subject to regulation under the California Coastal Act.

4.1 Land Cover Types

4.1.1 Terrestrial Biological Communities

The Study Area's terrestrial natural communities were evaluated to determine if such areas have the potential to support special-status plants or wildlife. In most instances, communities are delineated based on distinct shifts in plant assemblage (vegetation), and follow the *California Natural Community List* (CDFW 2018a), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California Vegetation, Online Edition* (CNPS 2020b). In some cases it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature; should an undescribed variant be used, it will be noted in the description.

Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled (S1/G1), imperiled (S2/G2), or vulnerable (S3/G3), were evaluated as sensitive as part of this evaluation.[1] Additionally, any sensitive natural communities as described in the Marin Countywide [General] Plan (Marin County 2007) and/or the Marin County LCP (Marin County 2015) were considered.

4.1.2 Aquatic Resources

Aquatic natural resources include Waters of the U.S., Waters of the State, and Streams, Lakes, and Riparian Habitat as defined in the CWA, Porter-Cologne Act, and CFGC, respectively. Marin County mandates setbacks from such aquatic resources, and therefore requires mapping of the outward extent of such features.

This site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales. None were noted, so there was no need for WRA biologists to perform sample points following the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008).

If streams potentially jurisdictional under the CWA and/or the CFGC are noted on a site, they are delineated using a mix of surveyed topography data, high resolution aerial photographs, and a sub-meter GPS unit. The ordinary high water mark would be used to determine the extent of potential Section 404 jurisdiction, while the top-of-bank would be used to determine the extent of CFGC Section 1602 and 401. Streams with associated woody vegetation were assessed to determine if these areas would be considered riparian habitat by the CDFW following *A Field*

[1] Ranking of CDFW List of Vegetation Alliances is based on NatureServe Rankings (NatureServe 2018)

Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code (CDFG 1994).

4.2 Special-status Species

4.2.1 General Assessment

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database review. Database searches for known occurrences of special-status species focused on the 7.5-minute USGS quadrangles mentioned above for special-status plants and the entirety of Marin County for special-status wildlife.

A site visit was made on April 9, 2020 to evaluate the presence of suitable habitat for special-status species. Suitable habitat conditions are based on physical and biological conditions of the site, as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then determined according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site in the recent past.

If a more thorough assessment was deemed necessary, a targeted or protocol-level assessment or survey was conducted or recommended as a future study. Methods for the assessments are described below. If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 5.2.

4.2.2 Special-status Plants

To determine the presence or absence of special-status plant species, protocol-level surveys were conducted within the Study Area on April 9, 2020. The surveys correspond to the period sufficient to observe and identify those special-status plants determined to have the potential to occur. The field surveys were conducted by botanists familiar with the flora of Marin and surrounding counties. The surveys were performed in accordance with those described by resource experts and agencies (CNPS 2001, CDFW 2018b, USFWS 1996). Plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et. al. 2012) and Jepson Flora Project

(eFlora 2020), to the taxonomic level necessary to determine whether or not they were sensitive. Plant names follow those of Jepson Flora Project (eFlora 2020), unless otherwise noted.

4.2.3 Special-status Wildlife

The general assessment for special-status wildlife determined that a few species have the potential to occur in the Study Area. Targeted assessments and protocol-level surveys were deemed inapplicable or infeasible at the time of the site visit, due to inappropriate timing between such a survey and the proposed Project initiation.

4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Prior to the site visit the USFWS Critical Habitat Mapper (USFWS 2020b) and the NMFS Essential Fish Habitat Mapper (NMFS 2020) were queried to determine if critical habitat for any species or EFH, respectively, occurs within the Study Area. To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CalTrans 2010) and habitat connectivity data available through the CDFW Biogeographic Information and Observation System (BIOS) (CDFW 2020a). Additionally, aerial imagery (Google 2020) for the local area was referenced to assess if local core habitat areas were present within, or connected to the Study Area. This assessment was refined based on observations of on-site physical and/or biological conditions.

5.0 ASSESSMENT RESULTS

5.1 Land Cover Types

WRA observed four land cover types within the Study Area, including three terrestrial biological communities and one aquatic resource. These land cover types include developed/disturbed areas, common velvet grass meadow, and seasonal wetland (Appendix A).

5.1.1 Terrestrial Land Cover Types

Developed Area (no vegetation alliance). CDFW Rank: None; Non-ESHA. The Study Area contains an informal garden and laid down materials, as well as a compacted gravel driveway and parking that is connected to Wharf Road, totaling 0.54 acre. Vegetation is minimal and entirely composed of disturbance-adapted non-natives including upright veldt grass (*Ehrharta erecta*), white-flowered onion (*Allium triquetrum*), old-man-of-spring (*Senecio vulgaris*), field burweed (*Soliva sessilis*), bur medic (*Medicago polymorpha*), and English plantain (*Plantago lanceolata*). A few trees and shrubs are rooted and overhang the developed areas, primarily Monterey cypress (*Hesperocyparis macrocarpa*). This land cover type is not considered sensitive by the CDFW or Marin County LCP.

Non-native Grassland – Common Velvet Grass-Sweet Vernal Grass Meadows (*Holcus lanatus-Anthoxanthum odoratum* Semi-Natural Herbaceous Stands). CDFW Rank: None; Non-ESHA. Non-native grasslands occur throughout California, particularly in the Sierra Foothills, Coast Range, Transverse Range, and Peninsular Ranges, situated on coastal terraces, valley bottoms, and foothills underlain by a variety of soil types (Sawyer et al. 2009, CNPS 2020b). Grassland is

a minor land cover type in the Study Area totaling 0.04 acre. The dominant cover is common velvet grass (*Holcus lanatus*) and sweet vernal grass (*Anthoxanthum odoratum*). Other plants with substantial cover includes coyote brush (*Baccharis pilularis*), big rattlesnake grass (*Briza maxima*), soft chess (*Bromus hordeaceus*), bull thistle (*Cirsium vulgare*), and wild radish (*Raphanus sativus*). This land cover type is not considered sensitive by the CDFW or Marin County LCP.

Coast Live Oak Woodland (*Quercus agrifolia* Woodland Alliance). CDFW Rank: G5 S4: Coast live oak woodlands occur throughout coastal California, particularly in the Coast Range, Transverse Range, and Peninsular Ranges, situated on alluvial terraces, canyon bottoms, stream banks, slopes, and flats underlain by a variety of deep substrates (Sawyer et al. 2009, CNPS 2020b). This woodland is the dominant land cover type in the Study Area totaling 1.3 acres. The dominant cover is coast live oak (*Quercus agrifolia*), with substantial cover of Monterey pine (*Pinus radiata*), Monterey cypress (*Hesperocyparis macrocarpa*), and California bay (*Umbellularia californica*). The understory is mixed with shrubs and herbs including poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), French broom (*Genista monspeliensis*), California blackberry (*Rubus ursinus*), English ivy (*Hedera helix*), Cape ivy (*Delairea odorata*), hedge nettle (*Stachys ajugoides*), and common veldt grass (*Ehrharta erecta*). This land cover type is not considered sensitive by the CDFW or Marin County LCP.

5.1.2 Aquatic Resources

Seasonal Wetland – Pacific Rush Wetland (*Juncus effusus* Herbaceous Alliance). Rank: G4 S4; Potentially Jurisdictional under CWA and CCA; ESHA. Seasonal wetlands are known from a variety of topographic positions and soil types where surface waters collect and flows are reduced, and/or subsurface waters approach the soil surface as a rising water table or seep. In the Study Area, one seasonal wetland occupies 0.01 acre as seasonal seep-swale. The vegetation is dominated by herbaceous hydrophytes including Pacific rush (*Juncus effusus*), common rush (*Juncus patens*), and tall flatsedge (*Cyperus eragrostis*) situated on the edges of these wetlands.

Indicators of wetland hydrology include direct observation of saturation and minor flow patterns. The soils were saturated during the site visit, and are assumed hydric given the presence of strong vegetation and wetland hydrology indicators. Because all three wetland parameters (vegetation, soil, and hydrology) are clearly evidenced, those areas mapped as wetland in the Study Area would be considered ESHA by the CCA and Marin County LCP, as well as being jurisdictional under the CWA.

5.2 Special-status Species

5.2.1 Special-status Plant Species

A total of 35 special-status plant species have been documented within five miles of the Study Area (Figure A-2); however, only five of these species have the potential to occur in the Study Area. The remaining 30 species are unlikely or have no potential to occur in the Study Area due to one or more of the following reasons:

- Hydrologic conditions (e.g. tidal, vernal pool) necessary to support the special-status plant species are not present in the Study Area;
- Edaphic (soil) conditions (e.g. serpentine, shale) necessary to support the special-status plant species are not present in the Study Area;
- Topographic conditions (e.g. elevation range) necessary to support the special-status plant species are not present in the Study Area;
- Unique pH conditions (e.g. alkali or acidic substrates) necessary to support this species are not present in the Study Area;
- Associated vegetation communities (e.g. chaparral, coastal prairie, redwood forest) necessary to support the special-status plant species are not present in the Study Area;
- Land use history and contemporary management (e.g. vegetation clearing, adjacent residential development) has degraded local habitat necessary to support the special-status plant species.

On April 9 and July 27, 2020, a WRA botanist traversed the entire Study Area recording each plant species observed. Plant species were identified with *Marin Flora* (Howell et al. 2007), *The Jepson Manual, 2nd Edition* (Baldwin et al. 2012), and/or the Jespon eFlora online database (Jepson eFlora 2020). The timing of the surveys coincided with all of the four special-status species bloom periods with potential to occur in the Study Area. Based on the results of the April surveys, no special-status plant species are present within the Study Area. The following plants were assessed to have a potential to occur within the Study Area, none of which were observed during the site visit.

Marin manzanita (*Arctostaphylos virgata*). CRPR 1B. Moderate Potential (Not Observed). Marin manzanita is an evergreen shrub in the heath family (Ericaceae) that blooms from January to March. It typically occurs on sandstone and granitic substrate in broadleaf upland forest, closed-cone conifer forest, chaparral, and North Coast coniferous forest at elevations ranging from 195 to 2,275 feet (CDFW 2020a, CNPS 2020a, Baldwin et al. 2012).

Glory bush (*Ceanothus gloriosus* var. *exaltatus*). CRPR 4. Moderate Potential (Not Observed). Glory bush is an evergreen shrub in the buckthorn family (Rhamnaceae) that blooms from March through July, sometimes August. It typically occurs in chaparral habitat within a maritime influence at elevations ranging from 95 to 1,985 feet (CDFW 2020a, CNPS 2020a).

Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*). CRPR 4. Moderate Potential (Not Observed). Point Reyes ceanothus is an evergreen shrub in the buckthorn family (Rhamnaceae) that blooms from March through May. It typically occurs on bluffs and terraces underlain by sandy substrates in coastal bluff scrub, coastal scrub, coastal dune, and closed-cone coniferous forest habitat at elevations ranging from 15 to 1,690 feet (CNPS 2020a, Baldwin et al. 2012).

Western leatherwood (*Dirca occidentalis*), CRPR 1B. Moderate Potential (Not Observed). Western leatherwood is a deciduous shrub in the mezereum family (Thymelaeaceae) that blooms from January to April, but is typically identifiable via vegetative structures into late summer and/or early fall. It typically occurs on brushy, mesic slopes in partial shade in broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland,

North Coast coniferous forest, riparian forest, and riparian woodland habitat at elevations range from 165 to 1,285 feet (CDFW 2020a, CNPS 2020a, Baldwin et al. 2012).

California bottle-brush grass (*Elymus californicus*), CRPR 4. Moderate Potential (Not Observed). California bottle-brush grass is a perennial graminoid in the grass family (Poaceae) that blooms from May to November. It typically occurs along stream banks or other mesic sites within broadleaf upland forest, cismontane woodland, North Coast coniferous forest, and riparian woodland habitat at elevations ranging from 45 to 1,530 feet (CNPS 2020a).

5.2.2 Special-status Wildlife Species

Frequently, wildlife species, including designated special-status species, are documented from sites where physical and/or biological elements necessary to support critical life-cycle functions are lacking (e.g., roosting, nesting, breeding, metamorphosis, foraging, dispersal corridor). In these instances, species would be considered errant, but not occupying (i.e., occurring) within the site. With some exceptions, for purposes of analyzing potential presence, WRA biologists consider wildlife species to be unlikely or have no potential to occur in locales where habitat for critical life-cycle functions are lacking or absent.

Based upon a review of the resources and databases listed in Section 3.2.1, 26 special-status wildlife species have been documented within 5-miles of the Study Area (CDFW 2020a, USFWS 2020b). The potential for each of these species to occur in the Study Area is summarized in Appendix B. The Study Area does not have the potential to support 20 of the 26 special-status wildlife due to one or more of the following reasons:

- Aquatic habitats (e.g. rivers/streams, ponds, estuaries) necessary to support the special-status wildlife species are not present in the Study Area;
- On-site aquatic habitats (e.g. seasonal wetland) is isolated/not connected to larger aquatic features to provide for migration and dispersal for special-status wildlife;
- Vegetation types (e.g. tidal marsh, chaparral) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Structures or vegetation (e.g. tules) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Host plants (e.g. dog violet, harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Study Area;
- The Study Area is outside (e.g. north of, west of) of the special-status wildlife species documented range (including nesting/breeding range, for birds).

The following special-status wildlife with the potential to occur in the Study Area; however, because trees will not be removed, none will be impacted.

Pallid Bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential (Presence Unknown). Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands,

and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet, but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g. ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is taken on the ground, or sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2010).

Townsend's Western big-eared bat (*Corynorhinus townsendii townsendii*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential (Presence Unknown). This species ranges throughout western North America, from British Columbia to the central Mexico. They are typically associated with caves, but are also found in man-made structures, including mines and buildings. While many bats wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth. Females roost with their young until late summer or early fall, until young become independent, flying and foraging on their own. Hibernation roosts tend to be made up of small aggregations of individuals in central and southern California (Pierson and Rainey 1998).

Hoary bat (*Lasiurus cinereus*), WBWG Medium Priority. Moderate Potential (Presence Unknown). Hoary bats are highly associated with forested habitats in the western United States. They are a solitary species and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, typically at the edge of a clearing. Roosts are typically 10 to 30 feet above the ground. This species reportedly has a strong preference for moths, but is also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG 2015). Tree foliage within the Study Area (particularly adjacent to cleared areas) provides potential roosting substrates for this species; the nearest documented occurrence is approximately 1.7 miles south of the Study Area.

Nesting birds (non-status), High Potential (Present). The Study Area contains vegetation (trees, shrubbery, etc.) that may be used as nesting habitat by bird species with baseline protections under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. These laws/codes apply to a wide variety of native birds, including species that are non-migratory and/or commonly found near developed areas in western Marin County. In addition to adult birds, legal protections include active nests (those with eggs or young), the deliberate destruction of which is prohibited.

Great blue heron (*Ardea herodias*). CDFW Protected Rookery Sites. Moderate Potential (Presence Unknown). Feeds mostly in slow moving or calm freshwater, also along seacoasts. Occasionally in surf and fields. Nests in trees, bushes, on ground and artificial structures, usually near water (Butler 1992).

Great egret (*Ardea alba*). CDFW Protected Rookery Sites. Moderate Potential (Presence Unknown). Great egrets Feed and rest in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in

irrigated croplands and pastures. The birds primarily forage for fishes, amphibians, snakes, snails, crustaceans, insects, and small mammals (Palmer 1962). Nests in large trees, and roosts in trees (Grinnell and Miller 1944, Cogswell 1977). In northern California, fairly common to common yearlong in coastal lowlands, inland valleys, and the Central Valley.

Black-crowned night heron (*Nycticorax nycticorax*). CDFW Protected Rookery Sites. Moderate Potential (Presence Unknown). Black-crowned night heron are year-round residents throughout the majority of California; occurring in and around marshes. Nesting is typically in large emergent wetland vegetation such as tules (*Schoenoplectus* ssp.) and cattails (*Typha* ssp.), and occasionally isolated trees that are protected from predators (e.g., on small islands). These birds nest colonially, and remain social (rookeries) throughout the year. They feed a variety of resources, with freshwater and estuarine aquatic organisms dominating their diet.

Purple Martin (*Progne subis*). CDFW Species of Special Concern. Moderate Potential (Presence Unknown). Purple martin is an uncommon summer resident in California, occurring in woodlands and low-elevation hardwood and coniferous forest. It usually feeds on insects captured in flight approximately 150 to 500 feet above ground. These birds nest in cavities of tall, old, isolated trees or snags in open forest or woodland.

Monarch butterfly (*Danaus plexippus*) – overwintering roost sites. CDFW Species of Special Concern. Moderate Potential (Presence Unknown). Monarch (*Danaus plexippus*) is a large, showy butterfly is found throughout the United States, southern Canada, and Central America. It also occurs in parts of South America and other continents. In North America, this species spends spring and summer months breeding and foraging across much of its range. This is followed by migration in late summer/early fall to overwintering areas in both coastal California and central Mexico. Thousands to millions of monarchs will congregate on a tree or trees with nectar and water sources nearby for overwintering. Favored roosting sites are wind-protected tree groves typically composed of eucalyptus (*Eucalyptus* spp.), coastal pines (*Pinus radiata*, *P. muricata*, *P. coulteri*), Monterey cypress (*Hesperocyparis macrocarpa*), and coast redwood (*Sequoia sempervirens*) (CDFW 2020a, CEC 2009). These stands are typically a U-shaped formation, with several rows of trees and a multi-tiered canopy to protect from high winds, but allow sunlight to penetrate for warmth (CED 2009). Native milkweeds (*Asclepias* spp.) are the larval host, while nectar resources include milkweeds and a broader suite of flowering plants (CDFW 2020a, Opler, Lotts, and Naberhaus 2011). Documented roost sites are prevalent along the California Coast from Mendocino County south to San Diego County, with numerous documented occurrences in the Bolinas-Stinson Beach-Muir Beach region of Marin County (CDFW 2020a).

5.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

The Study Area is not within Critical Habitat or Essential Fish Habitat. Likewise, the Study Area is not an essential wildlife corridor. While common mammals and birds certainly wander in and out of the Study Area, there is nothing unique about its habitat or location that provides critical linkages for local wildlife.

6.0 PROJECT DESCRIPTION AND RECOMMENDATIONS

6.1 Project Description

6.1.1 Proposed Development

The Proposed Project consists of the construction of a 17,220 square foot mixed-use development consisting of eight all-affordable rental housing units and commercial space at the street level. The Proposed Project also entails an underground parking garage and an elevated parking and circulation area serving the residential units and neighboring properties. The affordable residential units include two-story 3-bedroom units and four stacked two-bedroom units. Single garage parking spaces for the eight residential units, thirteen spaces in an underground parking structure, and four on-street parking spaces will also be developed.

6.1.2 Development Considerations

The new development has been intentionally designed to avoid wetlands by 100 feet or greater. Such buffers will ensure the physical and ecological integrity of this aquatic resource. A majority of the property will remain undeveloped. In addition to setbacks, the timing of project activities and application of best management practices will protect the potential natural resources in and around the Project Area. Seven special-status wildlife species have the potential to occur there. As noted above, there have been no observations of special-status wildlife or plant species within the property.

Great blue heron and great egret have the potential to nest in property. Additionally, a variety of non-status bird species with baseline protections under the MBTA and CFCG have the potential to nest on-site. Similarly, pallid bat, Townsend's western big-eared bat, and hoary bat may maternity and/or day roost in the property, particularly in the standing trees. Likewise, Monarch butterfly may roost in the on-site larger Monterey cypress (*Hesperocyparis macrocarpa*), Monterey pine (*Pinus radiata*), and blue gum (*Eucalyptus globulus*) during the winter months (November through January). Trees will not be removed as part of this Project.

6.2 Summary

The development footprint has been selected to reduce the amount of earth-moving (relatively flat), fit within adjacent development, not remove trees, and avoid sensitive natural resources. As a result, the Proposed Project will be located in areas suitable for new development and no special-status species or sensitive habitats will be impacted. The Proposed Project will not substantially reduce the number or restrict the range of a rare, endangered, or threatened plant or animal. The Proposed Project will not result in impacts to roosting bats or breeding birds.

The Proposed Project will not cause a fish or wildlife population to drop below self-sustaining levels.

The Proposed Project will not adversely affect significant riparian lands, wetlands, marshes, and other significant wildlife habitats because the Project avoids all such habitats.

In conclusion, the Proposed Project as designed is unlikely to result in significant adverse biological impacts.

7.0 REFERENCES

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Appendix A

Figures

Path: C:\Acad 2000 Files\27000\27283-3\GIS\ArcMap\Fig A-1_Location.mxd

Sources: National Geographic, WRA | Prepared By: aarthur, 5/1/2020

Figure 1. Study Area Location

31 Wharf Road
Bolinas, Marin County

0 1 2 Miles

N

wra
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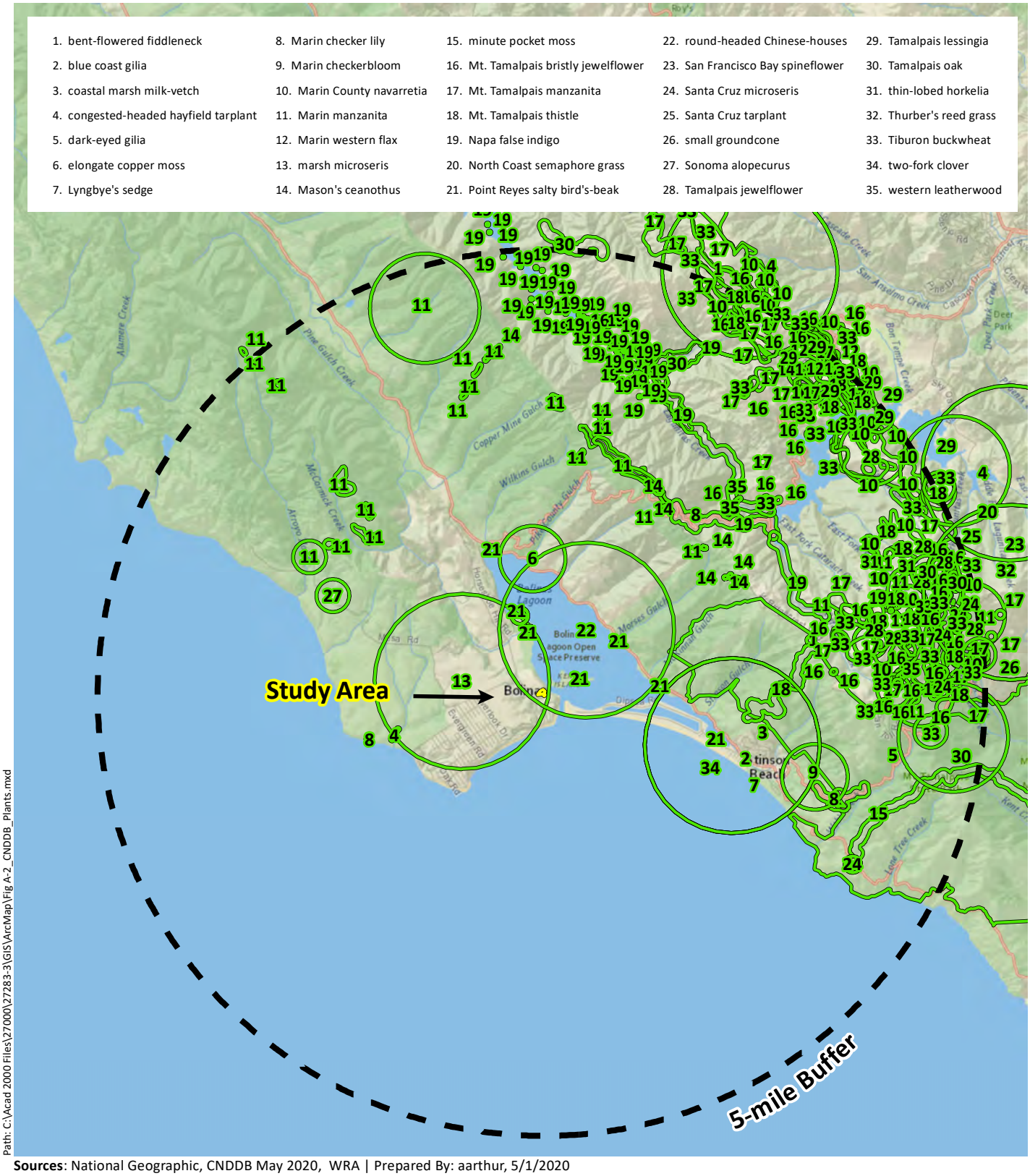

Path: C:\Acad 2000 Files\27000\27283-3\GIS\ArcMap\Fig A-2_CNDDB_Plants.mxd

Sources: National Geographic, CNDDB May 2020, WRA | Prepared By: aarthur, 5/1/2020

Figure A-2. Special-Status Plants Documented within 5 Miles of the Study Area

31 Wharf Road
Bolinas, Marin County

0 1 2 Miles

N

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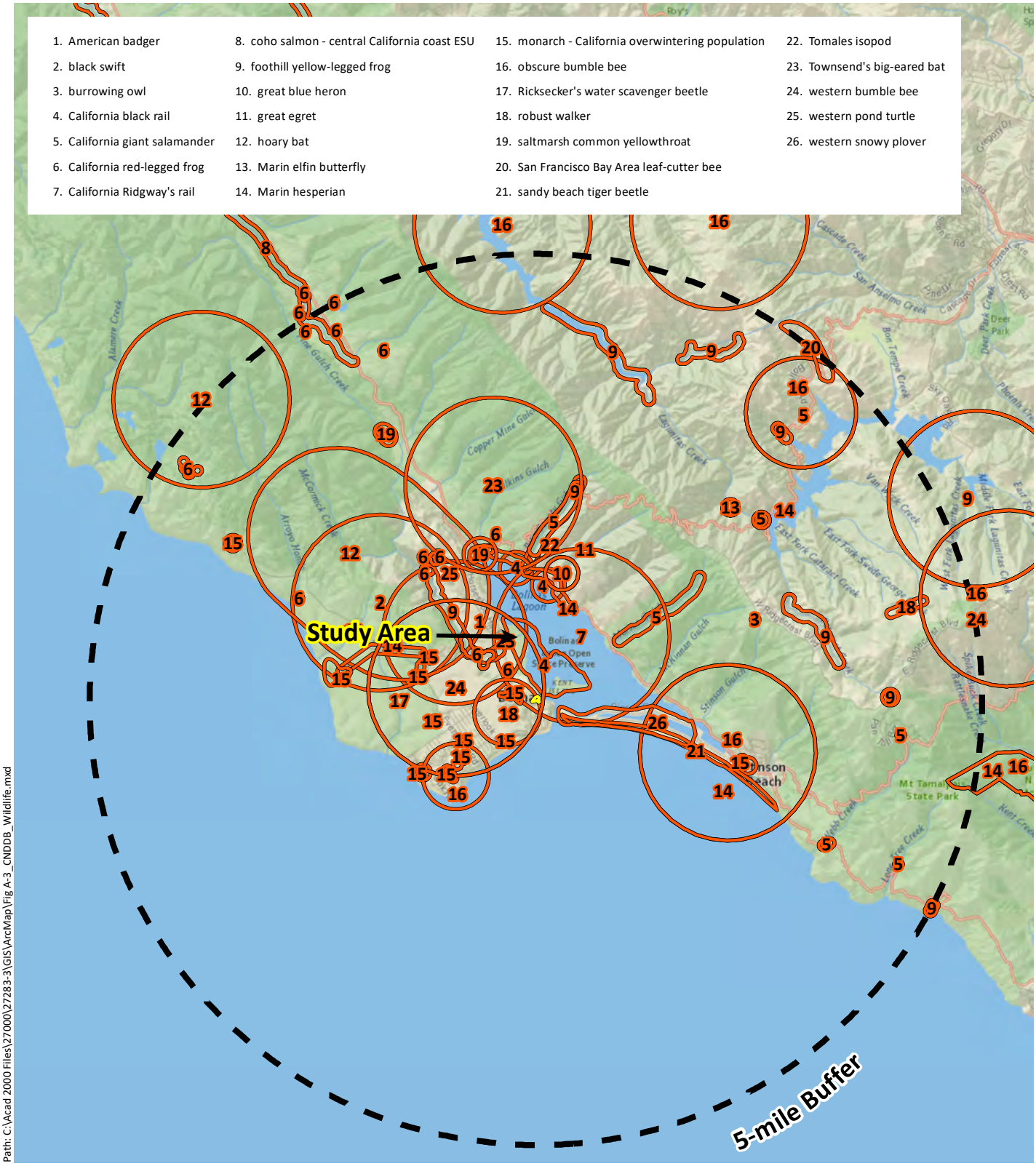
ENVIRONMENTAL CONSULTANTS



Path: C:\Acad 2000 Files\27000\27283-3\GIS\ArcMap\Fig A-3_CNDDB_Wildlife.mxd

Sources: National Geographic, CNDDB May 2020, WRA | Prepared By: aarthur, 5/1/2020

Figure A-3. Special-Status Wildlife Documented within 5 Miles of the Study Area

31 Wharf Road
Bolinas, Marin County

0 1 2 Miles

N

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Path: C:\Acad 2000 Files\27000\27283-3\GIS\ArcMap\Fig A-4_LandCover.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: aarthur, 5/6/2020

Figure A-4. Land Cover

31 Wharf Road
Bolinas, Marin County

0 100 200 Feet

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Path: C:\Acad 2000 Files\27000\27283-3\GIS\ArcMap\Fig A-5_Project.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: aarthur, 8/27/2020

Figure A-5. Proposed Project Area

31 Wharf Road
Bolinas, Marin County

0 100 200 Feet

ENVIRONMENTAL CONSULTANTS

Appendix B

Species Observed in the Study Area

Table B-1. Plant species observed in the Study Area, April 9 and July 27, 2020

Family	Scientific name	Common name	Life form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Alliaceae	*Allium triquetrum*	three-corner leek	perennial forb	non-native	--	assessed	NL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Conium maculatum*	poison hemlock	perennial forb	non-native	--	moderate	FACW
Apiaceae	*Foeniculum vulgare*	fennel	perennial forb	non-native	--	high	NL
Apiaceae	*Heracleum maximum*	common cow parsnip	perennial forb	native	--	--	FACW
Apiaceae	*Torilis arvensis*	hedge parsley	annual forb	non-native	--	moderate	NL
Aquifoliaceae	*Ilex aquifolium*	English holly	evergreen tree	non-native	--	moderate	NL
Araceae	*Zantedeschia aethiopica*	calla lily	perennial forb	non-native	--	limited	OBL
Araliaceae	*Hedera helix*	English ivy	evergreen vine	non-native	--	high	NL
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Cirsium vulgare*	bull thistle	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Delairea odorata*	Cape ivy	perennial forb	non-native	--	high	FAC
Asteraceae	*Erigeron canadensis*	Canadian horseweed	annual forb	native	--	--	FACU
Asteraceae	*Senecio vulgaris*	old man in the Spring	annual forb	non-native	--	--	FACU
Asteraceae	*Soliva sessilis*	field burweed	annual forb	non-native	--	--	FACU
Asteraceae	*Taraxacum officinale*	common dandelion	perennial forb	non-native	--	assessed	FACU
Boraginaceae	*Echium candicans*	Pride-of-Madeira	evergreen shrub	non-native	--	limited	NL
Boraginaceae	*Myosotis latifolia*	broadleaf forget-me-not	perennial forb	non-native	--	limited	NL
Brassicaceae	*Raphanus sativus*	wild radish	perennial forb	non-native	--	limited	NL
Brassicaceae	*Sinapis arvensis*	charlock	annual forb	non-native	--	limited	NL
Caryophyllaceae	*Stellaria media*	common chickweed	annual forb	non-native	--	--	FACU
Cucurbitaceae	*Marah oregana*	coast manroot	perennial vine	native	--	--	NL
Cupressaceae	*Hesperocyparis macrocarpa*	Monterey cypress	evergreen tree	native	--	--	NL

Family	Scientific name	Common name	Life form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Cyperaceae	*Carex praegracilis*	clustered field sedge	perennial graminoid	native	--	--	FACW
Cyperaceae	*Cyperus eragrostis*	tall flat-sedge	perennial graminoid	native	--	--	FACW
Dryopteridaceae	*Dryopteris arguta*	California wood fern	perennial fern	native	--	--	NL
Dryopteridaceae	*Polystichum munitum*	western sword fern	perennial fern	native	--	--	FACU
Fabaceae	*Genista monspessulana*	French broom	evergreen shrub	non-native	--	high	NL
Fabaceae	*Medicago arabica*	spotted burclover	annual forb	non-native	--	--	NL
Fabaceae	*Medicago polymorpha*	bur medic	annual forb	non-native	--	limited	FACU
Fabaceae	*Vicia sativa*	garden vetch	annual forb	non-native	--	--	FACU
Fagaceae	*Quercus agrifolia*	coast live oak	evergreen tree	native	--	--	NL
Geraniaceae	*Erodium brachycarpum*	foothill filaree	annual forb	non-native	--	limited	NL
Geraniaceae	*Geranium dissectum*	cutleaf geranium	annual forb	non-native	--	moderate	NL
Juglandaceae	*Juglans hindsii*	black walnut	deciduous tree	native	--	--	FAC
Juncaceae	*Juncus effusus* ssp. *pacificus*	Pacific rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus patens*	common rush	perennial graminoid	native	--	--	FACW
Lamiaceae	*Lamium purpureum*	purple deadnettle	annual forb	non-native	--	--	NL
Lamiaceae	*Stachys ajugoides*	bugle hedgenettle	perennial forb	native	--	--	OBL
Malvaceae	*Malva nicaeensis*	bull mallow	annual forb	non-native	--	--	NL
Myrtaceae	*Eucalyptus globulus*	blue gum	evergreen tree	non-native	--	moderate	NL
Oxalidaceae	*Oxalis pes-caprae*	Bermuda buttercup	perennial forb	non-native	--	moderate	NL
Pinaceae	*Pinus muricata*	Bishop pine	evergreen tree	native	--	--	NL
Pinaceae	*Pinus radiata*	Monterey pine	evergreen tree	native	--	limited	NL
Plantaginaceae	*Plantago lanceolata*	English plantain	perennial forb	non-native	--	limited	FAC
Plantaginaceae	*Plantago major*	common plantain	perennial forb	non-native	--	--	FAC
Poaceae	*Anthoxanthum odoratum*	sweet vernalgrass	perennial graminoid	non-native	--	moderate	FAC
Poaceae	*Avena barbata*	wild oat	annual graminoid	non-native	--	moderate	NL

Family	Scientific name	Common name	Life form	Origin	Rare Status[1]	Invasive Status[2]	Wetland indicator[3]
Poaceae	*Briza maxima*	big rattlesnake grass	annual graminoid	non-native	--	limited	NL
Poaceae	*Bromus catharticus*	Chilean brome	perennial graminoid	non-native	--	--	NL
Poaceae	*Bromus diandrus*	rip-gut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL
Poaceae	*Ehrharta erecta*	panic veldtgrass	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Holcus lanatus*	common velvet grass	perennial graminoid	non-native	--	moderate	FAC
Poaceae	*Poa annua*	annual bluegrass	annual graminoid	non-native	--	--	FAC
Polygonaceae	*Rumex pulcher*	fiddle dock	perennial forb	non-native	--	--	FAC
Rhamnaceae	*Frangula californica*	California coffeeberry	evergreen shrub	native	--	--	NL
Rosaceae	*Cotoneaster franchetii*	orange cotoneaster	evergreen shrub	non-native	--	moderate	NL
Rosaceae	*Prunus cerasifera*	cherry plum	deciduous tree	non-native	--	limited	NL
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	evergreen shrub	non-native	--	high	FAC
Rosaceae	*Rubus ursinus*	California blackberry	evergreen shrub	native	--	--	FACU
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012) and *Marin Flora* (Howell et al. 2007); nomenclature follows *The Jepson Flora Project* (eFlora 2020) unless otherwise noted

Sp.: “species”, intended to indicate that the observer was confident in the identity of the genus but uncertain which species
Cf.: intended to indicate a species appeared to the observer to be specific, but was not identified based on diagnostic characters

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2020a)

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
Rank 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere
Rank 2A:	Plants presumed extirpated in California, but more common elsewhere
Rank 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3:	Plants about which we need more information – a review list
Rank 4:	Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

High:	Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate:	Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited moderate distribution ecologically
Limited:	Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed:	Assessed by Cal-IPC and determined to not be an existing current threat

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2018)

OBL:	Almost always a hydrophyte, rarely in uplands
FACW:	Usually a hydrophyte, but occasionally found in uplands
FAC:	Commonly either a hydrophyte or non-hydrophyte
FACU:	Occasionally a hydrophyte, but usually found in uplands
UPL:	Rarely a hydrophyte, almost always in uplands
NL:	Rarely a hydrophyte, almost always in uplands
NI:	No information; not factored during wetland delineation

Appendix C

Potential for Special-status Species to Occur in the Study Area

Table C. Potential for Special-status Species to Occur in the Study Area. List compiled from the CDFW BIOS database (CDFW 2020a), USFWS IPaC Report (USFWS 2020b), and CNPS Electronic Inventory (CNPS 2020a) searches. For plants, the Inverness, San Geronimo, Novato, Double Point, Bolinas, San Rafael, and Point Bonita USGS 7.5' quadrangles were included in the search. For wildlife, the entirety of Marin County was considered.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
PLANTS				
Abronia umbellata var. *breviflora* pink sand-verbena	Rank 1B	Coastal dunes, coastal strand; located on foredunes and interdunes with sparse cover. Elevation range: 0 – 35 feet. Blooms: June – October.	**Unlikely.** The Study Area does not contain dunes or other sandy habitats.	**Not Present.** No further actions are recommended for this species.
Agrostis blasdalei Blasdale's bentgrass	Rank 1B	Coastal dunes, coastal bluff scrub, coastal prairie; on sandy or gravelly soil near exposed rock; often in nutrient-poor soil. Elevation range: 15 – 490 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE; Rank 1B	Freshwater marshes and swamps, riparian scrub; closely associated with other wetland species. Elevation range: 15 – 1200 feet. Blooms: May – July.	**Unlikely.** While the Study Area contains seasonal wetland, species observed indicate absence of perennially wet area, which is typical habitat for this species.	**Not Present.** No further actions are recommended for this species.
Amorpha californica var. *napensis* Napa false indigo	Rank 1B	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	**Unlikely.** While the Study Area contains upland forest, this species typically does not occur very near the coast.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Amsinckia lunaris bent-flowered fiddleneck	Rank 1B	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation range: 10 – 1625 feet. Blooms: March – June.	**Unlikely.** While the Study Area contains grassland and woodland habitat, this species typically occurs on dry, rocky soils, which are absent.	**Not Present.** No further actions are recommended for this species.
Arabis blepharophylla coast rock cress	Rank 4	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub; located on rocky sites, often on coastal bluffs. Elevation range: 10 – 3575 feet. Blooms: February – May.	**Unlikely.** The Study Area does not contain rocky areas.	**Not Present.** No further actions are recommended for this species.
Arctostaphylos montana ssp. *montana* Mt. Tamalpais manzanita	Rank 1B	Chaparral, valley and foothill grassland; on rocky serpentine slopes in scrub and grassland. Elevation range: 520 – 2470 feet. Blooms: February – April.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Arctostaphylos virgata Marin manzanita	Rank 1B	Broadleaf upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest; on sandstone and granitic substrates. Elevation range: 195 – 2275 feet. Blooms: January – March.	**Moderate Potential.** The Study Area contains upland forest habitat on decomposed sandstone soils.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions are recommended for this species.
Aspidotis Carlotta-halliae Carlotta Hall's lace fern	Rank 4	Chaparral, cismontane woodland; typically located in rock crevices and outcrops of serpentine. Elevation range: 325 – 4550 feet.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Astragalus breweri Brewer's milk-vetch	Rank 4	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland; located on open, gravelly serpentine or volcanic substrate. Elevation range: 290 – 2375 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Astragalus nuttallii var. *nuttallii* Nuttall's milk-vetch	Rank 4	Coastal bluff scrub, coastal dunes. Elevation range: 10 – 390 feet. Blooms: January – November.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	Rank 1B	Coastal dunes, coastal scrub, coastal salt marshes; mesic sites in dunes, along streams, and marshes. Elevation range: 0 – 100 feet. Blooms: April – October.	**No Potential.** The Study Area does not contain mesic dune or marsh habitat.	**Not Present.** No further actions are recommended for this species.
Calamagrostis crassiglumis Thurber's reed grass	Rank 2B	Mesic areas within coastal scrub, freshwater marshes and swamps; typically in marshy swales surrounded by scrub or grassland. Elevation range: 10 – 45 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain mesic areas in coastal scrub.	**Not Present.** No further actions are recommended for this species.
Calamagrostis ophitidis serpentine reed grass	Rank 4	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland; located in openings, often north-facing, underlain by rocky serpentine substrate. Elevation range: 290 – 3465 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Calandrinia breweri Brewer's Calandrinia	Rank 4	Chaparral, coastal scrub; located on sandy or loamy substrate in areas often recently disturbed or burned. Elevation range: 30 – 3965 feet. Blooms: March – June.	**Unlikely.** The Study Area does not contain chaparral or coastal scrub and has not been recently burned.	**Not Present.** No further actions are recommended for this species.
Calochortus umbellatus Oakland star tulip	Rank 4	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; often located on serpentine substrate. Elevation range: 325 – 2275 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Calystegia purpurata ssp. *saxicola* coastal bluff morning-glory	Rank 1B	Coastal dunes, coastal scrub. Elevation range: 10 – 105 feet. Blooms: May – September.	**Unlikely.** The Study Area does not contain coastal dunes or coastal scrub habitat.	**Not Present.** No further actions are recommended for this species.
Campanula californica swamp harebell	Rank 1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marshes and swamps, North Coast coniferous forest; in mesic sites in forested and grassland habitat. Elevation range: 1 – 405 feet. Blooms: June – October.	**Unlikely.** The Study Area does not contain perennially mesic habitat in forest or grasslands.	**Not Present.** No further actions are recommended for this species.
Cardamine angulata seaside bittercress	Rank 2B	North Coast coniferous forest, lower montane coniferous forest; located in wet areas and along streambanks. Elevation range: 210 – 2975 feet. Blooms: March – July.	**No Potential.** The Study Area does not contain stream or wet areas in coniferous forest habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Carex lyngbyei Lyngbye's sedge	Rank 2B	Freshwater and brackish marshes and swamps. Elevation range: 0 – 35 feet. Blooms: May – August.	**No Potential**. The Study Area does not contain perennially mesic habitat.	**Not Present.** No further actions are recommended for this species.
Castilleja affinis ssp. *neglecta* Tiburon paintbrush	FE; ST; Rank 1B	Valley and foothill grassland; located in grassy, open areas and rock outcrops underlain by serpentine substrate. Elevation range: 195 – 1300 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Castilleja ambigua ssp. *ambigua* johnny-nip	Rank 4	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins. Elevation range: 0 – 1415 feet. Blooms: March – August.	**Unlikely.** The Study Area is heavily wooded with no open mesic habitat.	**Not Present.** No further actions are recommended for this species.
Castilleja ambigua ssp. *humboldtiensis* Humboldt Bay owl's-clover	Rank 1B	Coastal salt marsh; in coastal areas associated with marsh vegetation. Elevation range: 0 – 10 feet. Blooms: April – August.	**No Potential.** The Study Area does not contain coastal salt marsh.	**Not Present.** No further actions are recommended for this species.
Ceanothus decornutus Nicasio ceanothus	Rank 1B	Chaparral; associated with maritime chaparral species, located on rocky clay derived from serpentine. Elevation range: 760 – 945 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Ceanothus gloriosus var. *exaltatus* glory bush	Rank 4	Chaparral; typically located within maritime influence. Elevation range: 95 – 1985 feet. Blooms: March – June, sometimes August.	**Moderate Potential.** The Study Area is located very near the coast.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions are recommended for this species.
Ceanothus gloriosus var. *gloriosus* Point Reyes ceanothus	Rank 4	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub; located on sandy substrate. Elevation range: 15 – 1690 feet. Blooms: March – May.	**Moderate Potential.** The Study Area is underlain by sandy substrate and is located very near the coast.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions are recommended for this species.
Ceanothus gloriosus var. *porrectus* Mt. Vision ceanothus	Rank 1B	Closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland; low shrub in a variety of habitats in Point Reyes; located on sandy soils. Elevation range: 80 – 1000 feet. Blooms: February – May.	**Unlikely**. The Study Area does not contain coniferous forest or coastal scrub habitat.	**Not Present.** No further actions are recommended for this species.
Ceanothus masonii Mason's ceanothus	SR; Rank 1B	Chaparral; located on serpentine ridges and slopes in chaparral or transitional zones. Elevation range: 745 – 1625 feet. Blooms: March – April.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Ceanothus pinetorum Kern ceanothus	Rank 4	Lower montane coniferous forest, subalpine forest, upper montane coniferous forest; located on rocky areas of granitic rock. Elevation range: 5200 – 8925 feet. Blooms: May – July.	**No Potential**. The Study Area is below elevation range and does not contain rocky granite outcrops.	**Not Present.** No further actions are recommended for this species.
Ceanothus rigidus Monterey ceanothus	Rank 4	Closed-cone coniferous forest, chaparral, coastal scrub; situated on sandy substrates. Elevation range: 10 – 1790 feet. Blooms: February – April, sometimes June.	**Unlikely.** The Study Area does not contain coniferous forest, chaparral or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Chloropyron maritimum ssp. *palustre* Point Reyes bird's-beak	Rank 1B	Coastal salt marshes; located in low-growing saltgrass and pickleweed mats. Elevation range: 0 – 35 feet. Blooms: June – October.	**No Potential.** The Study Area does not contain pickleweed mats or coastal salt marsh.	**Not Present.** No further actions are recommended for this species.
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower	Rank 1B	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub; located on sandy substrates of terraces and slopes. Elevation range: 10 – 700 feet. Blooms: April – August.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Chorizanthe valida Sonoma spineflower	FE; SE; Rank 1B	Coastal prairie; in sandy soils. Elevation range: 35 – 1000 feet. Blooms: June – August.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Cicuta maculata var. *bolanderi* Bolander's water hemlock	Rank 2B	Coastal freshwater and brackish marshes. Elevation range: 0 – 650 feet. Blooms: July – September.	**No Potential.** The Study Area does not contain perennial wetland habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Cistanthe maritima seaside cistanthe	Rank 4	Coastal bluff scrub, coastal scrub, valley and foothill grassland; situated on sandy substrates. Elevation range: 15 – 975 feet. Blooms: sometimes February, March – June, sometimes August.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Collinsia corymbosa round-headed Chinese houses	Rank 1B	Coastal dunes, coastal prairie. Elevation range: 0 – 65 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Collinsia multicolor San Francisco Collinsia	Rank 1B	Closed-cone coniferous forest, coastal scrub; located on decomposed shale mixed with humus. Elevation range: 95 – 815 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain decomposed shale.	**Not Present.** No further actions are recommended for this species.
Cypripedium californicum California lady's-slipper	Rank 4	Bogs and fens, lower montane coniferous forest; located along seeps and streambanks, typically underlain by serpentine. Elevation range: 95 – 8940 feet. Blooms: April – August.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Delphinium bakeri Baker's larkspur	FE; SE; Rank 1B	Coastal scrub, valley and foothill grassland; located on rocky north-facing slopes derived of decomposed shale. Elevation range: 260 – 995 feet. Blooms: March – May. Counties: MRN, SON.	**No Potential.** The Study Area does not contain decomposed shale.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Delphinium luteum yellow larkspur	FE; SR; Rank 1B	Chaparral, coastal prairie, coastal scrub; located on rocky north-facing slopes. Elevation range: 0 – 325 feet. Blooms: March – May. Counties: MRN, SON.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Dirca occidentalis western leatherwood	Rank 1B	Broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland; located on brushy, mesic slopes in woodland and forest. Elevation range: 165 – 1285 feet. Blooms: January – April.	**Moderate Potential.** The Study Area contains broadleaf upland forest with shaded, brushy slopes.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions are recommended for this species.
Elymus californicus California bottle-brush grass	Rank 4	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest, riparian woodland; located in mesic areas. Elevation range: 50 – 1530 feet. Blooms: May – August, sometimes November.	**Moderate Potential.** The Study Area contains broadleaf upland forest with shady mesic area.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions are recommended for this species.
Entosthodon kochii Koch's cord moss	Rank 1B	Cismontane woodland, valley and foothill grassland; located on river banks, may be on serpentine. Elevation range: 585 – 3250 feet.	**No Potential.** The Study Area does not contain stream habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Eriogonum luteolum var. *caninum* Tiburon buckwheat	Rank 1B	Chaparral, valley and foothill grassland, cismontane woodland, coastal prairie; located on sandy or gravelly substrate derived from serpentine. Elevation range: 0 – 2275 feet. Blooms: May – September.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Erysimum concinnum bluff wallflower	Rank 1B	Coastal bluff scrub, coastal scrub, coastal dunes; situated on sandy substrate. Elevation range: 0 – 605 feet. Blooms: February – July.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Erysimum franciscanum San Francisco wallflower	Rank 4	Maritime chaparral, coastal dunes, coastal scrub, valley and foothill grassland; typically located on serpentine or volcanic substrate, often on roadsides. Elevation range: 0 – 1790 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Fissidens pauperculus minute pocket moss	Rank 1B	North Coast coniferous forest; located on damp soil along the coast, and in dry streambanks and streambeds. Elevation range: 30 – 3330 feet.	**No Potential.** The Study Area does not contain stream habitat or coniferous forest.	**Not Present.** No further actions are recommended for this species.
Fritillaria lanceolata var. *tristulis* Marin checker lily	Rank 1B	Coastal bluff scrub, coastal scrub, coastal prairie; observed in canyons, riparian areas, and rock outcrops; often located on serpentine substrate. Elevation range: 45 – 490 feet. Blooms: February – May.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Fritillaria liliacea fragrant fritillary	Rank 1B	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	**Unlikely.** The Study Area does not contain clay soils.	**Not Present.** No further actions are recommended for this species.
Gilia capitata ssp. *chamissonis* blue coast gilia	Rank 1B	Coastal dunes, coastal scrub. Elevation range: 5 – 600 feet. Blooms: April – July.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Gilia capitata ssp. *tomentosa* woolly-headed gilia	Rank 1B	Coastal bluff scrub; rocky outcrops on the coast. Elevation range: 15 – 155 feet. Blooms: May – July.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Gilia millefoliata dark-eyed gilia	Rank 1B	Coastal dune. Elevation range: 5 – 100 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain coastal dune habitat.	**Not Present.** No further actions are recommended for this species.
Grindelia hirsutula var. *maritima* San Francisco gumplant	Rank 1B	Coastal scrub, coastal bluff scrub, valley and foothill grassland; situated on sea bluffs underlain by sand substrate, often derived from serpentine. Elevation range: 45 – 1300 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Helianthella castanea Diablo helianthella	Rank 1B	Broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; typically located in oak woodland/chaparral ecotone underlain by rocky, azonal substrates, often in partial shade. Elevation range: 195 – 4225 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain chaparral nor rocky soil.	**Not Present.** No further actions are recommended for this species.
Hemizonia congesta ssp. congesta Hayfield tarplant	Rank 1B	Coastal scrub, valley and foothill grassland. Elevation range: 65 – 1840 feet. Blooms: April – October.	**Unlikely.** The Study Area does not contain coastal scrub habitat and is dominated by forest habitat.	**Not Present.** No further actions are recommended for this species.
Hesperevax sparsiflora var. *brevifolia* short-leaved evax	Rank 1B	Coastal bluff scrub, coastal dunes; on sandy bluffs and flats in direct maritime influence. Elevation range: 0 – 215 feet. Blooms: March – June.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Hesperolinon congestum Marin western flax	FT; ST; Rank 1B	Chaparral, valley and foothill grassland; located on serpentine substrate. Elevation range: 15 – 1205 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Heteranthera dubia water star-grass	Rank 2B	Marshes and swamps; still or slow-moving water, alkaline. Elevation range: 95 – 4905 feet. Blooms: July – October.	**No Potential.** The Study Area does not contain perennial wetland habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Holocarpha macradenia Santa Cruz tarplant	FT; SE; Rank 1B	Coastal prairie, coastal scrub, valley and foothill grassland; located on light, sandy to sandy clay substrate; tolerant of non-native herbaceous vegetation. Elevation range: 30 – 715 feet. Blooms: June – October.	**Unlikely.** While the Study Area contains sandy soils, it is dominated by forest habitat with few sunny openings.	**Not Present.** No further actions are recommended for this species.
Horkelia cuneata var. *sericea* Kellogg's horkelia	Rank 1B	Closed cone coniferous forest, coastal scrub, chaparral; located in openings on relict dunes and coastal sandhills. Elevation range: 30 – 650 feet. Blooms: April – September.	**Unlikely.** While the Study Area contains sandy soils, it is dominated by forest habitat with few sunny openings.	**Not Present.** No further actions are recommended for this species.
Horkelia marinensis Point Reyes horkelia	Rank 1B	Coastal dunes, coastal prairie, coastal scrub; located on sandy flats and dunes near the coast; in open grassy sites within scrub. Elevation range: 15 – 1140 feet. Blooms: May – September.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Horkelia tenuiloba thin-lobed horkelia	Rank 1B	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	**Unlikely.** While the Study Area contains sandy soils, it is dominated by forest habitat with few sunny openings.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Hosackia gracilis harlequin lotus	Rank 4	Broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, valley and foothill grassland; located in wetlands and roadside ditches. Elevation range: 0 – 2275 feet. Blooms: March – July.	**Unlikely.** While the Study Area contains broadleaf upland forest, sunny mesic habitat is not present.	**Not Present.** No further actions are recommended for this species.
Kopsiopsis hookeri small groundcone	Rank 2B	North Coast coniferous forest; located in open woods, shrublands, generally hosts on salal (*Gaultheria shallon*). Elevation range: 290 – 2880 feet. Blooms: April – August.	**No Potential.** The Study Area does not contain coniferous forest nor the host plant.	**Not Present.** No further actions are recommended for this species.
Lasthenia californica ssp. macrantha perennial goldfields	Rank 1B	Coastal bluff scrub, coastal dunes, coastal scrub. Elevation range: 5 – 520 feet. Blooms: January – November.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Layia carnosa beach layia	FE; SE; Rank 1B	Coastal dunes; located in sparsely vegetated semi-stabilized dunes behind foredunes. Elevation range: 0 – 195 feet. Blooms: March – July.	**No Potential.** The Study Area does not contain coastal dune habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Leptosiphon acicularis bristly leptosiphon	Rank 4	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; often located on shallow, rocky substrate in foothill positions; typically, low-growing and sparse vegetation; often on edge of chaparral and shrub thickets. Elevation range: 175 – 4875 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain chaparral or scrub habitat.	**Not Present.** No further actions are recommended for this species.
Leptosiphon croceus coast yellow leptosiphon	Rank 1B	Coastal bluff scrub, coastal prairie. Elevation range: 30 – 490 feet. Blooms: April – May.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Leptosiphon grandiflorus large-flowered leptosiphon	Rank 4	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland; typically on sandy substrate. Elevation range: 15 – 3965 feet. Blooms: April – August.	**Unlikely.** While the Study Area is underlain by sandy soils, it is dominated by forest habitat which provides limited sunny areas.	**Not Present.** No further actions are recommended for this species.
Leptosiphon rosaceus rose leptosiphon	Rank 1B	Coastal bluff scrub. Elevation range: 0 – 325 feet. Blooms: April – July.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lessingia hololeuca woolly-headed lessingia	Rank 3	Broadleaf upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland; typically on clay, serpentine substrate. Elevation range: 3 – 2885 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Lessingia micradenia var. *micradenia* Tamalpais lessingia	Rank 1B	Chaparral, valley and foothill grassland; typically located in serpentine grassland or serpentine scrub, often on roadsides. Elevation range: 325 – 1625 feet. Blooms: June – October.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Lilaeopsis masonii Mason's Lilaeopsis	SR, Rank 1B	Freshwater and brackish coastal marshes, riparian scrub; located on channel banks in the splash zone on bare mud substrate. Elevation range: 0 – 35 feet. Blooms: April – November.	**No Potential.** The Study Area does not contain bare mud substrate on brackish channels.	**Not Present.** No further actions are recommended for this species.
Lilium maritimum coast lily	Rank 1B	Closed-cone coniferous forest, coastal prairie, coastal scrub, broadleaf upland forest, North Coast coniferous forest; typically located on sandy soils, often in raised hummocks or bogs, and roadside ditches. Elevation range: 15 – 1545 feet. Blooms: May – August.	**Unlikely.** While the Study Area contains sandy soils, mesic areas are limited and do not provide suitable habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Micropus amphibolus Mt. Diablo cottonweed	Rank 3	Broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland; typically on thin, rocky soils. Elevation range: 145 – 2710 feet. Blooms: March – May.	**Unlikely.** The Study Area does not contain thin, rocky soils.	**Not Present.** No further actions are recommended for this species.
Microseris paludosa marsh microseris	Rank 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation range: 5 – 300 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain shallow soils.	**Not Present.** No further actions are recommended for this species.
Mielichhoferia elongata elongate copper moss	Rank 2B	Cismontane woodland; located on acidic, metamorphic rock and substrate, often located in higher portions in fens. Elevation range: 1625 – 4225 feet.	**Unlikely.** The Study Area does not contain fens or metamorphic rock.	**Not Present.** No further actions are recommended for this species.
Monardella sinuata ssp. *nigrescens* northern curly-leaved Monardella	Rank 1B	Chaparral, coastal dunes, coastal scrub, lower montane coniferous forest (ponderosa pine forest). Elevation range: 0 – 985 feet. Blooms: sometimes April, May – July, sometimes August – September.	**No Potential.** The Study Area does not contain chaparral, dune or coniferous forest.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	Rank 1B	Wet, mesic sites underlain by adobe and/or alkaline substrate in cismontane woodland, meadows, seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Elevation range: 15 – 5710 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain alkaline soils or adobe clay.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Navarretia rosulata Marin County navarretia	Rank 1B	Closed-cone coniferous forest, chaparral; located on dry, rocky sites often formed from serpentine. Elevation range: 650 – 2065 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Pentachaeta bellidiflora white-rayed pentachaeta	FE; SE; Rank 1B	Valley and foothill grassland; located on open, dry rocky slopes and grassy areas, often on substrate derived from serpentine. Elevation range: 110 – 2015 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	Rank 4	Broadleaf upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools; located in vernally mesic sites. Elevation range: 0 – 1985 feet. Blooms: June – October.	**Unlikely.** While the Study Area contains broadleaf forest with vernally mesic habitat, the mesic area is shaded.	**Not Present.** No further actions are recommended for this species.
Phacelia insularis var. *continentis* North Coast phacelia	Rank 1B	Coastal bluffs scrub, coastal dunes; located on open maritime bluffs underlain by sandy substrate. Elevation range: 30 – 555 feet. Blooms: March – May.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Plagiobothrys glaber hairless popcornflower	Rank 1A	Meadows and seeps, marshes and swamps; located in coastal salt marshes and alkaline meadows. Elevation range: 45 – 585 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain coastal salt marsh habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Pleuropogon hooverianus North coast semaphore grass	ST; Rank 1B	Broadleaf upland forests, meadows and seeps, freshwater marshes and swamps, North Coast coniferous forest, shaded, wet, and grassy areas in forested habitat. Elevation range: 10 – 635 feet. Blooms May – August.	**Unlikely.** While the Study Area contains shady mesic area in broadleaf forest, the mesic area is seasonal and does not represent typical habitat of the species.	**Not Present.** No further actions are recommended for this species.
Pleuropogon refractus nodding semaphore grass	Rank 4	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest; located in mesic settings. Elevation range: 0 – 5200 feet. Blooms: March – August.	**No Potential.** The Study Area does not contain coniferous or riparian habitat.	**Not Present.** No further actions are recommended for this species.
Polemonium carneum Oregon polemonium	Rank 2B	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation range: 0 – 5950 feet. Blooms: April – September.	**Unlikely.** The Study Area does not contain coastal prairie, or coastal scrub.	**Not Present.** No further actions are recommended for this species.
Polygonum marinense Marin knotweed	Rank 3	Salt and brackish coastal marshes. Elevation range: 0 – 35 feet. Blooms: sometimes April, May – August, sometimes October.	**No Potential.** The Study Area does not contain marsh habitat.	**Not Present.** No further actions are recommended for this species.
Quercus parvula var. *tamalpaisensis* Tamalpais oak	Rank 1B	Lower montane coniferous forest; highly restricted to the slopes of Mt. Tamalpais. Elevation range: 325 – 2275 feet. Blooms: March – April.	**No Potential.** The Study Area does not contain coniferous forest nor is located on Mt. Tamalpais.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Ranunculus lobbii Lobb's buttercup	Rank 4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools; located in mesic, vernally wet areas. Elevation range: 45 – 1530 feet. Blooms: February – May.	**No Potential.** The Study Area does not contain vernally wet pools of water.	**Not Present.** No further actions are recommended for this species.
Ribes victoris Victor's gooseberry	Rank 4	Broadleaf upland forest, chaparral; located in shady, mesic sites. Elevation range: 325 – 2440 feet. Blooms: March – April.	**Unlikely.** While the Study Area contains shady, mesic habitat in broadleaf upland forest, the species does not occur very near the coast.	**Not Present.** No further actions are recommended for this species.
Sagittaria sanfordii Sanford's arrowhead	Rank 1B	Marshes and swamps; located in assorted shallow freshwater habitats including canals and perennial drainage ditches. Elevation range: 0 – 2115 feet. Blooms: May – October, sometimes November.	**No Potential.** The Study Area does not contain perennial wetland habitat.	**Not Present.** No further actions are recommended for this species.
Sidalcea calycosa ssp. *rhizomata* Point Reyes checkerbloom	Rank 1B	Marshes and swamps; located in freshwater marsh habitat near the coast. Elevation range: 10 – 245 feet. Blooms: April – September.	**No Potential.** The Study Area does not contain perennial wetland habitat.	**Not Present.** No further actions are recommended for this species.
Sidalcea hickmanii ssp. *viridis* Marin checkerbloom	Rank 1B	Chaparral; located on serpentine or volcanic substrate, often located in burns. Elevation range: 160 – 1400 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Silene scouleri ssp. *scouleri* Scouler's catchfly	Rank 2B	Coastal bluff scrub, coastal prairie, valley and foothill grassland; situated on rocky slopes and bluffs. Elevation range: 0 – 1950 feet. Blooms: sometimes March – May, typically June – August, sometimes September.	**No Potential.** The Study Area does not contain rocky slopes or rocky bluff habitat.	**Not Present.** No further actions are recommended for this species.
Stebbinsoseris decipiens Santa Cruz Stebbinsoseris	Rank 1B	Broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub; located on open, loose or disturbed substrate derived from sandstone, shale, or serpentine. Elevation range: 30 – 1625 feet. Blooms: April – May.	**No Potential.** The Study Area does not contain rocky slopes or rocky bluff habitat.	**Not Present.** No further actions are recommended for this species.
Streptanthus batrachopus Tamalpais jewel-flower	Rank 1B	Closed-cone coniferous forest, chaparral; located on serpentine talus slopes. Elevation range: 990 – 2115 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain rocky slopes or rocky bluff habitat.	**Not Present.** No further actions are recommended for this species.
Streptanthus glandulosus ssp. *pulchellus* Mt. Tamalpais jewelflower	Rank 1B	Chaparral, valley and foothill grassland; located on serpentine slopes. Elevation range: 490 – 2600 feet. Blooms: May – August.	**No Potential.** The Study Area does not contain serpentine soils.	**Not Present.** No further actions are recommended for this species.
Trifolium amoenum showy rancheria clover	FE; Rank 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine. Elevation range: 15 – 1365 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain mesic sunny sites.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Triphysaria floribunda San Francisco owl's-clover	Rank 1B	Coastal prairie, valley and foothill grassland; located on serpentine and non-serpentine substrate. Elevation range: 30 – 520 feet. Blooms: April – June.	**Unlikely.** The Study Area does not contain coastal prairie habitat and limited grassland habitat.	**Not Present.** No further actions are recommended for this species.
Triquetrella californica coastal triquetrella	Rank 1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland; grows within 100 feet of the coastline in scrub and grasslands on open gravel substrates of roads, hillsides, bluffs, and slopes. Elevation range: 30 – 325 feet.	**No Potential.** The Study Area does not contain open, gravelly areas.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Mammals				
Antrozous pallidus pallid bat	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** The Study Area contains large trees that may provide maternity roosts for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Aplodontia rufa phaea Point Reyes mountain beaver	SSC	Known from the coastal areas of Point Reyes. Located in north-facing slopes of hills and gullies with seeps and springs nearby. Areas typically overgrown with vegetation such as sword fern (*Polystichum munitum*) and thimbleberry (*Rubus parviflorus*).	**Unlikely.** The Study Area does not contain thick understory nor is it north-facing.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Corynorhinus townsendii townsendii Townsend's western big-eared bat	SSC, WBWG High	Humid coastal regions of northern and central California. Roost in limestone caves, lava tubes, mines, buildings etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance	**Moderate Potential.** The Study Area contains large trees that may provide maternity roosts for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Enhydra lutris nereis southern sea otter	FT, SFP	Located in near-shore marine environments from Ano Nuevo to Point Sal (possibly Marin County). Requires canopies of giant kelp and bull kelp for rafting and feeding. Prefers rocky substrates with abundant invertebrates for foraging.	**No Potential.** The Study Area is terrestrial and does not contain marine environments.	**Not Present.** No further actions are recommended for this species.
Lasiurus blossevillii western red bat	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods (*Populus* spp.), sycamores (*Platanus* spp.), alders (*Alnus* spp.), and maples (*Acer* spp.). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Unlikely.** The Study Area does not contain the broadleaf trees that this species is typically associated with.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lasiurus cinereus western red bat	WBWG Medium	Migratory and typically solitary, roosting primarily in the foliage of trees and shrubs. Roosts are usually in broadleaf trees including cottonwoods (*Populus* spp.), sycamores (*Platanus* spp.), alders (*Alnus* spp.), and maples (*Acer* spp.). Day roosts are commonly in edge habitats adjacent to streams, open fields, orchards, and occasionally urban areas.	**Unlikely.** The Study Area does not contain the broadleaf trees that this species is typically associated with.	**Presumed Absent.** No further actions are recommended for this species.
Reithrodontomys raviventris salt marsh harvest mouse	FE, SE, SFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for dryland refugia during high tides.	**No Potential.** The Study Area does not contain salt or brackish marsh habitat or similar wetland communities.	**Not Present.** No further actions are recommended for this species.
Taxidea taxus American badger	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**No Potential.** The Study Area does not contain expansive herbaceous or open scrub habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Zapus trinotatus orarius Point Reyes jumping mouse	SSC	Known from upland areas in Point Reyes. Typically located in upper margins of bunch grass wetlands, as well as coastal scrub, grassland, and meadows. Primarily forages for grass seeds, with some insects and fruits. Builds grass nests above ground, but burrows in winter.	**No Potential.** The Study Area does not contain coastal prairie or mesic meadow habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Birds				
Agelaius tricolor tricolored blackbird	SC (E), SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**No Potential.** The Study Area does not contain perennial wetlands or stillwaters to support this species.	**Not Present.** No further actions are recommended for this species.
Ammodramus savannarum grasshopper sparrow	SSC	Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	**No Potential.** The Study Area does not contain expansive grassland or open scrub habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Aquila chrysaetos golden eagle	BGEPA, SFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	**Unlikely.** The Study Area does not contain large canyons or cliffs, or very large trees to support nesting of this species.	**Presumed Absent.** No further actions are recommended for this species.
Ardea alba great egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Moderate Potential.** The Study Area contains trees with vertical complexity and cover that may provide roosting for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Ardea herodias great blue heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequested terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Moderate Potential.** The Study Area contains trees with vertical complexity and cover that may provide roosting for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Asio flammeus short-eared owl	SSC	Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**No Potential.** The Study Area does not contain expansive grassland or other herbaceous habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Asio otus long-eared owl	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Moderate Potential.** The Study Area contains trees that may provide nesting substrate for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Athene cunicularia burrowing owl	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**No Potential.** The Study Area does not contain expansive grassland or other open herbaceous habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Buteo swainsoni Swainson's hawk	ST	Summer resident in Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**No Potential.** The Study Area does not contain expansive grassland or other open herbaceous habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Charadrius alexandrines nivosus western snowy plover	FT, SSC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No Potential.** The Study Area does not contain beach, coastal strand, or other open shoreline areas for nesting for this species.	**Not Present.** No further actions are recommended for this species.
Circus cyaneus northern harrier	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**No Potential.** The Study Area does not contain expansive grassland or other open herbaceous habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Contopus cooperi olive-sided flycatcher	SSC	Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.	**No Potential.** The Study Area does not contain montane coniferous forest or similar forest types to support this species.	**Not Present.** No further actions are recommended for this species.
Coturnicops noveboracensis yellow rail	SSC	Summer resident in eastern Sierra Nevada, breeding in shallow freshwater marshes and wet meadows with dense vegetation. A rare winter visitor along the coast and other cismontane areas. Extremely cryptic.	**No Potential.** Does not breed in coastal California.	**Not Present.** No further actions are recommended for this species.
Cypseloides niger black swift	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas.	**No Potential.** The Study Area does not contain deep canyons or cliffs to support nesting of this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Egretta thula snowy egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees, at times in sequestered beds of dense emergent vegetation (e.g., tules). Rookery sites usually situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	**Moderate Potential.** The Study Area contains trees with vertical complexity and cover that may provide roosting for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Elanus leucurus white-tailed kite	SFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Moderate Potential.** The Study Area contains trees that may provide nesting substrate for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Falco peregrinus anatum American peregrine falcon	SE, SFP	Year-round resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. Usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	**No Potential.** The Study Area does not contain cliffs, large outcrops, tall buildings, or other structures for nesting.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Fratercula cirrhata tufted puffin	SSC	Pelagic and coastal marine. Nests near or along the coast on islands, islets, and (rarely) isolated mainland cliffs. Requires sod or earth into which the birds can burrow, or rocky crevices where friable soil is absent. Forages at sea, primarily for fish.	**No Potential.** The Study Area does not contain coastal islands to support nesting for this species.	**Not Present.** No further actions are recommended for this species.
Geothlypis trichas sinuosa San Francisco (saltmarsh) common yellowthroat	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**No Potential.** The Study Area does not contain coastal marsh to support this species.	**Not Present.** No further actions are recommended for this species.
Haliaeetus leucocephalus bald eagle	BGEPA, SE, SFP	Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs, and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** Although the Study Area contains trees, most of even sized without large open canopies to provide nesting substrate. No pronounced, large stick nests were observed during the site visits.	**Presumed Absent.** No further actions are recommended for this species.
Icteria virens yellow-breasted chat	SSC	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (*Salix* ssp.), blackberry (*Rubus* spp.), and wild grape (*Vitis californicus*).	**Unlikely.** The Study Area does not contain willow or other riparian thickets to provide nesting for this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lanius ludovicianus loggerhead shrike	SSC	Year-round resident in open woodland, grasslands, savannah, and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely-foliaged shrubs or trees.	**Unlikely.** The Study Area does not contain expansive grassland or open scrub habitat to support nesting of this species.	**Presumed Absent.** No further actions are recommended for this species.
Laterallus jamaicensis coturniculus California black rail	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Study Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.
Melospiza melodia samuelis San Pablo song sparrow	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed (*Salicornia* ssp.), with gumplant (*Grindelia* ssp.) and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**No Potential.** The Study Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Nycticorax nycticorax black-crowned night heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees but also in patches of emergent vegetation. Rookery sites are often on islands and usually located adjacent to foraging areas: margins of lakes and bays.	**Moderate Potential.** The Study Area contains trees with vertical complexity and cover that may provide roosting for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Oceanodroma homochroa ashy storm-petrel	SSC	Marine species; nests in rocky crevices on offshore islands and rocks from southern Mendocino County to norther Baja California. Forages over open ocean for invertebrates and larval fishes.	**No Potential.** The Study Area does not contain coastal islands to support nesting for this species.	**Not Present.** No further actions are recommended for this species.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	SSC	Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas, including grasslands. Also uses drier, more upland coastal grasslands. Nests near the ground in taller vegetation, including along levees and canals.	**Unlikely.** The Study Area does not contain expansive grassland or open scrub habitat to support nesting of this species.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Pelecanus occidentalis californicus California brown pelican	SFP	(Nesting colony) colonial nester on coastal islands just outside the surf line. Islands are small to moderate sized to afford protection from ground-dwelling predators.	**No Potential.** The Study Area does not contain coastal islands to support nesting for this species.	**Not Present.** No further actions are recommended for this species.
Progne subis purple martin	SSC	Summer resident. Inhabits woodlands and low-elevation coniferous forests. Nests in old woodpecker cavities and man-made structures (bridges, utility towers). Nest is often located in tall, isolated tree or snag.	**Moderate Potential.** The Study Area contains trees that may provide nesting substrate for this species.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.
Rallus obsoletus obsoletus California Ridgway's (clapper) rail	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	**No Potential.** The Study Area does not contain coastal brackish marsh to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Riparia riparia bank swallow	ST	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**No Potential.** The Study Area does not contain river or lake banks.	**Not Present.** No further actions are recommended for this species.
Setophaga petechia yellow warbler	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting is variable, but dense willow (*Salix* ssp.) growth is typical. Occurs widely on migration.	**Unlikely.** The Study Area does not contain willow or other similar riparian thickets.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Strix occidentalis caurina northern spotted owl	FT,ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Marin County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Documented nest trees in Marin County both conifer and broadleaf. Preys on small forest/woodland mammals.	**No Potential.** The Study Area does not contain old-growth or mixed old-growth forest to support nesting of this species.	**Not Present.** No further actions are recommended for this species.
Xanthocephalus xanthocephalus yellow-headed blackbird	SSC	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**No Potential.** The Study Area does not contain perennial wetlands to support nesting of this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Reptiles and Amphibians				
Ambystoma californiense California tiger salamander	FT, ST	Occurs in grasslands, oak savannah, and open woodlands with a mosaic of vernal pools or similar seasonal wetlands. Requires vernal pools or similarly inundated waters for breeding and larvae. Adults are fossorial utilizing small mammal burrows for estivation.	**No Potential.** The Study Area does not contain vernal pools or similarly inundated habitat.	**Not Present.** No further actions are recommended for this species.
Dicamptodon ensatus California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**No Potential.** The Study Area does not contain perennial stream or open water habitat.	**Not Present.** No further actions are recommended for this species.
Emys marmorata Pacific (western) pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**No Potential.** The Study Area does not contain perennial stream or open water habitat.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Rana boylii foothill yellow-legged frog	SC (T), SSC	Found in or near rocky streams in a variety of habitats; highly aquatic. Prefers partially-sunlit, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on invertebrates (aquatic and terrestrial).	**No Potential.** The Study Area does not contain perennial stream or open water habitat.	**Not Present.** No further actions are recommended for this species.
Rana draytonii California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains.	**No Potential.** The Study Area does not contain ponds, lakes, perennial wetlands, or perennial/intermittent stream habitat.	**Not Present.** No further actions are recommended for this species.
Fishes				
Eucyclogobius newberryi tidewater goby	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Requires fairly still but not stagnant water and high oxygen levels.	**No Potential.** The Study Area does not contain perennial stream or estuarine habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lavinia symmetricus ssp. 2 Tomales roach	SSC	Habitat generalist. Found in well aerated perennial and tributaries to Tomales Bay. Feed primarily on algae supplemented with crustaceans and insects.	**No Potential.** The Study Area does not contain perennial stream or open water habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Oncorhynchus kisutch coho salmon – central CA coast ESU	FE, SE	Occurs in inland and coastal rivers, and marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also requires riparian cover to contribute to cool, well-aerated water. Federal listing applies to populations between Punta Gorda and San Lorenzo River. State listing applies populations south of San Francisco Bay only.	**No Potential.** The Study Area does not contain riverine or estuarine habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Oncorhynchus mykiss irideus steelhead - central CA coast DPS	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for one or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does not contain riverine or estuarine habitat to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Spirinchus thaleichthys longfin smelt	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Study Area does not contain estuarine habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Invertebrates				
Callophrys mossii bayensis San Bruno elfin butterfly	FE	Known from San Bruno Mountain, Milagra Ridge, and Montara Mountain. Host plant is Pacific stonecrop (*Sedum spathulifolium*). Adult nectar resources include manzanita (*Arctostaphylos* spp.) and evergreen huckleberry (*Vaccinium ovatum*).	**No Potential.** The Study Area does not contain the host plants for this species.	**Not Present.** No further actions are recommended for this species.
Danaus plexippus monarch butterfly	roosting sites protected by CDFW	Winter roost sites along the coast from Baja California north to Mendocino County. Roosts are wind-protected tree groves, typically of eucalyptus (*Eucalyptus* spp.), Monterey pine (*Pinus radiata*), and Monterey cypress (*Hesperocyparis macrocarpa*).	**Moderate Potential.** The Study Area contains a grove of trees that may support winter roosting.	**Presence Unknown without Impact.** Although the presence of this species is not known, the proposed project will not remove trees; therefore, no further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Plebejus icarioides missionensis Mission blue butterfly	FE	Known from Twin Peaks and Marin Headlands. Hosts on three perennial lupines (*Lupinus variicolor, L. albifrons, L. formosus*). Nectars on a variety of flowers.	**No Potential.** The Study Area does not contain host plants for this species.	**Not Present.** No further actions are recommended for this species.
Speyeria zerene myrtleae Myrtle's silverspot butterfly	FE	Historic populations from Russian River to San Mateo County; currently known only from western Marin and southwestern Sonoma counties. Host plant is dog violet (*Viola adunca*); nectar plants are varied.	**No Potential.** The Study Area does not contain host plant for this species.	**Not Present.** No further actions are recommended for this species.
Syncaris pacifica California freshwater shrimp	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**No Potential.** The Study Area does not contain perennial stream habitat to support this species.	**Not Present.** No further actions are recommended for this species.

***Key to status codes:**

FC	Federal Candidate for Listing
FE	Federal Endangered
BGEPA	Bald and Golden Eagle Protection Act Species
FT	Federal Threatened
SC (E/T)	State Candidate for Listing (Endangered/Threatened)
SE	State Endangered
SFP	State Fully Protected Animal
SR	State Rare
SSC	State Species of Special Concern
ST	State Threatened
Rank 1A	CNPS Rank 1A: Plants presumed extinct in California
Rank 1B	CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B	CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CNPS Rank 3: Plants about which CNPS needs more information (a review list)
Rank 4	CNPS Rank 4: Plants of limited distribution (a watch list)
WBWG	Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:

No Potential: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:

Present: Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

Assumed Present: Species is assumed to be present on-site based on the presence of key habitat components.

Presence Unknown without Impact: Species may be present; however, project activities will not have an impact on the species.

Presumed Absent: Species is presumed to not be present due to a lack of key habitat components.

Not Present: Species is considered not present due to a clear lack of any suitable habitat and/or local range limitations.

Not Observed: Species was not observed during dedicated/formal surveys.

Presence Unknown: Species has the potential to be present, but no dedicated surveys to determine absence/presence were performed.

Appendix D

Representative Photographs

Photo 1. Example of coast live oak forest within the Study Area.

Photo 2. Disturbed area on slope.

Photo 3. Looking downslope across the seasonal wetland.

Photo 4. Close-up of vegetation within the seasonal wetland.