BOTANICAL REPORT OF SPECIAL STATUS NATIVE PLANT POPULATIONS AND NATURAL COMMUNITIES

APN: 111-121-037

Shelter Cove, Humboldt County, CA

Prepared For:

495 Sea Court
Shelter Cove, CA 95589

Prepared by:

Sarah Mason
Consulting Botanist
1198 P Street, Unit A
Arcata, CA 95521
(406) 499-1075

In Conjunction with:

Naiad Biological Consulting
www.naiadbiological.com

PO Box 121
Samoa, CA 95564

Date Prepared:

July 23, 2023

Table of Contents

Summary Information

Legal description:	Portions of section 16 of T5S, R1E, H.B. &M.
APN:	111-121-037
USGS 7.5' Quad:	Shelter Cove (4012411)
Parcel size:	0.14 Acres
Dates of survey:	April 21st and June 11th, 2022
Surveyed by:	Sarah Mason
Field survey effort:	2.5 hours
Results:	**No CRPR 1 or 2 plants were observed**

Introduction, Background, and Project Understanding

Purpose and Need

This botanical survey report was prepared to assess potential impacts to botanical resources and summarizes the results of a survey conducted in Shelter Cove, California (APN: 111-121-037). The survey was performed to identify special status plants and sensitive plant communities that could be impacted by operations associated with the subdivision of parcels in accordance with the California Environmental Quality Act (CEQA) using the California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

Project Description and Setting

The proposed project includes the development of residential housing on a 0.14-acre lot within the coastal zone. The coastal grasslands were historically utilized for grazing starting in the 1850s (Humboldt 2023) and eventually altered for residential development. The project area is dominated by several invasive species.

The parcel address is located at 495 Sea Court, Shelter Cove, California 95589, within the Shelter Cove USGS 7.5-minute quadrangle (Quad code: 4012368:), section 16, T5S, R1E, H.B.&M. The center location of the parcel is 40°1'46.74" N 124°4'42.53" W at an elevation of 41 feet (12.5meters) above sea level (Google Earth Pro, 2023).

Soil, Topography, and Hydrology

Data from *Web Soil Survey* for the project area do not indicate any unique soil types that would provide habitat for rare plants such as serpentinite or peat. The soil consists of gravelly loams with a parent material composed of fluviomarine marine deposits derived from sedimentary rock.

The project area is situated along the Pacific Coast adjacent to a coastal bluff, directly 0.3 miles west of the Shelter Cove airport and approximately 25 miles west of Garberville, California. The project area lies within the Mattole River watershed which drains into the Pacific Ocean ~4.0 miles southwest of Petrolia, California. Refer to Figure 1 (Appendix C) for locator map.The project area is mostly flat with a slight west facing aspect ranging from ~29 to ~44 feet in elevation.

Definitions

Special Status Plants and Plant Communities

Special status plants include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) in addition to plants which meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). CDFW recommends that plants on California Rare Plant Ranks (CRPR) Lists 1A (presumed extinct or extirpated), 1B (rare, threatened, or endangered in California and elsewhere), 2A (presumed extirpated) and 2B (rare, threatened, or endangered in California but more common elsewhere), or other species that warrant consideration based on local or biological significance, be addressed during California Environmental Quality Act (CEQA) review of proposed projects. Plants of rank 3 and 4, which are under review and watch lists respectively, are addressed by Naiad Biological Consulting, and may warrant consideration under CEQA if potential or cumulative impacts to the plant exist.

CDFW's natural community rarity rankings follow NatureServes's 2012 *NatureServe Conservation Status Assessment: Methodology for Assigning Ranks*, in which all alliances are listed with a global (G) and (S) rank. NCSC are those natural communities that are ranked S1 to S3 (CDFW, 2023), where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

Methods

Pre-Site Visit Data Compilation and Preparation

Prior to conducting the field surveys, the following database information was reviewed to determine the location and types of botanical resources that possibly exist in the survey area. This pre-field investigation included searches of the California Natural Diversity Database (CNDDB, 2023) and the California Native Plant Society's *Inventory of Rare and Endangered Plants* (CNPS, 2023). This list includes CRPR (California Rare Plant Rank) plant species that have been observed within a 9-quad search centered on the Shelter Cove quadrangle. Because the Shelter Cove quadrangle is coastal only 6 quadrangles were included in this search. USGS quadrangles within the search area include Shelter

Cove (4012411), Shubrick Peak (4012422), Honeydew (4012421), Ettersberg (4012328), Briceland (4012318), and Bear Harbor (4012388). The results of the project's scoping are presented below in Table 1 (Appendix 1).

Reference Populations

Reference populations were used to determine the timing of seasonally appropriate surveys. The following reference populations of rare plants were used for this project:

Lasthenia californica ssp. *macrantha* located 100 meters north of the project area, along the coastal bluff, was observed in bloom on June 11th, 2023.

Montia howellii located 51 miles northeast of the project area, near Baxter Environmental Camp in Humboldt Redwoods State Park, was observed in bloom April 3rd, 2023.

Botanical Field Survey and Habitat Investigation

The botanical field survey for this project was completed by Sarah Mason. Sarah holds a BS in Botany from Humboldt State University and is currently employed as an Environmental Services Intern with California State Parks for the North Coast Redwoods District. Sarah has worked as an assistant botanist with Caltrans, a Botanical Technician for the Bitterroot and Klamath National Forests, and studied bumble bee communities in the Marble Mountains. Sarah has experience in rare plant identification, protection and monitoring of rare plants, and teaching plant taxonomy at the university level.

Surveys were floristic in nature and conducted in a manner consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Plants were identified to the lowest taxonomic level necessary to ensure that they were not a species of concern. Plants not identifiable in the field were identified off site with the use of *The Jepson Manual, Vascular Plants of California*. Other resources used to identify plants can be found in the reference section towards the end of this report.

Botanical surveys were conducted throughout the areas proposed for development operations and the associated road system. Surveys were conducted in an intuitive meander focused on areas likely to provide habitat for rare plant species and/or potentially affected (directly or indirectly) by construction operations. These areas include but are not limited to existing permanent and seasonal roads, new road construction, road points and crossings, forest openings (i.e., meadows, landings, and cut banks), springs and watercourses. Refer to Figure 2 (Appendix C) for the survey routes.

Results

Habitats Observed

No special-status vegetation communities or habitats were observed during the botanical survey of the project area. The project area habitat is a highly altered and disturbed coastal prairie. The site is dominated by several invasive species including velvet grass (*Holcus lanatus*), Italian rye grass (*Festuca perennis*), ice plant (*Carprobrotus edulis*), and pride of madeira (*Echium canadensis*). No

native grasses were observed during the field surveys. See figures 3 and 4 (Appendix D) for example photos of project area and habitats present.

Species Observed

No CRPR 1 or 2 plants were encountered in the project area. Refer to Table 2 (Appendix B) for a list of species observed in the project area. A total of 43 plant taxa were observed in the project area, of which approximately 30% are invasive species.

Conclusion and Discussion

Conclusion

Results of the botanical field survey indicate that negative impacts to sensitive species or sensitive habitats will not occur as a result of the development of residential housing at the specific site surveyed.

Although no listed species were observed during the field survey, it is possible that previous ground disturbances and climate and weather patterns may have affected survey results. Heatwaves or drought during the growing season or in previous years can affect phenology and detection probability. Spring was unusually cool and wet, which may have delayed flowering for several species, making them more difficult to detect. Therefore, documented taxa are not necessarily an exhaustive list of special status species growing in the project area.

Recommendations

Due to the low quality of habitat, from prior land use practices and high coverage of invasive species, no sensitive plant species, communities, or habitats were encountered during the botanical field survey. No further botanical surveys are recommended.

References

Baldwin, B. C., D. H. Goldman, D. J. Keili, R. Patterson, and T. J. Roasatti. Eds. 2012. *The Jepson Manual, Vascular Plants of California, Second Edition.* University of California Press. Berkeley, CA.

California Department of Fish and Wildlife (CDFW). 2023. *California Natural Diversity Database* (CNDDB), Wildlife and Habitat Data Branch, Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2023. *California Natural Community List.* Biogeographic Branch, Vegetation Classification and Mapping Program, Sacramento, CA.

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org. [Accessed April – July 2023].

Calflora. 2023. Information on California plants for education, research, and conservation. *The Calflora Database*. Berkley, CA. https://www.calflora.org/ [Accessed April-July 2023].

CDFW. 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.* California Department of Fish and Wildlife, Sacramento, CA.

County of Humboldt. 2023. *Humboldt Planning & Building: Humboldt GIS Portal*. https://humboldtgov.org/1357/Web-GIS [Accesses April - August 2023]

Humboldt County Historical Society.2023. *Shelter Cove*. https://www.humboldthistory.org/history-nuggets/2023/4/20/shelter-cove [accessed July 23, 2023]

Jepson Flora Project (eds.) 2023. Jepson eFlora. https://ucjeps.berkeley.edu.eflora/ [accessed April -July 2023.]

Sawyer, J.O., T. Keeler-Wold and J.M. Evans. 2009. *A Manual of California Vegetation, 2nd Edition.* California Native Plant Society. Sacramento, CA.

Smith, J. P. Jr. 2014. *Field Guide to Grasses of California.* University of California Press. Berkeley, CA.

United States Department of Agriculture, Natural Resource Conservation Service (USDA, NRCS). 2023. *Web Soil Survey.* http://websoilsurvey.sc.egov.usda.gov [Accessed July 2023].

Appendix A. Results from database search

Table 1. Special-Status Plant Species –Shelter Cove and surrounding 7.5 min quadrangles.

Scientific Name	Common Name	CRPR	Blooming Period	Habitat	Microhabitat	Elevation (meters)	Potential of Occurrence
Antennaria suffrutescens	evergreen everlasting	4.3	Jan-Jul	Lower montane coniferous forest (serpentinite)		500-1600	Unlikely
Calamagrostis foliosa	leafy reed grass	4.2	May-Sep	Coastal bluff scrub, North Coast coniferous forest	Rocky	0-1220	Likely
Castilleja litoralis	Oregon coast paintbrush	2B.2	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	15-100	Likely
Castilleja mendocinensis	Mendocino Coast paintbrush	1B.2	Apr-Aug	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub		0-160	Somewhat likely
Ceanothus gloriosus var. exaltatus	glory brush	4.3	Mar-Jun (Aug)	Chaparral		30-610	Unlikely
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	1B.1	Jun-Aug	Coastal bluff scrub, Coastal scrub		10-100	Likely
Coptis laciniata	Oregon goldthread	4.2	(Feb)Mar-May (Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic	0-1000	Unlikely
Epilobium septentrionale	Humboldt County fuchsia	4.3	Jul-Sep	Broadleafed upland forest, North Coast coniferous forest	Rocky (sometimes), Sandy (sometimes)	45-1800	Unlikely
Erythronium oregonum	giant fawn lily	2B.2	Mar-Jun(Jul)	Cismontane woodland, Meadows and seeps	Openings, Rocky, Serpentinite (sometimes)	100-1150	Unlikely

Erythronium revolutum	coast fawn lily	2B.2	Mar-Jul(Aug)	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, Streambanks	0-1600	Unlikely
Gilia capitata ssp. pacifica	Pacific gilia	1B.2	Apr-Aug	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland		5-1665	Likely
Hemizonia congesta ssp. tracyi	Tracy's tarplant	4.3	(Mar-Apr)May-Oct	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	Openings, Serpentinite (sometimes)	120-1200	Unlikely
Hosackia gracilis	harlequin lotus	4.2	Mar-Jul	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	Roadsides, Wetlands	0-700	Somewhat likely
Lasthenia californica ssp. macrantha	perennial goldfields	1B.2	Jan-Nov	Coastal bluff scrub, Coastal dunes, Coastal scrub		5-520	Likely
Lathyrus palustris	marsh pea	2B.2	Mar-Aug	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	Mesic	1-100	Likely
Leptosiphon latisectus	broad-lobed leptosiphon	4.3	Apr-Jun	Broadleafed upland forest, Cismontane woodland		170-1500	Unlikely
Lilium rubescens	redwood lily	4.2	(Mar)Apr-Aug(Sep)	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Roadsides (sometimes), Serpentinite (sometimes)	30-1910	Unlikely

Listera cordata	heart-leaved twayblade	4.2	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest		5-1370	Unlikely
Mitellastra caulescens	leafy-stemmed mitrewort	4.2	(Mar)Apr-Oct	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Mesic, Roadsides (sometimes)	5-1700	Unlikely
Montia howellii	Howell's montia	2B.2	(Feb)Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools	Roadsides (sometimes), Vernally Mesic	0-835	Somewhat likely
Piperia candida	white-flowered rein orchid	1B.2	(Mar-Apr)May-Sep	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	Serpentinite (sometimes)	30-1310	Unlikely
Sidalcea malachroides	maple-leaved checkerbloom	4.2	(Mar)Apr-Aug	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Disturbed areas (often)	0-730	Somewhat likely
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2	(Mar)May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Roadsides (often), often roadcuts	15-1230	Somewhat likely
Tiarella trifoliata var. trifoliata	trifoliate laceflower	3.2	(May)Jun-Aug	Lower montane coniferous forest, North Coast coniferous forest	Edges, Streambanks; moist shady banks	170-1500	Unlikely
Usnea longissima	Methuselah's beard lichen	4.2		Broadleafed upland forest, North Coast coniferous forest	On tree branches; usually on old growth hardwoods and conifers	50-1460	Unlikely

Appendix B. Plant Species Observed

Table 2. List of plant species encountered during surveys.

Botanical Name	Common Name	Origin
Trees		
Hesperocyparis macrocarous	Monterey cypress	Native
Shrubs		
Echium canadensis	pride of madeira	Cal-IPC: Limited
Rubus ursinus	California blackberry	Native
Toxicodendron diversilobum	poison oak	Native
Grasses & Graminoids		
Avena barbata	slender wild oats	Cal-IPC: Moderate
Briza maxima	rattlesnake grass	Cal-IPC: Limited
Bromus catharticus	rescue grass	Non-native
Bromus diandrus	ripgut brome	Cal-IPC: Moderate
Bromus madritensis	foxtail brome	Non-native
Cynosurus echinatus	hedgehog dogtail grass	Cal-IPC: Moderate
Festuca perennis	Italian rye grass	Cal-IPC: Moderate
Holcus lanatus	velvet grass	Cal-IPC: Moderate
Hordeum murinum	foxtail barley	Cal-IPC: Moderate
Poa annua	annual bluegrass	Non-native
Poa compressa	Canada bluegrass	Non-native
Polypogon interruptus	ditch beard grass	Non-native
Forbs		
Carduus pycnocephalus	Italian thistle	Cal-IPC: Moderate
Carprobrotus edulis	iceplant	Cal-IPC: High
Cirsium vulgare	bull thistle	Cal-IPC: Moderate
Erigeron glaucus	seaside daisy	Native
Eschscholzia californica	California poppy	Native
Geranium dissectum	cutleaf geranium	Cal-IPC: Limited
Geranium molle	geranium	Non-native
Grindelia stricta var. *stricta*	gumplant	Native
Hypochaeris radicata	rough cat's ear	Cal-IPC: Moderate
Lepidium didymum	lesser swine cress	Non-native
Lotus corniculatus	bird's foot trefoil	Non-native
Lysimachia arvensis	scarlet pimpernel	Non-native
Medicago lupulina	black medick	Non-native
Narcissus pseudonarcissus	daffodil	Non-native

Osteospermum fruticosum	trailing African daisy	Non-native
Plantago lanceolata	English plantain	Non-native
Plantago maritima	maritime plantain	Native
Sagina procumbens	matted pearlwort	Native
Senecio minimus	coastal burnweed	Non-native
Senecio vulgaris	common groundsel	Non-native
Silene gallica	catchfly	Non-native
Sonchus apser	pricky sowthistle	Non-native
Sonchus oleraceus	sowthistle	Non-native
Stachys rigida var. *rigida*	hedge nettle	Native
Trifolium subterraneum	subterranean clover	Non-native
Vicia benghalensis	purple vetch	Non-native
Ferns		
Isolepis cernua	low bulrush	Native

Appendix C. Maps

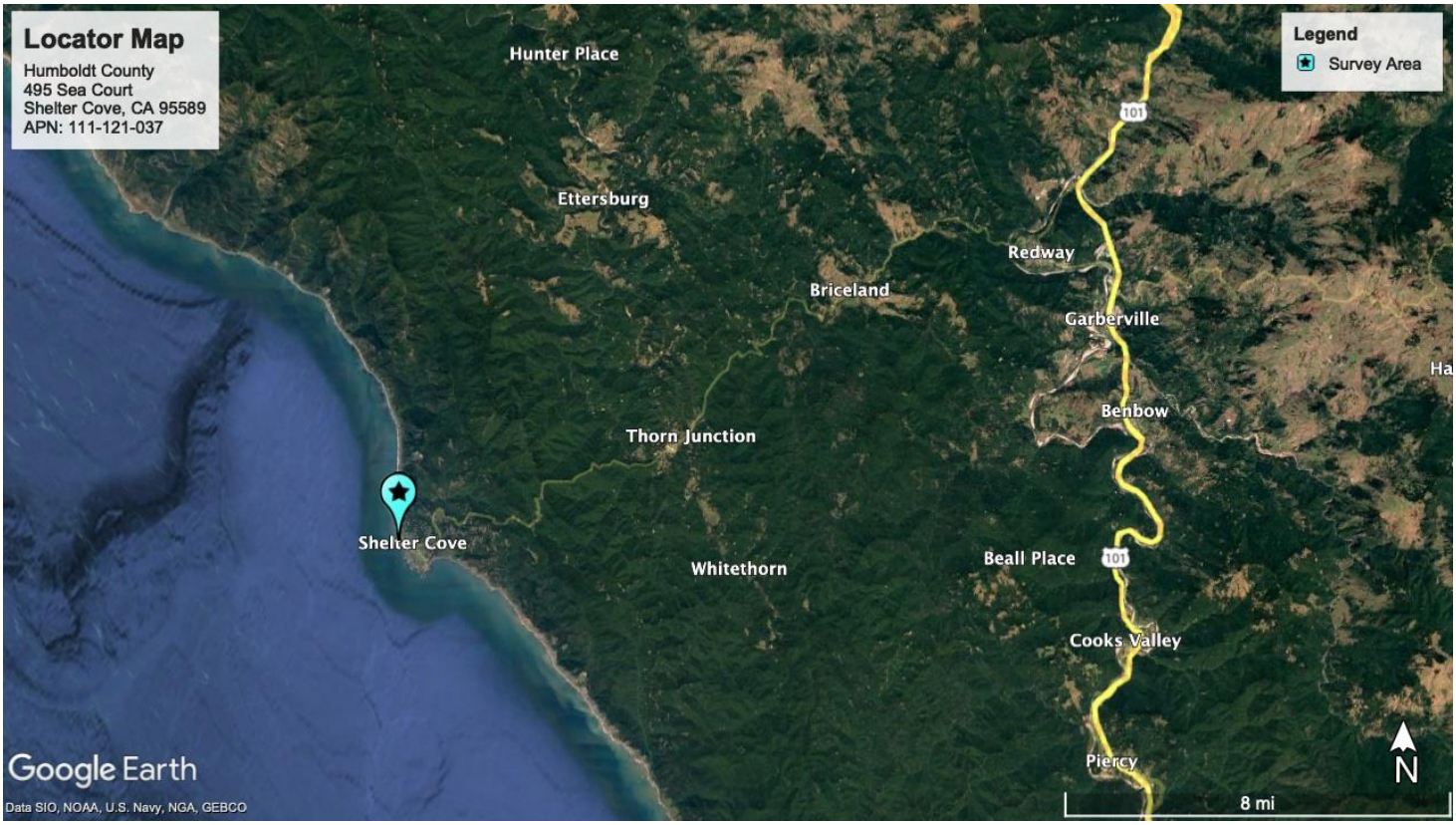

Figure 1. Locator Map of Project Area (blue star) located at 495 Sea Court, Shelter Cove, California in Humboldt County.

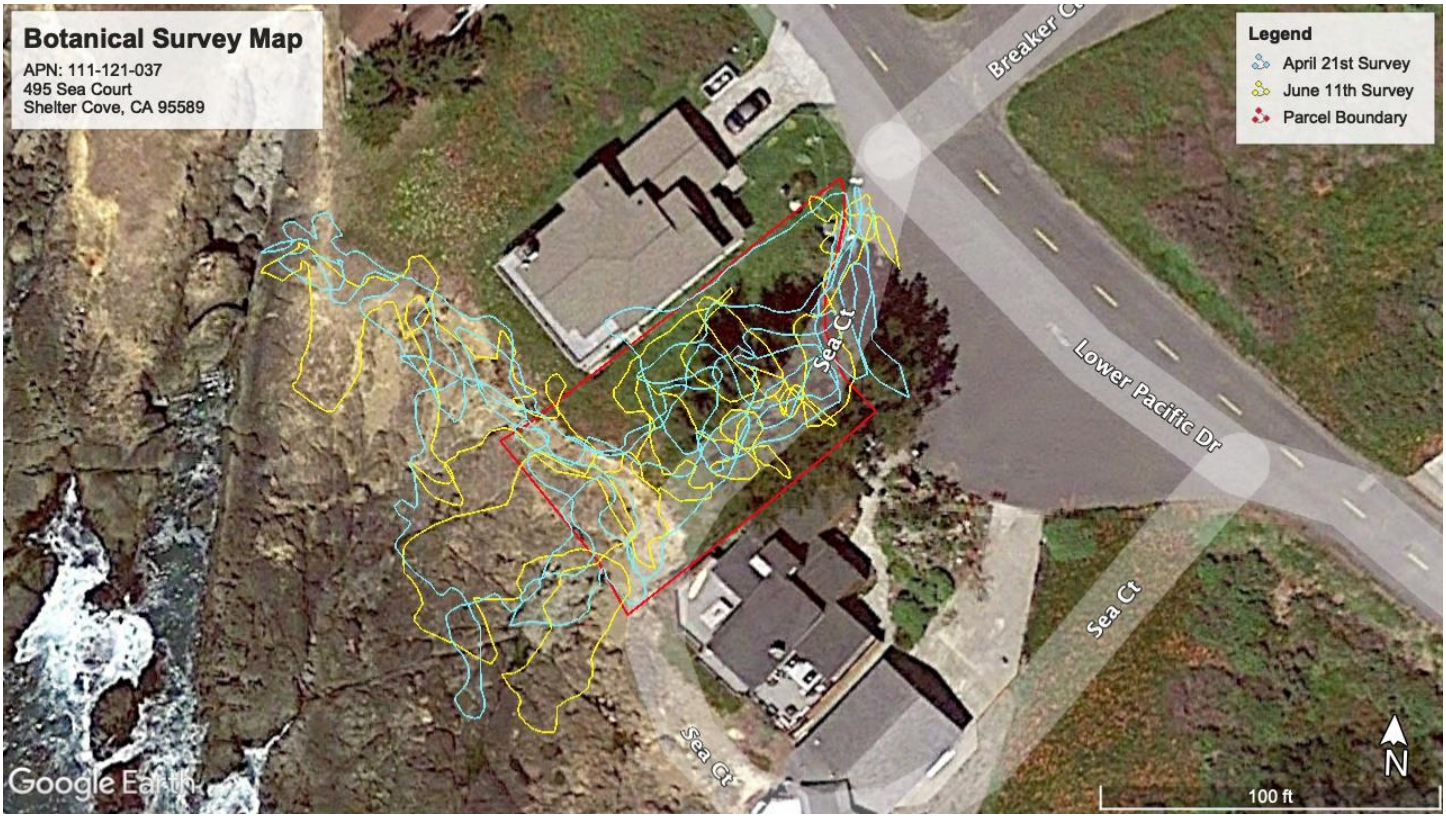

Figure 2. Map of project area and survey tracks.

Appendix D. Project Area and Habitat

Figure 3. Survey area, facing east, dominated by several invasive species including velvet grass (*Holcus lanatus*), iceplant (*Carprobrotus edulis*), and pride of madeira (*Echium canadensis*).

Figure 4. Project area's western edge, facing east. Evidence of active erosion along coastal bluff.