

TECHNICAL MEMORANDUM

RID# 1 Lot LK, Wetland Assessment and Stream Setback Establishment
Assessor's Parcel Number 111-118-006

Date: July 23, 2015

Project No.: 7912.02

Prepared For: Phillip Young, General Manager

Prepared By: Gary Lester, Senior Biologist

Reviewed By: Elizabeth Burks, AICP, Senior Planner

Appendix 1: Figures

Appendix 2: Photos

Gary S. Lester

Elizabeth Burks

INTRODUCTION

The Shelter Cove Resort Improvement District #1 (RID #1, Client) is proposing a zone reclassification from Natural Resources to Public Recreation, and a coastal plan amendment, for property identified as Assessor's Parcel Number 111-118-006 (Project Site) to allow for recreational facilities such as tennis courts and nature trails. LACO performed a preliminary biological survey of the Site in April 2014 and prepared a technical memorandum summarizing the findings (*Buffer Area Criteria Evaluation*, May 23, 2014). The Humboldt County Planning and Building Department has requested that RID #1 augment the biological survey to determine if the cleared area meets the definition of wetland, as defined by the South Coast Area Plan and if so, provide justification of a suitable buffer width pursuant to the California Coastal Commission's *Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas* (1981), Chapter One, Section V: Criteria for Establishing Buffer Areas. The County has also requested a plot plan to depict the precise location of the riparian zone and buffer width.

LACO's scope was limited to the preparation of this technical memorandum that includes:

A review of pertinent information in site visit correspondence to develop an understanding of the issues and determine potential natural habitat concerns present on the Site.

A field survey of the Site will be conducted by a field biologist and assistant planner who are qualified to conduct wetland and set-back surveys. The focus of the survey will be identification of environmentally sensitive habitat areas (wetlands), and a suitable stream setback present on or near the Site. A wetlands boundary (if located) and proposed 50-foot stream set-back will be flagged in the field.

The Project Site is located at the corner of Upper Pacific Drive and Lower Pacific Drive, in the unincorporated community of Shelter Cove in Humboldt County, California (Figure 1: Location Map) and comprises approximately 2.70 acres, primarily forested land with limited recreational use (foot path). An unnamed creek is north of the Project Site, and residential housing off Sea View Drive is located along the southern property line (Figure 2: Site Map).

The Project Site is within the planning area of the South Coast Area Plan (SCAP). The SCAP is a part of the Humboldt County General Plan and identifies land uses and standards by which development will be evaluated within the coastal zone. The relevant part of the SCAP (Section 30240) for the pending Project Site zone reclassification and coastal plan amendment deals with the protection of riparian corridors (buffers). In Shelter Cove the riparian corridors are considered to be the "green belt" areas. These green belt areas for the most part have been designated Natural Resources (NR) in the SCAP. The following is an excerpt from SCAP Section 30240(a):

- (a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*
- (b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

The County has requested that a qualified biologist investigate possible wetlands at the Project Site and if present, determine an appropriate buffer width. The County has also requested a determination of the precise location of the riparian zone and buffer width. A series of 50' and 100' buffer flagging has been placed on-site. This technical memorandum presents the results of a biological review of the Project Site and an evaluation of the criteria used to establish a site-specific buffer area.

METHODS

A field survey of the Project Site was conducted by LACO Senior Biologist Gary Lester on June 2, 2015. Mr. Lester is qualified to conduct biological surveys, having earned an undergraduate degree in Botany and having received training in recognition of the local flora and fauna and in rare plant identification and survey protocol. He has over 30 years of experience in wetland surveys throughout the North Coast.

Mr. Lester's evaluation was based on determining evidence of the presence of wetlands at the clearing location and locating the 50' setback from the streamside management area (riparian).

Project area topographic maps, current and historical aerial photographs (Historic Aerial Photographs [Google Earth, 2015]), the U.S. Geological Survey (1969) Shelter Cove 7.5-minute Quad Map, and the California Natural Diversity Database (CNDDB) (DFW, 2015) were reviewed prior to the survey to identify potential sensitive species occurrence.

BIOLOGICAL FIELD SURVEY OBSERVATIONS

The Project Site is located in Shelter Cove, California and is bordered by Upper Pacific Drive to the east, residential lots off Sea View Drive to the south, and an intermittent creek to the north. The ground surface elevations of the Project Site range between 60 feet and 160 feet above mean sea level. The Project Site includes a single recreational footpath, and is otherwise undeveloped. Habitats on the Project Site include coastal coniferous forest, coastal riparian, coastal grassland, and ruderal (weedy) vegetation.

The prominent vegetation occurring at the Project Site is Douglas-fir (*Pseudotsuga menziesii*) forest. Canopy cover is approximately 90 to 100 percent young trees (about 30 years old) up to 24 to 30 inches in diameter at breast height. Forest understory is sparse, with native vegetation represented by widely scattered associated native shrub and herbaceous cover of thimbleberry (*Rubus parviflorus*), red elderberry (*Sambucus racemosa* var. *racemosa*), California blackberry (*Rubus ursinus*), sword fern (*Polystichum munitum*), cow parsnip (*Heracleum maximum*), spring beauty (*Claytonia sibirica*), sweet cicely (*Osmorhiza berteroii*), coastal hedge nettle (*Stachys chamissonis*), and bitter-cress (*Cardamine oligosperma*). Ground cover was visually estimated at 20 to 5 percent. Herbaceous forest ground cover was visually estimated at 15 percent, including the horticultural escape, London pride (*Crassula multicava*). The forest cover extends all the way to the creek bank from Upper Pacific Drive to the Shelter Cove Golf Course. There is no developed riparian along the upper creek banks (Appendix 1, Figure 2, Appendix 2, Photo 1).

A small clearing of approximately 0.5 acre has been recently established (post August 23, 2012, on Google Earth) on the upper side of the parcel immediately adjacent to Upper Pacific Drive. An effort was made to locate any evidence of seasonal wetlands in the clearing. Signs were searched of dominant hydrophytic vegetation, occurrence of hydric soils or evidence of long standing water or the presence of high groundwater. None of these features, characteristic of coastal wetlands, were located in the cleared area (Appendix 2: Photo 2). The cleared area vegetation is dominated by non-native pasture grasses, including velvet grass (*Holcus lanatus*), sweet vernal grass (*Anthoxanthum odoratum*), tall quaking grass (*Briza maxima*), rescue grass (*Bromus catharticus*), Kentucky bluegrass (*Poa pratensis*), coastal hedge nettle, tall fescue (*Festuca arundinacea*) with associated herbaceous cover of English plantain (*Plantago lanceolata*), English daisy (*Bellis perennis*), wild oats (*Avena barbata*), scarlet pimpernel (*Anagallis arvensis*), bull thistle (*Cirsium vulgare*), California blackberry, bur clover (*Medicago arabica*), dandelion (*Taraxacum officinale*), perennial cat's ear (*Hypochaeris radicata*), bracken fern (*Pteridium aquilinum* var. *pubescens*), sheep sorrel (*Rumex acetocella*), and cut-leaved geranium (*Geranium dissectum*). Ruderal vegetation ground cover coverage was visually estimated at 90 to 100 percent. None of the dominant plant species or clusters of plants were indicators of wetlands. Coastal hedge nettle and California blackberry can occur in wetlands (FACW. Lichvar, et. al. 2014) but each appear to be acting as a weedy natives in this location. A soil pit dug near a coastal hedge nettle population was non-hydric, having only 2" of very dark brown (10YR 2/2) soil at the surface, with dark gray brown (10YR 4/2) soils to 10", yellowish brown (10YR 5/4) soils to 21" and pale brown (10YR 6/3) soils to 28" and having no redoximorphic features throughout the investigated soil column. Additional soil pits were dug throughout the clearing but all soils showed characteristics similar to the original pit, being non-hydric. There were no visible signs of standing water

detected (algal mats, cracking soils, bare soil, drift lines) or evidence of high groundwater (no redoximorphic soil features).

A small patch of riparian habitat (Appendix 1: Figure 2, Appendix 2: Photo 3) occurs at the furthest northwest edge of the property and consists of mature red alder (*Alnus rubra*), Pacific willow (*Salix lasiandra* var. *lasiandra*), and arroyo willow (*Salix lasiolepis*), with scattered understory of Oregon ash (*Fraxinus latifolia*), California blackberry, stinging nettle (*Urtica dioica*), lady fern (*Athyrium filix-femina*) and Italian thistle (*Carduus pycnocephalus*). The riparian vegetation borders the lower end of the intermittent creek. The majority length of the creek is vegetated mostly with Douglas-fir with widely scattered red alder. There is little or no established riparian habitat the length of the creek channel above the willow stand that is associated with the dominant Douglas-fir forest cover.

The biological survey did not record any population of sensitive plant species on the Project Site. No nests of waders, or any raptors were seen at the Project Site. The intermittent creek habitat supports macro-invertebrate species, such as water striders, classifying the creek as a Class II stream (State Water Resources Control Board, Division of Water Rights Policy for Maintaining Instream Flows in Northern California Coastal Streams, September 28, 2010).

DOCUMENT REVIEW

The National Wetlands Inventory (NWI), developed by the U.S. Fish and Wildlife Service, is a nationwide inventory of wetlands. The purpose of the inventory is to provide biologists and others with information on the distribution and type of wetlands and to aid in conservation efforts. No wetlands are identified on the Project Site by the NWI. Additionally, the USGS Shelter Cove topographic map shows no blueline streams at the Project Site (USGS, 1969).

STREAM SETBACK ESTABLISHMENT

The intermittent creek channel is deeply incised in the upper 550 feet of the Project Site. The creek channel is almost 30 to 40 feet elevation below the upper portion of the parcel at Upper Pacific Road. The creek channel is approximately 10' wide bank to bank, with little or no riparian vegetation establishment. A 100' rag tape was used to measure up from the creek bank using vertical distance slope correction to determine horizontal distance (corrections were applied to slopes of up to 25%). Up to 8 locations opposite the creek channel were measured to 50' horizontal distance upslope towards the clearing and were flagged in the field (50' setback as shown in Figure 2). An additional 100' flag line was also marked in the field (nearly level, where measured tape distance equaled horizontal distance). Because of the isolation of the upper portion of the Project Site from the natural creek processes, and the very limited extent of the on-site riparian habitat (less than 100' in width) and the intermittent nature of the creek, a 50-foot setback from the existing top of bank is more than adequate.

RESULTS AND RECOMMENDATIONS

The biological survey did not record any population of sensitive plant species on the Project Site. Due to long-established recreational use (golf course) and the public road system, few sensitive plant species would be expected.

1. Due to the very low-grade value of the on-site riparian habitat, a 50-foot setback from the existing intermittent creek is more than adequate to protect riparian habitat from degradation.

2. Within the 50-foot setback, we recommend limiting development to habitat enhancement.
3. The setback should not be reduced below 50 feet. A visual and physical barrier such as a split rail fence is recommended to demarcate the 50 foot boundary. This barrier will help discourage inadvertent development or recreational use of the habitat area.

LIMITATIONS

LACO has exercised a standard of care equal to that generated for this industry to ensure that the information contained in this report is current and accurate. LACO disclaims any and all liability for any errors, omissions, or inaccuracies in the information and data presented in this report and/or any consequences arising there from, whether attributable to inadvertence or otherwise. LACO makes no representations or warranties of any kind including, but not limited to, any implied warranties with respect to the accuracy or interpretations of the data furnished. LACO assumes no responsibility of any third-party reliance on the data presented, and that data generated for this report represent information gathered at that time and at the locations indicated. It should not be utilized by any third party to represent data for any other time or location. It is known that site and subsurface environmental conditions can change with time and under anthropologic influences. This report is valid solely for the purpose, site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description will invalidate this report.

REFERENCES

California Coastal Commission. 1981. Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas.

DFW. 2015. California Natural Diversity Data Base (CNDDB). Shelter Cove Quad, Sacramento, CA.

Humboldt County 1990. South Coast Area Plan of the Humboldt County Local Coastal Program. Resolution #85-81. Eureka, California.

Lichvar, R.W., M. Butterwick, N. C. Melvin and W. N. Kirchner. 2014. The National Wetland Plant List. Western Mountains, Valleys, and Coast, Regional Wetland Plant List. Phytoneuron 2014-41: 1-41.

US Fish and Wildlife Service. National Wetlands Inventory. June 2, 2015.
<http://www.fws.gov/wetlands/NWI/Overview.html> (accessed June 2, 2015).

USGS. 1969. Shelter Cove Quadrangle, California.

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APPENDIX 1

Figure 1 Location Map

Figure 2 Site Map

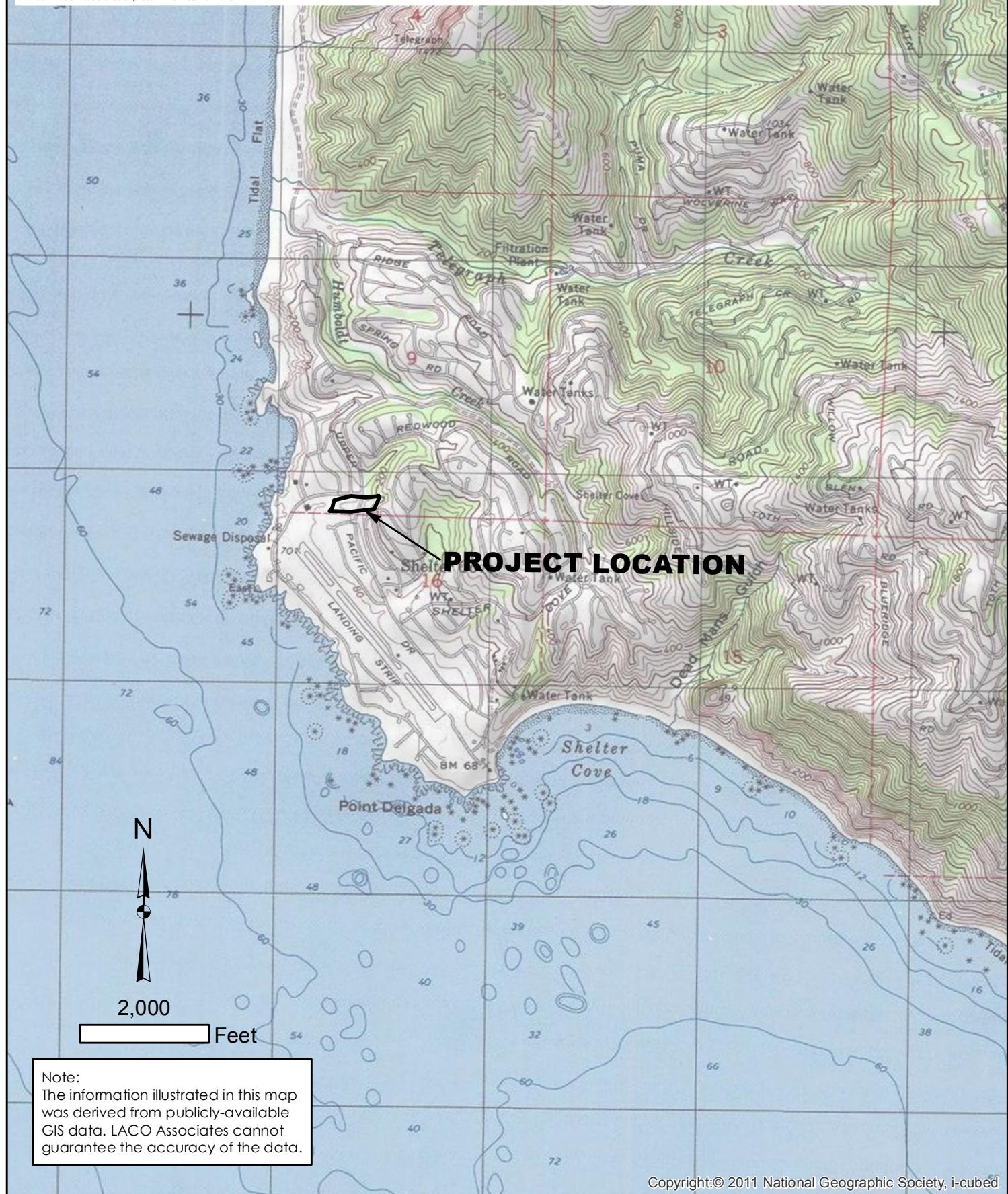
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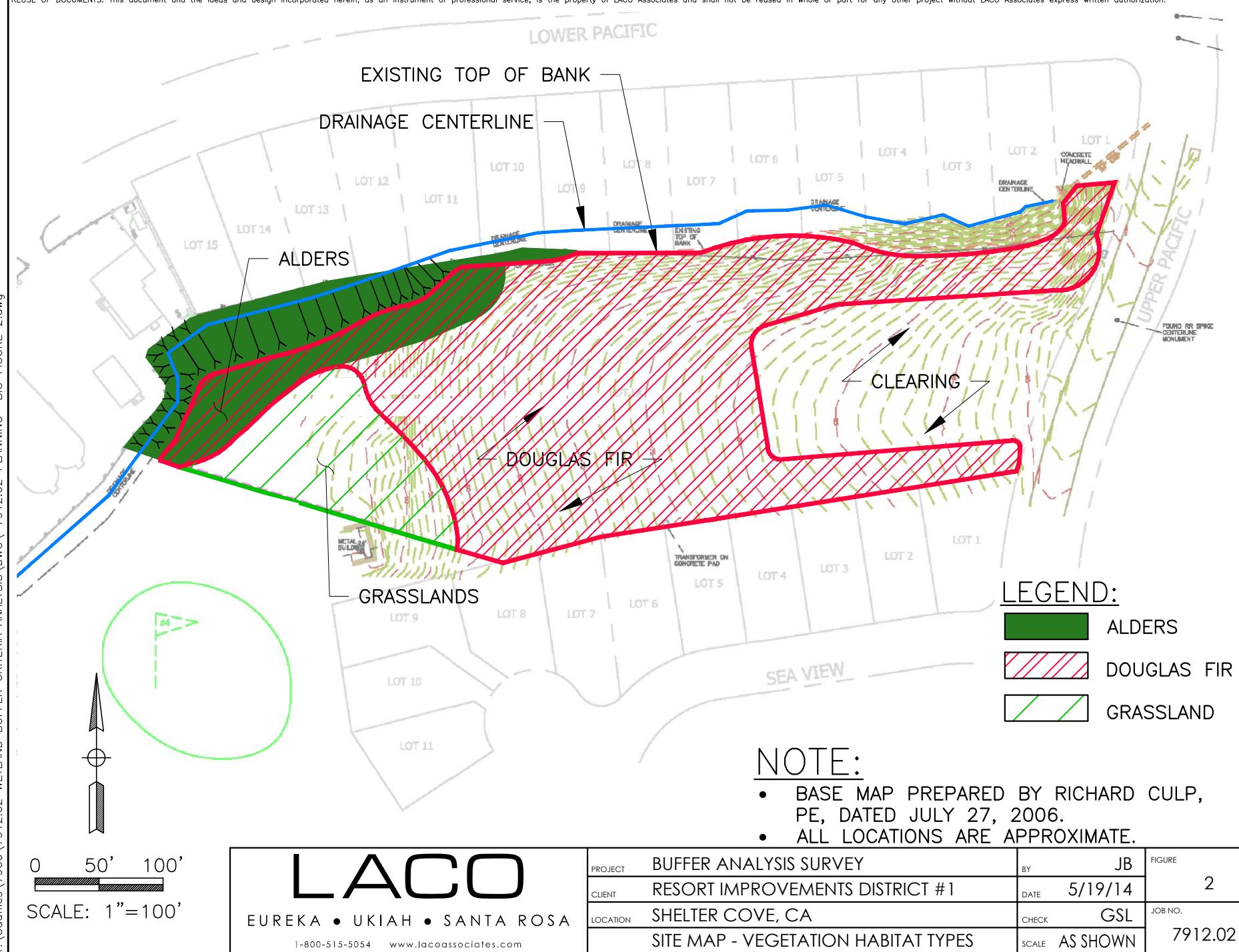
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PROJECT	STREAM CLASSIFICATION SURVEY	BY	JB	FIGURE
CLIENT	RESORT IMPROVEMENT DISTRICT # 1	CHECK	GSL	1
LOCATION	SHELTER COVE, CA.	DATE	5/14/14	JOB NO.
	LOCATION MAP, PORTION OF APN 111-181-006			7912.02

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APPENDIX 2

Photos



Photo1: Typical stream channel, note very little riparian development (adjacent upland sword fern/Douglas-fir habitat)



Photo 2: Upper clearing, with uniform upland grasslands, with no evidence of hydrophytic vegetation



Photo 3: Willow riparian established on lower creek channel