

VEGETATION CLASSIFICATION AND MAPPING

NAVAL BASE VENTURA COUNTY POINT MUGU, CALIFORNIA

N62473-07-D-3204, TASK ORDER 0015

PREPARED FOR



**NAVAL BASE VENTURA COUNTY, ENVIRONMENTAL DIVISION
311 MAIN ROAD
POINT MUGU, CA 93042**

PREPARED BY



**8690 BALBOA AVENUE, SUITE 200
SAN DIEGO, CA 92123**

UNDER CONTRACT TO

**NAVAL FACILITIES ENGINEERING COMMAND, SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132**

JANUARY 2014

ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
CDFW	California Department of Fish and Wildlife
CNPS	California Native Plant Society
COR	Contract Officer's Representative
DoD	Department of Defense
FGDC	Federal Geographic Data Committee
MMU	minimum mapping unit
NAVFAC SW	Naval Facilities Engineering Command, Southwest Division
NBVC	Naval Base Ventura County
NVCS	National Vegetation Classification Standard
SC	Station Contact

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**HDR
8690 BALBOA AVENUE, SUITE 200
SAN DIEGO, CA 92123**

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Recommended Citation. HDR. 2013. Vegetation Classification and Mapping, Naval Base Ventura County, Point Mugu, California. Prepared by HDR for Naval Facilities Engineering Command Southwest.

Executive Summary

Vegetation classification and mapping was conducted at Naval Base Ventura County (NBVC) Point Mugu, California using the National Vegetation Classification Standard (NVCS) and the California Department of Fish and Wildlife Vegetation Classification and Mapping Program. Objectives were to: (1) survey, map and classify vegetation communities in order to produce a product that is consistent, repeatable, and translatable to regional/national levels; and (2) provide a vegetation community classification and resultant map based on a floristic vegetation classification to Point Mugu.

The vegetation map classes represent the association-level of the NVCS. A total of 68 vegetation associations were mapped on the installation using a 1/16 acre Minimum Mapping Unit (MMU) for a total of 4307.3 acres mapped. Surveys were conducted within select vegetation communities during four sampling periods between January and July 2012. No surveys were conducted during several months in the spring to avoid potential impacts to breed federal and state-listed bird species. A total of 110 plots were surveyed which included 42 vegetation associations. Approximately 30 vegetation associations support or have the potential to support species of special interest, including federal and state-listed threatened and endangered species. Additionally, some of the same vegetation communities that support these species are components of tidal wetlands, a sensitive and biodiverse ecosystem.

Other than developed/landscaped/unvegetated areas (30.3 percent) mapped on Point Mugu, *Salicornia pacifica* – *Frankenia salina* Association was the most common association with 12.6 percent of the land area. The next most common mapped association was open water with 8.6 percent. Approximately 33.8 percent of Point Mugu is dominated by native vegetation while 17.5 percent is dominated by non-native vegetation. In addition, approximately 6.8 percent was mapped as tidal/sand/mudflats.

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**VEGETATION CLASSIFICATION AND MAPPING, NAVAL BASE VENTURA COUNTY
POINT MUGU**

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1. Introduction

The project consisted of installation-wide vegetation classification and mapping for Naval Base Ventura County (NBVC) Point Mugu, California. HDR conducted a vegetation assessment and sampling to obtain information necessary for land use and management decisions in support of military training activities, and facilities development and maintenance. Vegetation classification and mapping was carried out using the National Vegetation Classification Standard (NVCS) and the California Department of Fish and Wildlife (CDFW) Vegetation Classification and Mapping Program. Plant nomenclature follows that of Baldwin et al. (2012). Surveys were conducted during four survey periods between January and July 2012, and were timed and spaced to avoid sensitive species, particularly birds, during the breeding and nesting seasons.

1.1 Project Location

NBVC Point Mugu is located in Ventura County, California less than 3 miles southwest of Oxnard, and 30 miles northwest of the greater Los Angeles area (see **Figure 1-1**). Point Mugu is bordered by the Pacific Coast Highway 1 to the east, and by the Ventura County Game Preserve, the Point Mugu Game Preserve, and agricultural land to the northwest. The western and southern edges of Point Mugu are comprised of beaches and Mugu Lagoon, which flow into the Pacific Ocean. NBVC Point Mugu occupies approximately 4,660 acres in Ventura County, California, more than half of which is natural saltwater marsh wetlands.

1.2 Objective

The purpose of this project is to classify and map vegetation communities in order to support informed land management decisions on NBVC Point Mugu, support the Department of Defense mission, and ensure compliance with applicable Federal, state, and local statutes and regulations. Objectives for this survey were to: (1) survey, map and classify vegetation communities in order to create a product that is consistent, repeatable, and translatable to regional/national levels and (2) provide a vegetation community classification and resultant map based on a vegetation classification. The goal was to collect biological information on vegetation associations to a minimum accuracy of 80 percent. The level of detail ensured a product that complies with state and national standards for vegetation classification and habitat assessment as defined by CDFW, California Native Plant (CNPS), Federal Geographic Data Committee (FGDC), and NVCS.

1.3 Environmental Setting

Point Mugu is in the Oxnard Plain-Santa Paula Valley, Southern California Coast ecoregion (USDA 1997). The installation lies at the southwest margin of the Oxnard Plain, an alluvial plain that covers over 200 square miles in the southern and western portions of the Ventura Basin. The Ventura Basin is a relatively broad and nearly level floodplain and river delta formed primarily by the Santa Clara River. The Ventura Basin is a transitional zone consisting of a coastal plain and shoreline.

Climate is typically hot and subhumid, greatly modified by marine air (USDA 1997). It is typically described as a “Mediterranean climate” due to the influence of its coastal setting, moist winters and dry summers, with mild temperatures throughout the year. From March 1998 to December 2008, mean monthly temperatures ranged from 54.6 degrees Fahrenheit (°F) in January to 66.1 °F in July (WRCC 2012). The warmest temperatures occur in late summer and early fall when daily maximum



Figure 1-1. Location of Naval Base Ventura County, Point Mugu.

temperatures are generally in the low 70s, but can be in the upper 80s and low 90s. The coldest temperatures occur in winter when daily minimum temperatures are generally in the mid-40s, but can occasionally dip into the 30s. The average annual rainfall is approximately 10.39 inches, with over 85 percent of this falling between December and April (WRCC 2012). With its proximity to the Pacific Ocean, NBVC experiences coastal weather including ocean winds, fog and cloudiness, and marine inversions.

Elevations on the installation range from sea level to approximately 25 feet (8 meters). The topography is relatively flat and slopes gently from the northeast, toward the western and southern portions of the installation. The land along the shoreline consists primarily of sand dunes and beach sands forming the southern and southwestern boundaries of the installations. The most prominent geomorphic feature of Point Mugu is the Mugu Lagoon salt marsh estuary which connects the Calleguas Creek to the Pacific Ocean. In various areas, primarily developed locations, dredge fill material has raised land levels and facilitated upland habitats on the margins of infrastructure. As a result, surface soils in the central and northeast portion of NBVC Point Mugu are largely composed of fill material from historical dredging.

The predominant natural communities that occur on Point Mugu include estuarine areas and coastal saltmarsh dominated by Pacific swampfire (*Salicornia pacifica*), alkali heath (*Frankenia salina*), and salt grass (*Distichlis spicata*); mud and sandflats; various semi-natural and non-native herbaceous stands of grassland that include annual bromes (*Bromus diandrus*, *B. madritensis* subsp. *rubens*) grassland and wild oats grassland (*Avena barbata*, *A. fatua*); beaches and dunes that support a dune mat community dominated by sand verbena (*Abronia maritima*), beach evening primrose (*Camissoniopsis cheiranthifolia*), beach bursage (*Ambrosia chamissonis*), and beach morning glory (*Calystegia soldanella*); and shrublands, primarily coyotebrush scrub (*Baccharis pilularis*) and arroyo willow scrub (*Salix lasiolepis*) (FGDC 2008).

Invasive plant species invade native habitat and become problematic, in such a manner that it is difficult for natural resource managers to maintain an assemblage of native plant species. Within the dune communities, on Point Mugu, species such as iceplant (*Carpobrotus* sp.) and European beachgrass (*Ammophila arenaria*) have displaced native dune plants (Tetra Tech 2002). Upland habitats may be dominated by invasive non-native species such as black mustard (*Brassica nigra*) and bromes (*Bromus* sp.). In general, invasive species can degrade the native habitat. This may lead to impacts through reduction of suitable habitat for species of special concern, including state and federal listed species.

1.3.1 Species of Special Concern

Federal and state-listed species at Point Mugu include three endangered bird species, the California least tern (*Sterna antillarum browni*), light-footed clapper rail (*Rallus longirostris levipes*), and least Bell's vireo (*Vireo bellii pusillus*); one federal threatened species, the western snowy plover (*Charadrius nivosus nivosus*); one state endangered bird species, the Belding's savannah sparrow (*Passerculus sandwichensis beldingi*); one federal and state endangered fish species, the tidewater goby (*Eucyclogobius newberryi*); and one federal and state endangered plant species, saltmarsh bird's-beak (*Chloropyron maritimum* subsp. *maritimum*). These species are documented as occurring within the mapped vegetation communities.

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2. Methodology

HDR biologists conducted installation-wide vegetation classification and mapping at NBVC Point Mugu. This methodology specifies (1) mapping rules, including how the minimum mapping unit was determined, what was considered a distinctive vegetation stand, and how sampling points were determined; (2) the sampling rationale and methodology; (3) terminology and recent vegetation classifications used for the survey; and (4) data processing methodology. The sampling methodology includes a prioritized sampling strategy for the study area, proposed number of samples and general timing.

The vegetation community classification and concomitant Geographic Information System vegetation map was based on a floristic vegetation classification according to the NVCS and on statewide vegetation classification and mapping standards agreed upon by a state and Federal government consortium of vegetation information users. Additionally, the Jepson Manual (2012) was used as the authority for plant identification.

A total of approximately 4,307.3 acres of NBVC Point Mugu was mapped under this effort.

2.1 Mapping and Classification Strategy

Aerial photographs and existing maps were used to characterize the vegetation as precisely as possible. Mapping was based on 6-inch pixel resolution ($\pm 1:16,800$) true color ortho-rectified aerial photographs taken in 2007, and on fieldwork conducted in 2012. Aerial photographs were available from 2007, 2009, and 2011; however, only the 2007 aerial photos were ortho-rectified. HDR used the superior quality 2007 imagery with 6-inch resolution for mapping. HDR used 2009 and 2011 imagery that has not been fully corrected to check for differences in vegetation cover; this is more important for areas that have been restored or modified between 2007 and 2009.

Vegetation classification was based on the National Vegetation Classification Standard (FGDC 2008) and the CDFW Vegetation Classification and Mapping Program, which develops and maintains California's expression of the NVCS. Vegetation mapping was done in accordance with standards established by the FGDC for vegetation mapping on Federal lands. The FGDC website (http://www.fgdc.gov/standards/standards_publications/index.html) explains the development of the classification standards currently used for mapping and classifying vegetation.

2.1.1 GIS Standard

The FGDC requires that all Federal agencies follow the NVCS standard. All Geographic Information System data was delivered in SDSFIE v2.6 compliant format. Aerial photos were formatted for pre-ArcGIS version 9.3. Spatial data used to generate maps is consistent with Naval Facilities Engineering Command, Southwest Division (NAVFAC SW) metadata standards.

2.1.2 Mapping Rules

Not all vegetation types are equally mappable at a particular scale. Coordination during vegetation classification and the aerial photo-interpretation resolved whether it was best to map vegetation directly at the finest association level, at the higher-classification levels (such as at the alliance), or as a mosaic or complex. Mapping rules were developed as necessary to ensure consistency and accuracy throughout the project. Appropriate minimum mapping units and minimum vegetation stand (polygon) widths and thresholds were established.

2.1.3 Minimum Mapping Unit

Map scale determines the smallest area that can be drawn and recognized on a map. The smallest area that can be represented on a map, or minimum mapping unit (MMU), was determined based on the variability of the vegetation over small areas. The California Biodiversity Council's Memorandum of Understanding regarding vegetation recommends a MMU of $\leq \frac{1}{2}$ acre for fine scale surveys (areas <50,000 acres).

The MMU captures distinct vegetation stands, defined as "a spatially continuous unit of vegetation with uniform composition, structure, and environmental conditions." This term is often used to indicate a particular example of a plant community (Jennings et al. 2009). A stand is defined as an area of vegetation that has both compositional and structural integrity and represents a homogenous vegetation type that is repeated across the landscape. Stands can be selected prior to a site visit using aerial photos or other reconnaissance methods, or may be selected on site. Once a stand was selected, a field sampling form was completed that records both vegetation and environmental data.

Point Mugu has many distinct stands of vegetation that are narrow and linear or small and isolated. To capture stands that may generally be very small, but important for management purposes, the MMU of a vegetation stand will initially be the "minimum detectable unit" that can be represented on a map. This unit would then be broadened as appropriate, based on findings in the field, to determine the final MMU. Features smaller than the MMU were either merged with adjacent areas so that the map represents dominant classes, or if they were particularly important to the map theme, they were represented by symbols or were increased in size so that they could be mapped.

A MMU of 1/16 acre, approximately 2,723 square feet, was used for the Vegetation Classification Map (**Appendix A**). It was determined that 1/16 acre MMU captured notable vegetation stands (i.e., woodlands, shrubs) that would have not been mapped if a larger MMU was selected; while a smaller MMU would overly dissect the landscape. These captured vegetation stands, which would have otherwise been undetectable, will provide useful information when making natural resources management decisions on the installation.

2.1.4 Mapping Guidelines

1. Bird's-eye Cover Codes assigned to each mapped polygon (1/16 acre):
 - a) Dense Cover: >75 percent of the polygon.
 - b) Moderate Cover: 25-75 percent of the polygon.
 - c) Low Cover: <25 percent of the polygon.
2. Cover Codes will be assigned to each of the following categories:
 - a) Tree Cover.
 - b) Shrub Cover.
 - c) Herbaceous Cover.
3. Disturbance will be assigned to each mapped polygon using the following criteria:
 - a) High Disturbance: >50 percent of the polygon is affected with roads, trails, disked activity or scrapes in the landscape.
 - b) Moderate Disturbance: 25-50 percent of the polygon is affected with roads, trails, disked activity or scrapes in the landscape.

- c) Minimal Disturbance: between 5 percent and <25 percent of the polygon is affected with roads, trails, disked activity or scrapes in the landscape.
- 4. Invasive plant content will be assigned to each mapping polygon using the following criteria:
 - a) Most non-marshy upland vegetation with high herb cover is likely to be non-native. High Invasive Plant Content: >50 percent of the polygon is affected with invasive plants.
 - b) Moderate Invasive Plant Content: 25-50 percent of the polygon is affected with invasive plants.
 - c) Low Invasive Plant Content: between 5 percent and <25 percent of the polygon is affected with invasive plants.
 - d) No Observable Invasive Plant Component: <5 percent of the polygon is affected with invasive plants.
- 5. Comments Field: applies to any attributes; comments may be entered to clarify low or medium confidence ranking, or when a field check is needed, etc.

2.1.5 Classification

Classification of associations and alliances was based on standardized field plot observations, standardized type descriptions, review of proposed changes to the accepted types and their descriptions, and publication and permanent archiving of accepted types, revisions to the classification, and underlying data and analyses. Vegetation associations and alliances identified were based on the principles outlined in **Section 2.1.6**. The CDFW has established many location-specific associations and alliances which can be found at: <http://www.dfg.ca.gov/biogeodata/vegcamp/>. Floristic units that have potential to occur in the study area were identified based on a review of the CDFW categories and recent classification projects centered in southern coastal California (Evens and San 2005, Klein and Evens 2006, Keeler-Wolf and Evens 2006). A list of these floristic units is included in **Section 2.1.6**.

2.1.6 Glossary of Commonly Used Terms

Alliance: A classification unit of vegetation, including one or more associations and defined by one or more diagnostic species, often the layer with the highest canopy cover (Sawyer et al. 2009). Alliances reflect regional climates, substrates, hydrology, and disturbance regimes (Jennings et al. 2009).

Association: A vegetation classification unit defined by a diagnostics species, a characteristic range of species composition, physiognomy, and distinctive habitat conditions (Jennings et al. 2009). They reflect local topo-edaphic climates, substrates, hydrology, and disturbance regimes (Sawyer et al. 2009).

Provisional Association: A “provisional” classification unit is a candidate for acceptance in the International Vegetation Classification Standard, but has not yet been comprehensively reviewed. This provisional association is a synonym for a community type.

2.1.7 Vegetation Classification Process

Vegetation mapping classes were based on the existing NVCS (FGDC 2008). Naming conventions will use the floristic units of "associations," as defined by the NVCS, or International Vegetation Classification system (HRWG 2012) or A Manual of California Vegetation (Sawyer et al. 2009; Sproul et al. 2011) as appropriate. Classification of associations and alliances were based on the following principles:

1. Standardized field observations: Vegetation associations and alliances were documented through analysis of standardized field plot data collected across the potential range of a vegetation type and closely related types.
2. Vegetation was classified based on existing vegetation criteria, organized around ecological factors and biogeography: diagnostic and dominant species, diagnostic and dominant growth forms, and full floristic composition.
3. Type descriptions: Floristic units included sufficient information to determine the distinctive features of the types and their relationship to accepted National Vegetation Classification (NVC) types. Vegetation types identified that do not conform to existing vegetation classifications based on NVC standards were translated to higher-order group and macro-group categories in the NVCS, and a new association type is proposed. New or revised types included comparison of the focal type with related types, showing the differentiating characteristics.
4. Review: Vegetation types identified and mapped were evaluated through review by the Station Contact (SC) and Contract Officer's Representative (COR), including an accuracy assessment and analysis completed by installation staff or under a separate task order.
5. Plot data used to define vegetation types were provided to the PAR. The information: (a) included the rationale for classification decisions, (b) allowed for quantitative revision of the descriptions based on original data and new data, and (c) provided the basis for new or revised type descriptions. Accordingly, plot data conformed to a standard format so as to readily allow reevaluation. All plant taxa referenced in plot data or community type descriptions were defined by reference to public databases or publications.

2.1.8 Vegetation Key

The classification of the vegetation associations is described in **Appendix B** in a dichotomous key format. This structure allows the utilization of classification in the field and in various management applications. The keys represent a set of decision rules that specify the limits of each category. The key is organized to allow for the greatest ease of use. Dichotomous steps are based upon easily observable visual differences in vegetative and site physiognomy and, on a smaller scale, easily identified vegetative characteristics. Careful application and use of the dichotomous key facilitates more accurate identification of plant associations. There could be times when a plant community cannot be keyed out and if so, it is possible that none of the described plant community descriptions fit. If this is the case, further assessment and modification may be necessary. For reference all field data forms are located in **Appendix D**.

2.1.9 Vegetation Descriptions

The CDFW has established many location-specific associations and alliances which can be found at: <http://www.dfg.ca.gov/biogeodata/vegcamp/>. Data and vegetation samples from plot surveys were used to assign each mapping unit with the appropriate established vegetative association. Once the appropriate association was identified the data was reviewed to determine locations where further distinctions would allow for identification of potentially new associations in accordance with the NVCS. New associations were organized based upon the dominant vegetation type.

Determinations were based upon a variety of characteristics. Stands with similar dominant life forms but differing lower-canopy species were divided into separate associations. At the alliance and association levels, major distinctions were made based upon the species present within that area. Distinguishing features of associations were based on factors such as vegetation height, canopy cover, soil type or geographic formations.

2.1.10 Mapping and Sampling Surveys

Field activities at Point Mugu took place in two concurrent phases: (1) Reconnaissance and Mapping and (2) Vegetation Sampling (Rapid Assessment and Relevé; **Appendix C**). The study area was visited to ensure a high degree of floristic and spatial accuracy in the map. Aerial photos were used by field personnel to assess the vegetation signature of the communities during reconnaissance and mapping. The appropriate vegetation signatures for mapping were identified during this phase. Stands for vegetation sampling were surveyed as they were identified.

Mapping and sampling were scheduled to avoid sensitive wildlife areas during the bird breeding season. The initial reconnaissance and sampling efforts focused on sensitive beach, dunes, and marsh habitats preceding the 2012 bird breeding and nesting seasons. Characteristic plants in these areas tend to be perennial or evident. Subsequent efforts in non-sensitive areas occurred later in the spring. Non-sensitive habitats, often characterized by annuals, such as uplands, grasslands, and disturbed areas followed.

Surveys were conducted during five periods in 2012 (see **Table 2-1**).

Table 2-1. Survey Periods and Dates

Survey Period	Survey Date(s)
1	16-20 January 2012
2	23-27 January 2012
3	13-17 February 2012
4	24-27 April 2012
5	24-27 July 2012

2.1.11 Natural Resources Constraints

Due to the presence of Federal and state-listed species at Point Mugu, including Belding's savannah sparrow, California least tern, least Bell's vireo, light-footed clapper rail, saltmarsh bird's-beak, and western snowy plover, the timing of surveys were planned accordingly.

Field activities were timed to avoid these sensitive species. The following areas received special consideration during planning, timing, and coordination of field activities on Point Mugu:

1. Light-footed clapper rail habitat areas - Intertidal and Upper Salt Marsh
2. Western snowy plover usage areas and California least tern breeding areas - Beaches and Dunes.
3. Saltmarsh bird's-beak current and historical areas of growth - Intertidal and Upper Salt Marsh.
4. Belding's savannah sparrow usage areas - Intertidal and Upper Salt Marsh.

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3. Results

3.1 Vegetated Communities

3.1.1 *Baccharis salicifolia* Alliance

This alliance is an open riparian scrub that is most often transitional to more fully developed riparian woodlands. One association within this alliance was mapped at Point Mugu.

***Baccharis salicifolia* Association (Code: 240)**

Mulefat (*Baccharis salicifolia*) is the dominant species in the shrub canopy. Subdominant shrubs may include Menzie's golden bush (*Isocoma menziesii*) and western poison oak (*Toxicodendron diversilobum*). Emergent wetland trees, such as willow (*Salix* sp.), may be present. A total of 3.7 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Baccharis salicifolia* Association on the installation



Typical Aerial Signature for this *Baccharis salicifolia* Association

3.1.2 *Salix lasiolepis* Alliance

Arroyo willow is a riparian tall shrub or tree up to 8 meters in height (Sawyer et al. 2009). Stands of this species can be found in stream banks and benches, slope seeps, and stringers along drainages. Plants are typically shrubby and multi-branched along coastal creeks, at lower elevations; therefore, in this description, the alliance is described as a shrubland as opposed to a Forest Alliance. Two associations within this alliance were mapped at Point Mugu.

***Salix lasiolepis* Association (Code: 301)**

Arroyo willow is the dominant in the shrub canopy often with subdominants, including narrow-leaved willow (*Salix exigua*), mulefat, or coyote brush. The herbaceous canopy may include wetland species as subdominants mugwort (*Artemisia douglasiana*) and spiny rush (*Juncus acutus subsp. leopoldii*). A total of 2.8 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Salix lasiolepis* Association on the installation



Typical Aerial Signature for this *Salix lasiolepis* Association

***Salix lasiolepis* – *Baccharis pilularis* Association (Code: 302)**

The dominant shrub species in this association is arroyo willow followed by coyote brush. Other species observed within the surveyed plots were western ragweed (*Ambrosia psilostachya*), hottentot fig (*Carpobrotus edulis*), horseweed (*Erigeron* sp.), sweetclover (*Melilotus* sp.), ngaio tree (*Myoporum laetum*), sugar bush (*Rhus ovata*), Brazilian pepper tree (*Schinus terebinthifolius*), and western poison oak. Two plots of this association were sampled on Point Mugu. Both plots are found in disturbed areas with one in particular surrounded by dead hottentot fig and the other surrounded by development. A total of 7.1 acres were mapped on Point Mugu and within that acreage, two plots were sampled.



Map Location of the *Salix lasiolepis* – *Baccharis pilularis* Association on the installation



Typical Aerial Signature for this *Salix lasiolepis* – *Baccharis pilularis* Association

3.1.3 *Schinus (molle, terebinthifolius)* - *Myoporum laetum* Alliance

In the understory shrub layer is infrequent to common and the herbaceous layer is simple to diverse. One association within this alliance was mapped at Point Mugu.

***Myoporum laetum* Association (Code: 410)**

Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree, or ngaio tree is dominant in the stand. A total of 60.6 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Myoporum laetum* Association on the installation



Typical Aerial Signature for this *Myoporum laetum* Association

3.1.4 *Eucalyptus (globulus, camaldulensis)* Alliance

Stands along the southern California coast typically include red gum (*Eucalyptus camaldulensis*) and blue gum (*E. globulus*). This stand is often found in disturbed areas with sparse to intermittent shrub and herbaceous layers. One association within this alliance was mapped at Point Mugu.

***Eucalyptus (globulus, camaldulensis)* Association (Code: 400)**

This association is dominated by *Eucalyptus* species. A total of 5.5 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Eucalyptus (globulus, camaldulensis)* Association on the installation



Typical Aerial Signature for this *Eucalyptus (globulus, camaldulensis)* Association

3.2 Shrubland Vegetation Communities

3.2.1 *Malosma laurina* Alliance

This alliance includes laurel sumac (*Malosma laurina*) as the dominant species with codominant species in the shrub canopy such as California sagebrush (*Artemisia californica*), coastal buckwheat (*Eriogonum cinereum*), and California buckwheat (*E. fasciculatum*). Shrubs are usually <5 meters and the canopy is open to continuous. The herbaceous layer is generally sparse. One association within this alliance was mapped at Point Mugu.

***Malosma laurina* Association (Code: 250)**

A total of 2.8 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Malosma laurina* Alliance on the installation



Typical Aerial Signature for this *Malosma laurina* Alliance

3.2.2 *Artemisia californica* Alliance

California sagebrush is the quintessential species of southern California coastal sage scrub. This species grows up to 2 meters and this alliance occurs on gentle to steep slopes of variable aspect at low elevations. Stands of this alliance form an open to intermittent shrub layer (Keeler-Wolf and Evens 2006). One association within this alliance was mapped at Point Mugu.

***Artemisia californica* Association (Code: 270)**

The dominant species in the surveyed plots is California sagebrush with one plot having a co-dominant species of fountain grass (*Pennisetum setaceum*) and another plot with mule-fat as the co-dominant species. Other species detected within the surveyed plot were western ragweed, locoweed (*Astragalus trichopodus*), coyote brush, hottentot fig, California burclover (*Medicago polymorpha*), California brittlebush (*Encelia californica*), telegraph weed (*Heterotheca grandiflora*), deerweed (*Acmispon glaber*), and moss. This association is found in upland areas where there were either indications of revegetation over a potentially old graded pad and alongside Pacific Coast Highway where the toe of the slope was cut with potential riprap fill substrate. Riprap fill substrate is also found within this plot. A total of 5.3 acres were mapped on Point Mugu and within that acreage, two plots were sampled.

Map Location of the *Artemisia californica* Association on the installationTypical Aerial Signature for this *Artemisia californica* Association

3.2.3 *Encelia californica* Alliance

This alliance is one of several coastal sage scrub alliances. General alliance characteristics include California brittlebush as the dominant or codominant in the shrub canopy, with California sagebrush, coyote brush, monkey flower (*Mimulus aurantiacus*), coastal buckwheat, Menzie's golden bush, deerweed, our lord's candle (*Hesperoyucca whipplei*), prickly pear cholla (*Opuntia littoralis*), purple sage (*Salvia leucophylla*), and/or black sage (*S. mellifera*) occurring as subdominants. Shrub canopy is intermittent to continuous, and the herbaceous layer is variable. One association within this alliance was mapped at Point Mugu.

Encelia californica – *Artemisia californica* Association (Code: 291)

California brittlebush and California sagebrush are codominant in an open shrub canopy with sparse cover of subdominant shrubs (Sproul et al. 2011). A total of 0.4 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.

Map Location of the *Encelia californica* – *Artemisia californica* Association on the installationTypical Aerial Signature for this *Encelia californica* – *Artemisia californica* Association

3.2.4 *Acmispon glaber* Alliance

Characteristics of this alliance include deerweed as the dominant or codominant in the shrub canopy with species like California sagebrush, coyote brush and common sand aster (*Corethrogyne filaginifolia*), occurring as subdominants. The shrub canopy is open to intermittent and the herbaceous layer may be sparse to intermittent. One association within this alliance was mapped at Point Mugu.

***Acmispon glaber* Association (Code: 280)**

This association is characterized by the dominance of in the shrub layer and a variety of mostly nonnative herbs, none particularly characteristic, in the herbaceous layer. The emergent tree layer is generally absent. A total of 0.6 acre was mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Acmispon glaber* Association on the installation



Typical Aerial Signature for this *Acmispon glaber* Association

3.2.5 *Atriplex lentiformis* Alliance

This alliance is dominated by big saltbush (*Atriplex lentiformis*). Big saltbush is a fast-growing shrub found in alkali sinks, flats, washes, wetlands with gentle to steep slopes (Sawyer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Atriplex lentiformis* Association (Code: 220)**

The dominant species in this association is big saltbush. Other species found within the surveyed plots were hottentot fig, Maltese star-thistle (*Centaurea melitensis*), poison hemlock (*Conium maculatum*), black mustard, coyote brush, alkali heath, yellow sweetclover (*Melilotus indicus*), and Pacific swampfire (*Salicornia pacifica*). Although not observed in the sampled plots for this Association, broadleaved pepperweed (*Lepidium latifolium*) is found in this Association along Oxnard Drainage Ditch #2. A total of 71.5 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Atriplex lentiformis* Association on the installation



Typical Aerial Signature for this *Atriplex lentiformis* Association

3.2.6 *Baccharis pilularis* Alliance

Coyote brush is a prostrate to erect shrub that grows to 3 meters tall and has evergreen leaves (Sawyer et al. 2009). This species is the dominant to co-dominant in the shrub canopy. This alliance can be found in a diversity of areas such as, but not limited to, river mouths, stream sides, and terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges. It is sometimes associated with disturbance and wetland margins. Four associations within this alliance were mapped at Point Mugu.

***Baccharis pilularis* Association (Code: 200)**

Coyote brush more often occurred on Point Mugu with other species as opposed to finding monotypic stands. This species is the dominant species in this association. A total of 7.4 acres were mapped and within that acreage, zero plots were sampled.



Map Location of *Baccharis pilularis* Association on the installation



Typical Aerial Signature for this *Baccharis pilularis* Association

***Baccharis pilularis* – *Artemesia californica* Association (Code: 201)**

The dominant species in this association is coyote brush with the co-dominant species of California sagebrush. Other species found within the surveyed plots were locoweed, hottentot fig, California burclover, ngaio tree, and moss. The surveyed plots are found in upland shrub communities and adjacent to disturbance such as recently paved roads and/or old graded pads. A total of 12.1 acres were mapped on Point Mugu and within that acreage, two plots were sampled.



Map Location of the *Baccharis pilularis* – *Artemesia californica* Association on the installation



Typical Aerial Signature for this *Baccharis pilularis* – *Artemesia californica* Association

***Baccharis pilularis* – *Toxicodendron diversilobum* Association (Code: 202)**

The dominant species in this association is coyote brush with two co-dominant species, western poison oak and hottentot fig. Other species detected within the only surveyed plot were giant tickseed (*Leptosyne gigantea*), salt grass, and arroyo willow. A total of 3.5 acres were mapped on Point Mugu and within that acreage, one plot was sampled. This single plot was surveyed in a disturbed area with re-growth of dead hottentot fig along with upland shrubs.



Map Location of the *Baccharis pilularis* – *Toxicodendron diversilobum* Association on the installation



Typical Aerial Signature for this *Baccharis pilularis* – *Toxicodendron diversilobum* Association

***Baccharis pilularis* / Herbaceous Association (Code: 203)**

The dominant species in this association is coyote brush with two co-dominant shrub species, California sagebrush and mule-fat and tree species, arroyo willow. Herbaceous species found within the only surveyed plot were hottentot fig, horseweed (*Erigeron canadensis*), and ngaio tree. This single plot (Plot NVBC 134, see **Appendix D** for UTM) was surveyed in a disturbed area which was likely a dumpsite for dredge or fill sand. Also, there was dead hottentot fig present throughout the stand. A total of 52.3 acres were mapped on Point Mugu and within that acreage and one plot was sampled.



Map Location of the *Baccharis pilularis* / Herbaceous Association on the installation



Typical Aerial Signature for this *Baccharis pilularis* / Herbaceous Association

3.2.7 *Ammophila arenaria* Alliance

European beachgrass is an introduced species to both the Atlantic and Pacific coasts of North America, used to stabilize shifting sand dunes. It is a cool-season, coarse perennial grass with deep, tough creeping

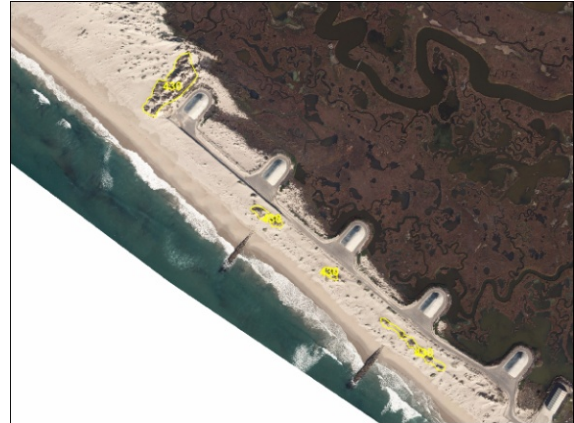
rhizomes (Saywer et al. 2009). Stands of this species are often found in dunes of coastal bars, foredunes, and river mouths. One association within this alliance was mapped at Point Mugu.

***Ammophila arenaria* Association (Code: 430)**

The dominant species in this association is European beachgrass. Other species observed were red sand-verbena, silver burr ragweed, beach saltbush (*Atriplex leucophylla*), coyote brush, California morning glory (*Calystegia macrostegia*), beach morning glory, hottentot fig, European sea rocket (*Cakile maritima*), and common sand aster. A total of 2.5 acres were mapped on Point Mugu and within that acreage, two plots were sampled.



Map Location of the *Ammophila arenaria* Association on the installation



Typical Aerial Signature for this *Ammophila arenaria* Association

3.2.8 *Isocoma menziesii* Alliance

This alliance is dominated by Menzie's golden bush is a perennial shrub that grows up to 1 meter tall and cover is open to intermittent. This alliance can be found in alluvial fans, arroyos, and stream terraces (Saywer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Isocoma menziesii* – *Distichlis spicata* Association (Code: 261)**

The dominant shrub species in this association is Menzie's golden bush and dominant herbaceous species were hottentot fig and salt grass. Other species found within the surveyed plot were locoweed, Watson's saltbush (*Atriplex watsonii*), alkali heath, marsh jaumea (*Jaumea carnosa*), marsh rosemary (*Limonium californicum*), and deerweed. The single surveyed plot is found in a dead/live hottentot fig stand on an old berm, surrounded by marsh. A total of 1.6 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of *Isocoma menziesii* – *Distichlis spicata* Association on the installation



Typical Aerial Signature for this *Isocoma menziesii* – *Distichlis spicata* Association

3.3 Herbaceous to Semi-Herbaceous Vegetation Communities

3.3.1 *Typha latifolia* Alliance

The broadleaf cattail (*Typha latifolia*) is an emergent perennial hydrophyte that grows up to 1.5 meters in height (Sawyer et al. 2009). This Alliance is found in semi-permanently flooded freshwater or brackish marshes with clay or silt soils. One association within this alliance was mapped at Point Mugu.

***Typha latifolia* Association (Code: 160)**

The dominant species in this Association is the broadleaf cattail and the only other species detected was a species of umbrella sedge (*Cyperus* sp.) The cattail stand was in a small depression within a disturbed area. A total of 1.5 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Typha latifolia* Association on the installation



Typical Aerial Signature for this *Typha latifolia* Association

3.3.2 *Arundo donax* Alliance

This alliance includes giant reed (*Arundo donax*) as the dominant herbaceous species. Stands of this species form an intermittent to continuous herbaceous layer. Giant reed is one of the fastest growing land plants in the world (Sawyer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Arundo donax* Association (Code: 470)**

A total of 0.01 acres were mapped on Point Mugu and within that acreage, zero plots were sampled. Although this association did not meet the stated MMU of 1/16 acre, it is important to note and map the location(s) of a highly invasive species.



Map Location of the *Arundo donax* Association on the installation



Typical Aerial Signature for this *Arundo donax* Association

3.3.3 *Juncus acutus* Provisional Alliance

Spiny rush (*Juncus acutus* subsp. *leopoldii*) is a robust tufted rush with very sharp apical tips (Sproul et al. 2011). It is a California native perennial rhizomatous herb. Stands of this species are associated with seeps at the upper edges of salt marshes or occasionally farther up streams and rivers where marshy seeps or saturated ground exists (Sproul et al. 2011). Generally small, these stands are usually less than 10 meters wide and sometimes contain halophytic wetland species (i.e., *Jaumea carnosa*) in the understory. One association within this alliance was mapped at Point Mugu.

***Juncus acutus* Provisional Association (Code: 150)**

The dominant species in this Provisional Alliance is spiny rush which forms a shrub layer canopy not observed in other marsh communities. Other species detected within the surveyed plots were western ragweed, Parish's glasswort (*Arthrocnemum subterminale*), marsh baccharis (*Baccharis glutinosa*), coyote brush, European sea rocket, hottentot fig, salt grass, alkali heath, marsh jaumea, marsh rosemary, shore grass (*Distichlis littoralis*), ngaio tree, phacelia (*Phacelia* sp.), and Pacific swampfire. Some of the surveyed plots are found behind dunes and some others are found alongside living and dead hottentot fig. In addition, the state and federal listed, California clapper rail, commonly nests in spiny rush stands. A total of 35.4 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Juncus acutus* Provisional Alliance on the installation



Typical Aerial Signature for this *Juncus acutus* Provisional Alliance

3.3.4 *Schoenoplectus californicus* Alliance

Although hardstem bulrush (*Schoenoplectus acutus* subsp. *occidentalis*) and California bulrush (*S. californicus*) commonly occur in the same area, California bulrush tends to dominate on the outer, more exposed edges of marshes adjacent to open water, and it appears to be more tolerant of brackish water than hardstem bulrush. In California, general characteristics of the alliance include California bulrush as dominant or co-dominant in the herbaceous layer with, western goldenrod (*Euthamia occidentalis*), narrow-leaved cattail (*Typha angustifolia*), southern cattail (*T. domingensis*), and broadleaf cattail. Herbs are generally <4 meters and the cover is intermittent to continuous (Sproul et al. 2011). One association within this alliance was mapped at Point Mugu.

Schoenoplectus californicus Association (Code: 181)

California bulrush is the dominant species in this association and is a widespread emergent marsh type species. A total of 3.5 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Schoenoplectus californicus* Association on the installation



Typical Aerial Signature for this *Schoenoplectus californicus* Association

3.3.5 *Lepidium latifolium* Alliance

This herbaceous stand is often found in intermittently and seasonally flooded fresh and saltwater marshes and riparian corridors. One association within this alliance was mapped at Point Mugu.

***Lepidium latifolium* Association (Code: 490)**

Broadleaved pepperweed is dominant in this herbaceous stand. Other non-native herbaceous species may be present. A total of 0.2 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Lepidium latifolium* Association on the installation



Typical Aerial Signature for this *Lepidium latifolium* Association

3.3.6 *Spartina foliosa* Alliance

This alliance, California cordgrass (*Spartina foliosa*), often dominates lower-marsh settings of coastal salt marshes and in southern California the stands occur in low marshes, along creeks, and up to the marsh plain (Sproul et al. 2011). Per Sawyer et al. 2009, this herbaceous layer grows up to 1.5 meters in height. One association within this alliance was mapped at Point Mugu.

***Spartina foliosa* Association (Code: 170)**

The dominant species in this alliance is California cordgrass. Other species within the surveyed plots were saltwort (*Batis maritima*), dwarf saltwort (*Salicornia bigelovii*), Pacific swampfire, and algae. All plots surveyed are found in low-marsh areas with partial to full inundation occurring at high tide. A total of 0.6 acres were mapped on Point Mugu and within that acreage, two plots were sampled.



Map Location of the *Spartina foliosa* Association on the installation



Typical Aerial Signature for this *Spartina foliosa* Association

3.3.7 *Pennisetum setaceum* Alliance

Crimson fountain grass is often found on steep coastal cliffs, bluffs, road-cuts, coastal dunes, coastal and desert scrub types. One association within this alliance was mapped at Point Mugu.

***Pennisetum setaceum* Association (Code: 480)**

Crimson fountain grass is dominant or codominant in the association with other non-native species in the herbaceous layer (Saywer et al. 2009). A total of 1.0 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Pennisetum setaceum* Association on the installation



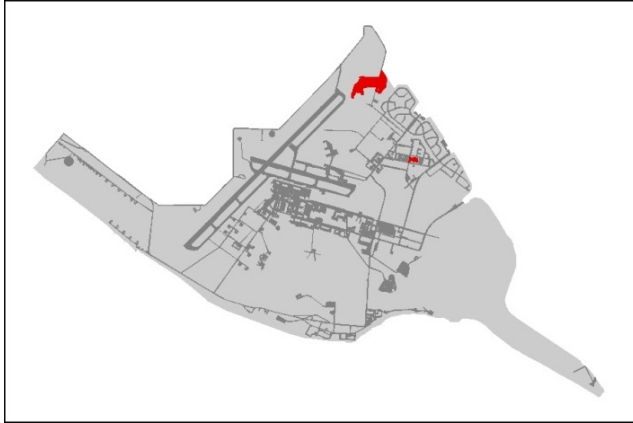
Typical Aerial Signature for this *Pennisetum setaceum* Association

3.3.8 *Bromus (diandrus, hordeaceus)* – *Brachypodium distachyon* Alliance

These brome species are non-native and invasive in the region. This alliance accounts for the largest acreage of grassland vegetation in cismontane California (Sawyer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Bromus diandrus* – *Hordeum* sp. Association (Code: 452)**

The co-dominant species in this association is ripgut grass and barley (*Hordeum* sp.). Other species detected within the single sampled plot were low ragweed (*Ambrosia artemisiifolia*), wild oat (*Avena* sp.), bristly ox-tongue (*Helminthotheca echioides*), short pod mustard (*Hirschfeldia incana*), Italian rye grass (*Festuca perennis*), and yellow sweetclover. This plot is in an occasionally mowed non-native grassland area. A total of 22.4 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Bromus diandrus* – *Hordeum* sp. Association on the installation



Typical Aerial Signature for this *Bromus diandrus* – *Hordeum* sp. Association

3.3.9 *Bromus madritensis* Alliance

Red brome is a non-native and invasive species in the region. Originally from Europe, this invasive species requires half as much rain to stimulate seed germination as do native winter annuals (Sawyer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Bromus madritensis* Association (Code: 453)**

The dominant species in this association is red brome. Other species detected within the sampled plots were western ragweed, wild oat (*Avena* sp.), Australian saltbush (*A. semibaccata*), ripgut grass, soft brome (*B. hordeaceus*), Italian thistle (*Carduus pycnocephalus* subsp. *pycnocephalus*), Maltese star-thistle, horseweed (*E. canadensis*), alkali weed (*Cressa truxillensis*), Bermuda grass (*Cynodon dactylon*), salt grass, alkali heath, everlasting (*Gnaphalium* sp.), short pod mustard, barley (*Hordeum* sp.), Italian rye grass, broadleaf birdfoot trefoil (*Lotus corniculatus*), slender-leaved iceplant (*Mesembryanthemum nodiflorum*), and Russian thistle (*Salsola tragus*). Most of the surveyed plots are found in mowed airfield non-native grassland and one plot is in a former golf course. A total of 136.3 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Bromus madritensis* Association on the installation



Typical Aerial Signature for this *Bromus madritensis* Association

3.3.10 *Hordeum* sp. Alliance

Common barley (*Hordeum vulgare*) is an introduced species from Eurasia. This species was first domesticated in western Asia (Utah State University 2013). This species is most often found in disturbed or ruderal areas of high disturbance. (This alliance/semi natural stand is currently not recognized by NVCS and will need to be described from this project) One association within this alliance was mapped at Point Mugu.

***Hordeum* sp. Association (Code: 451)**

The dominant species in this association is common barley. Other species detected within the sampled plots were Australian saltbush, wild oat (*Avena* sp.), five horn bassia (*Bassia hyssopifolia*), common beet (*Beta vulgaris*), rescue grass (*Bromus catharticus* var. *catharticus*), ripgut grass, soft brome, red brome (*B. madritensis* subsp. *rubens*), Maltese star-thistle, goosefoot (*Chenopodium* sp.), common brass buttons (*Cotula coronopifolia*), alkali weed, Bermuda grass, salt grass, cottonbatting plant (*Pseudognaphalium stramineum*), salt heliotrope (*Heliotropium curassavicum* var. *oculatum*), short pod mustard, seaside barley (*Hordeum marinum*), prickly lettuce (*Lactuca serriola*), Italian rye grass, birdfoot trefoil, cheeseweed mallow (*Malva parviflora*), yellow sweetclover, slender-leaved iceplant, sicklegrass (*Parapholis incurva*), annual beard grass (*Polypogon monspeliensis*), Pacific swampfire, Indian hedge mustard (*Sisymbrium orientale*), and hoary nettle (*Urtica dioica*). All plots sampled are in mowed fields. Two of the four plots are dominated by non-native grass species and another plot has a significant presence of Pacific swampfire which indicates a wetland area. A total of 79.1 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Hordeum vulgare* Association on the installation



Typical Aerial Signature for this *Hordeum vulgare* Association

3.3.11 *Festuca perennis* Alliance

Italian rye grass is a non-native grass that can be found in lowlands with periodic flooding, disked fields, and uplands including serpentine substrates (Sawyer et al. 2009). One association within this alliance was mapped at Point Mugu.

***Festuca perennis* Association (Code: 454)**

The dominant species in this association is Italian rye grass. Other species detected within the single surveyed were wild oat (*Avena* sp.), rescue grass, salt grass, seaside barley, common barley, birdfoot trefoil, prickly lettuce, and sicklegrass. A total of 7.8 acres were mapped on Point Mugu and within that acreage, one was sampled.

Map Location of the *Festuca perennis* Association on the installationTypical Aerial Signature for this *Festuca perennis* Association

3.3.12 Mediterranean California Naturalized Annual and Perennial Grassland (Code: 450)

This description is based on the group level, which is the hierarchical level above the alliance. The group level is a useful classification where distinction cannot be made to the alliance or association level. This group level classification because nonnative grasses and forbs are dominant over native species (Sproul et al. 2011). A total of 182.4 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the Mediterranean California Naturalized Annual and Perennial Grassland on the installation



Typical Aerial Signature for this Mediterranean California Naturalized Annual and Perennial Grassland

3.3.13 Naturalized Warm-Temperate Riparian and Wetland (Code: 460)

This description is based on the group level, which is the hierarchical level above the alliance. The group level is a useful classification where distinction cannot be made to the alliance or association level. This group level classification because nonnative grasses and forbs are dominant over native species (Sproul et al. 2011). A total of 24.0 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.

At Point Mugu this group is typically used for ephemeral wetland areas that predominantly are dominated by freshwater wetland species though there were a few areas with heavy saltwater influence also mapped within this group. Common species in this alliance include yellow nutsedge (*Cyperus esculentus*), dock (*Rumex* sp.), and spiny cocklebur (*Xanthium spinosum*). Some or all of these might be present. These are often very small areas where water ponds and then evaporates or drains seasonally.



Map Location of the Naturalized Warm-Temperate Riparian and Wetland on the installation



Typical Aerial Signature for this Naturalized Warm-Temperate Riparian and Wetland

3.3.14 *Brassica nigra* and Other Mustards Alliance

Brassica nigra and Other Mustards Semi-natural Stands Alliance occur throughout California in a variety of habitats. Many are associated with agricultural lands, but some do form large stands in wildland settings. Six mustard species are associated in this alliance; *Brassica. nigra*, *B. rapa*, *B. tournefortii*, *Hirschfeldia incana*, *Isatis tinctoria* and *Raphnus sativus* within the state (Sawyer et al. 2009). However, only *B. nigra*, *H. incana* and *R. sativus* have been reported from NBVC Point Mugu. Also known as the Upland mustards, this herbaceous strand is usually <3 meters tall with an open to continuous canopy. Three associations within this alliance were mapped at Point Mugu.

***Brassica nigra* Association (Code: 441)**

The dominant species in this association is black mustard. Other non-native grass species are likely to be detected in this association. A total of 10.7 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Brassica nigra* Association on the installation



Typical Aerial Signature for this *Brassica nigra* Association

***Centaurea melitensis* – *Brassica nigra* Association (Code: 442)**

The dominant species in this association is black mustard and Maltese star-thistle. Other species detected were scarlet pimpernel (*Anagallis arvensis*) and coyote brush. Black mustard has grown over past disturbance and coyote brush encroaches into areas of disturbance. A total of 5.8 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Centaurea melitensis* – *Brassica nigra* Association on the installation



Typical Aerial Signature for this *Centaurea melitensis* – *Brassica nigra* Association

***Brassica nigra* – *Conium maculatum* Provisional Association (Code: 443)**

The dominant species in this association is black mustard and poison hemlock. These species were part of a disturbed community. No additional species were detected in this association on this plot. A total of 3.1 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Brassica nigra* – *Conium maculatum* Provisional Association on the installation



Typical Aerial Signature for this the *Brassica nigra* – *Conium maculatum* Provisional Association

3.3.15 *Leptosyne gigantea* Alliance

Giant tickseed is usually found on steep bluffs or stable slopes within 2 kilometers of the ocean (Sawyer et al. 2009). Often this species is associated with coastal sage scrub species. One association within this alliance was mapped at Point Mugu.

***Leptosyne gigantea* Association (Code: 210)**

The dominant species is giant tickseed. Other species within these surveyed plots were silver burr ragweed, California sagebrush, locoweed, big saltbush, coyote brush, mule-fat, European sea rocket, hottentot fig, Maltese star-thistle, horseweed (*C. canadensis*), salt grass, lance-leaved liveforever (*Dudleya lanceolata*), alkali heath, deerweed, yellow bush lupine (*Lupinus arboreus*), horehound (*Marrubium vulgare*), ngaio tree, hoary nettle, and dwarf-nettle (*Urtica urens*). One of the surveyed plots is on top of dead hottentot fig in a heavily disturbed area, and the other plot is along either side of a raised berm on both sides of a paved road also with patches of dead hottentot fig. A total of 2.3 acres were mapped on Point Mugu and within that acreage, two plots were sampled.

Map Location of the *Leptosyne gigantea* Association on the installationTypical Aerial Signature for this *Leptosyne gigantea* Association

3.3.16 *Salicornia pacifica* Alliance

Pacific swampfire is the most characteristic perennial salt marsh plant throughout coastal California (Sproul et al. 2011). Often referred as pickleweed mats, this herbaceous alliance is usually <1.5 meters tall and the cover is intermittent to continuous (Sawyer et al. 2009). Pickleweed stands are critical habitat for two, state and federally, listed endangered species, California clapper rail and salt marsh bird's beak, and one state endangered species, Belding's savannah sparrow. Eleven associations within this alliance were mapped at Point Mugu.

***Salicornia pacifica* Association (Code: 101)**

The dominant species in this association is Pacific swampfire. The only other species detected was alkali heath in trace amounts in one of two plots surveyed. These plots were part of a low-marsh pickleweed stand and both were covered in standing water. One of the plots was surrounded by open water channels. Vegetation cover ranged from medium to dense for the areas surveyed. A total of 198.3 acres were mapped on Point Mugu and within that acreage, two plots were sampled.

Map Location of the *Salicornia pacifica* Association on the installationTypical Aerial Signature for this *Salicornia pacifica* Association

***Salicornia pacifica* – *Frankenia salina* Association (Code: 102)**

The dominant species in this association is Pacific swampfire with the co-dominant species of alkali heath. Other species found were salt marsh dodder (*Cuscuta salina*), marsh rosemary, salt grass, woolly seablite (*Suaeda taxifolia*), and estuary seablite (*Suaeda esteroa*). Also, algae were found at one of the plots. This association was detected throughout the salt marsh from the back-marsh, to mid-marsh, to low-marsh. Low-marsh was characterized by being adjacent to open water, canals, or channels. This was the most common association mapped on Point Mugu. A total of 542.5 acres were mapped on Point Mugu and within that acreage, seven plots were sampled.



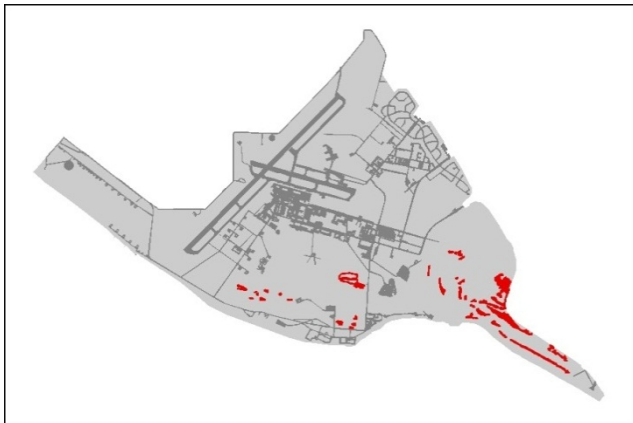
Map Location of the *Salicornia pacifica*– *Frankenia salina* Association on the installation



Typical Aerial Signature for this *Salicornia pacifica*– *Frankenia salina* Association

***Salicornia pacifica* – *Frankenia salina* – *Suaeda taxifolia* Association (Code: 103)**

The dominant species in this association is Pacific swampfire with the co-dominant species of alkali heath, seablite, and marsh jaumea. Other species found within the surveyed plot were salt grass, marsh rosemary, shore grass, and saltwort. This plot was located in a back-marsh area with an adjacent seablite stand. A total of 36.5 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Salicornia pacifica*– *Frankenia salina* – *Suaeda taxifolia* Association on the installation



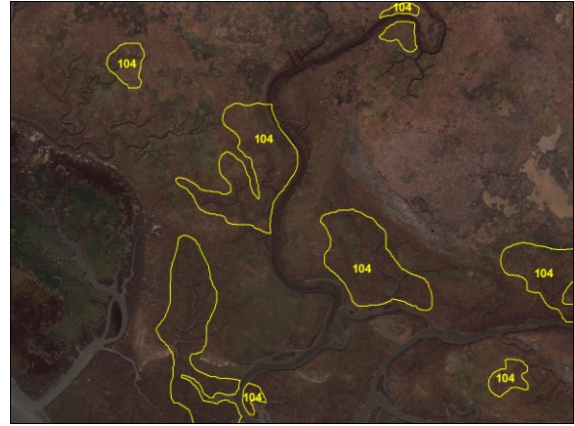
Typical Aerial Signature for this *Salicornia pacifica*– *Frankenia salina* – *Suaeda taxifolia* Association

***Salicornia pacifica* – *Jaumea carnosa* Association (Code: 104)**

The dominant species in this association is Pacific swampfire with the co-dominant species of marsh jaumea. Other species found within the surveyed plots were arrow-grass (*Triglochin concinna* var. *concinna*), alkali heath, woolly seablite, marsh rosemary, saltwort, and salt grass. This association was detected in mid-marsh communities. One of the plots was located adjacent to Pacific Coast Highway while a few of the plots for this association were located adjacent to channels within the salt marsh area. A total of 14.4 acres were mapped on Point Mugu and within that acreage, three plots were sampled.



Map Location of the *Salicornia pacifica*– *Jaumea carnosa* Association on the installation



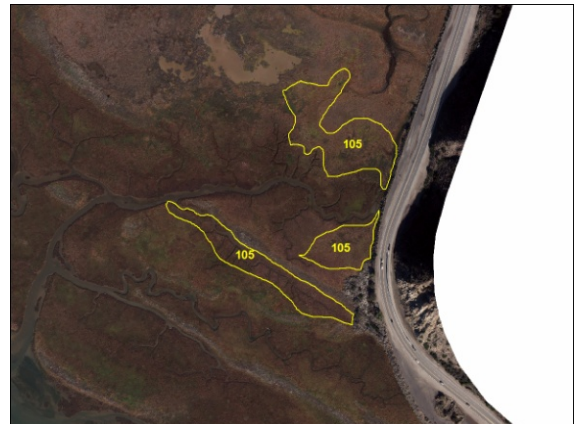
Typical Aerial Signature for this *Salicornia pacifica*– *Jaumea carnosa* Association

***Salicornia pacifica* – *Frankenia salina* – *Batis maritima* Association (Code: 105)**

The dominant species in this association is Pacific swampfire with the co-dominant species of saltwort and alkali heath. No other species were detected within the surveyed plots. This association is found in low marsh tidal flats with possible inundation during high tides and medium vegetation density. A total of 40.0 acres were mapped on Point Mugu and within that acreage and two plots were sampled.



Map Location of the *Salicornia pacifica*– *Frankenia salina* – *Batis maritima* Association on the installation



Typical Aerial Signature for this the *Salicornia pacifica*– *Frankenia salina* – *Batis maritima* Association

***Salicornia pacifica* – *Jaumea carnosa* – *Distichlis spicata* Association (Code: 106)**

The dominant species in this association is Pacific swampfire with the co-dominant species of marsh jaumea and salt grass. Also, alkali heath was found on this single plot. This plot is found in low-to-mid marsh tidal flats directly behind the dunes and was surrounded by open water channel (Plot NVBC 42, see **Appendix D** for UTM). The ground was saturated and muddy. Salt grass was dense near the dunes and gradually integrated with Pacific swampfire. A total of 0.8 acres were mapped on Point Mugu and within that acreage and one plot was sampled.



Map Location of the *Salicornia pacifica* – *Jaumea carnosa* – *Distichlis spicata* Association on the installation



Typical Aerial Signature for this *Salicornia pacifica* – *Jaumea carnosa* – *Distichlis spicata* Association

***Salicornia pacifica*/ Algae Association (Code: 107)**

The dominant species in this association is Pacific swampfire and algae. No other species were detected in this single plot. This plot is found in a partially inundated tidal flat community with dried algae mats throughout. A total of 11.4 acres were mapped on Point Mugu and within that acreage and one plot was sampled.



Map Location of the *Salicornia pacifica*/ Algae Association on the installation



Typical Aerial Signature for this *Salicornia pacifica*/ Algae Association

***Salicornia pacifica* – *Distichlis littoralis* Association (Code: 108)**

Pacific swampfire and shore grass occur together as codominant to dominant with continuous cover in the herbaceous canopy of the upper salt marsh (Sproul et al. 2011). A total of 2.3 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Salicornia pacifica*– *Distichlis littoralis* Association on the installation



Typical Aerial Signature for this *Salicornia pacifica*– *Distichlis littoralis* Association

***Salicornia pacifica* – *Jaumea carnosa* – *Batis maritima* Association (Code: 109)**

The dominant species in this association is Pacific swampfire with the co-dominant species of marsh jaumea and saltwort. Other species found within the surveyed plot were salt grass, alkali heath, California cordgrass, and woolly seablite. A total of 1.9 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Salicornia pacifica*– *Jaumea carnosa* – *Batis maritima* Association on the installation



Typical Aerial Signature for this *Salicornia pacifica*– *Jaumea carnosa* – *Batis maritima* Association

***Salicornia bigelovii* Provisional Association (Code: 110)**

The dominant species in this association is dwarf saltwort (*Salicornia bigelovii*) followed by Pacific swampfire, California cordgrass, and marsh jaumea. A total of 10.0 acres were mapped on Point Mugu and within that acreage, one plot was sampled. This single plot is found in a partially inundated low marsh stand near the estuary.



Map Location of the *Salicornia bigelovii* Provisional Association on the installation



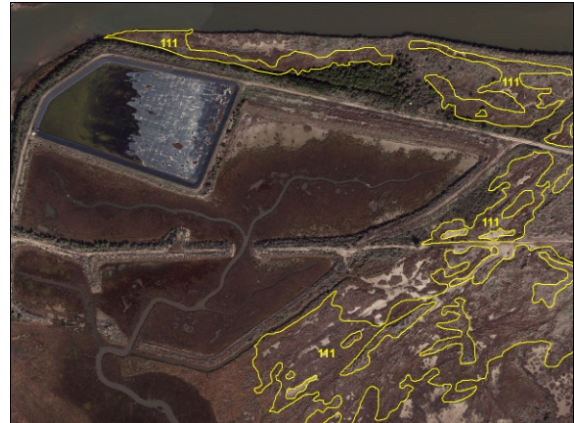
Typical Aerial Signature for this *Salicornia bigelovii* Provisional Association

***Salicornia pacifica* – *Brassica nigra* Association (Code: 111)**

The dominant species in this association is Pacific swampfire with the co-dominant species of black mustard. Other species detected within the surveyed plots were Parish's glasswort, alkali heath, big saltbush, sweetclover, prickly lettuce, coppery mesembryanthemum (*Malephora crocea*), and rigput grass. A total of 31.1 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Salicornia pacifica*– *Brassica nigra* Association on the installation



Typical Aerial Signature for this *Salicornia pacifica*– *Brassica nigra* Association

3.3.17 *Frankenia salina* Alliance

This alliance is dominated by Alkali heath a perennial or subshrub that occurs in seasonally moist or intermittently flooded, clayey, saline soils in association with marsh and other halophytic vegetation types (Saywer et al. 2009). Stands of this alliance can be found in coastal salt marshes, brackish marshes, alkali meadows, and alkali playas. Five associations within this alliance were mapped at Point Mugu.

***Frankenia salina* Association (Code: 231)**

The dominant species in this association is alkali heath. Other species found within the surveyed plots were Parish's glasswort, salt grass, marsh rosemary, shore grass, and Pacific swampfire. The surveyed plots are located in a slightly raised marsh area with one plot situated between mudflats and the other surrounded by channels and near a road. A total of 39.9 acres were mapped on Point Mugu and within that acreage, two plots were sampled.



Map Location of the *Frankenia salina* Association on the installation



Typical Aerial Signature for this *Frankenia salina* Association

***Frankenia salina* – *Distichlis spicata* Association (Code: 232)**

The dominant species in this association is alkali heath with a co-dominant species of salt grass. Other species detected within the surveyed plots were tumbleweed (*Amaranthus albus*), Parish's glasswort, salt marsh dodder, marsh rosemary, shore grass, Pacific swampfire, and estuary seablite. These surveyed plots are found in mid to high marsh areas. A total of 18.8 acres were mapped on Point Mugu and within that acreage, three plots were sampled.



Map Location of the *Frankenia salina* – *Distichlis spicata* Association on the installation



Typical Aerial Signature for this *Frankenia salina* – *Distichlis spicata* Association

***Frankenia salina* – *Arthrocnemum subterminale* Provisional Association (Code: 233)**

The dominant species in this association is alkali heath with a co-dominant species of Parish's glasswort. Other species detected within the surveyed plots were California saltbush (*Extriplex californica*), saltwort, bull thistle (*Cirsium vulgare*), salt marsh dodder, salt grass, goose grass (*Galium aparine*), marsh jaumea, shore grass, annual beard grass, and Pacific swampfire. The surveyed plots are found in mixed marsh areas with some plots adjacent to mud flats and others adjacent to roads/developed areas. A total of 8.8 acres were mapped on Point Mugu and within that acreage, five plots were sampled.



Map Location of the *Frankenia salina* – *Arthrocnemum subterminale* Provisional Association on the installation



Typical Aerial Signature for this *Frankenia salina* – *Arthrocnemum subterminale* Provisional Association

***Frankenia salina* – *Limonium californicum* – *Distichlis littoralis* – *Salicornia* spp. Association (Code: 234)**

The dominant shrub species in this association is alkali heath and the dominant herbaceous species was shore grass. Other species found within the surveyed plots were California saltbush, Watson's saltbush, saltwort, bull thistle, salt marsh dodder, salt grass, goose grass, marsh jaumea, marsh rosemary, annual beard grass, Pacific swampfire, estuary seablite, and woolly seablite. The surveyed plots are found in raised areas (i.e., berms) within tidal marshes or near mudflats. A total of 30.1 acres were mapped on Point Mugu and within that acreage, three plots were sampled.



Map Location of the *Frankenia salina* – *Limonium californicum* – *Distichlis littoralis* – *Salicornia* spp. Association on the installation



Typical Aerial Signature for this *Frankenia salina* – *Limonium californicum* – *Distichlis littoralis* – *Salicornia* spp. Association

***Frankenia salina* – *Carpobrotus edulis* (dead) Association (Code: 235)**

The dominant shrub species in this association was alkali heath and the dominant herbaceous species was dead hottentot fig. A total of 0.3 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Frankenia salina* – *Carpobrotus edulis* (dead) Association on the installation



Typical Aerial Signature for this *Frankenia salina* – *Carpobrotus edulis* (dead) Association

3.3.18 *Distichlis spicata* Alliance

Salt grass forms stands in alkaline and saline environments. This is a rhizomatous species that grows 10-40 centimeters tall. Salt grass occurs in salt marshes on Point Mugu. Salt grass stands are critical habitat for the state and federally listed endangered species, salt marsh bird's beak, and one state endangered species. Six associations within this alliance were mapped at Point Mugu.

***Distichlis spicata* Association (Code: 120)**

The most common species in this association is salt grass. A total of 6.6 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Distichlis spicata* Association on the installation



Typical Aerial Signature for this *Distichlis spicata* Association

***Distichlis spicata* – *Salicornia pacifica* Association (Code: 121)**

The dominant species in this association is salt grass with the co-dominant species of Pacific swampfire. Other species found within the surveyed plots were Parish's glasswort, hottentot fig, alkali heath, salt heliotrope, marsh jaumea, marsh rosemary, and shore grass. Two plots are adjacent to disturbed areas and next to roads or runways with wet to moist soils. Two other plots are partially inundated and potentially influenced by tidal fluctuation adjacent to marsh and dune areas. A total of 38.8 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Distichlis spicata* – *Salicornia pacifica* Association on the installation



Typical Aerial Signature for this *Distichlis spicata* – *Salicornia pacifica* Association

***Distichlis spicata* – *Ambrosia chamissonis* Association (Code: 123)**

The dominant species in this association is salt grass with the co-dominant species of silver burr ragweed. Other species found within the surveyed plots were red sand-verbena, marsh baccharis, coyote brush, European sea rocket, beach morning glory, beach evening primrose, hottentot fig, alkali heath, Menzies' goldenbush, marsh rosemary, marsh jaumea, and common dandelion (*Taraxacum officinale*). All plots sampled have some level of disturbance. A total of 5.1 acres were mapped on Point Mugu and within that acreage, four plots were sampled.



Map Location of the *Distichlis spicata* – *Ambrosia chamissonis* Association on the installation



Typical Aerial Signature for this *Distichlis spicata* – *Ambrosia chamissonis* Association

***Distichlis spicata* / Annual Grasses (or Grass-Herb) Association (Code: 124)**

Salt grass is dominant in the herbaceous canopy and nonnative annual grasses occur usually as subdominant cover (Sproul et al. 2011). However, one of three plots had equal parts relative vegetation cover of hottentot fig and the dominant species in this association is salt grass. Other species detected within the surveyed plots were scarlet pimpernel, Parish's glasswort, alkali heath, goose grass, hollowleaf annual lupine (*Lupinus succulentus*), wood sorrel (*Oxalis corniculata*), and common dandelion. Out of the three plots in this association surveyed on Point Mugu one is found with scattered myoporum and *Baccharis* sp. adjacent to the plot and the second plot is a hottentot stand now covered with weedy annuals (i.e., a successional community). The third surveyed plot (Plot NVBC 123, see **Appendix D** for UTM) was found in a mixed grass/wetland community bordered by channels. A total of 48.4 acres were mapped on Point Mugu and within that acreage, three plots were sampled.



Map Location of the *Distichlis spicata* / Annual Grasses Association on the installation



Typical Aerial Signature for this the *Distichlis spicata* / Annual Grasses Association

***Distichlis spicata* – *Jaumea carnosa* Association (Code: 125)**

The dominant species in this association is salt grass with the co-dominant species of marsh jaumea. Other species found within the surveyed plots were Parish's glasswort, coyote brush, salt marsh dodder, hottentot fig, alkali heath, Spiny rush, marsh rosemary, yellow bush lupine, crystalline iceplant (*Mesembryanthemum crystallinum*), shore grass, plantain (*Plantago* sp.), and Pacific swampfire. Two of the surveyed plots are in areas of mid-low marsh stands behind dunes and adjacent to standing water. Another plot is in a marsh stand with dead hottentot fig and with standing water present between developed/disturbed areas on the beach. A total of 13.5 acres were mapped on Point Mugu and within that acreage, three plots were sampled.



Map Location of the *Distichlis spicata* – *Jaumea carnosa* Association on the installation



Typical Aerial Signature for this *Distichlis spicata* – *Jaumea carnosa*

3.3.19 *Ambrosia chamissonis* – *Abronia maritima* Alliance

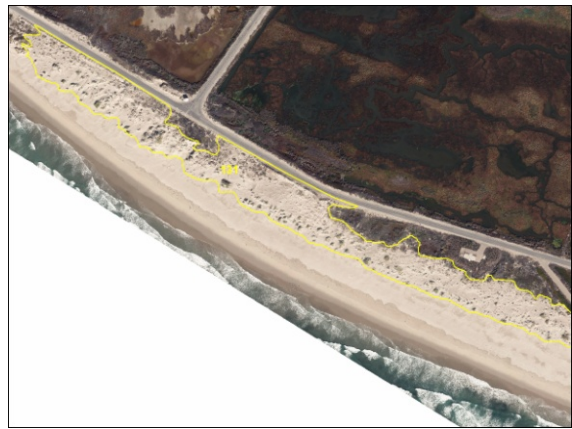
Ambrosia chamissonis – *Abronia maritima* Alliance occurs up and down the coast of California. Red sand-verbena and/or silver burr ragweed mix with other perennial herbs, grasses, and low shrubs to form an herbaceous cover (Sawyer et al. 2009). Often referred to as dune mat this herbaceous layer is usually <50 centimeters tall and the cover is usually sparse but can occasionally be intermittent or continuous (Sproul et al. 2011). Sparsely vegetated dunes of this stand may provide nesting habitat for the state and federally listed threatened species, western snowy plovers. Four associations within this alliance were mapped at Point Mugu.

Ambrosia chamissonis – *Abronia maritima* – *Cakile maritima* Association (Code: 131)

The dominant species in this association is silver burr ragweed with the co-dominant species of red sand-verbena and European sea rocket. Other species detected within the surveyed plots were European beachgrass, beach saltbush, California morning glory, beach evening primrose, salt marsh dodder, beach morning glory, salt grass, and alkali heath. Beach evening primrose was present in five of the seven plots. Beach evening primrose was common at low cover values within the association with relatively higher values on the backdunes than the foredunes. One of the seven surveyed plots contained two non-native species; European sea rocket and European beachgrass, which comprised less than 2 percent its ground cover. In addition, two surveyed plots had one non-native species; European sea rocket, which was less than 1 percent their ground cover. A fourth plot was noted to contain two non-native species; red sand-verbena and dead iceplant, which comprised less than 2 percent its ground cover. Red sand-verbena and European sea rocket were detected in sparse amounts in nearby backdunes. A patchy distribution of dead iceplant (*Carpobrotus* sp.) was found outside one of the plots. Dead European beachgrass was found adjacent to some of the plots. Some washed up trash, with minimal human disturbance, was noted in one plot with scattered tickseed and giant reed to the north. Another plot had a minimal but characteristic woody species component consisting of coyote brush, mule-fat, and arroyo willow. This association was found to be part of narrow dune systems in some locations, some adjacent to marsh areas, and near some developed areas. A total of 61.2 acres were mapped on Point Mugu and within that acreage, seven plots were sampled.



Map Location of the *Ambrosia chamissonis* – *Abronia maritima* – *Cakile maritima* Association on the installation



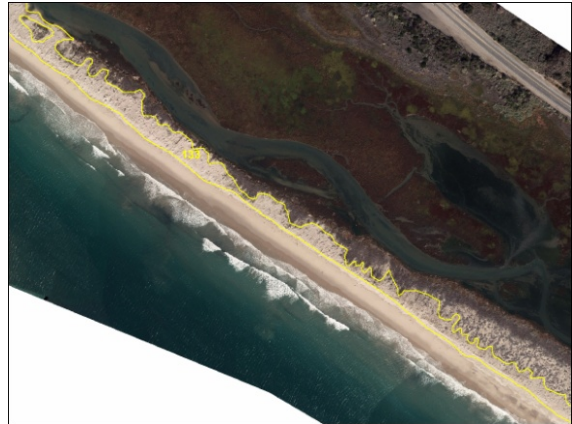
Typical Aerial Signature for this *Ambrosia chamissonis* – *Abronia maritima* – *Cakile maritima* Association

***Ambrosia chamissonis* – *Distichlis spicata* – *Abronia maritima* Provisional Association (Code: 133)**

The dominant species in this association is silver burr ragweed with two equally co-dominant species, salt grass and red sand-verbena. Other species detected within this plot were beach saltbush, beach morning glory, and beach evening primrose. Like the previous association this association is part of the back dunes system, between the beach and marsh areas and less than 1 kilometer (km) from the Santa Monica Mountains National Recreation Area. Some washed up trash, with minimal human disturbance, was also noted. A total of 17.0 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Ambrosia chamissonis* – *Distichlis spicata* – *Abronia maritima* **Provisional** Association on the installation



Typical Aerial Signature for this *Ambrosia chamissonis* – *Distichlis spicata* – *Abronia maritima* **Provisional** Association

3.3.20 *Arthrocnemum subterminale* Herbaceous Alliance

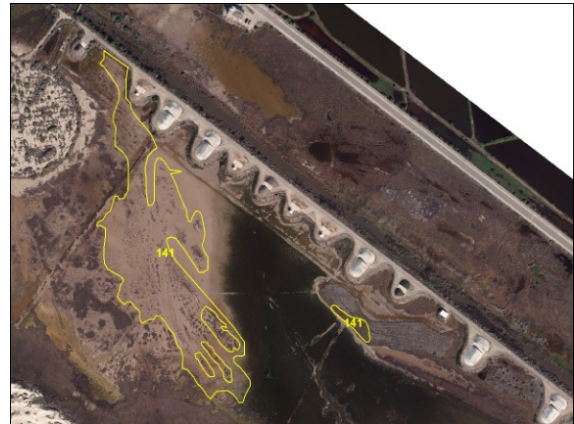
Parish's glasswort is a low perennial stem succulent of upper salt marshes (Sproul et al. 2011). It closely resembles pickleweed but is perennial instead of annual, and it differs from Pacific swampfire by having flowers in cymes distinctly separate from the branch of the inflorescences (Sawyer et al. 2009). Parish's glasswort or Pacific swampfire predominantly occurs in low to mid marsh stands on Point Mugu. Three associations within the alliance were mapped at Point Mugu.

***Arthrocnemum subterminale* Association (Code: 141)**

Parish's glasswort is dominant in the herb canopy often associated with several other herbs as codominant or subdominant including shore grass, alkali weed, dwarf coastweed (*Amblyopappus pusillus*), salt grass, and saltwort. This vegetation type most often occurs as discontinuous cover with shrubs of the upper salt marsh as it transitions from Pacific swampfire dominated cover alkali heath, Menzie's golden bush, and marsh rosemary (Sproul et al. 2011). This association is sometimes associated with salt pannes which are areas of high evaporation and high salinity with little vegetation cover (pers.comm. Todd Keeler-Wolf). A total of 16.4 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the *Arthrocnemum subterminale* Association on the installation



Typical Aerial Signature for this *Arthrocnemum subterminale* Association

***Arthrocnemum subterminale* – *Salicornia pacifica* Association (Code: 142)**

Parish's glasswort is the dominant species in this Association. Other species detected in the single surveyed plot were alkali heath, shore grass, and Pacific swampfire. This surveyed plot (Plot NVBC 18, see **Appendix D** for UTM) was found in a marshy area with some standing water, adjacent to open water and close to a berm. A total of 35.8 acres were mapped on Point Mugu and within that acreage a single plot was sampled.



Map Location of the *Arthrocnemum subterminale* – *Salicornia pacifica* Association Vegetation Community on the installation



Typical Aerial Signature for this *Arthrocnemum subterminale* – *Salicornia pacifica* Association

***Arthrocnemum subterminale* – *Distichlis littoralis* Association (Code: 143)**

Parish's glasswort is the dominant species with a co-dominant of shore grass. Other species detected in the surveyed plots were silver burr ragweed, beach saltbush, hottentot fig, salt grass, alkali heath, marsh jaumea, marsh rosemary, Pacific swampfire, and woolly seablite. The surveyed plots are found in low to mid marshes with mudflats present or mudflats in the vicinity. Two of the plots are found on raised mounds, potentially old berms. A total of 13.9 acres were mapped on Point Mugu and within that acreage, five plots were sampled.



Map Location of the *Arthrocnemum subterminale* – *Distichlis littoralis* Association on the installation



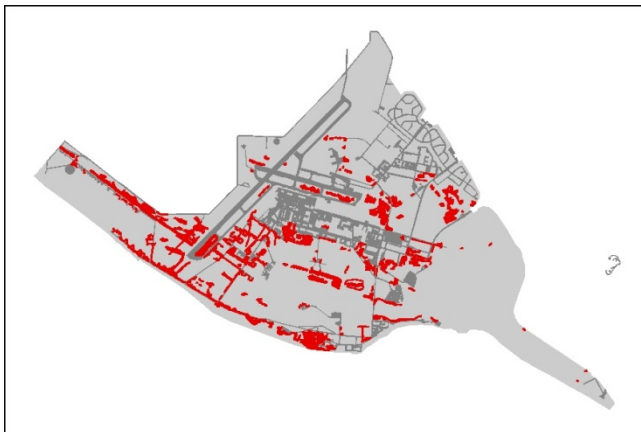
Typical Aerial Signature for this *Arthrocnemum subterminale* – *Distichlis littoralis* Association

3.3.21 *Carpobrotus edulis* or Other Ice Plants Alliance

Hottentot fig or other ice plant species are dominant in the herbaceous layer. This alliance can be found on bluffs, disturbed land, sand dunes of immediate coastline, and coastal and alkaline terraces (Sawyer et al. 2009). Two associations within this alliance were mapped at Point Mugu.

***Carpobrotus edulis* Association (Code: 421)**

Hottentot fig is dominant in this association. Plant species from coastal scrub types and dune systems may be possible in this association as hottentot fig is highly invasive and invades these habitats. Other species detected in this association were locoweed, red brome, beach evening primrose, giant tickseed, red-stemmed filaree (*Erodium cicutarium*), telegraph weed, and deerweed. A total of 213.0 acres were mapped on Point Mugu and within that acreage, one plot was sampled.



Map Location of the *Carpobrotus edulis* Association on the installation



Typical Aerial Signature for this *Carpobrotus edulis* Association

3.4 Non-vegetation Communities

3.4.1 Developed/Landscaped/Unvegetated (Code: 0)

Areas that no longer retain native function and are often covered with non-native species and/or hardscape. A total of 1303.2 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



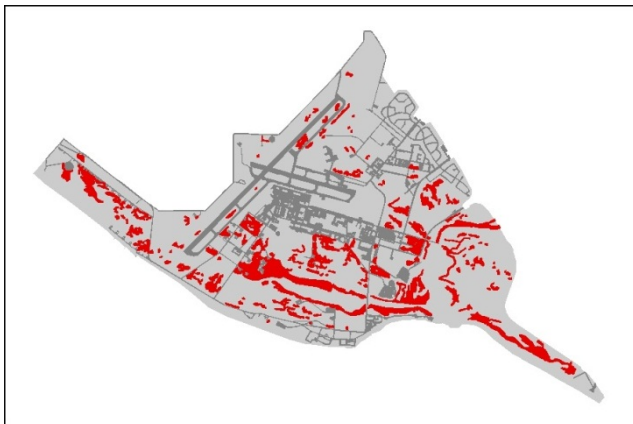
Map Location of the Developed/Landscaped/Unvegetated Community on the installation



Typical Aerial Signature for this Developed/Landscaped/Unvegetated Community

3.4.2 Tidal Flat/Sand/Mudflat (Code: 001)

Tidal flat/sand/mudflat areas are composed of nearly flat coastal areas that are in the intertidal zone and experience inundation and exposure due to tidal flows. These areas typically lack vegetation or have sparse vegetative cover. A total of 292.8 acres were mapped on Point Mugu and within that acreage, zero plots were sampled due to the lack of vegetation cover.



Map Location of the Tidal Flat/Sand/Mudflat Community on the installation



Typical Aerial Signature for this Tidal Flat/Sand/Mudflat Community

3.4.3 Beach (Code: 002)

Beach areas are composed of nearly flat sandy shores exposed and subjected to direct tidal flow fluctuations. These areas typically lack vegetation. Beach stands are critical nesting habitat for state and federally listed endangered species and a state and federally listed threatened species; California least terns and western snowy plovers, respectively. A total of 130.2 acres were mapped on Point Mugu and within that acreage, zero plots were sampled due to the lack of vegetation cover.



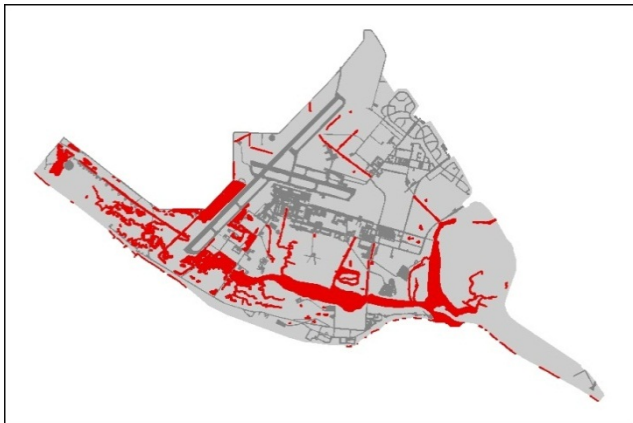
Map Location of the Beach Community on the installation



Typical Aerial Signature for this Beach Community

3.4.4 Open Water (Code: OW)

These areas were delineated using the 2011 aerial imagery provided for field surveys in 2012. Mapped Open Water polygons will likely change during flooding events, tidal changes and/or droughts. A total of 368.4 acres were mapped on Point Mugu and within that acreage, zero plots were sampled.



Map Location of the Open Water on the installation



Typical Aerial Signature for Open Water

4. Discussion

This project developed a floristic classification of vegetation within the boundaries of NBVC Point Mugu. **Appendix A** represents a map book of the installation depicting the mapped 67 vegetation associations/classes on aerial imagery. A total of 4307.3 acres were mapped of which approximately 33.8 percent was native vegetation, 17.5 percent was non-native vegetation, 30.3 percent was developed or landscaped or unvegetated, and 8.6 percent was mapped as open water (see **Table 4-1**). In addition, a dichotomous field key of the 68 associations/classes is provided in **Appendix B**.

A majority of the native vegetation belongs to coastal, estuarine salt marsh habitat alliances or associations (see **Table 4-1**). Associations and/or alliances dominated by species such as: *Salicornia pacifica*, *Frankenia salina*, *Distichlis spicata*, *Arthrocnemum subterminale*, *Juncus acutus* ssp. *leopoldii*, and *Arthrocnemum subterminale* are all influenced by tidal action. Estuarine marshes are some of the most productive ecosystems on the planet and provide habitat for a high number of terrestrial and aquatic species of plants and animals as well as provide a number of ecological services such as water quality and biogeochemical cycling. Estuarine marshes are also generally protected by the Clean Water Act (CWA) and are under the jurisdiction of the U.S. Army Corps of Engineers (USACE).

Salt marsh communities are extremely rare locally, regionally and globally as historically these communities have been greatly directly and indirectly impacted with estimates of historical losses in the state, most from anthropogenic cause, between 90-95 percent (Grewell et al. 2007).

Because of their intertidal location, estuarine wetlands are extremely sensitive to changes in sea-level rise and other predicted effects of global climate change. Current rates of global sea-level rise are approximately 1-2 mm annually with a predicted increase of approximately 50 cm over the next 100 years. Coastal and estuarine wetlands migrate inland as sea level rises but in California most of the areas adjacent to estuarine and coastal wetlands are developed and areas for migration in the prospect of global sea level rise are probably limited (Grewell et al. 2007).

Because of their rarity and importance, the estuarine associations and alliances provide an opportunity for management considerations particularly managing these as important natural resources. Protection of existing habitats, enhancement and/or restoration of existing degraded habitats, could lead to increasing the diversity and quality of the biological resources on NBVC Point Mugu. Increasing the value and function of wetland habitats has the opportunity to be coupled to future mitigation requirements that may arise from future activities on NBVC Point Mugu that may require such mitigation. As sea levels rise due to global warming, estuarine communities will migrate inland. Relatively flat upland areas adjacent to existing estuarine habitats are likely locations for this migration. Vegetation management decisions should anticipate such scenarios and include buffer areas potential movement of these habitats

Riparian habitats dominated by *Baccharis salicifolia* and/or *Salix lasiolepis* are also important for many of the same reasons discussed previously for the coastal and estuarine marshes. In addition, most of these habitats are likely to be protected by the CWA under the jurisdiction of the USACE. Though protection and enhancement of these areas is a worthwhile endeavor, the relative paucity of acreage of these habitats on NBVC Point Mugu would lessen its priority unless these habitats existed in a mosaic, contiguous with the aforementioned estuarine marshes that have been identified for high priority for resource management.

Table 4-1. Vegetation Classification, Acres, and Percentages

Vegetation Classification	Acres	Percentages
Developed/Landscaped/Unvegetated	1303.2	30.3%
Tidal flat/Sand/Mudflat	292.8	6.80%
Beach	130.2	3.0%
<i>Salicornia pacifica</i>	198.3	4.6%
<i>Salicornia pacifica</i> – <i>Frankenia salina</i>	542.5	12.6%
<i>Salicornia pacifica</i> – <i>Frankenia salina</i> – <i>Suaeda taxifolia</i>	36.5	0.8%
<i>Salicornia pacifica</i> – <i>Jaumea carnosa</i>	14.4	0.3%
<i>Salicornia pacifica</i> – <i>Frankenia salina</i> – <i>Batis maritima</i>	40.0	0.9%
<i>Salicornia pacifica</i> – <i>Jaumea carnosa</i> – <i>Distichlis spicata</i>	0.8	<0.1%
<i>Salicornia pacifica</i> / <i>Algae</i>	11.4	0.3%
<i>Salicornia pacifica</i> – <i>Distichlis littoralis</i>	2.3	0.1%
<i>Salicornia pacifica</i> – <i>Jaumea carnosa</i> – <i>Batis maritima</i>	1.9	<0.1%
<i>Salicornia bigelovii</i> Provisional	10.0	0.2%
<i>Salicornia pacifica</i> – <i>Brassica nigra</i>	31.1	0.7%
<i>Distichlis spicata</i>	6.6	0.2%
<i>Distichlis spicata</i> – <i>Salicornia pacifica</i>	38.8	0.9%
<i>Distichlis spicata</i> – <i>Ambrosia chamissonis</i>	5.1	0.1%
<i>Distichlis spicata</i> / Annual Grasses (or Grass-Herb)	48.4	1.1%
<i>Distichlis spicata</i> – <i>Jaumea carnosa</i>	13.5	0.3%
<i>Ambrosia chamissonis</i> – <i>Abronia maritima</i> – <i>Cakile maritima</i>	61.2	1.4%
<i>Ambrosia chamissonis</i> – <i>Distichlis spicata</i> - <i>Abronia maritima</i> Provisional	17.0	0.4%
<i>Arthrocnemum subterminale</i>	16.4	0.4%
<i>Arthrocnemum subterminale</i> – <i>Salicornia pacifica</i>	35.8	0.8%
<i>Arthrocnemum subterminale</i> – <i>Distichlis littoralis</i>	13.9	0.3%
<i>Juncus acutus</i> Provisional	35.4	0.8%
<i>Typha latifolia</i>	1.5	<0.1%
<i>Spartina foliosa</i>	0.6	<0.1%
<i>Schoenoplectus californicus</i>	3.5	0.1%
<i>Baccharis pilularis</i>	7.4	0.2%
<i>Baccharis pilularis</i> – <i>Artemisia californica</i>	12.1	0.3%
<i>Baccharis pilularis</i> – <i>Toxicodendron diversilobum</i>	3.5	0.1%
<i>Baccharis pilularis</i> / Herbaceous	52.3	1.2%
<i>Leptosyne gigantea</i>	2.3	0.1%
<i>Atriplex lentiformis</i>	71.5	1.7%

Vegetation Classification	Acres	Percentages
<i>Frankenia salina</i>	39.9	0.9%
<i>Frankenia salina</i> – <i>Distichlis spicata</i>	18.8	0.4%
<i>Frankenia salina</i> – <i>Arthrocnemum subterminale</i> Provisional	8.8	0.2%
<i>Frankenia salina</i> – <i>Limonium californicum</i> – <i>Distichlis littoralis</i> – <i>Salicornia</i> spp.	30.1	0.7%
<i>Frankenia salina</i> – <i>Carpobrotus edulis</i> (dead)	0.3	<0.1%
<i>Baccharis salicifolia</i>	3.7	0.1%
<i>Malosma laurina</i>	2.8	0.1%
<i>Isocoma menziesii</i> – <i>Distichlis spicata</i>	1.6	<0.1%
<i>Artemisia californica</i>	5.3	0.1%
<i>Acmispon glaber</i>	0.6	<0.1%
<i>Encelia californica</i> – <i>Artemisia californica</i>	0.4	<0.1%
<i>Salix lasiolepis</i>	2.8	0.1%
<i>Salix lasiolepis</i> – <i>Baccharis pilularis</i>	7.1	0.2%
<i>Eucalyptus</i> (globulus, camaldulensis)	5.5	0.1%
<i>Myoporum laetum</i>	60.6	1.4%
<i>Carpobrotus edulis</i>	213.0	4.9%
<i>Ammophila arenaria</i>	2.5	0.1%
<i>Brassica nigra</i>	10.7	0.2%
<i>Centaurea melitensis</i> - <i>Brassica nigra</i>	5.8	0.1%
<i>Brassica nigra</i> – <i>Conium maculatum</i> Provisional	3.1	0.1%
Mediterranean California Naturalized Annual and Perennial Grassland	182.4	4.2%
<i>Hordeum</i> sp.	79.1	1.8%
<i>Bromus diandrus</i> – <i>Hordeum</i> sp.	22.4	0.5%
<i>Bromus madritensis</i>	136.3	3.2%
<i>Festuca perennis</i>	7.8	0.2%
Naturalized Warm – Temperate Riparian and Wetland	24.0	0.6%
<i>Arundo donax</i>	<0.01	<0.1%
<i>Pennisetum setaceum</i>	1.0	<0.1%
<i>Lepidium latifolium</i>	0.2	<0.1%
Open Water	368.4	8.6%
TOTAL	4307.3	100.00%

The *Ambrosia chamissonis* – *Abronia maritima* association occupies dune systems and coastal strand areas throughout the state. On NBVC Point Mugu, this association occurs on narrow dunes immediately inland from the active beach. This association is rare throughout the state. Coastal dune and coastal strand vegetation has always occupied a very small portion of California's land mass but has also been disproportionately negatively affected by human-induced impacts as geographically these areas are a popular target for recreation, as well as residential and commercial development (Pickart and Barbour, 2007).

Coastal sage scrub communities have been the focus of large scale preservation programs in southern California particularly the Natural Communities Conservation Plan (NCCP) program. Classic coastal sage scrub habitat dominated by characteristic species such as *Artemisia californica*, *Encelia californica* and *Eriogonum fasciculatum* is very limited on NBVC Point Mugu. However there are large areas on NBVC Point Mugu that is dominated by early seral coastal sage species such as *Baccharis pilularis*. These species become readily established after a disturbance. This species also act to facilitate the establishment of later seral native species by acting as nurse plants. *Artemisia californica* is a co-dominant in some of these patches. Many of these areas occur adjacent to buildings and other structures and are most likely an artifact of a previous disturbance. Because of their proximity to actively develop areas their priority is low for preservation and active management. However, given the propensity for *Baccharis pilularis* in acting to facilitate vegetation succession, the presence of relatively abundant numbers of *Artemisia californica*, passive management of some selected areas could still result in eventual habitat conversion to relatively higher quality habitats albeit over a much longer time frame than would happen with active management.

The *Leptosyne gigantea* association is rare along southern California's mainland coast, being more representative on the California Channel Islands. On the mainland this association occurs on coastal bluffs. On NBVC Point Mugu this association occurs in several small scattered patches, some of which are immediately adjacent to developed areas. Areas that should be prioritized for management considerations should be contiguous or semi-contiguous with other native associations. Small isolated patches close to developed areas should have low priorities for management considerations.

Areas targeted for management should be prioritized based on size, quality, contiguousness with other native habitats and proximity to sources for indirect impacts, e.g., light, noise, storm water runoff, source populations of invasive species. Larger, more diverse habitats with relatively limited adjacent indirect impacts should be prioritized over small, isolated patches which generally require more intensive management strategies to reach success goals.

Vegetation change or succession occurs over a variety of time scales depending on a variety of abiotic and biotic factors. Periodic climatic events, e.g., droughts or el Niño, or disturbance events can lead to relatively rapid vegetation change. Physiological tolerances to environmental conditions also vary among individuals and species such that rates of species compositional changes in communities will also vary over time. Regular intervals between mapping efforts will track long-term vegetation change. Since communities vary in their rates of succession and with the concern of global warming induced succession, initially a relatively short interval (e.g., five years) might be most appropriate. In the absence of any ongoing long-term vegetation studies, setting a shorter interval as opposed to a longer interval may be prudent as rates of succession on NBVC Point Mugu are unknown at this time. Subsequent analyses of data collected during these initial future mapping efforts will determine vegetation change over the interval(s) and determine whether or not that change is sufficient to warrant a change in the vegetation mapping regime. Certain associations may change more rapidly than others and warrant more frequent mapping than others. The aforementioned coastal estuarine associations are most likely to change in extent over a shorter period than upland communities due to changes in sea levels.

Accuracy assessments conducted by an independent third party could increase the accuracy of these assessments. Experimental bias could be reduced if the vegetation mapping and assessments were conducted by separate teams. Establishment of a MMU for rare associations might result in capturing these features. Many polygons of rare associations may be inherently small and not get captured with a relatively larger MMU. Reducing the size of the standard MMU would create an even more landscape mosaic. However creating a MMU strictly for specific rare associations could capture these associations without overly dissecting the landscape.

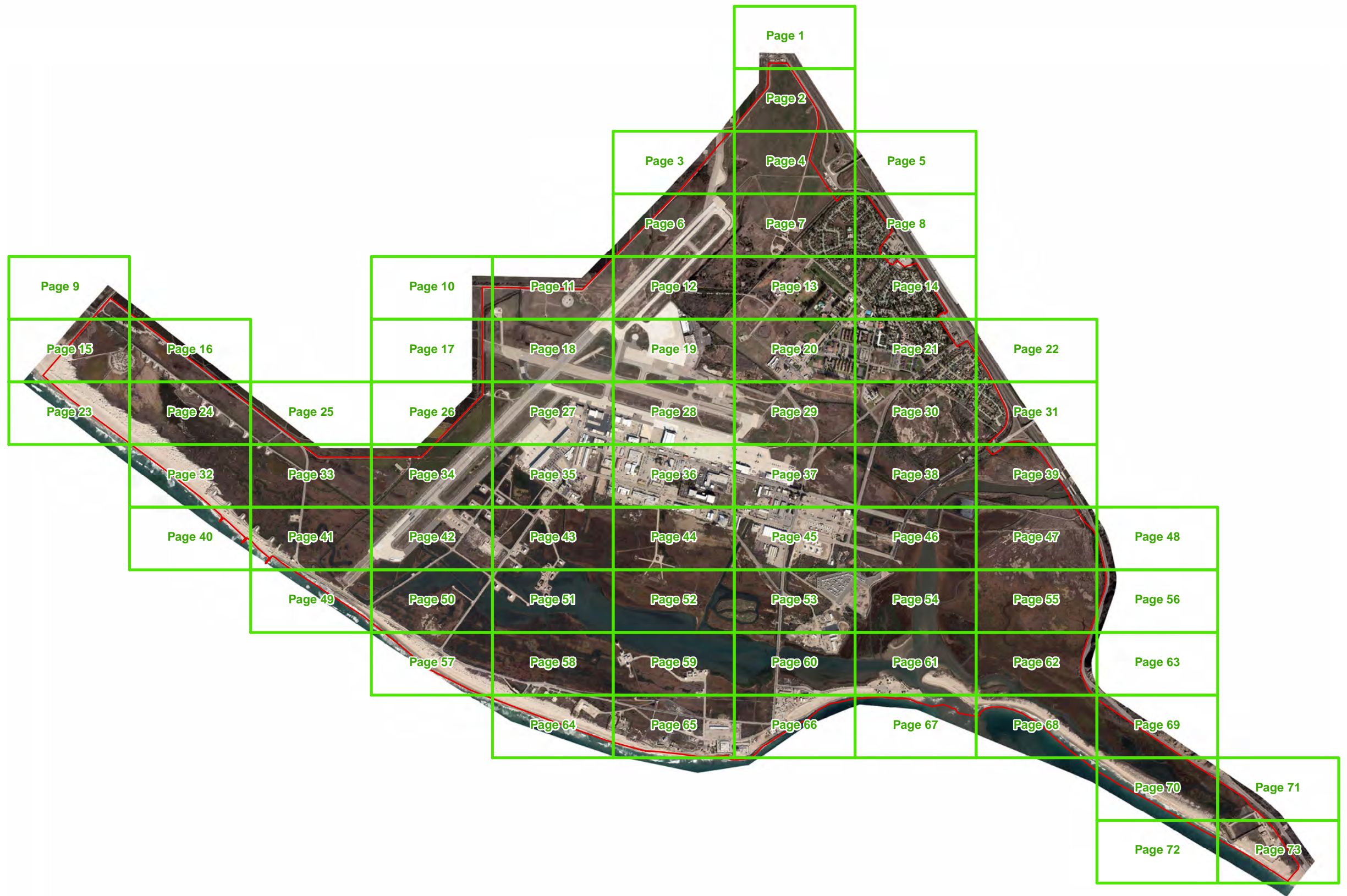
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5. References

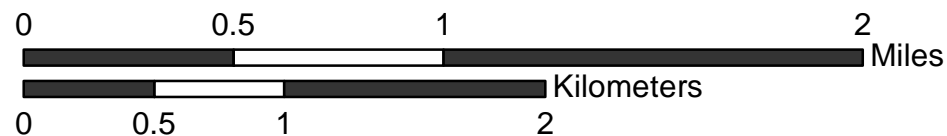
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APPENDIX A
NBVC POINT MUGU
VEGETATION CLASSIFICATION MAP

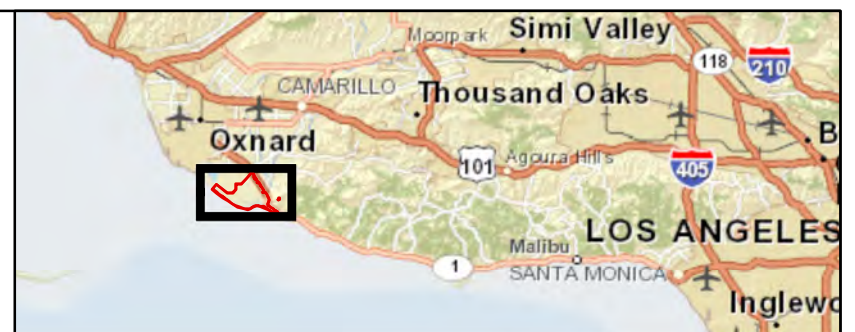


-  Map Book Grid
-  NBVC Point Mugu Boundary



Projection: Lambert Conformal Conic
State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification



Vegetation Classifications

- ☐ 001:Tidal flat/sand/mudflat
- ☐ 002:Beach
- ☐ 0:Developed/landscaped/unvegetated
- ☐ 101:Salicornia pacifica
- ☐ 102:Salicornia pacifica - Frankenia salina
- ☐ 103:Salicornia pacifica - Frankenia salina - Suaeda taxifolia
- ☐ 104:Salicornia pacifica - Jaumea carnosa
- ☐ 105:Salicornia pacifica - Frankenia salina - Batis maritima
- ☐ 106:Salicornia pacifica - Jaumea carnosa - Distichlis spicata
- ☐ 107:Salicornia pacifica / Algae
- ☐ 108:Salicornia pacifica - Distichlis littoralis
- ☐ 109:Salicornia pacifica - Jaumea carnosa - Batis maritima
- ☐ 110:Salicornia bigelovii Provisional
- ☐ 111:Salicornia pacifica – Brassica nigra
- ☐ 120:Distichlis spicata
- ☐ 121:Distichlis spicata – Salicornia pacifica
- ☐ 123:Distichlis spicata – Ambrosia chamissonis
- ☐ 124:Distichlis spicata / Annual Grasses (or Grass-Herb)
- ☐ 125:Distichlis spicata - Jaumea carnosa
- ☐ 131:Ambrosia chamissonis - Abronia maritima-Cakile maritima
- ☐ 133:Ambrosia chamissonis – Distichlis spicata - Abronia maritima Provisional
- ☐ 141:Arthrocnemum subterminale
- ☐ 142:Arthrocnemum subterminale - Salicornia pacifica
- ☐ 143:Arthrocnemum subterminale - Distichlis littoralis
- ☐ 150:Juncus acutus Provisional
- ☐ 160:Typha latifolia
- ☐ 170:Spartina foliosa
- ☐ 181:Schoenoplectus californicus
- ☐ 200:Baccharis pilularis
- ☐ 201:Baccharis pilularis - Artemisia californica
- ☐ 202:Baccharis pilularis - Toxicodendron diversilobum
- ☐ 203:Baccharis pilularis / Herbaceous

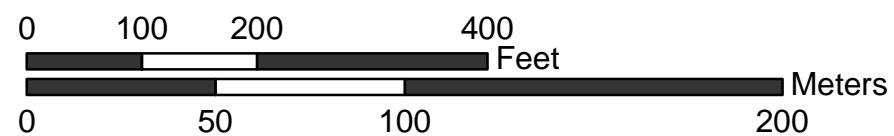
- ☐ 210:Leptosyne gigantea
- ☐ 220:Atriplex lentiformis
- ☐ 231:Frankenia salina
- ☐ 232:Frankenia salina - Distichlis spicata
- ☐ 233:Frankenia salina - Arthrocnemum subterminale Provisional
- ☐ 234:Frankenia salina - Limonium californicum - Distichlis littoralis - Salicornia spp.
- ☐ 235:Frankenia salina - Carpobrotus edulis
- ☐ 240:Baccharis salicifolia
- ☐ 250:Malosma laurina
- ☐ 261:Isocoma menziesii - Distichlis spicata
- ☐ 270:Artemisia californica
- ☐ 280:Acmispon glaber
- ☐ 291:Encelia californica - Artemisia californica
- ☐ 301:Salix lasiolepis
- ☐ 302:Salix lasiolepis - Baccharis pilularis
- ☐ 400:Eucalyptus (globulus, camaldulensis)
- ☐ 410:Myoporum laetum
- ☐ 421:Carpobrotus edulis
- ☐ 430:Ammophila arenaria
- ☐ 441:Brassica nigra
- ☐ 442:Centaurea melitensis - Brassica nigra
- ☐ 443:Brassica nigra - Conium maculatum Provisional
- ☐ 450:Mediterranean California Naturalized Annual and Perennial Grassland
- ☐ 451:Hordeum sp.
- ☐ 452:Bromus diandrus - Hordeum sp.
- ☐ 453:Bromus madritensis
- ☐ 454:Festuca perennis
- ☐ 460:Naturalized Warm - Temperate Riparian and Wetland
- ☐ 470:Arundo donax
- ☐ 480:Pennisetum setaceum
- ☐ 490:Lepidium latifolium
- ☐ OW:Open Water





 Vegetation Classification Types

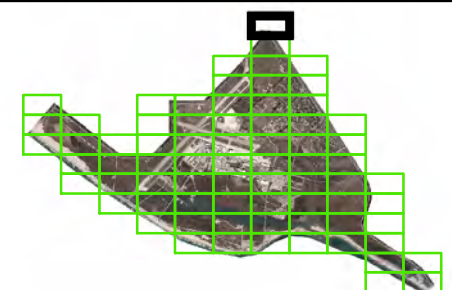
 NBVC Point Mugu Boundary



Projection: Lambert Conformal Conic
State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

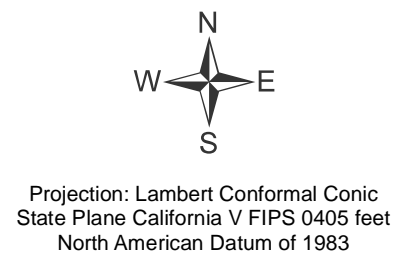
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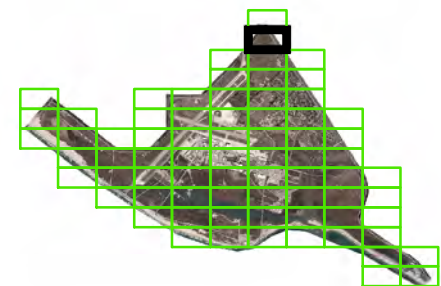
 Vegetation Classification Types

 NBVC Point Mugu Boundary



NBVC Point Mugu
Vegetation Classification

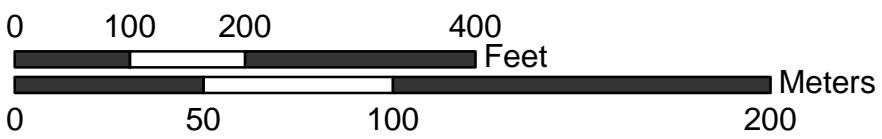
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 Vegetation Classification Types

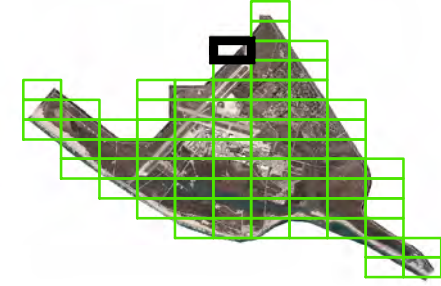
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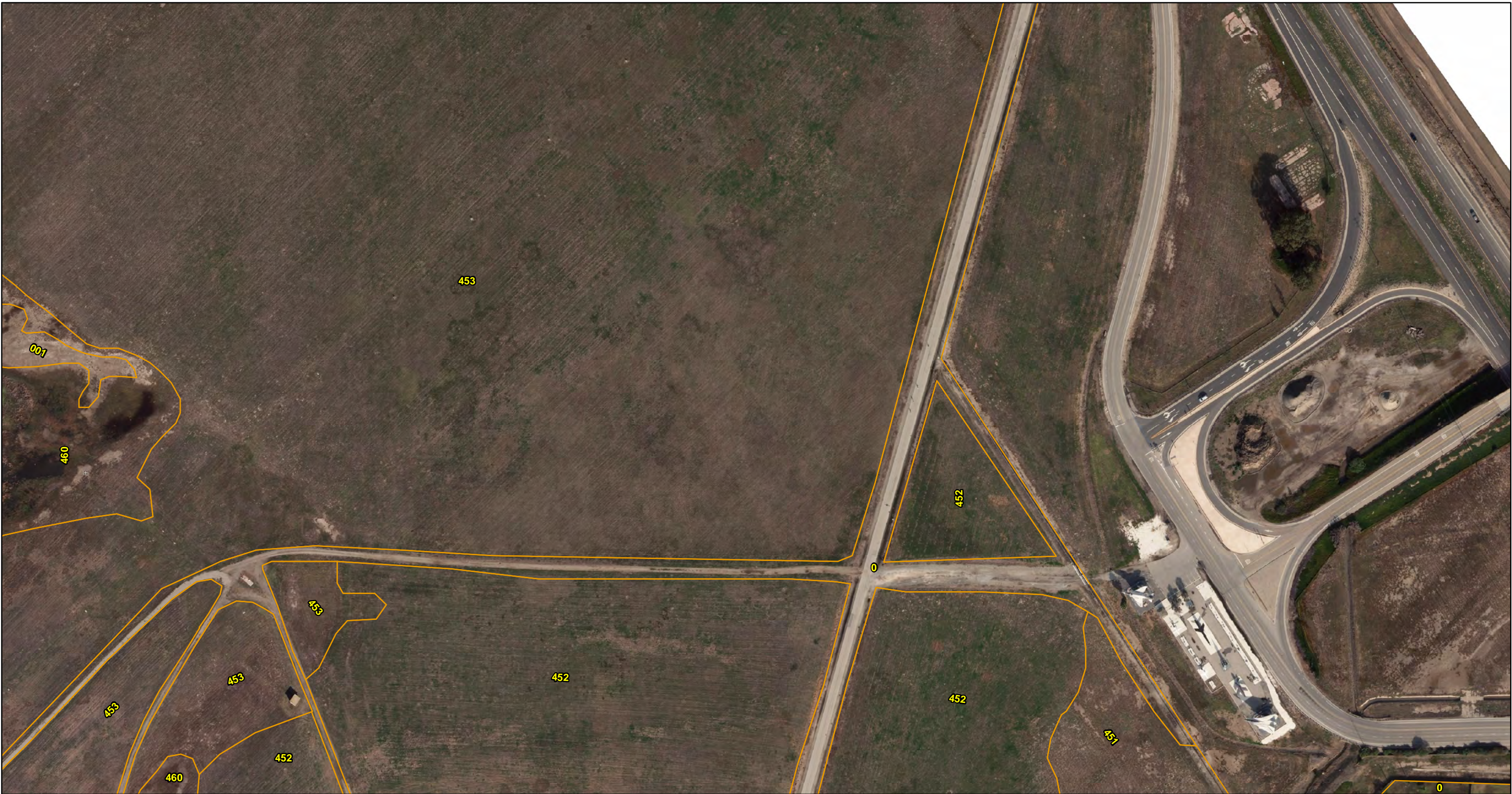


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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

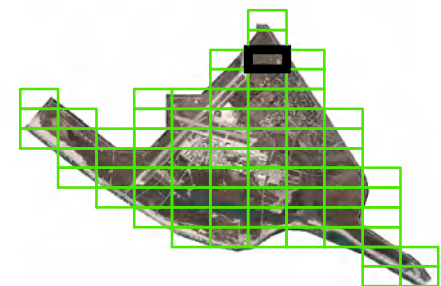
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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

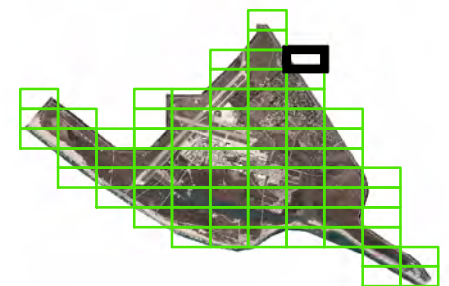
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North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

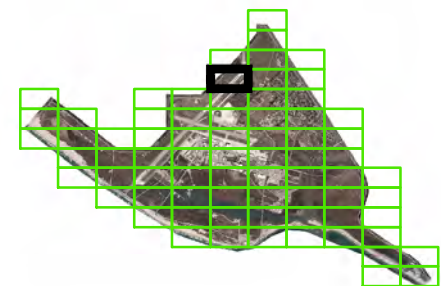
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North American Datum of 1983

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Vegetation Classification

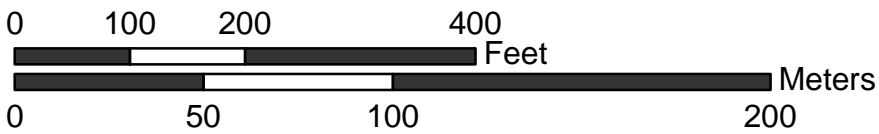
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 Vegetation Classification Types

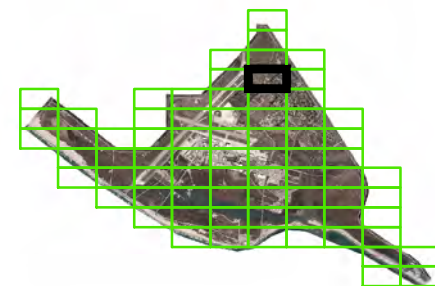
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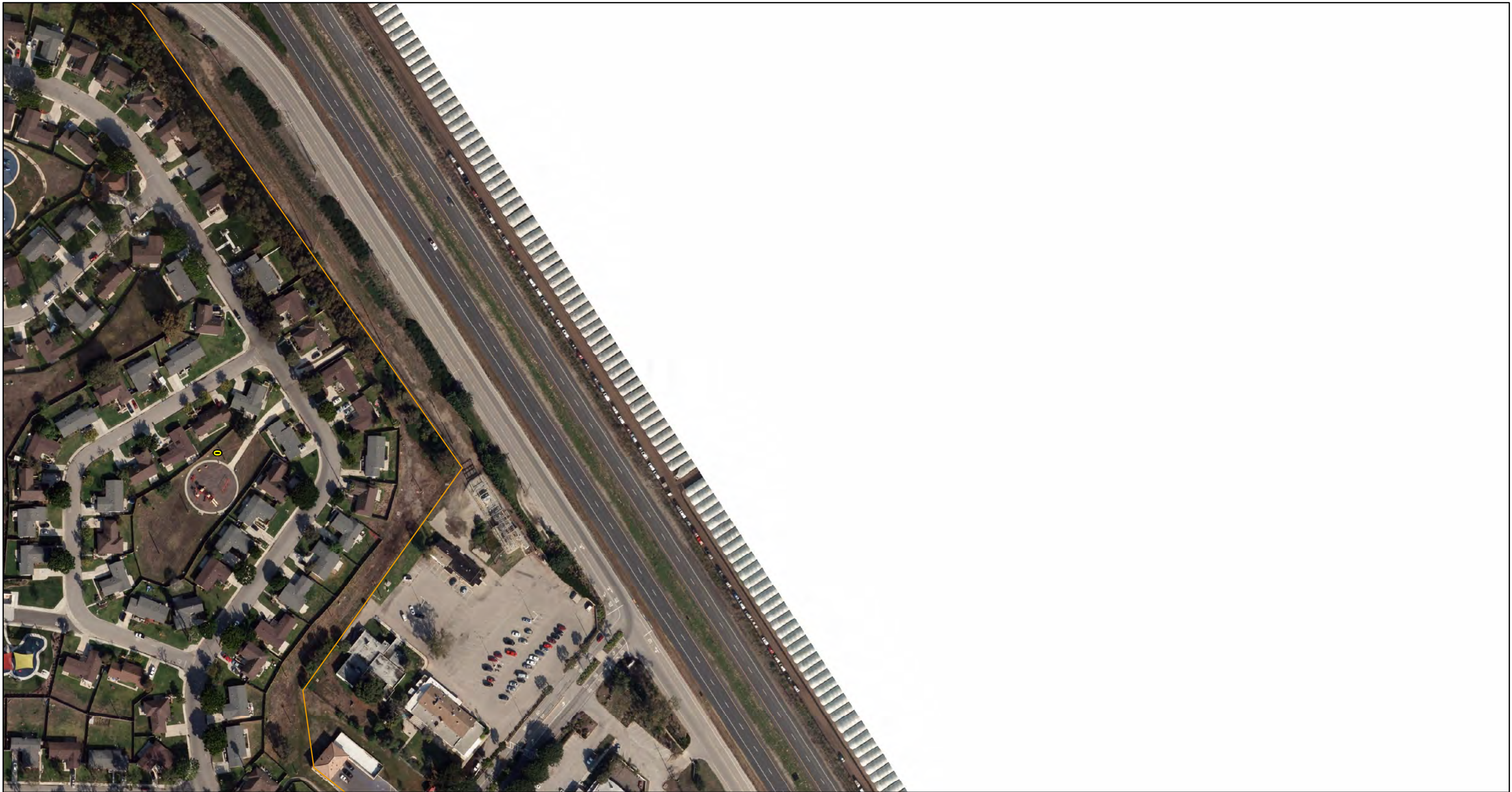


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North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

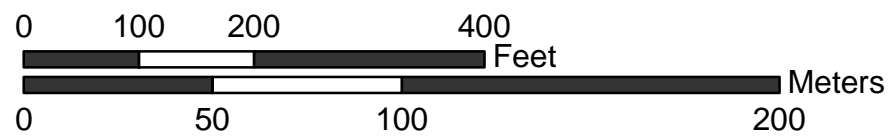
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 Vegetation Classification Types

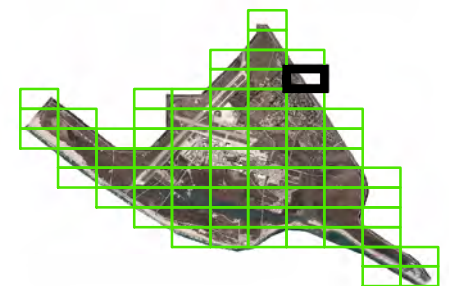
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Vegetation Classification

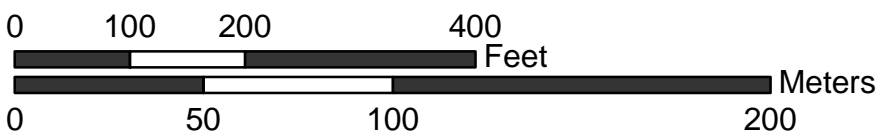
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 Vegetation Classification Types

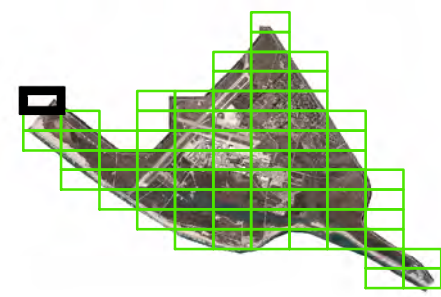
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Vegetation Classification

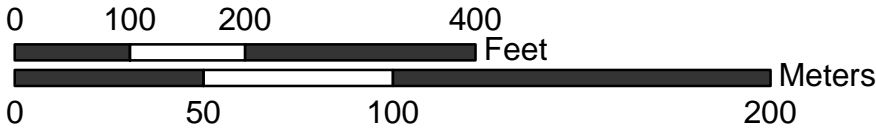
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 Vegetation Classification Types

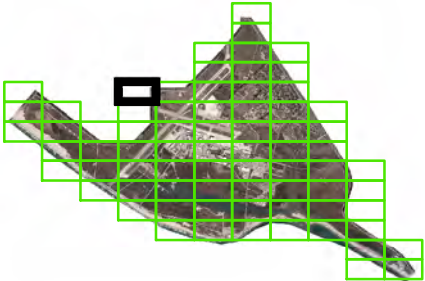
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Vegetation Classification

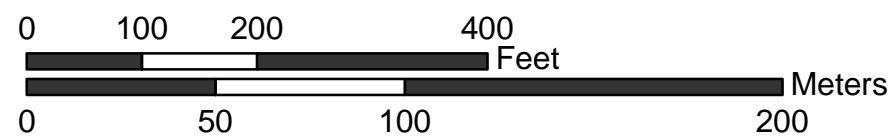
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 Vegetation Classification Types

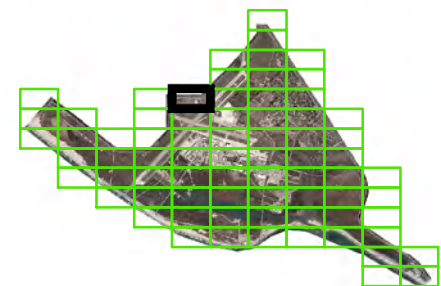
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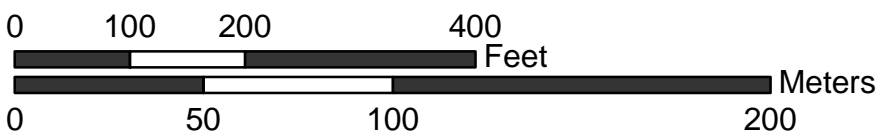
NBVC Point Mugu
Vegetation Classification

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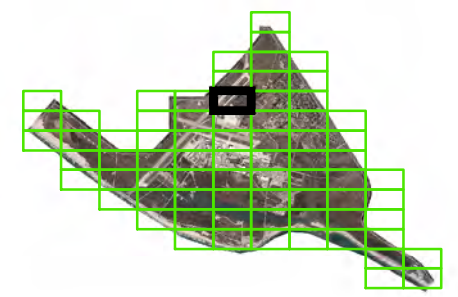
 Vegetation Classification Types
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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

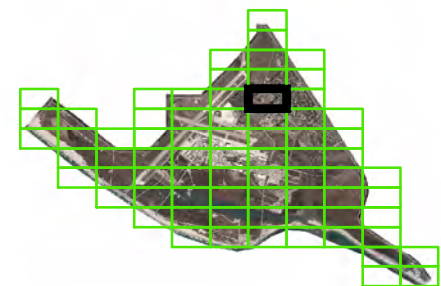
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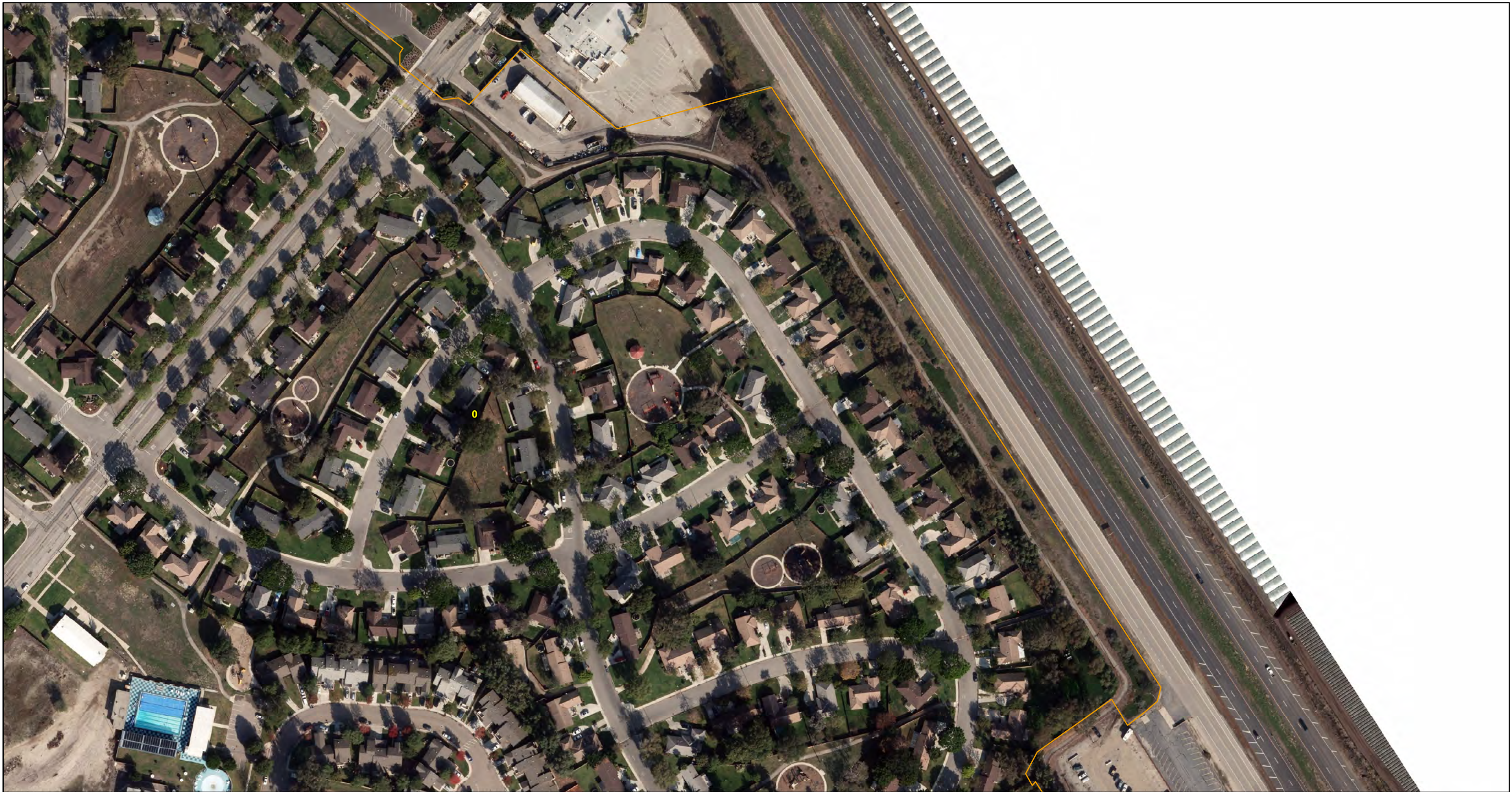


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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

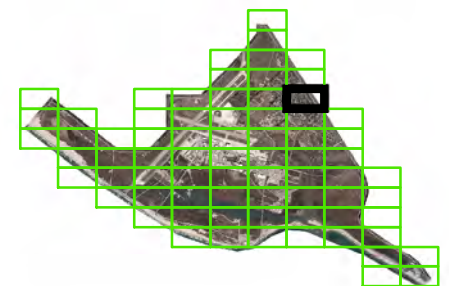
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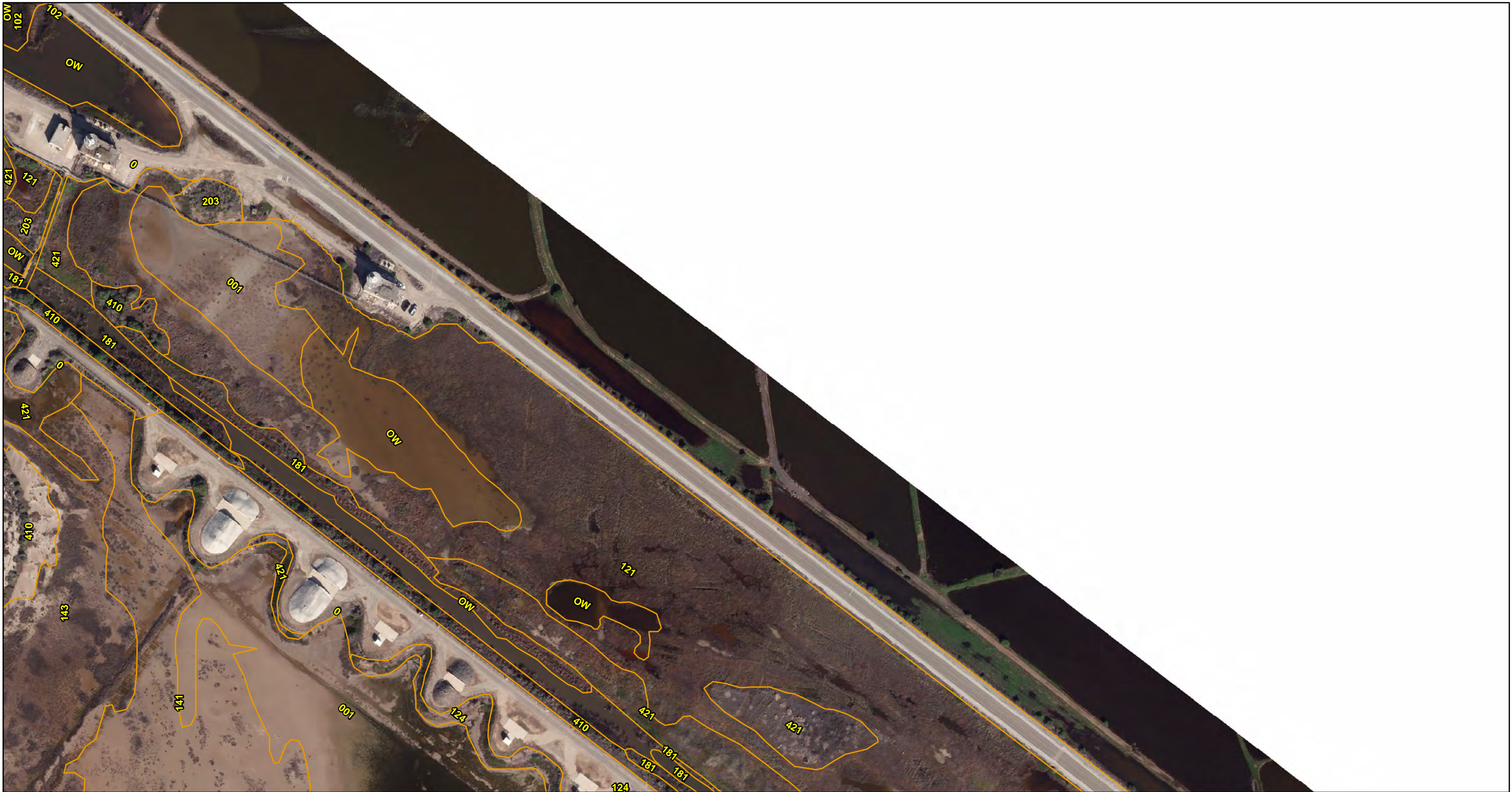


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North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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Vegetation Classification Types

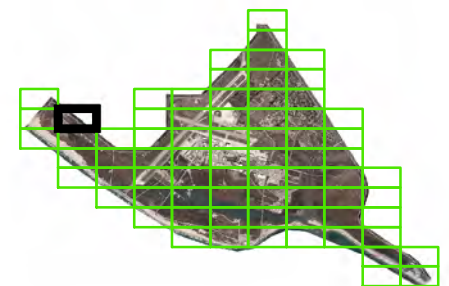
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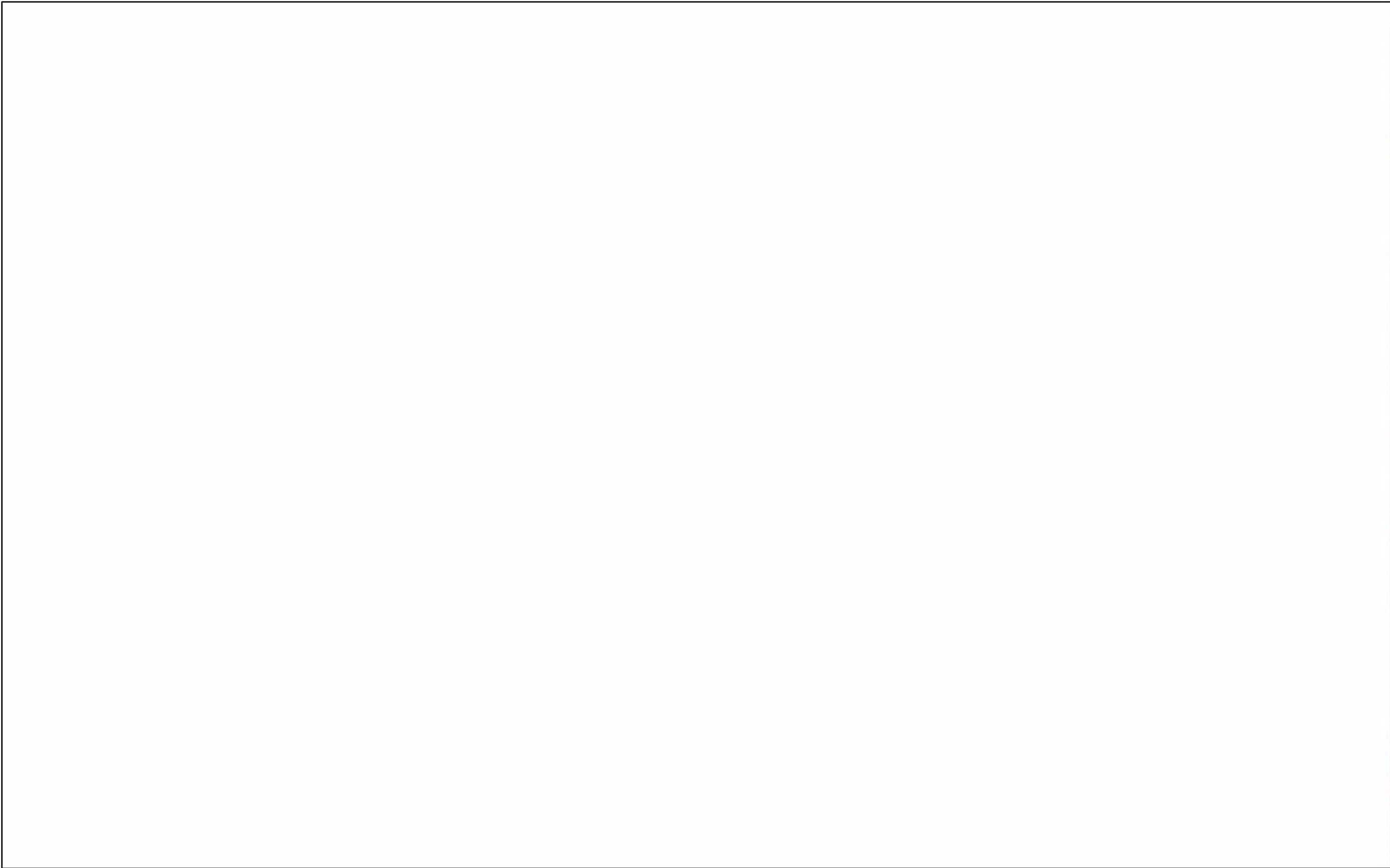


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North American Datum of 1983

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Vegetation Classification

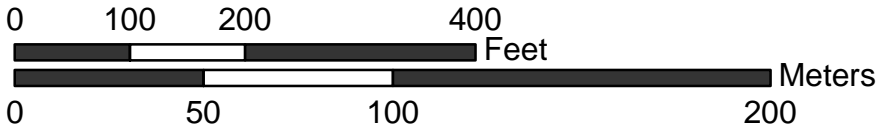
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 Vegetation Classification Types

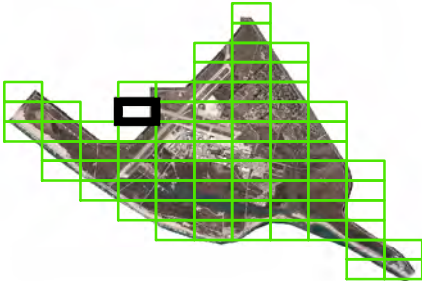
 NBVC Point Mugu Boundary



Projection: Lambert Conformal Conic
State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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 Vegetation Classification Types

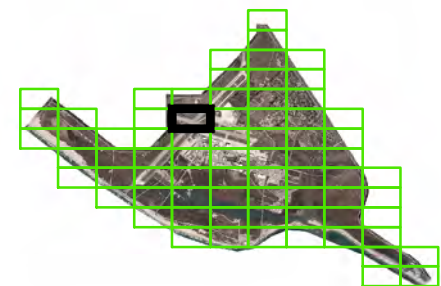
 NBVC Point Mugu Boundary



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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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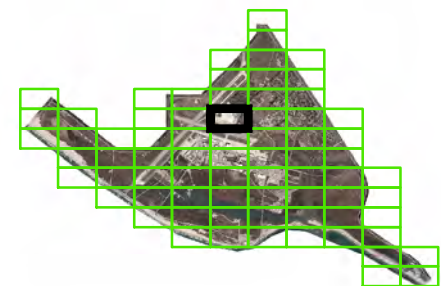
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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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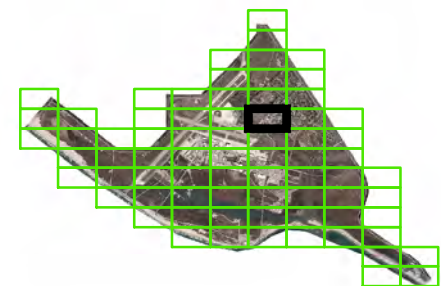
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North American Datum of 1983

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Vegetation Classification

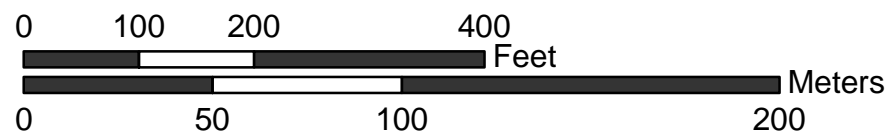
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 Vegetation Classification Types

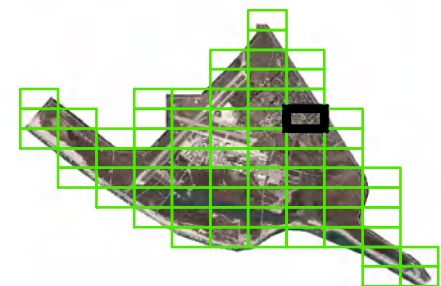
 NBVC Point Mugu Boundary



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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

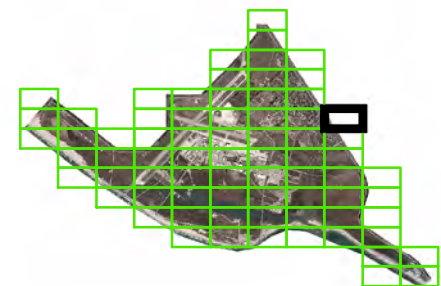
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North American Datum of 1983

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Vegetation Classification

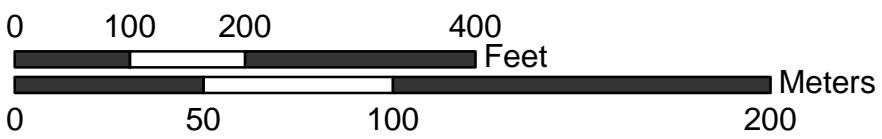
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 Vegetation Classification Types

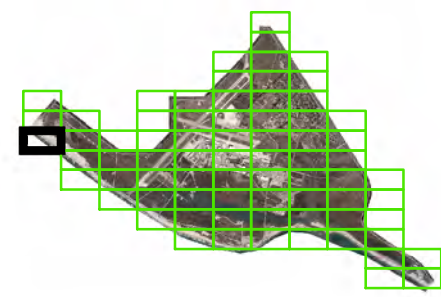
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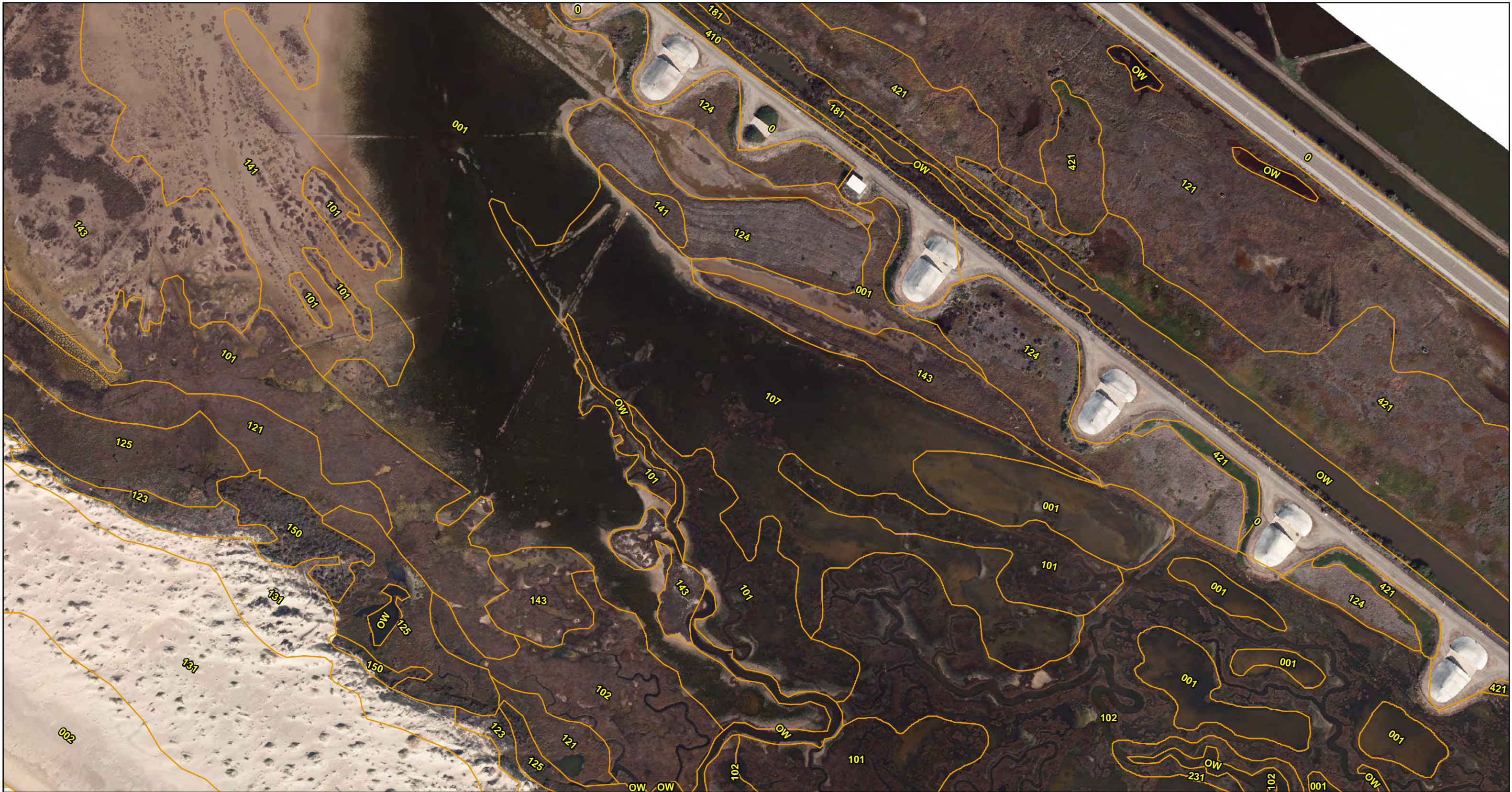


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North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

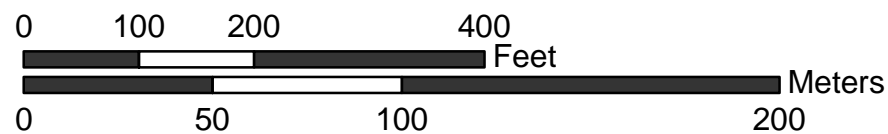
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Vegetation Classification Types

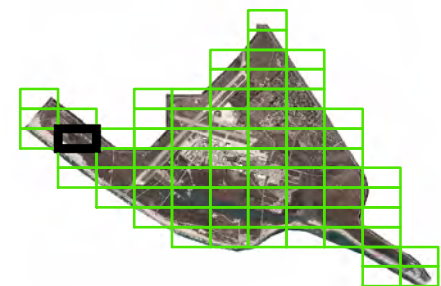
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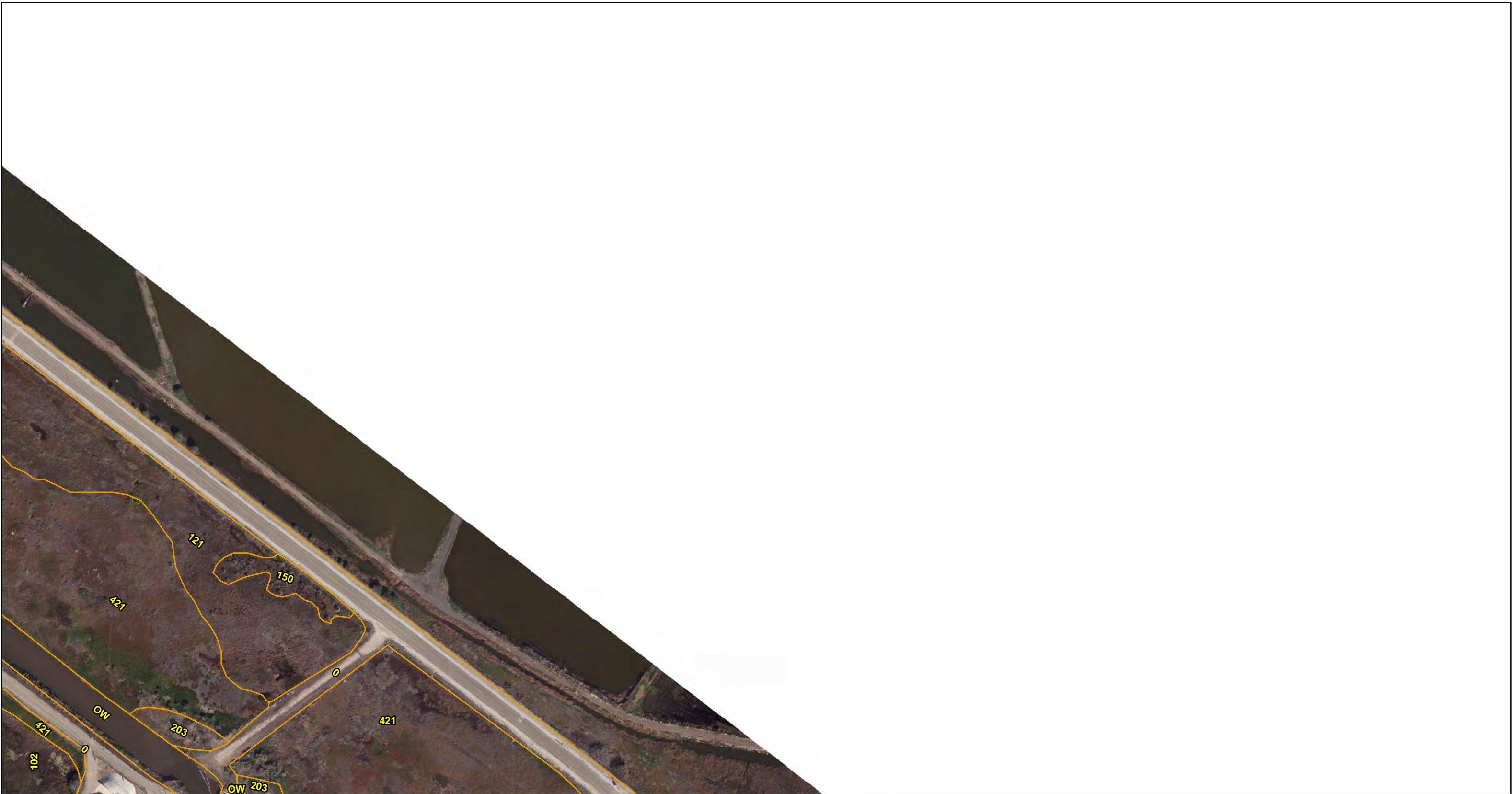


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Vegetation Classification

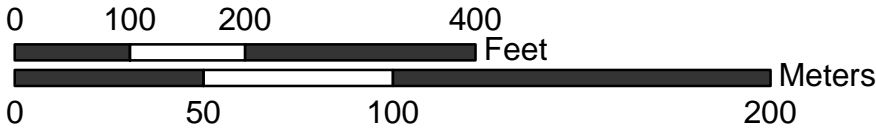
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Vegetation Classification Types

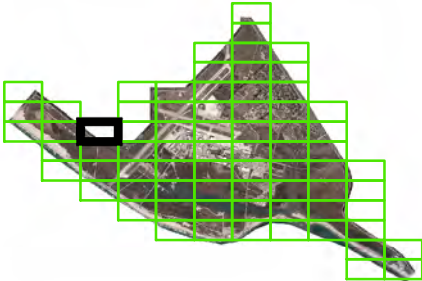
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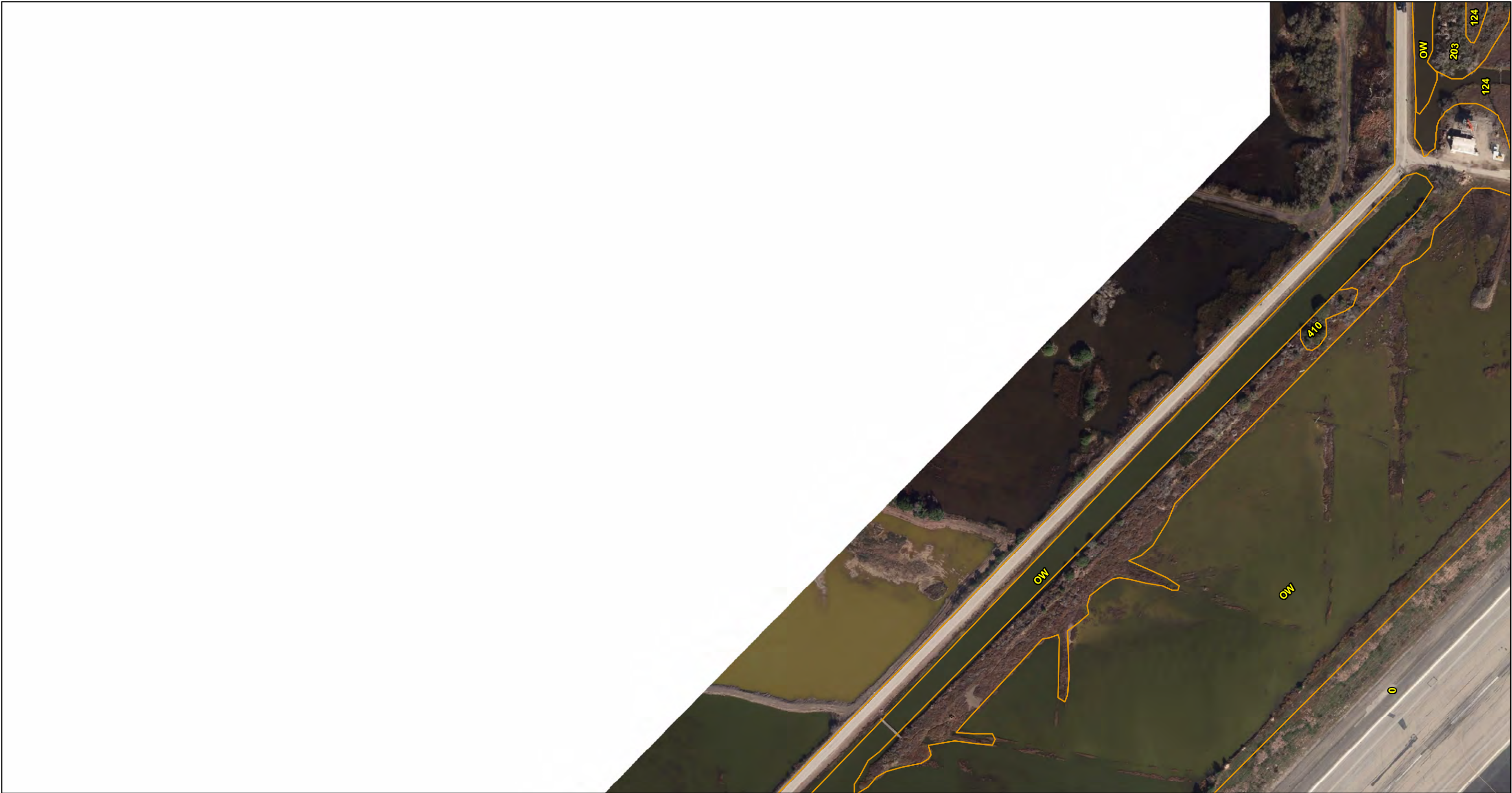


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Vegetation Classification

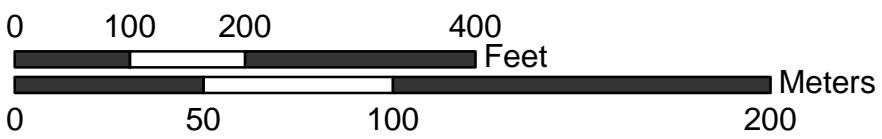
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 Vegetation Classification Types

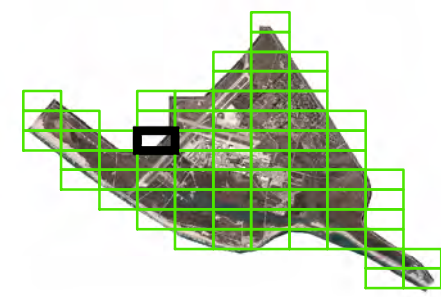
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North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

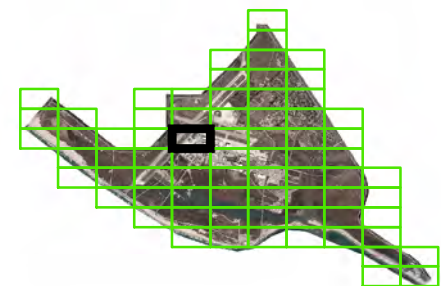
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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

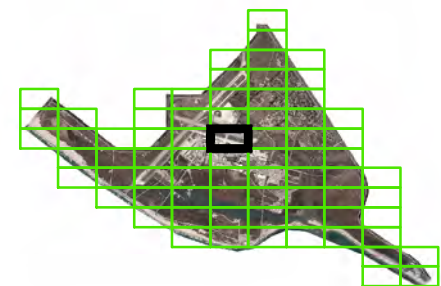
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Vegetation Classification

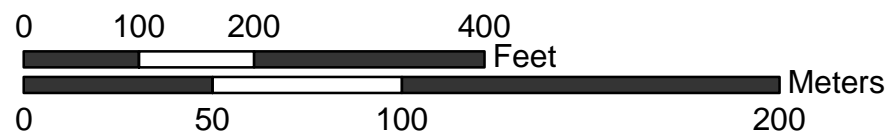
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 Vegetation Classification Types

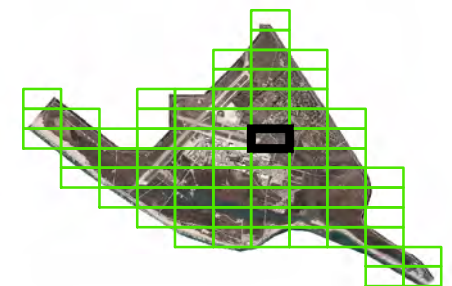
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North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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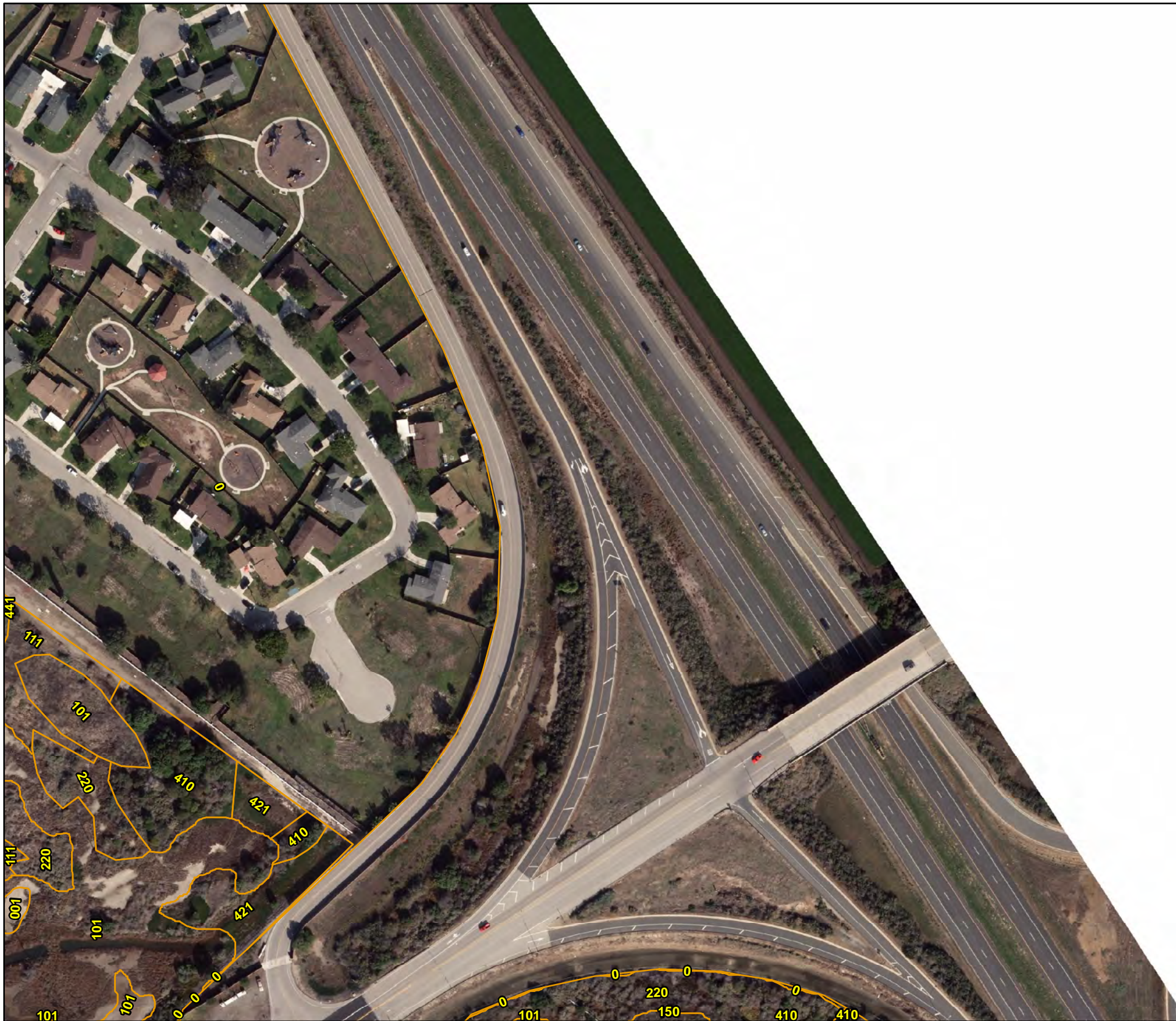




NBVC Point Mugu Vegetation Classification

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 Vegetation Classification Types

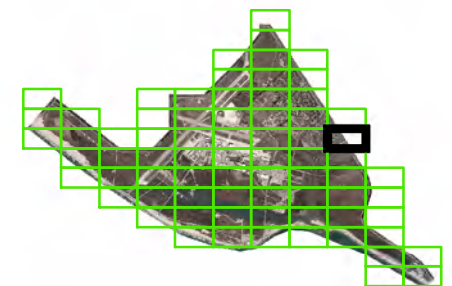
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Vegetation Classification

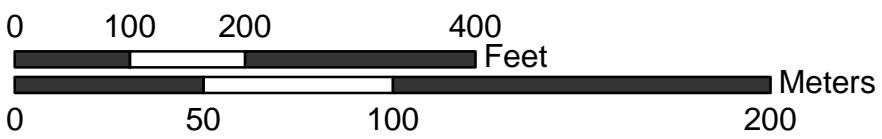
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 Vegetation Classification Types

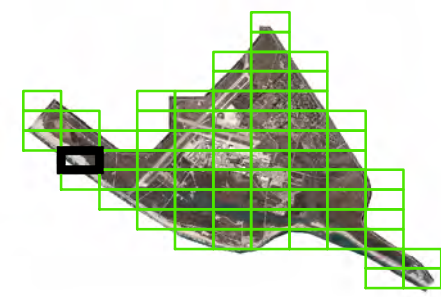
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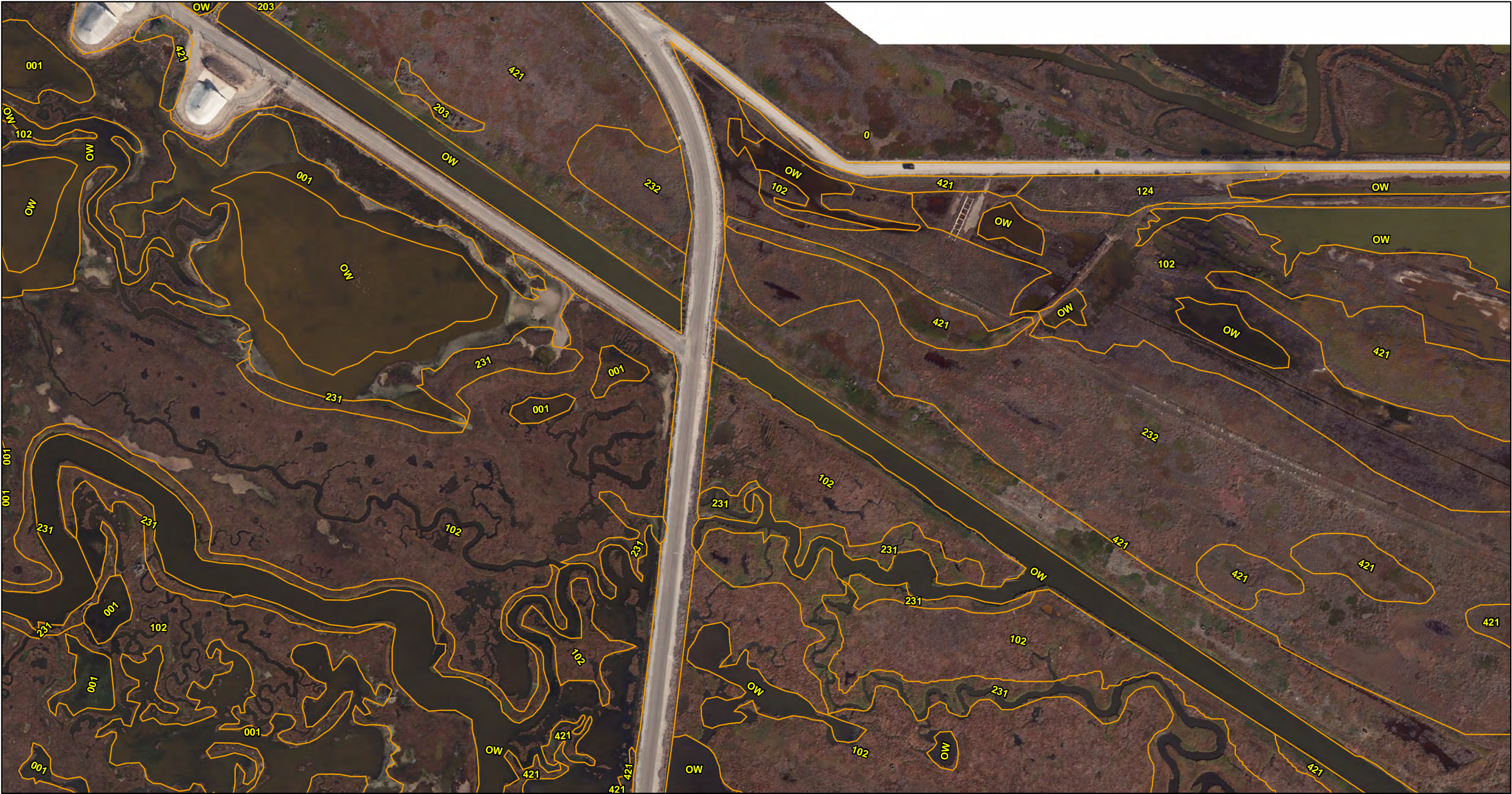


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North American Datum of 1983

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Vegetation Classification

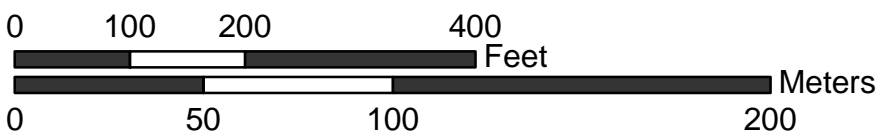
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Vegetation Classification Types

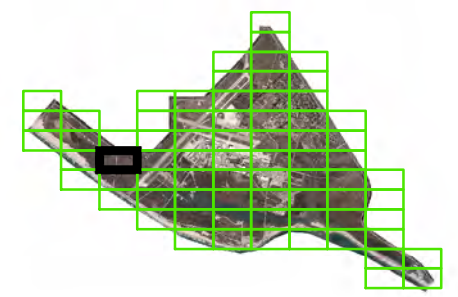
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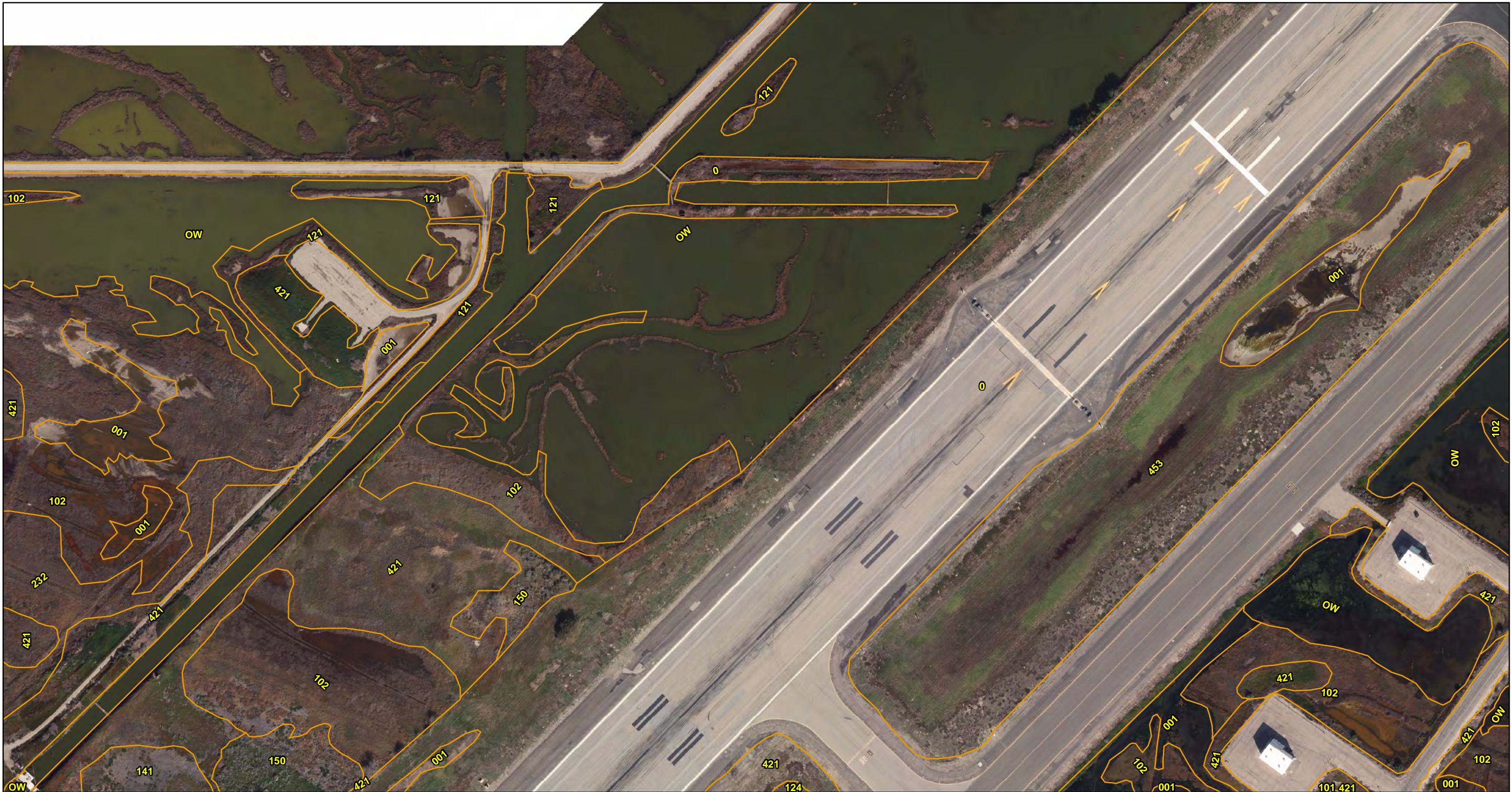


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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
Vegetation Classification

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Vegetation Classification Types

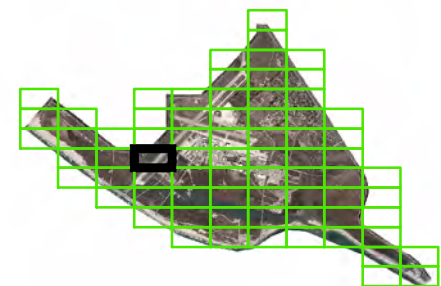
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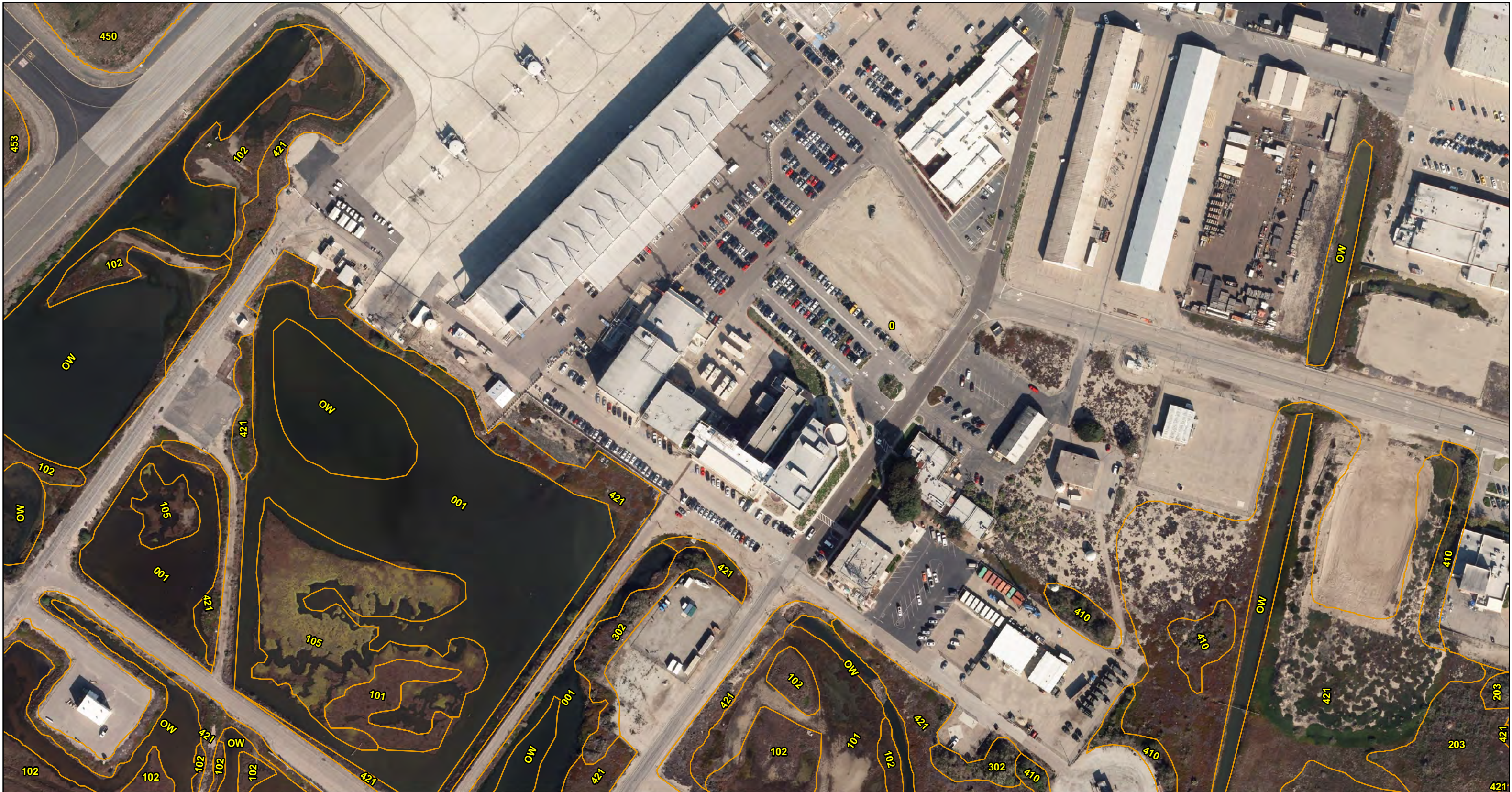


Projection: Lambert Conformal Conic
State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

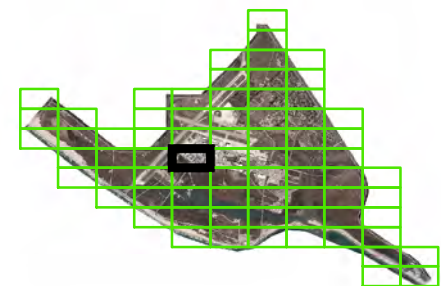
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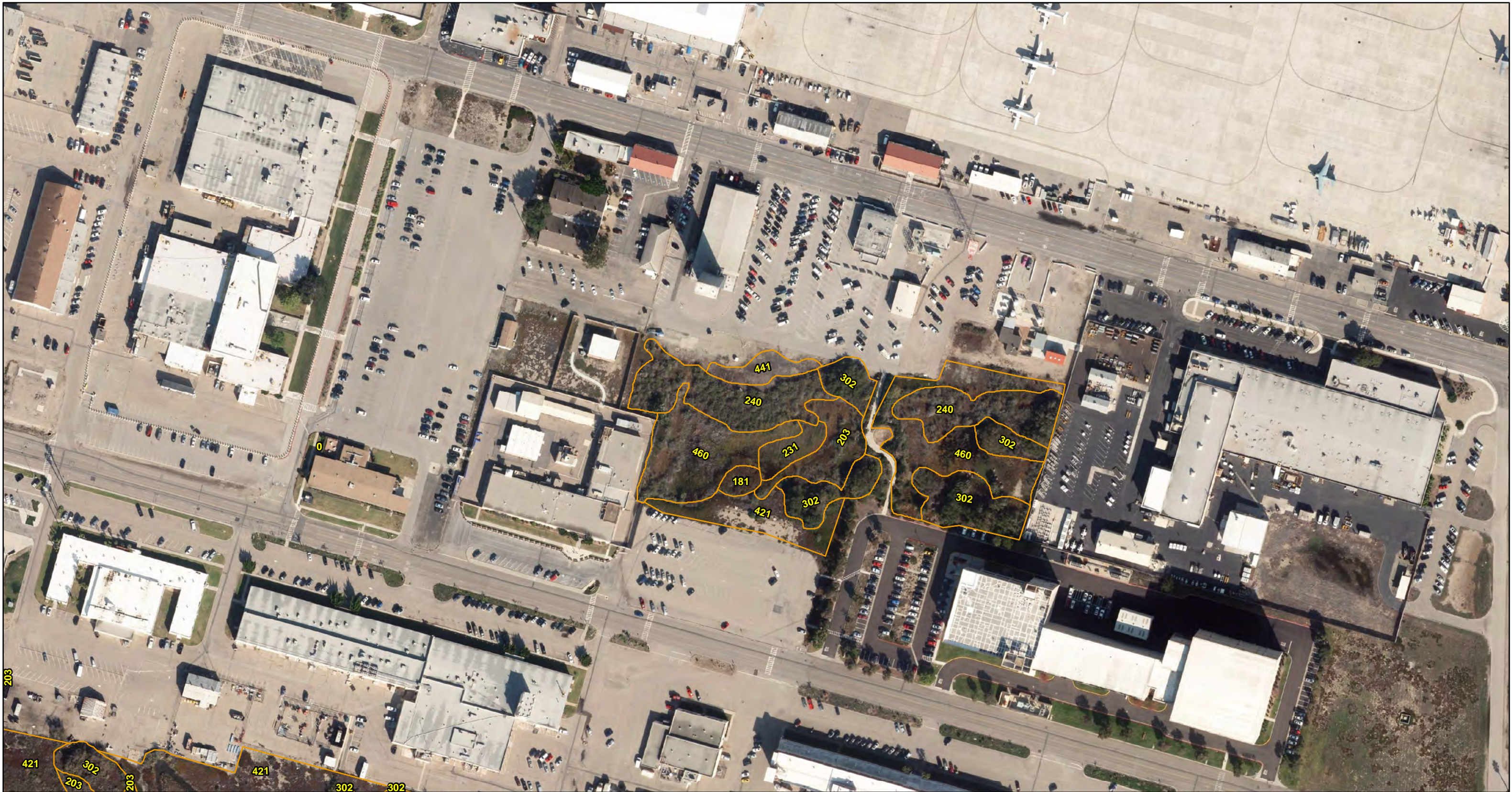


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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

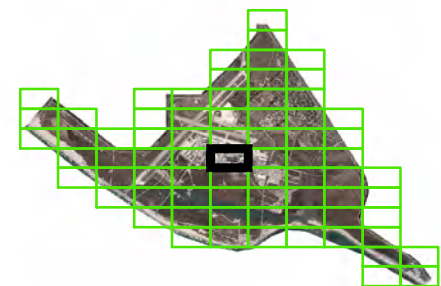
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Vegetation Classification

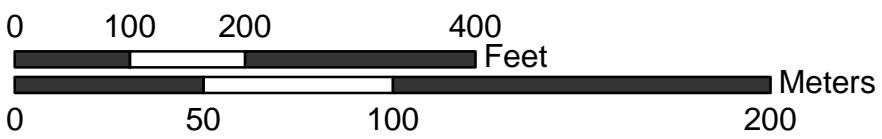
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 Vegetation Classification Types

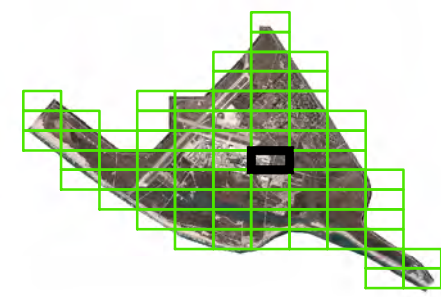
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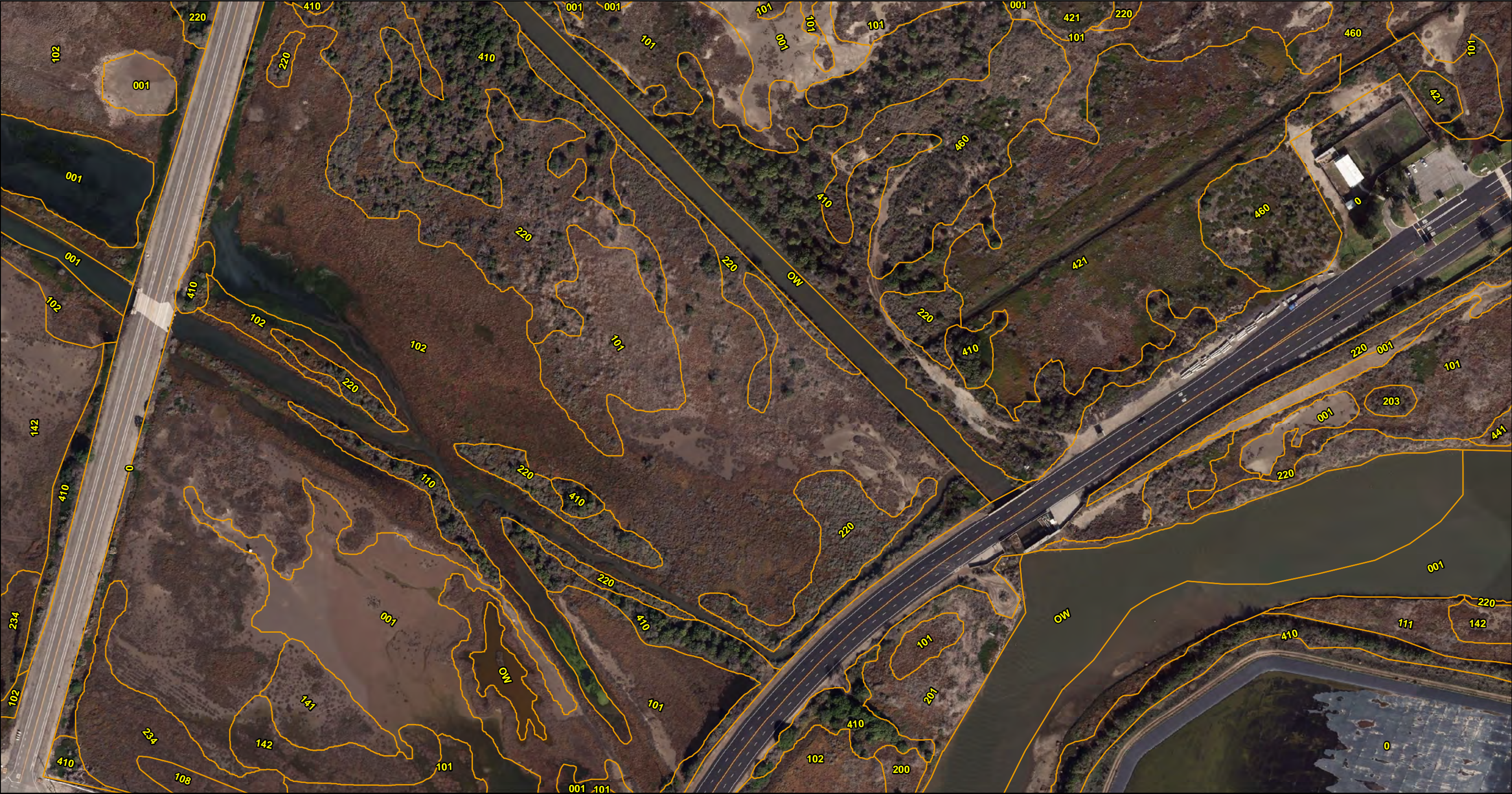


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State Plane California V FIPS 0405 feet
North American Datum of 1983

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Vegetation Classification

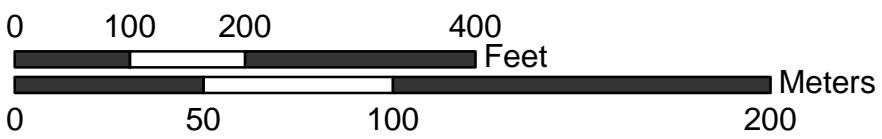
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 Vegetation Classification Types

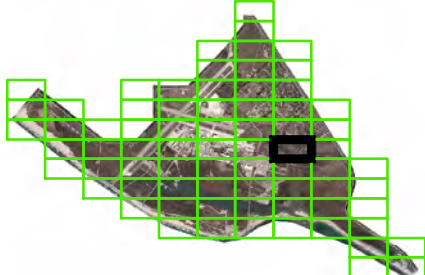
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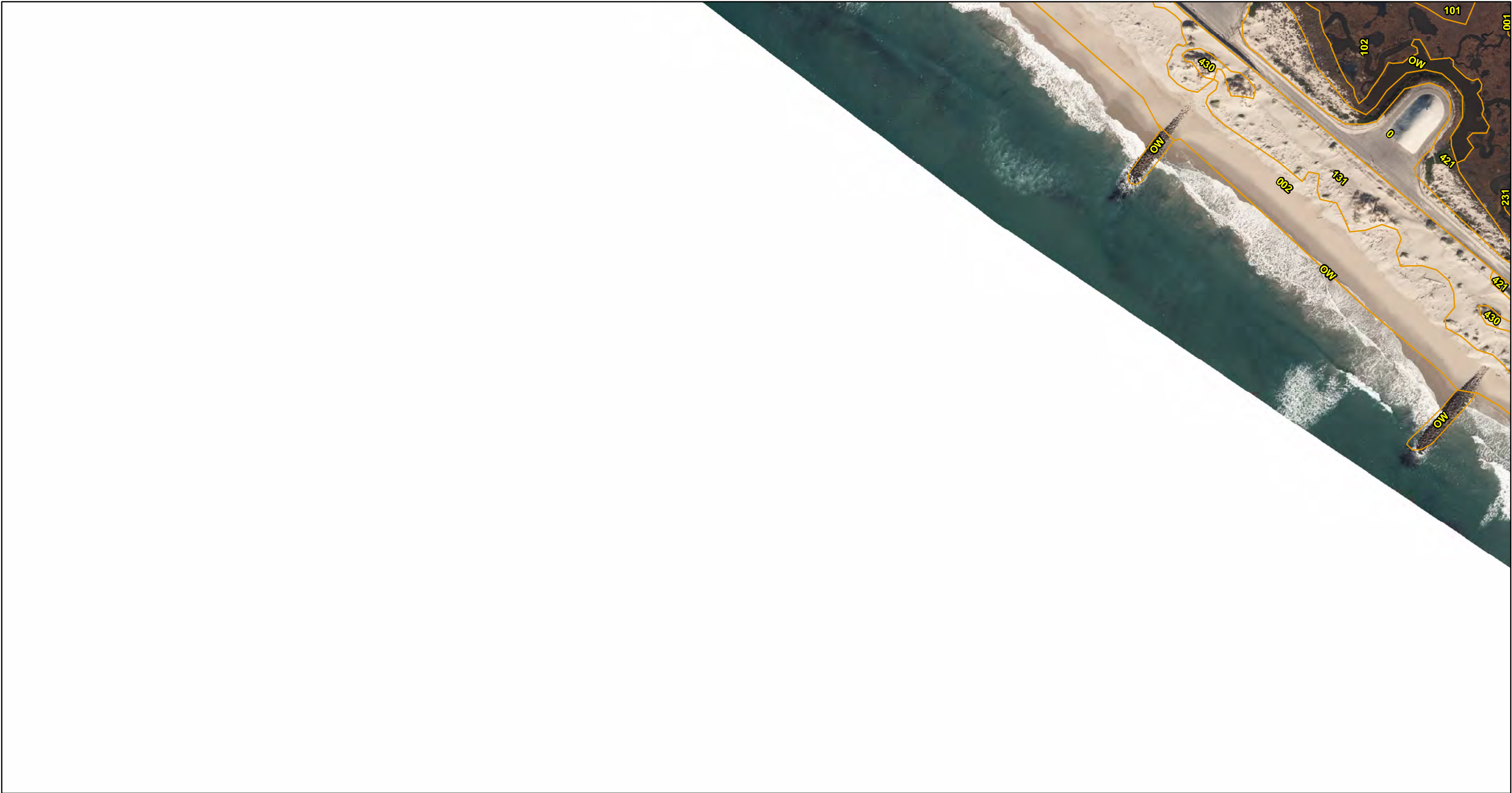


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State Plane California V FIPS 0405 feet
North American Datum of 1983

NBVC Point Mugu
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 Vegetation Classification Types

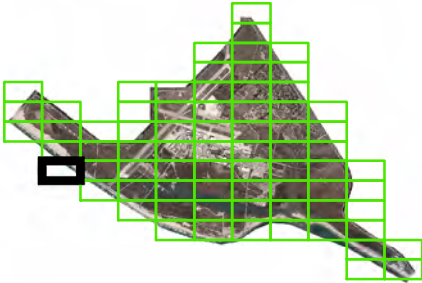
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Vegetation Classification

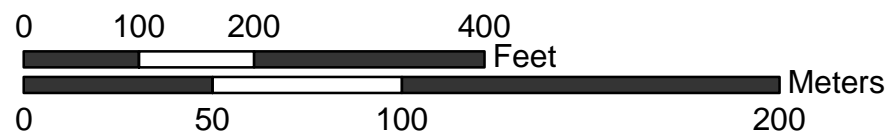
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Vegetation Classification Types

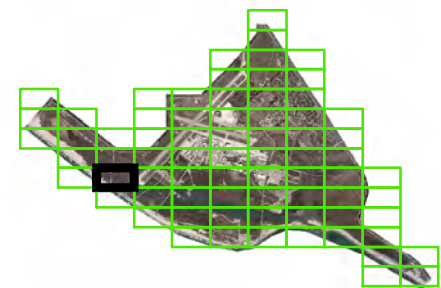
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Vegetation Classification

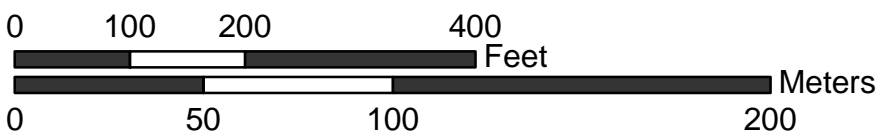
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Vegetation Classification Types

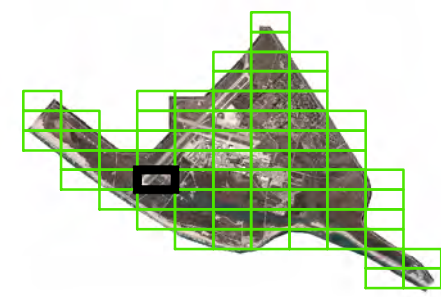
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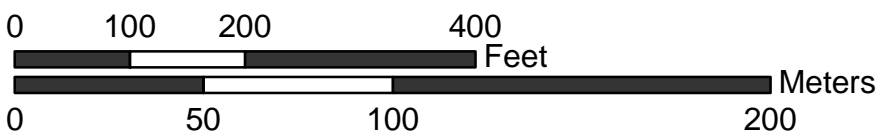
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Vegetation Classification Types

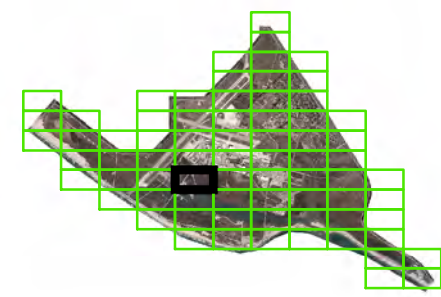
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Vegetation Classification

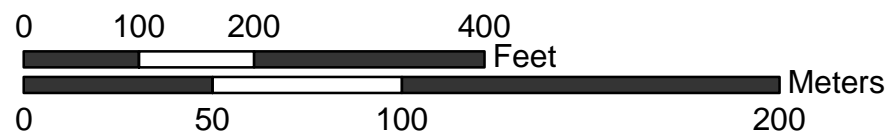
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 Vegetation Classification Types

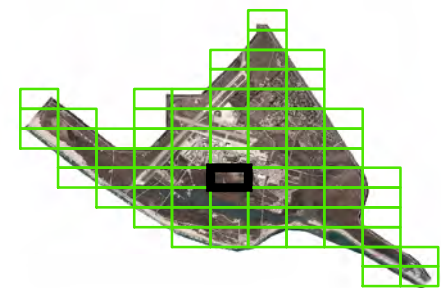
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Vegetation Classification

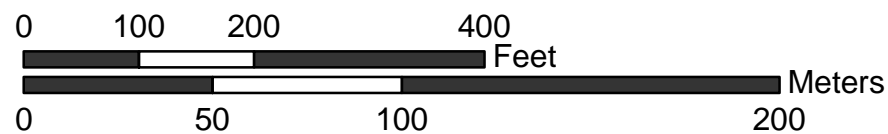
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 Vegetation Classification Types

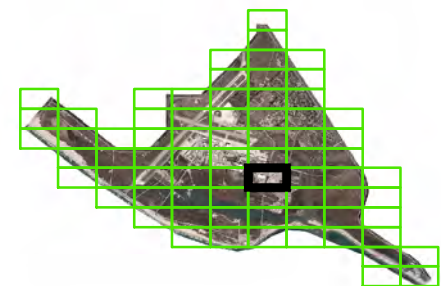
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NBVC Point Mugu
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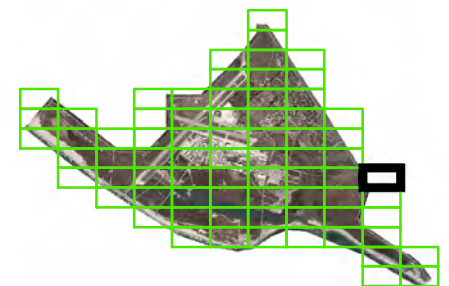
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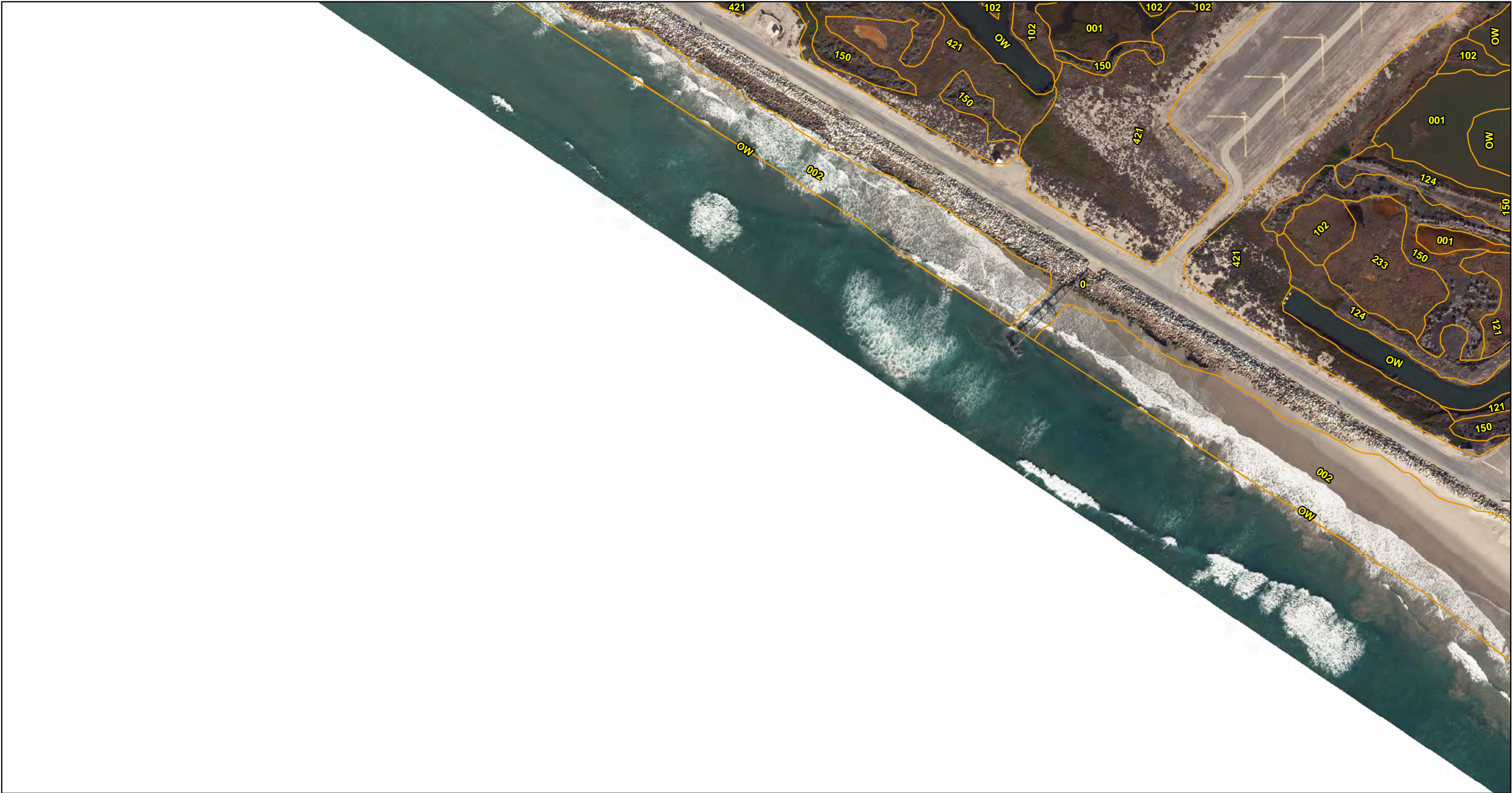


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Vegetation Classification

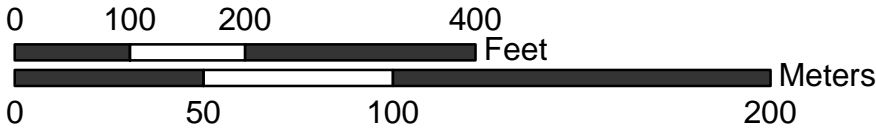
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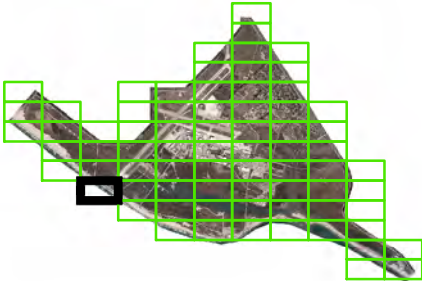
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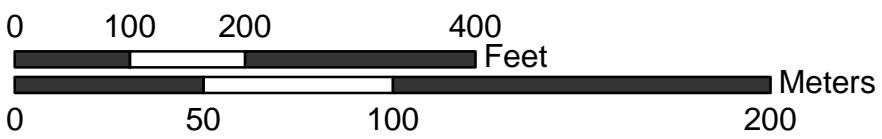
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 Vegetation Classification Types

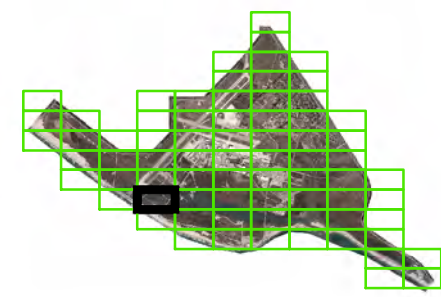
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NBVC Point Mugu
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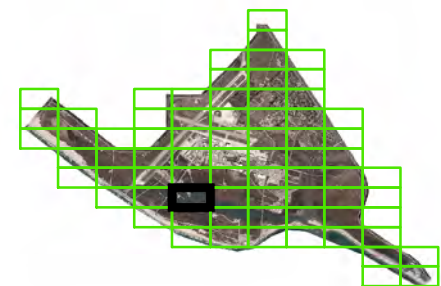
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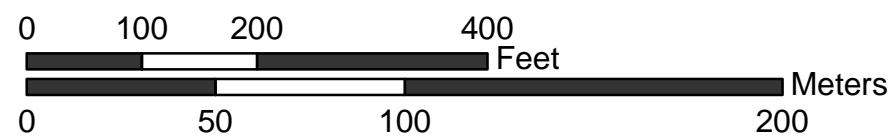
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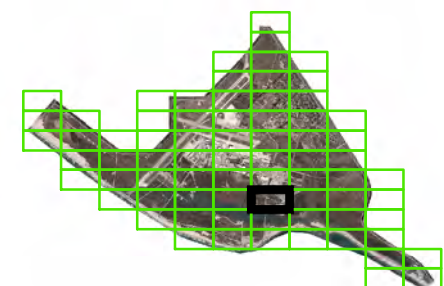
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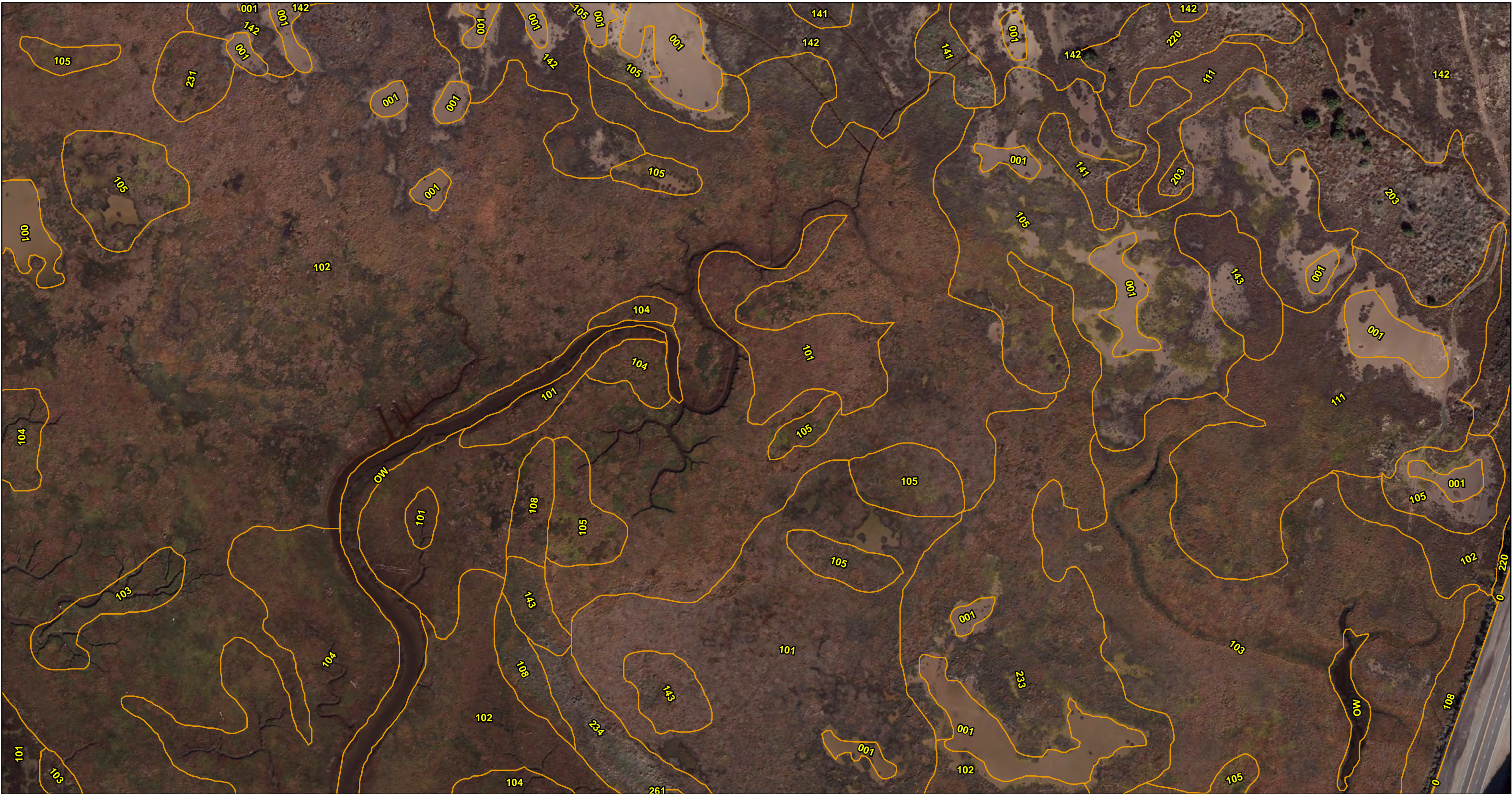


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Vegetation Classification

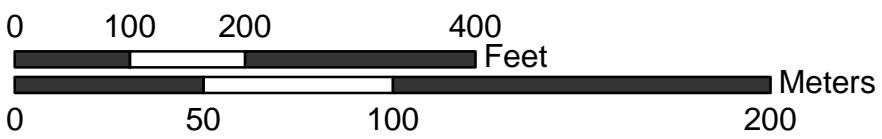
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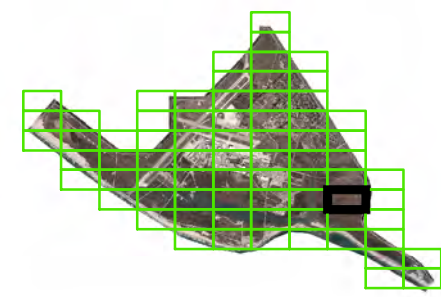
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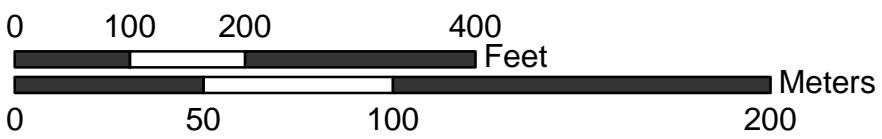
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Vegetation Classification Types

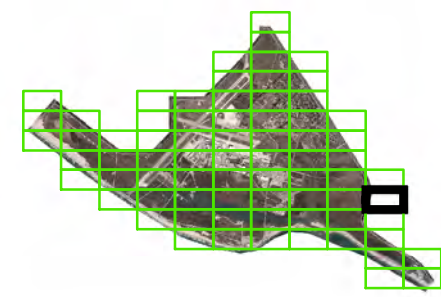
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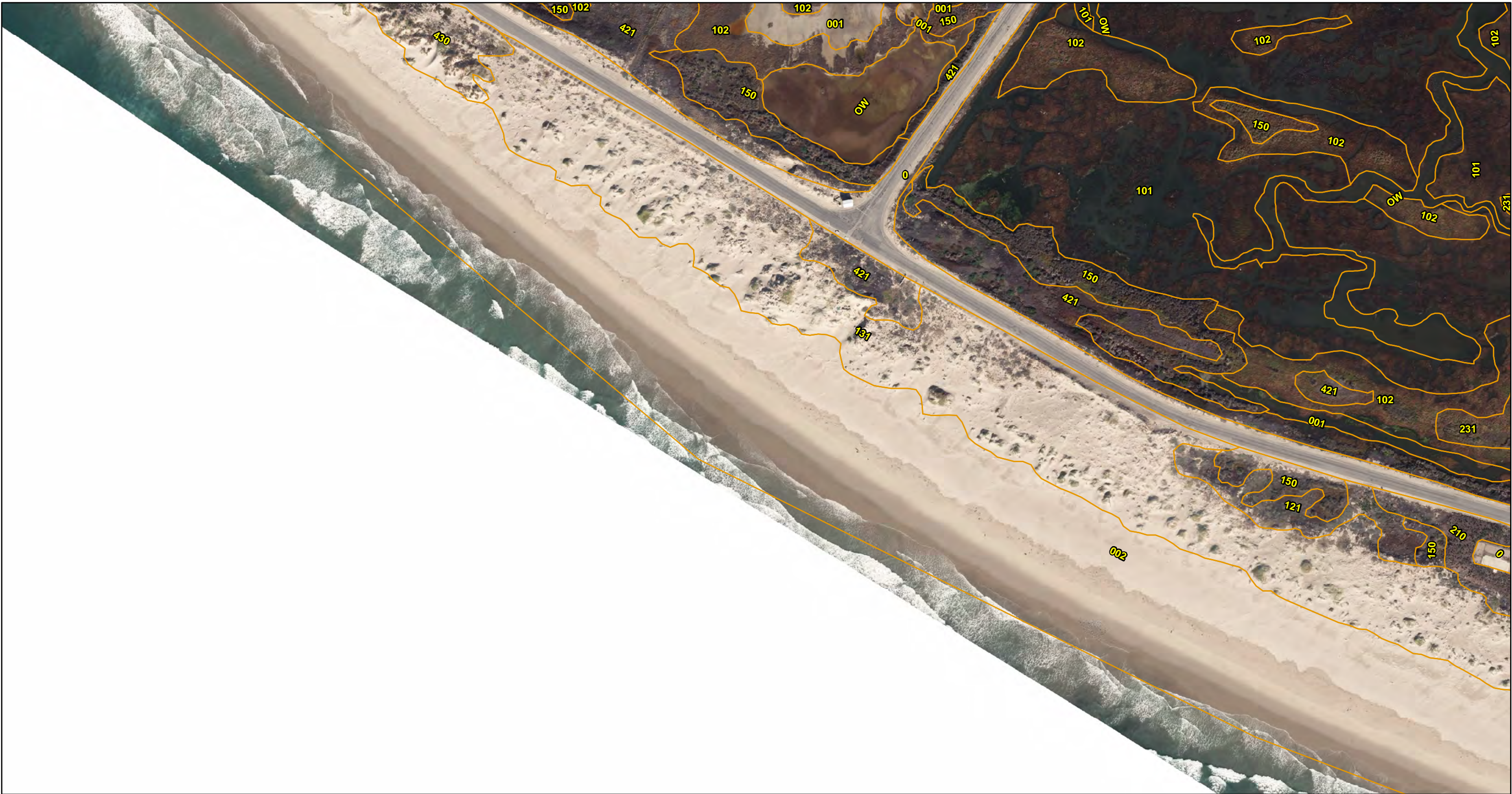


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Vegetation Classification

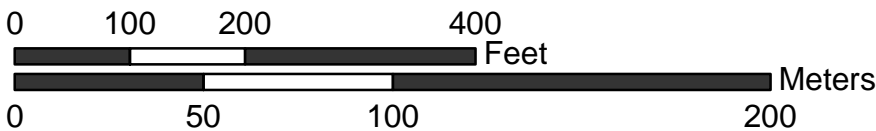
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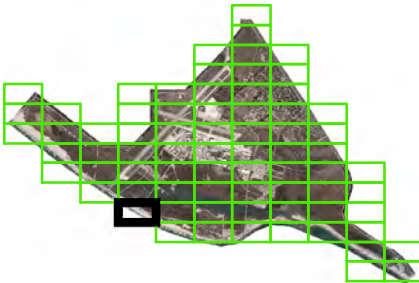
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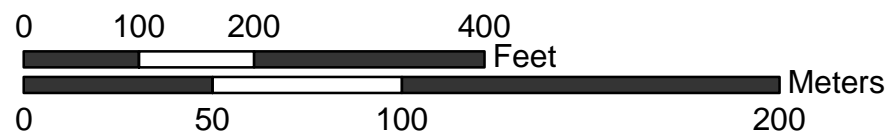
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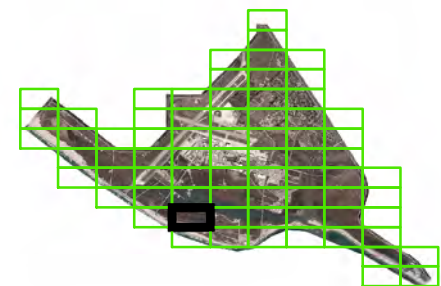
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NBVC Point Mugu
Vegetation Classification

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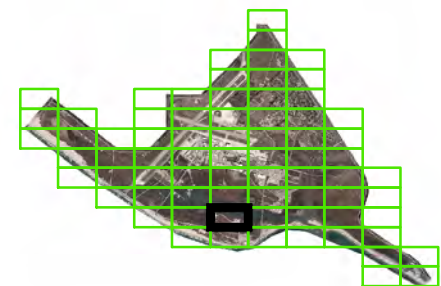
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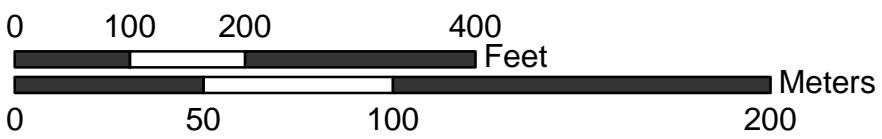
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 Vegetation Classification Types

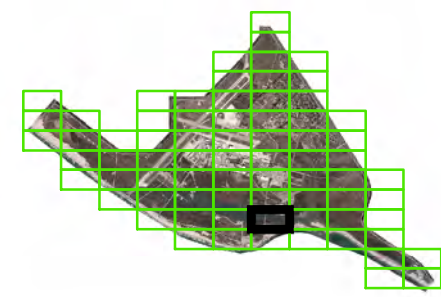
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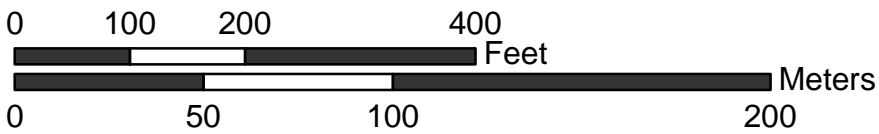
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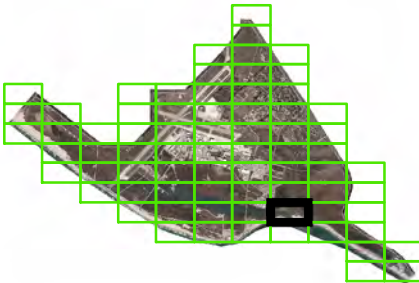
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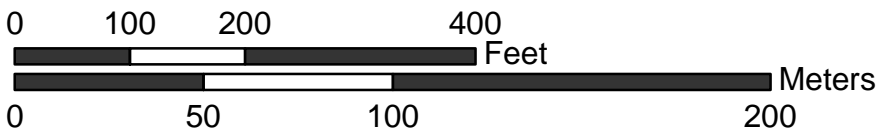
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Vegetation Classification Types

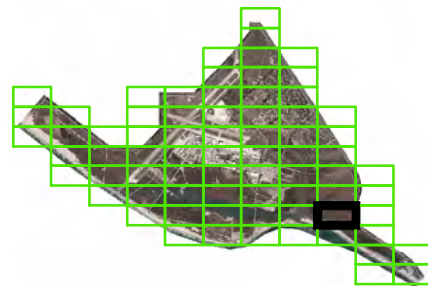
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NBVC Point Mugu
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 Vegetation Classification Types

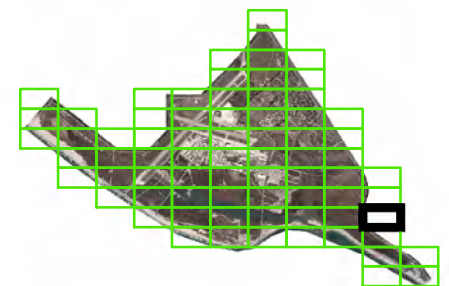
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 Vegetation Classification Types

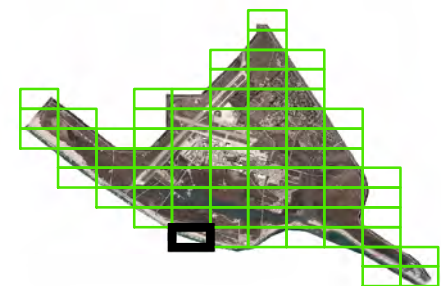
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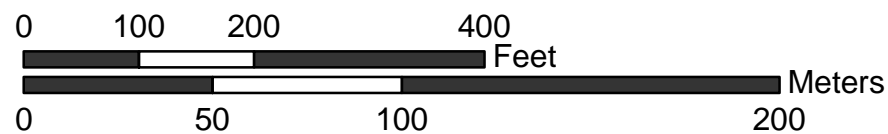
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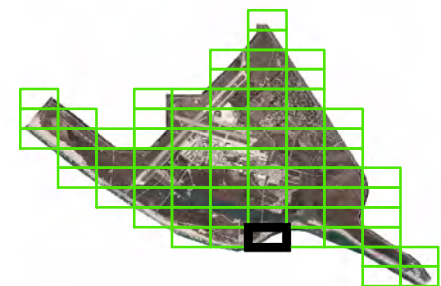
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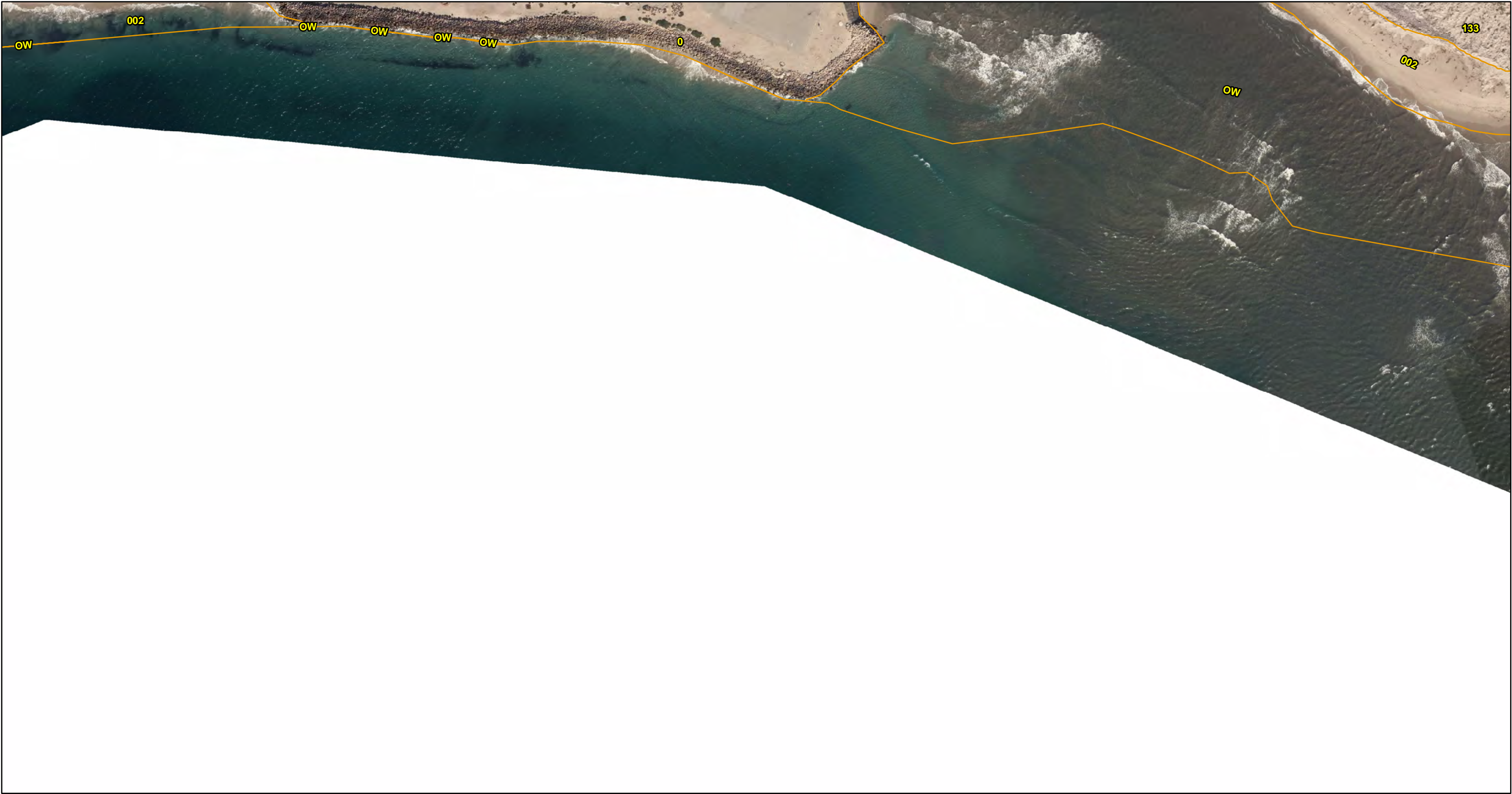


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Vegetation Classification

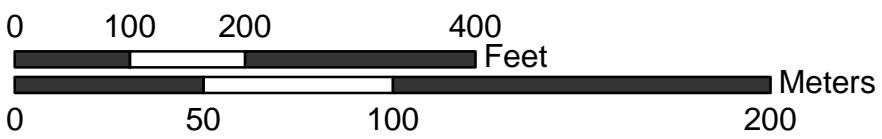
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Vegetation Classification Types

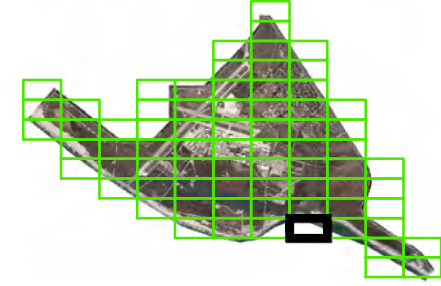
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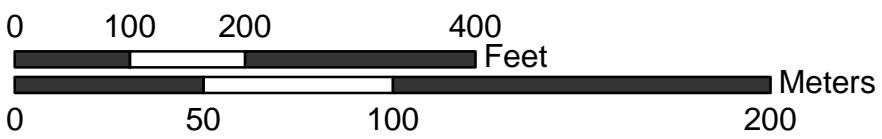
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 Vegetation Classification Types

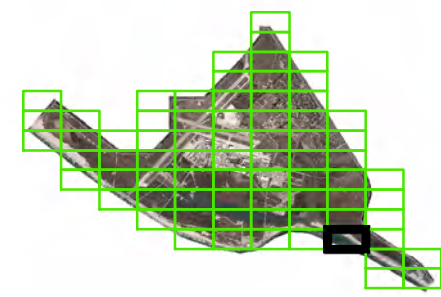
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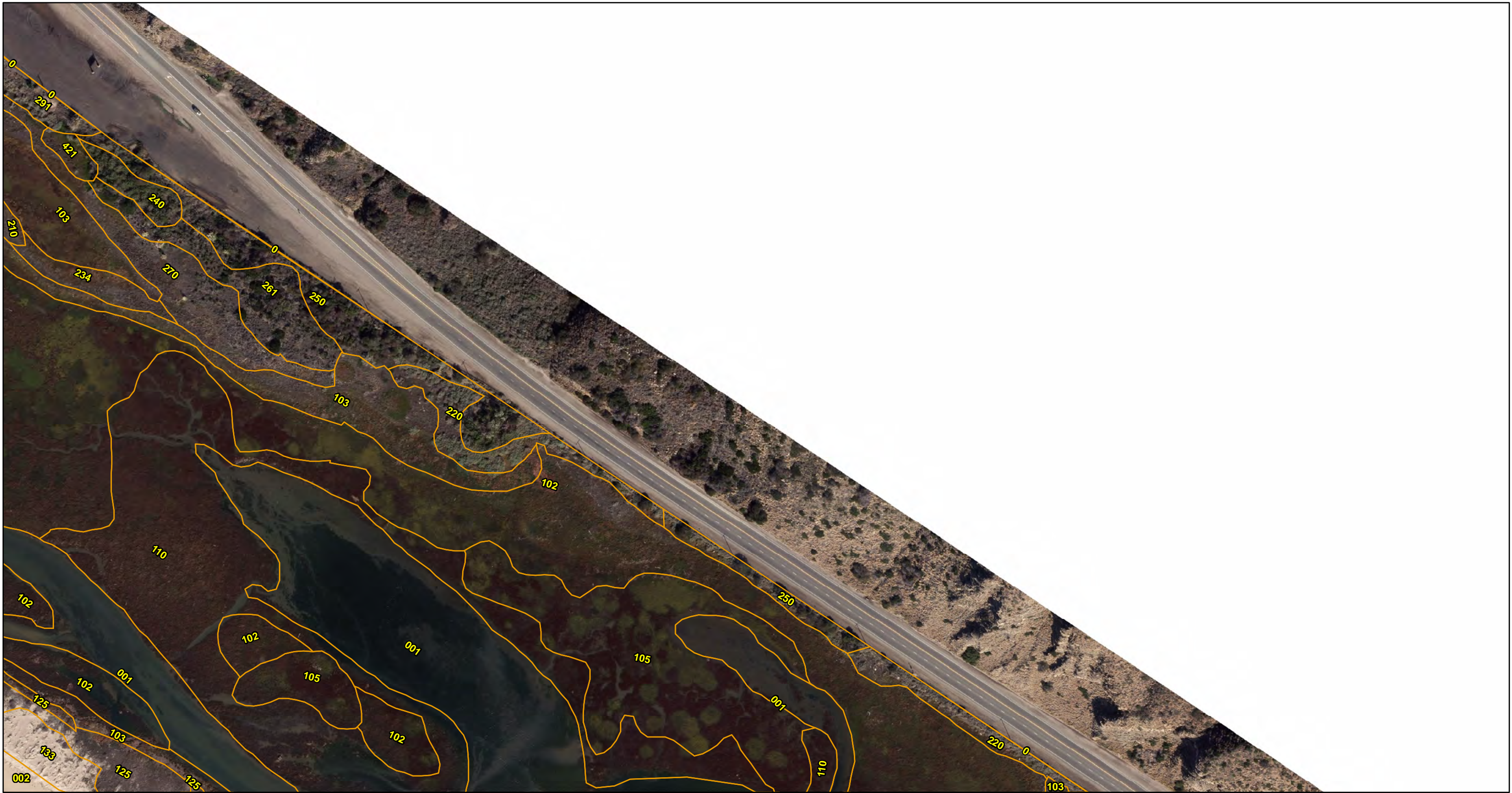


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NBVC Point Mugu
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 Vegetation Classification Types

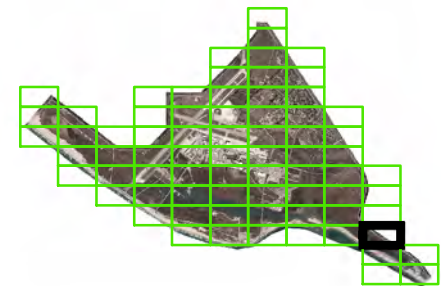
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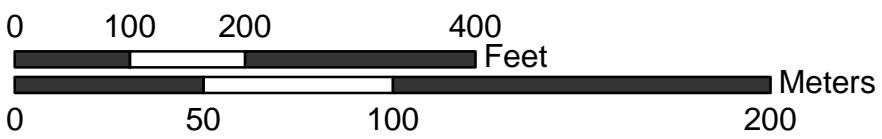
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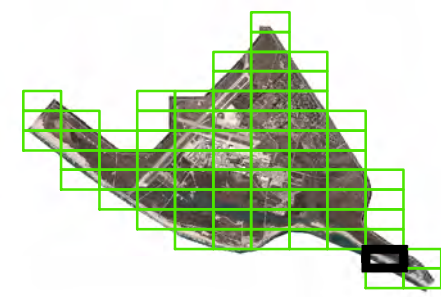
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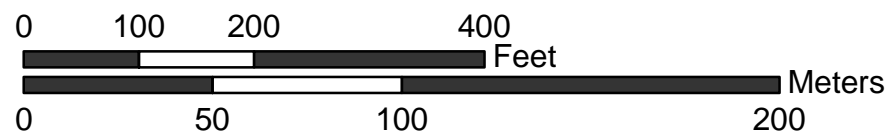
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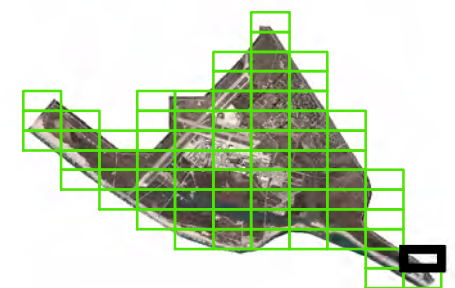
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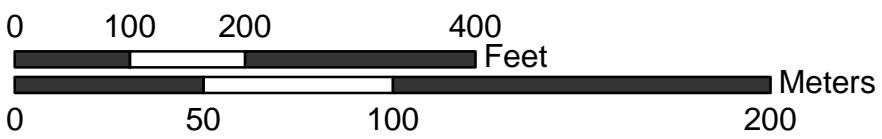
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 Vegetation Classification Types

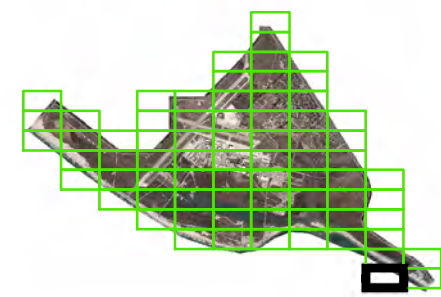
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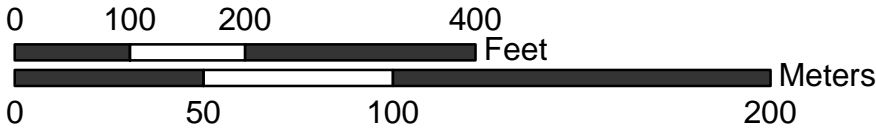
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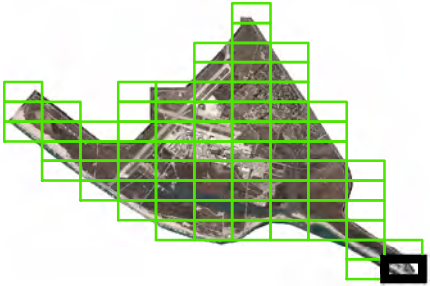
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State Plane California V FIPS 0405 feet
North American Datum of 1983

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APPENDIX B

FIELD KEY TO VEGETATION ASSOCIATIONS ON NBVC, POINT MUGU, CA

Appendix B

Field Key to Vegetation Associations on NBVC Point Mugu with Mapping Classification Codes and Names

Class I - Trees evenly distributed and conspicuous throughout stand. In areas where vegetation cover is greater than about 20 percent, tree canopy may be as low as 10 percent over denser layers of shrub and herbaceous species. In areas where vegetation is less than 20 percent total cover, trees may cover somewhat less than 10 percent (as low as about 8 percent) but are evenly distributed across the stand. **See Forests and Woodlands.**

Class II - Woody shrubs or subshrubs conspicuous throughout stand. When total vegetation cover is ca. 20 percent, the tree layer, if present, generally less than 10 percent cover in stand; herbaceous species may total higher cover than shrubs. Shrubs are always at least 10 percent cover. In areas where vegetation is less than 20 percent total cover, shrubs may cover less than 10 percent, but are evenly distributed across the stand. **See Shrublands.**

Class III - Non-woody herbaceous vegetation, including graminoid and forb species, dominant throughout stand. When total vegetation cover is greater than about 20 percent, the layers for shrubs, subshrubs, and trees, if present, are of lower cover than herbs and less than 10 percent. If total vegetation cover is less than about 20 percent, shrubs, subshrubs, and/or trees may be present but are less than 2-5 percent cover and are not evenly distributed across stand. **See Herbaceous Vegetation.**

Class I. Forests and Woodlands

I.A. One or more willow species or other tree-shrub species in the riparian overstory. (Note: Although some willows may be considered shrubs in this area, most are tall enough to be identified as tree willows, and there is no separation of tree and shrub willow categories in this key.)

I.A.1. Riparian shrublands or woodlands in which arroyo willow (*Salix lasiolepis*) is dominant. An emergent and sparse tree layer may also be present.

***Salix lasiolepis* Alliance**

I.A.1.a. Arroyo willow is the sole dominant.

***Salix lasiolepis* Association**

I.A.1.b. Arroyo willow is characteristically dominant with subdominant to codominant with coyote brush.

***Salix lasiolepis* – *Baccharis pilularis* Association**

I.B. Mulefat (*Baccharis salicifolia*) is dominant or codominant as shrub in riparian to semi-riparian areas.

***Baccharis salicifolia* Association**

I.C. *Schinus molle*, *Schinus terebinthifolius* or *Myoporum laetum* may represent a majority of the tree layer.

***Schinus (molle, terebinthifolius)* – *Myoporum laetum* Alliance**

I.C.1. Ngaio tree (*Myoporum laetum*) is the sole dominant.

***Myoporum laetum* Association**

I.D. *Eucalyptus* sp. dominates in the tree/shrub canopy, though there may be a minor presence of native trees/shrubs. Most stands are semi-natural in this study area.

Eucalyptus (globulus, camaldulensis) Association

II.E. This description is based on the group level, which is the hierarchical level above the alliance. The group level is a useful classification where distinction cannot be made to the alliance or association level. This group level classification may be applied in cases where nonnative grasses and forbs are dominant over native species, and where none of the following nonnative species are clearly dominant; *Arundo donax*, *Lepidium latifolium*, and *Festuca perennis*.

Naturalized Warm-Temperate Riparian and Wetland

Class II. Shrubland Vegetation

II.A. Shrublands are dominated by drought-deciduous or coastal succulent shrubs that are primarily in upland or mesic habitats.

II.A.1. Shrubland is usually characterized by the dominance of laurel sumac (*Malosma laurina*) or shared dominance with other coastal sage shrubs.

Malosma laurina Alliance

II.A.1.a. Laurel sumac is strongly dominant with significant lower cover.

Malosma laurina Association

II.B.1. Shrubland is usually characterized by the dominance of a species of encelia (*Encelia*) alone or in shared dominance with other shrubs. California sagebrush (*Artemisia californica*) occasionally may be dominant when encelia.

Encelia californica Alliance

II.B.1.a. California sagebrush is characteristically subdominant to codominant with California encelia.

Encelia californica – Artemisia californica Association

II.C.2. Shrubland in which California sagebrush (*Artemisia californica*) is dominant.

Artemisia californica Alliance

II.C.2.a. California sagebrush (*Artemisia californica*) is dominant.

Artemisia californica Association

II.B. Successional shrublands in which short-lived subshrubs or shrubs of deerweed (*Acmispon glaber*), bush poppy (*Dendromecon rigida*), or bush mallow (*Malacothamnus fasciculatus*) dominate following disturbance, particularly fire. The shrub canopy is sometimes over a higher cover of annual or perennial herbs such as bromes (*Bromus*), common sand aster (*Corethrogyne filaginifolia*), needlegrass (*Stipa*), stork's bill, wild oats, etc.

II.B.1. Deerweed (*Acmispon glaber*) is the dominant or codominant in the shrub canopy with other coastal sage subshrub species in the canopy.

Acmispon glaber Alliance

II.B.1.a. Deerweed is the dominant subshrub species in the canopy.

Acmispon glaber Association

II.B.2. Shrub canopy dominated by big saltbush (*Atriplex lentiformis*), usually along the coastal strip near highways. Coyote brush (*Baccharis pilularis*) is often present.

Atriplex lentiformis Alliance

II.B.2.a. Shrub canopy dominated by big saltbush.

Atriplex lentiformis Association

Vegetation dominated by microphyllous evergreen shrubs including coyote brush (*Baccharis pilularis*), cut-leaved goldenbush (*Hazardia squarrosa*), and broom (*Spartium junceum*).

III.A. Coyote brush is dominant, often with shrubs of coastal sage, such as *Artemisia californica* and *Salvia leucophylla*, as subdominants. Sometimes coyote brush is codominant, usually in disturbed areas such as old fields, road banks, and stream and ravine borders.

Baccharis pilularis Alliance

III.A.1. Coyote brush is the sole dominant

Baccharis pilularis Association

III.A.2. Coyote brush dominates over a mixed of grasses and herbs

Baccharis pilularis / Herbaceous Association

III.A.3. Coyote brush dominates over Poison oak (*Toxicodendron diversilobum*)

Baccharis pilularis / *Toxicodendron diversilobum* Association

III.A.4. Coyote brush dominates with California sagebrush as a subdominant. Purple sage and laurel sumac may be present.

Baccharis pilularis – *Artemisia californica* Association

III.B. Menzies' goldenbush is the dominant low shrub usually with a mixture of herbs and grasses plus a low cover of Saltgrass and other shrubs.

Isocoma menziesii Alliance

III.B.1. Menzies' goldenbush dominates with a lower cover of saltgrass usually present.

Isocoma menziesii – *Distichlis spicata* Association

Class III. Herbaceous to Semi-Herbaceous Vegetation

I.A. Vegetation is dominated by mainly freshwater wetland forb species including cattail (*Typha*), rush (*Juncus*), sedge (*Carex*), spike rush (*Eleocharis*), and giant reed grass (*Arundo*) species.

I.A.1. Stands are dominated with wetland grasses and graminoids including cattails (*Typha*) and reeds (*Arundo donax*).

I.A.1.a. Broad-leaved Cattails (*Typha latifolia*) are dominant, usually in standing fresh or brackish water.

Typha latifolia Association

I.A.1.b. Dense stands are dominated by giant reed (*Arundo donax*), generally small and locally distributed along streams and creeks.

Arundo donax Association

I.B. Stands are dominated by grasses and graminoids that are generally between 0.1–1 m tall including rushes (*Juncus*) and sedges (*Carex*).

I.B.1. A rush species, specifically spiny rush (*Juncus acutus*), is the sole dominant in the herb overstory.

***Juncus acutus* Provisional Association**

I.B.2. A rush species, specifically California bulrush (*Schoenoplectus californicus*), is the sole dominant in the herb overstory.

***Schoenoplectus californicus* Association**

I.C. Simi-natural stands are dominated by perennial forbs.

I.C.1. Vegetation is dominated by the perennial noxious forb perennial pepperweed (*Lepidium latifolium*).

***Lepidium latifolium* Association**

Vegetation dominated mainly by upland and mesic herbaceous species including native and exotic grasses, forbs, and cryptogrammic species. If woody species are present, they cover <10% of the ground surface.

II.A. Vegetation is dominated by a mixture of native perennial grasses and annuals, with the native grasses usually making up >10% relative cover of the herbaceous layer.

II.A.1. Native grass component is mainly California cordgrass (*Spartina foliosa*).

***Spartina foliosa* Association**

II.B. Vegetation is dominated mainly by nonnative invasive perennial bunchgrasses.

II.B.1. Crimson fountain grass (*Pennisetum setaceum*) occurs as the dominant species in semi-natural stands.

***Pennisetum setaceum* Association**

II.C. Grasslands or forb lands are strongly dominated by nonnative annual grasses and forbs including foxtail brome, ripgut brome, Italian ryegrass, common barley, star thistle, and black mustard. There may be native species, but these may be relatively low cover.

II.C.1. Ripgut brome (*Bromus diandrus*) is present; along with a mixed herbaceous layer.

***Bromus (diandrus, hordeaceus) – Brachypodium distachyon* Alliance**

II.C.1.a. Ripgut brome (*Bromus diandrus*) is dominant with subdominant to codominant with *Hordeum* sp.

***Bromus diandrus – Hordeum* sp. Association**

II.C.2. Foxtail Brome (*Bromus madritensis*) is present: along with a mixed herbaceous layer.

***Bromus madritensis* Alliance**

II.C.2.a. Foxtail brome is the dominant in this herbaceous layer.

***Bromus madritensis* Association**

II.C.3. Common barley (*Hordeum* sp.) is dominant with lower cover of a mixed herbaceous layer.

***Hordeum* sp. Association**

II.C.4. Italian rye grass (*Festuca perennis*) is strongly dominant with low cover of all other nonnative and native species and is often found in low-lying portions of grasslands.

***Festuca perennis* Association**

II.C.5. Black mustard (*Brassica nigra*) is dominant or codominant in semi-natural stands made up largely of other nonnative herbs and grasses.

***Brassica nigra* and Other Mustards Alliance**

II.C.5.a. Black mustard is the sole dominant.

***Brassica nigra* Association**

II.C.5.b. Poison hemlock and black mustard are both, significant components or codominant in the stands.

***Brassica nigra* – *Conium maculatum* Provisional Association**

II.C.5.c. Black mustard and star thistle (*Centaurea melitensis*) are both, significant components or codominant in the stands.

***Centaurea melitensis* – *Brassica nigra* Association**

II.D. Stands of vegetation dominated by medium to tall introduced perennial herbs like large flower tickseed (*Leptosyne gigantea*).

***Leptosyne gigantea* Association**

II.E. This description is based on the group level, which is the hierarchical level above the alliance. The group level is a useful classification where distinction cannot be made to the alliance or association level. This group level classification may be applied in cases where nonnative grasses and forbs are dominant over native species, and where none of the following nonnative species are clearly dominant; *Avena* sp., *Bromus* (*diandrus*, *hordeaceus*, *rubens*), *Festuca perennis*, *Pennisetum* sp., *Brassica nigra*.

Mediterranean California Naturalized Annual and Perennial Grassland

Vegetation dominated mainly by relatively low perennial forbs and graminoids of coastal, more or less, saline environments including brackish and salt marshes, sea cliffs, and dunes.

III.A. Salt marsh vegetation and coastal low-spreading dominated or codominated by pickleweed (*Salicornia* sp. and/or *Frankenia salina* and/or *Batis maritima*); often mixed with other saline forbs and grasses.

***Salicornia pacifica* Alliance**

III.A.1. Pacific swampfire (*Salicornia pacifica*) is the sole dominant.

***Salicornia pacifica* Association**

III.A.2. Pacific swampfire associates with the coastal salt marsh wetland-riparian Alkali Heath (*Frankenia salina*).

***Salicornia pacifica* – *Frankenia salina* Association**

III.A.3. Pacific swampfire associates with Alkali Heath (*Frankenia salina*) and woolly seablite (*Suaeda taxifolia*).

***Salicornia pacifica*– *Frankenia salina*-*Suaeda taxifolia* Association**

III.A.4. Pacific swampfire associates with marsh jaumea (*Jaumea carnosa*).

***Salicornia pacifica*– *Jaumea carnosa* Association**

III.A.5. Pacific swampfire mix as dominant, codominant or subdominant with *Frankenia salina* and *Batis maritima*.

***Salicornia pacifica*– *Frankenia salina* -*Batis maritima* Association**

III.A.6. Pacific swampfire is associated with marsh jaumea and salt grass (*Distichlis spicata*).

***Salicornia virginica* – *Jaumea carnosa* – *Distichlis spicata* Association**

III.A.7. Pacific swampfire form and are open to intermittent cover over mudflats with marine filamentous algae.

***Salicornia pacifica*/ Algae Association**

III.A.8. Pacific swampfire associates with perennial shoregrass.

Salicornia pacifica– *Distichlis littoralis* Association

III.A.9. Pacific swampfire associates with marsh jaumea and turtleweed (*Batis maritima*).

Salicornia pacifica– *Jaumea carnosa* – *Batis maritima* Association

III.A.10. Pacific swampfire associates with black mustard (*Brassica nigra*).

Salicornia pacifica– *Brassica nigra* Association

III.A.11. Dwarf saltwort (*Salicornia bigelovii*) is dominant but often associates with other coastal salt marsh saline forbs and grasses.

Salicornia bigelovii Provisional Association

III.B. Salt marsh vegetation dominated by the perennial forb *Frankenia salina*, usually mixed with other saline forbs and grasses.

Frankenia salina Alliance

III.B.1. Alkali Heath (*Frankenia salina*) is dominant.

Frankenia salina Association

III.B.1. *Frankenia salina* associates the native saltgrass (*Distichlis spicata*).

Frankenia salina – *Distichlis spicata* Association

III.B.2. *Frankenia salina* associates with the perennial herb Parish's glasswort (*Arthrocnemum subterminale*).

Frankenia salina – *Arthrocnemum subterminale* Provisional Association

III.B.3. *Frankenia salina* associates with the herbs *Limonium californicum* and *Salicornia* spp. and the native salt-tolerant grass *Distichlis littoralis*.

Frankenia salina – *Limonium californicum* – *Distichlis littoralis* –

Salicornia spp. Association

III.B.4. *Frankenia salina* associates with the non-native Iceplant (*Carpobrotus edulis*)

Frankenia salina – *Carpobrotus edulis* Association

III.C. Salt marsh and coastal low-spreading, turf-forming salt grass is the dominant species and may have emergent low shrubs and taller perennial herbs.

Distichlis spicata Alliance

III.C.1. Salt grass is the dominant

Distichlis spicata Association

III.C.2. Salt grass associates with (*Salicornia pacifica*).

Distichlis spicata – *Salicornia pacifica* Association

III.C.3. Salt grass associates with burr ragweed (*Ambrosia chamissonis*).

Distichlis spicata – *Ambrosia chamissonis* Association

III.C.4. Salt grass associates with annual grasses/grass-herbs.

Distichlis spicata / Annual grasses (or Grass-Herb) Association

III.C.5. Salt grass associates with marsh jaumea (*Jaumea carnosa*).

Distichlis spicata – *Jaumea carnosa* Association

III.D. Coastal low-spreading, dominated by the perennial herb *Ambrosia chamissonis* and (*Abronia maritima*), that is usually mixed with other forbs and grasses.

***Ambrosia chamissonis* – *Abronia maritima* Alliance**

III.D.1. Silver Beachweed associated with red sand verbena (*Abronia maritima*) and European searocket (*Cakile maritima*).

***Ambrosia chamissonis* – *Abronia maritima* – *Cakile maritima* Association**

III.D.2. Pacific swampfire associated with *Distichlis spicata* and *Abronia maritima*.

***Ambrosia chamissonis* – *Distichlis spicata* – *Abronia maritima* Provisional Association**

III.E. Coastal salt marsh, coastal sage scrub dominated by the perennial herb *Arthrocnemum subterminale* that is usually mixed with other coastal salt marsh.

***Arthrocnemum subterminale* Alliance**

III.E.1. Parish's glasswort (*Arthrocnemum subterminale*) is sole dominate.

***Arthrocnemum subterminale* Association**

III.E.2. Parish's glasswort associated with Pacific swampfire (*Salicornia pacifica*).

***Arthrocnemum subterminale* – *Salicornia pacifica* Association**

III.E.3. Parish's glasswort associated with shore grass (*Distichlis littoralis*).

***Arthrocnemum subterminale* – *Distichlis littoralis* Association**

III.F. European beach grass (*Ammophila arenaria*) is a perennial grass associated with dunes of coastal bars, foredunes, and along the immediate coastline.

***Ammophila arenaria* Alliance**

III.F.1. European beach grass is dominant.

***Ammophila arenaria* Association**

III.F. The low spreading and invasive succulent perennial sea fig (ice plant) is strongly dominant, usually on bluffs or dunes adjacent to the ocean with some parts being dead.

***Carpobrotus edulis* or Other Ice Plants Alliance**

III.F.1. Hottentot fig (*Carpobrotus edulis*) is dominant.

***Carpobrotus edulis* Association**

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APPENDIX C

CNPS/CDFW COMBINED VEGETATION RAPID ASSESSMENT AND RELEVÉ FIELD FORM

Appendix C

CNPS/CDFW Combined Vegetation Rapid Assessment and Relevé Field Form

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:**

[illegible]

RELEVE SPECIES SHEET (Revised 3/22/2010)

Page of Polygon/Stand #:

Stratum categories: T = Tree, S = Shrub, H = Herb, E = SEedling, A = SApling, and N=Non-vascular
% Cover Intervals for reference: r = trace, <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

[illegible]

APPENDIX D

**FIELD DATA- CNPS/CDFW COMBINED VEGETATION RAPID ASSESSMENT
AND RELEVÉ FIELD FORMS**

(Revised July 15 2010) **Project Code:** FS 1

3

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: 430	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: NBVC 02	Air photo: 27	Date: 1/24/2012	Name(s) of surveyors (circle recorder): Brent Eastly, Maia Lipschutz
GPS wypt #: GPS name: Garmin Datum: or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side			
UTME 301963 UTMN 3776692 Zone: 10 11 (circle one) Error: ± 2.1 ft / m / pdop			
GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)			
Elevation: -27 ft / m Camera Name/Photograph #'s: 6928 N, S, E, W			
Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 20 x 20 ft / m or Circle Radius ft / m			
Exposure, Actual °: NE NW SE SW Flat Variable All Steepness, Actual °: 0° 1-5° 5-25° >25			
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating			
Geology code: Sand Soil Texture code: Sand Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: BA Stems: 35 Litter: Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 65 = 100%			
% Current year bioturbation 0 Past bioturbation present? Yes / No % Hoof punch			
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: Beachgrass dune community. Some Carpobrotus is treated. Stand size ~ 1600m.			
Disturbance code / Intensity (L,M,H): EX/H 1 1 1 1 "Other" 1			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 85			
% Cover - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: 21 Herbaceous: 36			
Height Class - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: 01 Herbaceous: 01			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H2	Ammophila arenaria	35	
H1	Ambrosia chamissonis	<1	
H1	Carpobrotus sp. (edulis)	<1	
H1	baccharis pilularis	<1	
S	Atriplex matsonii leucophylla	<1	
H1	Abronia maritima	<1	
H1	Calystegia macrostegia	<1	
Unusual species:			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: Ammophila arenaria			
Field-assessed association name (optional): Ammophila arenaria			
Adjacent alliances/direction: Ambrosia chamissonis / Abronia maritima			
Confidence in alliance identification: L M (H) Explain: Only 1 beach grass community			
Phenology (E,P,L): Herb? Shrub Tree Other identification or mapping information:			
Is poly >1 type: Yes (No) If yes, explain:			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: 131	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: NBVC 03	Air photo: 27/19	Date: V24/12	Name(s) of surveyors (circle recorder): Brent Eastty (Maia Lipschutz)
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 360(degrees) of Long / Short side			
UTME 301893 UTMN 3776726 Zone: 10 / 11 (circle one) Error: ± 1.9 ft / m / pdop			
GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: -33 ft / m Camera Name/Photograph #'s: C933 N.E.S.W			
Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW Flat Variable All Steepness, Actual °: 0° 1-5° 5-25° >25			
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating			
Geology code: Sand Soil Texture code: Sand Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: BA Stems: 1 Litter: 1 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 98 =100%			
% Current year bioturbation 0 Past bioturbation present? Yes / (No) % Hoof punch 0			
Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: For dune community, treated olive beach grass near plot			
Disturbance code / Intensity (L,M,H): Ex / L / / / / / "Other" /			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 11			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 1 Herbaceous: 10			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H1	Abronia maritima	8	
H1	Ambrosia chamissonis	1	
H1	Atriplex watsoni leucophylla	1	
H1	Calystegia macrostegia	21	
H1	Cakile maritima	21	
H2	Anemophila arenaria	<1	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: Abronia latifolia - Ambrosia chamissonis			
Field-assessed association name (optional): Ambrosia chamissonis - Abronia maritima - Cakile maritima			
Adjacent alliances/direction: Anemophila arenaria / , /			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information: _____			
Is poly >1 type: Yes / (No) If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
132			
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBXC 04	18/27	1/24/12	Brent Eastly Maia Lipschultz
GPS wypt #:	GPS name:	Datum:	or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side
UTME 301875	UTMN 3776814	Zone: 10/11 (circle one)	Error: ± 2.1 ft / m / pdop
GPS within stand?	Yes / No	If No, cite from waypoint to stand, distance (meters) & bearing (degrees)	
Elevation:	-30 ft / m	Camera Name/Photograph #'s:	6937 N.E.S.W
Stand Size (acres):	<1, 1-5, >5	Plot Size (m²):	10 / 100 / 400 / 1000
Plot Shape:	10 x 10 ft / m	or Circle Radius:	ft / m
Exposure, Actual °:	NE NW SE SW Flat Variable All	Steepest, Actual °:	0° 1-5° 5-25° > 25
Topography: Macro:	top upper mid lower bottom	Micro:	convex flat concave undulating
Geology code:	Sand	Soil Texture code:	Sand
Upland or Wetland/Riparian:	(circle one)		
% Surface cover:	(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)		
H20:	BA Stems: 1	Litter: 2	Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 97 = 100%
% Current year bioturbation:	0	Past bioturbation present?	Yes / No
% Hoof punch:	0		
Fire evidence:	Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.		
Site history, stand age, comments: backdunes dominated by herbaceous natives and (often treated) Carpobrotus, with a lesser but characteristic woody component consisting of Baccharis pilularis, Salix lasiolepis, Baccharis salicifolia treated Carpobrotus in plot			
Disturbance code / Intensity (L,M,H): Ex/L 1 1 1 1 1 "Other" 1			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 9			
% Cover - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: 41 Herbaceous: 9			
Height Class - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: 01 Herbaceous: 01			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H1	Comissonia cheiranthifolia	3	
H1	Ambrosia chamissonis	4	
H1	Cakile maritima	1	
H1	Abrotona maritima	1	
H1	Carpobrotus sp. (dead) → litter	<1	
H1	Atriplex watsonii leucophylla	<1	
Unusual species:			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: Abrotona latifolia - Ambrosia chamissonis			
Field-assessed association name (optional): Abrotona maritima - Ambrosia chamissonis - Cakile maritima			
Adjacent alliances/direction: Ambrosia - Chamissonis 1 Abrotona maritima 1			
Confidence in alliance identification: L M H Explain:			
Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:			
Is poly >1 type: Yes / No (No) If yes, explain:			

(Revised July 15 2010) **Project Code:** FSV

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>430</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC06</u>	Air photo: <u>35</u>	Date: <u>1/24/12</u>	Name(s) of surveyors (circle recorder): <u>(Maia Lipschutz) Brent Easty</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>3 0 2 1 8 6</u> UTMN <u>3 7 7 5 7 2 9</u> Zone: 10 / <u>(11)</u> (circle one) Error: ± <u>2.2</u> ft / m / <u>pdp</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-27</u> ft / m Camera Name/Photograph #'s: <u>6957 N.E.S.W</u>			
Stand Size (acres): <u>(1)</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW Flat <u>Variable</u> , All Steepness, Actual °: _____ 0° 1-5° 5-25° <u>>25</u>			
Topography: Macro: top upper mid lower <u>(bottom)</u> Micro: convex flat concave <u>undulating</u>			
Geology code: <u>Sand</u> Soil Texture code: <u>Sand</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>30</u> Litter: <u>5</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>65</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Dunes colonized by Amophila arenaria & Carpobrotus sp. Dunes unusually tall, but only a narrow strip left beach and road.</u>			
Disturbance code / Intensity (L,M,H): <u>EX / H</u> / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>44/1</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u><1</u> Herbaceous: <u>44</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H2	<i>Amophila arenaria</i>	<u>25</u>	
H1	<i>Carpobrotus sp. (edulis)</i>	<u>10</u>	
H1	<i>Ambrosia chamissonis</i>	<u>1</u>	
H1	<i>Abronia maritima</i>	<u>5</u>	
H1	<i>Atriplex watsonii leucophylla</i>	<u>41</u>	
H1	<i>Chamissonia cheiranthifolia</i>	<u>41</u>	
H1	<i>Calystegia soldanella</i>	<u>41</u>	
H1	<i>Cuscuta salina</i>	<u>41</u>	
H1	<i>Lessingia flaginifolia</i>	<u>1</u>	
Unusual species: <u>Purple aster - Lessingia flaginifolia</u>			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Amophila arenaria</u>			
Field-assessed association name (optional): <u>Amophila arenaria</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M <u>(H)</u> Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: <u>Yes</u> / No If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>210</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 07</u>	<u>41</u>	<u>1/24/2012</u>	<u>Brant Eastly Maia Lipschultz</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>(NAD83)</u> Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>303879</u> UTMN <u>3775362</u> Zone: 10 / <u>11</u> (circle one) Error: \pm <u>4.5</u> ft / m / <u>pdop</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-26</u> ft / m Camera Name/Photograph #'s: <u>6960 N.E.S.W</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW Flat Variable <u>(All)</u> Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>(bottom)</u> Micro: <u>convex</u> flat concave undulating			
Geology code: <u>Fill</u> Soil Texture code: <u>Fill (dredge)</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>2</u> Litter: <u>95</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: <u>41</u> Gravel: _____ Fines: <u>2</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Coreopsis gigantea stand on top of treated carpobrotus. Heavily disturbed area.</u>			
Disturbance code / Intensity (L,M,H): <u>Ex/H</u> _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: <u>41</u> Total % Vasc Veg cover: <u>20</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>41</u> Herbaceous: <u>20</u> <u>19</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H2	<i>Coreopsis gigantea</i>	15	
H1	<i>Carpobrotus</i> sp. (<i>edulis</i>)	2	
S1	<i>Lotus scoparius</i>	1	
H1	<i>Frankenia salina</i>	41	
H1	<i>Cakile maritima</i>	41	
H1	<i>Ambrosia chamissonis</i>	1	
S1	<i>Lupinus arboreus</i>	41	
H1	<i>Distichlis spicata</i>	41	
S1	<i>Baccharis pilularis</i>	41	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Coreopsis gigantea</u>			
Field-assessed association name (optional): <u>Coreopsis gigantea - Carpobrotus edulis</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>150</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 68</u>	<u>41</u>	<u>1/24/2012</u>	<u>Brent Eastly (Maia Lipschultz)</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 303809 UTMN 3775391 Zone: 10 / 11 (circle one) Error: ± 7.5 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 0964 N.E.S.W

Stand Size (acres): 1 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: Sand Soil Texture code: Sand | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 4 Litter: 91 Bedrock: _____ Boulder: 41 Stone: _____ Cobble: _____ Gravel: _____ Fines: 5 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Intermittent juncus mixed w/ Salicornia, some treated
Carpobrotus around edges.

Disturbance code / Intensity (L,M,H): Ex 1 L / / / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 0 Total % Vasc Veg cover: 62

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 35 Herbaceous: 67 27

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: S1 Herbaceous: H2

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H2	<u>Juncus acutus</u>	<u>5</u>					
H1	<u>Salicornia depressa</u>	<u>15</u>					
H1	<u>Frankenia salina</u>	<u>35</u>					
H1	<u>Distichlis spicata</u>	<u>5</u>					
S1	<u>Baccharis pilularis</u>	<u>41</u>					
H1	<u>Carpobrotus edulis</u>	<u>41</u>					
H1	<u>Calce maritima</u>	<u>41</u>					
H1	<u>Phacelia sp.</u>	<u>1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Juncus acutus (with a Frankenia alliance)

Field-assessed association name (optional): Juncus acutus - Salicornia depressa

Adjacent alliances/direction: Careopsis gigantea / /

Confidence in alliance identification: 1 M H Explain: Juncus is only significant in a tight, irregular poly

Phenology (E,P,L): Herb L Shrub E Tree _____ Other identification or mapping information: otherwise it is a Frankenia alliance

Is poly >1 type: (Yes) / No If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use: Final database #: Final vegetation type: Alliance Association:

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 089 Air photo: Date: 1/25/12 Name(s) of surveyors (circle recorder): Beck Eastly (Maia Lipschutz)

GPS wypt #: GPS name: Datum: or NAD83. Bearing, left axis at SW pt (degrees) of Long / Short side
 UTME 3 0 4 6 6 3 UTMN 3 7 7 5 0 4 8 Zone: 10 / 11 (circle one) Error: \pm 1.8 ft / m (pdop)
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)
 Elevation: -34 ft / m Camera Name/Photograph #: 6968 NE, S, W
 Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape x ft / m or Circle Radius ft / m
 Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° > 25
 Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Fill Soil Texture code: Sandy silt | Upland or Wetland/Riparian (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: 3 BA Stems: 2 Litter: 91 Bedrock: Boulder: Stone: Cobble: 41 Gravel: Fines: 3 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Marshy area w/ treated Carpobrotus. Between developed / disturbed area to beach. Some standing water present. Evidence of previous disturbance w/in plot as well. old road through plot + cover of dead Plantago, Carpobrotus
 Disturbance code / Intensity (L,M,H): Homof M Ex L / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 42
 % Cover - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 2 Herbaceous: 40
 Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	Distichlis spicata	20		H1	Monanthochloe littoralis	1	
H1	Salicornia depressa	4		H1	Phacelia sp	<1	
H2	Juncus acutus	1		S1	Frankia Salina	1	
H1	Carpobrotus edulis	1		H1	Baccharis pilularis	<1	
H1	Suaeda carnea	10		S1	Lotus scoparius	<1	
H1	Meibomia anthemum cristallinum	<1		H1	Ambrosia psilostachya	<1	
S1	Lupinus arboreus	1		S2	Baccharis pilularis	<1	
H1	Plantago sp	1					
H1	Limonium californicum	1					

Unusual species:

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Distichlis spicata
 Field-assessed association name (optional): Distichlis spicata - Suaeda carnea
 Adjacent alliances/direction: / /
 Confidence in alliance identification: L M H Explain:
 Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information:
 Is poly >1 type: Yes / No If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>150</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC10</u>	<u>42</u>	<u>1/25/12</u>	<u>Brent Eastly Maia Lipschultz</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>304701</u> UTMN <u>3775154</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>2.3</u> ft / m / <u>pdop</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>6975 N.E.S.W</u>			
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>Sandy alluvium</u> Soil Texture code: <u>Sandy loam</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>10</u> BA Stems: <u>3</u> Litter: <u>82</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>5</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Semi-disturbed wetland area w/ some treated and some live, Carpobrotus. Some open water with raised hummocks. Surrounded by mature Myoporum, Baccharis and some willow. Bordered on all sides by road / disturbed areas.</u>			
Disturbance code / Intensity (L,M,H): <u>Ex 1 L</u> _____ / _____ / _____ / _____ "Other" _____ / _____			

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 45

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 13 Herbaceous: 4236

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H2	<i>Juncus acutus</i>	15					
H1	<i>Salicornia depressa</i>	10					
H1	<i>Frankia Salina</i>	8					
H1	<i>Carpobrotus edulis</i>	4					
S1	<i>Myoporum laetum</i>	1					
S1	<i>Baccharis pilularis</i>	2					
H1	<i>Distichlis spicata</i>	1					
H1	<i>Ambrosia psilostachya</i>	41					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Juncus acutus Provisional Alliance

Field-assessed association name (optional): Juncus acutus - Salicornia depressa

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub E Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use: Final database #: Final vegetation type name: 123 Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 11 Air photo: 412 Date: 1/25/2012 Name(s) of surveyors (circle recorder): Brent Eastly (Maia Lipschultz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 304388 UTMN 3775143 Zone: 10/11 (circle one) Error: \pm 2.1 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 1979 N, E, S, W

Stand Size (acres): 1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Alluvium Soil Texture code: Sand | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 22 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 75 = 100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Disturbed area behind dunes. Adjacent to protected marshy area and developed area.

Disturbance code / Intensity (L,M,H): Human / M Ex / L _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 31

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 1 Herbaceous: 30

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	<i>Ambrosia chamissonis</i>	10					
H1	<i>Distichlis spicata</i>	15					
H1	<i>Calystegia soldanella</i>	1					
S1	<i>Baccharis pilularis</i>	1					
H1	<i>Carpobrotus edulis</i>	1					
H1	<i>Chamissonia cheiranthifolia</i>	3					
H1	<i>Cakile maritima</i>	1					
H1	<i>Frankenia salina</i>	1					
H1	<i>Limonium californica</i>	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Distichlis spicata

Field-assessed association name (optional): Distichlis spicata - Ambrosia chamissonis

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub E Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: F51

For Office Use:	Final database #:	Final vegetation type name: <u>123</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBYC12</u>	<u>41</u>	<u>1/25/12</u>	<u>Brent Eastly</u> <u>Maia Lipschutz</u>
GPS wypt #: <u>12</u> GPS name: <u>Sub</u> Datum: <u> </u> or <u>NAD83</u> Bearing, left axis at SW pt <u> </u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>308802</u> UTMN <u>3774612</u> Zone: <u>10</u> / <u>11</u> (circle one) Error: ± <u> </u> ft / m / pdop			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance <u> </u> (meters) & bearing <u> </u> (degrees)			
Elevation: <u> </u> ft / m Camera Name/Photograph #'s: <u>6983 N,E,S,W</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape <u> </u> x <u> </u> ft / m or Circle Radius <u> </u> ft / m			
Exposure, Actual °: <u> </u> NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: <u>0</u> ° 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>Sand</u> Soil Texture code: <u>Sand</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>BA</u> Stems: <u>3</u> Litter: <u>27</u> Bedrock: <u> </u> Boulder: <u> </u> Stone: <u> </u> Cobble: <u> </u> Gravel: <u> </u> Fines: <u>70</u> = 100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Disturbed area near marsh/juncus community behind dunes. Near disturbed areas. Treated amphi and carpobrotus present. Medium veg. cover.</u>			
Disturbance code / Intensity (L,M,H): <u>Human</u> / <u>L</u> <u>EX</u> / <u>M</u> <u>treated</u> / <u> </u> / <u> </u> / <u> </u> "Other" <u> </u> / <u> </u>			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: <u> </u> Total % Vasc Veg cover: <u>40</u>			
% Cover - Conifer tree / Hardwood tree: <u> </u> / <u> </u> Regenerating Tree: <u> </u> Shrub: <u>42</u> Herbaceous: <u>40</u> <u>38</u>			
Height Class - Conifer tree / Hardwood tree: <u> </u> / <u> </u> Regenerating Tree: <u> </u> Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
S	<u>Frankenia salina</u>	<u>2</u>	<u>H1</u>
	<u>Distichlis spicata</u>	<u>20</u>	<u>H1</u>
	<u>Carpobrotus edulis</u>	<u>1</u>	
	<u>Ambrosia chamissonis</u>	<u>8</u>	
	<u>Baccharis pilularis</u>	<u><1</u>	
	<u>Calystegia soldanella</u>	<u><1</u>	
	<u>Abutilon maritima</u>	<u>1</u>	
	<u>Taraxacum officinale</u>	<u>4</u>	
S	<u>Isocoma menziesii</u>	<u><1</u>	
Unusual species: <u> </u>			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Distichlis spicata</u>			
Field-assessed association name (optional): <u>Distichlis spicata - Ambrosia chamissonis</u>			
Adjacent alliances/direction: <u> </u> / <u> </u> / <u> </u> / <u> </u>			
Confidence in alliance identification: L M H Explain: <u> </u>			
Phenology (E,P,L): Herb <u>L</u> Shrub <u> </u> Tree <u> </u> Other identification or mapping information: <u> </u>			
Is poly >1 type: Yes / <u>No</u> If yes, explain: <u> </u>			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>133</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NVBC 13</u>	<u>50</u>	<u>1/25/12</u>	<u>Brent Easty</u> <u>Maia Lipschultz</u>

GPS wypt #: _____ GPS name: Gormin Datum: _____ or NAD83. Bearing, left axis at SW pt 310 (degrees) of Long / Short side
 UTME 308710 UTMN 3774405 Zone: 10 (11) (circle one) Error: \pm 25 (ft) m / pdop
 GPS within stand? (Yes) No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: 2 ft / m Camera Name/Photograph #'s: 6989 N.E.S.W
 Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / (100) / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ (NE) (NW) (SE) (SW) Flat Variable All | Steepness, Actual °: _____ 0° (1-5°) 5-25° > 25
 Topography: Macro: top upper mid lower (bottom) | Micro: convex flat concave (undulating)
 Geology code: Sand Soil Texture code: Sand | Upland or Wetland/Riparian (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 1 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: 1 Fines: 96 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / (No) | % Hoof punch 0
 Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Back side of dunes b/t beach & Marsh. Santa Monica mts <1 km from dunes/beach. Some washed-up trash, but otherwise minimal human disturbance. Sparse vegetation.
 Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 12
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 41 Herbaceous: 12
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	<u>Abronia Maritima</u>	<u>2</u>					
H1	<u>Ambrosia chamissonis</u>	<u>41</u>					
H1	<u>Calystegia Soldanella</u>	<u>1</u>					
S	<u>Atriplex watsonii leucophylla</u>	<u>41</u>					
H1	<u>Distichlis Spicata</u>	<u>2</u>					
H1	<u>Chamissonia cheiranthifolia</u>	<u>41</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Abronia maritima - Ambrosia chamissonis
 Field-assessed association name (optional): Ambrosia chamissonis - Distichlis spicata - Abronia maritima
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb E/L Shrub _____ Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / (No) If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

(Relevé or Rapid Assessment (circle one))

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>132</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 14 Air photo: 50 Date: 1/25/12 Name(s) of surveyors (circle recorder): Brent Easty (Maia Lipschutz)

GPS wypt #: _____ GPS name: Garmin Datum: _____ or NAD83 Bearing, left axis at SW pt 310 (degrees) of Long / Short side
 UTME 308694 UTMN 3774448 Zone: 10 / 11 (circle one) Error: \pm 20 ft / m / pdop
 GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -11 ft / m Camera Name/Photograph #'s: 6994

Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius 1 ft / m
 Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Sand Soil Texture code: Sand | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 20 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 77 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Back side of dunes directly adjacent to Marshy Area. Santa Monica mts 4 km from beach. Sparse to medium veg. covered.
Transition to map code 133

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 30
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 30
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	<i>Ambrosia chamissonis</i>	25					
H1	<i>Abronia maritima</i>	1					
H1	<i>Distichlis spicata</i>	2					
H1	<i>Chamissonia cheiranthifolia</i>	2					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Abronia maritima - Ambrosia chamissonis
 Field-assessed association name (optional): Ambrosia chamissonis - Chamissonia cheiranthifolia
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L (M) H Explain: marginal w/ Ambrosia/Distichlis community
 Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FSI

For Office Use:	Final database #:	Final vegetation type name: 132	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 15	50	1/25/12	Brent Easty (Maia Lipschutz)

GPS wypt #: _____ GPS name: Garmin Datum: _____ or NAD83. Bearing, left axis at SW pt 310 (degrees) of Long / Short side
 UTM E 308628 UTM N 3774478 Zone: 10 / 11 (circle one) Error: \pm 17 ft / m / pdop
 GPS within stand? (Yes) No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -6 ft / m Camera Name/Photograph #'s: 6999 N.E.S.W
 Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius 1 ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating
 Geology code: Sand Soil Texture code: Sand Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 25 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 73 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Back dunes directly adjacent to marsh area
Santa Monica mts <1km from beach. Some washed up trash but otherwise
minimal human disturbance. Scattered Coreopsis grandiflora to the north.
Sparse to medium veg. cover.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 78

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 28

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	<i>Ambrosia chamissonis</i>	20					
H1	<i>Chamissonia cheiranthifolia</i>	7					
H1	<i>Calystegia soldanella</i>	21					
H1	<i>Distichlis spicata</i>	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Abronia maritima - Ambrosia chamissonis

Field-assessed association name (optional): Ambrosia chamissonis - Chamissonia cheiranthifolia

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>131</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC116 Air photo: _____ Date: 1/25/12 Name(s) of surveyors (circle recorder): Brent Easty (Mara Lipschutz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt. 300 (degrees) of Long / Short side
 UTME 304234 UTMN 3775159 Zone: 10 / 11 (circle one) Error: \pm 3.1 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -30 ft / m Camera Name/Photograph #'s: 7004 N.E.S.W

Stand Size (acres): <1, (1-5) >5 | Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW (SE) SW Flat Variable All | Steepness, Actual °: _____ (0°) 1-5° 5-25° > 25

Topography: Macro: top upper mid lower (bottom) | Micro: convex flat concave (undulating)
 Geology code: Sand Soil Texture code: Sand | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 1 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: 1 Fines: 96 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / (No) | % Hoof punch 0
 Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Fore dune community, sparse vegetation. Close to, but not adjacent to developed areas.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 8

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 1 Herbaceous: 87
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H1	<i>Ambrosia chamissonis</i>	5					
H	<i>Abronia maritima</i>	1					
S	<i>Atriplex watsonii leucophylla</i>	1					
H1	<i>Calystegia sordanella</i>	41					
H	<i>Cakile maritima</i>	41					
S	<i>Frankenia salina</i>	41					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Abronia maritima - Ambrosia chamissonis

Field-assessed association name (optional): Ambrosia chamissonis - Abronia maritima

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / (No) If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: F51

For Office Use:	Final database #:	Final vegetation type name: 121	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 17	10	1/26/12	Brent Eastin (Maia Lipschutz)
GPS wypt #:	GPS name:	Datum:	or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side
UTME 301080	UTMN 3777765	Zone: 10 / 11 (circle one)	Error: ± 2.0 ft / m / pdop
GPS within stand?	Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)		
Elevation:	-35 ft / m Camera Name/Photograph #'s: 7009 N, E, S, W		
Stand Size (acres):	<1, (1-5), >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius ft / m		
Exposure, Actual °:	NE NW SE SW Flat Variable All Steepness, Actual °: 0° 1-5° 5-25° > 25		
Topography: Macro: top upper mid lower bottom	Micro: convex flat concave undulating		
Geology code: Tidal Flat	Soil Texture code: Tidal Flat Upland or Wetland/Riparian (circle one)		
% Surface cover:	(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)		
H20: BA Stems: 2 Litter: 25 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 33 =100%			
% Current year bioturbation 1	Past bioturbation present? Yes / No % Hoof punch 0		
Fire evidence: Yes / (No) (circle one)	If yes, describe in Site history section, including date of fire, if known.		
Site history, stand age, comments: Occasionally flooded wetland, medium vegetative cover. Potentially some tidal influence, ~500 m from dunes/beach. Adjacent to open water.			
Disturbance code / Intensity (L,M,H): / / / / / / / / "Other" /			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)		% Non-Vasc cover: Total % Vasc Veg cover: 2.2	
% Cover - Conifer tree / Hardwood tree: /		Regenerating Tree: Shrub: Herbaceous: 22	
Height Class - Conifer tree / Hardwood tree: /		Regenerating Tree: Shrub: Herbaceous: 01	
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H1	Distichlis spicata	12	
H1	Monanthes chloa littoralis	2	
H1	Limnium californica	<1	
H1	Arthrocnemum subterminale	6	
H1	Salicornia depressa	2	
Unusual species:			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: Distichlis spicata			
Field-assessed association name (optional): Distichlis spicata - A. subterminale (or pickleweed spp.)			
Adjacent alliances/direction: / /			
Confidence in alliance identification: L M H Explain:			
Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:			
Is poly >1 type: Yes / (No) If yes, explain:			

* Key: ✓

see notes →

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS1

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CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>210</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 19</u>	<u>10</u>	<u>1/26/12</u>	<u>Brent Eastby</u> <u>Maia Lipschultz</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83, Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 301125 UTMN 3777616 Zone: 10 / 11 (circle one) Error: \pm 1.9 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: -33 ft / m Camera Name/Photograph #'s: 7017 ENE 7018 WSW
 Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25
 Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Fill Soil Texture code: Fill | Upland or Wetland/Riparian (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: 5 Gravel: 10 Fines: 81 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Coreopsis community along either side of a raised berm on either side of a paved rd. that runs WSW to ENE. Patches of treated carpobrotus patches present.
 Disturbance code / Intensity (L,M,H): Humid H / / / / / "Other" / /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 28
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 10 Herbaceous: 18
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 02 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
1 H2	<u>Coreopsis gigantea</u>	<u>15</u>		H	<u>Urtica urens</u>	<u><1</u>	
3 S	<u>Artemisia californica</u>	<u>2</u>		H	<u>Astragalus trichopodus</u>	<u><1</u>	
2 S	<u>Atriplex lentiformes</u>	<u>7</u>		H	<u>Conyza canadensis</u>	<u><1</u>	
E	<u>Baccharis pilularis</u>	<u><1</u>		H	<u>Urtica dioica</u>	<u><1</u>	
H	<u>Limnium californica</u>	<u>1</u>		S	<u>Baccharis salicifolia</u>	<u><1</u>	
S	<u>Mycoporum laetum</u>	<u><1</u>		H	<u>Centaurea melitensis</u>	<u><1</u>	
H	<u>Marubium vulgare</u>	<u><1</u>		E	<u>Fabaceae (clover)</u>	<u><1</u>	
H	<u>Carpobrotus edulis</u>	<u><1</u>					
5 N	<u>Fragaria salina</u>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Coreopsis gigantea
 Field-assessed association name (optional): Coreopsis gigantea - Atriplex lentiformes
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb L Shrub EL Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / No If yes, explain: _____

(Revised July 15 2010) **Project Code:** FSI

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FSI

For Office Use:	Final database #:	Final vegetation type name: 125	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBYC 21	18	1/26/12	Brent Eastly (Maia Lipschutz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt 360 (degrees) of Long / Short side
 UTME 301358 UTMN 3777252 Zone: 10 / 11 (circle one) Error: ± 2.4 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: -34 ft / m Camera Name/Photograph #'s: 7024
 Stand Size (acres): 1 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25
 Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)
 % Surface cover: _____ (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: 5 BA Stems: 2 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 93 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Marshy area directly behind dunes. Slightly raised
Marsh, standing water only around edges
 Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 77
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 20 Herbaceous: 57
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Distichlis spicata</i>	20					
H	<i>Jaumea carnosa</i>	20					
H	<i>Monanthochloe littoralis</i>	5					
H	<i>Limonium californica</i>	2					
H	<i>Salicornia depressa</i>	15					
H	<i>Cuscuta salina</i>	<1					
H	<i>Frankenia salina</i>	20					
H	<i>A. subterminalis</i>	5					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Distichlis spicata
 Field-assessed association name (optional): Distichlis spicata - Frankenia salina - Jaumea carnosa
 Adjacent alliances/direction: Distichlis spicata - Salicornia depressa, Juncus /
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FSI

For Office Use:	Final database #:	Final vegetation type name: <u>150</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC 22</u>	Air photo: <u>18</u>	Date: <u>1/26/12</u>	Name(s) of surveyors (circle recorder): <u>Brant Eastly (Maia Lipschultz)</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> , Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>303372</u> UTMN <u>3777233</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>2.1</u> ft / m / (pdop)			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-34</u> ft / (m) Camera Name/Photograph #'s: <u>7028</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>Sand</u> Soil Texture code: <u>Sand</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>3</u> Litter: <u>20</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>77</u> =100%			
% Current year bioturbation <u>7</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>7</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Juncus stand directly behind dunes before low marsh & standing water begins, soil still sandy. Dense veg.</u>			
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>79</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>5</u> Herbaceous: <u>74</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>H2</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S = Shrub, H= Herb, E = SEedling, A = SApling, N= Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
1	H <u>Juncus acutus</u>	<u>35</u>	
3	H <u>Distichlis spicata</u>	<u>15</u>	
5	H <u>Frankenia salina</u>	<u>5</u>	
2	H <u>Joumea carnosa</u>	<u>20</u>	
	H <u>Limonium californica</u>	<u>2</u>	
	H <u>Arthrocnemum subterminale</u>	<u>2</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Juncus acutus</u>			
Field-assessed association name (optional): <u>Juncus acutus - Joumea carnosa</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

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(Revised July 15 2010) **Project Code:** FSI

[illegible]

(Relevé or Rapid Assessment (circle one))

(Revised July 15 2010) **Project Code:** FS1

For Office Use: Final database #: Final vegetation type name: 143 Alliance Association *Sarcocornia monanthachloa*

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 24 Air photo: 18 Date: 1/26/2012 Name(s) of surveyors (circle recorder): Brent Easting, Maia Lipschutz

GPS wypt #: GPS name: Datum: or NAD83, Bearing, left axis at SW pt 310 (degrees) of Long / Short side
UTME 301406 UTMN 3727370 Zone: 10/11 (circle one) Error: ± 2.1 ft / m / p.dop
GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)

Elevation: 35 ft / m Camera Name/Photograph #'s: 7033 N.E.S.W

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius ft / m
Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
Geology code: Tidal Flats Soil Texture code: Tidal Flats | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
H2O: BA Stems: 2 Litter: 1 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 97 =100%

% Current year bioturbation 2 Past bioturbation present? Yes / No | % Hoof punch 2
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Low/mid marsh. Sparse vegetation, no standing H₂O, but areas of bare mud that may become open water.

Disturbance code / Intensity (L,M,H): / / / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 18

% Cover - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: Herbaceous: 18
Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: Herbaceous: 8
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Monanthachloa littoralis</i>	2					
H	<i>Salicornia depressa</i>	2					
H	<i>Limonium californica</i>	<1					
H	<i>A. subterminale</i>	8					

Unusual species: / / / / /

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: *Arthrocnemum subterminale*
Field-assessed association name (optional): *Monanthachloa littoralis - A. subterminale*
Adjacent alliances/direction: / / / / /
Confidence in alliance identification: L M H Explain: /
Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information: /
Is poly >1 type: Yes / No If yes, explain: /

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>143</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 25 Air photo: 10 Date: 12/6/12 Name(s) of surveyors (circle recorder): Brent Easting (Maia Lipschultz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side
 UTME 301390 UTMN 3777429 Zone: 10 / 11 (circle one) Error: \pm 2.0 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7037 N.E., S.W

Stand Size (acres): <1 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 96 =100%

% Current year bioturbation 2 Past bioturbation present? Yes / No | % Hoof punch 2
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Mid marsh area. Sparse to dense veg. No standing water, patches of bare ground.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 18

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 18
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
3	<u>H Distichlis spicata</u>	<u>4</u>					
4	<u>H Limonium californica</u>	<u><1</u>					
1	<u>H A. subterminalis</u>	<u>8</u>					
2	<u>H Monanthochloa littoralis</u>	<u>5</u>					
	<u>H Sulicocornia depressa</u>	<u>1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Arthrocnemum subterminale

Field-assessed association name (optional): A. subterminalis - Monanthochloa littoralis

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

*Suncus pics 7042-7044 *

(Revised July 15 2010) **Project Code:** FS1

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CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FSI

For Office Use:	Final database #:	Final vegetation type name: 233	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 27		1/26/12	Brent Easthy Maia Lipschub

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 5 (degrees) of Long / Short side
 UTME 302591 UTMN 3776195 Zone: 10 / 11 (circle one) Error: ± _____ ft / m / pdop
 GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: _____ ft / m Camera Name/Photograph #'s: 7049 N.E.S.W
 Stand Size (acres): <1, 1-5, (>5) Plot Size (m²): 10 / (100) 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW (Flat) Variable All | Steepness, Actual °: _____ (0°) 1-5° 5-25° > 25
 Topography: Macro: top upper mid lower (bottom) | Micro: convex (flat) concave undulating
 Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or (Wetland/Riparian) (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 80 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 18 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / (No) | % Hoof punch 0
 Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Mid-marsh area adjacent to road / developed area. Adjacent to standing H₂O, but this plot currently dry. Lots of dead veg.
 Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 77
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 35 Herbaceous: 77
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
1.5	X Frankenia Salina	35					
4	H Salicornia depressa	4					
	H Samia carnosa	2					
3	H Distichlis spicata	7					
	H Cuscuta salina	<1					
4	H Monanthochloa littoralis	4					
2	H A. subterminale	25					
? -> S	H Atriplex californica	<1					
	H Gnaphalium sp.	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____
 Field-assessed association name (optional): Frankenia salina - A. subterminale Provisional Alliance
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L M H Explain: ↑ ARSN cover unusual, w/ little previous sampling or analysis
 Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / (No) If yes, explain: _____

(Revised July 15 2010) **Project Code:** FS1

$$\begin{matrix} 1 \\ 2 \\ 3 \end{matrix} S$$

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FSI

For Office Use:	Final database #:	Final vegetation type name: <u>102</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 29</u>	<u>31</u>	<u>1/26/12</u>	<u>Brent Eastly</u> <u>(Maia Lipschutz)</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 35 (degrees) of Long / Short side
 UTME 306801 UTMN 3776115 Zone: 10 / 11 (circle one) Error: \pm 2.1 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -33 ft / m Camera Name/Photograph #'s: 7057 N, E, S, W

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 80 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 18 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Upper marsh adjacent to Canal. Dense veg.
Near disturbed/developed area

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 70
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 2 Herbaceous: 68
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
1	H <u>Salicornia depressa</u>	<u>65</u>					
2	H <u>Suaeda taxifolia</u>	<u>41</u>					
	H <u>Cuscuta salina</u>	<u>2</u>					
	H <u>Distichlis spicata</u>	<u>1</u>					
2	H <u>Frankenia salina</u>	<u>2</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Salicornia depressa
 Field-assessed association name (optional): Salicornia depressa - Frankenia salina (w/or w/o FRSA)
 Adjacent alliances/direction: _____ / _____ see rules 1
 Confidence in alliance identification: L M H Explain: low FRSA cover, but it is present ✓
 Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>234</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 31 Air photo: 80 Date: 1/27/12 Name(s) of surveyors (circle recorder): Benk Fastig (Maia Lipschitz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 5 (degrees) of Long / Short side

UTME 308802 UTMN 3774618 Zone: 10 / 11 (circle one) Error: \pm 2.6 ft / m / pdop

GPS within stand? Yes No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7065 W 7066 E

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 3 Litter: 45 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 52 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Raised area w/ in tidal marsh. Dense veg.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 73

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 5 Herbaceous: 73

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Monanthochloe littoralis</i>	<u>55</u>					
H	<i>Suaeda cornosa</i>	<u>5</u>					
H	<i>Distichlis spicata</i>	<u>5</u>					
H	<i>Frankenia salina</i>	<u>5</u>					
H	<i>Atriplex californica</i>	<u><1</u>					
H	<i>Limnium californica</i>	<u><1</u>					
H	<i>Suaeda estropea</i>	<u>1</u>					
H	<i>Salicornia depressa</i>	<u>1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): Monanthochloe littoralis - S. depressa

Adjacent alliances/direction: Salicornia depressa / Batis, maritima - Salicornia depressa

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>102</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC-32</u>	<u>50</u>	<u>1/27/12</u>	<u>Brent Easthy</u> <u>Maina Lifshutz</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> , Bearing, left axis at SW pt <u>10</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>308800</u> UTMN <u>3774632</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>2.9</u> ft / m / (pdop)			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>7067 N, E, S, W</u>			
Stand Size (acres): <u><1</u> , <u>1-5</u> , >5 Plot Size (m²): 10 / <u>100</u> / 400 / 1000 Plot Shape <u>15</u> x <u>10</u> ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>Tidal Flat</u> Soil Texture code: <u>Tidal Flat</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>3</u> Litter: <u>2</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>95</u> =100%			
% Current year bioturbation <u>15</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Back marsh adjacent to Highway + berm w/ Monanthochloe littoralis, dense veg.</u>			

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 55

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 15 Herbaceous: 40

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
<u>1</u>	<u>H Salicornia depressa</u>	<u>40</u>					
<u>2</u>	<u>H Frankenia salina</u>	<u>15</u>					
<u>3</u>	<u>H Suaeda esterea</u>	<u>41</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): Salicornia depressa - Frankenia salina

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>103</u>	Alliance Association				
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION							
Polygon/Stand #: <u>NBVC 33</u>	Air photo: <u>50</u>	Date: <u>1/27/12</u>	Name(s) of surveyors (circle recorder): <u>Brent Eastby</u> <u>Maia Lipschutz</u>				
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side							
UTME <u>308791</u> UTMN <u>3774625</u> Zone: 10 / <u>1T</u> (circle one) Error: ± <u>2.1</u> ft / m / <u>pdop</u>							
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)							
Elevation: <u>-31</u> ft / m Camera Name/Photograph #'s: <u>7071 W, 7072 E</u>							
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m							
Exposure, Actual °: _____ <u>NE</u> NW SE SW Flat Variable All Steepness, Actual °: _____ 0° <u>1-5°</u> 5-25° > 25							
Topography: Macro: top upper mid lower <u>bottom</u> Micro: <u>convex</u> flat concave undulating							
Geology code: <u>Tidal Flat</u> Soil Texture code: <u>Tidal Flat</u> Upland or <u>Wetland/Riparian</u> (circle one)							
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)							
H20: _____ BA Stems: <u>3</u> Litter: <u>35</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>62</u> =100%							
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>							
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.							
Site history, stand age, comments: <u>Back Marsh Sueda stand,</u>							
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____							
II. HABITAT AND VEGETATION DESCRIPTION							
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)							
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)							
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>53</u>							
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>10</u> Herbaceous: <u>83</u> <u>43</u>							
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>							
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m							
Species, Stratum, and % cover. Stratum categories: T=Tree, S = Shrub, H= Herb, E = SEedling, A = SApling, N= Non-vascular.							
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.							
Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Salicornia depressa</i>	26					
H	<i>Sueda estuaria</i>	10					
H	<i>Suaeda carnea</i>	10					
H	<i>Frankenia salina</i>	10					
H	<i>Distichlis spicata</i>	1					
H	<i>Limonium californicum</i>	1					
H	<i>Monanthochloe littoralis</i>	1					
H	<i>Batis maritima</i>	<1					
Unusual species: _____							
III. INTERPRETATION OF STAND							
Field-assessed vegetation alliance name: <u>S. depressa</u>							
Field-assessed association name (optional): <u>Salicornia depressa - Suaeda carnea</u>							
Adjacent alliances/direction: <u>Salicornia depressa</u> / <u>Monanthochloe littoralis</u> /							
Confidence in alliance identification: L M H Explain: _____							
Phenology (E,P,L): Herb <u>L</u> Shrub _____ Tree _____ Other identification or mapping information: _____							
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____							

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>262</u>	Alliance Association				
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION							
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):				
<u>NBVC 34</u>	<u>50</u>	<u>1/27/12</u>	<u>Brent Eastby</u> <u>Maria Lipschultz</u>				
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side							
UTME <u>3 0 8 8 5 0</u> UTMN <u>3 7 7 4 5 6 7</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>2.0</u> ft / m / pdop							
GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)							
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>7074 N.E.S.W</u>							
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m							
Exposure, Actual °: _____ NE NW SE SW Flat <u>Variable</u> All Steepness, Actual °: _____ 0° <u>1-5°</u> 5-25° > 25							
Topography: Macro: top upper mid lower <u>bottom</u> Micro: <u>convex</u> flat concave undulating							
Geology code: _____ Soil Texture code: <u>Sandy Fill</u> Upland or Wetland/Riparian (circle one)							
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)							
H20: _____ BA Stems: <u>3</u> Litter: <u>10</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>87</u> =100%							
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>							
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.							
Site history, stand age, comments: <u>Upland surrounded by marsh. Fairly random plant assortment. sparse-med veg. density. Along berm. alternate w/ patches of monanthochloa littoralis</u>							
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____							
II. HABITAT AND VEGETATION DESCRIPTION							
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)							
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)							
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>17</u>							
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>9</u> Herbaceous: <u>87</u>							
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>02</u> Herbaceous: <u>01</u>							
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m							
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.							
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.							
Strata	Species	% cover	C	Strata	Species	% cover	C
<u>1</u> S	<u>Artemisia californica</u>	<u>1</u>		S	<u>Atriplex californica</u>	<u>1</u>	
S	<u>Isocoma menziesii</u>	<u>5</u>					
H	<u>Crocosmia gigantea</u>	<u>1</u>					
H	<u>Suaeda taxifolia</u>	<u>1</u>					
<u>1</u> H	<u>Distichlis spicata</u>	<u>5</u>					
<u>2</u> S	<u>Atriplex lentiformes</u>	<u>3</u>					
<u>5</u> H	<u>Fouquieria salina</u>	<u>1</u>					
S	<u>Hesperis Yucca whipplei</u>	<u>1</u>					
S	<u>Opuntia littoralis</u>	<u>1</u>					
Unusual species: _____							
III. INTERPRETATION OF STAND							
Field-assessed vegetation alliance name: <u>Isocoma menziesii</u>							
Field-assessed association name (optional): <u>Distichlis spicata - Isocoma menziesii</u>							
Adjacent alliances/direction: <u>Monanthochloa littoralis</u> / _____							
Confidence in alliance identification: L M H Explain: _____							
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____							
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____							

(Revised July 15 2010) **Project Code:** FS1

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>231</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 36</u>	<u>19</u>	<u>1/27/12</u>	<u>Brent Eastly</u> <u>Maria Lipschultz</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 302558 UTMN 3776788 Zone: 10 / 11 (circle one) Error: ± 23 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7077

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 3 Litter: 87 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 10 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Slightly raised marsh area w/ mudflats.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 65

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 60 Herbaceous: 5

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
1-5	<u>Frankenia salina</u>	<u>60</u>					
2	<u>Salicornia depressa</u>	<u>5</u>					
3	<u>Monorhachis littoralis</u>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: F. salina

Field-assessed association name (optional): Frankenia salina - Salicornia depressa (w/ or w/o S. dep.)

Adjacent alliances/direction: Salicornia depressa / Open H2O / mudflats /

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

no 15% cover

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS1

For Office Use:	Final database #:	Final vegetation type name: 02	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NB1C37	19	1/27/12	Brent Eastly Maia Lipschutz

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 362508 UTMN 3776750 Zone: 10/(11) (circle one) Error: ± 1.9 ft/m/~~pdop~~

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7078

Stand Size (acres): 1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape x ft / m or Circle Radius ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ (0°) 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover:	(Incl. outcrops)	(>60cm diam)	(25-60cm)	(7.5-25cm)	(2mm-7.5cm)	(Incl sand, mud)
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H20: BA Stems: 2 Litter: 10 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 87 = 100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Mid-marsh stand of *Frankenia* adjacent to mudflats/
open H₂O. esp Along margin of open H₂O.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: **S1** seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: **H1** (<12" plant ht.), **H2** (>12" ht.)

% Non-Vasc cover: _____ **Total % Vasc Veg cover:** 30

% Cover - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 15 Herbaceous: ~~30~~ 15

Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 01 Herbaceous: 01

Height classes: 01= $\leq 1/2$ m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10= ≥ 50 m

Species, Stratum, and % cover. Stratum categories: T=Tree, S = Shrub, H= Herb, E = SEedling, A = SApling, N= Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

[illegible]

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: S. depressa

Field-assessed association name (optional): *Frankenia Salina-Salicornia depressa* ← need 15% cover ✓

Adjacent alliances/direction: Mud flats / open H₂O / *Salicornia depressa* /

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb ☒ Shrub ☐ Tree ☐ Other identification or mapping information:

Is poly >1 type: Yes ☒ No ☐ If yes, explain:

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FSI

1
25

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS1

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

NYC	Date	Name(s) of signers (circle recorder)
NYC 39	1/18/19	1/27/12 Brent Eastly (Maia Lipschitz)

UTME 302784 UTMN 3776825 Zone: 10 / 11 (circle one) Error: ± 1.9 ft / m / p.dop

Elevation: 34 ft/m Camera Name/Photograph #'s: 7084

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

H20: 3 BA Stems: 3 Litter: 40 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 37 =100%

Site history, stand age, comments: High growth belt near H & road across

Disturbance code / Intensity (L,M,H): ____/____/____/____/____/____/____/____ "Other" ____/____

Tree DBH : **T1** (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 78

Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 01 Herbaceous: 01

Height classes: 01= \leq 1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10= \geq 50m

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Unusual species: _____

field-assessed vegetation alliance name: *F. salina* (meets criteria for *D. salicata* as well)

adjacent alliances/direction: _____ / _____ / _____

Phenology (E,P,L): Herb ☒ Shrub ☐ Tree ☐ Other identification or mapping information:

poly >1 type: Yes / ☒ No If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: F51

For Office Use:	Final database #:	Final vegetation type name: 232	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVL 40 Air photo: 18/19 Date: 1/27/12 Name(s) of surveyors (circle recorder): Brent Eastly (Maia Lipschutz)

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 40 (degrees) of Long / Short side
 UTME 302792 UTMN 3776773 Zone: 10 / 1 (circle one) Error: ± 1.8 ft / m / p (circle one)
 GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -35 ft / m Camera Name/Photograph #'s: 7085

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Tidal Flat Soil Texture code: Tidal Flat | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 3 Litter: 87 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 10 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / (No) | % Hoof punch 0
 Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Mid to high marsh bit berms with carpobrotus. Dense veg.

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 69
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 30 Herbaceous: 39
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
2 S	Frankenia salina	30					
1	Distichlis spicata	35					
3	Salicornia depressa	2					
	Cuscuta salina	21					
3	Amaranthus albus (senescent)	2					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: F. salina
 Field-assessed association name (optional): Distichlis spicata - Frankenia salina
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information: _____
 Is poly >1 type: Yes / (No) If yes, explain: _____

(Revised July 15 2010) **Project Code:** FS1

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added 106 *28* *EN0112* *This actually could be a different alliance due to higher % of districts.

~~* Notes on back *~~

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS1

For Office Use:	Final database #:	Final vegetation type name: <u>126</u>	Alliance Association				
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION							
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):				
<u>NBVC 43</u>	<u>18</u>	<u>1/27/12</u>	<u>Brent Eastby</u> <u>Main Lipschitz</u>				
GPS wpyt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side							
UTME <u>301760</u> UTMN <u>3777339</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>25</u> ft / m / pdop							
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)							
Elevation: <u>33</u> ft / m Camera Name/Photograph #'s: <u>7101</u>							
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m							
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25							
Topography: Macro: top upper mid lower <u>bottom</u> Micro: <u>convex</u> flat concave undulating							
Geology code: <u>Fill</u> Soil Texture code: <u>Fill</u> <u>Upland</u> or Wetland/Riparian (circle one)							
% Surface cover: _____ (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)							
H20: _____ BA Stems: <u>2</u> Litter: <u>78</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>20</u> =100%							
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>							
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.							
Site history, stand age, comments: <u>Treated Ceropolobus stand now covered w/ weedy annuals. Successional community</u>							
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____							
II. HABITAT AND VEGETATION DESCRIPTION							
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)							
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)							
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>37</u>							
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>3</u> Herbaceous: <u>34</u>							
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>31</u> Herbaceous: <u>0</u>							
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m							
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.							
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.							
Strata	Species	% cover	C	Strata	Species	% cover	C
	H <u>Scarlet Pimpernell</u>	<u>41</u>					
	H <u>Gallium aparine</u>	<u>15</u>					
	H <u>Lupinus succulentus</u>	<u>41</u>					
	H <u>Oxalis corniculata</u>	<u>41</u>					
	H <u>Toxicum officinale</u>	<u>1</u>					
	H <u>Distichlis spicata</u>	<u>15</u>					
	H <u>Farkentia salina</u>	<u>3</u>					
	H <u>A. subterminalis</u>	<u>2</u>					
Unusual species: _____							
III. INTERPRETATION OF STAND							
Field-assessed vegetation alliance name: <u>Distichlis spicata</u>							
Field-assessed association name (optional): <u>Distichlis spicata - Gallium aparine Annual forbs</u>							
Adjacent alliances/direction: _____ / _____ / _____							
Confidence in alliance identification: L M H Explain: _____							
Phenology (E,P,L): Herb <u>E</u> Shrub _____ Tree _____ Other identification or mapping information: _____							
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____							

(Revised July 15 2010) **Project Code:** FS1

[illegible]

(Relevé or Rapid Assessment (circle one))

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: 233	Alliance: <i>Arthrocnemum subterminale</i> Association: <i>Arthrocnemum subterminale - Sarcocornia pacifica</i>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 101	Air photo: 67	Date: 2/13/12	Name(s) of surveyors (circle recorder): Brent Easton, Maia Lipschutz
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 320 (degrees) of Long / (Short) side

UTME 302984 UTMN 3775964 Zone: 10 / 11 (circle one) Error: ± 2.2 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 34 ft / m Camera Name/Photograph #'s: 151

Stand Size (acres): <1, (1-5), >5 | Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape 5 x 20 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW (Flat) Variable All | Steepness, Actual °: 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower (bottom) | Micro: convex flat concave (undulating)

Geology code: KIAL Soil Texture code: ts | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 3 Litter: 87 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 10 =100%

% Current year bioturbation 3 Past bioturbation present? Yes / (No) | % Hoof punch 0

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

Mixed Marsh stand. Surrounded by treated *Carpobrotus* / berms

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 50

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 15 Herbaceous: 35

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Salicornia depressa</i>	10					
H	<i>Arthrocnemum subterminale</i>	18					
S	<i>Frankia Salina</i>	15					
H	<i>Distichlis spicata</i>	5					
H	<i>Suaeda frutescens</i>	1					
H	<i>Galium aparine</i>	<1					
H	<i>Monardella villosa</i>	<1					
		50					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: A. Subterminalis

Field-assessed association name (optional): A. Subterminalis - F. Salina

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: D M H Explain: ~ 30% FRSA cover

Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:

Is poly >1 type: Yes / (No) If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) **Project Code:** FS2

For Office Use:	Final database #:	Final vegetation type name: <u>181/190</u>	Alliance <u>Spartina foliosa</u> Association <u>Spartina foliosa</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVC102</u>	Air photo: <u>81</u>	Date: <u>2/13/2012</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTM E 1190612.4509 W UTM N 340604.1221 N Zone: 10 / 11 (circle one) Error: ± _____ ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -35 ft (m) Camera Name/Photograph #'s: 8345 155-158

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: MIAL Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: 2 BA Stems: 1 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 95 =100%

% Current year bioturbation 5 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Low Marsh Spartina stand, partially inundated at high tide

Disturbance code / Intensity (L,M,H): 28/L / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 20 Total % Vasc Veg cover: 7

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 41 Herbaceous: 7

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=Seedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>Spartina densiflora foliosa</u>	<u>6</u>					
H	<u>Baccharis maritima</u>	<u>41</u>					
N	<u>Algae</u>	<u>20</u>					
H	<u>Salicornia depressa</u>	<u>41</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Spartina densiflora foliosa

Field-assessed association name (optional): Algae - Spartina densiflora foliosa

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Lat
Long

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FSZ

For Office Use:	Final database #:	Final vegetation type name: <u>233</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 103</u>		<u>2/14/12</u>	<u>Brent Eastly</u> <u>Maia Lipschultz</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 70 (degrees) of Long / Short side

UTME 306029 UTMN 3775951 Zone: 10 11 (circle one) Error: \pm 2.2 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -31 ft / m Camera Name/Photograph #'s: 7159-7163

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 5 x 20 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: M=AL Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 3 Litter: 90 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 47=100%

% Current year bioturbation 2 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Raised marsh to mud flats in the middle of a pond / salt marsh area surrounded by roads & berms. Highly altered hydrology

Disturbance code / Intensity (L,M,H): Hydro H 28/11 / / / / "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 65

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 25 Herbaceous: 40

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=Seedling, A=SAPling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<u>Frankenia salina</u>	<u>25</u>					
H	<u>Dichelis spicata</u>	<u>4</u>					
H	<u>A. subterminalis</u>	<u>35</u>					
H	<u>Monanthochloe littoralis</u>	<u>4</u>					
H	<u>Polygomon monspeliensis</u>	<u>21</u>					
H	<u>Belt Thistle Cirsium vulgare</u>	<u>21</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: A. subterminalis

Field-assessed association name (optional): A. subterminalis - F. salina

Adjacent alliances/direction: Myoporum - C. adulis 1 E, N, W A. S. depressa 1 S, W

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: 104	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBYC104		2/14/12	BE ML
GPS wypt #: GPS name: Datum: or NAD83. Bearing, left axis at SW pt 50 (degrees) of Long / Short side			
UTME 3 08 013 UTMN 3 775246 Zone: 10 / 11 (circle one) Error: ± 3.5 ft / m / pdop			
GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)			
Elevation: -34 ft / m Camera Name/Photograph #'s: 7176-7179			
Stand Size (acres): <1, (1-5), >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius ft / m			
Exposure, Actual °: NE NW SE SW (Flat) Variable All Steepness, Actual °: 0° 1-5° 5-25° >25			
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating			
Geology code: SAAL/MIA Soil Texture code: TS Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: BA Stems: 2 Litter: 2 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 96 =100%			
% Current year bioturbation 2 Past bioturbation present? Yes / No % Hoof punch 0			
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: Marsh area adjacent to the PCH. Channel bordering stand. Born to the S. New unknown sp. dominant/co-dominant. Saturated to very wet soil. Very mixed veg. Hard to determine dominants.			
Disturbance code / Intensity (L,M,H): 08 / L 28 / L 1 1 1 "Other" 1			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 66			
% Cover - Conifer tree / Hardwood tree: 1 Regenerating Tree: Shrub: 20 Herbaceous: 46			
Height Class - Conifer tree / Hardwood tree: 1 Regenerating Tree: Shrub: 01 Herbaceous: 01			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H	Triglochin concinnum	15	X
S	Suaeda taxifolia	5	
S	Buthis maritima	21	
H	Limonium californica	1	
H	S. depressa	20	
S	F. Salina	15	
H	S. carnososa	10	
Unusual species:			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: S. depressa			
Field-assessed association name (optional): S. depressa - F. Salina - wake. Sp #1 Triglochin concinnum			
Adjacent alliances/direction: 1 1			
Confidence in alliance identification: L M H Explain: ↑ % of S. carnososa indicates code 104			
Phenology (E,P,L): Herb E Shrub L Tree Other identification or mapping information:			
Is poly >1 type: Yes / No (No) If yes, explain:			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>270</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC105</u>	<u>83</u>	<u>2/14/12</u>	<u>BE ML</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 307999 UTMN 3775326 Zone: 10 / 11 (circle one) Error: ± 1.9 ft / m / pdop _____
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -31 ft / m Camera Name/Photograph #'s: 7183

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: OTHE Soil Texture code: Fill | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 1 Litter: 5 Bedrock: _____ Boulder: 10 Stone: 10 Cobble: 10 Gravel: 10 Fines: 54 =100%
 % Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 8
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Raised "upland" area. Toe of slope cut off by PCH. Riprap fill substrate.

Disturbance code / Intensity (L,M,H): 05 / L 25 / H / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 25
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 20 Herbaceous: 5
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 03 Herbaceous: 02
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<i>Coreopsis gigantea</i>	1		H	<i>Distichlis spicata</i>	<1	
S	<i>Artemisia californica</i>	6		S	<i>Atriplex lentibarnis</i>	5	
H	<i>Amaranthus donax</i>	<1					
S	<i>Malosma laurina</i>	4					
S	<i>Baccharis pillularis</i>	1					
S	<i>Rhus ovata</i>	1					
H	<i>Pennisetum setaceum</i>	5					
S	<i>Eriogonum</i> sp	2					
S	<i>Salvia melifera</i>	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Artemisia californica
 Field-assessed association name (optional): Artemisia californica - Pennisetum setaceum
 Adjacent alliances/direction: Salt marsh / S. depressa / SW Road _____ / N
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Riprap /
Fill
Substrate

Photo# →
7180-
7182

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>234</u>	Alliance <u>Sarcocornia pacifica (Salicornia depressa)</u> Association <u>Sarcocornia pacifica - Monanthochloa</u> Special Stands
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVC106</u>	Air photo: <u>83</u>	Date: <u>2/14/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 307902 UTMN 3775398 Zone: 10 / 11 (circle one) Error: ± 1.7 ft / m (pdop)

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 71810-7187

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: MIAL Soil Texture code: Ed | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 4 Litter: 48 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 48=100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Raised berm b/t salt marsh stands.

Disturbance code / Intensity (L,M,H): 25 / H 28 / L _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 64

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 13 Herbaceous: 51

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 0 Herbaceous: 0

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>M. littoralis</i>	35		H	<i>Bromus madritensis</i>	1	
H	<i>L. californica</i>	1		S	<i>C. gigantea</i>	21	
H	<i>S. carnosus</i>	10		H	<i>Suaeda acutus</i>	21	
S	<i>A. watsonii</i>	10					
H	<i>A. subterminalis</i>	3					
H	<i>D. spicata</i>	21					
S	<i>E. salina</i>	3					
H	<i>S. depressa</i>	1					
S	<i>S. taxifolia</i>	21					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: M. littoralis

Field-assessed association name (optional): M. littoralis - S. carnosus - A. watsonii

Adjacent alliances/direction: S. depressa _____ 1 N to S _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: F32

For Office Use:	Final database #:	Final vegetation type name: <u>104</u>	Alliance Association				
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION							
Polygon/Stand #: <u>NB14107</u>	Air photo:	Date: <u>2/14/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>				
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt <u>70</u> (degrees) of <u>Long</u> / <u>Short</u> side							
UTME <u>307829</u> UTMN <u>3775565</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>2.7</u> ft / m / <u>pdop</u>							
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)							
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>7188-7191</u>							
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m							
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25							
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating							
Geology code: <u>SIAL</u> Soil Texture code: <u>TS</u> Upland or <u>Wetland/Riparian</u> (circle one)							
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)							
H20: _____ BA Stems: <u>2</u> Litter: <u>18</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>80</u> =100%							
% Current year bioturbation _____ Past bioturbation present? Yes / No % Hoof punch _____							
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.							
Site history, stand age, comments: <u>Mid-marsh stand similar to 104. In the middle of salt marsh channels</u>							
Disturbance code / Intensity (L,M,H): <u>281 L</u> _____ / _____ / _____ / _____ "Other" _____ / _____							
II. HABITAT AND VEGETATION DESCRIPTION							
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)							
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)							
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>50</u>							
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>7</u> Herbaceous: <u>43</u>							
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>							
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m							
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.							
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.							
Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Triglochin coelestinum</i>	<u>7</u>					
H	<i>J. carnosus</i>	<u>15</u>					
H	<i>S. depressa</i>	<u>20</u>					
H	<i>L. californica</i>	<u>1</u>					
S	<i>S. taxifolia</i>	<u>2</u>					
H	<i>D. spicata</i>	<u>41</u>					
S	<i>F. salina</i>	<u>5</u>					
Unusual species: _____							
III. INTERPRETATION OF STAND							
Field-assessed vegetation alliance name: <u>S. depressa</u>							
Field-assessed association name (optional): <u>S. depressa - J. carnosus</u>							
Adjacent alliances/direction: _____ / _____							
Confidence in alliance identification: L M H Explain: _____							
Phenology (E,P,L): Herb <u>E/L</u> Shrub <u>E</u> Tree _____ Other identification or mapping information: _____							
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____							

(Revised July 15 2010) **Project Code:** TS7

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CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: 432

For Office Use:	Final database #:	Final vegetation type name: <u>104</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>N81C 110</u>	<u>73</u>	<u>2/14/12</u>	<u>BE ML</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt <u>20</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>307548</u> UTMN <u>3775764</u> Zone: 10 / <u>(1)</u> (circle one) Error: \pm <u>2.7</u> ft / m / <u>(pdop)</u>			
GPS within stand? Yes / <u>No</u> If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-33</u> ft / <u>m</u> Camera Name/Photograph #'s: <u>7200-7203</u>			
Stand Size (acres): <u><1</u> , <u>(1-5)</u> , <u>>5</u> Plot Size (m ²): 10 / <u>100</u> / 400 / 1000 Plot Shape <u>10</u> x <u>10</u> ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>MIAL</u> Soil Texture code: <u>T3/PA</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>BA</u> Stems: <u>3</u> Litter: <u>5</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>92</u> =100%			
% Current year bioturbation <u>3</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Mid-marsh community similar to plots 107 + 104.</u> <u>Very mixed veg.</u>			
Disturbance code / Intensity (L,M,H): <u>28/L</u> _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>56</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>16</u> Herbaceous: <u>40</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H	<i>Triglochin concinnum</i>	8	
H	<i>J. carnosa</i>	10	
S	<i>B. maritima</i>	3	
H	<i>L. californica</i>	2	
H	<i>S. depressa</i>	20	
H	<i>M. littoralis</i>	10	
S	<i>F. Salina</i>	10	
S	<i>S. taxifolia</i>	3	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>S. depressa</u>			
Field-assessed association name (optional): <u>S. depressa - J. carnosa - M. littoralis - F. Salina</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>102</u>	Alliance <u>Sarcocornia pacifica (Salicornia depressa)</u> Association <u>Sarcocornia pacifica-Frankenia salina</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBYC.III</u>	Air photo: <u>73</u>	Date: <u>2/14/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 50 (degrees) of Long / Short side
 UTME 307649 UTMN 3775811 Zone: 10 / 11 (circle one) Error: \pm 2.4 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -33 ft / m Camera Name/Photograph #'s: 7204-7207

Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius: _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: MIAL Soil Texture code: TS/Pa | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 4 Litter: 86 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 10 =100%

% Current year bioturbation 8 Past bioturbation present? Yes / No | % Hoof punch 8

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Vibrant green patch on map = dense veg.
Mid-marsh stand of very dense mixed veg

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 72

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 17 Herbaceous: 55

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>S. depressa</u>	<u>40</u>					
H	<u>D. spicata</u>	<u>15</u>					
S	<u>F. salina</u>	<u>12</u>					
H	<u>Cuscuta salina</u>	<u>4</u>					
S	<u>S. taxifolia</u>	<u>5</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: S. depressa

Field-assessed association name (optional): S. depressa - D. spicata ← apparently a central coast community

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS2

> *F. salina* is >30% relative cover

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: F32

For Office Use:	Final database #:	Final vegetation type name: <u>220</u>	Alliance <u>Atriplex lentiformis</u> Association <u>Atriplex lentiformis Alliance</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVC 13</u>	Air photo: <u>72</u>	Date: <u>2/14/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 3 0 6 5 3 7 UTMN 3 7 7 5 7 9 8 Zone: 10 / (11) (circle one) Error: \pm 1.8 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7214-7215

Stand Size (acres): <1, (1-5), >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW (SE) SW Flat Variable All | Steepness, Actual °: _____ 0° (1-5°) 5-25° > 25

Topography: Macro: top upper mid lower (bottom) | Micro: convex flat concave undulating

Geology code: MIAL Soil Texture code: Fa | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 2 Litter: 5 Bedrock: _____ Boulder: _____ Stone: 5 Cobble: 5 Gravel: 15 Fines: 68 =100%

% Current year bioturbation 7 Past bioturbation present? Yes / No | % Hoof punch 7

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Upland strip b/t parking lot & Marsh

Disturbance code / Intensity (L,M,H): 01 / H 05 / M _____ "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), (S3) mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: (H1) (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____

Total % Vasc Veg cover: 57

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 55 Herbaceous: 2

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 03 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<i>Atriplex lentiformis</i>	50					
S	<i>Baccharis pilularis</i>	5					
S	<i>Myoporum laetum</i>	21					
H	<i>Carpobrotus edulis</i>	2					
H	<i>Arundo donax</i>	21					
S	<i>Encelia californica</i>	21					
H	<i>Gnaphalium ramosissimum</i>	21					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Atriplex lentiformis

Field-assessed association name (optional): Atriplex lentiformis - Baccharis pilularis

Adjacent alliances/direction: Salt Marsh _____ 1 SE _____

Confidence in alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS2

For. Office Use: Final database #: Final vegetation type name: 233 Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 114 Air photo: 70 Date: 2/15/12 Name(s) of surveyors (circle recorder): Brent Eastly Maia Lipschultz

GPS wypt #: GPS name: Datum: or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side

UTME 305080 UTMN 3776070 Zone: 10 11 (circle one) Error: ± 25 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)

Elevation: -33 ft / m Camera Name/Photograph #'s: 7216-7219

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius ft / m

Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: MIAL Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 3 Litter: 62 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 35 =100%

% Current year bioturbation Past bioturbation present? Yes / No | % Hoof punch

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Marsh area adjacent to mud flat. in "V" b/t 2 roads. Fairly moist soil

Disturbance code / Intensity (L,M,H): 08/H 1 1 1 1 "Other" 1

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 56

% Cover - Conifer tree / Hardwood tree: 1 Regenerating Tree: Shrub: 30 Herbaceous: 26

Height Class - Conifer tree / Hardwood tree: 1 Regenerating Tree: Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	Acrocomium subterminalis	20					
S	Frankenia salina	30					
H	Distichlis spicata	5					
H	Salicornia depressa	1					

Unusual species:

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: A. Subterminalis - Salina

Field-assessed association name (optional): A. Subterminalis - F. Salina

Adjacent alliances/direction: Developed 1 E, NW, Corpo mix 1 S.

Confidence in alliance identification: L M H Explain:

Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:

Is poly >1 type: Yes / No If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: F52

For Office Use:	Final database #:	Final vegetation type name: <u>232</u>	Alliance <u>Frankenia salina</u> Association <u>Frankenia salina - Distichlis spicata</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 115</u>		<u>2/15/12</u>	<u>RE ML</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> Bearing, left axis at SW pt <u>350</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>304895</u> UTMN <u>3775960</u> Zone: <u>10</u> / <u>11</u> (circle one) Error: \pm <u>0</u> ft / m (<u>pdop</u>)			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>7221-7224</u>			
Stand Size (acres): <u><1</u> , <u>1-5</u> , <u>>5</u> Plot Size (m ²): <u>10</u> / <u>100</u> / <u>400</u> / <u>1000</u> Plot Shape <u>10</u> x <u>10</u> ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>MIAL</u> Soil Texture code: <u>TS</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>3</u> Litter: <u>37</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>10</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Mid marsh near treated carpobrotus-covered berm to development and S. depressa Salt marsh</u>			

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.)		% Non-Vasc cover: _____ Total % Vasc Veg cover: <u>51</u>	
% Cover - Conifer tree / Hardwood tree: _____ / _____		Regenerating Tree: _____ Shrub: <u>35</u> Herbaceous: <u>16</u>	
Height Class - Conifer tree / Hardwood tree: _____ / _____		Regenerating Tree: _____ Shrub: <u>31</u> Herbaceous: <u>31</u>	
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
<u>J8</u>	<u>F. Salina</u>	<u>30</u>	
<u>H</u>	<u>D. spicata</u>	<u>10</u>	
<u>S</u>	<u>Sueda taxifolia</u>	<u>5</u>	
<u>H</u>	<u>Limonium californicum</u>	<u>2</u>	
<u>H</u>	<u>S. depressa</u>	<u>3</u>	
<u>H</u>	<u>Senescent annual</u>	<u>1</u>	

Unusual species: Senescent annual

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: <u>F. Salina (unique stand)</u>
Field-assessed association name (optional): <u>F. Salina - S. taxifolia - (D. spicata)</u>
Adjacent alliances/direction: <u>S. depressa</u> <u>All except SE</u> <u>Carpobrotus</u> <u>SE</u>
Confidence in alliance identification: L M H Explain: _____
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____

added 110 lbs
BNA12

(Revised July 15 2010) **Project Code:** F.S.2

(Revised July 15 2010) **Project Code:** FS2

[illegible]

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** ES2

For Office Use: Final database #: Final vegetation type name: Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: Air photo: Date: Name(s) of surveyors (circle recorder):

GPS wypt #: GPS name: Datum: or NAD83 Bearing, left axis at SW pt (degrees) of Long / Short side

UTME UTMN Zone: 10 (circle one) Error: ± ft / m (pdop)

GPS within stand? Yes No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)

Elevation: ft (m) Camera Name/Photograph #'s:

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape x ft / m or Circle Radius ft / m

Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: Soil Texture code: Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H2O: BA Stems: Litter: Bedrock: Boulder: Stone: Cobble: Gravel: Fines: =100%

% Current year bioturbation Past bioturbation present? Yes / No | % Hoof punch

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

Disturbance code / Intensity (L,M,H): "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover:

% Cover - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: Herbaceous:

Height Class - Conifer tree / Hardwood tree: Regenerating Tree: Shrub: Herbaceous:

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	D. Spicata	25					
H	C. edulis	25					
S	F. Salina	<1					

Unusual species:

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: D. Spicata (unique stand)

Field-assessed association name (optional): Distichlis spicata - Carpobrotus edulis Unique (treated)s

Adjacent alliances/direction: , ,

Confidence in alliance identification: L M H Explain: Marginal alliance

Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:

Is poly >1 type: Yes / (No) If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>261</u>	Alliance <u>Isocoma menzeisii</u> Association <u>Isocoma menzeisii / Distichlis spicata</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBYC 119</u>	Air photo: <u>71</u>	Date: <u>2/15/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 305462 UTMN 3775726 Zone: 10 / 11 (circle one) Error: \pm 4.4 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7237-7240 (S, W, N, E)

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: OTHE Soil Texture code: Fd | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 2 Litter: 67 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: 1 Gravel: _____ Fines: 30 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Treated / live carpobatus stand on old berm at high point surrounded by marsh.

Disturbance code / Intensity (L,M,H): 05/H 28/H 08/H _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 50

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 29 Herbaceous: 21

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 02 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>C. edulis</u>	<u>15</u>					
H	<u>D. spicata</u>	<u>5</u>					
S	<u>P. Salina</u>	<u>3</u>					
S	<u>Atriplex watsonii</u>	<u>1</u>					
H	<u>L. Californicum</u>	<u>1</u>					
H	<u>Saurea carnea</u>	<u>1</u>					
S	<u>Astragalus</u>	<u>1</u>					
S	<u>Lotus scoparius</u>	<u>1</u>					
S	<u>Isocoma menzeisii</u>	<u>25</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Isocoma menzeisii

Field-assessed association name (optional): Isocoma menzeisii - C. edulis

Adjacent alliances/direction: S. depressa _____ / S. Juncus acutus _____ / N

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

(Revised July 15 2010) **Project Code:** FSZ

Spartina foliosa

Name(s) of surveyors (circle recorder):

ML

Is poly >1 type: Yes / No If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use: Final database #: Final vegetation type name: 110 Alliance Salicornia pacifica (Salicornia depressa) Association Salicornia bigelovii Provisional Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NB/C 121 Air photo: 72 Date: 2/15/12 Name(s) of surveyors (circle recorder): ML

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side

UTME 306591 UTMN 3775817 Zone: 10 / 11 (circle one) Error: \pm 2.9 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7245-7248

Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: MIAL Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: 20 BA Stems: 2 Litter: 3 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 75 =100%

% Current year bioturbation 3 Past bioturbation present? Yes / No | % Hoof punch 5

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: low marsh sand, partially inundated, near large estuarine channel

Disturbance code / Intensity (L,M,H): 28 / L / / / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 39

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 34

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>S. bigelovii</u>	<u>25</u>					
H	<u>S. depressa</u>	<u>10</u>					
H	<u>Spartina foliosa</u>	<u>3</u>					
H	<u>Salicornia (or N. Sa)</u>	<u>1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Salicornia depressa

Field-assessed association name (optional): Salicornia bigelovii Provisional Association

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L/E Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: ES2

For Office Use:	Final database #:	Final vegetation type name: <u>201</u>	Alliance <u>Baccharis pilularis</u> Association <u>Baccharis pilularis - Artemisia californica</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NB/C122 Air photo: _____ Date: 2/15/12 Name(s) of surveyors (circle recorder): BE ML

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 305968 UTMN 3775679 Zone: 10 / 11 (circle one) Error: \pm 4.2 ft / m / pdop
 GPS within stand? Yes No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7249 - 7252

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: 10THE Soil Texture code: Fd | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 1 Litter: 3 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: 2 Gravel: 3 Fines: 91 =100%

% Current year bioturbation 8 Past bioturbation present? Yes / No | % Hoof punch 8
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Upland community on old graded pad

Disturbance code / Intensity (L,M,H): 281 H 251 H / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 18
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 16 Herbaceous: 2
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 03 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Baccharis pilularis	10					
S	Artemisia californica	5					
A	C. edulis	2					
S	Myoporum laetum	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Baccharis pilularis
 Field-assessed association name (optional): Baccharis pilularis - Artemisia californica
 Adjacent alliances/direction: _____ / _____
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use: Final database #: Final vegetation type name: 990 Alliance: Distichlis spicata Association: Distichlis spicata Annual Grasses/Herbs

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBWC 123 Air photo: Date: 2/15/12 Name(s) of surveyors (circle recorder): BE ML

GPS wypt #: GPS name: Datum: or NAD83 Bearing, left axis at SW pt 35 (degrees) of Long / Short side
 UTM E 306003 UTM N 3775835 Zone: 10 / 11 (circle one) Error: \pm 2.7 ft / m / (pdop)

GPS within stand? Yes / No If No, cite from waypoint to stand, distance (meters) & bearing (degrees)

Elevation: -34 ft (m) Camera Name/Photograph #'s: 7253-7257

Stand Size (acres): <1, (1-5), >5 | Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape 10 x 10 ft / (m) or Circle Radius ft / m

Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: OTHE Soil Texture code: Fd | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 5 Litter: 90 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 5 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Mixed grass/wetland community bordered by channels, soil much wetter than adjacent plots

Disturbance code / Intensity (L,M,H): 28/H 25/H / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: Total % Vasc Veg cover: 81

% Cover - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 10 Herbaceous: 71

Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<u>Frankenia Salina</u>	<u>10</u>					
H	<u>Salicornia depressa</u>	<u>5</u>					
H	<u>Cyperus sp. (senescent)</u>	<u>30</u>					
H	<u>D. spicata</u>	<u>25</u>					
H	<u>Rumex crispus</u>	<u>1</u>					
H	<u>Cressa truxellensis</u>	<u>10</u>					
H	<u>Polypogon monspeliensis</u>	<u>41</u>					

Unusual species:

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Distichlis spicata

Field-assessed association name (optional): Distichlis spicata - Annuals

Adjacent alliances/direction: Canals / N, S

Confidence in alliance identification: L (M) H Explain: ↑Cyperus could indicate

Phenology (E,P,L): Herb L Shrub Tree Other identification or mapping information:

Naturalized Warm-Temperate Wetland Semi-Natural Stand

Is poly >1 type: Yes / No If yes, explain:

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FS2

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>234</u>	Alliance <u>Frankenia salina</u> Association <u>Frankenia salina - Limonium californicum</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVC125</u>	Air photo:	Date: <u>2/15/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 20 (degrees) of Long / Short side

UTME 305737 UTMN 2775940 Zone: 10 / 11 (circle one) Error: \pm 2.0 ft / m / pdp

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -34 ft / m Camera Name/Photograph #'s: 7258-7261

Stand Size (acres): <1, (1-5) >5 | Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower (bottom) | Micro: convex (flat) concave undulating

Geology code: Field Soil Texture code: fd | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 3 Litter: 92 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 5 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Raised area near mudflats + s. depress stands.
Very dense low veg.

Disturbance code / Intensity (L,M,H): 28/M / / / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____

Total % Vasc Veg cover: 70

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 30 Herbaceous: 40

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>M. littoralis</u>	<u>30</u>					
S	<u>F. salina</u>	<u>20</u>					
H	<u>A. subterminalis</u>	<u>2</u>					
H	<u>D. spicata</u>	<u>5</u>					
S	<u>S. hirsuta</u>	<u>3</u>					
H	<u>L. californicum</u>	<u>1</u>					
H	<u>Cuscuta salina</u>	<u>1</u>					
S	<u>Atriplex watsonii</u>	<u>3</u>					
	<u>Salicornia depressa</u>	<u>3</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: M. littoralis

Field-assessed association name (optional): M. littoralis - F. salina

Adjacent alliances/direction: S. depressa / N /

Confidence in alliance identification: L M H Explain: marginal F. salina Alliance

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information:

could also be MOLI special stand or Salicornia alliance

Is poly >1 type: Yes / No If yes, explain:

undescribed F. salina - M. littoralis alliance?

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>302</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC126 Air photo: _____ Date: 2/15/12 Name(s) of surveyors (circle recorder): BE ML

GPS wpyt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTM E 305680 UTM N 3776427 Zone: 10 / 11 (circle one) Error: \pm 2.7 ft / m (pdop)

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -31 ft / m Camera Name/Photograph #'s: 7262

Stand Size (acres): <1, (1-5), >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: 2THE Soil Texture code: Fd | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 2 Litter: 20 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: 2 Gravel: 5 Fines: 71 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Highly disturbed area. Possibly old graded pad. Willow stand. Surrounded by development

Disturbance code / Intensity (L,M,H): 28/H 25/H _____ / _____ / _____ "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 32

% Cover - Conifer tree / Hardwood tree: 130 Regenerating Tree: _____ Shrub: 11 Herbaceous: 1
 Height Class - Conifer tree / Hardwood tree: 104 Regenerating Tree: _____ Shrub: 04 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
T	<i>Shinus teretifolius</i>	4					
T	<i>Salix lasiolepis</i>	25					
S	<i>Baccharis pilularis</i>	10					
T	<i>Myoporum laetum</i>	1					
S	<i>Ambrosia psilostachya</i>	1					
H	<i>Oeniza</i> sp	21					
H	<i>C. edulis</i>	1					
S	<i>Rhus ovata</i>	21					
H	<i>Melaleuca</i> sp	21					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Salix lasiolepis

Field-assessed association name (optional): Salix lasiolepis-Baccharis pilularis

Adjacent alliances/direction: Developed / N, W

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree L Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
Relevé or Rapid Assessment (circle one) (Revised July 15 2010) **Project Code:** FS2

For Office Use:	Final database #:	Final vegetation type name: 201	Alliance <i>Baccharis pilularis</i> Association <i>Baccharis pilularis</i> - <i>Artemisia californica</i>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 127		2/16/12	Brent Easty, Maria Lipschultz

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 305163 UTMN 3775143 Zone: 10/(11)(circle one) Error: ± 2.1 ft/m/(pdop)

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -33 ft / (m) Camera Name/Photograph #'s: 7263

Stand Size (acres): <1, 1-5, >5 | **Plot Size (m²):** 10 / 100 / 400 / 1000 | **Plot Shape** x ft / m or **Circle Radius** ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | **Micro:** convex flat concave undulating

Geology code: OTHE Soil Texture code: Fd | Upland or Wetland/Riparian (circle one)

% Surface cover:	(Incl. outcrops)	(>60cm diam)	(25-60cm)	(7.5-25cm)	(2mm-7.5cm)	(Incl sand, mud)
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H2O: BA Stems: 2 Litter: 5 Bedrock: Boulder: Stone: Cobble: 3 Gravel: 5 Fines: 85 =100%

% Current year bioturbation	Past bioturbation present?	Yes / No	% Hoof punch
0			0
1			0
2			0
3			0
4			0
5			0
6			0
7			0
8			0
9			0
10			0
11			0
12			0
13			0
14			0
15			0
16			0
17			0
18			0
19			0
20			0
21			0
22			0
23			0
24			0
25			0
26			0
27			0
28			0
29			0
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32			0
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42			0
43			0
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85			0
86			0
87			0
88			0
89			0
90			0
91			0
92			0
93			0
94			0
95			0
96			0
97			0
98			0
99			0
100			0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Old developed area now colonized by upland shrubs. Surrounded by roads - recently paved

Disturbance code / Intensity (L,M,H): 28/H 25/H 05/M 1 1 "Other" 1

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: **S1** seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: **H1** (<12" plant ht.), **H2** (>12" ht.)

% Non-Vasc cover: 1 Total % Vasc Veg cover: 31

% Cover - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 25 Herbaceous: 6

Height Class - Conifer tree / Hardwood tree: / Regenerating Tree: Shrub: 03 Herbaceous: 01

Height classes: 01= $\leq 1/2$ m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10= ≥ 50 m

Species, Stratum, and % cover. Stratum categories: T=Tree, S = Shrub, H= Herb, E = SEedling, A = SApling, N= Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Artemisia californica	10					
S	Baccharis pilularis	15					
H	Carpobastus edulis	4					
H	Medicago polymorpha	2					
H	Astragalus trichopodus	41					
N	Moss	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: *Baccharis pilularis*

Field-assessed association name (optional): B. Diluvialis - Artemisia Californica

Adjacent alliances/direction: _____ / _____, _____ / _____

Confidence in alliance identification: L M H Explain:

Phenology (E,P,L): Herb ☒ Shrub ☐ Tree ☐ Other identification or mapping information:

Is poly >1 type: Yes (No) If yes, explain:

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>270</u>	Alliance <u>Baccharis salicifolia</u> Association <u>Baccharis salicifolia *</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVL28 Air photo: _____ Date: 2/16/12 Name(s) of surveyors (circle recorder): BE ML

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
UTME 304427 UTMN 3775222 Zone: 10 / 11 (circle one) Error: \pm 2.8 ft / m (pdop) _____

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 34 ft / m Camera Name/Photograph #'s: 7265

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
Geology code: Fill dirt Soil Texture code: Ed | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
H20: BA Stems: 2 Litter: 1 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: 2 Gravel: 2 Fines: 93 =100%

% Current year bioturbation 0 Past bioturbation present? Yes No | % Hoof punch 0
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Re-veg community. Mulefoot & Art cal. Probably old graded pad.
* Artificial BASA-ARCA Alliance via revegetation effort

Disturbance code / Intensity (L,M,H): 28 / H 25 / H _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: <1 Total % Vasc Veg cover: 23

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 18 Herbaceous: 5
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 02 Herbaceous: 01
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<u>Baccharis salicifolia</u>	<u>7</u>		H	<u>Carpobrotus edulis</u>	<u>1</u>	
S	<u>Artemisia californica</u>	<u>10</u>		N	<u>moss</u>	<u><1</u>	
S	<u>Baccharis pilularis</u>	<u>1</u>					
H	<u>Medicago polymorpha</u>	<u>2</u>					
H	<u>Leptochloa grandiflora</u>	<u><1</u>					
H	<u>Ambrosia psilostachya</u>	<u><1</u>					
H	<u>Astragalus trichopodus</u>	<u><1</u>					
S	<u>Lotus scoparius</u>	<u><1</u>					
S	<u>Encelia californica</u>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Artemisia californica

Field-assessed association name (optional): Artemisia californica - Baccharis salicifolia

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: Reveg w/ unusual codominants from

Phenology (E,P,L): Herb E Shrub E Tree _____ Other identification or mapping information: different Alliances

Is poly >1 type: Yes / No If yes, explain: _____

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:** FSZ

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: F52

For Office Use:	Final database #:	Final vegetation type name: <u>231</u>	Alliance <u>Frankenia salina</u> Association <u>Frankenia salina - Distichlis spicata</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVL130</u>	Air photo:	Date: <u>2/16/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 303966 UTMN 3775395 Zone: 10 / 11 (circle one) Error: ± 2.2 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 7270

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: MIAI Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: 3 BA Stems: 3 Litter: 92 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 5 =100%

% Current year bioturbation 2 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Slightly raised marsh stand, surrounded by channels
near road. Suncos adjacent to plot

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 63

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 40 Herbaceous: 23

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<u>F. salina</u>	<u>40</u>					
H	<u>S. depressa</u>	<u>10</u>					
H	<u>D. spicata</u>	<u>8</u>					
H	<u>Limnium californicum</u>	<u>2</u>					
H	<u>A. subterminalis</u>	<u>3</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: F. salina

Field-assessed association name (optional): F. salina - S. depressa

Adjacent alliances/direction: Suncos acutos 1 S, N

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: F52

For Office Use:	Final database #:	Final vegetation type name: <u>121</u>	Alliance <u>Distichlis spicata</u> Association <u>Distichlis spicata - Sarcocornia pacifica</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVL 131</u>	Air photo: <u>57</u>	Date: <u>2/16/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 310 (degrees) of Long / Short side
 UTME 303634 UTMN 3776304 Zone: 10 / 11 (circle one) Error: \pm 2.1 ft / m / pdop
 GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 34 ft / (m) Camera Name/Photograph #'s: 7274

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / (m) or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: OTHE Soil Texture code: FD | Upland or Wetland/Riparian (circle one)

% Surface cover: _____ (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 3 Litter: 67 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 30 =100%

% Current year bioturbation 2 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Disturbed area adjacent to roads/runway. Slightly lower so soil is moister Adjacent to willow & carpobrotus stands.

Disturbance code / Intensity (L,M,H): 28/H 25/H 05/L 08/H _____ / "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 45

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 10 Herbaceous: 35

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>D. Spicata</u>	<u>25</u>					
S	<u>E. Salina</u>	<u>10</u>					
H	<u>S. depressa</u>	<u>6</u>					
H	<u>Heliotropium curassavicum</u>	<u>41</u>					
H	<u>Suaeda caribaea</u>	<u>41</u>					
H	<u>C. edulis</u>	<u>1</u>					
H	<u>Senecio annuus</u>	<u>3</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: D. Spicata

Field-assessed association name (optional): D. Spicata - E. Salina - S. depressa

Adjacent alliances/direction: Salix lasiolepis / N Carpobrotus / E, S

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>202</u>	Alliance <u>Baccharis pilularis</u> Association <u>Baccharis pilularis - Toxicodendron diversilobum</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBNC 132</u>	<u>57</u>	<u>2/16/12</u>	<u>BE ML</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 303691 UTMN 3776278 Zone: 10 / 11 (circle one) Error: \pm 25 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 7278

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: OTHE Soil Texture code: Fcl | Upland or Wetland/Riparian (circle one)

% Surface cover: _____ (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: 3 Litter: 87 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 10 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Disturbed area. Previously treated carpobrotus re-growing with upland shrubs on top.

Disturbance code / Intensity (L,M,H): OS/H 25/H _____ "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____

Total % Vasc Veg cover: 46

% Cover - Conifer tree / Hardwood tree: 121 Regenerating Tree: _____ Shrub: 28 Herbaceous: 12

Height Class - Conifer tree / Hardwood tree: 103 Regenerating Tree: _____ Shrub: 53 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>C. edulis</u>	<u>12</u>					
S	<u>B. pilularis</u>	<u>20</u>					
S	<u>Toxicodendron diversilobum</u>	<u>8</u>					
S	<u>Coreopsis gigantea</u>	<u>41</u>					
H	<u>D. Spirata</u>	<u>41</u>					
T	<u>Salix laesrolepis</u>	<u>41</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: B. pilularis (unique stand)

Field-assessed association name (optional): B. pilularis - C. edulis - upland community

Adjacent alliances/direction: _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub E Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

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CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised July 15 2010) Project Code: FSZ

For Office Use:	Final database #:	Final vegetation type name:	Alliance Mes. spp. - Carpo. spp. Semi-natural shrubland Association Carpobrotus edulis (treated)
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 133	57	2/16/12	BE ML
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt <u>15</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>303769</u> UTMN <u>3776309</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>1.8</u> ft / m / <u>pdop</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-35</u> ft / m Camera Name/Photograph #'s: <u>7279-7282</u>			
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape <u>10</u> x <u>10</u> ft / m Or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>sand</u> Soil Texture code: <u>sand</u> <u>Upland</u> or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>1</u> Litter: <u>5</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: <u>3</u> Gravel: <u>2</u> Fines: <u>89</u> =100%			
% Current year bioturbation <u>1</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Disturbed area w/ treated carpobrotus, now re-growing</u> <u>Substrate is sandy fill dirt. Beach plant community likely influenced</u> <u>by substrate.</u>			
Disturbance code / Intensity (L,M,H): <u>05/H</u> <u>25/H</u> <u>28/H</u> _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>17</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>1</u> Herbaceous: <u>16</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H	C. edulis	8	
H	Chamissonia cheiranthifolia	3	
H	Astragalus fricospodus	2	
S	Lotus scoparius	1	
H	Erodium cicutarium	2	
H	Bromus matritensis	<1	
S	Carcopsis gigantea	<1	
H	Heterotheca grandiflora	<1	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>C. edulis (unique stand)</u>			
Field-assessed association name (optional): <u>C. edulis</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M <u>H</u> Explain: _____			
Phenology (E,P,L): Herb <u>1</u> / EShrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: F52

For Office Use:	Final database #:	Final vegetation type name: <u>203</u>	Alliance <u>Baccharis pilularis</u> Association <u>Baccharis pilularis / Herbaceous Assoc.</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVL B4</u>	Air photo:	Date: <u>2/15/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 306447 UTMN 3776200 Zone: 10 / 11 (circle one) Error: \pm 1.5 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: -32 ft / m Camera Name/Photograph #'s: 7283
 Stand Size (acres): <1, (1-5), >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° (1-5°) 5-25° > 25
 Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: Sand Soil Texture code: SAND | Upland or Wetland/Riparian (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 49 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 49 =100%
 % Current year bioturbation 5 Past bioturbation present? Yes / No | % Hoof punch 0
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: Disturbed area, most likely dumped dredge of fill sand. Traced to live carpobrotus present throughout stand. Dominated by upland shrubs.
 Disturbance code / Intensity (L,M,H): 28/H 25/H 05/H _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 24
 % Cover - Conifer tree / Hardwood tree: 12 Regenerating Tree: _____ Shrub: 12 Herbaceous: 10
 Height Class - Conifer tree / Hardwood tree: 104 Regenerating Tree: _____ Shrub: 04 Herbaceous: 01
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<u>B. pilularis</u>	<u>5</u>					
S	<u>A. californica</u>	<u>1</u>					
S	<u>B. Salisibolia</u>	<u>5</u>					
H	<u>C. edulis</u>	<u>10</u>					
S	<u>M. laetum</u>	<u>1</u>					
T	<u>Salix lasiolepis</u>	<u>2</u>					
H	<u>Iconyza Canadensis</u>	<u>21</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: C. edulis (unique stand)
 Field-assessed association name (optional): C. edulis
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: D M H Explain: not a native shrubland
 Phenology (E,P,L): Herb L Shrub L Tree _____ Other identification or mapping information: _____
 Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name:	Final vegetation type name:	Alliance	Association
		130		<i>Juncus acutus</i> Provisional	<i>Juncus acutus</i> - <i>Jaumea carnosa</i> Provisional

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
NBVC 135		2/17/12	Brent Eastby Maia Lipschutz

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 301573 UTMN 3777146 Zone: 10 1P (circle one) Error: ± 2.5 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -33 ft / m Camera Name/Photograph #'s: 7284

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: SAND Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: 30 BA Stems: 2 Litter: 10 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 58 = 100%

% Current year bioturbation _____ Past bioturbation present? Yes / No | % Hoof punch _____

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Juncus stand behind dunes on slightly raised area adjacent to broad marsh, exposure. Blue flags w/ in stand (indicate sensitive plant locations?)

Disturbance code / Intensity (L,M,H): 28/L 25/L 1 1 1 "Other" 1

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: 50

% Cover - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: 5 Herbaceous: 45

Height Class - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 02

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Juncus acutus</i>	35		H	<i>Cuscuta salina</i>		
S	<i>Frankenia salina</i>	5					
H	<i>D. sticticlis spicata</i>	3					
H	<i>Salicornia prostrata</i>	1					
H	<i>Jaumea carnosa</i>	5					
H	<i>Monanthodalea litoralis</i>	1					
H	<i>Baccharis douglasii</i>						
H	<i>Cyperus</i>	1					
H	<i>Ambrosia psilostachya</i>						

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: *Juncus acutus*

Field-assessed association name (optional): _____

Adjacent alliances/direction: _____

Confidence in alliance identification: L / M H Explain: _____

Phenology (E,P,L): Herb / Shrub / Tree Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>143</u>	Alliance <u>Arthrocnemum subterminale</u> Association <u>Arthrocnemum subterminale - Sarcocornia pacifica</u>
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBLC B6</u>	Air photo: <u>32</u>	Date: <u>2/17/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>301761</u> UTMN <u>3727137</u> Zone: 10 / <u>11</u> (circle one) Error: \pm <u>2.4</u> ft / m / <u>pdop</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>33</u> ft / m Camera Name/Photograph #'s: <u>7285-7288</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: <u>convex</u> flat concave undulating			
Geology code: <u>SIAL</u> Soil Texture code: <u>T5</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud) H20: BA Stems: <u>1</u> Litter: <u>3</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>96</u> =100%			
% Current year bioturbation <u>3</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Raised mound surrounded by mud flats & low marsh.</u> <u>Several similar elevated mounds near by</u>			
Disturbance code / Intensity (L,M,H): <u>28/L</u> _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>28</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>1</u> Herbaceous: <u>27</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H	<u>M. littoralis</u>	<u>3</u>	
H	<u>A. subterminalis</u>	<u>3</u>	
S	<u>E. Salina</u>	<u>1</u>	
H	<u>S. depressa</u>	<u>10</u>	
H	<u>C. edulis</u>	<u>1</u>	
H	<u>L. californicum</u>	<u><1</u>	
H	<u>S. spicata</u>	<u>2</u>	
H	<u>Ambrosia chamissonensis</u>	<u><1</u>	
H	<u>Atriplex leucophylla</u>	<u><1</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>M. littoralis</u>			
Field-assessed association name (optional): _____			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: #32

For Office Use:	Final database #:	Final vegetation type name: <u>123</u>	Alliance <u>Distichlis spicata</u> Association <u>Distichlis spicata-Ambrosia chamissonis</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 137</u>		<u>2/17/12</u>	<u>BE ML</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83 Bearing, left axis at SW pt _____ (degrees) of Long / Short side
UTME 301700 UTMN 3776988 Zone: 10 / 11 (circle one) Error: \pm 1.7 ft / m pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 7289-7292

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: SAND Soil Texture code: TS | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 2 Litter: 2 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 96 =100%

% Current year bioturbation 0 Past bioturbation present? Yes / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: D. spicata - Ambrosia community on elevated part of back dunes. Generally occurs in small patches on back side of dunes on level sandy patches like treated C. edulis

Disturbance code / Intensity (L,M,H): 28/L 08/L _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 18

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 18

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 21

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>D. spicata</u>	<u>8</u>					
H	<u>Ambrosia chamissonis</u>	<u>5</u>					
H	<u>J. carnosa</u>	<u>1</u>					
H	<u>chamissonia cheiranthiobolia</u>	<u>3</u>					
H	<u>Cactile maritima</u>	<u><1</u>					
H	<u>Taraxium officinale (c.p.)</u>	<u><1</u>					
H	<u>C. edulis</u>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: D. spicata

Field-assessed association name (optional): D. spicata - A. chamissonis

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb E Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code: FS2

For Office Use:	Final database #:	Final vegetation type name: <u>123</u>	Alliance <u>Distichlis spicata</u> Association <u>Distichlis spicata - Ambrosia chamissonis</u>
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVL 138</u>	Air photo:	Date: <u>2/17/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
GPS wpyt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> . Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>301669</u> UTMN <u>3777030</u> Zone: 10 / <u>11</u> (circle one) Error: \pm <u>1.8</u> ft / m / <u>padp</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-23</u> ft / m Camera Name/Photograph #'s: <u>7294-7297</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ <u>NE</u> NW SE SW Flat Variable All Steepness, Actual °: _____ 0° <u>1-5°</u> 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex flat concave <u>undulating</u>			
Geology code: <u>SAND</u> Soil Texture code: <u>TS</u> <u>Upland</u> or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>1</u> Litter: <u>80</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>19</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Very old treated Carportus stand, reverting to beach community / D. spicata, Ambrosia community.</u>			
Disturbance code / Intensity (L,M,H): <u>05 / L 28 / H</u> _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>15</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u><1</u> Herbaceous: <u>15</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=Seedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C Strata Species % cover C
H	<u>C. Cheiranthiopia</u>	<u>1</u>	<u>S</u> <u>F. Salina</u> <u><1</u>
H	<u>D. spicata</u>	<u>8</u>	
H	<u>A. chamissonis</u>	<u>4</u>	
S	<u>B. pilularis</u>	<u><1</u>	
H	<u>J. carnosa</u>	<u><1</u>	
H	<u>Baccharis douglasii</u>	<u>1</u>	
H	<u>pink aster (Dyc)</u>	<u><1</u>	
H	<u>C. edulis</u>	<u><1</u>	
H	<u>C. maritima</u>	<u><1</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>D. spicata</u>			
Field-assessed association name (optional): <u>D. spicata - A. chamissonis</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>E</u> Shrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
Relevé or Rapid Assessment (circle one) (Revised July 15 2010) **Project Code:**

For Office Use:	Final database #:	Final vegetation type name: <u>125</u>	Alliance <u>Distichlis spicata -</u> Association <u>Distichlis spicata - Jaumea carnosa</u>
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC 139</u>	Air photo:	Date: <u>2/17/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt <u>350</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>301152</u> UTMN <u>3777401</u> Zone: 10 / <u>11</u> (circle one) Error: \pm <u>2.2</u> ft / m / <u>pdop</u>			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-34</u> ft / m Camera Name/Photograph #'s: <u>7300-7303</u>			
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Size (m ²): 10 / <u>100</u> / 400 / 1000 Plot Shape <u>10 x 10</u> ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: <u>SIAL</u> Soil Texture code: <u>T5</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>4</u> Litter: <u>86</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>10</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? Yes / <u>No</u> % Hoof punch <u>0</u>			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Mid-late elevation marsh stand behind dunes adjacent to standing water</u>			
Disturbance code / Intensity (L,M,H): <u>28/L 25/L</u> _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>62</u>			
% Cover - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: <u>4</u> Herbaceous: <u>58</u>			
Height Class - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular. % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
H	<u>D. spicata</u>	<u>30</u>	
H	<u>J. carnosa</u>	<u>25</u>	
S	<u>F. salina</u>	<u>4</u>	
H	<u>L. californicum</u>	<u>1</u>	
H	<u>S. depressa</u>	<u>2</u>	
H	<u>C. salina</u>	<u>1</u>	
H	<u>Aster (DYG)</u>	<u>1</u>	
S	<u>B. pilularis</u>	<u>1</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>D. spicata</u>			
Field-assessed association name (optional): <u>D. spicata - Jaumea carnosa</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M <u>H</u> Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / <u>No</u> If yes, explain: _____			

Relevé or ~~Rapid~~ Assessment (circle one)

(Revised July 15 2010) **Project Code:**

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>442</u>	Alliance <u>Brassica(nigra) and Other Mustards Semi-Natural</u> Association <u>Brassica nigra - Centaurea melitensis</u>
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 202</u>	<u>24/25</u>	<u>4-27-12</u>	<u>EASTTY</u>

GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side

UTME 305610 UTMN 3777610 Zone: 10 / 11 (circle one) Error: \pm 1.7 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -31 ft / m Camera Name/Photograph #'s: 7558 N, E, S, W

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: 0 BA Stems: 3 Litter: 40 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 57 =100%

% Current year bioturbation _____ Past bioturbation present? Yes / No | % Hoof punch _____

Fire evidence: Yes No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: B. nigra over past disturbance w/ encroaching coyotebush on upland fill

Disturbance code / Intensity (L,M,H): 1M / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: _____

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<u>Brassica nigra</u>	<u>30</u>					
H	<u>Centaurea melitensis</u>	<u>20</u>					
S	<u>Baccharis pilularis</u>	<u>2</u>					
H	<u>Anagallis arvensis</u>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: B. nigra

Field-assessed association name (optional): _____

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb P Shrub P Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>451</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC 203</u>	Air photo:	Date: <u>4-27-12</u>	Name(s) of surveyors (circle recorder): <u>EASTTY</u>
GPS wypt #: _____ GPS name: <u>MM</u> Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>30 57 38</u> UTMN <u>37 77 89 4</u> Zone: 10 / 11 (circle one) Error: ± <u>1.9</u> ft / m (<u>pdop</u>)			
GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-33</u> ft / m Camera Name/Photograph #'s: <u>7562 NESW</u>			
Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW Flat Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating			
Geology code: _____ Soil Texture code: _____ Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>0</u> BA Stems: <u>4</u> Litter: <u>50</u> Bedrock: <u>0</u> Boulder: <u>0</u> Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>46</u> =100%			
% Current year bioturbation <u>5</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch _____			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments:			
<u>mowed field dominated by nonnative grasses and forbs</u>			
<u>variable species composition in field. Nearby arrays are more</u>			
<u>intensity disturbed</u>			
Disturbance code / Intensity (L,M,H): <u>1H</u> _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>65</u>			
% Cover - Conifer tree / Hardwood tree: <u>0</u> / <u>0</u> Regenerating Tree: <u>0</u> Shrub: <u>0</u> Herbaceous: _____			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
	<i>Hordeum spp. (vulgare cf)</i>	<u>33</u>	
	<i>Cressa trux illensis</i>	<u>6</u>	
	<i>Mesembryanthemum nodiflorum</i>	<u>6</u>	
	<i>Bromus hordeaceus</i>	<u>3</u>	
	<i>Atriplex semibaccata</i>	<u>4</u>	
	<i>unk forb.</i>	<u><1</u>	
	<i>Salicornia depressa</i>	<u><1</u>	
	<i>Cotula coronopifolia</i>	<u>1</u>	
	<i>Bromus diandrus</i>	<u>1</u>	
	<i>Hirschfeldia incana</i>	<u><1</u>	
	<i>Basia hyssopifolia</i>	<u>5</u>	
	<i>Centaurea melitensis</i>	<u>1</u>	
	<i>unk grass *</i>	<u>2</u>	
	<i>Bromus madritensis</i>	<u>1</u>	
	<i>Polypogon monspeliensis</i>	<u>1</u>	
	<i>Mesembryanthemum crystallinum</i>	<u><1</u>	
Unusual species: <u>* mown grass difficult to distinguish species, could be other Hordeum spp.</u>			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Hordeum spp. Semi-Natural</u>			
Field-assessed association name (optional): _____			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L <u>M</u> H Explain: <u>no precedent, new alliance & association</u>			
Phenology (E,P,L): Herb _____ Shrub _____ Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / No If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: 451	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: NBVC 204	Air photo: 25	Date: 4-24-12	Name(s) of surveyors (circle recorder): EASTTY
GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side			
UTME 306135 UTMN 3777801 Zone: 10 / 11 (circle one) Error: ± 1.7 ft / m (pdop)			
GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: -34 ft in Camera Name/Photograph #'s: 7570 NESW			
Stand Size (acres): <1, 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW EAP Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating			
Geology code: Fill Soil Texture code: _____ Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: BA Stems: 3 Litter: 30 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 4 Gravel: 2 Fines: 59 =100%			
% Current year bioturbation 1 Past bioturbation present? Yes / No % Hoof punch _____			
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: mown field (occasionally mown) in vacant lot			
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 65			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: 01			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C Strata Species % cover C
H	Hordeum sp. (vulgare cf)	15	H Lactuca serriola <1
H	Bromus rubens	8	H Ambrosia psilostachya 2
H	Avena sp.	2	H Cressa truxellensis 3
H	Bromus diandrus	7	H Heliotropium curassavicum <1
H	Distichlis spicata	7	H Cynodon dactylon 6
H	Salsola tragus	4	H Melilotus (yellow) <1
H	Atriplex semibaccata	5	H Hirschfeldia incana <1
H	Mesembryanthemum crystallinum	2	H Lolium multiflorum 2
H	Lotus corniculatus	1	H Gnaphalium stramineum <1
Unusual species:			Bassia hyssopifolia <1
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: Hordeum spp Semi-Natural			
Field-assessed association name (optional): _____			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: no Hordeum-dominant precedent			
Phenology (E,P,L): Herb P Shrub Tree Other identification or mapping information:			
Is poly >1 type: Yes / No If yes, explain:			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>451</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 205</u>	<u>9</u>	<u>4-24-12</u>	<u>EASTTY</u>

GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side
 UTME 306084 UTMN 3778518 Zone: 10 / 11 (circle one) Error: ± 3.8 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 7576 NESW

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 3 Litter: 80 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 20 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / No | % Hoof punch _____
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: mowed area adjacent to airfield
appears to be upland grassland, but significant presence of S. depressa indicates wetland in some areas

Disturbance code / Intensity (L,M,H): 1 H / / / / / / "Other" /

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 67

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
	<i>Hordeum sp. (vulgare cf)</i>	25			<i>Lotus corniculatus</i>	2	
	<i>Salicornia depressa</i>	4			<i>Distichlis spicata</i>	5	
	<i>Bromus hordeaceus</i>	8			<i>Melilotus indica</i>	<1	
	<i>Bromus diandrus</i>	5			<i>Lactuca scariola</i>	<1	
	<i>Parapholis incurva</i>	10			<i>Hordeum marinum</i>	<1	
	<i>Cressa truxellensis</i>	4			<i>Avena sp.</i>	<1	
	<i>Atriplex semibaccata</i>	2					
	<i>Lolium multiflorum</i>	2					
	<i>Bassia hyssopifolia</i>	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Hordeum spp. Semi-natural

Field-assessed association name (optional): _____

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: no precedent

Phenology (E,P,L): Herb _____ Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>454</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 206</u>	<u>9</u>	<u>4-27-12</u>	<u>EASTTY</u>
GPS wypt #: _____ GPS name: <u>MM</u> Datum: _____ or NAD83. Bearing, left axis at SW pt <u>90</u> (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>305985</u> UTMN <u>3778557</u> Zone: 10 / 11 (circle one) Error: \pm <u>2.3</u> ft / m / <u>pdop</u>			
GPS within stand? (Yes / No) If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>32</u> ft / <u>m</u> Camera Name/Photograph #'s: <u>7560 NESW</u>			
Stand Size (acres): <1, 1-5, >5 Plot Size (m ²): 10 / <u>400</u> 400 / 1000 Plot Shape <u>10</u> x <u>10</u> ft / <u>m</u> or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ <u>0°</u> 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex <u>flat</u> concave undulating			
Geology code: _____ Soil Texture code: _____ <u>Upland</u> or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: _____ BA Stems: <u>5</u> Litter: <u>90</u> Bedrock: <u>0</u> Boulder: <u>0</u> Stone: <u>0</u> Cobble: <u>0</u> Gravel: <u>0</u> Fines: <u>5</u> =100%			
% Current year bioturbation <u><1</u> Past bioturbation present? (Yes / No) % Hoof punch _____			
Fire evidence: Yes / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments:			
<u>Dense Lolium dominated grassland, occasionally mowed</u>			
Disturbance code / Intensity (L,M,H): <u>1H</u> / _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>83</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
	<u>Lolium multiflorum</u>	<u>35</u>	
	<u>Hordeum marinum</u>	<u>10</u>	
	<u>Hordeum sp. (vulgare cf)</u>	<u>15</u>	
	<u>Distichlis spicata</u>	<u>15</u>	
	<u>Parapholis incurva</u>	<u>5</u>	
	<u>Avena sp.</u>	<u>2</u>	
	<u>Bromus catharticus</u>	<u>1</u>	
	<u>Lactuca serriola</u>	<u><1</u>	
	<u>Lotus corniculatus</u>	<u><1</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>CA Annual Grassland</u>			
Field-assessed association name (optional): <u>Lolium multiflorum Herbaceous</u>			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____			
Is poly >1 type: Yes / No If yes, explain: _____			

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>452</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBYC 208</u>	<u>9</u>	<u>4-27-12</u>	<u>EASTTY</u>

GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side
 UTME 305798 UTMN 3778629 Zone: 10 / 11 (circle one) Error: \pm 2.3 ft / m (pdop)
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: 7597 NESW

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 5 Litter: 90 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 5 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / No | % Hoof punch _____
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:
occasionally mowed Bromus-Hordeum NNG

Disturbance code / Intensity (L,M,H): 1H / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 70

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SAPling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
	<i>Bromus diandrus</i>	<u>25</u>					
	<i>Hordeum sp (vulgare cf)</i>	<u>25</u>					
	<i>Helminthotheca echioides</i>	<u>1</u>					
	<i>Melilotus indica</i>	<u>3</u>					
	<i>Ambrosia artemisiifolia</i>	<u>5</u>					
	<i>Avena sp.</i>	<u>9</u>					
	<i>Lolium multiflorum</i>	<u>2</u>					
	<i>Hirschfeldia incana</i>	<u><1</u>					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: CA Annual Grassland
 Field-assessed association name (optional): Bromus diandrus - Hordeum ssp.
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L (M) H Explain: marginal dominance of B. diandrus
 Phenology (E,P,L): Herb _____ Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Relevé or Rapid Assessment (circle one)

For Office Use:	Final database #:	Final vegetation type name: <u>443</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBVC 209</u>	Air photo: <u>62</u>	Date: <u>4-27-12</u>	Name(s) of surveyors (circle recorder): <u>EASTT</u>
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GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side
UTME 307904 UTMN 3776445 Zone: 10 / 11 (circle one) Error: ± 2.4 ft / m (pdp)
GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -31 ft / m Camera Name/Photograph #'s: 7603 NESW

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 | 100 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: 0° 1-5° 5-25° >25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
H20: BA Stems: 2 Litter: 50 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 48 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / No | % Hoof punch _____
Fire evidence: Yes No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:
mustard is up and flowering, hemlock is still early stages

Disturbance code / Intensity (L,M,H): 114 _____ "Other" _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 0 Total % Vasc Veg cover: 39
% Cover - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: 2 Herbaceous: 37
Height Class - Conifer tree / Hardwood tree: _____ Regenerating Tree: _____ Shrub: 03 Herbaceous: 03
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	<i>Brassica nigra</i>	25					
H	<i>Conium maculatum</i>	12					
S	<i>Atriplex lentiformes</i>	2					
S	<i>Frankenia salina</i>	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Brassica nigra
Field-assessed association name (optional): Brassica nigra
Adjacent alliances/direction: _____
Confidence in alliance identification: L M ED Explain: _____
Phenology (E,P,L): Herb P Shrub P Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: integrates with Atriplex lentiformes alliance

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>220</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBYC 210</u>	Air photo: <u>62</u>	Date: <u>4-27-12</u>	Name(s) of surveyors (circle recorder): <u>EASTTY</u>
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GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 90 (degrees) of Long / Short side
 UTME 307769 UTMN 3776454 Zone: 10 / 11 (circle one) Error: ± 3.1 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 31 ft / m Camera Name/Photograph #'s: 7607, 7608

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: BA Stems: 3 Litter: 60 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: 37 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / No | % Hoof punch _____
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:
scattered A. lent. in B. nigra

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: 50

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 20 Herbaceous: 30

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 03 Herbaceous: 03

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S = Shrub, H= Herb, E = SEedling, A = SApling, N= Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<i>Atriplex lentiformes</i>	20					
H	<i>Brassica nigra</i>	25					
H	<i>Conium maculatum</i>	4					
H	<i>Salicornia depressa</i>	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Atriplex lentiformes

Field-assessed association name (optional): Atriplex lentiformes

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: significant cover of Brassica nigra

Phenology (E,P,L): Herb _____ Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) **Project Code:**

[illegible]

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
Relevé or Rapid Assessment (circle one) (Revised July 15 2010) **Project Code:**

For Office Use:	Final database #:	Final vegetation type name: <u>111</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: <u>NBCV 212</u>	Air photo: <u>102</u>	Date: <u>4-27-12</u>	Name(s) of surveyors (circle recorder): <u>EASTTY</u>
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GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 307916 UTMN 3776312 Zone: 10 / 11 (circle one) Error: ± 2.8 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: -32 ft / m Camera Name/Photograph #'s: T610 NESW, and T614

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: _____ BA Stems: _____ Litter: _____ Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: _____ =100%

% Current year bioturbation _____ Past bioturbation present? Yes / No | % Hoof punch _____

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)

% Non-Vasc cover: _____ Total % Vasc Veg cover: _____

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: 01 Herbaceous: 02

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=Sapling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
	<i>Salicornia depressa</i>	30			<i>Malephora crocea</i>	1	
	<i>Arthrocnemum subterminale</i>	.5			<i>Bromus diandrus</i>	1	
	<i>Brassica nigra</i>	10					
	<i>Frankenia salina</i>	5					
	<i>Atriplex lentiformes</i>	<1					
	<i>Melilotus sp.</i>	<1					
	<i>Lactuca serriola</i>	<1					
	unk. grass	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: S. dep - B. nig. (or A. subterm. → transition plot)

Field-assessed association name (optional): _____


Adjacent alliances/direction: A. subterm / E / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code:

added 220  ENOV12

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 213 Air photo: 62 Date: 4-27-12 Name(s) of surveyors (circle recorder): EASTTV

GPS wypt #: _____ GPS name: MM Datum: _____ or NAD83. Bearing, left axis at SW pt 360 (degrees) of Long / Short side
 UTME _____ UTMN _____ Zone: 10 / 11 (circle one) Error: ± _____ ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 32 ft / m Camera Name/Photograph #'s: 7615

Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: _____ BA Stems: 2 Litter: 50 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 0 Fines: 58 =100%

% Current year bioturbation _____ Past bioturbation present? Yes / No | % Hoof punch _____
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	<i>Atriplex lentiformes</i>	25					
H	<i>Brassica nigra</i>	15					
H	<i>Conium maculatum</i>	6					
H	<i>Cirsium</i> sp.	<1					
H	<i>Melilotus indica</i>	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Atriplex lentiformes

Field-assessed association name (optional): Atriplex lentiformes

Adjacent alliances/direction: _____ / _____ / _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb _____ Shrub _____ Tree _____ Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>453</u>	Alliance Association
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I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 301</u>		<u>7-24-12</u>	<u>EASTTY</u>

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side
 UTME 306058 UTMN 3778268 Zone: 10 / 11 (circle one) Error: \pm 17 ft / m / pdop
 GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)
 Elevation: 7 ft / m Camera Name/Photograph #'s: 9103 NESW
 Stand Size (acres): <1, 1-5, >5 | Plot Size (m²): 10 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius _____ ft / m
 Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25
 Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating
 Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)
 % Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)
 H20: 0 BA Stems: 5 Litter: 50 Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: 1 Fines: 44 =100%
 % Current year bioturbation 10 Past bioturbation present? Yes / No | % Hoof punch _____
 Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.
 Site history, stand age, comments: former golf course, veg is a mix of lingering ornamentals (pine, willow, eucalyptus, myoporum) w/ kikyo grass and non-native invasives
Patches of thistle or kikyo grass dominant in areas E and S.
 Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)
 Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)
 Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____
 % Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____
 Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m
 Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.
 % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
	<i>Bromus madritensis</i>	35			<i>Carduus pycnocephalus</i>	3	
	<i>Bromus hordeaceus</i>	8			<i>Hordeum</i> sp.	5	
	<i>Coryza canadensis</i>	2			<i>Frankenia salina</i>	5	
	<i>Hirschfeldia incan</i>	1			<i>Salsola tragus</i>	<1	
	<i>Lobium multiflorum</i>	10			<i>Cressa truxellensis</i>	2	
	<i>Distichlis spicata</i>	4			<i>Bromus diandrus</i>	5	
	<i>Atriplex semibaccata</i>	6			<i>Mesembryanthemum nodif.</i>	<1	
	<i>Lotus corniculatus</i>	<1					
	<i>Centaurea melitensis</i>	2					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Bromus madritensis
 Field-assessed association name (optional): BRMA - mixed
 Adjacent alliances/direction: _____ / _____ / _____
 Confidence in alliance identification: L M H Explain: _____
 Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____
 Is poly >1 type: Yes / No If yes, explain: _____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>453</u>	Alliance <u>California Annual Grassland/Herbaceous Association</u> <u>Mediterranean California Naturalized Annual and Perennial Grassland Seminal stands</u>
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC 302</u>	Air photo:	Date: <u>7-24-12</u>	Name(s) of surveyors (circle recorder): <u>EASTTY</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>306121</u> UTMN <u>3778942</u> Zone: <u>10</u> / 11 (circle one) Error: \pm <u>17</u> ft / m / pdop			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: _____ ft / m Camera Name/Photograph #'s: _____			
Stand Size (acres): <u><1</u> , <u>1-5</u> , <u>>5</u> Plot Size (m ²): <u>10</u> / 100 / 400 / 1000 Plot Shape <u>10</u> x <u>10</u> ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW <u>Flat</u> Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower <u>bottom</u> Micro: convex flat concave undulating			
Geology code: _____ Soil Texture code: _____ <u>Upland</u> or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>0</u> BA Stems: <u>3</u> Litter: <u>30</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>66</u> =100%			
% Current year bioturbation <u>4</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch _____			
Fire evidence: <u>Yes</u> / <u>No</u> (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>mown area near airfield, Distichlis spicata dominant in patches (darker green)</u> <u>* % cover of some grasses difficult to distinguish due to mowing</u>			
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ "Other": _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
	<u>Cynodon dactylon *</u>	<u>30</u>	
	<u>Atriplex semibaccata</u>	<u>5</u>	
	<u>Bromus madritensis *</u>	<u>15</u>	
	<u>Avena sp.</u>	<u>1</u>	
	<u>Salsola tragus</u>	<u><1</u>	
	<u>Bromus hordeaceus</u>	<u>3</u>	
	<u>Distichlis spicata *</u>	<u>10</u>	
	<u>Grappalium</u>	<u><1</u>	
	<u>Lolium multiflorum *</u>	<u>1</u>	
	<u>Lotus corniculatus</u>	<u><1</u>	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>CA Annual Grasslands</u>			
Field-assessed association name (optional): _____			
Adjacent alliances/direction: _____ / _____ / _____			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____			
Is poly >1 type: Yes / No If yes, explain: _____			

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CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>190</u>	Alliance <u>Cressa truxillensis - Distichlis spicata</u> Association <u>Cressa truxillensis Provisional</u>
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
<u>NBVC 303</u>		<u>07-24-12</u>	<u>EASTTY</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>306089</u> UTMN <u>3779335</u> Zone: <u>10</u> / <u>11</u> (circle one) Error: \pm <u>14</u> (ft) / m / pdop			
GPS within stand? <u>Yes</u> / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>1</u> ft / m Camera Name/Photograph #'s: <u>9115 NESW</u>			
Stand Size (acres): <u><1</u> , 1-5, >5 Plot Size (m ²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW Flat Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° >25			
Topography: Macro: <u>top</u> <u>upper</u> <u>mid</u> <u>lower</u> <u>bottom</u> Micro: <u>convex</u> <u>flat</u> <u>concave</u> <u>undulating</u>			
Geology code: _____ Soil Texture code: _____ Upland or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>BA</u> Stems: <u>2</u> Litter: <u>25</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: <u>1</u> Fines: <u>72</u> =100%			
% Current year bioturbation <u>5</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch _____			
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>small patch of Cressa-alliance surrounded by</u> <u>a larger CYDA-BRMA community (maybe same association)</u> <u>[Cressa association surrounded by Med. CA Nat. Ann/Peren. Grassland</u> <u>in the mowed airstrip field</u>			
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ "Other": _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata Species	% cover	C Strata Species	% cover C
<u>Cressa truxillensis</u>	<u>25</u>	<u>Ambrosia psilostachya</u>	<u><1</u>
<u>Hordeum sp.</u>	<u>10</u>		
<u>Bromus madritensis</u>	<u>15</u>		
<u>Atriplex semibaccata</u>	<u>15</u>		
<u>Lolium multiflorum</u>	<u>2</u>		
<u>Cynodon dactylon</u>	<u>5</u>		
<u>Distichlis spicata</u>	<u>1</u>		
<u>Avena sp.</u>	<u>1</u>		
<u>Heliotrop</u>	<u><1</u>		
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>Cressa truxillensis - Distichlis spicata</u>			
Field-assessed association name (optional): <u>Cressa truxillensis Provisional Association</u>			
Adjacent alliances/direction: <u>CYDA</u> <u>1 NEW A. Psilostachya - BRMA</u> <u>1 S</u>			
Confidence in alliance identification: L M <u>H</u> Explain: _____			
Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____			
Is poly >1 type: Yes / No If yes, explain: _____			

STAND

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (circle one)

(Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: 453	Alliance CA Annual Grassland / Herbaceous
			Association Bromus madritensis - mixed herbaceous

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: NBVC 304	Air photo:	Date: 07-24-12	Name(s) of surveyors (circle recorder): EASTTY
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GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 306078 UTMN 3779273 Zone: 10 / 11 (circle one) Error: ± 116 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)

Elevation: 1 ft / m Camera Name/Photograph #'s: 9119 NESW

Stand Size (acres): 1-5, >5 | Plot Size (m²): 10 / 100 / 400 / 1000 | Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m

Exposure, Actual °: _____ NE NW SE SW Flat Variable All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H20: BA Stems: 3 Litter: 65 Bedrock: Boulder: Stone: Cobble: Gravel: Fines: 32 = 100%

% Current year bioturbation 3 Past bioturbation present? Yes / No | % Hoof punch _____

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Ambrosia psilostachya association w/ in CYNA-BRMA alliance

mowed airfield grassland

Disturbance code / Intensity (L,M,H): _____ / _____ / _____ "Other" _____ / _____

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____

% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____

Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.

% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
	Ambrosia psilostachya	15					
	Bromus madritensis	25					
	Atriplex semibaccata	5					
	Cynodon dactylon	1					
	Lolium	1					
	Hirschfeldia incana	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: CA Annual Grassland

Field-assessed association name (optional): _____

Adjacent alliances/direction: CYDA-BRMA 1E,SW, Cressa association 1N

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____

Is poly >1 type: Yes / No If yes, explain: _____

STAND

STAND

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code:

For Office Use:	Final database #:	Final vegetation type name: <u>453</u>	Alliance <u>CA Annual Grassland/Herbaceous</u>	Association <u>Bromus madritensis - mixed herbaceous</u>			
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION							
Polygon/Stand #: <u>NBVC 305</u>	Air photo:	Date: <u>7-24-12</u>	Name(s) of surveyors (circle recorder): <u>EASTTY</u>				
GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side							
UTME <u>305116</u> UTMN <u>3778484</u> Zone: 10 <u>(11)</u> (circle one) Error: ± <u>14</u> ft / m / pdop							
GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)							
Elevation: <u>0</u> ft / m Camera Name/Photograph #'s: <u>9124 NESW</u>							
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Size (m ²): <u>100</u> 100 / 400 / 1000 Plot Shape <u>10 x 10</u> ft / m or Circle Radius _____ ft / m							
Exposure, Actual °: _____ NE NW SE SW Flat Variable All Steepness, Actual °: _____ 0° 1-5° 5-25° > 25							
Topography: Macro: top upper mid lower bottom Micro: convex flat concave undulating							
Geology code: _____ Soil Texture code: _____ Upland or Wetland/Riparian (circle one)							
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)							
H20: <u>0</u> BA Stems: <u>3</u> Litter: <u>55</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>42</u> =100%							
% Current year bioturbation <u>2</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch _____							
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.							
Site history, stand age, comments: <u>mown airfield grassland</u>							
<u>Distichlis + + + along drainages to W</u>							
Disturbance code / Intensity (L,M,H): _____ / _____ / _____ / _____ / _____ "Other" _____ / _____							
II. HABITAT AND VEGETATION DESCRIPTION							
Tree DBH : <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)							
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)							
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: _____							
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____							
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: _____ Herbaceous: _____							
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m							
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.							
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.							
Strata	Species	% cover	C	Strata	Species	% cover	C
	<u>Bromus madritensis</u>	<u>30</u>					
	<u>Ambrasia psilostachya</u>	<u>15</u>					
<u>S2</u>	<u>Baccharis pilularis</u>	<u>3</u>					
	<u>Bromus hordeaceus</u>	<u>1</u>					
	<u>Hirschfeldia incana</u>	<u><1</u>					
	<u>Avena sp.</u>	<u>1</u>					
Unusual species: _____							
III. INTERPRETATION OF STAND							
Field-assessed vegetation alliance name: <u>CA Annual Grassland</u>							
Field-assessed association name (optional): <u>BRMA mixed</u>							
Adjacent alliances/direction: <u>Lepidium @ 305066E, 3778504N (to west)</u> 1							
Confidence in alliance identification: L M H Explain: _____							
Phenology (E,P,L): Herb Shrub Tree Other identification or mapping information: _____							
Is poly >1 type: Yes / No If yes, explain: _____							

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form
 Relevé or Rapid Assessment (circle one) (Revised July 15 2010) Project Code: FSZ

For Office Use:	Final database #:	Final vegetation type name: <u>109</u>	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>NBVC408</u>	Air photo:	Date: <u>2/14/12</u>	Name(s) of surveyors (circle recorder): <u>BE ML</u>
GPS wypt #: _____ GPS name: _____ Datum: _____ or <u>NAD83</u> Bearing, left axis at SW pt _____ (degrees) of <u>Long</u> / <u>Short</u> side			
UTME <u>30 7 78 0</u> UTMN <u>3 77 55 20</u> Zone: 10 / <u>11</u> (circle one) Error: ± <u>4.3</u> ft / m / pdop			
GPS within stand? (<u>Yes</u>) / No If No, cite from waypoint to stand, distance _____ (meters) & bearing _____ (degrees)			
Elevation: <u>-35</u> ft / m Camera Name/Photograph #'s: <u>7192-7195</u>			
Stand Size (acres): (<u><1</u>) 1-5, >5 Plot Size (m²): 10 / 100 / 400 / 1000 Plot Shape _____ x _____ ft / m or Circle Radius _____ ft / m			
Exposure, Actual °: _____ NE NW SE SW (<u>Flat</u>) Variable All Steepness, Actual °: _____ (<u>0°</u>) 1-5° 5-25° > 25			
Topography: Macro: top upper mid lower (<u>bottom</u>) Micro: convex (<u>flat</u>) concave undulating			
Geology code: <u>MEAL</u> Soil Texture code: <u>T3</u> Upland or <u>Wetland/Riparian</u> (circle one)			
% Surface cover: _____ (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>5</u> BA Stems: <u>2</u> Litter: <u>5</u> Bedrock: _____ Boulder: _____ Stone: _____ Cobble: _____ Gravel: _____ Fines: <u>88</u> =100%			
% Current year bioturbation <u>5</u> Past bioturbation present? Yes / (<u>No</u>) % Hoof punch <u>0</u>			
Fire evidence: Yes / (<u>No</u>) (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Lower marsh b/t 2 channels. Mix of battis, Spartina sp. & Salicornia patches</u>			
Disturbance code / Intensity (L,M,H): <u>28/L</u> _____ / _____ / _____ / _____ "Other" _____ / _____			
II. HABITAT AND VEGETATION DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: (<u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht.) % Non-Vasc cover: _____ Total % Vasc Veg cover: <u>56</u>			
% Cover - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>16</u> Herbaceous: <u>40</u>			
Height Class - Conifer tree / Hardwood tree: _____ / _____ Regenerating Tree: _____ Shrub: <u>01</u> Herbaceous: <u>01</u>			
Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m			
Species, Stratum, and % cover. Stratum categories: T=Tree, S=Shrub, H=Herb, E=SEedling, A=SApling, N=Non-vascular.			
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.			
Strata	Species	% cover	C
S	<i>Battis maritima</i>	15	
H	<i>S. depressa</i>	30	
S	<i>Spartina densiflora</i>	1	
H	<i>F. salina</i>	5	
H	<i>S. carnososa</i>	5	
H	<i>D. spirata</i>	21	
S	<i>S. taxifolia</i>	21	
Unusual species: _____			
III. INTERPRETATION OF STAND			
Field-assessed vegetation alliance name: <u>S. depressa</u>			
Field-assessed association name (optional): <u>S. depressa - Battis maritima - (Jaumea carnososa?)</u> new NBVC			
Adjacent alliances/direction: _____ (Frankenia salina?) NNWRA Phase			
Confidence in alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub <u>L</u> Tree _____ Other identification or mapping information: _____			
Is poly >1 type: Yes / (<u>No</u>) If yes, explain: _____			

APPENDIX E

NBVC POINT MUGU PLANT SPECIES LIST

Appendix E Point Mugu Species List

Family	Genus	Species	Common Name	*Duration	Status
Nyctaginaceae	<i>Abronia</i>	<i>maritima</i>	red sand verbena	P	Native
Fabaceae	<i>Acmispon</i>	<i>glaber</i>	deer weed	P	Native
Amaranthaceae	<i>Amaranthus</i>	<i>albus</i>	tumbleweed	A	Introduced
Asteraceae	<i>Ambrosia</i>	<i>chamissonis</i>	beach bursage	P	Native
Asteraceae	<i>Ambrosia</i>	<i>psilostachya</i>	western ragweed	P	Native
Poaceae	<i>Ammophila</i>	<i>arenaria</i>	European beachgrass	P	Invasive
Myrsinaceae	<i>Anagallis</i>	<i>arvensis</i>	scarlet pimpernel	A	Introduced
Asteraceae	<i>Artemisia</i>	<i>californica</i>	California sagebrush	P	Native
Chenopodiaceae	<i>Arthrocnemum</i>	<i>subterminale</i>	Parish's glasswort	P	Native
Poaceae	<i>Arundo</i>	<i>donax</i>	giant reed	P	Invasive
Fabaceae	<i>Astragalus</i>	<i>sp.</i>	milk-vetch	U	Unknown
Fabaceae	<i>Astragalus</i>	<i>trichopodus</i> var. <i>trichopodus</i>	locoweed	P	Native
Chenopodiaceae	<i>Atriplex</i>	<i>lentiformis</i>	big saltbush	P	Native
Chenopodiaceae	<i>Atriplex</i>	<i>leucophylla</i>	beach saltbush	P	Native
Chenopodiaceae	<i>Atriplex</i>	<i>semibaccata</i>	Australian saltbush	P	Invasive
Chenopodiaceae	<i>Atriplex</i>	<i>watsonii</i>	Watson's saltbush	P	Native
Poaceae	<i>Avena</i>	<i>sp.</i>	wild oat	A/P	Introduced
Asteraceae	<i>Baccharis</i>	<i>glutinosa</i>	marsh baccharis	P	Native
Asteraceae	<i>Baccharis</i>	<i>pilularis</i>	coyote brush	P	Native
Asteraceae	<i>Baccharis</i>	<i>salicifolia</i>	mule fat	P	Native
Chenopodiaceae	<i>Bassia</i>	<i>hyssopifolia</i>	five horn bassia	A	Invasive
Bataceae	<i>Batis</i>	<i>maritima</i>	saltwort	P	Native
Chenopodiaceae	<i>Beta</i>	<i>vulgaris</i>	common beet	B	Introduced
Brassicaceae	<i>Brassica</i>	<i>nigra</i>	black mustard	A	Invasive
Poaceae	<i>Bromus</i>	<i>catharticus</i> var. <i>catharticus</i>	rescue grass	A/P	Introduced
Poaceae	<i>Bromus</i>	<i>diandrus</i>	ripgut grass	A	Invasive
Poaceae	<i>Bromus</i>	<i>hordeaceus</i>	soft chess	A	Invasive
Poaceae	<i>Bromus</i>	<i>madritensis</i> subsp. <i>madritensis</i>	foxtail chess	A	Introduced
Poaceae	<i>Bromus</i>	<i>madritensis</i> subsp. <i>rubens</i>	red brome	A	Invasive
Brassicaceae	<i>Cakile</i>	<i>maritima</i>	European searocket	A	Invasive

Family	Genus	Species	Common Name	*Duration	Status
Convolvulaceae	<i>Calystegia</i>	<i>macrostegia</i>	California morning glory	P	Native
Convolvulaceae	<i>Calystegia</i>	<i>soldanella</i>	beach morning glory	P	Native
Onagraceae	<i>Camissoniopsis</i>	<i>cheiranthifolia</i>	beach evening primrose	P	Native
Onagraceae	<i>Camissoniopsis</i>	<i>sp.</i>	suncup	A/P	Native
Asteraceae	<i>Carduus</i>	<i>pycnocephalus</i> subsp. <i>pycnocephalus</i>	Italian thistle	A	Invasive
Aizoaceae	<i>Carpobrotus</i>	<i>edulis</i>	hottentot fig	P	Invasive
Aizoaceae	<i>Carpobrotus</i>	<i>sp.</i>	ice plant	P	Invasive
Asteraceae	<i>Centaurea</i>	<i>melitensis</i>	star thistle	A	Invasive
Chenopodiaceae	<i>Chenopodium</i>	<i>sp.</i>	goosefoot	A/P	Unknown
Asteraceae	<i>Cirsium</i>	<i>sp.</i>	thistle	A/P	Unknown
Asteraceae	<i>Cirsium</i>	<i>vulgare</i>	bull thistle	B	Invasive
Apiaceae	<i>Conium</i>	<i>maculatum</i>	poison hemlock	B	Invasive
Asteraceae	<i>Corethrogyne</i>	<i>filaginifolia</i>	common salt aster	P	Native
Asteraceae	<i>Cotula</i>	<i>coronopifolia</i>	brassbutton	P	Invasive
Convolvulaceae	<i>Cressa</i>	<i>truxillensis</i>	alkali weed	P	Native
Convolvulaceae	<i>Cuscuta</i>	<i>salina</i>	salt marsh dodder	A	Native
Poaceae	<i>Cynodon</i>	<i>dactylon</i>	Bermuda grass	P	Invasive
Cyperaceae	<i>Cyperus</i>	<i>esculentus</i>	yellow nutsedge	P	Introduced
Cyperaceae	<i>Cyperus</i>	<i>sp.</i>	cypress	A/P	Unknown
Poaceae	<i>Distichlis</i>	<i>littoralis</i>	shore grass	P	Native
Poaceae	<i>Distichlis</i>	<i>spicata</i>	saltgrass	P	Native
Crassulaceae	<i>Dudleya</i>	<i>lanceolata</i>	lanceleaf liveforever	P	Native
Asteraceae	<i>Encelia</i>	<i>californica</i>	California brittlebush	P	Native
Asteraceae	<i>Erigeron</i>	<i>canadensis</i>	Canadian horseweed	A	Native
Asteraceae	<i>Erigeron</i>	<i>sp.</i>	horseweed	S	Native
Polygonaceae	<i>Eriogonum</i>	<i>sp.</i>	wild buckwheat	A/P	Native
Geraniaceae	<i>Erodium</i>	<i>cicutarium</i>	red-stemmed filaree	A	Invasive
Chenopodiaceae	<i>Extriplex</i>	<i>californica</i>	saltbush	P	Native
Poaceae	<i>Festuca</i>	<i>perennis</i>	Italian rye grass	P	Invasive
Poaceae	<i>Festuca</i>	<i>sp.</i>	tufted grass	A/P	Unknown
Frankeniaceae	<i>Frankenia</i>	<i>salina</i>	alkali heath	P	Native
Rubiaceae	<i>Galium</i>	<i>aparine</i>	goose grass	A	Native
Boraginaceae	<i>Heliotropium</i>	<i>curassavicum</i> var. <i>oculatum</i>	salt heliotrope	P	Native
Boraginaceae	<i>Heliotropium</i>	<i>sp.</i>	heliotrope	A/P	Unknown

Family	Genus	Species	Common Name	*Duration	Status
Asteraceae	<i>Helminthotheca</i>	<i>echioides</i>	bristly ox-tongue	A/P	Invasive
Liliaceae	<i>Hesperoyucca</i>	<i>whipplei</i>	our lord's candle	P	Native
Asteraceae	<i>Heterotheca</i>	<i>grandiflora</i>	telegraph weed	B	Native
Brassicaceae	<i>Hirschfeldia</i>	<i>incana</i>	wild mustard	P	Invasive
Poaceae	<i>Hordeum</i>	<i>marinum</i> subsp. <i>gusoneanum</i>	seaside barley	A	Invasive
Poaceae	<i>Hordeum</i>	<i>sp.</i>	barley	A/P	Unknown
Poaceae	<i>Hordeum</i>	<i>vulgare</i>	common barley	A	Introduced
Asteraceae	<i>Isocoma</i>	<i>menziesii</i>	Menzies' golden bush	P	Native
Asteraceae	<i>Jaumea</i>	<i>carnosa</i>	marsh jaumea	P	Native
Juncaceae	<i>Juncus</i>	<i>acutus</i> subsp. <i>leopoldii</i>	spiny rush	P	Native
Asteraceae	<i>Lactuca</i>	<i>serriola</i>	prickly lettuce	A	Introduced
Asteraceae	<i>Leptosyne</i>	<i>gigantea</i>	giant tickseed	P	Native
Plumbaginaceae	<i>Limonium</i>	<i>californicum</i>	marsh rosemary	P	Native
Fabaceae	<i>Lotus</i>	<i>corniculatus</i>	bird's-foot trefoil	P	Introduced
Fabaceae	<i>Lupinus</i>	<i>arboreus</i>	yellow bush lupine	P	Native
Fabaceae	<i>Lupinus</i>	<i>succulentus</i>	Hollowleaf annual lupine	A	Native
Aizoaceae	<i>Malephora</i>	<i>crocea</i>	coppery mesembryanthemum	P	Introduced
Anacardiaceae	<i>Malosma</i>	<i>laurina</i>	laurel sumac	S	Native
Malvaceae	<i>Malva</i>	<i>parviflora</i>	cheeseweed mallow	A	Introduced
Lamiaceae	<i>Marrubium</i>	<i>vulgare</i>	horehound	P	Invasive
Fabaceae	<i>Medicago</i>	<i>polymorpha</i>	California burclover	A	Invasive
Fabaceae	<i>Melilotus</i>	<i>indicus</i>	yellow sweetclover	A	Introduced
Fabaceae	<i>Melilotus</i>	<i>sp.</i>	sweetclover	A/B	Introduced
Aizoaceae	<i>Mesembryanthemum</i>	<i>crystallinum</i>	crystalline iceplant	A	Invasive
Aizoaceae	<i>Mesembryanthemum</i>	<i>nodiflorum</i>	slenderleaf iceplant	A	Introduced
Scrophulariaceae	<i>Myoporum</i>	<i>laetum</i>	ngaio tree	S/T	Invasive
Cactaceae	<i>Opuntia</i>	<i>littoralis</i>	prickly pear cholla	P	Native
Oxalidaceae	<i>Oxalis</i>	<i>corniculata</i>	wood sorrel	P	Introduced
Poaceae	<i>Parapholis</i>	<i>incurva</i>	sicklegrass	A	Introduced
Poaceae	<i>Pennisetum</i>	<i>setaceum</i>	crimson fountain grass	P	Invasive
Boraginaceae	<i>Phacelia</i>	<i>sp.</i>	phacelia	A/P	Unknown
Plantaginaceae	<i>Plantago</i>	<i>sp.</i>	plantain	A/P	Unknown

Family	Genus	Species	Common Name	*Duration	Status
Poaceae	<i>Polypogon</i>	<i>monspeliensis</i>	annual beard grass	A	Invasive
Asteraceae	<i>Pseudognaphalium</i>	<i>ramosissimum</i>	pink everlasting	B	Native
Asteraceae	<i>Pseudognaphalium</i>	<i>sp.</i>	everlasting	A/B/P	Native
Asteraceae	<i>Pseudognaphalium</i>	<i>stramineum</i>	cottonbatting plant	A/B	Native
Anacardiaceae	<i>Rhus</i>	<i>ovata</i>	sugar bush	S	Native
Polygonaceae	<i>Rumex</i>	<i>crispus</i>	curly dock	P	Introduced
Polygonaceae	<i>Rumex</i>	<i>sp.</i>	dock	P	Unknown
Chenopodiaceae	<i>Salicornia</i>	<i>bigelovii</i>	dwarf saltwort	A	Native
Chenopodiaceae	<i>Salicornia</i>	<i>pacifica</i>	Pacific swampfire	P	Native
Salicaceae	<i>Salix</i>	<i>lasiolepis</i>	arroyo willow	S	Native
Chenopodiaceae	<i>Salsola</i>	<i>tragus</i>	Russian thistle	A	Invasive
Lamiaceae	<i>Salvia</i>	<i>leucophylla</i>	purple sage	S	Native
Lamiaceae	<i>Salvia</i>	<i>mellifera</i>	black sage	S	Native
Anacardiaceae	<i>Schinus</i>	<i>terebinthifolius</i>	Brazilian pepper tree	S/T	Invasive
Brassicaceae	<i>Sisymbrium</i>	<i>orientale</i>	Indian hedge mustard	A/P	Introduced
Poaceae	<i>Spartina</i>	<i>densiflora</i>	dense flowered cord grass	P	Invasive
Poaceae	<i>Spartina</i>	<i>foliosa</i>	California cordgrass	P	Native
Chenopodiaceae	<i>Suaeda</i>	<i>esteroa</i>	estuary seablite	P	Native
Chenopodiaceae	<i>Suaeda</i>	<i>taxifolia</i>	woolly seablite	S	Native
Aizoaceae	<i>Taraxacum</i>	<i>officinale</i>	common dandelion	B/P	Introduced
Anacardiaceae	<i>Toxicodendron</i>	<i>diversilobum</i>	western poison oak	S/V	Native
Juncaceae	<i>Triglochin</i>	<i>concinna</i> var. <i>concinna</i>	arrow-grass	P	Native
Typhaceae	<i>Typha</i>	<i>latifolia</i>	broadleaf cattail	P	Native
Urticaceae	<i>Urtica</i>	<i>dioica</i>	hoary nettle	P	Native
Urticaceae	<i>Urtica</i>	<i>urens</i>	dwarf-nettle	A	Introduced
Asteraceae	<i>Xanthium</i>	<i>spinosum</i>	spiny cocklebur	A	Introduced
			algae		
			moss		
			unknown aster		
			unknown forb		
			unknown grass		

* Duration Abbreviations: A (Annual), B (Biennial), P (Perennial), S (Shrub), T (Tree) and V (Vine)

APPENDIX F

NBVC POINT MUGU VEGETATION COMMUNITIES HIERARCHY

Appendix F

Point Mugu Vegetation Communities Hierarchy

KEY:

Formation Class

Formation Subclass

Formation

Division

Macrogroup

Group

Alliance

Association

Mesomorphic Tree Vegetation (Forest and Woodland)

Temperate Forest

Cool Temperate Forest

North American Introduced Evergreen Broadleaf and Conifer Forest

Introduced North American Mediterranean woodland forest

Introduced North American Mediterranean woodland forest

Eucalyptus (globulus, camaldulensis)

Eucalyptus (globulus, camaldulensis)

Schinus molle (molle, terebinthifolius) – Myoporum laetum

Myoporum laetum

Western North American Warm Temperate Flooded and Swamp Forest

Southwestern North American Riparian, Flooded and Swamp Forest

Southwestern North American riparian/wash scrub

Baccharis salicifolia

Baccharis salicifolia

Southwestern North American riparian evergreen and deciduous woodland

Salix lasiolepis

Salix lasiolepis

Salix lasiolepis – Baccharis pilularis

Southwestern North American introduced riparian scrub

Arundo donax

Arundo donax

Mesomorphic Shrub and Herb Vegetation (Shrubland and Grassland)

Mediterranean Scrub and Grassland

Mediterranean Scrub (f)

California Scrub

California Chaparral

Californian maritime chaparral

Malosma laurina

Malosma laurina

Central and South Coastal Californian coastal sage scrub

Artemisia californica

Artemisia californica

Encelia californica

Encelia californica – *Artemisia californica*

Central and south coastal California seral scrub

Acmispon glaber

Acmispon glaber

Isocoma menziesii

Isocoma menziesii – *Distichlis spicata*

(f) Mediterranean Grassland and Forb Meadow

California Grassland and Meadow

California Annual and Perennial Grassland

Mediterranean California Naturalized Annual and Perennial Grassland

***Brassica nigra* and other mustards (upland mustards) semi-natural stands**

Centaurea melitensis – *Brassica nigra*

Brassica nigra – *Conium maculatum* Provisional

Brassica nigra

***Bromus (diandrus, hordeaceus)* – *Brachypodium distachyon* semi-natural stands**

Bromus diandrus – *Hordeum* sp.

Bromus madritensis

Bromus madritensis

Festuca perennis

Festuca perennis

***Pennisetum setaceum* semi-natural stands**

Pennisetum setaceum

Temperate and Boreal Shrubland and Grassland

Temperate and Boreal Scrub and Herb Coastal Vegetation (f)

Pacific Coast Scrub and Herb Littoral Vegetation

Vancouverian Coastal Dune and Bluff

Vancouverian/Pacific dune mat

Ambrosia chamissonis* – *Abronia maritima

Ambrosia chamissonis – *Abronia maritima* – *Cakile maritima*

Ambrosia chamissonis – *Distichlis spicata* – *Abronia maritima* Provisional

California Coastal Evergreen Bluff and Dune Scrub

Baccharis pilularis

Baccharis pilularis

Baccharis pilularis – *Artemisia californica*

Baccharis pilularis – *Toxicodendron diversilobum*

Baccharis pilularis / Herbaceous (*Baccharis pilularis* / Annual Grass – Herb)

California–Vancouverian Semi-natural Littoral Scrub and Herb Vegetation

***Ammophila arenaria* Semi-natural Stands**

Ammophila arenaria

***Carpobrotus edulis* or other ice plants (ice plant mats) semi-natural Stands**

Carpobrotus edulis

Temperate and Boreal Freshwater Marsh

Western North America Freshwater Marsh

Arid West Freshwater Emergent Marsh

Schoenoplectus californicus

Schoenoplectus californicus
Typha latifolia
Typha latifolia

Western North America Wet Meadow and Low Shrub Carr
Naturalized Warm – Temperate Riparian and Wetland

***Lepidium latifolium* (Perennial pepper weed patches)**
Lepidium latifolium
***Juncus acutus* Provisional**
Juncus acutus Provisional

Temperate and Boreal Salt Marsh

Temperate and Boreal Pacific Coastal Salt Marsh

North American Pacific Coastal Salt Marsh

Temperate Pacific Tidal Salt and Brackish Meadow

Distichlis spicata
Distichlis spicata
Distichlis spicata – *Ambrosia chamissonis*
Distichlis spicata – *Jaumea carnosa*
Distichlis spicata – *Salicornia pacifica*
Distichlis spicata / Annual grasses (or Grass Herb)
Distichlis spicata Naturalized (dead)
Salicornia pacifica
Salicornia bigelovii Provisional
Salicornia pacifica
Salicornia pacifica – *Brassica nigra*
Salicornia pacifica – *Frankenia salina*
Salicornia pacifica – *Frankenia salina* – *Batis maritima*
Salicornia pacifica – *Frankenia salina* – *Suaeda taxifolia*
Salicornia pacifica – *Jaumea carnosa*
Salicornia pacifica – *Jaumea carnosa* – *Batis maritima*
Salicornia pacifica – *Jaumea carnosa* – *Distichlis spicata*
Salicornia pacifica – *Distichlis littoralis*
Salicornia pacifica / Algae
Spartina foliosa
Spartina foliosa

Western North American Interior Alkali – Saline Wetland

Warm Semi-Desert/Mediterranean Alkali – Saline Wetlands

Southwestern North American Salt Basin and High Marsh

Atriplex lentiformis
Atriplex lentiformis
Arthrocnemum subterminale
Arthrocnemum subterminale
Arthrocnemum subterminale – *Distichlis littoralis*
Arthrocnemum subterminale – *Salicornia pacifica*
Frankenia salina
Frankenia salina
Frankenia salina – *Arthrocnemum subterminale* Provisional
Frankenia salina – *Carpobrotus edulis* (dead)
Frankenia salina – *Distichlis spicata*
Frankenia salina – *Limonium californicum* – *Distichlis*

littoralis – *Salicornia* sp.
Californian mixed annual/perennial freshwater vernal pool / swale bottomland
***Hordeum* sp.**
Hordeum sp.

Xeromorphic Scrub and Herb Vegetation (Semi-Desert)

Warm Semi-Desert Scrub and Grassland

Warm Semi-Desert Scrub and Grassland

Sonoran and Chihuahuan Semi-Desert Scrub and Grassland

Viscaino-Baja California Desert Scrub

Coastal Baja California Norte maritime succulent scrub

Leptosyne gigantea

Leptosyne gigantea

APPENDIX G

NBVC POINT MUGU PLANT SPECIES OBSERVED AT SURVEYED ASSOCIATIONS

Table G-1a. Plant Species Observed Per Surveyed Associations 101-150

Genus	Species	101	102	103	104	105	106	107	109	110	111	121	123	124	125	131	133	142	143	150
		Salicornia pacifica	Salicornia pacific – Frankenia salina	Salicornia pacific–Frankenia salina –Suaeda taxifolia	Salicornia pacific– Jaumea carnosa	Salicornia pacific–Frankenia salina –Batis maritima	Salicornia pacific– Jaumea carnosa – Distichlis spicata	Salicornia pacific/ Algae	Salicornia pacific–Jaumea carnosa – Batis maritima	Salicornia bigelovii Provisional	Salicornia pacific– Brassica nigra	Distichlis spicata – Salicornia pacifica	Distichlis spicata – Ambrosia chamissonis	Distichlis spicata- Annual Grasses (or Grass-Herb)	Distichlis spicata – Jaumea camosa	Ambrosia chamissonis – Abronia maritima – Cakile maritima	Ambrosia chamissonis – Distichlis spicata – Abronia maritima Provisional	Arthrocnemum subterminale – Salicornia pacifica	Arthrocnemum subterminale – Distichlis littoralis	Juncus acutus Provisional
Aizoaceae																				
Carpobrotus	edulis											x	x	x	x				x	x
Carpobrotus	sp.															x				
Malephora	crocea										x									
Mesembryanthemum	crystallinum														x					
Mesembryanthemum	nodiflorum																			
Taraxacum	officinale												x	x						
Amaranthaceae																				
Amaranthus	albus																			
Arthrocnemum	subterminale										x	x		x	x			x	x	x
Salicornia	bigelovii									x										
Anacardiaceae																				
Malosma	laurina																			
Rhus	ovata																			
Schinus	terebinthifolius																			
Toxicodendron	diversilobum																			
Apiaceae																				
Conium	maculatum																			
Asteraceae																				
Ambrosia	chamissonis												x			x	x		x	
Ambrosia	psilostachya														x					x
Artemisia	californica																			
Baccharis	douglasii												x							x
Baccharis	pilularis												x		x					x
Baccharis	salicifolia																			
Carduus	pycnocephalus																			
Centaurea	melitensis																			
Corethrogyne	filaginifolia																			
Cirsium	sp.																			
Cirsium	vulgare																			
Cotula	coronopifolia																			
Encelia	californica																			
Erigeron	canadensis																			
Erigeron	sp.																			
Helminthotheca	echioides																			
Heterotheca	grandiflora																			
Isocoma	menziesii												x							
Jaumea	carnosa			x	x		x		x	x		x	x		x				x	x
Lactuca	serriola										x									
Leptosyne	gigantea																			
Pseudognaphalium	ramosissimum																			
Pseudognaphalium	sp.																			
Pseudognaphalium	stramineum																			
Bataceae																				
Batis	maritima				x	x			x											
Boraginaceae																				
Heliotropium	Curassavicum var. oculatum											x								
Brassicaceae																				
Brassica	nigra										x									
Cakile	maritima												x			x				x
Hirschfeldia	incana																			
Sisymbrium	orientale																			

Table G-1a. Plant Species Observed Per Surveyed Associations 101-150

Genus	Species	101	102	103	104	105	106	107	109	110	111	121	123	124	125	131	133	142	143	150
		Salicornia pacifica	Salicornia pacifica – Frankenia salina	Salicornia pacifica–Frankenia salina –Suaeda taxifolia	Salicornia pacifica– Jaumea carnosa	Salicornia pacifica–Frankenia salina –Batis maritima	Salicornia pacifica– Jaumea carnosa – Distichlis spicata	Salicornia pacifica/ Algae	Salicornia pacifica–Jaumea carnosa – Batis maritima	Salicornia bigelovii Provisional	Salicornia pacifica– Brassica nigra	Distichlis spicata – Salicornia pacifica	Distichlis spicata – Ambrosia chamissonis	Distichlis spicata- Annual Grasses (or Grass-Herb)	Distichlis spicata – Jaumea camosa	Ambrosia chamissonis – Abronia maritima – Cakile maritima	Ambrosia chamissonis – Distichlis spicata – Abronia maritima Provisional	Arthrocnemum subterminale – Salicornia pacifica	Arthrocnemum subterminale – Distichlis littoralis	Juncus acutus Provisional
Cactaceae																				
Opuntia	littoralis																			
Chenopodiaceae																				
Atriplex	lentiformis										x									
Atriplex	leucophylla												x			x	x		x	
Atriplex	semibaccata																			
Atriplex	watsonii																			
Bassia	hyssopifolia																			
Beta	vulgaris																			
Chenopodium	sp.																			
Dudleya	lanceolata																			
Extriplex	californica																			
Salicornia	pacifica	x	x	x	x	x	x	x	x	x	x	x		x	x			x	x	x
Salsola	tragus																			
Suaeda	esteroa		x	x																
Suaeda	taxifolia		x		x				x										x	
Convolvulaceae																				
Calystegia	macrostegia															x				
Calystegia	soldanella												x			x	x			
Cressa	truxillensis													x						
Cuscutaceae																				
Cuscuta	salina		x												x	x				x
Cyperaceae																				
Cyperus	sp.													x						x
Fabaceae																				
Acmispon	glaber														x					
Astragalus	sp.																			
Astragalus	trichopodus																			
Lotus	corniculatus																			
Lupinus	arboreus														x					
Lupinus	succulentus													x						
Medicago	polymorpha																			
Melilotus	indica																			
Melilotus	sp.										x									
Frankeniaceae																				
Frankenia	salina	x	x	x	x	x	x		x		x	x	x	x	x	x		x	x	x
Geraniaceae																				
Erodium	cicutarium																			
Hydrophlyllaceae																				
Phacelia	sp.														x					x
Juncaceae																				
Juncus	acutus subsp. leopoldii														x					x
Triglochin	concinna var. concinna				x															
Lamiaceae																				
Marrubium	vulgare																			
Salvia	mellifera																			
Liliaceae																				
Hesperoyucca	whipplei																			
Malvaceae																				
Malva	parviflora																			
Myrsinaceae																				
Anagallis	arvensis													x						

Table G-1a. Plant Species Observed Per Surveyed Associations 101-150

Genus	Species	101	102	103	104	105	106	107	109	110	111	121	123	124	125	131	133	142	143	150
		Salicornia pacifica	Salicornia pacifica – Frankenia salina	Salicornia pacifica–Frankenia salina –Suaeda taxifolia	Salicornia pacifica– Jaumea carnosa	Salicornia pacifica–Frankenia salina –Batis maritima	Salicornia pacifica– Jaumea carnosa – Distichlis spicata	Salicornia pacifica/ Algae	Salicornia pacifica–Jaumea carnosa – Batis maritima	Salicornia bigelovii Provisional	Salicornia pacifica– Brassica nigra	Distichlis spicata – Salicornia pacifica	Distichlis spicata – Ambrosia chamissonis	Distichlis spicata- Annual Grasses (or Grass-Herb)	Distichlis spicata – Jaumea camosa	Ambrosia chamissonis – Abronia maritima – Cakile maritima	Ambrosia chamissonis – Distichlis spicata – Abronia maritima Provisional	Arthrocnemum subterminale – Salicornia pacifica	Arthrocnemum subterminale – Distichlis littoralis	Juncus acutus Provisional
Nyctaginaceae																				
Abronia	maritima												x			x	x			
Onagraceae																				
Camissoniopsis	cheiranthifolia												x			x	x			
Oxalidaceae																				
Oxalis	corniculata													x						
Plantaginaceae																				
Plantago	sp.														x					
Plumbaginaceae																				
Limonium	californicum		x	x	x							x	x		x				x	x
Poaceae																				
Ammophila	arenaria															x				
Arundo	donax																			
Avena	sp.																			
Bromus	catharticus var. catharticus																			
Bromus	diandrus										x									
Bromus	hordeaceus																			
Bromus	madritensis																			
Bromus	madritensis spp. rubens																			
Cynodon	dactylon																			
Distichlis	spicata		x	x	x		x		x			x	x	x	x		x		x	x
Distichlis	littoralis			x	x							x			x			x	x	x
Festuca	perennis																	x		
Festuca	sp.																			
Hordeum	marinum																			
Hordeum	sp.																			
Hordeum	vulgare																			
Parapholis	incurva																			
Pennisetum	setaceum																			
Polypogon	monspeliensis													x						
Spartina	densiflora								x					x						
Spartina	foliosa									x										
Polygonaceae																				
Eriogonum	sp.																			
Rumex	crispus													x						
Rubiaceae																				
Galium	aparine													x						
Salicaceae																				
Salix	lasiolepis																			
Scrophulariaceae																				
Myoporum	laetum														x					x
Typhaceae																				
Typha	latifolia																			
Urticaceae																				
Urtica	dioica																			
Urtica	urens																			
Unknown																				
	algae		x					x												
	moss																			
	unknown aster												x		x					
	unknown forb																			
	unknown grass										x									

Table G-1b. Plant Species Observed Per Surveyed Associations 160-453

Genus	Species	160	170	201	202	203	210	220	231	232	233	234	261	270	302	421	430	442	443	451	452	453
		Typha latifolia	Spartina foliosa	Baccharis pilularis – Artemisia californica	Baccharis pilularis – Toxicodendron diversilobum	Baccharis pilularis / Herbaceous	Leptosyne gigantea	Atriplex lentiformis	Frankenia salina	Frankenia salina – Distichlis spicata	Frankenia salina – Arthrocnemum subterminale Provisional	Frankenia salina – Limonium californicum – Distichlis littoralis – Salicornia spp.	Isocoma menziesii – Distichlis spicata	Artemisia californica	Salix lasiolepis / Baccharis pilularis	Carpobrotus edulis	Amnophila arenaria	Brassica nigra – Centaurea melitensis	Brassica nigra – Conium maculatum Provisional	Hordeum sp.	Bromus diandrus – Hordeum sp.	Bromus madritensis
Aizoaceae																						
Carpobrotus	edulis			x	x	x	x	x					x	x	x	x	x					
Carpobrotus	sp.							x														
Malephora	crocea																					
Mesembryanthemum	crystallinum																			x		
Mesembryanthemum	nodiflorum																			x		x
Taraxacum	officinale																					
Amaranthaceae																						
Amaranthus	albus									x												
Arthrocnemum	subterminale								x		x	x										
Salicornia	bigelovii		x																			
Anacardiaceae																						
Malosma	laurina													x								
Rhus	ovata													x								
Schinus	terebinthifolius														x							
Toxicodendron	diversilobum				x										x							
Apiaceae																						
Conium	maculatum							x											x			
Asteraceae																						
Ambrosia	chamissonis						x										x					
Ambrosia	psilostachya													x	x					x	x	x
Artemisia	californica			x		x	x						x	x								
Baccharis	glutinosa																					
Baccharis	pilularis			x	x	x	x	x						x	x		x	x				x
Baccharis	salicifolia					x	x							x								
Carduus	pycnocephalus																					x
Centaurea	melitensis						x	x										x		x		x
Cirsium	sp.							x														
Cirsium	vulgare										x											
Corethrogyne	filaginifolia						x															
Cotula	coronopifolia																			x		
Encelia	californica							x						x								
Erigeron	canadensis					x	x															x
Erigeron	sp.														x							
Helminthotheca	echioides																				x	
Heterotheca	grandiflora													x		x						
Isocoma	menziesii												x									
Jaumea	carnosa										x	x	x									
Lactuca	serriola																x			x		
Leptosyne	gigantea				x		x					x	x	x		x						
Pseudognaphalium	ramosissimum							x														
Pseudognaphalium	sp.										x											x
Pseudognaphalium	stramineum																			x		
Bataceae																						
Batis	maritima		x								x											
Boraginaceae																						
Heliotropium	curassavicum var. oculatum																			x		
Brassicaceae																						
Brassica	nigra							x										x	x			
Cakile	maritima						x															
Hirschfeldia	incana																			x	x	x
Sisymbrium	orientale																			x		

Table G-1b. Plant Species Observed Per Surveyed Associations 160-453

Genus	Species	160	170	201	202	203	210	220	231	232	233	234	261	270	302	421	430	442	443	451	452	453
		Typha latifolia	Spartina foliosa	Baccharis pilularis – Artemisia californica	Baccharis pilularis – Toxicodendron diversilobum	Baccharis pilularis / Herbaceous	Leptosyne gigantea	Atriplex lentiformis	Frankenia salina	Frankenia salina – Distichlis spicata	Frankenia salina – Arthrocnemum subterminale Provisional	Frankenia salina – Limonium californicum – Distichlis littoralis – Salicornia spp.	Isocoma menziesii – Distichlis spicata	Artemisia californica	Salix lasiolepis / Baccharis pilularis	Carpobrotus edulis	Annophila arenaria	Brassica nigra – Centaurea melitensis	Brassica nigra – Conium maculatum Provisional	Hordeum sp.	Bromus diandrus – Hordeum sp.	Bromus madritensis
Cactaceae																						
Opuntia	littoralis												x									
Chenopodiaceae																						
Atriplex	lentiformis						x	x						x								
Atriplex	leucophylla													x			x					
Atriplex	semibaccata																	x			x	
Atriplex	watsonii											x	x									
Bassia	hyssopifolia																			x		
Beta	vulgaris																			x		
Chenopodium	sp.																			x		
Extriplex	californica										x	x	x									
Salicornia	pacifica		x					x	x	x	x	x								x		
Salsola	tragus																			x		x
Suaeda	esteroa											x										
Suaeda	taxifolia										x	x	x									
Convolvulaceae																						
Calystegia	macrostegia																x					
Calystegia	soldanella																x					
Cressa	truxillensis																			x		x
Crassulaceae																						
Dudleya	lanceolata							x														
Cuscutaceae																						
Cuscuta	salina									x	x	x					x					
Cyperaceae																						
Cyperus	sp.	x																				
Fabaceae																						
Acmispon	glaber						x						x	x		x						
Astragalus	sp.												x									
Astragalus	trichopodus			x			x							x		x						
Lotus	corniculatus																			x		x
Lupinus	arboreus						x															
Lupinus	succulentus																					
Medicago	polymorpha			x										x								
Melilotus	indica							x												x	x	
Melilotus	sp.							x							x					x		
Frankeniaceae																						
Frankenia	salina						x	x	x	x	x	x	x						x			x
Geraniaceae																						
Erodium	cicutarium															x						
Hydrophlyllaceae																						
Phacelia	sp.																					
Juncaceae																						
Juncus	acutus subsp. leopoldii											x										
Triglochin	concinna var. concinna																					
Lamiaceae																						
Marrubium	vulgare						x															
Salvia	mellifera													x								
Liliaceae																						
Hesperoyucca	whipplei												x									
Malvaceae																						
Malva	parviflora																			x		
Myrsinaceae																						
Anagallis	arvensis																	x				

Table G-1b. Plant Species Observed Per Surveyed Associations 160-453

Genus	Species	160	170	201	202	203	210	220	231	232	233	234	261	270	302	421	430	442	443	451	452	453
		Typha latifolia	Spartina foliosa	Baccharis pilularis – Artemisia californica	Baccharis pilularis – Toxicodendron diversilobum	Baccharis pilularis / Herbaceous	Leptosyne gigantea	Atriplex lentiformis	Frankenia salina	Frankenia salina – Distichlis spicata	Frankenia salina – Arthrocnemum subterminale Provisional	Frankenia salina – Limonium californicum – Distichlis littoralis – Salicornia spp.	Isocoma menziesii – Distichlis spicata	Artemisia californica	Salix lasiolepis / Baccharis pilularis	Carpobrotus edulis	Amnophila arenaria	Brassica nigra – Centaurea melitensis	Brassica nigra – Conium maculatum Provisional	Hordeum sp.	Bromus diandrus – Hordeum sp.	Bromus madritensis
Nyctaginaceae																						
Abronia	maritima																x					
Onagraceae																						
Camissoniopsis	cheiranthifolia															x	x					
Oxalidaceae																						
Oxalis	corniculata																					
Plantaginaceae																						
Plantago	sp.																					
Plumbaginaceae																						
Limonium	californicum								x	x		x	x									
Poaceae																						
Ammophila	arenaria																x					
Arundo	donax							x						x								
Avena	sp.																			x	x	x
Bromus	catharticus var. catharticus																			x		
Bromus	diandrus																			x	x	x
Bromus	hordeaceus																			x		x
Bromus	madritensis											x				x				x		x
Bromus	madritensis spp. rubens																			x		
Cynodon	dactylon																			x		x
Distichlis	spicata				x		x		x	x	x	x	x	x						x		x
Distichlis	littoralis					x			x		x	x										
Festuca	sp.																					x
Festuca	perennis																			x	x	x
Hordeum	marinum																			x		
Hordeum	sp.																					x
Hordeum	vulgare																			x	x	
Parapholis	incurva																			x		
Pennisetum	setaceum													x								
Polypogon	monspeliensis										x									x		
Spartina	densiflora																					
Spartina	foliosa		x																			
Polygonaceae																						
Eriogonum	sp.													x								
Rumex	crispus														x							
Rubiaceae																						
Galium	aparine										x											
Salicaceae																						
Salix	lasiolepis				x	x									x							
Scrophulariaceae																						
Myoporum	laetum			x			x	x							x							
Typhaceae																						
Typha	latifolia	x																				
Urticaceae																						
Urtica	dioica						x													x		
Urtica	urens						x															
Unknown																						
	algae		x																			
	moss			x										x								
	unknown aster																					
	unknown forb																			x		
	unknown grass																			x		