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> November 9, 2020 M&A #15-016-04

Mr. Chris Langdon KTUA 3916 Normal Street San Diego, CA 92103

Biological Resources Survey Report for the Chula Vista Bayfront – Sweetwater District and Harbor District

Dear Mr. Langdon:

Merkel & Associates, Inc. has prepared the following biological resources survey report in support of the Chula Vista Bayfront Master Plan, supplemental studies for the Sweetwater District and Harbor District.

If you have any questions concerning this letter report, please do not hesitate to contact me (agonzales@merkelinc.com) or Mr. Keith Merkel (kmerkel@merkelinc.com) at (858) 560-5465.

Sincerely,

Amanda K. Gonzales Senior Biologist

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INTRODUCTION

Purpose of Report

Merkel & Associates, Inc. (M&A) has prepared this biological resources survey report in support of the Chula Vista Bayfront Master Plan (CVBMP), supplement studies for the Sweetwater District and Harbor District. The purpose of this letter report is to document the existing vegetation communities and special status species present within the Sweetwater District as well as the Harbor District. Thus, the biological study area (BSA) includes both Districts (Figure 1).

M&A biologists conducted ground-truthing vegetation mapping and rare plant surveys along with protocol and/or focused surveys for the coastal California gnatcatcher (Polioptila californica californica) a federally listed threatened species, Belding's savannah sparrow (Passerculus sandwichensis beldingi) a state listed endangered species, burrowing owl (Athene cunicularia) a California Department of Fish and Wildlife (CDFW) species of special concern, and raptors. The surveys were conducted between May and July 2019. This letter report serves as an update to previous biological mapping and sensitive species surveys conducted as part of the Final Environmental Impact Report (FEIR) for the Chula Vista Bayfront Master Plan (Dudek 2010) and most recently by M&A for the Sweetwater District and the Sweetwater Bicycle Path and Promenade Bridge Project (also known as the Sweetwater Park Urban Greening Grant Project and/or Sweetwater Park Pedestrian and Bicycle Bridge and Inlet Channel Improvements Project) (M&A 2019a). Since completion of the surveys in July 2019, the Costa Vista RV Park Project located within the Sweetwater District, and the Sweetwater Bicycle Path and Promenade Bridge Project located within the Sweetwater and Harbor Districts have initiated construction in accordance with applicable project approvals. As a result, vegetation communities within these areas have been modified. In effort to provide the project team with the most update to date vegetation mapping, this report does include a figure depicting vegetation communities as of October 2020.

Location

The BSA is located in the City of Chula Vista with portions of the site located on San Diego Unified Port District (Port) lands, San Diego County, within unsectioned lands, Township 18 South, Range 2 West of the San Bernardino Base and Meridian, U.S. Geological Survey 7.5' National City, California Quadrangle (central point of the BSA Latitude 32.6344, Longitude -117.1046 decimal degrees, WGS84 datum) (Figure 1).

SURVEY METHODS

Literature and Data Review

Historical and currently available biological literature and data pertaining to the project area were reviewed prior to initiation of the field investigations. This review included examination of: 1) aerial photography for the project site (Google Earth Pro, M&A 2018a); 2) previously mapped vegetation data for the project vicinity (M&A 2019a, ICF 2016, Dudek 2015, Dudek 2010); 3) soil types mapped on the project site (SanGIS 2002); 4) digital elevation model (DEM) and topographic data (M&A 2016); 5) federally designated critical habitat for the project vicinity (USFWS 2019a); 6) CDFW California Natural Diversity Database (CNDDB) and USFWS special status species records for the project vicinity (CDFW 2020a and USFWS 2019b, respectively); and 7) previous biological

reports/data for the project site and local vicinity including: Final Environmental Impact for the Chula Vista Bayfront Master Plan (Dudek 2010), Biological Resources Survey Report for the E Street Realignment in Chula Vista, Chula Vista Bayfront Master Plan (Dudek 2015), South Bay Bio Reconnaissance Survey (ICF 2016), Final Report Restoration and Enhancement Alternatives for the Chula Vista Bayfront (M&A 2017), Habitat Mitigation for the Costa Vista RV Park (M&A 2018b), Vegetation Map, Impact and Mitigation Update for the Costa Vista RV Park (M&A 2018c), and Biological Impact Analysis Report for the Sweetwater Park – Urban Greening Grant Project (M&A 2019a).

Field Surveys Conducted

M&A biologists conducted a ground-truthing survey of the vegetation communities and rare plants recently mapped within the Sweetwater District by M&A for the Sweetwater Bicycle Path and Promenade Bridge Project (M&A 2019a); the ground-truthing survey was expanded to the Harbor District as most recently mapped by ICF (ICF 2016). M&A also conducted protocol surveys for the coastal California gnatcatcher as well as focused surveys for Belding's savannah sparrow, burrowing owl, and raptors. M&A did not conduct a jurisdictional resources delineation under this contract. The below paragraphs provide a summary of the survey methods.

The ground-truthing and rare plant surveys were conducted on-foot and any changes were delineated onto a 1" = 280' and 1" = 460' scale, color aerial photograph (Google Earth Pro) of the Sweetwater and Harbor Districts, respectively. A minimum mapping unit of 0.01 acre was used for vegetation mapping to be consistent with previous mapping efforts. Significant and sensitive resources were noted on field maps, recorded using a Trimble® GeoExplorer Global Positioning System (GPS) unit with submeter accuracy, and/or a mobile mapping application on a hand-held device (i.e., Avenza). Data collected from the survey were digitized in Environmental Systems Research Institute (ESRI) Geographic Information System (GIS) software, using ArcGIS for Desktop.

A general botanical and wildlife survey was performed concurrent with all surveys. A list of detectable flora species was recorded in a field notebook. Plant identifications were either resolved in the field or later determined through verification of voucher specimens. Wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows, tracks, scat, etc.). The scientific and common names utilized for the floral and faunal resources were noted according to the following nomenclature: flora, Baldwin (2011); butterflies, Klein and San Diego Natural History Museum (2002); birds, American Ornithologists' Union (1998 and 2020); and mammals, San Diego Natural History Museum (2012), (species level) Wilson and Reeder (2005) and (sub-species level) Hall (1981).

M&A permitted biologists conducted coastal California gnatcatcher surveys in accordance with the current U.S. Fish and Wildlife Service's (USFWS) Coastal California Gnatcatcher Presence/Absence Survey Protocol (USFWS 1997), as authorized under M&A's federal Endangered Species Act, Section 10(a)(1)(A) permit #797999-8.1 and CDFW Memorandum of Understanding.

An assessment for burrowing owl habitat was conducted in accordance with CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012). Suitable burrowing owl habitat and burrows were not

identified within the BSA; however, due to the proximity to occupied burrowing owl habitat located approximately 2.5 miles south of the central portion of the BSA, M&A did continue with four focused burrowing owl surveys in specific locations identified as potential areas that could be used by burrowing owls in transit (i.e., recently graded pads with sparse vegetation but lacking burrows).

Three focused Belding's savannah sparrow surveys were conducted where southern coastal salt marsh was identified within the BSA. The surveys were conducted on-foot using binoculars during optimal weather. Any Belding's savannah sparrows observed were recorded and mapped.

Surveys for nesting raptors were conducted concurrent with all surveys, with an emphasis on nest identification and mapping during the burrowing owl surveys. Any active nests and/or breeding behaviors (e.g., young, carrying food, paired adult perch, etc.) were noted and mapped.

Survey Date, Time, and Conditions

Table 1 summarizes the survey date, time, and conditions.

Table 1. Survey Date, Time, Conditions

Survey	Date	Time	Conditions (start to end) 1	Biologist
Gnatcatcher Survey #1 and Burrowing Owl Assessment	2019 May 8	0619-1130	Weather: 100%-10% cc Wind: 0-3 BS Temperature: 59-64° F	Amanda Gonzales
Belding's Savannah Sparrow #1, Ground- truthing Survey, Burrowing Owl Assessment	2019 May 8	0619-0900	Weather: 100%-10% cc Wind: 0-3 BS Temperature: 59-64° F	Brandon Stidum
Gnatcatcher Survey #2	2019 May 17	0830-1048	Weather: 75%-10% cc Wind: 1-2 BS Temperature: 62-67° F	Amanda Gonzales
Belding's Savannah Sparrow #2, Burrowing Owl #1	2019 May 17	1048-1300	Weather: 10%-10% cc Wind: 2-2 BS Temperature: 67-67° F	Amanda Gonzales
Gnatcatcher Survey #3	2019 May 31	0735-0923	Weather: 100%-100% cc Wind: 1-2 BS Temperature: 60-62° F	Amanda Gonzales
Belding's Savannah Sparrow #3, Burrowing Owl #2, Rare Plant Survey	2019 May 31	0930-1200	Weather: 100%-100% cc Wind: 2-0 BS Temperature: 60-66° F	Amanda Gonzales Kyle Ince
Burrowing Owl #3	2019 June 21	1745-1930	Weather: 100%-100% cc Wind: 2-1 BS Temperature: 68-64° F	Amanda Gonzales Kyle Ince
Burrowing Owl #4, Rare Plant Survey, Ground- truthing Survey	2019 July 12	1630-1830	Weather: 10%-10% cc Wind: 2-1 BS Temperature: 80-73° F	Amanda Gonzales Kyle Ince

Survey	Date	Time	Conditions (start to end) 1	Biologist
In-progress development verification survey	2020 Oct 9	1030-1245	Weather: clear Wind: 3 BS	Amanda Gonzales
verification survey			Temperature: 72-74° F	

cc = cloud cover; BS = Beaufort scale [BS 0 = <1 miles per hour (mph), BS 1 = 1-3 mph, BS 2 = 4-7 mph, BS 3 = 8-12 mph]; °F = degrees Fahrenheit

SURVEY RESULTS

Regional Context

Regionally, the BSA is located in the southern coast ecoregion of San Diego County. It is located along the Bayfront, within the Lower Sweetwater Hydrologic Area (Basin No. 9.10) of the Sweetwater Hydrologic Unit/Watershed (Basin No. 9.00). Various regions of San Diego Bay are recognized under section 303(d) of the Clean Water Act (CWA) as an impaired waterbody. The BSA is not located within federally designated critical habitat.

Local Setting

Locally, the Sweetwater District can be characterized by predominantly undeveloped flat land dominated by disturbed habitat and bordered to the west by San Diego Bay and to the east by commercial development. An inlet channel conveying tidal flows from the Bay to the F&G Street Marsh (offsite) is located within the southern portion of the District. Tidal flows convey under Marina Parkway via pipe culverts. The inlet channel bed is narrow with vertical and eroding banks. The elevation within the Sweetwater District ranges from approximately +2 feet NAVD88 in the channel bottom (i.e., inlet to the F&G Street Marsh) to +20 feet NAVD88 at the top of a manmade soil stockpile berm in the central portion of the BSA. From north to south, soils are mapped as Huerhuero loam (2-9% slopes), Tidal flats, and Made land.

As of October 2020, the Costa Vista RV Project, located in the northern portion of the Sweetwater District is under construction and thus actively converting habitat to urban uses as well as open space buffer and/or open space compensatory mitigation. In addition, the Sweetwater Bicycle Path and Promenade Bridge Project has been constructed and has also converted lands to urban uses as well as open space compensatory mitigation.

The Harbor District can be characterized by predominately urban uses consisting of the Bayside Park, RV Resort, Chula Vista Launch Ramp, Chula Vista Bayfront Park, and Public Marina. Other urban associated uses include a gravel overflow parking lot off Quay Avenue, two soil import pads off Sandpiper Way, both of which were compacted and stabilized to prevent erosion, a soil remediation area site off H Street and Marina Parkway, and a side dirt lot used by pedestrians for trail use between the Marina and Marina Way. Lastly, a large undeveloped lot is located along the southeastern portion of the District off Marina Parkway.

Vegetation Communities and Flora

Thirteen vegetation types were identified within the BSA during the biological surveys (as of July 2019) (Table 2; Figure 2). The below paragraphs provide a short description of the overall area. A list of the floral species observed within the BSA during the biological surveys has been included with this report in Appendix 1.

Table 2. Vegetation Communities within the Biological Study Area – As of July 2019

	Holland/	General	Exis	sting (acres)	
Vegetation Community	Vegetation Community Oberbauer Habitat Group Code Classification		Sweetwater	Harbor	Total
Southern coastal salt marsh	52120	Wetland	2.11	0.67	2.78
Southern coastal salt marsh - disturbed	52120	Wetland	<0.01		<0.01
Mule fat scrub	63310	Wetland	0.16		0.16
Beach	64400	Wetland	0.47	1.91	2.38
Open water	64100	Wetland	0.12	57.57	57.69
Riprap ¹	NA	NA		2.92	2.92
Bare ground ¹	NA	NA	0.02	<0.01	0.02
	Aquatic Asso	ciated Subtotal ¹ :	2.88	63.07	65.95
Diegan coastal sage scrub	32500	Upland	9.30	<0.01	9.30
Diegan coastal sage scrub - disturbed	32500	Upland	9.87	1.30	11.17
Eucalyptus woodland	79100	Upland	0.42		0.42
Disturbed habitat	11300	Upland	98.99	107.74	206.73
Ornamental	NA	Upland	1.78		1.78
Urban/developed	12000	Upland	6.24	108.45	114.69
	Upland Associated Subtotal:		126.60	217.49	344.09
		Grand Total:	129.48	280.56	410.04

Riprap occurs along the Bayfront shoreline as well as within the inlet channel to the F&G Street Marsh. Similarly, bare ground occurs within the inlet channel. These features (where dominant) have been mapped and included in Table 2 but don't necessarily have a corresponding code or habitat classification.

Open water and beach is an overarching classification for the open waters of San Diego Bay (including the inlet channel) and the associated shoreline/beach areas. Beach could be further classified as intertidal sandflat, intertidal gravel beach, and/or intertidal beach. Lastly, riprap is located sporadically within the inlet channel to the F&G Street Marsh as well as installed and maintained as a revetment slope along the Bayfront shoreline within the Harbor District.

A jurisdictional delineation was not conducted; thus, this represents a subtotal of potentially aquatic associated resources.

Sweetwater District

The Sweetwater District is dominated by disturbed habitat. Disturbed habitat has been classified for areas dominated by non-native species (not ornamental or landscaping), and/or areas comprised of bare ground intermixed with non-native species. Where vegetation is present, the community is comprised of areas dominated by a single or few species, as well as areas dominated by a mixture of species. Garland (Glebionis coronaria), a non-native annual herb forms a large monotypic canopy in the central portion of the District. Other non-native species present throughout the disturbed habitat, and forming relatively tall/moderate canopies included pampas grass (Cortaderia selloana), giant reed (Arundo donax), and Eucalyptus, in addition to patches dominated by summer field mustard (Hirschfeldia incana) and Russian thistle (Salsola tragus). Individual and/or small groupings of Mexican fan palm (Washingtonia robusta) and Canary Island palm (Phoenix canariensis) also occur throughout the community. Areas are also comprised of a mixture of non-native species including stinkwort (Dittrichia graveolens), prickly lettuce (Lactuca serriola), cheeseweed (Malva parviflora), sprawling saltbush (Atriplex suberecta), and five hook bassia (Bassia hyssopifolia), intermixed with patches of fennel (Foeniculum vulgare) and tree tobacco (Nicotiana glauca). Non-native grasses are sporadically found in portions of the disturbed habitat but their density and/or coverage is very low with the area expected to function as an extension of the surrounding disturbed habitat and not as non-native grassland. In addition, individual and/or small groups of native species are present throughout the disturbed habitat; however, in most cases, not in sufficient quantities to comprise a native vegetation type (e.g., Diegan coastal sage scrub). Native species present sporadically throughout the disturbed habitat generally consist of opportunistic species, most notably broom baccharis (Baccharis sarothroides).

A large patch of non-native grassland was previously identified along the western portion of the Sweetwater District boundary (Dudek 2015). Prior to the 2015 report, the FEIR classified a portion of the same area as disturbed wetland with the dominant plant being listed as pineapple weed (Matricaria discoidea) [facultative upland plant (FACU), USACOE 2008 and 2016] (Dudek 2010). This area currently supports non-native species consistent with the adjacent disturbed habitat, including Australian saltbush (Atriplex semibaccata), Lindley's saltbush (Atriplex lindleyi), London rocket (Sisymbrium irio), crystalline iceplant (Mesembryanthemum crystallinum), five hook bassia, tocalote (Centaurea melitensis), sourclover (Melilotus indicus), and Russian thistle. Non-native grass cover in this area is limited to sporadically occurring hare barley (Hordeum murinum ssp. leporinum) and red brome (Bromus madritensis ssp. rubens). As such, the presence of non-native grasses is not sufficient enough to classify the community as non-native grassland. Similarly, the presence of wetland associated plants [i.e., limited to Australian saltbush, classified as a facultative plant (FAC)] is not sufficient to meet federal or state wetland parameter requirements. Thus, the area has been classified as disturbed habitat, consistent with the surrounding land.

Diegan coastal sage scrub is present in the Sweetwater District; however, much of the community is disturbed in nature. The disturbed classification is associated with areas supporting a high amount of non-native species (e.g., mustard, fennel, etc.) as well as areas dominated by broom baccharis, Menzies's goldenbush (*Isocoma menziesii var. menziesii*), and big saltbush (*Atriplex lentiformis*). The FEIR previously classified all coastal sage scrub onsite as disturbed Diegan coastal sage scrub. In addition to the presence of invasive species, isolation of the sage scrub from other native habitat was a factor in the FEIR classification. Although the onsite coastal sage scrub is isolated from other native upland habitat, M&A has distinguished between disturbed and non-disturbed based on the

presence of non-native invasive species. The below paragraphs provide a short description of each sub-community.

Areas dominated by broom baccharis and goldenbush are typically associated with disturbed sites (e.g., previously brushed or graded) and/or nutrient poor soils. Both species can be characterized as opportunistic, due to their ability to quickly thrive in undesirable conditions. Within the BSA, broom baccharis dominated areas comprise dense moderately tall (four to six feet) shrub cover. Goldenbush dominated areas form sparse, low growing cover (one to two feet) intermixed with bare ground and other low growing native species typical of disturbed areas [e.g., deerweed (*Acmispon glaber* var. *glaber*)]. Areas dominated by big saltbush also occur throughout the Sweetwater District. Big saltbush is an opportunistic native shrub that commonly occurs in saline soils along the immediate coast of San Diego County. It generally occurs in coastal sage scrub vegetation but will also occur at lower elevations within moist soils of coastal salt marsh or brackish marsh habitats. As such, it is a species that can occur in both upland and wetland plant communities. Within the BSA, this plant is present at higher elevations, co-occurring with a predominance of upland plant species. The largest patches of big saltbush are situated along Lagoon Drive, in an area previously identified as disturbed habitat (Dudek 2010) and subsequently mapped as disturbed Diegan coastal sage scrub (Dudek 2015).

Patches of higher quality Diegan coastal sage scrub are present within the Sweetwater District and include the northern limit of the Sweetwater District as well as the southern limit of the District, just north of the inlet to the F&G Street Marsh. The coastal sage scrub that occurs in the northern portion of the Sweetwater District quickly transitions offsite to the north via a relatively steep slope into the adjacent Wildlife Refuge. Here (within the Sweetwater District), this habitat is generally dominated by California encelia (Encelia californica) with taller lemonade berry (Rhus integrifolia) occurring offsite to the north. Within the southern portion of the Sweetwater District, this community is dominated by California sagebrush (Artemisia californica), coastal California buckwheat (Eriogonum fasciculatum var. fasciculatum), and decumbent goldenbush (Isocoma menziesii var. decumbens). The taller broom baccharis occurs occasionally in this area. A manmade berm is also located within the central portion of the Sweetwater District. This berm was constructed in approximately 1988 from surplus soil generated from the Sweetwater River channelization project and SR-54 construction. The soil was imported for future development of the Chula Vista Bayfront and stabilized for erosion control using a native sage scrub seed mix dominated by California encelia (K. Merkel, pers. obs.). Today, much of the berm is dominated by a relatively narrow, linear strip of California encelia.

The inlet channel to the F&G Street Marsh is located in the southern portion of the Sweetwater District. This is a fully tidal channel that connects the F&G Street Marsh to San Diego Bay through two, approximate 36-inch high density polyethylene corrugated pipe culverts under Marina Parkway. Near the inlet, the channel bed is narrow with vertical and eroding banks. The channel bed has been classified as open water, with portions of the eroding bank classified as bare ground. Within the bed are notable amounts of concrete rubble and other debris intermixed with the soil. A small area of riprap and bare ground has also been identified at the outlet of Outfall No. CV1-2. Southern coastal salt marsh occurs on the shallow banks of the bench, prior to transitioning to upland habitat as well as benches that have established following erosion. Along the shoreline, the salt marsh community is generally sporadic and linear in nature, comprised of typical salt marsh

plants including alkali heath (*Frankenia salina*), pacific pickleweed (*Salicornia pacifica*), with inclusions of salty Susan (*Jaumea carnosa*), saltwort (*Batis maritima*), estuary seablite (*Suaeda esteroa*), shoregrass (*Distichlis littoralis*), Parish's pickleweed (*Arthrocnemum subterminale*), western marsh-rosemary (*Limonium californicum*), and alkali weed (*Cressa truxillensis*). Additional species present along the transitional boundary to higher elevations include saltgrass (*Distichlis spicata*), woolly sea blite (*Suaeda taxifolia*), big saltbush, decumbent goldenbush, Australian saltbush, and Russian thistle.

A small grouping of mule fat (*Baccharis salicifolia*) is present at the gated entrance to the Living Coast Discovery Center off Gunpowder Point Drive and along the outer fringe of the seasonal pond, just north of Lagoon Drive. Although these plants are not associated with an aquatic feature, they were previously classified as mule fat scrub and will retain the classification.

Ornamental vegetation occurs along the eastern portion of the Sweetwater District and has been identified for areas that are expected to serve as landscaping and/or barriers between the adjacent development. Urban development has been classified for paved roadways, parking lots, and any permanent structures present within the District boundary.

Harbor District

The Harbor District is dominated by urban development and secondarily disturbed habitat. Urban developed lands have been mapped for parks, the RV park, marina, paved roadways, parking lots, and any permanent structure present within the District boundary.

Disturbed habitat has been mapped for those urban-associated uses within the District including the gravel overflow parking lot off Quay Avenue, two soil import pads off Sandpiper Way, both of which were compacted and stabilized to prevent erosion, the soil remediation lot off H Street and Marina Parkway, and a side dirt lot used by pedestrians for trail use between the Marina and Marina Way. Overall, the vegetation within these areas is sparse and approximately less than 10 percent cover. The disturbed habitat is dominated by bare ground with sporadic non-native weedy species, generally found along the fence line. Non-native species present include garland, summer field mustard, Russian thistle, stinkwort, prickly lettuce, cheeseweed, Australian saltbush, flax-leaf fleabane (*Erigeron bonariensis*), and crystalline iceplant.

Lastly, a large undeveloped lot is located at the southeastern portion of the District off Marina Parkway. The eastern portion of this lot was previously developed and supported facilities which have since been removed. Based on aerial review, the lot has been unmaintained for the past several years, resulting in an emergence of weedy species. The lot is largely dominated by garland with an inclusion of non-native weedy plants including sourclover, slender leaved ice plant (Mesembryanthemum nodiflorum), and non-native grasses. Patches of broom baccharis are also present.

Current Site Conditions – As of October 2020

Since completion of the surveys in July 2019, construction associated with the Costa Vista RV Park Project located within the Sweetwater District and the Sweetwater Bicycle Path and Promenade Bridge Project located within the Sweetwater District and extending into the northern portion of the Harbor District has been initiated in accordance with applicable project approvals. As a result,

vegetation communities within these areas have been modified. In effort to provide the project team with the most up-to-date vegetation mapping, this report includes Figure 3 depicting inprogress development and restoration areas as of October 2020; approximate acreages are quantified in Table 3. The in-progress areas are based on the approved site development plans.

Table 3. Vegetation Communities within the Biological Study Area – As of October 2020

	Holland/	General	Exis	sting (acres)	
		Habitat Group Classification	Sweetwater	Harbor	Total
Southern coastal salt marsh	52120	Wetland	2.11	0.67	2.78
Southern coastal salt marsh - disturbed	52120	Wetland	<0.01		<0.01
Mule fat scrub	63310	Wetland	0.16		0.16
Beach	64400	Wetland	0.47	1.91	2.38
Open water	64100	Wetland	0.11	57.56	57.67
Riprap ¹	NA	NA		2.92	2.92
Bare ground ¹	NA	NA	0.01		0.01
	Aquatic Asso	ciated Subtotal ¹ :	2.86	63.06	65.92
Diegan coastal sage scrub	32500	Upland	7.78	<0.01	7.78
Diegan coastal sage scrub - disturbed	32500	Upland	6.78	1.28	8.06
Eucalyptus woodland	79100	Upland	0.42		0.42
Disturbed habitat	11300	Upland	38.18	106.93	145.11
Ornamental	NA	Upland	1.71		1.71
Urban/developed	12000	Upland	5.25	107.45	112.70
Upland Associated Subtotal:		60.12	215.66	275.78	
In-progress development	NA	NA	48.75	1.22	49.97
In-progress restoration	NA	NA	17.75	0.62	18.37
Grand Total: 129.48 280.56 410.04					

Zoological Resources – Fauna

Wildlife species most commonly observed during the biological surveys consisted of avian species, many of which are common throughout coastal San Diego County. Less common (but non-sensitive) avian species identified within the BSA include the warbling vireo (*Vireo gilvus*) and MacGillivray's warbler (*Oporornis tolmiei*). The warbling vireo is a common migrant through San Diego County but rare as a breeding bird (Unitt 2004). Migrants typically stop in any tree but breeding birds seek mature riparian and oak woodland. One individual was detected along the northern boundary of the Sweetwater District within the Diegan coastal sage scrub as it extends offsite to the north; it was only detected once and thus assumed to be a migrant. MacGillivray's warbler is a migrant in both spring and fall to San Diego County (more common in spring) and typically occurs in dense, low vegetation (Unitt 2004). One individual was observed in late spring (May 8) within the Diegan coastal sage scrub on the berm in the central portion of the Sweetwater District. Another bird of interest that was observed within the BSA included the brown-headed cowbird (*Molothrus ater*), an obligate brood parasitic bird. A maximum three brown-headed

cowbirds were observed perched along the overhead utility lines within the central and northern portion of the Sweetwater District. A full list of species detected within the BSA is provided in Appendix 2.

Protocol surveys for the coastal California gnatcatcher were negative; the results are detailed in the 45-day Letter Report included as Appendix 3. The coastal California gnatcatcher is a non-migratory bird occurring along the Pacific regions of southern California and northern Baja California, Mexico in or near coastal scrub vegetation. The majority of the sage scrub within the BSA occurs within the Sweetwater District; however, much of the community is disturbed in nature and overall, the area is isolated from other upland native communities. The Harbor District does support sporadic broom baccharis intermixed with a low inclusion of other natives (e.g., coastal California buckwheat) and a high inclusion of non-natives. While sporadic broom baccharis is present in these areas, it is not suitable gnatcatcher habitat and no gnatcatchers were detected. The negative results are consistent with previous surveys conducted within the CVBMP (Dudek 2015).

Focused surveys for the burrowing owl were negative. The burrowing owl prefers short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils, commonly associated with grassland as well as agricultural areas, ruderal grassy fields, vacant lots and pastures so long as the vegetation structure is suitable and there are usable burrows and foraging habitat in proximity (CDFW 2012). A requirement for this small owl are underground cavities for nesting during the breeding season and for roosting and cover year around (multiple burrow sites within its local area). The BSA was determined to not support any suitable burrows and the majority of habitat was determined to not support foraging habitat (i.e., BSA dominated by areas comprised of tall, relatively dense non-native vegetation including garland and mustards). During the 2019 surveys, multiple, recently created soil import pads were present within the BSA (one within the Sweetwater District and two within the Harbor District). No burrows were located on these pads; however, due to the proximity to known occupied burrowing owl habitat south of the BSA, M&A did conduct focused surveys on these pads since they could potentially be used by owls in transit. No owls or owl sign was observed on these pads or within the BSA. Previous surveys conducted in June 2016 did identify one burrowing owl burrow in the large undeveloped lot in the southeastern portion of the Harbor District off Marina Parkway (ICF 2016 and included on Figure 2b). According to the 2016 report, the burrow showed signs of previous owl occupation (pellets and bones) and there are numerous other burrows in this location that would serve as suitable owl burrows. During the 2019 surveys, the area was overgrown with vegetation and suitable burrows could not be located.

Numerous raptors were observed utilizing the BSA but no nesting raptors were identified onsite. Raptors observed included red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion haliaetus*), Cooper's hawk (*Accipiter cooperii*), and northern harrier (*Circus hudsonius*). At maximum two redtailed hawks were observed interacting together; both were observed flying over the central and northern portion of the Sweetwater District as well as offsite to the north. They were also observed to be perched on the utility poles along Gunpowder Point Road. The BSA supports suitable foraging habitat for the red-tailed hawk. Osprey, Cooper's hawk, and northern harrier are special status species and discussed in the below section.

Special Status Species

Eight special status species were identified within the BSA during the biological surveys. They consist of four plant species, California box thorn (*Lycium californicum*), estuary seablite, woolly sea-blite, and decumbent goldenbush, and four avian species, osprey, Cooper's hawk, northern harrier, and California horned lark (*Eremophila alpestris actia*). Three additional special status avian species were observed utilizing resources immediately adjacent to the BSA but they were not observed onsite, California least tern (*Sternula antillarum browni*), Belding's savannah sparrow, and brant (*Branta bernicla*). All special status species are depicted in Figures 2a and 3a and discussed below. For purposes of this letter report and to track use of the BSA over time, M&A has also created Figures 2b and 3b showing the locations of special status species as detected within the CVBMP under previous surveys (ICF 2016 and Dudek 2015).

Two additional special status species were observed flying over the BSA, they consist of double-crested cormorant (*Phalacrocorax auritus*) a CDFW watch list (nesting colony only) and great blue heron (*Ardea herodias*) a CNDDB special animal (nesting colony only). Since nesting habitat for either species is not present onsite and because they were not observed to forage onsite or immediately adjacent to the site, the locations of these species were not plotted onto Figures 2a and 3a. Double-crested cormorants forage within open water; the individual flying over the site was likely in transit. Great-blue herons are year round birds in San Diego County, most commonly nesting in colonies, high in tall trees near water (Unitt 2004). Breeding herons potentially forage within approximately five miles of their colonies; they can be found foraging in marshes, mud flats, agricultural areas at low to mid elevations. While nesting does not occur within the BSA or immediately adjacent to the BSA, great-blue herons could forage onsite within the shallow waters of the Bay, inlet channel, and/or disturbed areas.

State CEQA Guidelines §15380 (Title 14, Chapter 3, Article 20) define "endangered, rare or threatened species" as "species or subspecies of animal or plant or variety of plant" listed under the Code of Federal Regulations, Title 50, Part 17.11 or 17.12 (Volume 1, Chapter I) or California Code of Regulations, Title 14, Sections 670.2 or 670.5 (Division 1, Subdivision 3, Chapter 3), or a species not included in the above listings but that can be shown to be "endangered" meaning "when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" or "rare" meaning "although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the Federal Endangered Species Act". State CEQA guidelines Appendix G, Section IV generally refers to species that fall under the above criteria as "special status species". To be consistent with the terminology within the CVBMP FEIR, the term "sensitive species" will be used throughout this report.

Thus, for the purposes of this letter report, sensitive species are: 1) federally and state listed species (CDFW 2020b and 2020c); 2) CDFW Species of Special Concern (SSC) and Fully Protected (FP) species (CDFW 2020d and 2020e); 3) species designated as California Rare Plant Rank of 1 or 2 by

the California Native Plant Society (CNPS); and 4) species identified as special status in the CVBMP EIR (Dudek 2010).

California Box Thorn

California box thorn, a CNPS California Rare Plant Rank List 4.2 [Plants of limited distribution (a watch list), Fairly threatened in California (moderate degree/immediacy of threat] is a perennial shrub, commonly found in San Diego coastal bluff scrub and/or coastal sage scrub communities at elevations between approximately 16 and 492 feet.

California box thorn is present along the northern edge of the inlet channel to the F&G Street Marsh as well as the western portion of the Sweetwater District. All of the plants near the inlet channel are located outside the channel limits at the top of the eroding bank. The plants are small, low growing and classified as part of the surrounding habitat (i.e., disturbed habitat). The plants present in the western portion of the Sweetwater District are mature and occur as individuals, classified as part of the surrounding habitat (i.e., disturbed habitat).

Estuary Seablite

Estuary seablite, a CNPS California Rare Plant Rank List 1B.2 (Plant rare or endangered in California and elsewhere, Moderately threatened in California with a moderate degree and immediacy of threat) is a perennial herb found in coastal bluff scrub, coastal dunes, marshes and swamps on the margins of coastal salt marsh at elevations ranging from approximately 0 to 164 feet.

Estuary seablite was detected along the northern bank of the inlet channel and along the western boundary of the Sweetwater District. Most plants were relatively large and classified as southern coastal salt marsh. It should be noted that the plants along the western boundary of the Sweetwater District were originally classified in the 2010 EIR as woolly seablite. They were reclassified as estuary seablite in Dudek's 2015 report. As part of the present survey, M&A retained the classification for those species along the western boundary of the Sweetwater District as estuary seablite; however, identification between the estuary seablite and woolly seablite is difficult.

Woolly Seablite

Woolly seablite, a CDFW CNDDB Special Plant and California Rare Plant Rank List 4.2 is a perennial evergreen shrub found in coastal bluff scrub, coastal dunes, marshes and swamps on the margins of coastal salt marsh at elevations ranging from approximately 0 to 164 feet.

Numerous woolly seablite were detected on the western portion of the Sweetwater District. Woolly seablite generally occurs at slightly higher elevations than estuary seablite; however, as mentioned above, identification between estuary seablite and woolly seablite can be difficult.

Decumbent Goldenbush

Decumbent goldenbush, a CNPS California Rare Plant Rank List 1B.2 (Plant rare or endangered in California and elsewhere, Moderately threatened in California with a moderate degree and immediacy of threat) is a small shrub commonly found in chaparral and coastal sage scrub (and often in disturbed areas), and occasionally in wetland-riparian areas. It is documented to occur in

sage scrub and disturbed communities throughout coastal San Diego County as well as in the local South Bay region (Calflora 2019).

Decumbent goldenbush was detected in the Sweetwater District, throughout the upland areas in disturbed habitat and coastal sage scrub. Plants were observed individually as well as in small groups; approximately 107 plants detected. A patch of disturbed Diegan coastal sage scrub is dominated by decumbent goldenbush, with potential hybrids between decumbent goldenbush and Menzies's goldenbush. Within this area, it is estimated that approximately 405 plants are present throughout the community. Only those plants with a predominance of distinctive decumbent goldenbush features are included in the above estimation.

Osprey

Osprey, a CDFW watch list species (nesting site only) is a year-round avian resident of San Diego County, preferring the coast and inland lakes. Large nests are typically constructed on high structures (e.g., utility poles, utility platforms, trees) in the vicinity of water where it forages on live fish. Within the Chula Vista Bayfront, this species is expected to feed almost exclusively on live fish. Although osprey could prey on non-fish such as birds, the local setting within the Chula Vista Bayfront provides easy access to their preferred prey of live fish.

One active osprey nest is located just outside the limits of the BSA. The platform nest is located on a light post within the fenced limits of the industrial facility located just north of H Street, near the intersection of H Street and Marina Parkway. During the 2019 survey season, the adult pair fledged three young. The adults were observed flying between the open waters of the Bay and the nest site while the young were primarily observed perched and/or flying within proximity to the nest. An osprey nest had previously been identified within the Harbor District off G Street (Dudek 2015); this nest is no longer present.

On one occasion, one osprey was observed flying outside of the BSA, over the J Street Marsh (south of the Harbor District) eastward out of sight and carrying nesting material. Based on the behavior, it is assumed that this osprey is not associated with the nesting pair discussed above.

Cooper's Hawk

Cooper's hawk, a CDFW watch list species (nesting site only) is a year-round avian resident of San Diego County that frequently nests in dense stands of coast live oak, riparian deciduous or other forest habitat located near water and along broken woodland habitat and edges where it perches under cover and hunts live prey, including amphibians, reptiles, and small birds and mammals. Small birds could include a wide variety of species, most notably doves, starlings, scrub-jay, and rock pigeons. Cooper's hawks are common in urban areas where suitable canopy is present, including eucalyptus trees (Unitt 2004). They typically nest high in trees but beneath the canopy. Although subject to change based on factors including weather and prey availably, nest building generally begins in mid-February. Nest construction may be complete and occupied by early-March. If successful at breeding, young may be present in nest until early July; post-fledge, young may be present in the area and still dependent on the parents until early August.

At maximum, only one Cooper's hawk was observed within the BSA at one time; however, the BSA is expected to be utilized by multiple individuals, potentially two to three. No active nests were

identified; however, suitable nesting habitat occurs within the eucalyptus woodland located in the Sweetwater District and potentially within the dense vegetation along Bay Boulevard. During the surveys, individual Cooper's hawks were observed perched and/or being harassed by other birds [i.e., northern mockingbird (*Mimus polyglottos*) and common raven (*Corvus corax*)].

Northern Harrier

The northern harrier, a CDFW species of special concern is a year-round avian resident and winter visitor to San Diego County that nests on the ground (marsh or other dense vegetation) and forages in open grassland and marshes. They forage mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, and insects. Nests are typically built of a large mound of sticks in wet areas, and a smaller cup of grasses on dry sites. They typically breed between April and September, with peak activity in June and July.

At maximum, two northern harriers, an assumed pair was observed flying over the northern portion of the BSA. A single individual harrier was observed on May 8, 2019 while the pair was observed on May 17, 2019. The pair appeared to be transferring food mid-air while also chasing away an osprey. The pair were observed flying over the northern portion of the Sweetwater District and offsite to the north, over the Sweetwater National Wildlife Refuge. No active nests were identified during the 2019 surveys. The points on Figures 2 and 3 represent approximate mid-air locations of each sighting; however, the sightings are assumed to be of the same bird/pair.

California Horned Lark

The California horned lark, a CDFW watch list species is a year-round avian resident of San Diego County. This species nests on the ground, commonly digging a small depression such that the nest is slightly below ground level (Unitt 2004). It can be found in the coastal strand, arid grasslands, and sandy deserts where there is open ground for foraging for insects and seeds. This species' distribution in coastal San Diego County is patchy, due to the general lack of habitat and threats from urban-adapted predators. This non-migratory subspecies is generally concentrated throughout coastal San Diego County, in Warner Valley, and in the Anza Borrego desert.

California horned larks were commonly observed foraging on the graded pad in the Sweetwater District as well as the soil import pads and large disturbed lots in the Harbor District. At maximum three California horned larks were observed at one time. No active nests were observed; however, suitable nesting habitat occurs throughout the BSA.

California least tern

California least tern, a federally and state listed endangered species and CDFW fully protected species (nesting colony) is migratory to California, nesting in colonies located in marine and estuarine shores.

There is no suitable nesting habitat for the California least tern within the BSA. However, the BSA is located between two known nesting colonies, the D Street Fill to the north of the Sweetwater District and the Chula Vista Wildlife Refuge to the southwest of the Harbor District (Patton 2019). The open waters of the Bay serve as foraging areas for the California least tern. The California least tern identified by M&A and depicted in Figures 2 and 3 was observed foraging within the Bay.

Belding's Savannah sparrow

Belding's savannah sparrow, a state listed endangered species is a nonmigratory subspecies of the Savannah sparrow endemic to the coast of southern California and northern Baja California, and is narrowly restricted to coastal marshes dominated by pickleweed (Unitt 2004).

No Belding's savannah sparrow were identified within the BSA. Suitable marsh habitat is limited within the Sweetwater District to the narrow band of salt marsh along the inlet channel to the F&G Street marsh, along the western shoreline where *Suaeda* occurs, and within the seasonal pond just north of Lagoon Drive. Due to the small area of these communities and lack of dominance by pickleweed, these areas are less likely to be used as nesting habitat but rather used more commonly as foraging habitat. Suitable marsh habitat within the Harbor District is limited to the southern extent of the District near the J Street Marsh along a narrow shoreline.

Belding's savannah sparrows were identified (assumed territories) adjacent to the BSA where the salt marsh community is much larger and includes pickleweed. Individuals were identified within the Sweetwater National Wildlife Refuge and F&G Street Marsh, adjacent to the Sweetwater District. Individuals were also detected within the J Street Marsh located immediately south of the Harbor District.

Previous surveys conducted within the BSA did identify three pairs of Belding's savannah sparrow onsite within the Sweetwater District (Dudek 2015). Two pairs were located along the western portion of the Bayfront, presumably in the fragmented patches of *Suaeda* with the third pair located in the coastal salt marsh habitat associated within the seasonal pond, just north of Lagoon Drive. The presence of Belding's savannah sparrow along the Bayfront is consistent with the results of the *San Diego Bay Avian Species Surveys 2016-2017* (i.e., two Belding's savannah sparrow detected at Point Count Station 17 during one of 12 months evaluated) (Tierra Data 2018).

Brant

Brant, a CDFW species of special concern (wintering and staging) is a winter visitor to San Diego County occurring primarily within coastal waters. South San Diego Bay is the Brant's primary habitat in the county, concentrated strongly along the Chula Vista bayfront where stands of eelgrass occur, the bird's primary food source (Unitt 2004). A group of brant were identified by M&A during surveys conducted in March 2018 (M&A 2018d). They were foraging within the shallow waters of the Bay, just west of the Sweetwater District boundary and intermixed with other common shorebirds [marbled godwit (*Limosa fedoa*), dowitcher (*Limnodromus* sp.) and sandpiper (*Calidris* sp.)].

REFERENCES

America	an Ornithologists' Union, et al. 1998. Check-list of North American Birds, 7th ed. American Ornithologists' Union, Washington D.C.
	2020. Sixty-first Supplement to the American Ornithologists' Union Check-list of North American Birds [Internet]. Volume 137, 1 July 2020, pp 1-24. Available from: http://americanornithology.org/ .
Baldwir	n B. G., et al. 2011. Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California [Internet]. Jepson Flora Project, Jepson Online Interchange. University and Jepson Herbaria of the University of California at Berkely and Regents of the University of California. Available from: http://ucjeps.berkeley.edu/interchange/
Calflora	2019. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: 2019)
Califorr	nia Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. Available from: https://wildlife.ca.gov/conservation/survey-protocols#377281284-birds
·	2020a. California Natural Diversity Database (CNDDB). Biogeographic Data Branch. RareFind 3; GIS shapefile update, 2020. Sacramento, California.
·	2020b July. State and Federally Listed Endangered & Threatened Animals of California [Internet]. Natural Diversity Database. 26pp. Available from: https://www.dfg.ca.gov/biogeodata/cnddb/plants and animals.asp
·	2020c Sept. Special Vascular Plants, Bryophytes, and Lichens List [Internet]. Natural Diversity Database. Quarterly publication. 146pp. Available from: https://www.dfg.ca.gov/biogeodata/cnddb/plants and animals.asp
·	2020d Sept. State and Federally Listed Endangered & Threatened Plants of California [Internet]. Natural Diversity Database. 18pp. Available from: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals
·	2020e July. Special Animals [Internet]. Natural Diversity Database. 82pp + Endnotes. Available from: https://www.dfg.ca.gov/biogeodata/cnddb/plants and animals.asp
Dudek.	2010 May. Final Environmental Impact Report for the Chula Vista Bayfront Master Plan. UPD #83356-EIR-658, SCH #2005081077. Prepared for the San Diego Unified Port District. Inclusive of the Mitigation Monitoring and Reporting Program (MMRP). Available from:

https://www.portofsandiego.org/chula-vista-bayfront-master-plan.html

- _____. 2015. Biological Resources Survey Report for the E Street Realignment in Chula Vista, Chula Vista Bayfront Master Plan. 39pp + Figures and Attachments.
- Google Earth Pro™. 7.3.3.7786 [Software]. Available from: http://www.earth.google.com. Accessed 2018-2020.
- Hall ER. 1981. The mammals of North America. 2nd Edition. John Wiley & Sons. New York, New York. Two volumes. 1,181 pp.
- ICF International. 2016. Task 005, South Bay Bio Reconnaissance Survey. September 28, 2016. 8pp + Appendices.
- Klein MW, San Diego Natural History Museum. 2002. Checklist of Butterflies of San Diego County [Internet]. Available from: https://www.sdnhm.org/science/entomology/
- Merkel & Associates, Inc. (M&A). 2016 Nov. Orthoimagery. Point coordinates are rounded to the nearest survey foot (State Plane zone 6).
- _____. 2017 Apr. Final Report Restoration and Enhancement Alternatives for the Chula Vista Bayfront. 112pp.
- _____. 2018a. Aerial Imagery. Flown by Merkel & Associates, Inc. on May 31, 2018 and July 8, 2018 using an unmaned aerial vehical (UAV).
- _____. 2018b. Habitat Mitigation for the Costa Vista RV Park. February 2018. Prepared for Atwell, LLC. 19pp.
- _____. 2018c. Vegetation Map, Impact and Mitigation Update for the Costa Vista RV Resort Project in Chula Vista, California. 6pp + Attachment. August 23, 2018.
- _____. 2018d. Biological Impact Analysis Report for the Chula Vista Bayfront Sweetwater Urban Greening Grant Early Action Project. May 29, 2018. 71pp + Appendices.
- _____. 2019a. Biological Impact Analysis Report for the Sweetwater Park Urban Greening Grant Project. March 18, 2019. 78pp + Appendices.
- Patton, R. T. 2019 Dec. The Status of the California Least Tern at San Diego Unified Port District Properties in 2019. Available from:

 https://pantheonstorage.blob.core.windows.net/environment/California-least-Tern-in-Port-of-San-Diego-Annual-Report-2019.pdf
- San Diego Natural History Museum. 2012. Checklist of Mammal Species Recored in San Diego County. Available from: https://www.sdnhm.org/science/birds-and-mammals/resources
- Tierra Data Inc. 2018. San Diego Bay Avian Species Surveys 2016-2017. Prepared for Naval Base Coronado Environmental Compliance, Naval Bases Point Loma & San Diego Environmental Compliance, and San Diego Unified Port District Planning & Green Port. Final April 2018.

52pp + Appendices. Available from: https://www.portofsandiego.org/public-records/all?topic=64

Unitt P. 2004. San Diego County Bird Atlas.

	nd Wildlife Service (USFWS). 1997 Jul 28. Coastal California Gnatcatcher (<i>Polioptila ifornica californica</i>) Presence/Absence Survey Protocol. 5pp.
	19a. Critical Habitat Portal [Internet]. Data Download (zip) updated November 2019. ailable from: http://criticalhabitat.fws.gov/ .
Do	19b. Carlsbad Fish and Wildlife Office (CFWO), GIS Division Species Occurrence Data wnload (zip) updated Map 2019 [Internet]. Available from: p://www.fws.gov/carlsbad/giswebpage/giswebpage

Wilson DE, Reeder DM (eds). 2005. Mammal Species of the World. A Taxonomic and Geographic Reference (3rd ed), Johns Hopkins University Press, 2,142 pp. (Available from Johns Hopkins University Press, 1-800-537-5487 or (410) 516-6900, or at http://www.press.jhu.edu).

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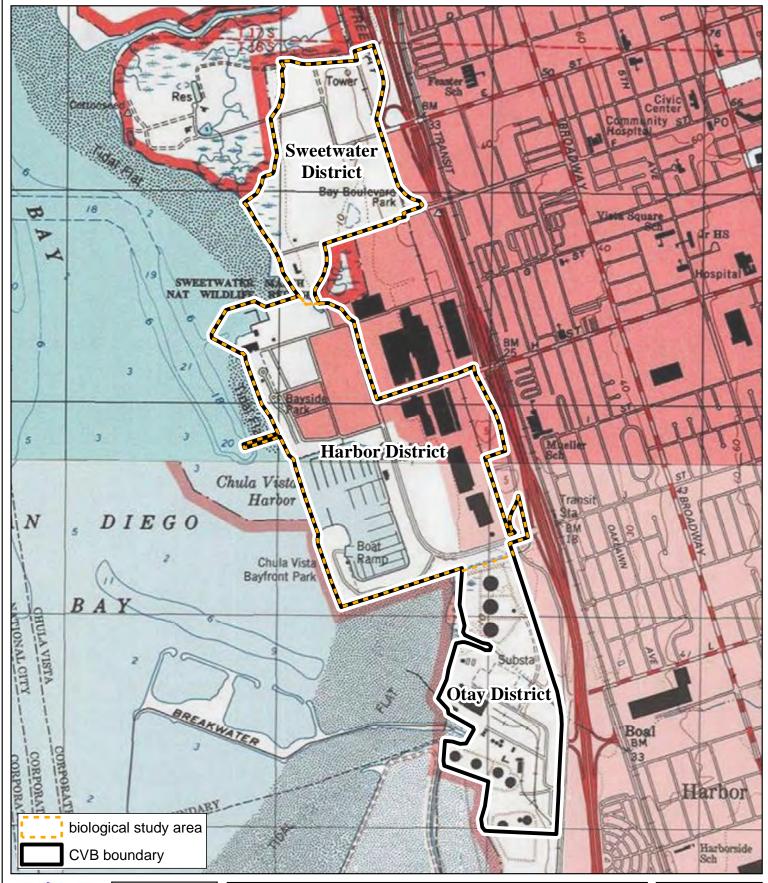
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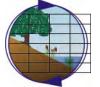
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Report Figures (Figures 1 - 3)







Project Vicinity Map

Chula Vista Bayfront - Sweetwater District and Harbor District Source: USGS 7.5' National City, CA Quadrangle

Figure 1







Chula Vista Bayfront - Sweetwater District and Harbor District

Aerial Source: Bing 2020

Created on October 30, 2020

Figure 2a





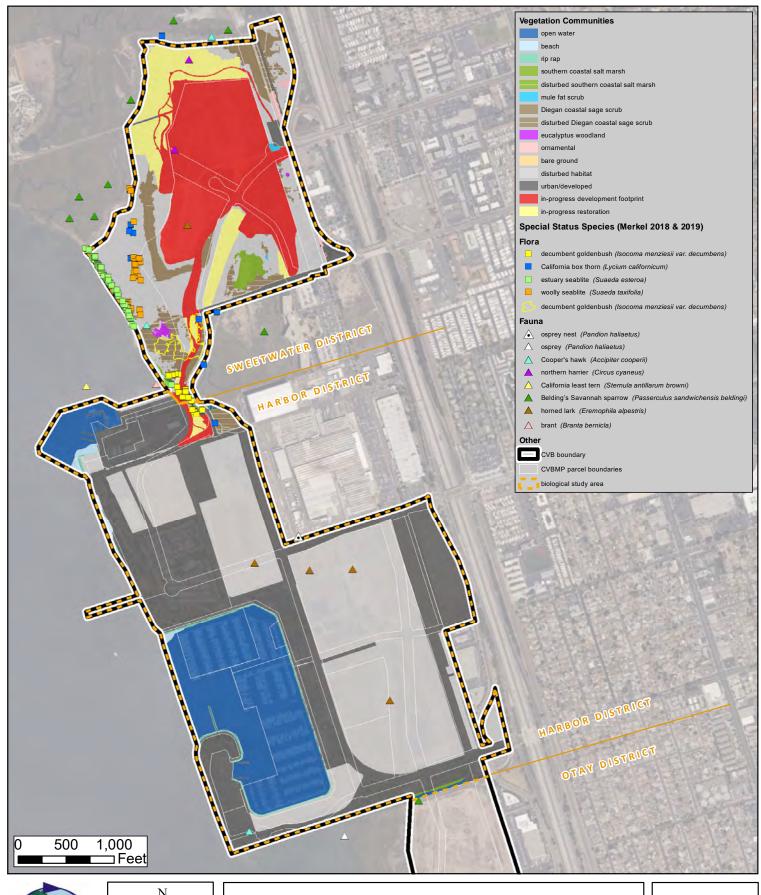


Chula Vista Bayfront - Sweetwater District and Harbor District

Aerial Source: Bing 2020

Created on October 30, 2020

Figure 2b







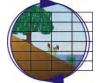
Chula Vista Bayfront – Sweetwater Park and Harbor Park Schematic Design

Aerial Source: Bing 2020

Created on October 30, 2020

Figure 3a







Chula Vista Bayfront – Sweetwater Park and Harbor Park Schematic Design

Aerial Source: Bing 2020

Created on October 30, 2020

Figure 3b

APPENDIX 1. FLORA SPECIES NOTED WITHIN THE BSA

Habitat Types:

O = Open water, Beach, & Riprap

S = Southern coastal salt marsh, includes disturbed form

F = Mule Fat Scrub

 C = Diegan coastal sage scrub, includes forms of: baccharis dominated, isocoma dominated, disturbed, saltbush scrub

E = Eucalyptus woodland

M = OrnamentalG = Bare ground

H = Disturbed habitat

U = Urban/developed

Refer to the Literature Cited section of the report for recent biological investigations and the corresponding flora list.

^{* =} Denotes non-native flora species.

Scientific Name	Common Name	Habitat
Solentine Name	-common Nume	Haisitat
DICOTYLEDONS		
Aizoaceae - Fig-Marigold Family		
*Malephora crocea (Jacq.) Schwantes	Crocea ice plant	Н
*Mesembryanthemum crystallinum L.	crystalline iceplant	Н
*Mesembryanthemum nodiflorum L.	slender-leaved iceplant	Н
Amaranthaceae - Amaranth Family		
*Amaranthus albus L.	tumbleweed	Н
Anacardiaceae - Sumac Family		
Rhus integrifolia (Nutt.) Benth. & Hook. f. ex Rothr.	lemonade berry	С
Apiaceae - Carrot Family		
*Foeniculum vulgare Miller	fennel	Н
r ochicalatti valgare ivilici	remer	
Asteraceae - Sunflower Family		
Ambrosia psilostachya DC.	western ragweed	Н
Artemisia californica Less.	California sagebrush	С, Н
Baccharis pilularis DC.	coyote brush	Н
Baccharis salicifolia (Ruíz Lopez & Pavón) Pers.	mule fat	F <i>,</i> H
Baccharis sarothroides A. Gray	broom baccharis	C, H
*Centaurea melitensis L.	tocalote, Maltese star-thistle	Н
*Dimorphotheca sinuata DC.	namaqualand daisy	Н
*Dittrichia graveolens (L.) Greuter	stinkwort	Н
Encelia californica Nutt.	California encelia	С
*Erigeron bonariensis L.	flax-leaf fleabane	Н
*Glebionis coronaria (L.) Spach	garland, crown daisy	Н
*Hedypnois rhagadioloides (L.) F. W. Schmidt	Crete weed	Н
Heterotheca grandiflora Nutt.	telegraph weed	Н
Isocoma menziesii (Hook. & Arn.) G. L. Nesom var. decumb	pens (Greene) G. L. Nesom	H, C
	decumbent goldenbush	
Isocoma menziesii (Hook. & Arn.) G. L. Nesom var. menzies	sii	
	Menzies's goldenbush	С, Н
Jaumea carnosa (Less.) A. Gray	salty Susan, fleshy jaumea	S
Laennecia coulteri (A. Gray) G. L. Nesom	Coulter's fleabane	Н
*Lactuca serriola L.	prickly lettuce	Н
Pseudognaphalium beneolens (Davidson) Anderb.	fragrant pearly everlasting	Н
Pseudognaphalium biolettii Anderb.	Bioletti's rabbit-tobacco	С
Pseudognaphalium stramineum (Kunth) Anderb.	cotton-batting plant	Н
Xanthium strumarium L.	cocklebur	S
Patacoae Saltwort Family		
Bataceae - Saltwort Family Batis maritima L.	saltwort, beachwort	S
batis mantima L.	Janewort, Deachwort	5

Scientific Name	Common Name	Habitat
Boraginaceae - Borage Family		
Amsinckia sp.	fiddleneck	Н
Heliotropium curassavicum L. var. oculatum	seaside or alkali heliotrope	S
Brassicaceae - Mustard Family		
*Brassica nigra (L.) Koch	black mustard	C, H
*Cakile maritima Scop.	maritime sea-rocket	Н
Descurainia pinnata (Walter)	tansymustard	С
*Hirschfeldia incana (L.) LagrFossat	summer field mustard	C, H
*Lobularia maritima (L.) Desv.	Common sweet alyssum	Н
*Sisymbrium irio L.	London rocket	Н
Cactaceae - Cactus Family		
Opuntia littoralis (Engelm.) Cockerell	coast prickly-pear	С
Caryophyllaceae - Pink Family		
*Spergularia marina (L.) Besser	salt marsh sand-spurrey	Н
Chenopodiaceae - Goosefoot Family		
Arthrocnemum subterminale (Parish) Standl.	Parish's pickleweed	S
Atriplex lentiformis (Torrey) S. Watson	big saltbush	C,S,H
*Atriplex lindleyi Moq.	Lindley's saltbush	S, H
*Atriplex semibaccata R. Br.	Australian saltbush	Н
*Atriplex suberecta I. Verd.	Sprawling saltbush	Н
Atriplex watsonii A. Nelson ex Abrams	Watson's saltbush	Н
*Bassia hyssopifolia (Pall.) Kuntze	five-hook bassia	Н
*Chenopodium murale L.	nettle-leaf goosefoot	Н
*Salsola tragus L.	Russian thistle, tumbleweed	Н
Salicornia pacifica (Standl.)	pacific pickleweed	S, H
Suaeda esteroa Ferren & S.A. Whitmore	estuary sea blite	S
Suaeda taxifolia (Standl.) Standle.	woolly sea blite	S, H
Convolvulaceae - Morning-Glory Family		
Cressa truxillensis Kunth.	alkali weed	S
Euphorbiaceae - Spurge Family		
*Euphorbia maculata L.	spotted spurge	Н
Fabaceae - Pea Family		
*Acacia cyclops G. Don	western coastal wattle	Н
*Acacia redolens Maslin	vanilla scented wattle	Н
Acmispon americanus (Nutt.) Rydb. var. americanus	American bird's-foot trefoil	Н
Acmispon glaber (Vogel) Brouillet var. glaber	dear lotus, deerweed	С

Scientific Name	Common Name	Habitat
Astragalus trichopodus (Nutt.) A. Gray var. lonchus (M. E. J		
	Santa Barbara milkvetch/	
	ocean locoweed	C,S,H
*Medicago polymorpha L.	California burclover	Н
Melilotus albus Medik.	white sweetclover	Н
*Melilotus indicus (L.) All.	sourclover	Н
Trifolium sp.	clover	Н
Frankeniaceae - Frankenia Family		
Frankenia salina (Molina) I. M. Johnst.	alkali heath	S
Geraniaceae - Geranium Family		
*Erodium cicutarium (L.) L'Hér. ex Aiton	red-stem filaree	Н
*Erodium moschatum (L.)L'Hér.	white-stem filaree	C, H
Lamiaceae - Mint Family		
*Marrubium vulgare L.	horehound	Н
Malvaceae - Mallow Family		
*Malva parviflora L.	cheeseweed, little mallow	Н
Myrtaceae - Myrtle Family		
*Eucalyptus sp.	eucalyptus	Н
*Melaleuca viminalis (Sol. ex Gaertn.) Bymes	weeping bottlebrush	Н
Oleaceae - Olive Family		
*Olea europaea L.	olive	M, H
Onagraceae - Evening-Primrose Family		
Camissoniopsis cheiranthifolia (Spreng.) W.L. Wagner & H	Hoch ssp. <i>suffruticosa</i> (S. Wats	on) W.L.
Wagner & Hoch Oenothera elata Kunth ssp. hookeri (Torr. & A. Gray) W. Di	shrubby beach primrose	Н
Denothera elata Kullili ssp. hooken (1011. & A. Glay) W. Di	great marsh evening primrose	Н
	great marsh evening primiose	"
Papaveraceae - Poppy Family	a 115	
Eschscholzia californica Cham.	California poppy	Н
Plumbaginaceae - Leadwort Family		
Limonium californicum (Boiss.) A.A. Heller	western marsh-rosemary	S
Polygonaceae - Buckwheat Family		
Eriogonum fasciculatum Benth. var. fasciculatum	coastal California buckwheat	S,C,H
*Polygonum aviculare L. ssp. depressum (Meisn.) Arcang.	prostrate knotweed	Н
*Rumex crispus L.	curly dock	S

Scientific Name	Common Name	Habitat
Salicaceae - Willow Family		_
Salix lasiolepis Benth.	arroyo willow	S
Simmondsiaceae - Jojoba Family		_
Simmondsia chinensis (Link) C. Schneider	goat-nut, jojoba	С
Solanaceae - Nightshade Family		•
Lycium brevipes Benth. var. brevipes	common box thorn	C
Lycium californicum Nutt.	California box thorn	C,S,H
* <i>Nicotiana glauca</i> Graham	tree tobacco	Н, С
Tomoniososos Tomonials Fourille		
Tamaricaceae - Tamarisk Family	and the same of the same and a firm a firm a firm a firm a firm a firm and a firm a	
*Tamarix parviflora DC.	small-flower/four-petal Europ	
		Н
Zygophyllaceae - Caltrop Family		
Tribulus terrestris L.	puncture vine	Н
Tribulus terrestris E.	puncture vine	"
MONOCOTYLEDONS		
Arecaceae - Palm Family		
*Phoenix canariensis Chabaud	Canary Island palm	М
*Washingtonia robusta H. Wendl.	Mexican fan palm	M, H
Cyperaceae - Sedge Family		
Schoenoplectus americanus (Pres.) Schinz & R. Keller	Olney's threesquare bulrush	S
Schoenoplectus californicus (C.A. Meyer) Soják	southern bulrush	S
Juncaceae - Rush Family		
Juncus bufonius L. var. bufonius	toad rush	Н
Poaceae - Grass Family		
*Arundo donax L.	giant reed	H
*Avena barbata Link	slender wild oat	H
*Avena fatua L.	wild oat	Н
*Bromus diandrus Roth	ripgut grass	H, C
*Bromus madritensis L. ssp. rubens (L.) Husnot	red brome, foxtail chess	H
*Cortaderia selloana (Schultes) Asch. & Graebner	pampas grass	Н
*Cynodon dactylon (L.)Pers.	Bermuda grass	Н
Distichlis littoralis (Engelm.) H.L. Bell & Columbus	shoregrass	S
Distichlis spicata (L.) Greene	saltgrass	S
*Hordeum murinum L. ssp. leporinum (Link) Arcang.	hare barley	Н
*Hordeum vulgare L.	cultivated barley	H
*Pennisetum setaceum Forsskal	crimson fountain grass	Н

Scientific Name	Common Name	Habitat
Phalaris sp.	canary grass	Н
*Parapholis incurva (L.) C. E. Hubb.	sickle grass	Н
Spartina foliosa Trin.	California cord grass	S
*Stipa miliacea (L.) Hoover var. miliacea	smilo grass	Н

Appendix 2. Fauna Species Observed or Detected within the BSA

Habitat Types:

O = Open Water

B = Beach

S = Southern Coastal Salt Marsh, includes Disturbed form

F = Mule Fat Scrub

 C = Diegan Coastal Sagescrub, includes forms of: baccharis dominated, isocoma dominated, disturbed, saltbush scrub

E = Eucalyptus woodland

M = Ornamental

H = Disturbed HabitatU = Urban/Developed

FO = fly over

Abundance Codes (birds only):

- A = Abundant: Almost always encountered in moderate to large numbers in suitable habitat and the indicated season.
- C = Common: Usually encountered in proper habitat at the given season.
- U = Uncommon: Infrequently detected in suitable habitat. May occur in small numbers or only locally in the given season.
- R = Rare: Applies to species that are found in very low numbers.

Status Codes (birds only):

- M= Migrant: Uses the site for brief periods of time, primarily during the spring and fall months.
- R = Year-round resident: Probable breeder on-site or in the vicinity.
- S = Spring/summer resident: Probable breeder on-site or in the vicinity unless combined with transient status.
- T = Transient: Uses site irregularly in summer but unlikely to breed. Not a true migrant and actual status often poorly known
- W = Winter visitor: Does not breed locally.
- V = Casual vagrant: Not expected; out of normal geographic or seasonal range and by definition rare.

^{* =} denotes introduced species

[&]quot;Numbers" indicate the number of individuals observed during the field survey work.

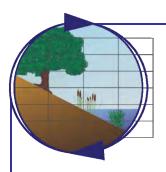
Common Name	Scientific Name	Habitat A	Abundance	Status
BUTTERFLIES				
BOTTERFEIES				
Lycaenidae (Gossamer-wing But	terflies)			
western pygmy-blue	Brephidium exile	С	-	-
acmon blue	Icaricia acmon acmon	Н, С	-	-
Riodinidae (Metalmarks)				
Behr's metalmark	Apodemia mormo virgulti	С	-	-
Nymphalidae (Brushfoots)				
mourning cloak	Nymphalis antiopa	S, H	-	-
Lorquin's admiral	Limenitis lorquini	С	-	-
monarch	Danaus plexippus	Н	-	-
queen	Danaus gilippus thersippus	U	-	-
BIRDS				
Anatidae (Swans, Geese, and Du	icks)			
brant	Branta bernicla	B (offsite) C	M, W
mallard	Anas platyrhynchos	U	С	R, M, W
Phalacrocoracidae (Cormorants)				
double-crested cormorant	Phalacrocorax auritus	FO	С	T, R
Ardeidae (Herons and Bitterns)				
great blue heron	Ardea herodias	FO	С	R
great egret	Ardea alba	FO	С	T, R
snowy egret	Egretta thula	FO, S, O a	and B (offsite))
			С	T, R
Pandionidae (Osprey)				
osprey	Pandion haliaetus	FO, U (ne	est offsite), O	(offsite)
			С	T, R
Accipitridae (Hawks and Harriers	s)			
northern harrier	Circus cyaneus	FO, H	U	M, R
Cooper's hawk	Accipiter cooperii	FO, H, U,	C, E	
			С	M, R
red-tailed hawk	Buteo jamaicensis	FO, H	С	R, M, W
Charadriidae (Plovers and Relati	ves)			
killdeer	Charadrius vociferous	FO, B	С	R

Common Name	Scientific Name	Habitat Al	oundance	Status
Scolopacidae (Sandpipers and F	Relatives)			
marbled godwit	Limosa fedoa	B (offsite)	С	M, W, T
sandpiper	Calidris sp.	B (offsite)	C	M, W, T
dowitcher	Limnodromus sp.	B (offsite)	C	M, W, T
Laridae (Gulls and Terns)				
western gull	Larus occidentalis	FO	Α	R, T
California gull	Larus californicus	FO	С	M, W, T
California least tern	Sternula antillarum browni	O (offsite)	С	M, S
Caspian tern	Hydroprogne caspia	FO, O (offsite)		,
·	, , , , , ,	, ,	Ċ	R
Forster's tern	Sterna forsteri	FO, O (offsite)		
	,	-, - (C	R
Columbidae (Pigeons and Dove	c)			
*rock pigeon	Columba livia	H, U	Α	R
mourning dove	Zenaida macroura	All	C	R
mourning dove	Zenalaa macroara	All	C	N.
Apodidae (Swifts)				
white-throated swift	Aeronautes saxatalis	FO, H	С	R
Trochilidae (Hummingbirds)				
Anna's hummingbird	Calypte anna	C, H, U	С	R
Tyrannidae (Tyrant Flycatchers)				
Pacific-slope flycatcher	Empidonax difficilis	Е	С	M, S
Say's phoebe	Sayornis saya	_ С, Н	C	W
western kingbird	Tyrannus verticalis	C, H	C	M, S
Virgonidae (Tunical Virgos)				
Vireonidae (Typical Vireos)	Virgo gilvus	С	С	М
warbling vireo	Vireo gilvus	C	C	IVI
Corvidae (Jays, Magpies, and Ci	_			
American crow	Corvus brachyrhynchos	FO, All	Α	R
common raven	Corvus corax	FO, H, U, C	(offsite)	
			С	R
Alaudidae (Larks)				
Caifornia horned lark	Eremophila alpestris actia	Н, С	С	R, M, W
Hirundinidae (Swallows)				
barn swallow	Hirundo rustica	FO, H, C	U	M, W, S
cliff swallow	Petrochelidon pyrrhonota	FO, H, C	C	M, S
Citi Swallow	r etrochendon pyrmonota	10,11,0	C	101, 3

Common Name	Scientific Name	Habitat A	Abundance	Status
Aegithalidae (Long Tailed Tits)	D #	6 11 11		
bushtit	Psaltriparus minimus	C, H, U	С	R
Troglodytidae (Wrens)				
Bewick's wren	Thryomanes bewickii	С, Н	С	R
0				
Sturnidae (Starlings) *European starling	Sturnus vulgaris	H, U	Α	R
European starting	Sturrius vulguris	п, О	A	n
Estrildidae (Waxbills, Munias, a	nd Allies)			
*Scaly-breasted Munia	Lonchura punctulata	H,U	С	R
Downlides (Morblers)				
Parulidae (Warblers) common yellowthroat	Geothlypis trichas	S, C, H	С	M, R
MacGillvray's warbler	Geothlypis tolmiei	C C	U	M
,	, ,			
Mimidae (Mockingbirds and Th	•			
northern mockingbird	Mimus polyglottos	S, C, H, U	J C	R
Passerellidae (New World Bun	tings and Sparrows)			
Belding's Savannah sparrow		lingi		
· ·		S (offsite) C	R
song sparrow	Melospiza melodia	S, C, H	Α	R
California towhee	Melozone crissalis	C, H	С	R
spotted towhee	Pipilo maculates	С	С	R
Icteridae (Blackbirds, Meadowla	arks. Orioles, and Relatives)			
hooded oriole	Icterus cucullatus	C, H, U, E	С	M, S
*brown-headed cowbird	Molothrus ater	H, U, C	С	s, M, W
Brewer's blackbird	Euphagus cyanocephalus	H, U	С	R, M, W
esta ettitule e /eta ele est				
Fringillidae (Finches) house finch	Haemorhous mexicanus	All	٨	R
lesser goldfinch	Spinus psaltria	C, H	A C	M, R
icaser goldinien	эртиз рэшини	С, 11	C	141, 11
Passeridae (Weaver Finches)				
*house sparrow	Passer domesticus	H, U	С	R
MAMMALS				
Leporidae (Hares and Rabbits)	Culvilague gudubanii canatidiaa	<i>:</i> பப		
desert cottontail	Sylvilagus audubonii sanctidieg	i H, U	-	-



Appendix 3. 45-Day Letter Report of Coastal California Gnatcatcher Protocol Surveys for the Chula Vista Bayfront — Sweetwater and Harbor District Park Projects, Located in Chula Vista, San Diego County (M&A August 2019)



Merkel & Associates, Inc.

5434 Ruffin Road, San Diego, CA 92123 Tel: 858/560-5465 • Fax: 858/560-7779 e-mail: associates @merkelinc.com

> August 9, 2019 M&A #15-016-04

Ms. Stacey Love Recovery Permit Coordinator U.S. Fish and Wildlife Service – Carlsbad Fish and Wildlife Office 2177 Salk Ave, Suite 250 Carlsbad, CA 92008

Re: 45-day Letter Report of Coastal California Gnatcatcher Protocol Surveys for the Chula Vista Bayfront – Sweetwater and Harbor District Park Projects, Located in Chula Vista, San Diego County

Dear Ms. Love:

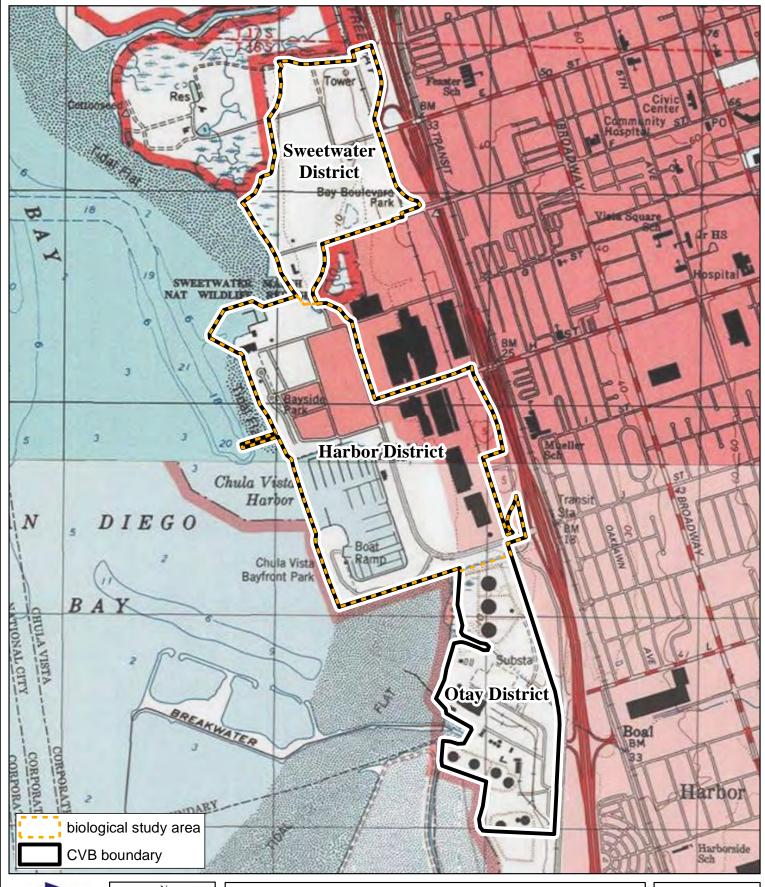
SUMMARY

Merkel & Associates, Inc. (M&A) conducted three protocol surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) for the purpose of determining the presence or absence of this species on the Chula Vista Bayfront – Sweetwater and Harbor District Park project site. These surveys were conducted in accordance with the current U.S. Fish and Wildlife Service's *Coastal California Gnatcatcher Presence/Absence Survey Protocol* (USFWS 1997), as authorized under M&A's federal Endangered Species Act, Section 10(a)(1)(A) permit #797999-8.1 and California Department of Fish and Wildlife (CDFW) Memorandum of Understanding (MOU). The project site contains approximately 14 acres of potential gnatcatcher habitat. No coastal California gnatcatchers were detected on the project site during the protocol surveys. This letter report has been prepared and submitted to the client, USFWS, and CDFW in accordance with the requirements of M&A's 10a permit and MOU.

INTRODUCTION

Merkel & Associates, Inc. (M&A) conducted protocol surveys for the federally listed threatened, coastal California gnatcatcher (*Polioptila californica californica*) for the purpose of determining the presence or absence of this species on the Chula Vista Bayfront – Sweetwater and Harbor District Park project site.

The project property (portions of Assessors Parcel Numbers: 565-010-30, 567-011-05, 760-048-26, 17, -28, -24, -27, -00, -29, -10, -01, -25, -03, -01, -19, 571-330-28, -31, -23, -21, 760-235-67, 571-160-06, -08, 565-010-08, -15, -12, 565-290-39, 565-310-33, -32, 567-011-01, 567-021-11, -32, -22, 567-011-04, 567-010-19, -18, -28, 760-235-55, 571-330-32, -15) is located in the City of Chula of Chula Vista with portions of the site located on San Diego Unified Port District, San Diego County, within unsectioned lands, Township 18 South, Range 2 West of the San Bernardino Base and Meridian, U.S. Geological Survey 7.5' National City, California Quadrangle (Latitude 32.6344, Longitude -117.1046 decimal degrees, WGS84 datum) (Figure 1).







Project Vicinity Map

Chula Vista Bayfront – Sweetwater Park and Harbor Park Source: USGS 7.5' National City, CA Quadrangle Figure 1

METHODS

M&A conducted three protocol surveys for the coastal California gnatcatcher, as authorized under M&A's federal Endangered Species Act (ESA), Section 10(a)(1)(A) permit #797999-8.1 and California Department of Fish and Wildlife (CDFW) Memorandum of Understanding (MOU) (Table 1). The approximate 410-acre property site supports approximately 14 acres of potential gnatcatcher habitat.

Table 1. Survey Dates, Times, and Conditions

Survey #	Date	Time	Conditions ¹ (start-end)	Permitted Biologist(s)	Acres per Hour/Day ²	Taped Vocalizations Playback Frequency
1	2019 May 8	0619-0830 & 0900-1130	Wthr: 100%-10% cc Wind: 0-3 BS Temp.: 59°-64° F	Amanda Gonzales	3 per hour/ 14 per day	1 per 13 minutes
2	2019 May 17	0830-1048	Wthr: 75%-10% cc Wind: 1-2 BS Temp.: 62°-67° F	Amanda Gonzales	6 per hour/ 14 per day	1 per 10 minutes
3	2019 May 31	0735-0923	Wthr: 100%-100% cc Wind: 1-2 BS Temp.: 60°-62° F	Amanda Gonzales	7 per hour/ 14 per day	1 per 15 minutes

cc=cloud cover; BS=Beaufort Scale [0 = <1 mile per hour (mph); 1 = 1-3 mph; 2 = 4-7 mph; 3 = 8-12 mph]; F = Fahrenheit

The surveys were conducted in accordance with the current U.S. Fish and Wildlife Service's (USFWS) Coastal California Gnatcatcher Presence/Absence Survey Protocol (USFWS 1997). All on-site vegetation communities were previously mapped, and survey routes were slowly walked in appropriate gnatcatcher habitat. Taped recordings of gnatcatcher vocalizations, as well as "pishing', were used to elicit initial vocal responses, and an approximate five to 12 minute time interval was allowed for a response, particularly from advantageous viewpoints. A list of detected avian species was recorded in a field notebook.

Data collected from the surveys were digitized into current Geographical Information System (GIS) Environmental Systems Research Institute (ESRI) software platforms.

The scientific nomenclature used in this report is noted according to the following references: birds, American Ornithologists' Union (1998 and 2018).

RESULTS

No coastal California gnatcatchers were detected on the project site during the protocol surveys. Nearly all potential suitable gnatcatcher habitat occurs within the Sweetwater District. Locally, the Sweetwater District can be characterized as predominantly flat land dominated by disturbed habitat and bordered to the west by San Diego Bay and to the east by commercial development (Figure 2).

² Acres of potentially suitable gnatcatcher habitat

Diegan coastal sage scrub is present in the Sweetwater District; however, much of the community is disturbed in nature and overall the area is isolated from other upland native communities. The disturbed classification is associated with areas supporting a high amount of non-native species (e.g., mustard, fennel, garland etc.) as well as areas dominated by broom baccharis (*Baccharis sarothroides*), Menzies's goldenbush (*Isocoma menziesii* var. *menziesii*), and big saltbush (*Atriplex lentiformis*).

Areas dominated by broom baccharis and goldenbush are typically associated with disturbed sites (e.g., previously brushed or graded) and/or nutrient poor soils. Both species can be characterized as opportunistic, due to their ability to quickly thrive in undesirable conditions. Within the survey area, broom baccharis dominated areas (generally) comprise dense moderately tall (four to six feet) shrub cover. Goldenbush dominated areas form sparse, low growing cover (one to two feet) intermixed with bare ground and other low growing native species typical of disturbed areas [e.g., deerweed (Acmispon glaber var. glaber)]. Areas dominated by big saltbush also occur throughout the Sweetwater District. Big saltbush is an opportunistic native shrub that commonly occurs in saline soils along the immediate coast of San Diego County. It generally occurs in coastal sage scrub vegetation but will also occur at lower elevations within moist soils of coastal salt marsh or brackish marsh habitats. As such, it is a species that can occur in both upland and wetland plant communities. Within the survey area, this plant is present at higher elevations, co-occurring with a predominance of upland plant species. The largest patches of big saltbush are situated along Lagoon Drive.

Patches of higher quality Diegan coastal sage scrub are present within the Sweetwater District and include the northern limit of the Sweetwater District as well as the southern limit of the District, just north of the inlet to the F&G Street Marsh. The coastal sage scrub that occurs in the northern portion of the Sweetwater District transitions offsite to the north via a relatively steep slope into the adjacent Wildlife Refuge. Here (within the Sweetwater District), this habitat is generally dominated by California encelia (Encelia californica) with taller lemonade berry (Rhus integrifolia) occurring offsite to the north. Within the southern portion of the Sweetwater District, this community is dominated by California sagebrush (Artemisia californica), coastal California buckwheat (Eriogonum fasciculatum var. fasciculatum), and decumbent goldenbush (Isocoma menziesii var. decumbens). The taller broom baccharis occurs occasionally in this area. A manmade berm is also located within the central portion of the Sweetwater District. This berm was constructed in approximately 1988 from surplus soil generated from the Sweetwater River channelization project and SR-54 construction. The soil was imported for future development of the Chula Vista Bayfront and stabilized for erosion control using a native sage scrub seed mix dominated by California encelia. Today, much of the berm is dominated by a relatively narrow, linear strip of California encelia.

The Harbor District is dominated by urban/developed areas as well as disturbed lots. However, there are areas that support sporadic broom baccharis intermixed with a low inclusion of other natives (e.g., coastal California buckwheat) and a high inclusion of non-natives. While sporadic broom baccharis is present in these areas, it is not suitable gnatcatcher habitat and no gnatcatchers were detected.







Gnatcatcher Survey Route Map

Chula Vista Bayfront – Sweetwater Park and Harbor Park

Figure 2

CONCLUSIONS

No other pertinent observations pertaining to the coastal California gnatcatcher were noted during the survey efforts. Due to the limited nature of the work on this project (i.e., protocol presence/absence surveys, not long-term research), we have no additional recommendations for species recovery.

If you have any questions concerning this report, please do not hesitate to contact me at (858) 560-5465 or agonzales@merkelinc.com.

Sincerely,

Amanda K. Gonzales

Senior Biologist/Project Manager

Keith W. Merkel Principal Consultant

cc: Hans Sin, California Department of Fish and Wildlife, South Coast Region, hans.sin@wildlife.ca.gov

Chris Langdon, KTUA, chris@ktua.com;

Mark Mcintire, San Diego Unified Port District, mmcintir@portofsandiego.org

REFERENCES

American Ornithologists' Union. 1	1998. Check-list o	f North American	Birds, 7 th ed	. American
Ornithologists' Union, Was	shington D.C.			

_____. 2018. Fifty-ninth Supplement to the American Ornithologists' Union *Check-list of North American Birds* [Internet]. Auk 135(3):798-813. Available from: http://www.americanornithology.org/.

U.S. Fish and Wildlife Service (USFWS), Carlsbad Fish and Wildlife Office (CFWO). 1997 Jul 28.

Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. 5 pp.

I hereby certify that the statements furnished herein and in the attached exhibits present the data and information as required pursuant to Recovery Permit TE-797999-8.1, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

1) Fieldwork Performed By:

Amanda K. Gonzales, Senior Biologist 10(a) Permit Number 797999-8.1

amarda K. Sompler