Environmental Intelligence, LLC

A Biological Constraints Assessment of the Newport Mesa Unified School District Site Located in Orange County, California

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LIST OF COMMON ACRONYMS

APN	ASSESSOR'S PARCEL NUMBER
BMP	BEST MANAGEMENT PRACTICE
CCC	CALIFORNIA COASTAL COMMISSION
CCH	CONSORTIUM OF CALIFORNIA HERBARIA
CDFW	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
CESA	CALIFORNIA ENDANGERED SPECIES ACT
CEQA	CALIFORNIA ENVIRONMENTAL QUALITY ACT
CGP	CONSTRUCTION GENERAL PERMIT
CNDDB	CALIFORNIA NATURAL DIVERSITY DATABASE
CNPS	CALIFORNIA NATIVE PLANT SOCIETY
CWA	CLEAN WATER ACT
EI	ENVIRONMENTAL INTELLIGENCE, LLC
EPA	ENVIRONMENTAL PROTECTION AGENCY
ESA	FEDERAL ENDANGERED SPECIES ACT
ESHA	ENVIRONMENTALLY SENSITIVE HABITAT AREA
FT	FEET / FOOT
GIS	GEOGRAPHIC INFORMATION SYSTEM
KM	KILOMETER
MBTA	MIGRATORY BIRD TREATY ACT
NBR	NEWPORT BANNING RANCH
NMUSD	NEWPORT MESA UNIFIED SCHOOL DISTRICT
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NRCS	NATIONAL RESOURCES CONSERVATION SERVICE
NWI	NATIONAL WETLANDS INVENTORY
OHWM	ORDINARY HIGH WATER MARK
QSD	QUALIFIED STORM WATER POLLUTION PREVENTION PLAN DEVELOPER
QSP	QUALIFIED STORM WATER POLLUTION PREVENTION PLAN PRACTITIONER
RPW	RELATIVELY PERMANENT WATERS
RWQCB	REGIONAL WATER QUALITY CONTROL BOARD
SQ FT	SQUARE FEET
SWS	SEASONAL WETLANDS
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SWANCC	SOLID WASTE AGENCY OF NORTHERN COOK COUNTY
SWRCB	STATE WATER RESOURCES CONTROL BOARD
TNW	TRADITIONAL NAVIGABLE WATERS
US	UNITED STATES
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE
USGS	UNITED STATES GEOLOGICAL SURVEY
WOUS	WATERS OF THE UNITED STATES
WOS	WATERS OF THE STATE

EXECUTIVE SUMMARY

Environmental Intelligence, LLC (EI) conducted a biological constraints analysis pertaining to biological resources and wetlands on the 11.1-acre Newport Mesa Unified School District Site (the Site). This Biological Assessment (Assessment) includes: 1) a literature review; 2) a habitat assessment for coastal California gnatcatcher, burrowing owl, fairy shrimp, and rare plants and wildlife movement; 3) a coastal California gnatcatcher survey following U.S. Fish and Wildlife Service survey protocol; 4) wintering burrowing owl survey following CDFW guidelines, 5) fairy shrimp survey following U.S. Fish and Wildlife Service survey protocol, 6) a rare plant survey; 7) a wetland assessment, and an impacts analysis of previously installed fence-line. The following conclusions and results are detailed in this Assessment.

1) EI's 2016 vegetation community mapping results show that there are five (5) vegetation or ground cover types on-site. Of these five, none are sensitive vegetation communities.
2) Coastal California gnatcatcher and rare plant habitat was observed to be present on-site and focused surveys were conducted in September 2015.
3) No coastal California gnatcatchers were observed on-site during the U.S. Fish and Wildlife Service protocol survey. Coastal California gnatcatchers do not breed on-site. However the limited habitat on-site is likely utilized as foraging habitat outside the breeding season.
4) No burrowing owls were observed on-site during the 2015/2016 wintering surveys. Due to historic observations, suitable habitat should be considered occupied foraging habitat until 2018 unless new observations confirm continued occupation.
5) Rare plant surveys were conducted on-site following the CNPS and CDFW guidelines. No sensitive plant species were observed.
6) The Site contains two potentially wetland areas subject to California Coastal Commission regulation. No wetland indicators were observed during EI's 2015/2016 surveys. Both areas are 'problematic' wetlands, as no current wetland indicators were observed and only one wetland indicator (hydrology) was determined based on historical data.
7) The impacts to biological resources due to the installation of fence-line in 2012 were minimal. If removal or alternate design is required due to the denial of the coastal development permit, very little impact is expected if the activity follows protection measures and best management practices.

1.0 INTRODUCTION

Environmental Intelligence, LLC (EI) was retained by Newport Mesa Unified School District (the NMUSD), to conduct a Biological Resource Assessment (Assessment) for an 11.1 acre parcel (the Site) located at 975 W. 16th street within Assessor's Parcel Numbers (APNs) 114.170.51, 114,170.63 and 114.170.64 located in the City of Newport Beach, Orange County, California.

In 2012, the NMUSD installed 2,046 feet of chain-link fencing around the perimeter of the Site. Fence posts used to anchor the 6-foot high chain-link fence were driven 2 feet into the ground and concrete footings were used at the corner posts. The purpose of the fence installation was to stop unauthorized access to the Site (Tim Marsh pers. comm. 2015). The NMUSD submitted an after-the-fact coastal development permit application for the fence installation in November 2013. The California Coastal Commission (CCC) recommended denial of the application in March 2015 (CCC 2015). Within the denial of application the CCC cited additional information was necessary for continued action, either the removal of the fence or otherwise.

The Site abuts the Newport Banning Ranch (NBR) property on three sides. Much of the basis for the CCC's decision for denial of the coastal development permit was due to the proximity of known resources on the NBR property. The NBR property is known to have freshwater wetlands including vernal pools known to support an endangered species of fairy shrimp, grasslands (native and non-native) that support raptors including burrowing owl (*Athene cunicularia*), and coastal sage scrub that supports the endangered coastal California gnatcatcher (P*olioptila californica californica*), as well as other biological resources (CCC 2015).

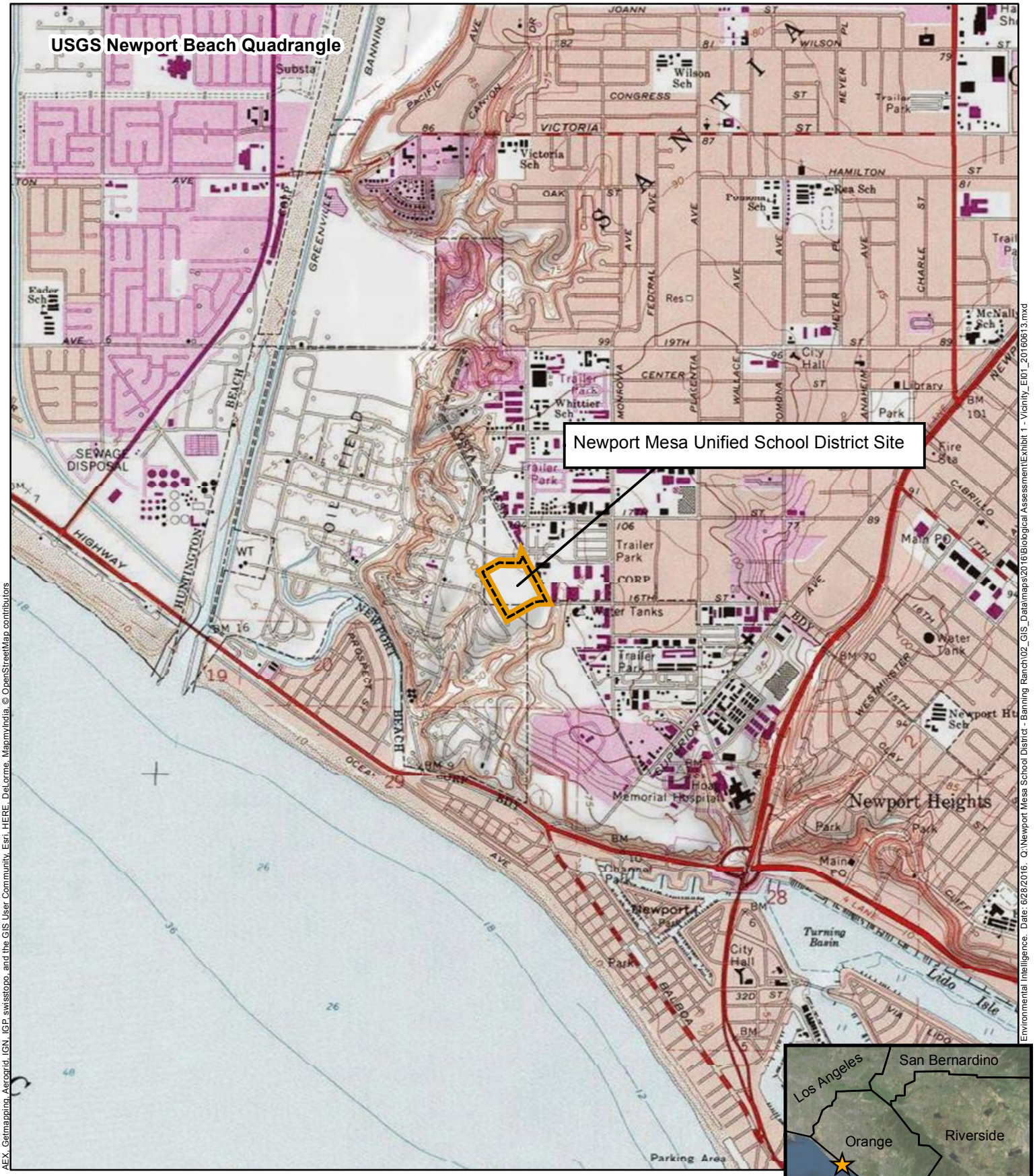
CCC staff consulted with the U.S. Fish and Wildlife Service (USFWS; CCC 2015) who recommended postponing all construction or fence removal activity in the area until further biological studies were performed. Subsequent biological surveys supplied by the NMUSD (the Applicant) document the presence of several sensitive species and resources impacted by the fence including sensitive vegetation, burrowing owl and coastal California gnatcatcher habitat, and seasonal wetlands and vernal pools.

2.0 PURPOSE

The purpose of this Assessment is to provide a more complete evaluation of the potential biological resources on-site, pursuant to the recommendations in the 2014 Habitat Assessment (Bramlet 2014) and discussion in the Staff Recommendation for California Coastal Commission Application 5-13-1100 (CCC 2015). A complete understanding of the potential biological resources will assist in future activities due to the denial of the coastal development permit, whether it be removal, modification, or allowing the fence to remain. This Assessment provides the following information:

- A description of the Site's physical and general biological conditions, with background ecological data;
- Results of focused surveys for coastal California gnatcatcher, vernal fairy shrimp, wintering burrowing owls, as well as rare plants and vegetation; and
- An evaluation of potential wetland habitat.

This Assessment is based on the best available scientific and commercial information, including data results from EI's 2016 field surveys, biological reports from nearby areas, as well as species, habitat, and geographic information system (GIS) databases provided by State and Federal agencies.



Service Layer Credits: Image courtesy of USGS Image courtesy of LAR-IAC © 2015 Microsoft Corporation Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

Environmental Intelligence. Date: 6/28/2016. Q:\Newport Mesa School District - Banning Ranch\02_GIS_Data\maps\2016\Biological Assessment\Exhibit 1 - Vicinity_EI01_20160613.mxd

Exhibit 1 - Site Vicinity

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3.0 REGULATORY FRAMEWORK

This section outlines all Federal, State, and local plans, policies and regulations pertaining to biological resources within the study area.

3.1 Federal Regulations

The Site occurs on and near areas (and species) that are subject to federal regulation. This section provides an overview of the biological resources and related federal regulations considered under this Assessment.

3.1.1 FEDERAL ENDANGERED SPECIES ACT (ESA)

The Federal Endangered Species Act of 1973 (ESA; 16 U.S.C. § 1531 et seq.) establishes a program for the protection and conservation of threatened and endangered plants and animals as well as for the habitats in which these species may be found. The ESA requires consultation with the USFWS to ensure that a proposed action will not interfere with or inhibit the existence or survival of any listed species.

The ESA further prohibits the "take" of any endangered species, lists prohibited actions, and provides guidelines for consultation with agencies regarding species that are designated as "threatened" or "endangered." Under the ESA, "take" is defined as "…to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Harm is an act which injures or kills a wildlife species, including significant habitat modification or degradation; whereas harass is defined as an intentional or negligent act or omission which creates the likelihood of injury by annoying the animal to the extent it significantly disrupts normal behavior patterns such as breeding, feeding, or sheltering.

3.1.2 CLEAN WATER ACT (CWA)

The Clean Water Act (CWA; 33 U.S.C. Section 1251 et seq.), was enacted in 1972 to protect the quality of the waters of the United States. Specifically, the CWA establishes a framework for restoring and maintaining the chemical, physical, and biological integrity of Waters of the United States (WoUS) by regulating the discharge of pollutants into these waters. The U.S. Environmental Protection Agency (EPA) is responsible for overseeing and implementing the CWA. Sections 401, 402 and 404 of the CWA would relate to the Project and are described in the following sections.

3.1.2.1 Section 401

The State Water Resources Control Board (SWRCB) requires that, as stated in Section 401 of the CWA, "any applicant for a Federal permit for activities that involve a discharge to Waters of the United States, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal CWA."

3.1.2.2 Section 402

The National Pollution Discharge Elimination System (NPDES) was established per Section 402 of the CWA, in order to control discharges of pollutants from point sources. The CWA created a section devoted to stormwater permitting (Section 402), with individual States designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The SWRCB issues both General Construction Permits and individual permits under this program. The SWRCB for California delegates its NPDES authority and administration to nine

regional water quality control boards. The Project is located within the Lahontan Regional Water Quality Control Board. NPDES requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to eliminate non-stormwater discharges during project construction.

3.1.2.3 Section 404

The United States Army Corps of Engineers (USACE) administers and enforces Section 404 of the CWA. Pursuant to Section 404 of the CWA, the USACE regulates the discharge of dredged and/or fill material into WoUS. The term WoUS is defined in USACE regulations at 33 Code of Federal Regulations (CFR) Section 328.3(a).

3.1.2.3.1 Waters of the United States (WoUS)

The USACE administers and enforces Section 404 of the CWA. Pursuant to Section 404 of the CWA, the USACE regulates the discharge of dredged and/or fill material into WoUS. The term WoUS is defined in USACE regulations at 33 Code of Federal Register (CFR) Part 328.3(a) as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are used or could be used for industrial purpose by industries in interstate commerce.

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section;

(8) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States;

(9*) Waters of the United States do not include prior converted cropland. Notwithstanding, the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the Environmental Protection Agency (USEPA).*

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the Ordinary High Water Mark (OHWM; USACE 2008a) which is defined at 33 CFR 328.3(e) as:

> *"..that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*

Non-wetland waters are classified as either ephemeral, intermittent, or perennial waters as defined in the January 15, 2002 Federal Register Notice:

- *Ephemeral Stream – An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.*
- *Intermittent Stream – An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.*
- *Perennial Stream – A perennial stream has flowing water year-round during a typical year. The water table is located above the streambed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.*

3.1.2.3.2 Wetland Waters of the US

The term "wetlands" (a subset of "WoUS.") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual (Manual; USACE 1987) and the Arid West Supplement (USACE 2008b) generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics, often referred to as a "three-parameter wetland."

A wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands [Reed 1988]);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Indicators of wetland hydrology, such as soil saturation, must be present. Whereas the Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least 5 percent of the growing season during a

normal rainfall year, the Arid West Supplement does not include quantitative criteria with the exception for areas with "problematic hydrophytic vegetation," which require a minimum of 14 days of ponding to be considered a wetland.

Vernal Pools

Vernal pools are depressional wetlands that fill with rain water in the winter and spring and are dry at other points of the year and often house endangered species such as San Diego fairy shrimp (*Branchinecta sandiegonensis*), which are protected under the Federal Endangered Species Act. Vernal pools are classified as "problem areas" because one or more of the traditional wetland indicators are typically missing (USACE 1987). On November 25, 1997, the Los Angeles District of the USACE issued Regional General Condition #1: Vernal Pool Notification to address discharge of dredged or fill material into any vernal pool. The USACE included a list of vernal pool "indicator species" in the 1997 notice. These 'indicator species' include federally protected species (Federally Endangered, Threatened, or Candidate). The presence of any species listed within this Regional Condition identifies a vernal pool as federally jurisdictional (USACE 1997).

3.1.3 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) originated in 1918 as a statute designed for the protection of migratory birds. The MBTA prohibits the pursuit, hunt, take, capture, killing, attempt to take, capture, or kill, possession, sell, purchase, or other distribution in any manner, of more than 1,000 migratory bird species unless authorized by regulation. Since 1918, the MBTA has been amended to include treaties between the U.S. and three countries: Mexico, Japan, and Russia, to protect migratory birds.

3.1.4 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), prohibits the "taking" of bald eagles [or golden eagles] by anyone without a permit issued by the Secretary of the Interior. The Act defines "take" as "pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing [agitating or otherwise bothering a bald or golden eagle in a manner that might result in injury, decreased productivity, or nest abandonment]."

3.2 State Regulations

The Site occurs on and near areas (and species) that are subject to federal regulation. This section provides an overview of the biological resources and related federal regulations considered under this Assessment.

3.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act (CEQA) was signed into law in 1970. CEQA requires any project or action that has the potential to result in physical environmental change, or use, or projects requiring State or local public agency discretionary action (typically through funding, land, or required approvals), to review, consider, disclose, and attempt to avoid, reduce, or mitigate (where necessary) the potential environmental impacts associated with the project.

3.2.2 CALIFORNIA ENDANGERED SPECIES ACT (CESA)

The California Endangered Species Act (CESA) prohibits the "taking" of any listed "threatened, endangered, or candidate" species in the State. The California Department of Fish and Wildlife (CDFW) is responsible for ensuring and maintaining compliance with the CESA to protect and

preserve state-listed species and their habitats. CESA enables the CDFW to authorize the "take" of state-listed species under certain circumstances.

3.2.3 CALIFORNIA FISH AND GAME CODE

The California Fish and Game Code authorizes the CDFW to oversee the direction and implementation of sections related to the protection of the State's natural resources.

3.2.3.1 Sections 1801 - 1802

Sections 1801-1802 of the California Fish and Game Code encourage the preservation, conservation, and maintenance of the State's wildlife resources. These sections are intended to maintain the existing species populations for biological benefits, educational and recreational uses, in addition to the intrinsic values associated with these resources. The CDFW is tasked as a trustee for wildlife species to ensure that the populations and their habitat are sustained, diverse, and protected.

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Code or any associated regulation. Section 3503.5 makes it unlawful to take, possess, or destroy birds of prey. It also prohibits the take, possession, or destruction of nests or eggs of any bird of prey. Section 3511 describes bird species, primarily raptors that are "fully protected." Fully protected animals may not be taken incidentally unless pursuant to a CDFW-adopted Natural Communities Conservation Plan.

3.2.3.2 Sections 1600 - 1603

Under the California Fish and Game Code Sections 1600-1603, the CDFW regulates any person, state or local government agency, or public utility that proposes to "substantially divert[s] or obstruct[s] the natural flow or substantially change[s] the bed, channel, or bank of any river, stream, or lake designated by the department, or use[s] any material from the streambeds". This jurisdiction includes ephemeral, intermittent, and perennial streams, dry washes, and lakes characterized by a defined bed and bank and observed relationship to fish or wildlife resources. This jurisdiction extends to adjacent habitats that function as part of the riparian system, regardless of the riparian area's federal status. When riparian vegetation is present, CDFW jurisdiction reaches to the outer limits of the riparian vegetation dripline. Further, CDFW asserts jurisdiction over vernal pools only when California State threatened and/or endangered species (e.g., thread leaved brodiaea [*Brodiaea filifolia*, FAC]) are present.

3.2.4 PORTER-COLOGNE ACT AND CALIFORNIA WATER CODE

The SWRCB, as regulated by the Regional Water Quality Control Board (RWQCB), regulates "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state (Water Code 13260(a)). "Waters of the State" (WoS) are defined as "any surface water or groundwater, including saline waters, within the boundary of the state" (Water Code 13050 (e)). Additionally, pursuant to the definition of WoS in the Porter-Cologne Act, the state maintains jurisdiction of isolated waters In other words, the RWQCB regulates all activity, including dredging and filling, in WoS that are not regulated by the USACE, including vernal pools and other waters showing lack of connectivity to a traditionally navigable water.

3.2.5 CALIFORNIA COASTAL COMMISSION

The CCC regulates the diking, filling, or dredging of wetlands within the coastal zone. The Coastal Act at Public Resources Code Section 30121 defines "wetlands" as land "which may be

covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." The 1981 CCC Statewide Interpretive Guidelines state that hydric soils and hydrophytic vegetation "are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act."

In addition, Public Resources Code Section 30240(a) restricts land uses within or adjacent to environmentally sensitive habitat areas (ESHAs). Section 30107.5 defines an ESHA as: *"...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and* developments." Included within this definition are wetlands, estuaries, streams, riparian habitats, lakes, and portions of open coastal waters, which meet the rare or valuable habitat criteria. Not all wetlands necessarily meet the "rare or valuable habitat criteria" and as set forth in Section 30233, "where there is no feasible less environmentally damaging alternative, and where feasible mitigation avoidance and minimization measures have been provided to minimize adverse environmental effects" degraded or low-value wetlands that do not which meet the rare criteria.

3.2.6 CALIFORNIA NATIVE PLANT PROTECTION ACT

The California Native Plant Protection Act (NPPA) of 1977 requires all State agencies to ensure that programs designed to conserve endangered and rare native plants are implemented. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use. The NPPA was expanded within CESA in 1984 to further protect rare and endangered plants within the State.

4.0 REGIONAL SETTING

The Site is located at the western end of Newport Beach, north of Pacific Coast Highway, at the western terminus of West 16th Street (Exhibit 1: Site Vicinity). The property is located on a coastal upland, immediately east of Newport Banning Ranch, and west of the City of Costa Mesa. The majority of the Site is within the City of Newport Beach. The southern-most portion of the Site is in the jurisdiction of the County of Orange, but under the "sphere of influence" of Newport Beach.

4.1 Topography and Land Use

The Site is divided into five (5) areas. These five fenced areas were numbered in the CCC Staff Report (2015) and while these designations have no legal or parcel meaning, we utilize the same numbering for comparison purposes (Exhibit 2: Site Conditions).

Areas 1, 2, and 3 consist of fenced areas used historically for equipment storage. Areas 1 and 2 were leased to construction companies for equipment and material storage. Area 3 was used for material storage by the NMUSD. These areas are heavily disturbed and include imported clay and gravel soils that have been continually compacted by storage activities.

Areas 4 and 5 consist of the 2012 fenced areas that are the subject of the CCC Violation letter (V-5-13-003; 2/15/2013) and subsequent after-the fact Construction Application (Application No. 5-13-1100, 10/1/14). Until the fencing was installed, these areas were subject to NBR oil field activities including historic oil drilling and maintenance activities. These areas are relatively disturbed and have historically been mowed, used as storage areas for soil spoils, and oil production (CCC 2015).

The terrain is relatively flat with undulating mounds where spoils piles have been left. Elevation on-site ranges from 1,850 feet above mean sea level (msl) at the eastern ridge-tops to areas at approximately 1,675 msl at the toe of slope near the southern boundary.

4.2 Soils

The Site contains no mapped hydric soils. The following non-hydric soils occur within the Project area (Natural Resources Conservation Service [NRCS] 2016; Exhibit 2: Soils Survey):

- Myford sandy loam, 0 to 2 percent slopes
- Myford sandy loam, 2 to 9 percent slopes

The NRCS describes the Myford sandy loam series as consisting of deep, moderately drained soils formed on terraces. These soils are formed from sandy alluvium from mixed rock. These soils are moderately well drained with medium to rapid runoff and very slow permeability. The survey also notes that the soil type has a frequency of ponding or flooding as 'none,' signifying that flooding or ponding is exceedingly rare for this soil group (NRCS 2016). Uses for this soil include irrigated production of citrus, pasture, range, barley, and for urban development. Typical natural vegetation is annual grasses and forbs with some scattered low-growing brush.

4.3 Hydrology

The Site is located in California's Mediterranean climate distinguished by warm, wet winters under prevailing westerly winds and calm, hot, dry summers. Typically, 74.5% of the yearly precipitation is accumulated in the winter months (December-March). Typically the Site receives 9.23 inches of precipitation. There has an extended drought on-site for the last five years. Prior to that, the Site received an above average precipitation in 2009/2010 and 2010/2011. Precipitation in 2009/2010 was 60% above the median average with 14.24 inches. Precipitation in 2010/2011 was 87% above the median average with 17.24 inches (OC Public Works 2016).

The Site is relatively flat with no discernable drainage patterns. Given the soils described by the NRCS and observed on-site, uplands receiving precipitation are expected to have water slowly percolate though the soil and excess water is expected to runoff in a general westerly or southerly direction.

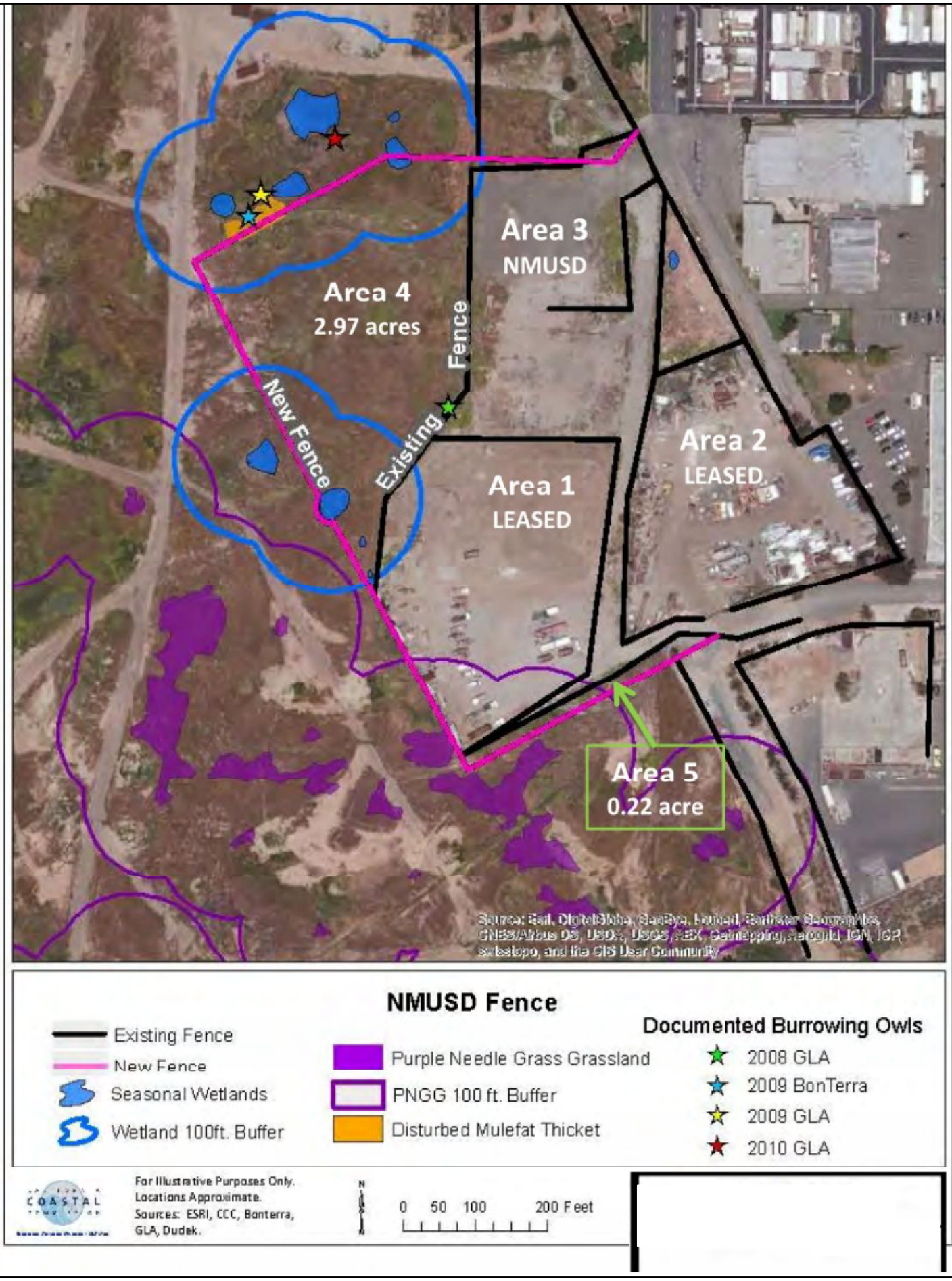

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Exhibit 2 - Previously Conducted Studies

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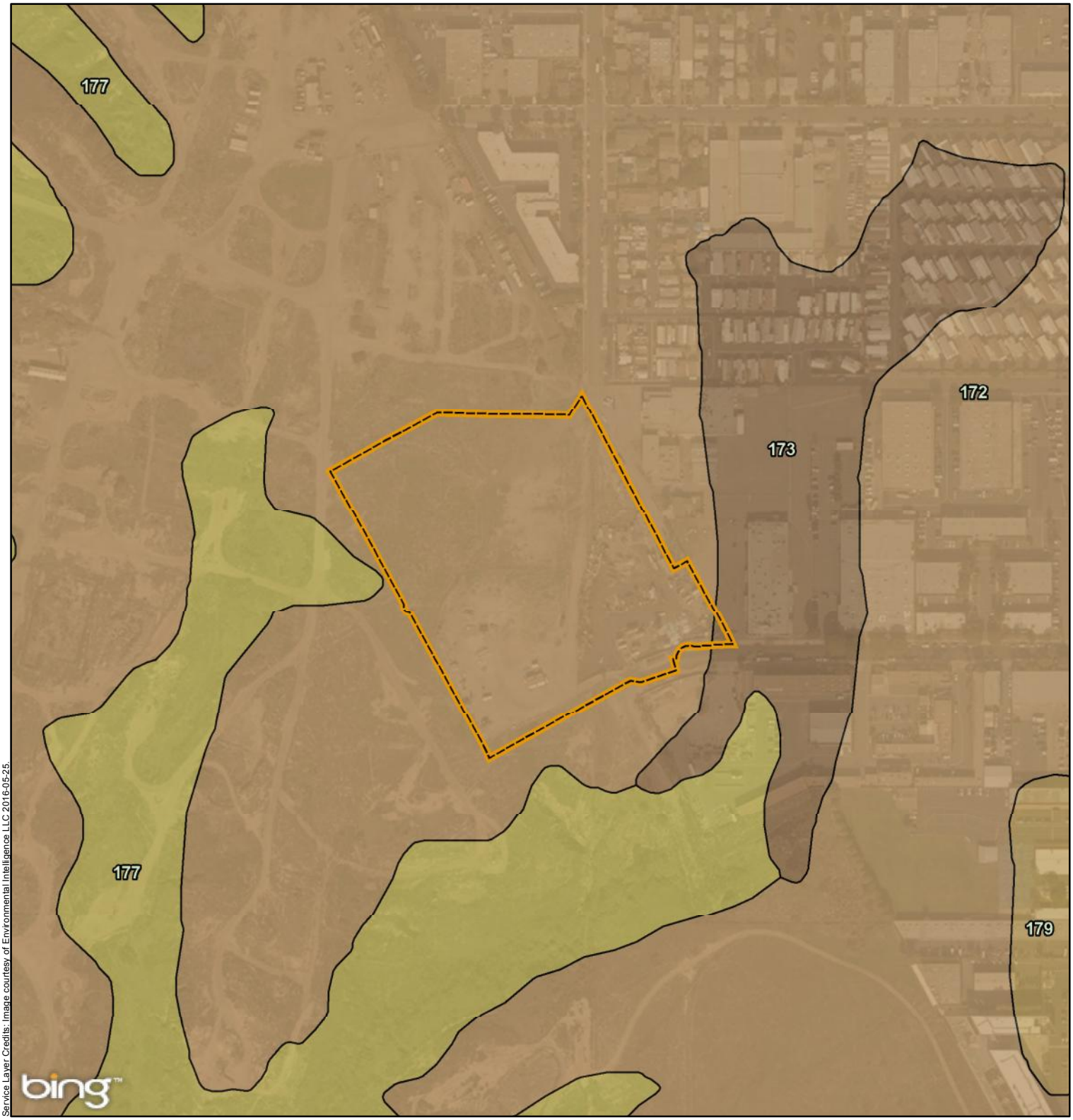

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Site Boundary

Soils (NRCS, 2015)

- 172;Myford sandy loam, 0 to 2 percent slopes
- 173;Myford sandy loam, 2 to 9 percent slopes
- 177;Myford sandy loam, 9 to 30 percent slopes, eroded
- 179;Myford sandy loam, thick surface, 2 to 9 percent slopes

N W E S

0 150 300 Feet

Exhibit 3 - Soils Survey

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5.0 BIOLOGICAL SURVEY METHODS

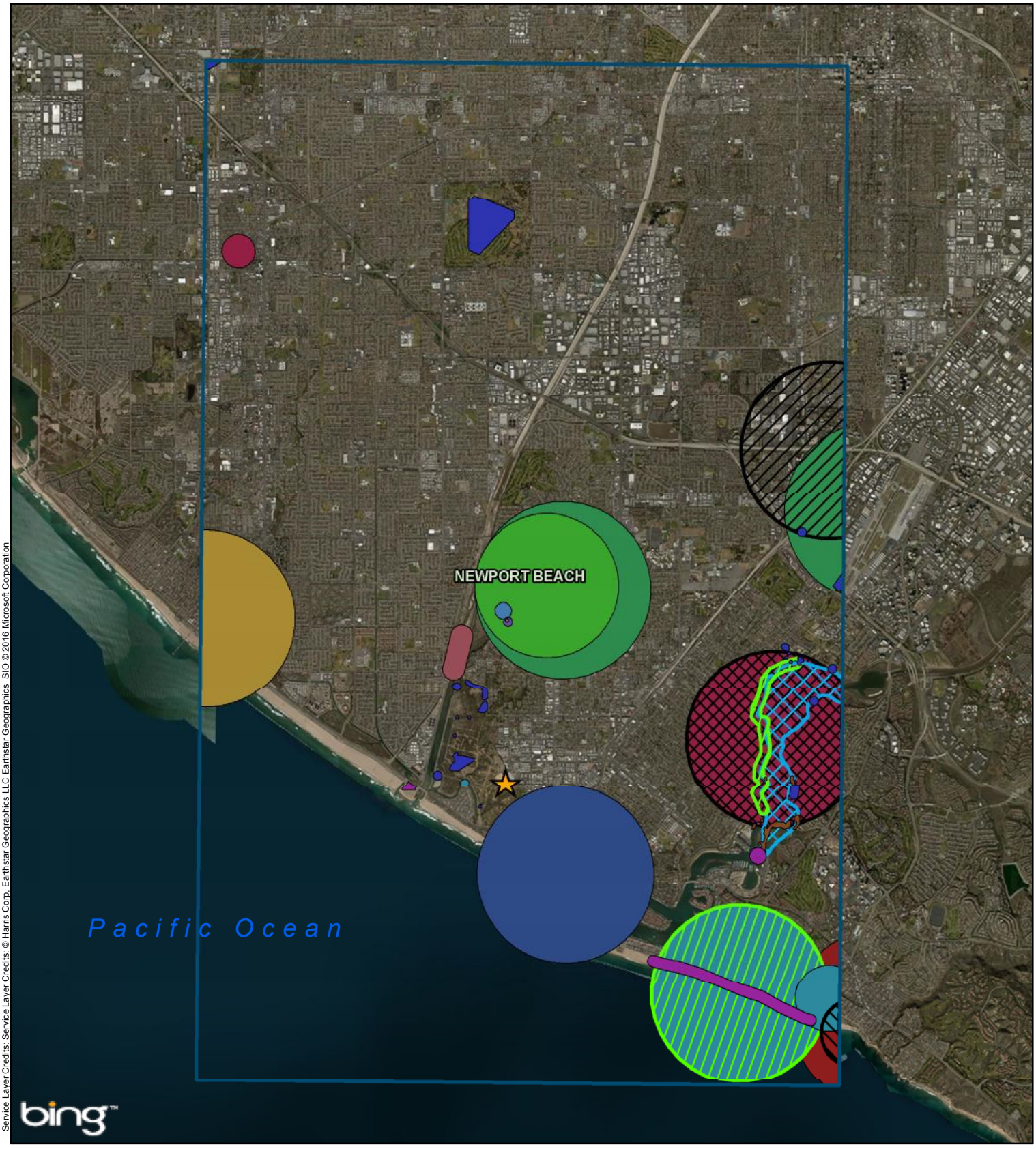
Floral and faunal taxonomy used in this Assessment follow the taxonomy used in the most recent authoritative literature. Vegetation types follow Sawyer et al. (2009). For plants, The Jepson Manual (Baldwin et al. 2012) is followed. Common plant names, where not available from Baldwin et al., are taken from the California Native Plant Society (CNPS; 2016). Scientific names are mentioned once in the text and common names are used thereafter.

5.1 Literature Review

Prior to conducting the field surveys, a database search and literature review was conducted. The species database search focused on listed species within the California Natural Diversity Database (CNDDB 2016), the Consortium of California Herbaria (CCH 2016), and USFWS Species Occurrence Data (USFWS 2015). EI also analyzed numerous previously prepared reports specific the Site. These reports included but were not limited to:

- California Coastal Commission. March 12, 2015. Staff Report on Application 5-13-1100 for the Newport Mesa Unified School District. California Coastal Commission.
- Engel, J. February 26, 2015. Biological Resources in Vicinity of Newport-Mesa Unified School District Unpermitted Fence. California Coastal Commission
- Bramlet, D. July 7, 2014. Habitat Assessment for the Fencing at 975 W. 16th Street, Newport Beach, California. Prepared For: Newport-Mesa Unified School District.
- Dudek. May 2013. Revised Grassland Assessment and Vegetation Mapping Survey Report for Newport Banning Ranch. Prepared for Newport Banning Ranch LLC.
- Johnston, A. September 11, 2011. Final Biological Technical Report, Newport Banning Ranch, Newport Beach, California. Prepared for the City of Newport Beach

In addition to the species identified by the previously prepared reports, the sensitive species identified by the CNDDB within nine United States Geological Service (USGS) 7.5-minute quadrangles and centered on the Site location were selected as potential focal survey species. These quadrangles included the *Orange*, *Anaheim*, *Los Alamitos*, *Tustin*, *Newport Beach*, *Seal Beach,* and *Laguna Beach* quadrangles. The results of the CNDDB search are included as Exhibit 3: CNDDB Results.



Service Layer Credits: Service Layer Credits: © Harris Corp, Earthstar Geographics LLC Earthstar Geographics SIO © 2016 Microsoft Corporation

Environmental Intelligence. Date: 6/23/2016. Q:\Newport Mesa School District - Banning Ranch\02_GIS_Datalmaps\2016\BioTech\Exhibit 4a - Literature_Review_EI01_20160613.mxd

Project Location

USGS QUAD Index

California Orcutt grass

Coulter's goldfields

Coulter's saltbush

Davidson's saltscale

Gambel's water cress

Los Angeles sunflower

San Bernardino aster

San Diego button-celery

aphanisma

chaparral sand-verbena

coast woolly-heads

decumbent goldenbush

estuary seablite

many-stemmed dudleya

mud nama

prostrate vernal pool navarretia

salt marsh bird's-beak

south coast saltscale

southern tarplant

N

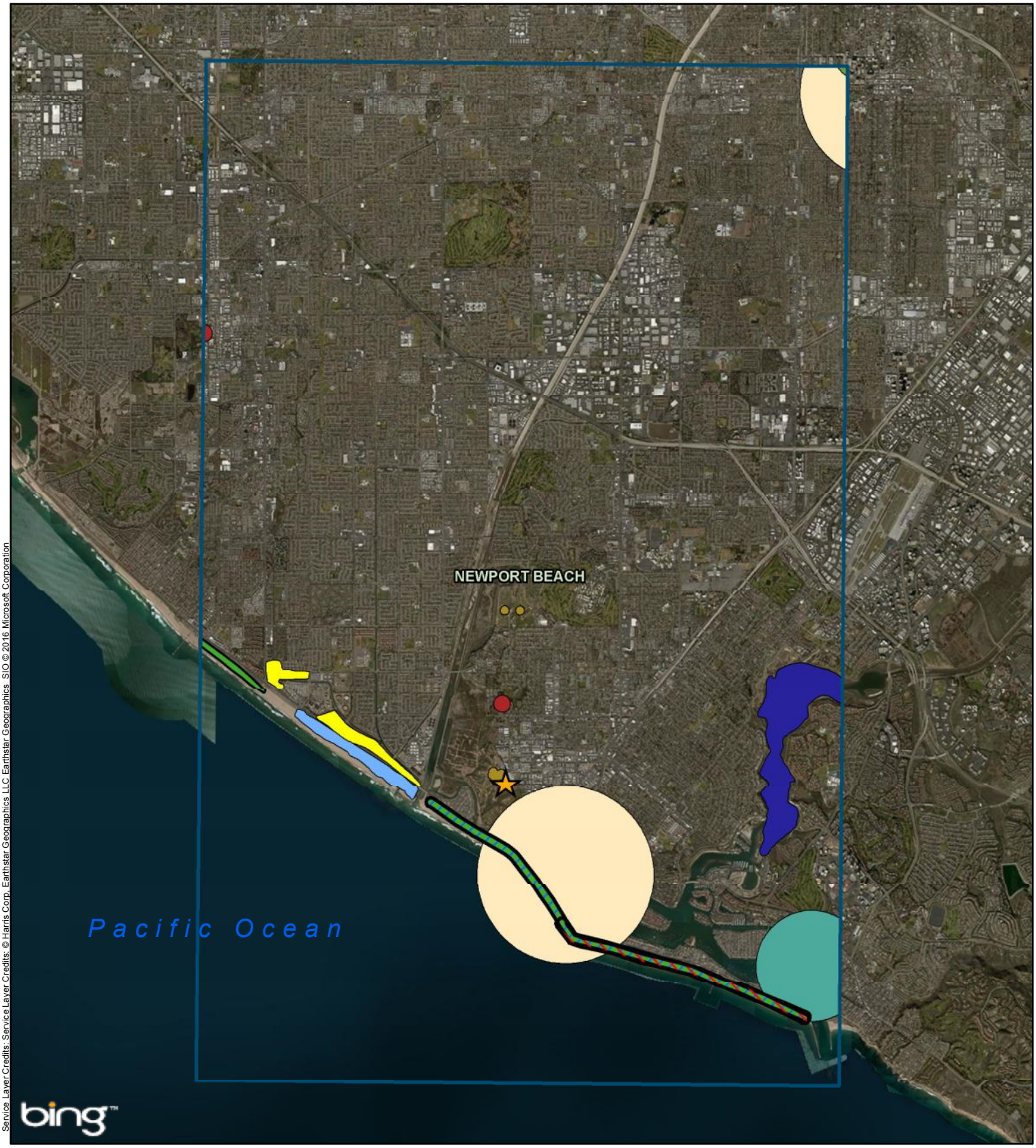
W E

S

0 0.5 1 Miles

Exhibit 4A - CNDDB Results - Plant Records

Newport Mesa Unified School District | Orange County, CA



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Environmental Intelligence. Date: 6/23/2016. Q:\Newport Mesa School District - Banning Ranch\02_GIS_Datalmaps\2016\BioTech\Exhibit 4B - CNDDB_Inverts_Herps_Fish_EI02_20160613.mxd

Project Location

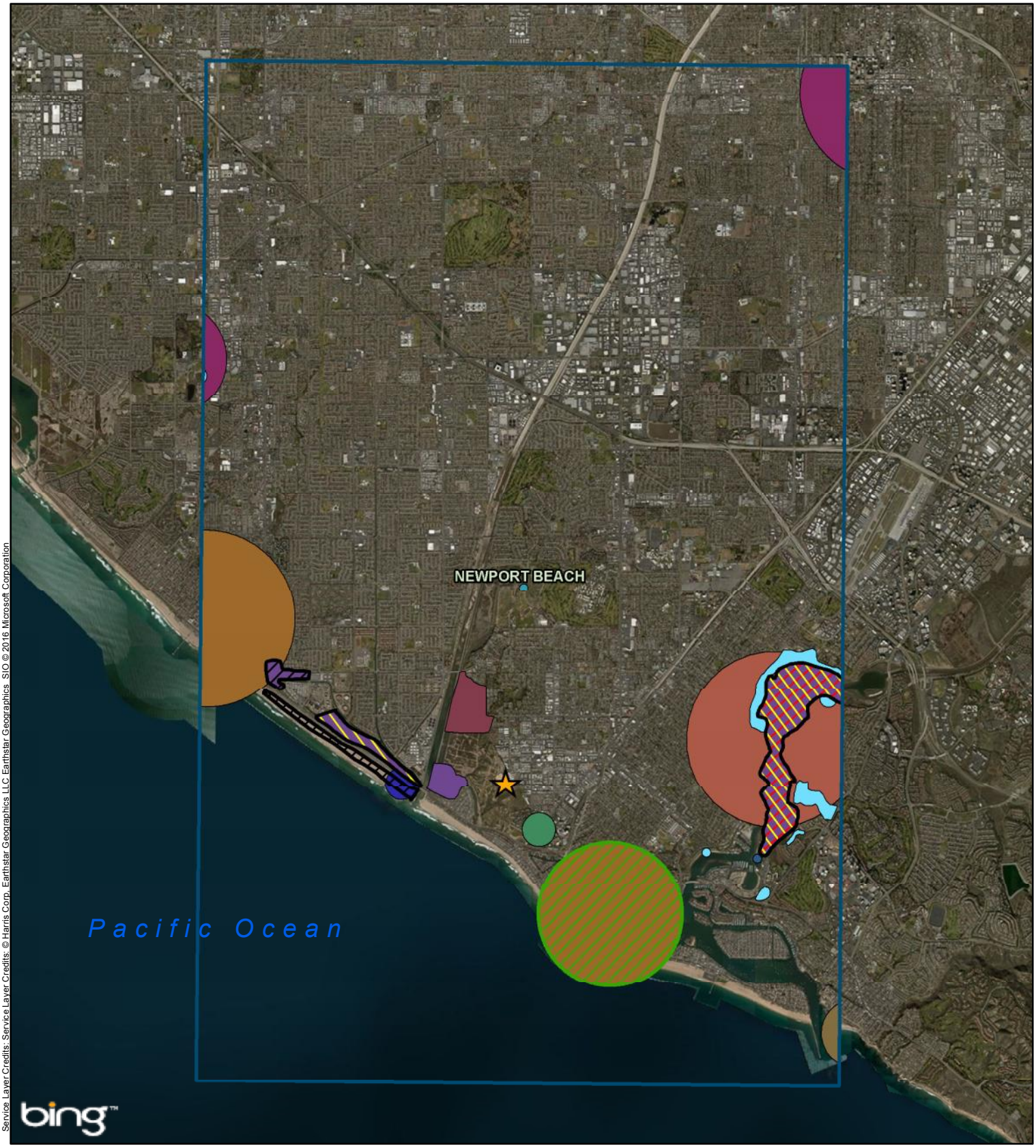
USGS QUAD Index

- Crotch bumble bee
- San Diego fairy shrimp
- coast horned lizard
- globose dune beetle
- mimic tryonia (=California brackishwater snail)
- monarch - California overwintering population
- orangethroat whiptail
- sandy beach tiger beetle
- wandering (=saltmarsh) skipper
- western beach tiger beetle
- western tidal-flat tiger beetle

0 0.5 1 Miles

Exhibit 4B - CNDDB Results - Invertebrate, Fish, Amphibian, & Reptile Records

Newport Mesa Unified School District | Orange County, CA



Service Layer Credits: Service Layer Credits: © Harris Corp, Earthstar Geographics LLC Earthstar Geographics SIO © 2016 Microsoft Corporation

Environmental Intelligence. Date: 6/23/2016. Q:\Newport Mesa School District - Banning Ranch\02_GIS_Datalmaps\2016\BioTech\Exhibit 4C - CNDDB_Birds_Mammals_EI02_20160613.mxd

Project Location

USGS QUAD Index

- American badger
- Belding's savannah sparrow
- California black rail
- California least tern
- bank swallow
- big free-tailed bat
- burrowing owl
- coastal California gnatcatcher
- hoary bat
- least Bell's vireo
- light-footed clapper rail
- osprey
- southern California saltmarsh shrew
- western mastiff bat
- western snowy plover
- western yellow-billed cuckoo
- white-tailed kite

0 0.5 1 Miles

Exhibit 4C - CNDDB Results - Bird and Mammal Records

Newport Mesa Unified School District | Orange County, CA

5.2 Field Surveys

Following the literature review described above, EI biologists conducted general and focused biological surveys throughout the Site in 2015 and 2016. The purpose of these surveys was to gather information about the Site's natural resources including the extent and location of vegetation communities and the presence of conditions sufficient to support any State or federally listed or otherwise special status plant or wildlife species. Results of these surveys, along with additional plant and wildlife observations, are included in Section 6.

5.2.1 VEGETATION SURVEYS

EI biologists conducted habitat assessments, vegetation mapping, and surveys for special-status plants on April 8 and May 25, 2016. The plant surveys were conducted pursuant to the joint CNPS and CDFW protocol (CDFW 2009) and USFWS guidelines (USFWS 1996) for vegetation assessments. Qualified EI biologists conducted surveys by walking transects over the entire Site to ensure thorough coverage and noted all observed plant taxa. Focused attention was given to areas with higher potential habitat for special-status plant species (e.g., mesic sites, rocky outcrops, clay or alkaline soils, etc.). Vegetation types were delineated on aerial maps with a minimum mapping unit of 0.1 acre and ground-truthed in the field. A floral compendium listing all species recorded are included as Appendix B.

Vegetation mapping of the Site was conducted previously by Bramlet (2014) following the County of Orange County Habitat Classification System, which was specifically prepared for sites within the County of Orange to support the County's Natural Communities Conservation Planning Program (NCCP; Dames et al. 1992.). Following completion of Bramlet's vegetation community mapping efforts, a new vegetation classification system, the Manual of California Vegetation, Second Edition (MCV2; Sawyer et al. 2009) was introduced and accepted by the academic community and the CDFW. The MCV2 classification system focuses on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed. Utilizing this nomenclature relates directly to the most recent vegetation efforts on the adjacent Banning Ranch property and CDFW's List of California Terrestrial Natural Communities recognized by CNDDB (CDFW 2016).

5.2.2 SENSITIVE PLANT SURVEYS

Sensitive plant surveys followed guidelines described by the CNPS (2001) and CDFW (2009). Timing of the surveys was dependent on the time of year when species are both evident and identifiable and was determined by known flowering season and visits to reference populations. A total of two seasonal surveys were conducted for the survey area including the habitat assessment, to accurately determine what plants exist on-site. Conducting more than one survey during the growing season was necessary to capture the floristic diversity and determine if special-status plants were present.

5.2.3 GENERAL WILDLIFE SURVEYS

General wildlife surveys were led by Travis Kegel and David Levine on September 16, 2015. General wildlife surveys were conducted by walking meandering transects throughout all accessible areas of the Site. All observed wildlife, bird calls, and wildlife sign (e.g., scat, burrows, middens, nests) were recorded and the abundance of each species was estimated. Specific attention was given to those sensitive species previously reported or with the potential to occur as listed by the CNDDB, USFWS, CCC documents or studies prepared for NBR as

occurring within the nine USGS 7.5-minute quadrangles centered on the Site. A faunal compendium listing all species recorded are included as Appendix C.

5.2.4 FOCUSED COASTAL CALIFORNIA GNATCATCHER SURVEYS

The coastal California gnatcatcher is a resident species in coastal sage scrub habitat. Surveys to determine presence/absence of this species are regulated by the USFWS. In areas not participating in a Natural Communities Conservation Plan (NCCP), the USFWS requires a minimum of six surveys conducted by a permitted biologist at least one week apart during the breeding season, March 15 to June 30 (USFWS 1997). Surveys are to be conducted in the morning between 6:00 am and 12:00 pm; however, when temperatures are excessively cool or hot, or the weather is inclement, surveys are to be suspended.

All 2016 surveys were led by Scott Duff (TE-59586B-0) in accordance with guidelines issued by the USFWS (1997). Six surveys were performed following the protocol for areas not participating in a NCCP, between 15 April and 22 May 2015, covering all suitable California gnatcatcher habitat within the Site. All areas were covered on foot by walking slowly through or adjacent to suitable habitat, stopping periodically to listen for gnatcatcher calls. In addition, the surrounding habitat, within 200-feet of the Site boundary was evaluated through binoculars to observe gnatcatchers near the Site. Tape-recordings of the species' typical mew notes were played periodically along with "pishing" to induce any nearby silent birds that may be present to call in response to the presumed intruder.

5.2.5 FOCUSED FAIRY SHRIMP SURVEYS

Wet season fairy shrimp sampling followed the USFWS Survey Guidelines for the Listed Large Branchiopods (USFWS 2015). Briefly, each pool was photographed and the exact location was noted using a hand-held GPS receiver. At each subsequent visit the air temperature, wind speed and weather conditions were recorded along with the surface area, depth, and water temperature of each pool. The pools were sampled throughout the water column, including edges & bottom, using a standard 500 micron aquatic dip net (Bioquip®). Additionally, an approximately 210 micron brine shrimp net was used to sample the water column to detect the presence of newly hatched shrimp and other small branchiopods (e.g., cladocerans, ostracods, & conchostracans), and other associated aquatic invertebrates.

Protocol fairy shrimp wet season sampling was led by Frank Wegscheider (TE-038716-3) and commenced on January 10, 2016 (after notification was submitted to USFWS). Thereafter, ponding status of seasonal depressions was monitored at 7-day intervals, and pools were sampled whenever inundated.

5.2.6 WINTERING BURROWING OWL SURVEYS

EI biologists Travis Kegel and Matt Amalong conducted four focused surveys for burrowing owls between December 22, 2015 and January 26, 2016, based upon the guidance provided in the 2012 California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFW 2012). All rodent and squirrel burrows and crevices of manmade structures observed on-site were assessed for use by burrowing owls and were inspected for evidence of use by burrowing owl diagnostic sign (e.g., white wash, pellets, scat, feathers, and small mammal bone fragments). Each focused survey day included 100 percent coverage of suitable habitat on the Site. All suitable burrows observed on the Site were assessed for indicative sign of burrowing owl use. If any evidence of recent use by burrowing owls was observed, the burrow was, for the

purposes of this study, recorded as an "active burrow". Burrow locations were recorded with handheld GPS units.

6.0 RESULTS

The following section discusses the results of focused surveys and studies conducted on-site.

6.1 Vegetation Mapping

Timing of surveys allowed for identification of perennial plant species and annual species. A complete list of all plant species observed in floristic surveys is presented in Appendix B. Vegetation was similar to the vegetation mapping conducted by Bramlet in 2014. Since 2014, some of the vegetation has expanded slightly or have been grouped to meet the minimum mapping unit. The vegetation communities and land cover types identified include Developed, Disturbed, Coyote Bush Scrub, Menzies's Golden Bush Scrub, and Upland Mustard as depicted in Exhibit 5: Survey Results and summarized in Table 1.

TABLE 1: SUMMARY OF VEGETATION COMMUNITIES

Orange County Habitat Classification System	Manual Of California Vegetation, 2nd Edition	Rarity Ranking[1]	Total Area (Acres)
Graded/Developed	Developed	NA	5.5
Disturbed Annual Grassland	Disturbed	NA	2.8
Coastal Sage Scrub/Disturbed Annual Grassland Ecotone	Coyote Bush Scrub *(Baccharis pilularis* Alliance*)*	G5 / S5	0.6
Coastal Sage Scrub/Disturbed Annual Grassland Ecotone	Menzies's Golden Bush Scrub (*Isocoma menziesii* Alliance)	G4? / S4?	0.1
Ruderal	Upland Mustard *(Brassica nigra* and other mustards Semi-natural Stands)	NA	2.1
		Total	**11.1**

[1] Rankings follow CDFW's List of California Terrestrial Natural Communities (2010) and utilize NatureServe conservation status ranks. Under this system, status is assessed and documented at the global (G) and state/province (S) scales from critically imperiled (1) to demonstrable secure (5). A question mark denotes an inexact numeric rank. All vegetation types with a global or state rank of 3 or less is considered sensitive.

6.1.1 DEVELOPED

There are approximately 5.9 acres of developed areas on-site. Developed areas are the most prevalent land designation on-site. These areas are relatively barren due to anthropogenic disturbance and have been historically used for machinery storage and parking. These areas often had a layer of compact clay or gravel covering the soil surface restricting the growth of vegetation. Few species were observed in the developed areas. Observed weedy species included patches of ornamental trees (*Eucalyptus* sp.) and non-native mustards (*Hirschfeldia incana*, *Sisymbrium* spp., etc.).

6.1.2 DISTURBED

A total of 2.4 acres of disturbed areas were mapped within the survey area. These areas are located within the newly fenced areas, primarily within Area 4 and oil production facilities, abandoned oil production facilities, and adjacent to dirt access roads and paved roads. These areas show evidence of anthropogenic impacts including mowing in recent years and are dominated by non-native species. Disturbed areas have been physically disturbed or invaded by non-native species, such that few native plant species remain. Dominant plants include non-

native brome grasses (*Bromus diandrus, B. madritensis*) and non-native mustards. The native forbs that were observed included common deerweed (*Acmispon glaber*), ragweed (*Ambrosia psilostachya*), common sandaster (*Corethrogyne filaginifolia*), dove weed (*Croton setigerus*), clustered tarweed (*Deinandra fasiculata*), Canadian horseweed (*Erigeron canadensis*), Coulter's horseweed (*Laennecia coulteri*), seaside heliotrope (*Heliotropium curassavicum*), telegraphweed (*Heterotheca grandiflora*), dotseed plantain (*Plantago erecta*), greenspot nightshade (*Solanum douglasii*), and California chicory (*Rafinesquia californica*).

6.1.3 COYOTE BRUSH SCRUB

There are approximately 0.6 acre of disturbed coyote brush scrub located within of Area 4 and Area 5. This vegetation type was relatively open, contained a high cover of non-native species, and patches of bare ground. This vegetation type was previously mapped as Coastal Sage Scrub/Disturbed Annual Grassland following the criteria of the County of Orange County Habitat Classification System (Bramlet 2012). Coyote brush scrub occurs when coyote brush (*Baccharis pilularis*) is the dominant species (greater than 50 percent absolute cover) in the shrub layer or when coyote brush is greater than 15 percent shrub cover over a grassy understory with coyote brush relative cover greater than 50 percent among shrub species (Sawyer et al. 2009). Throughout California, coyote brush scrub occurs along the coastline, coastal bluffs, open slopes, ridges, and terraces. In southern California it is often observed on historically disturbed sites and is one of the early native colonizers on the coast (Sawyer et al. 2009). This vegetation type was relatively open with grassland species consisting primarily of red brome, short pod mustard, and clustered tarweed. Additional shrub cover consisted of California brittlebush (*Encelia californica*) and Menzies's goldenbush (*Isocoma menziesii*).

6.1.4 MENZIES'S GOLDEN BUSH SCRUB

There are approximately 0.1 acre of Menzies's golden bush scrub located along the western edge of Area 4. Menzies's golden bush scrub occurs when Menzies's goldenbush as the dominant or co-dominant species (greater than 50 percent relative cover) in the shrub layer (Sawyer et al. 2009). Menzies's golden bush scrub occurs in southern California along the coast and in the southern California mountains and valleys. It often occurs in sandy areas, including alluvial fans, arroyos, and stream terraces, with frequent disturbance. Menzies's golden bush scrub has an open to intermittent shrub canopy less than 1 meter in height with an open to continuous, diverse, and grassy herbaceous layer (Sawyer et al. 2009). No other shrubs were found in these areas. Additional cover consisted of non-native grasses (*Bromus madritensis, Schismus barbatus*), non-native mustards, and few native forbs.

6.1.5 UPLAND MUSTARD

A total of 2.1 acres of upland mustard areas were mapped within the survey area. The Upland Mustard areas were generally located in the previously disturbed areas in Area 3 and along fence-lines. This category is described as Ruderal in the Orange County Habitat Classification System (Bramlet 2012). Upland mustard has an open to continuous canopy less than 3 meters in height in the herbaceous layer and is dominated by black mustard (*Brassica nigra*), common mustard (*Brassica rapa*), Saharan mustard (*Brassica tournefortii*), shortpod mustard (*Hirschfeldia incana*), Dyer's woad (*Isatis tinctoria*), and/or wild radish (*Raphanus sativus*). Throughout California, upland mustard occurs in fallow fields, roadsides, grasslands, levee slopes, riparian areas, disturbed scrublands, and waste places from sea level to 1,500 meters (4,922 feet) above msl (Sawyer et al. 2009). Mustard thrives under regular frequent disturbance (fire, heavy grazing, or disking).

Service Layer Credits: Image courtesy of Environmental Intelligence LLC 2016-05-25.

Environmental Intelligence. Date: 6/23/2016. Q:\Newport Mesa School District - Banning Ranch\02_GIS_Data\maps\2016\BioTech\Exhibit 5 - SurveyResults_EI01_20160623.mxd

Site Boundary

Incidental Coastal California Gnatcatcher Location

Seasonal Wetlands

Vegetation Type

Developed (DVLP)

Disturbed (D)

Disturbed Coyote Bush Scrub (D-CYS)

Disturbed Menzies's Golden Bush Scrub (D-MGBS)

Upland Mustard (UM)

0 50 100 Feet

Exhibit 5 - Survey Results

Newport Mesa Unified School District | Orange County, CA

6.2 Special Status Vegetation Types

Special status vegetation communities are those communities that are of limited distribution as listed by the CDFW based on the sensitivity rankings provided in the List of Vegetation Alliances and Associations (CDFW 2011). This list is based on the MCV2, however CNDDB data were also used to evaluate the potential for special status vegetation types. Ranking for this list is based on NatureServe's Heritage Methodology (NatureServe 2011) where vegetation types are given a global (G) and subnational (S) rank from 1 (critically imperiled) to 5 (secure). Vegetation alliances with G or S ranks of 3 or less are considered to be special status under this system.

No special status vegetation types were observed on-site. Dudek's vegetation assessment (2013) referenced nearby special status vegetation types, purple needle grass grassland and California brittlebush shrubland alliance occurring on the NBR property. No purple needlegrass (*Stipa pulchra*) was observed during EI's vegetation or rare plant surveys and therefore no purple needle grass grassland occurs on-site. Few small patches of California brittlebush were observed within the coyote bush scrub. The California brittlebush cover did not meet the MCV2 cover requirements for classification as California brittlebush shrubland alliance. For the California brittlebush shrubland alliance classification, the brittlebush must occupy greater than 30% relative cover within a closed, intermittent, or open canopy or greater than 50% absolute native shrub cover (Sawyer et al. 2009).

6.3 Special Status Plant Species

For the purpose of this study, special status plant species include any species listed as threatened or endangered under Federal or State Endangered Species Act or meet the definition of rare or endangered under CEQA, including species considered by the CNPS to be "rare, threatened or endangered in California" (i.e., California Rare Plant Rank 1A, 1B and 2).

No special status plant species were observed during focused rare plant searches conducted on April 8 and May 25, 2016. Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a potential for a false negative survey result as species may be present on-site but not be detectable or populations may be limited in extent due to climate conditions. Nevertheless, based on the phenological characteristics observed during surveys and the identification expanded native vegetation mapping, the target plant species were expected to be evident and observable during this year's survey periods.

6.4 Special Status Wildlife

No special status wildlife species were detected on the 11.1-acre Site during EI's 2016 focused surveys. A complete list of wildlife species observed by EI's wildlife biologists or those reported in other studies is presented in Appendix C.

6.4.1 COASTAL CALIFORNIA GNATCATCHER

No coastal California gnatcatchers were observed utilizing the limited habitat on-site during the 2016 presence/absence surveys for the species. However, on May 3, 2016, gnatcatchers were heard approximately 200-feet off-site to the southwest on the adjacent NBR property during protocol surveys. The California gnatcatchers did not approach, respond, or fly on-site during the survey. The location of the observation corresponds to previously identified California gnatcatcher use-areas identified in 2013 (Dudek 2013b).

While not observed during the protocol breeding season survey, coastal California gnatcatchers were incidentally observed along the southern Site boundary in coyote brush scrub within the newly fenced area during September 2015 assessment surveys. This observation is not associated with a breeding territory and represents extended foraging outside of the breeding season. It is typical for the species to extend their foraging ranges significantly during the fall and winter (USFWS 2007).

As the Site is located in USFWS critical habitat for California gnatcatcher, the species' Primary Constituent Elements were evaluated. While the Site does not contain breeding habitat for the species, the disturbed habitat, coyote brush scrub, and Menzies's golden bush scrub may provide foraging habitat for the species during the winter months when gnatcatchers extend their typical foraging ranges.

6.4.2 BURROWING OWL

No burrowing owls were observed during the 2015/2016 wintering surveys. The last reported observance of the burrowing owl was January 29, 2015 within NBR property north of the Site (Engel 2015).

Despite the lack of observances, active burrows, or indicative sign during 2015-2016 focused surveys, the Site is considered occupied by the burrowing owl if an owl has been observed occupying a burrow within the last three years (Rich 1984, CDFW 2012). As such, the Site shall be considered occupied foraging habitat until 2018 unless new observances confirm continued occupation.

6.4.3 FAIRY SHRIMP

No fairy shrimp or other aquatic invertebrates were observed during the focused wet season surveys. On-site brief ponding was only observed on the disturbed and compact clay soils of Area 1. No ponding was observed in the 'seasonal wetlands' identified by Bramlet (2014).

As Area 4 is located in USFWS critical habitat for San Diego fairy shrimp and within the watershed boundary of occupied vernal pools, any impacts should be evaluated to maintain its hydrology.

6.5 Wetlands

The Site was inspected for wetland parameters required by the Coastal Act regulations to qualify as a wetland: hydrophytic vegetation, hydric soils, and/or wetland hydrology. If any one of these parameters are identified the subject area would be considered wetland. As the area has been historically disturbed (GLA 2011, CCC 2015) and is currently experiencing an extended drought (OC Public Works 2016), the three 'seasonal wetlands" (SWs) identified by the CCC and Bramlet have 'problematic' wetland indicators and are subject to additional historical evaluation pursuant to the Arid West supplement (USACE 2008).

The Site was previously assessed for wetlands by Bramlet (2014) and BRC (2014). In combination, they identified three (3) potential 'seasonal wetlands' (SWs). One of the SWs (SW No. 2) straddles the Site with the majority of its area located on NBR property. Due to SW 2's location on NBR property, this SW was subject to vernal fairy shrimp surveys conducted for the property on 2010/2011, 2011/2012, 2012/2013 and a jurisdictional determination in 2013.

In 2016, no ponding or water accumulation was observed in the three SWs identified by Bramet and the BRC (Bramlet 2014, BRC 2014). The three SWs identified by Bramlet were inspected for hydrophytic vegetation, hydric soils and wetland hydrology including additional evaluation

assuming problematic wetlands following the guidance provided by the Army Corps of Engineers (2008). None of these features contained the wetland parameters required by the Coastal Act regulations.

Due to the lack of observed hydrophytic vegetation, hydric soils, and/or wetland hydrology, EI's assessment included the review of historic wetland documents including fairy shrimp surveys from 2009 through 2013 on the nearby BRP (which included SW2), jurisdictional determination of NBR (which included SW2), aerial photos and accounts provided by the Newport Banning Ranch Conservancy (CCC 2015), and pool accounts provided by Bramlet (2014).

6.5.1 HYDROPHYTIC VEGETATION

Problematic hydrophytic vegetation can be identified and delineated using a combination of observations made in the field and/or supplemental information from the scientific literature and other sources (USACE 2008, Lichvar et al. 2016).

During 2015/2016 surveys, none of the SW areas met the dominance or prevalence test for hydrophytic vegetation. None on the SWs had an historical dominance or prevalence of hydrophytic vegetation (Bramlet 2014). As such, the SW areas did not meet the CCC requirement for hydrophytic vegetation.

6.5.2 HYDRIC SOILS

Each of the SW areas have been created by anthropogenic disturbance making them unlikely to contain hydric soils. SW1 is found within an artificial pit related to historic oil operations. SW2 was "created by excavation in a grassland area as part of oil field operations" (GLA 2011). SW3 was a 'road rut' likely created by machinery movement (Bramlet 2014).

Soil pits were not excavated in order to avoid impacts to potential sensitive resources. The SW areas are not likely to have hydric soils as these areas are recently created and disturbed. Dudek sampled SW 2 and observed "a matrix color of 10YR 3/3 in the upper six inches and contained no redoximorphic features." No other soil type or impeding layer was noted. Soils in this feature are not hydric and thus do not meet the hydric soils (Dudek 2013b). SW1 and SW3 are assumed to have similar soil characteristics based on similar topsoil and proximity to SW2.

6.5.3 WETLAND HYDROLOGY

No wetland hydrology was observed during 2016 surveys. Following the problematic hydrology guidelines provided by the USACE, historic aerials and documents were assessed to determine hydrology. Wetland hydrology in problematic areas under the USACE standard requires 14 or more consecutive days of flooding or ponding, or a water table 12 in. (30 cm) or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability) (USACE 2008). Based on a review of historic data, problematic wetland hydrology was assumed for the SW1 and SW2 locations.

6.5.3.1 Focused Fairy Shrimp Studies

The focused fairy shrimp studies prepared for the NBR property were examined as they included SW2 in their discussions. Glenn Lukos Associates conducted wet-season fairy shrimp surveys for the NBR property in 1999/2000, 2007/2008, 2009/2010, 2010/2011, and 2011/2012. Ponding and sampling of SW2 was only noted during the extreme 2010/2011 wet season described above (GLA). The 2010/2011 wet season fairy shrimp survey did not detect any fairy shrimp (GLA 2011).

Dudek conducted dry season fairy shrimp surveys in 2012 for SW2 and noted the presence of three (3) common versatile fairy shrimp (*Branchinecta lindahli*) cysts (Dudek 2013c). Dudek then used these data as justification in their Jurisdictional Determination for SW2 to meet the requirements of the USACE Aquatic Invertebrates primary hydrological indicator (2013d). The USACE cautions that when using this hydrologic indicator, especially when no other indicators are found, invertebrate findings must be numerous. The USACE states:

> "Invertebrates or their remains should be reasonably abundant; one or two individuals are not sufficient. Use caution in areas where invertebrate remains may have been transported by high winds, unusually high water, or other animals into non-wetland areas. Shells and exoskeletons are resistant to tillage but may be moved by equipment beyond the boundaries of the wetland. They may also persist in the soil for years after dewatering. Use caution in areas containing relict ostracod shells and other remains." (USACE 2008)

Female fairy shrimp typically lay 100 to 300 cysts or more, with differences in mean number among species (Hathaway and Simovich 1996). If fairy shrimp were breeding in SW2, the number of cysts would be expected to be higher, suggesting that the cysts may have been transported.

6.5.3.2 Historic Aerials

The historic aerials and photos provided by the Newport Banning Ranch Conservancy were reviewed and determined not to be representational of wetland hydrology for the area. While the photos show the SW areas inundated, the photos were taken in December 2010 / January 2011 directly after a 100 year storm event for the area. The area typically receives a median average of 1.22 inches of rain in December and during 2010 the area received 8.99 inches. The 2010 rainfall is the most ever observed in December and the fourth highest monthly total since precipitation data collection was started in 1955 (OC Public Works 2016). Since these photos were taken during an extreme precipitation event in 2010/2011 (BRC 2014), they are discounted as they do not reflect typical hydrological conditions of the area.

Other sources of aerials were reviewed including aerials taken in April 2003, March 2004, March 2005, January 2006, March 2011, April 2013, April 2014, and March 2015 (Google Earth 2016). Based on this review, SW1 and SW2 displayed darker soils and potential ponding/saturation, on March 7, 2011, March 27, 2005, and April 16, 2003 only during higher than average precipitation. There was no information on the duration of the ponding/saturation. These observations occurred during high yearly precipitation ranging 60%-175% above the median yearly average of 9.23 inches.

Based on this review, it would appear that SW1 and SW2 pond in years with greater than average precipitation in saturated upland soils. As ponding or saturated soils were observed in multiple years, the sites meet the primary hydrologic indicator of inundation being visible on aerial imagery. As discussed in the CCC recommendation for denial letter, because SW1 and SW2 met one wetland parameter, they would be protected under Section 30233 of the Coastal Act and would be considered ESHA. Boundaries of these areas are provided in Exhibit 5: Survey Results.

6.6 Wildlife Movement

The Site supports potential habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and mammal species), but it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale.

Local wildlife including various reptile, bird, and mammal species, were observed moving through the fence. As noted in the CCC report, although made more difficult by the presence of the fence, larger mammals (presumably coyote) were able to pass under the fence-line. As such, the fence does not constitute a major impediment to local wildlife movement and does not constitute a significant impact it movement in the area.

7.0 DISCUSSION

The installation of the fence did not have significant impact to biological resources including ESHA resources. The fence installation did not remove vegetation or modify existing habitats. Fence installation included concrete footings only at the corner posts and the majority of the fence posts were hammered into the ground. Impacts associated with the installation would have included temporary damage associated with the fence installation. No indication of impact (e.g., loose soil, tire tracks, scraped vegetation, or compaction) were observed as result of the installation. The following provides a discussion of the minimal impacts as they relate to ESHA resources.

7.1 Purple needle Grass Grassland

No purple needle grass grassland was observed on-site. The fencing was installed within the ESHA 100-ft buffer of purple needle grass grassland on adjacent NBR property. Purple needle grass grassland is threatened by the encroachment of non-native species that outcompete the species in California's Mediterranean climate (Callaway 1993, Sawyer et al. 2009). As the fence installation did not remove or disturb vegetation and did not change the existing uses on-site, it did not add to the encroachment of non-native species (Bramlet 2014). As such, the installation of the fence is not expected to significantly impact off-site purple needle grass grassland habitat.

7.2 Coastal California Gnatcatcher

The site does not contain occupied breeding territories for the coastal California gnatcatcher. Outside the breeding season, a coastal California gnatcatcher was incidentally observed foraging or dispersing within coyote brush scrub within the newly fenced area. As demonstrated by this observation, the fence did not deter the species from utilizing foraging habitat. Outside the breeding season, dispersing gnatcatchers move across large barriers including man-modified landscapes, major highways and residential development (Bailey and Mock 1998). As such, the installation of the fence is not expected to have significant impact to the coastal California gnatcatcher.

7.3 Burrowing Owl

Burrowing owls were observed utilizing burrows directly below the chain-link fence in 2013 following installation of the new fence (Black 2013). As demonstrated by this observation, the species is able to easily fly over the fence and utilize habitat within the fenced area.

The fence would have added potential perching locations for predatory raptors, however numerous perch locations already existed including the existing fence line and power poles and transmission lines bisecting Area 4. As numerous perch locations already existed in the area, the addition of the fence is not expected to increase predation of the owl. In addition, while the fence

increased perch locations, the fence would also slow the approach of terrestrial predators (e.g., coyotes, cats, etc.) and is expected to reduce predation from terrestrial animals.

7.4 Wetlands and Fairy Shrimp

The installation would have included approximately 4 sq. in. of fill in the form of one fence post within SW2. No listed fairy shrimp are associated within this feature (Dudek 2013d). The fence-post installation at this location did not include a concrete footing and the chain-link was attached at or above ground level. As discussed in Section 6.5.2, the seasonal wetland does not contain a restrictive layer of soil typical of vernal pools and only exhibits ponding when the surrounding soils are saturated. As such, the pole installation is unlikely to have affected the duration of water held in the pool.

The installation of the fence is not expected to have modified the hydrology existing on-site. No earth moving, mechanical compaction, or other activities that would have notably modified hydrology were conducted. In addition, soils in this area are historically disturbed and potential impacts from foot traffic are expected to have been minimal.

8.0 CONCLUSION

The fence was installed within ESHA and ESHA buffers defined by the CCC. While the installation was not authorized prior to construction, it does not significantly impact the habitat values of the ESHA habitat. If removal or alternate design is required to adhere to CCC directives, the action should include measures to minimize impact to biological resources:

- Pre-activity survey for burrowing owls, in conformance with the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game, 2012) as described below, shall be completed no more than 30 days prior to the start of construction within 500 feet of all suitable habitat within the activities and buffer zone(s).
- Pre-activity survey for wetted or saturated areas. No activities should take place if areas of ponding or saturated soil are identified.
- Biological monitoring of on-site activities. On-site personnel will comply with directions from qualified biologists, whose role is to help personnel avoid and minimize impacts to biological resources. Biologists have the authority to temporarily halt construction activities that could harm sensitive biological resources, including nests and burrows.

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Appendix A:

FLORAL COMPENDIUM

NEWPORT MESA USD BANNING RANCH PROJECT
FLORAL COMPENDIUM

SCIENTIFIC NAME (* introduced/nonnative species)	COMMON NAME
AIZOACEAE –ICE PLANT FAMILY	
**Mesembryanthemum crystallinum*	Common ice plant
**Mesembryanthemum nodiflorum*	Slender leaved ice plant
AMARANTHACEAE – AMARANTH FAMILY	
**Amaranthus albus*	Tumbleweed
Amaranthus blitoides	Prostrate amaranth
ARECACEAE – PALM FAMILY	
**Washingtonia robusta*	Washington fan palm
ASTERACEAE – SUNFLOWER FAMILY	
**Acroptilon repens*	Russian knapweed
Amblyopappus pusillus	Dwarf coastweed
Ambrosia psilostachya	Western Ragweed
Baccharis pilularis	Coyote Brush
Baccharis salicifolia	Mule Fat
**Carduus pycnocephalus*	Italian thistle
**Centaurea melitensis*	Tocalote
Conyza canadensis	Common horseweed
Conyza coulteri	Coulter's horseweed
Deinandra fasciculata	Fascicled tarweed
Encelia californica	Brittle bush
**Glebionis coronaria*	Crown daisy
Gnaphalium californicum	California cudweed
Heterotheca grandiflora	Telegraph Weed
**Hypochaeris glabra*	Smooth cat's ear
Isocoma menziesii	Coastal goldenbush
Malacothrix saxatilis var. *tenuifolia*	Cliff desertdandelion
Pseudognaphalium californicum	Ladies' tobacco
**Pseudognaphalium luteoalbum*	Jersey cudweed
Psilocarphus brevissimus	Woolly marbles
**Pulicaria paludosa*	Spanish false fleabane
Rafinesquia californica	California chicory
**Senecio vulgaris*	Common groundsel
**Senecio mandraliscae*	Blue Ice Plant
**Sonchus asper*	Spiny sowthistle
**Sonchus oleraceus*	Common sowthistle
BORAGINACEAE – BORAGE FAMILY	
Heliotropum curassavicum	Alkali heliotrope
Plagiobothrys collinus var. californicus	California popcorn flower
BRASSICACEAE – MUSTARD FAMILY	
**Brassica nigra*	black mustard
**Brassica rapa*	Field mustard

SCIENTIFIC NAME (* introduced/nonnative species)	COMMON NAME
**Hirshfeldia incana*	short-podded mustard
**Lepidium didymum*	Lesser swine cress
**Raphanus sativus*	Wild radish
**Sisymbrium irio*	London Rocket
**Sisymbrium orientale*	Oriental hedge mustard
CHENOPODIACEAE – GOOSEFOOT FAMILY	
**Bassia hyssopifolia*	Fivehook bassia
**Chenopodium album*	Lamb's quarters
**Chenopodium murale*	Nettle leaf goosefoot
**Dysphania pumilio*	Tasmanian goosefoot
**Salsola tragus*	Russian thistle
CONVOLULACEAE – MORNING GLORY FAMILY	
**Convolvulus arvensis.*	bindweed
CRASSULACEAE – STONECROP FAMILY	
Crassula connata	Sand pygmy weed
CYPERACEAE – SEDGE FAMILY	
**Cyperus* sp.	sedge
EUPHORBIACEAE – SPURGE FAMILY	
Chamaesyce maculata	Spotted spurge
Croton setigerus	Dove weed
Euphorbia peplus	Garden spurge
Ricinus communis	Castor bean
FABACEAE (LEGUMINOSAE) – PEA FAMILY	
Acmispon glaber	Deerweed
Acmispon strigosus	Strigose lotus
**Medicago polymorpha*	Bur clover
**Melilotus indicus*	Annual yellow sweetclover
GERANIACEAE – GERANIUM FAMILY	
**Erodium botrys*	Broad leaf filaree
**Erodium cicutarium*	Red-stem Filaree
LAMIACEAE (LABIATAE) – MINT FAMILY	
**Marrubium vulgare*	White horehound
**Rosmarinus officinalis*	Rosemary
MALVACEAE – MALLOW FAMILY	
**Malva parviflora*	Cheeseweed
**Modiola caroliniana*	Carolina bristle mallow
MYRTACEAE – MYRTLE FAMILY	
Eucalyptus camaldulensis	River red gum

SCIENTIFIC NAME (* introduced/nonnative species)	COMMON NAME
MYRSINACEAE – MYRSINE FAMILY	
**Anagallis arvensis*	Scarlet pimpernel
ONAGRACEAE –WILLOWHERB FAMILY	
Camissonia micrantha	Spencer primrose
OXALIDACEAE – WOOD SORREL FAMILY	
**Oxalis pres-caprae*	Sourgrass
PLANATAGINACEAE – PLANTAIN FAMILY	
**Nuttallanthus texanus*	Blue toadflax
Plantago erecta	California plantain
PLUMBAGINACEAE – LEADWORT FAMILY	
**Limonium ramosissimum*	Algerian sea lavender
POACEAE (GRAMINEAE) – GRASS FAMILY	
**Bromus diandrus*	Ripgut brome
**Bromus hordeaceus*	Soft chess
**Bromus madritensis* ssp. *rubens*	Foxtail brome
**Bromus tectorum*	Cheatgrass
**Cortaderia selloana*	Uruguayan pampas grass
**Cynodon dactylon*	Bermuda grass
**Festuca myuros*	Rattail
**Hordeum marinum*	Seaside barley
**Poa annua*	Annual blue grass
**Schismus barbatus*	Common mediterranean grass
**Stipa miliacea* var. *miliacea*	Smilo grass
POLYGONACEAE – BUCKWHEAT FAMILY	
**Emex spinosa*	Devil's thorn
**Rumex crispus*	Curly Dock
RUBIACEAE – BEDSTRAW FAMILY	
Galium aparine	Common bedstraw
SOLANACEAE – NIGHTSHADE FAMILY	
**Datura stramonium*	Jimson weed
**Lycopersicon esculentum*	Tomato
**Nicotiana glauca*	tree tobacco
Solanum americanum	Common nightshade
Solanum douglasii	Douglas' nightshade
URTICACEAE – NETTLE FAMILY	
**Urtica urens*	Dwarf nettle

Appendix B:

FAUNAL COMPENDIUM

NEWPORT MESA USD BANNING RANCH PROJECT
FAUNAL COMPENDIUM

REPTILES	**REPTILIA**
Zebra-tailed, Earless, Fringe-toed, Spiny, Tree, Side-blotched, and Horned Lizards	**Phrynosomatidae**
Western fence lizard	*Sceloperus occidentalis*
Side blotched lizard	*Uta stansburiana*
BIRDS	**AVES**
HAWKS, KITES, EAGLES, AND ALLIES	**ACCIPITRIFORMES**
New World Vultures	**Cathartidae**
Turkey Vulture	*Cathartes aura*
Hawks, Kites, Eagles, and Allies	**Accipitridae**
Sharp-shinned hawk	*Accipiter striatus*
Red-tailed Hawk	*Buteo jamaicensis*
	Pandionidae
Osprey	*Pandion haliaetus*
PIGEONS AND DOVES	**COLUMBIFORMES**
Pigeons and Doves	**Columbidae**
Rock Pigeon	*Columba livia*
Mourning Dove	*Zenaida macroura*
Hummingbirds	**Trochilidae**
Anna's Hummingbird	*Calypte anna*
Allen's Hummingbird	*Selasphorus sasin*
CARACARAS AND FALCONS	**FALCONIFORMES**
Caracaras and Falcons	**Falconidae**
American Kestrel	*Falco sparverius*
PASSERINE BIRDS	**PASSERIFORMES**
Tyrant Flycatchers	**Tyrannidae**
Pacific-slope flycatcher	*Empidonax difficilis*
Dusky flycatcher	*Empidonax oberholseri*
Black Phoebe	*Sayornis nigricans*
Say's Phoebe	*Sayornis saya*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Western Kingbird	*Tyrannus verticalis*
Vireos	**Vireonidae**
Warbling Vireo	*Vireo gilvus*
Crows and Jays	**Corvidae**
American Crow	*Corvus brachyrhynchos*
Swallows	**Hirundinidae**
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Cliff Swallow	*Petrochelidon pyrrhonota*
Long-tailed Tits and Bushtits	**Aegithalidae**
Bushtit	*Psaltriparus minimus*

Wrens	**Troglodytidae**
House Wren	*Troglodytes aedon*
Gnatcatchers and Gnatwrens	**Polioptilidae**
California Gnatcatcher	*Polioptila californica*
Blue-gray Gnatcatcher	*Polioptila caerulea*
Thrushes	**Turdidae**
Western Bluebird	*Sialia mexicana*
Mockingbirds and Thrashers	**Mimidae**
Northern Mockingbird	*Mimus polyglottos*
Starlings	**Sturnidae**
European Starling	*Sturnus vulgaris*
Wood-Warblers	**Parulidae**
Common Yellowthroat	*Geothlypis trichas*
Yellow-rumped Warbler	*Setophaga coronata*
Wilson's Warbler	*Cardellina pusilla*
Emberizids	**Emberizidae**
California Towhee	*Melozone crissalis*
Savannah Sparrow	*Passerculus sandwichensis*
White-crowned sparrow	*Zonotrichia leucophrys*
Cardinals and Allies	**Cardinalidae**
Black-headed Grosbeak	*Pheucticus melanocephalus*
Blue Grosbeak	*Passerina caerulea*
Lazuli Bunting	*Passerina amoena*
Blackbirds	**Icteridae**
Hooded oriole	*Icterus cucullatus*
Fringilline and Cardueline Finches and Allies	**Fringillidae**
House Finch	*Haemorhous mexicanus*
Lesser Goldfinch	*Spinus psaltria*
Perching birds	**Motacillidae**
American pipit	*Anthus rubescens*
	Bombycillidae
Cedar waxwing	*Bombycilla cedrorum*

Appendix C:

REPRESENTATIVE PHOTOGRAPHS

Photo 1:

Photo of disturbed conditions in Area 4. Photograph taken at north west corner of the site looking at disturbed habitat.

Photo 2:

Photo of disturbed and coyote brush habitat conditions in Area 4. Photograph taken near corner of the Areas 1, 3, and 4 looking north.

Photo 3:

Photo of developed conditions in Area 1. Photograph taken near Center of Area 1.

Photo 4:

Photo of Upland Mustard Habitat in Area 1. Photograph taken near corner of the Areas 1, 3, and 4 looking east.

Photo 5:

Photo of SW1 during December 23, 2015 assessment. No Ponding or wetland species were observed.

Photo 6:

Photo of SW1 during March 10, 2016 assessment. No Ponding or wetland species were observed.

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Photo 7:

Photo of SW2 during December 23 assessment. No Ponding was observed.

Photo 8:

Photo of SW2 during March 10, 2016 assessment. Wooly marbles (*Psilocarphus brevissimus. var. brevissimus*) was observed despite a lack of ponding throughout the growing season.