BIOLOGICAL RESOURCES ASSESSMENT

NEWPORT BEACH CITY HALL AND PARK DEVELOPMENT PLAN

CITY OF NEWPORT BEACH

ORANGE COUNTY, CALIFORNIA

LSA

July 2009

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ORANGE COUNTY, CALIFORNIA

Submitted to:

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LSA Project No. CNB0901

LSA

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INTRODUCTION

LSA Associates, Inc. (LSA) has prepared this technical Biological Resources Assessment (BRA), as well as the reports included in the Appendices, at the request of the City of Newport Beach (City) to assess the effects of construction and operation of the proposed project on the existing biological resources associated with three parcels (colloquially referred to as the northern, central, and southern parcels) located between MacArthur Boulevard and Avocado Avenue in the City of Newport Beach, California. This BRA describes the site-specific survey methods, results of the various surveys, an analysis of project-related impacts, and recommendations for the mitigation of significant adverse impacts, as needed. This technical information is provided for project review under the California Environmental Quality Act (CEQA), State and federal Endangered Species Acts (CESA and FESA, respectively), and other pertinent regulations.

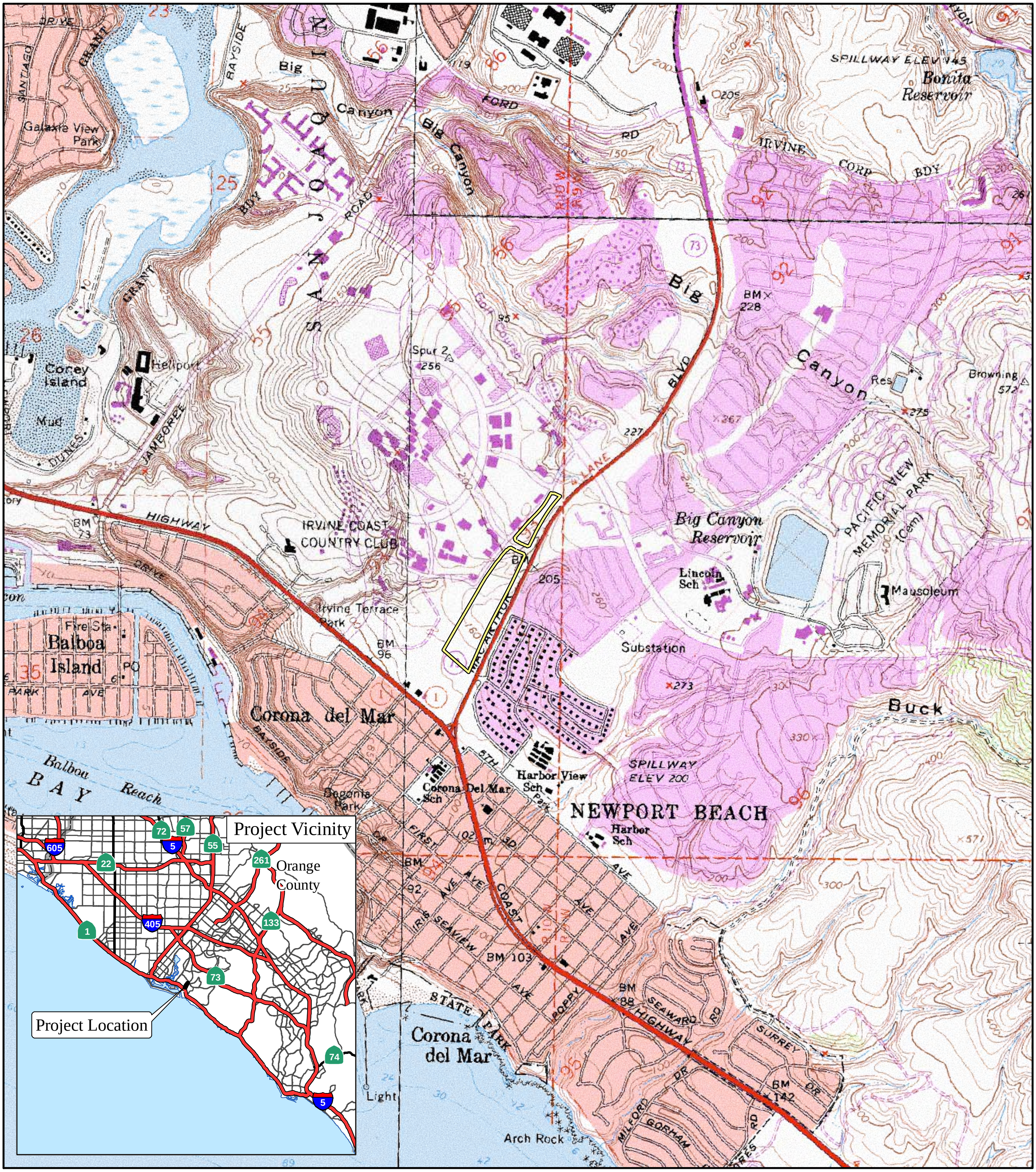
The northern and central parcels, both of which are currently undeveloped, are separated by San Miguel Drive. The southern parcel is completely developed (i.e., Newport Beach Public Library). The Library, located at 1000 Avocado Avenue, would remain open during and after project implementation. The combined total area of the northern, central, and southern parcels (hereinafter referred to as the "study area") is approximately 20 acres (ac) and has an average elevation of 250 feet (ft) above mean sea level (amsl) (Figure 1). The study area is located between MacArthur Boulevard and Avocado Avenue, and generally south of San Joaquin Hills Road and north of Pacific Coast Highway. The study area is located in an unsectioned portion of Township 7 South and within portions of Ranges 10 and 11 West, San Bernardino Baseline and Meridian, on the United States Geological Survey (USGS) *Laguna Beach, California* 7.5-minute series topographic quadrangle (Figure 1). Approximate Universal Transverse Mercator (UTM) coordinates are $^{37}20^{000m}$ on the north, $^{37}19^{600m}$ on the south, $^{4}19^{400m}$ on the west, and $^{4}19^{600m}$ on the east.

PROJECT DESCRIPTION

The proposed project would result in the relocation of City Hall (with the exception of the Fire Department), including all City employees and functions, from the existing City Hall site to the proposed project site. The proposed project includes seven primary components, including: (1) construction and operation of an approximately 98,000-square-foot (sf) City Hall building, meeting hall, and Council Chambers; (2) a 450-space parking structure; (3) an approximately 17,000 sf expansion of the Newport Beach Central Library (Library); (4) an Emergency Operations Center; (5) construction of a 14.3 ac public park; (6) widening of San Miguel Drive; and (7) reuse of the existing City Hall structures with government/commercial office uses.

The proposed project would extend from the northern boundary of the library structure to the northern end of the northern parcel, adjacent to an existing Orange County Transportation Authority (OCTA) facility. The proposed City Hall and parking structure would be located immediately north of the existing library. The proposed park would extend from the proposed City Hall to the northern site boundary. A pedestrian bridge over San Miguel Drive is also proposed to link the central and northern parcels.

The proposed public park would include both natural as well as more conventional park features (e.g., picnic areas). A dog park would be located in the northern portion of the proposed public park (north



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LEGEND

Project Boundary

FIGURE 1

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Newport Beach City Hall and Park Development Plan Project

Project Location Map

SOURCE: USGS 7.5min. Quad. (Tustin (1981), Newport Beach (1981), Laguna Beach (1981)); City of Newport Beach (1/09)

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of San Miguel Drive). A small ravine having steep slopes and wetland/riparian habitat would serve as the focal point for the portion of the proposed park located south of San Miguel Drive but north of the proposed City Hall structures. Invasive exotic plant species (e.g., myoporum, castor bean, pampas grass) associated with the wetland/riparian habitat would be removed and mule fat and willow cuttings would be installed. The landscaping palette to be used on site would include the use of native plants and would also prohibit the use of invasive exotic plants (i.e., those plant species rated as "High" or "Moderate" in California Invasive Plant Council [Cal-IPC's] Invasive Plant Inventory).[1]

REGULATORY BACKGROUND

California Environmental Quality Act

CEQA was enacted in the early 1970s and was applied to private as well as public projects to ensure that projects proposed for implementation receive an evaluation of the environmental implications prior to project approval and that the public and decisionmakers be informed of potential project impacts. Through subsequent legislation, court interpretation, and publication of Guidelines by the State of California, environmental evaluations have become somewhat standardized throughout the State. Public and agency review of projects and their environmental evaluations is required of all discretionary projects through established procedures and methods. The public agency that takes the lead on a project (having review and approval authority over the project) is known as the Lead Agency. Other agencies involved in subsequent approvals or responsible for implementing mitigation identified in the environmental documentation are called Responsible Agencies.

Should a project be determined by the Lead Agency to have the potential to create one or more significant impacts, the Lead Agency shall require mitigation of the impact to lessen or avoid the identified impacts. If mitigation is determined to be feasible and is judged to offset the impacts, a Negative Declaration may be adopted by the Lead Agency after a mandatory public review period. Should the Lead Agency determine that an impact or several impacts are significant and that mitigation may not fully mitigate these project effects to below a level of significance, an Environmental Impact Report (EIR) shall be prepared by the Lead Agency and submitted to the public and interested agencies for a minimum 45-day review period prior to consideration of the project.

Significance Criteria. Section 15382 of the CEQA Guidelines provides the following definition:

> "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Section 15380 of the CEQA Guidelines provides a definition of rare or endangered species that is summarized as follows:

[1] http://www.cal-ipc.org/ip/inventory/index.php.

> "Species" as used in this subsection means a species or subspecies of animal or plant or a variety of plant.
>
> Plants or animals already listed by a government agency (CDFG and/or USFWS) as being rare, threatened, or endangered shall be presumed rare or endangered for purposes of CEQA. The section also provides that a plant or animal may be treated as rare or endangered even if it has not been listed by a government agency if it can be shown that the species meets the criteria for such listing.

As indicated in the Environmental Checklist Form, Appendix G of the CEQA Guidelines, impacts to biological resources may be considered significant if a project results in any of the following:

- Substantial adverse effect on any species identified as candidate, sensitive, or special-status species
- Substantial adverse effect on any riparian habitat or other sensitive natural community
- Substantial adverse effect on federally protected wetlands as defined in Section 404 of the Clean Water Act
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede intent of the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan

California Department of Fish and Game

California Endangered Species Act. The California Department of Fish and Game (CDFG), via policies formulated by the California Fish and Game Commission (Commission), regulates species of plants and animals that are in danger of, or threatened with, extinction. The Commission has established a list of endangered, threatened, and candidate species that are regulated by the CDFG. Endangered species are native species or subspecies of plants and animals that are in serious danger of becoming extinct throughout all or a significant portion of their range. Threatened species are those species that, although not presently threatened with extinction, are likely to become endangered species in the foreseeable future in the absence of special protection and management efforts. Candidate species are those species the Commission has formally noticed as being under review for addition to either the list of endangered or threatened species or a species proposed for listing.

California Natural Diversity Data Base. The CDFG administers the California Natural Diversity Data Base (NDDB), which maintains lists of special-interest plants, animals, and natural communities that occur within California. These particular natural communities, or habitat types, are designated as sensitive because of their rarity (e.g., very localized distribution, few scattered occurrences) and/or because of some threat (e.g., development, off-road vehicles) to this specific habitat type. The purpose of these listings is solely informational; there is no regulatory protection of these

communities afforded by these NDDB listings.

Wetlands/Streambeds. The CDFG, through provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic flow of water. The CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFG. The CDFG also includes nonwetland riparian communities that are associated with rivers and streams as part of jurisdictional waters of the State. These areas may extend beyond jurisdictional waters of the United States (U.S.).

California Native Plant Society

The California Native Plant Society (CNPS) is a nonprofit organization whose purpose is to promote the preservation of native California plants. CNPS created and maintains an Online Inventory of Rare and Endangered Plants of California. This extensive database is used by amateur and professional biologists and identifies four specific designations, or "Lists," of special-interest plant species.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS), pursuant to the FESA, protects endangered and threatened species (listed species). An endangered species is defined as a species "in danger of extinction throughout all or a significant portion of its range;" a threatened species is one that is likely to become endangered in the foreseeable future.

The USFWS also identifies species that are proposed for listing as endangered or threatened. Other than for federal actions, there is no formal protection for these species under the FESA. However, consultation with the USFWS regarding proposed species can prevent project delays that could occur if a species is listed prior to project completion.

"Take" of a listed species is prohibited under Section 9 of the FESA. "Take" is to harass, harm, pursue, hunt, shoot, wound, trap, capture, or collect or attempt to engage in any such conduct. Harm is further defined as significant habitat alteration that results in death or injury to listed species by significantly impairing behavior patterns such as breeding, feeding, or sheltering. "Take" of a listed species incidental to otherwise lawful activities can be authorized by the USFWS. The take of federally listed species can be authorized under Section 10(a) of the FESA, with development of a Habitat Conservation Plan (HCP) or as part of a Section 7 consultation between the USFWS and another federal agency if the project is subject to federal action (e.g., a Section 404 Permit). In certain instances, such as for the California gnatcatcher, take of a threatened species can be authorized by special rule (i.e., 4[d]). In the case of the California gnatcatcher, the 4(d) rule applies in jurisdictions that are participating in the State's NCCP program dealing with coastal sage scrub (CSS) plant communities.

Natural Community Conservation Plan

In an effort to respond to growing concern over the conservation of coastal sage scrub and other biological communities, federal, State, and local agencies have developed a multispecies approach to habitat conservation planning known as the NCCP process. This was made possible by legislation (Assembly Bill [AB] 2172) that authorized the California Department of Fish and Game (CDFG) to enter into agreements for the preparation and implementation of NCCPs. The USFWS joined in this effort, utilizing both the Section 4(d) Special Rule and the HCP processes.

The goal of this NCCP program is to identify significantly important coastal sage scrub habitat and to develop ways and means to preserve and/or restore the ecological value of this and associated plant communities and their attendant sensitive species in a rapidly urbanizing setting. In Orange County, the development of two subregional NCCP/HCPs for coastal sage scrub and three other covered habitats was undertaken jointly by the County of Orange, the Transportation Corridor Agencies, USFWS, and CDFG, in cooperation with several large private landowners, including the Irvine Company, with the County of Orange as the Lead Agency and other cities, including the City of Newport Beach, as participating agencies. The NCCP/HCP for the Central/Coastal Subregion, which was approved by the participating agencies in July 1996, addresses a range of species issues and, in particular, subregional habitat needs of the coastal California gnatcatcher.

The site is located within the jurisdiction of the Central and Coastal Orange County NCCP/HCP, and a Section 10(a) permit has been issued for participating landowners and signatory agencies. The Irvine Company is an NCCP participating landowner and previously owned the northern and central parcels of the study area in 1996 when the Implementation Agreement for the Orange County Central and Coastal Region NCCP/HCP was signed. The City acquired the central parcel from the Irvine Company in November 2007 and acquired the northern parcel in October 2008. All of the approvals and authorizations that the Irvine Company agreed to in the NCCP Implementation Agreement remain with the property and are transferred to the new property owner (i.e., City). Within the study area, take of CSS, gnatcatchers, cactus wrens, and other species and habitats covered by the NCCP is already mitigated through the Irvine Company's previous participation in the NCCP/HCP.

United States Army Corps of Engineers

The United States Army Corps of Engineers (ACOE) regulates discharges of dredged or fill material into waters of the U.S. These waters include wetlands and nonwetland bodies of water that meet specific criteria. The ACOE regulatory jurisdiction pursuant to Section 404 of the federal Clean Water Act is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. The following definition of waters of the U.S. is taken from the discussion provided in 33 CFR 328.3:

> "The term waters of the United States means:
>
> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce . . . ;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation or destruction of which could affect interstate or foreign commerce . . . ;

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

(5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section."

The ACOE typically regulates as waters of the U.S. any body of water displaying an ordinary high water mark (OHWM). The landward limits of ACOE jurisdiction in tidal waters of the U.S. extend to the high tide line, and ACOE jurisdiction over nontidal waters of the U.S. extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 Code of Federal Regulations [CFR] 328.4). The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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 area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

The ACOE and United States Environmental Protection Agency (EPA) define wetlands as follows:

> "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met. Several parameters may be analyzed to determine whether the criteria are satisfied.

City Of Newport Beach, Natural Resources Element of the General Plan

The City's Natural Resource Element of the General Plan contains goals and policies that provide direction regarding the conservation, development, and utilization of natural resources. The Natural Resource Element addresses: water supply (as a resource) and water quality (includes bay and ocean quality, and potable drinking water), air quality, terrestrial and marine biological resources, open space, archaeological and paleontological resources, mineral resources, visual resources, and energy.

A variety of diverse, valuable and sensitive biological resources occur within the City of Newport Beach. The undeveloped areas with the City supporting natural habitats that may be capable of supporting sensitive biological resources are referred to as Environmental Study Areas (ESAs) by the General Plan. An ESA may support species and habitats that are sensitive and rare within the region or may function as a migration corridor for wildlife. There are 28 identified ESAs within the City of

Newport Beach. Many of these sites contain one or more sensitive plant communities, and many species of wildlife. Some of the ESAs also contain endangered species of plants and animals. Most of these ESAs are protected as parks, conservation areas, nature preserves, and other open space areas. However, each of these ESAs is subjected to various threats from the surrounding urban environment that include degraded water quality, traffic, noise, public access, development encroachment, erosion and sedimentation, dredging or filling, stormwater runoff, invasive species, and feral animals. The proposed project site includes areas contained within the MacArthur and San Miguel (25), and MacArthur and San Joaquin Hills (26) ESA's.

The following Natural Resource Element goals and policies apply to the proposed project:

- **Goal NR 10.** Protection of sensitive and rare terrestrial and marine resources from urban development.
    - **Policy NR 10.2: Orange County Natural Communities Conservation Plan.** Comply with the policies contained within the Orange County Natural Communities Conservation Plan. (Imp 2.1)
    - **Policy NR 10.3: Analysis of Environmental Study Areas.** Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for any development permit applications where development would occur within or contiguous to areas identified as ESAs. (Imp 2.1, 6.1)
    - **Policy NR 10.4: New Development Siting and Design**. Require that the siting and design of new development, including landscaping and public access, protect sensitive or rare resources against any significant disruption of habitat values. (Imp 2.1)
    - **Policy NR 10.5: Development in Areas Containing Significant Rare Biological Resources.** Limit uses within an area containing any significant or rare biological resources to only those uses that are dependent on such resources, except where application of such a limitation would result in a taking of private property. If application of this policy would likely constitute a taking of private property, then a non-resource-dependent use shall be allowed on the property, provided development is limited to the minimum amount necessary to avoid a taking and the development is consistent with all other applicable resource protection policies. Public access improvements and educational, interpretative and research facilities are considered resource dependent uses. (Imp 2.1)
    - **Policy NR 10.6: Use of Buffers.** Maintain a buffer of sufficient size around significant or rare biological resources, if present, to ensure the protection of these resources. Require the use of native vegetation and prohibit invasive plant species within these buffer areas. (Imp 2.1)
    - **Policy NR 10.7: Exterior Lighting.** Shield and direct exterior lighting away from significant or rare biological resources to minimize impacts to wildlife. (Imp 2.1)

- **Goal NR 13**. Protection, maintenance, and enhancement of Southern California Wetlands.

    - **Policy NR 13.1: Wetland Protection.** Recognize and protect wetlands for their commercial, recreational, water quality, and habitat value. (Imp 1.2, 2.1, 21.1)

    - **Policy NR 13.2: Wetland Delineation.** Require a survey and analysis with the delineation of all wetland areas when the initial site survey indicates the presence or potential for wetland species or indicators. Wetland delineations will be conducted in accordance with the definitions of wetland boundaries established by California Department of Fish and Game, and/or United States Fish and Wildlife Service. (Imp 14.7, 14.11, 14.12)

METHODS

LSA biologists have extensive experience and knowledge concerning the local biological resources. Nevertheless, in preparation for the survey work and subsequent technical analysis, LSA biologists examined a variety of database records and technical documents from previous biological studies of the site to better understand the particular biological issues associated with the study area. Database records from the CDFG Rarefind 3 and the CNPS Online Inventory of Rare and Endangered Plants of California were utilized to assist in determining the existence or potential occurrence of any special-interest plant and animal species in or immediately adjacent to the study area. LSA also reviewed the findings presented in previous BRAs, one prepared by Robert A. Hamilton (1998) and another prepared by Michael Brandman Associates (MBA) (2004). LSA also reviewed a jurisdictional delineation report previously prepared by MBA (2004).

LSA senior biologist Jim Harrison conducted botanical surveys of the study area on February 4 and 12, April 1 and 29, and June 29, 2009. These surveys were conducted on foot and included a floristic inventory and habitat mapping of the study area. Particular attention was placed on identifying the presence of any special-interest plant species in the study area. A list of the vascular plant species observed can be found in Appendix A. Plant taxonomy conforms to The Jepson Manual (1993). Generally, plant communities were classified and mapped according to the Orange County Habitat Classification System (OCHCS) (Dames & Moore, et al. 1992; Jones & Stokes Associates 1993). Additional habitat categories were created where site specific conditions made this applicable. A recently flown aerial photograph showing the study area was used in the field for both orientation and mapping. The minimum polygon size for habitat mapping purposes was 0.02 ac.

LSA senior biologist Jim Harrison also conducted an evaluation of the wetlands and jurisdictional waterbodies on site. MBA prepared a previous jurisdictional delineation report in 2004. LSA conducted a routine jurisdictional delineation of areas of potential jurisdiction in accordance with current ACOE and CDFG guidelines. A Trimble global positioning system (GPS) unit was used in the field to record the delineated jurisdictional limits.

A detailed evaluation of two shallow topographic depressions referred to by MBA as “disturbed ephemeral ponds” in its 2004 Biological Assessment was conducted by LSA in February and April of 2009. On April 1, 2009, Mr. Harrison examined soils and evaluated the vegetation associated with

these two areas. LSA also compared the hydrologic conditions of these two depressions with areas having analogous features at the vernal pools located at Fairview Park in Costa Mesa, California. On February 6, 9, and 19, 2009, Mr. Harrison visited Fairview Park to examine and photograph the ponding conditions present there. Then in each instance, he immediately drove to the project site to examine and photograph the conditions associated with the two subject depressions.

Dry season fairy shrimp surveys of these two topographic depressions were conducted by LSA senior wildlife biologist David Muth, who collected soil samples from the two depression areas. Then, the soil samples were processed and closely analyzed for any fairy shrimp eggs, or cysts.

LSA senior wildlife biologist Richard Erickson conducted six California gnatcatcher protocol surveys of the study area from March 17 to April 21, 2009. During each of the surveys, he walked slowly through the CSS and adjacent habitats, listening for coastal California gnatcatchers. Taped recordings of coastal California gnatcatchers were played periodically to solicit a response from any California gnatcatchers in the area. A recently flown aerial photograph showing the study area was used in the field for orientation and mapping. A list of animal species observed on site can be found in Appendix B.

In addition to the other numerous surveys conducted on site by Mr. Erickson, he also conducted additional on-site surveys for least Bell's vireo on June 9 and 30, 2009. These focused surveys were conducted in the only riparian habitat on site and during the least Bell's vireo breeding season to better support the conclusion that this species is not expected to occur on site. It is important to note that the limited quantity and marginal quality of the riparian habitat on site is not typical of that normally occupied by least Bell's vireo.

To determine the presence or absence of the endangered Pacific pocket mouse (*Perognathus longimembris pacificus*), LSA senior wildlife biologists Richard Erickson and Leo Simone conducted small mammal trapping on site from April 26 through May 1, 2009. This trapping was specifically conducted in habitat on site that could potentially support the Pacific pocket mouse, and the trapping was conducted in accordance with the survey guidelines established by the USFWS.

As a result of all the surveys conducted in the study area, LSA biologists were able to thoroughly assess the biological resources present in the study area. This included vegetation, wildlife, and suitability of habitat to support various special-interest species. All plant and animal species observed or otherwise detected on site were noted.

RESULTS

Plant Communities

The total study area is 20.00 ac and, as shown on Figure 2, supports 16 habitat types, or plant communities, including the already-developed southern parcel (i.e., Newport Beach Central Library). With the exception of some concrete drainage ditches, standpipes, two concrete box culverts, and some riprap in the natural drainages, the northern and central parcels are essentially undeveloped.

LSA

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Project Boundary

Vegetation Types (codes from OC Habitat Classification System)

2.3.6	Sagebrush Scrub
2.3.6.1	Sagebrush-Mulefat Complex
2.3.9	Coyote Brush Scrub
2.3.10	Mixed Scrub
2.4	Southern Cactus Scrub
2.8.1	Sagebrush-Grassland Ecotone/Sere
2.8.6	Deerweed-Grassland Ecotone/Sere
2.9	Scrub-Eucalyptus Planting
4.1	Annual Grassland
4.6	Ruderal Grassland
6.4	Freshwater Marsh
7.2	Willow Riparian Scrub
7.3	Mulefat Scrub
15.1	Developed
15.5	Ornamental Landscaping
16.1	Disturbed

0 70 140
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SOURCE: MSVE (2008); City of Newport Beach (1/09)

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FIGURE 2

Newport Beach City Hall Master Plan

Vegetation Map

The representative photographs provided in Figure 3 show much of the site and many of the plant communities present. Each plant community identified in the study area is described in more detail below and has a corresponding numerical code that is consistent with the OCHCS. The acreages of each plant community are provided in Table A.

Table A: Acreages of Plant Communities within the Study Area

OCHCS No.[1]	Plant Community Designation	Total Acreage
2.3.6	Sagebrush Scrub	3.16
2.3.6.1	Sagebrush-Mulefat Complex	0.16
2.3.9	Coyote Brush Scrub	0.07
2.3.10	Mixed Scrub	0.50
2.4	Southern Cactus Scrub	0.06
2.8.1	Sagebrush-Grassland Ecotone/Sere	0.14
2.8.6	Deerweed-Grassland Ecotone/Sere	0.73
2.9	Scrub-Eucalyptus Planting	0.03
4.1	Annual Grassland	2.67
4.6	Ruderal Grassland	5.25
6.4	Freshwater Marsh	0.28
7.2	Willow Riparian Scrub	0.11
7.3	Mulefat Scrub	0.08
15.1	Developed	3.07
15.5	Ornamental Landscaping	3.18
16.1	Disturbed	0.51
	Total	**20.00**

OCHCS = Orange County Habitat Classification System

Sagebrush Scrub (2.3.6). This habitat type, also referred to as "Venturan-Diegan Transitional CSS" in the OCHCS, is dominated on site primarily by California sagebrush (*Artemisia californica*) and sometimes codominant with California encelia (*Encelia californica*). Other native species associated with the CSS on site include coastal deerweed (*Lotus scoparius* var. *scoparius*), coyote bush (*Baccharis pilularis*), coast goldenbush (*Isocoma menziesii* var. *vernonioides*), coastal prickly pear (*Opuntia littoralis*), and scattered individuals of bladderpod (*Isomeris arborea*) and lemonadeberry (*Rhus integrifolia*). Invasive, exotic plants associated with portions of this habitat type include myoporum (*Myporum laetum*) and hottentot-fig (*Carpobrotus edulis*).

The habitat quality and species diversity of CSS on site is generally "moderate" to "good." While the vegetation appears healthy and relative cover is good, there is some visible evidence of current and past disturbances associated with portions of the CSS. The CSS habitat is restricted to the central parcel of the study area, which is an isolated fragment of habitat surrounded by urban development. Human-induced disturbances are common and expected where islands of native habitat occur in urban areas such as this.

[1] Number scheme and habitat designations based on the Orange County Habitat Classification System (OCHCS) prepared by Jones & Stoke Associates, Inc. (1993).

Northeasterly view of Central Parcel showing ruderal grassland and CSS habitat.

Northwesterly view of riparian habitat in Drainage A.

Southwesterly view of Central Parcel showing southern cactus scrub and CSS habitat.

Southwesterly view of Northern Parcel showing nonnative grassland habitat.

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FIGURE 3

Newport Beach City Hall and Park Development Plan

Site Photos

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Sagebrush-Mulefat Complex (2.3.6.1). This habitat type is generally the same as sagebrush scrub described above. However, mulefat (*Baccharis salicifolia*) is also a dominant plant species in these areas within the study area. It is important to note that these areas are upland and are not directly associated with any wetlands or drainages. This association of mulefat and CSS species is not uncommon in Southern California and does occur where mulefat has had the past opportunity to become established in habitat adjacent to drainages and other waterbodies located nearby, where mulefat occurs in greater abundance. A dense stand of mulefat is located nearby in a natural drainage channel on site. The habitat quality is the same as described above for sagebrush scrub. Evidence of transient use in this habitat type was observed during the surveys.

Coyote Brush Scrub (2.3.9). Coyote bush is the exclusive dominant plant of this habitat type. Although coyote bush is common and scattered about the study area, only one polygon of coyote brush scrub occurs in the study area. The habitat quality is "moderate." Human disturbances associated with this habitat were evident.

Mixed Scrub (2.3.10). This CSS habitat type is a mixture of several different species. While California sagebrush is common, it is not exclusively dominant here. The primary plant species include California sagebrush, California encelia, coyote bush, black sage (*Salvia mellifera*), and island buckwheat (*Eriogonum grande*). Invasive, exotic plant species present include pampas grass (*Cortaderia selloana*) and hottentot-fig. This habitat type is located on a slope adjacent to the existing library facility and appears to be part of a previous restoration or revegetation effort. The habitat quality is "fair" to "moderate."

Southern Cactus Scrub (2.4). A solitary occurrence of this habitat type exists in the northern portion of the central parcel. Southern cactus scrub is composed of CSS habitat with at least a 20 percent relative cover of cacti. In this particular case, the habitat type is dominated by California encelia, California sagebrush, and coastal prickly pear (*Opuntia littoralis*). The habitat quality is "good" with little evidence of disturbance.

Sagebrush-Grassland Ecotone/Sere (2.8.1). This is a successional plant community, transitioning from a ruderal grassland habitat to a sagebrush scrub habitat. The grassland component consists primarily of a variety of ruderal, nonnative grasses and forbs with scattered California sagebrush, California encelia, and coyote bush individuals interspersed. The habitat quality is generally "good" based primarily on the health and diversity of the CSS plant species present.

Deerweed-Grassland Ecotone/Sere (2.8.6). This is also a successional plant community, transitioning from a ruderal grassland habitat to a sagebrush scrub habitat. The grassland component consists primarily of a variety of ruderal, nonnative grasses and forbs with scattered California sagebrush, coastal deerweed (*Lotus scoparius*), and coastal goldenbush (*Isocoma menziesii* var. *vernonioides*) individuals interspersed. The habitat quality ranges from "moderate" where disturbance has been more prevalent and "good" where disturbance has been low.

Scrub-Eucalyptus Planting (2.9). A small cluster of eucalyptus trees having a sparse understory of CSS plant species comprises this habitat type. The eucalyptus trees are nonnative and could have been previously planted, but it is more likely that they invaded from adjacent urban/commercial uses. The CSS vegetation was likely present before the eucalyptus trees became established. The habitat quality is "fair" to "moderate." While eucalyptus trees are exotic, invasive plant species, they also provide potential nesting and perching habitat for birds, especially raptors.

Annual Grassland (4.1). This habitat type consists of a relatively dense cover of mostly low-growing herbaceous vegetation dominated primarily by a variety of nonnative grasses and forbs. Annual grassland occurs as the dominant habitat type on the northern parcel. The dominant grass species include wild oats (*Avena* spp.), brome grasses (*Bromus* spp.), and hare barley (*Hordeum murinum* ssp. *leporinum*). Ruderal forbs that are typically interspersed with the annual nonnative grasses include filaree (*Erodium* spp.), black mustard (*Brassica nigra*), common silver scale (*Atriplex argentea* var. *argentea*), cudweed aster (*Corethrogyne filaginifolia* var. *filaginifolia*), and tocalote (*Centaurea melitensis*). The habitat quality of annual grassland is "low."

Ruderal Grassland (4.6). Under the OCHCS system, the division between ruderal grassland and annual grassland plant communities is somewhat subjective. However, in this case, ruderal forbs are more prevalent than nonnative grasses where ruderal grassland has been mapped. Dominant plant species include filaree, tocalote, yellow sweet clover (*Melilotus indica*), Bermuda-buttercup (*Oxalis pes-caprae*), and sand pygmy-stonecrop (*Crassula connata*). Within the study area, ruderal grassland contains less than 5 percent cover of CSS species, and native grasses are essentially absent from these areas. The areas corresponding to the ruderal grasslands appear to have been extensively disturbed in the past. Most ruderal species become established rapidly following disturbance, which is what has apparently happened here. This grassland habitat type is similar to annual grassland in terms of species value and habitat quality.

Freshwater Marsh (6.4). This wetland habitat is associated with portions of both of the natural drainages in the study area. Freshwater marsh typically has a regular, if not perennial, water source. In this case, perennial urban runoff from the local storm drain system provides sufficient water to support this habitat type. Dominant plant species associated with this habitat type on site include cat-tails (*Typha* spp.), California bulrush (*Scirpus californicus*), white water-cress (*Rorippa nasturium-aquaticum*), water speedwell (*Veronica anagallis-aquatica*), and marsh fleabane (*Pluchea odorata*). The habitat quality is "good."

Willow Riparian Scrub (7.2). Willow riparian scrub occurs in the southernmost natural drainage on site and is dominated by arroyo willows (*Salix lasiolepis*), with an understory consisting primarily of mulefat and some freshwater marsh plant species. Goodding's black willow (*Salix gooddingii*) is also present but in less abundance than the arroyo willow. The habitat quality is "good."

Mulefat Scrub (7.3). This dense stand of mulefat is located in the southernmost of the two natural drainages in the central parcel. Mulefat is the exclusive dominant plant species of this habitat type. There is essentially no understory to this habitat type. Riprap is associated with most of this habitat type in the study area. The habitat quality is "moderate."

Developed (Library Facility) (15.1). The southern parcel is composed primarily of an existing library facility and is classified as developed. As is typical of similar developed areas, disturbance is quite high and native vegetation is all but nonexistent, thereby resulting in "low" habitat quality.

Ornamental Landscaping (15.5). This habitat type is associated with the library facility and along portions of the road edges (i.e., MacArthur Boulevard, Avocado Avenue, and San Miguel Drive) surrounding the perimeter of much of the study area. This habitat type was intentionally planted in the past and is dominated primarily by nonnative, ornamental shrubs and trees. Where ornamental vegetation is installed adjacent to native habitat, competition between native and exotic plants increases and overall native habitat value decreases. The habitat quality is "low."

Disturbed (16.1). The two areas on site classified as disturbed are located along Avocado Avenue on the western edges of the northern and central parcels (Figure 2). The areas are characterized by concrete v-ditches and primarily unvegetated, compacted dirt. These disturbed areas are highly disturbed, and the habitat quality is "low."

Wildlife

A number of wildlife species typically associated with the habitat types identified within the study area were observed. It is not surprising, however, given the isolation of the site for many years, that species diversity was relatively low. The numbers of native vertebrates observed or otherwise detected in the study area during the site surveys include 1 amphibian, 4 reptile, 46 bird, and 6 mammal species. All animal species observed or detected on or immediately adjacent to the study area are listed in Appendix B. No active raptor (e.g., hawk) nests were observed on or immediately adjacent to the study area, and the general lack of trees on site (with the exception of some eucalyptus trees) makes the potential for raptor nesting on site low.

Because of the isolation of this site amidst urban development, the study area does not function as a wildlife movement corridor. Those species present on site are either able to fly in, are able to navigate on the ground through long stretches of residential development, or have been able to sustain a small population in spite of the isolation.

Special-Interest Species

Any plant species listed or proposed for listing[1] by federal and/or State resource agencies, as well as plant species not listed or proposed for listing by any resource agency but having some other special designation from a resource agency or a recognized conservation organization (e.g., CNPS), are considered "special-interest species" for purposes of this report. Some of the special-interest species identified in the literature review are not expected to occur due to the absence of suitable habitat or conditions on site, or the distant location of the study area from a species' known distribution. These species are excluded from further discussion in this report. As provided in Appendix C, a list of special-interest plant and animal species potentially occurring in the local region was compiled from records found in the literature review and database records in the CNPS Online Inventory and the NDDB. Appendix C contains detailed information regarding special-interest plant and animal species observed or potentially present within the study area or vicinity, including species' habitat and distribution, activity period, State and federal status designations, and probability of occurrence.

Of the 20 special-interest plant species identified in Appendix C, only four have a "moderate" or greater probability of occurrence in the study area. These four plant species include Coulter's saltbush (*Atriplex coulteri*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), vernal barley (*Hordeum intercedens*), and Allen's pentachaeta (*Pentachaeta aurea* ssp. *allenii*). None of these four species is federally or State listed; all four are "Special Plants," included on the CNDDB "Special Plants" list. Suitable habitat and conditions exist in the study area to potentially support both intermediate mariposa lily and Allen's pentachaeta, but neither was observed in the study area, which was carefully inspected during the LSA surveys. Vernal barley was reportedly observed in the central parcel during previous biological studies of the site, but no vernal barley was observed during any of the numerous LSA surveys on site. Coulter's saltbush has been observed on site during previous biological studies, and LSA observed a solitary population consisting of 18 individuals of Coulter's saltbush located along the eastern edge of the central parcel (Figure 4). This population occurs along a disturbed foot-trail and along the ecotonal edge between ornamental landscaping (consisting primarily of acacia) and ruderal grassland. The remaining 16 special-interest plant species identified in Appendix C have either a "low" probability of occurring on site or are "not expected" to occur in the study area. None of these or any other special-interest plant species were observed on site during the LSA surveys.

Of the 37 special-interest animal species identified in Appendix C, five have a "moderate" or greater probability of occurrence in the study area, and none of these five are federally or State listed. These five animal species include northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), American peregrine falcon (*Falco peregrinus anatum*), Allen's hummingbird (*Selasphorus sasin*), and California horned lark (*Eremophila alpestris actia*). The peregrine falcon is a California Fully Protected species, and none were observed in the study area during any of the LSA surveys.

A northern harrier was one of three special-interest animal species observed in the study area. It was flying over the study area when observed. No northern harriers are expected to nest in the study area. The relatively small size of the project site, ongoing disturbance of the site, and marginal habitat quality makes the site unsuitable for this ground-nesting raptor. In addition, northern harriers are

[1] Includes species already listed or proposed for listing by the federal government as "Threatened" or "Endangered." In addition to the Threatened or Endangered designations, the State of California also has a third listing designation of "Rare," but only with regard to specific plant species.

LSA

LEGEND

Project Boundary

Coulter's saltbush *(Atriplex coulteri)* (18 individuals)

FIGURE 4

0 50 100

FEET

SOURCE: City of Newport Beach (2/06, 1/09)

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Newport Beach City Hall and Park Development Plan Project

Special-Interest Plants

extremely rare as a nesting bird in Orange County. Two horned larks were observed in the study area on April 7, 2009, and may have been California horned larks, but the subspecies could not be determined. California horned larks are expected to occasionally visit the site, but nesting by this open ground-nesting species would be highly unlikely given the amount of human foot traffic and disturbance observed on site. Allen's hummingbirds were seen during every bird survey in 2009 and probably nest on site. This species thrives in the ornamental plantings of Orange County.

The remaining 32 special-interest animal species identified in Appendix C have either a "low" probability of occurring on site or are "not expected" to occur in the study area. Although noted as previously occurring on site by Hamilton (1998), no coastal California gnatcatchers, a federally threatened bird species, were observed or detected during any of the six protocol surveys conducted by LSA. Also, no coastal California gnatcatchers were observed on site by MBA in 2004. More detailed information regarding the protocol coastal California gnatcatcher surveys conducted by LSA is provided in Appendix D.

Focused small mammal trapping surveys for Pacific pocket mouse were conducted by LSA pursuant to USFWS protocol. No Pacific pocket mice were captured during the live trapping on site. More details regarding the Pacific pocket mouse surveys are provided in Appendix E.

LSA did not identify any typical habitat for fairy shrimp on site, but previous biological studies identified the possibility that fairy shrimp could occupy two shallow depressions located in the central portion of the property. Therefore, to conclusively determine whether any fairy shrimp occupied either of the two shallow depressions, LSA biologists conducted dry season fairy shrimp surveys. The results were negative, meaning there were no fairy shrimp cysts in the soil samples collected from each area. More detailed information regarding these fairy shrimp survey results is provided in Appendix F.

In addition to the other numerous surveys conducted on site, an LSA Biologist also conducted additional on-site surveys specifically for least Bell's vireo on June 9 and June 30, 2009. These surveys were conducted in the only riparian habitat on site and during the least Bell's vireo breeding season to better support the conclusion that this species is not expected to occur on site. It is important to note that the limited quantity and marginal quality of the riparian habitat on site is not typical of that normally occupied by least Bell's vireo. The surveys resulted in negative findings.

Shallow Topographic Depressions

Previous biological studies cite the occurrence of two "ephemeral ponds" in the central parcel of the study area. Hamilton (1998) reported observing "two seasonal ponds" on the central parcel. The general location of these two seasonal ponds was described by Hamilton, but no map was provided. In a follow-up biological study, MBA (2004) did create an exhibit showing the general locations of the two ponds identified by Hamilton, however MBA indicated that no ponding was present during their surveys. MBA referred to these two areas as "ephemeral ponds." LSA carefully examined these areas in February 2009 and noted a very subtle, shallow depression in the two corresponding areas but could not at that time find enough visible indicators to accurately map the extent of previous ponding in these areas. The shallow low-lying area located nearer the intersection of Avocado Avenue and Farallon Drive is referred to as Area A, and the shallow depression located nearer MacArthur Boulevard is referred to as Area B (Figure 5).

LSA

LEGEND

Project Boundary

Shallow Topographic Depressions

0 70 140

FEET

SOURCE: City of Newport Beach (2/06, 1/09)

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FIGURE 5

Newport Beach City Hall and Park Development Plan Project

Shallow Topographic Depressions

The two areas referred to above were further studied to determine whether they functioned as vernal pools capable of supporting crustaceans, particularly the San Diego fairy shrimp. In February 2009, LSA compared the hydrologic conditions of Areas A and B with areas having analogous features associated with the vernal pools located at Fairview Park in Costa Mesa, California. These shallow depressions at Fairview Park were used as reference sites for comparing instances of inundation at Fairview Park with Areas A and B on site. On February 6, 2009, LSA examined the vernal pools at Fairview Park and then immediately drove to the project site to examine Areas A and B. February 6 was the first rainy day in a series of five consecutive days with measureable rainfall. There was no evidence of inundation (soils were dry) at either Fairview Park or Areas A and B on site. On February 9, 2009, LSA repeated the visits to Fairview Park followed immediately by a visit to the site. Approximately 0.7 inches of cumulative rainfall occurred in the previous three days. LSA observed inundation in several shallow depressions at Fairview Park but noted no inundation at the two areas on site (Figure 6a). Likewise, on February 19, 2009, LSA repeated the same methodology and observed extensive ponding at Fairview Park but still did not observe any inundation or even soil saturation at Areas A and B (Figure 6b). Approximately 1 inch of cumulative rainfall had occurred in the previous 5 days. The observed ponding in 1998 occurred in the rainy season of an exceptionally wet year and shortly following one of the wettest Februarys on record, and the frequency of inundation associated with these two areas is likely very low. Many upland areas were inundated as a result of the extremely heavy rainfall occurring in February 1998.

On April 1, 2009, LSA conducted a detailed evaluation of the soils and vegetation associated with Areas A and B. The presence of mottles in the soils associated with Areas A and B resulted from some past instance of inundation such as that which occurred in 1998. Where mottles form, the soils have become saturated for a sufficient duration to cause the formation of anaerobic soil conditions and to trigger the reduction of iron in the soils. However, once formed, these mottles can persist in the soils for years or even decades provided the soils are not disturbed. Mottles in the soil are not necessarily an indication of the frequency of inundation or soil saturation, but rather are an indication of at least some past inundation or soil saturation event where anaerobiosis and reduction has occurred.

Woolly marbles (*Psilocarphus brevissimus* var. *brevissimus*) were observed in the two areas previously identified as “ephemeral ponds” by MBA (2004). Woolly marbles were not observed at any other location on site. The presence of woolly marbles does indicate some level of previous soil saturation that was sufficient enough to support the initial introduction and continued persistence of that particular plant species. However, the occurrence of woolly marbles does not equate to the regular frequency of ponding at the two sites. In this particular instance, the woolly marbles would appear to be persistent remnants, initially introduced on site from some previous event dating back to 1998 or, possibly, earlier. Although a vernal pool indicator plant, woolly marbles are not always associated with vernal pools. In some cases, this species can occur in nonvernal pools where soils, such as heavy clays, retain sufficient moisture to allow the species to germinate and continue to persist at that site. No other vernal pool indicator plants or other signs of vernal pools were observed in Areas A and B, or elsewhere in the study area, for that matter.

The presence of upland perennial shrubs such as California sagebrush (*Artemisia californica*) in and around these shallow topographic depressions further supports the assertion that these areas do not pond with any regularity; otherwise, these uplands shrubs could not persist. Also, Areas A and B were dominated primarily by upland plant species. Dominant plants in Area A included California

Ponding clearly evident in shallow depression at Fairview Park.

Additional ponding at Fairview Park.

Area A: Shallow topographic depression. No ponding; soils dry.

Area B: Shallow topographic depression. No ponding; soils dry.

LSA

FIGURE 6A

Newport Beach City Hall and Park Development Plan

Comparative Site Photos taken February 9, 2009

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Ponding clearly evident at Fairview Park.

Additional ponding evident at Fairview Park.

Area A: No ponding; soil not saturated.

Area B: No ponding; soil not saturated.

LSA

FIGURE 6B

Newport Beach City Hall and Park Development Plan

Comparative Site Photos taken February 19, 2009

I:\CNB0901\G\Comp photos Feb 19.cdr (6/9/09)

sagebrush, coastal deerweed, scarlet pimpernel (*Anagallis arvensis*), sand pygmy-stonecrop, tocalote, filaree, and mulefat. Dominant plants in Area B included yellow sweet clover, red-stemmed filaree, short-fruited filaree, sand pygmy-stonecrop, tocalote, and scarlet pimpernel. Woolly marbles were common but not dominant in both areas. LSA used the extent of the woolly marble distribution at each area to more definitively delineate the extent of Areas A and B.

In addition, LSA conducted fairy shrimp dry season surveys of Areas A and B. Soil samples were collected, processed, and carefully examined using a microscope to determine whether any fairy shrimp cysts were present in the soils. No fairy shrimp cysts were present in either Area A or Area B. Therefore, since fairy shrimp cysts can persist for several years without a ponding event of sufficient duration (i.e., one to two weeks), clearly instances of ponding are too infrequent on site to sustain a viable population of fairy shrimp in either Area A or Area B.

Based on the data presented above, it is clear that ponding only occurs in these areas during extraordinarily wet years or after a series of exceptionally heavy rainfall events. Therefore, Areas A and B have no substantially greater biological significance than the surrounding habitat areas.

Wetlands and Potential Jurisdictional Drainages

MBA conducted a jurisdictional delineation of the central parcel in 2004. LSA conducted a jurisdictional delineation that included both the central and northern parcels. Details concerning the LSA Jurisdictional Delineation are provided in Appendix G.

LSA identified potential ACOE and CDFG jurisdiction associated with two primary drainages located on the central parcel of the study area (Figure 7). These unnamed drainages are situated in two small ravines on site. The main drainage (hereinafter referred to as Drainage A) extends generally east to west. Runoff in this drainage is conveyed onto the site from a large concrete box culvert and ultimately drains into a large standpipe on the western end of the drainage. The other drainage (hereinafter referred to as Drainage B) extends southwesterly from near the northeast corner of the central parcel to Drainage A. Runoff in this drainage is conveyed onto the site from an existing underground concrete culvert at the northeast end of the drainage and ultimately empties into Drainage A. Overall, runoff is conveyed onto the site, into these earthen-bottomed drainage courses, and then back into the underground storm drain system, where it is ultimately conveyed to the Pacific Ocean, a traditional navigable water of the U.S.

Although the primary source of water in both Drainages A and B is from urban runoff, the drainage courses are essentially natural. Both drainages exhibit an OHWM and have connectivity to a traditional navigable water. Consequently, the boundary of potential ACOE jurisdiction in both drainages extends to the OHWM. In this case, there were no adjacent wetlands extending beyond the limits of the OHWM in either Drainage A or Drainage B. In other words, potential jurisdictional wetlands are confined to within the OHWMs.

The potential wetland waters of the U.S. in Drainages A and B, as shown on Figure 7, have a prevalence of hydrophytic vegetation and evidence of hydric soils. Also, these drainages were inundated during survey work conducted by LSA. Drainage A may have perennial flows, but certainly appears to receive sufficient runoff to stay inundated for much of the year in most years, thus satisfying the wetland hydrology criterion. Drainage B appears to have either perennial or

LSA

LEGEND

Project Boundary

CDFG Jurisdiction (0.55 ac)

ACOE Jurisdiction

Non-Wetland Waters (0.05 ac)

Wetland Waters (0.36 ac)

0 30 60
FEET

SOURCE: City of Newport Beach (2/06, 1/09)

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FIGURE 7

Newport Beach City Hall and Park Development Plan Project

Potential Jurisdictional Areas

intermittent flows in at least the northern portion of the drainage; however, the southern portion of Drainage B does not appear to remain inundated for very long during most years and would not satisfy the wetland hydrology criterion (see Appendix G for more details). The potential nonwetland waters of the U.S. lacked a predominance of hydrophytic vegetation and thereby failed to satisfy the ACOE wetland criteria.

Drainages A and B exhibit a definable streambed and banks and have associated riparian habitat. Potential CDFG jurisdiction in Drainages A and B, as shown on Figure 7, not only includes the area corresponding to the drainage bottoms and banks but also extends beyond to include associated riparian canopy.

LSA thoroughly assessed the hydrology, vegetation, and soils associated with the two shallow depressions described in the preceding section. Although some wetland indicator plants (e.g., mule fat, curly dock) were present, the vegetation was dominated by upland indicator plants. The wetland indicator plants present are likely remnants from an extraordinary rainfall event that occurred in the past and resulted in the inundation of these shallow depressions. The presence of some relict mottles in the soils further confirms this notion of past inundation. Moreover, the two shallow depressions on site failed to become inundated or even exhibit saturated soils following several days of steady rainfall on two separate occasions in 2009. At the same time, LSA noted inundation at vernal pools/seasonal wetlands not far from the project area. LSA concluded that these two shallow depressions on site only become inundated during years, or following a concentrated period, of extraordinary rainfall. Neither of these two isolated depressions would be subject to ACOE or CDFG jurisdiction, pursuant to Section 404 of the Clean Water Act or Section 1602 of the California Fish and Game Code.

LSA observed several concrete drainage ditches located in both the northern and central parcels. These artificial ditches were constructed for the purpose of collecting surface runoff and conveying the runoff into the storm drain system to prevent surface erosion and the flooding of adjacent landscape and structures. These concrete v-ditches and other concrete drainages are not considered waterbodies by the ACOE since nothing more than rills and other erosion features would form in the absence of these concrete-lined drainage systems. Therefore, these concrete v-ditches and drainages would not be subject to ACOE or CDFG jurisdiction.

PROJECT IMPACTS

This assessment also evaluates how the proposed project would affect biological resources occurring within the study area. The CEQA significance criteria used to evaluate the project impacts to biological resources were described in detail in the preceding Regulatory Background section of this report. Figure 8 shows the proposed area of preservation; all other areas within the northern and central parcels are expected to be impacted by construction of the proposed project. The preservation area would include 1.8 ac of the project site.

LSA

LEGEND

- Area of Preservation* (1.79 ac)
- CDFG Jurisdiction (0.554 ac)
- ACOE Jurisdiction (0.413 ac)

0 30 60
FEET

SOURCE: City of Newport Beach (2/06, 1/09)

* All areas of the Northern Parcel and areas outside of the preservation area of the Central Parcel will be impacted.

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FIGURE 8

Newport Beach City Hall and Park Development Plan Project

Area of Preservation

Plant Communities

The proposed project would result in impacts to 15.13 ac of native, ornamental, and disturbed plant communities. In addition, a total of 3.07 ac of currently developed area will be impacted for a total of 18.2 ac of permanent impacts.

Implementation of the proposed project will result in the direct loss of 11.68 ac of native habitat and the preservation of 1.56 ac of native habitat and 0.24 ac of landscaped and disturbed habitat associated with the two natural drainages in the study area. The proposed project will result in the direct loss of 88 percent of the total native habitat on site, which would be considered a significant impact. A breakdown and comparison of the habitat that will be lost and the habitat that will be preserved based on the proposed project is provided in Table B.

Table B: Impacts to and Preservation of Plant Communities within the Study Area

OCHCS No.	Plant Community Designation	Permanent Loss of Habitat; Northern + Central Parcels (acres)	Preservation of Habitat; Central Parcel (acres)
2.3.6	Sagebrush Scrub	0 + 2.18	0.98
2.3.6.1	Sagebrush-Mulefat Complex	0 + 0.15	0.01
2.3.9	Coyote Brush Scrub	0 + 0.07	
2.3.10	Mixed Scrub	0 + 0.50	
2.4	Southern Cactus Scrub	0 + 0.06	
2.8.1	Sagebrush-Grassland Ecotone/Sere	0 + 0.14	
2.8.6	Deerweed-Grassland Ecotone/Sere	0 + 0.73	
2.9	Scrub-Eucalyptus Planting	0 + 0.01	0.02
4.1	Annual Grassland	2.67 + 0	
4.6	Ruderal Grassland	0 + 5.17	0.08
6.4	Freshwater Marsh		0.28
7.2	Willow Riparian Scrub		0.11
7.3	Mulefat Scrub		0.08
15.1	Developed	0 + 3.07	
15.5	Ornamental Landscaping	0.16 + 2.81 = 2.97	0.21
16.1	Disturbed	0.35 + 0.13 = 0.48	0.03
	Total	**18.2**	**1.8**
	Grand Total	**20.00**	

Note: The Disturbed (OCHCS No. 16.1) area may increase as the project boundary changes to include the roadway widening between the northern and central parcels.
OCHCS = Orange County Habitat Classification System

Wildlife

Based on the large percentage of native habitat on site that will be removed during grading activities, the loss of habitat as a result of the proposed project will likely have a direct, locally significant adverse effect on wildlife in the study area. The project will also result in a locally significant loss of foraging habitat for wildlife.

The adverse effects of nuisance noise from construction activities would be temporary and, with the possible exception of nesting birds, would not constitute a significant adverse impact to wildlife on site or in the adjacent areas. Construction noise could potentially disrupt normal nesting behavior in birds, aside from just raptors, on site and/or immediately adjacent to the study area. Also, removing or trimming trees or shrubs on site in association with the proposed construction activities could potentially result in significant adverse impacts to nesting birds, which are protected under the Migratory Bird Treaty Act.

Special-Interest Species

The population of 18 Coulter's saltbush (location shown on Figure 4) would be completely eliminated on site as a result of proposed grading activities. This would result in a significant adverse impact to Coulter's saltbush. No other special-interest plant species were observed in the study area during LSA surveys, and none are expected to be significantly affected by the proposed project.

Also, none of the five special-interest animal species identified as having a "moderate" or greater probability of occurrence on site are expected to be significantly impacted as a result of the proposed project. Although none were observed, it is possible that merlins and peregrine falcons may occasionally forage on site. However, large tracts of coastal lands supporting raptor foraging habitat have been set aside for permanent preservation. These lands include the Seal Beach National Wildlife Refuge, Bolsa Chica Ecological Reserve, as well as lands set aside in the Nature Reserve of Orange County, including the Upper Newport Bay Ecological Reserve. When viewed in the context of how much raptor foraging habitat has already been conserved in Orange County, the quantity of raptor foraging habitat lost as part of project implementation would not be substantial.

Focused surveys for coastal California gnatcatcher, Pacific pocket mouse, and fairy shrimp yielded negative results. Similarly, least Bell's vireo was not observed during 2009 surveys. Since no least Bell's vireo were detected on site and since there is limited quantity and marginal quality of riparian habitat to support this species, implementation of the project would have no significant adverse impact on this species. Therefore, none of these species is expected to be significantly impacted by the proposed project.

A northern harrier was one of three special-interest animal species observed in the study area, and it was flying over the study area when observed. Impacts to northern harriers would be considered significant if found to be actively nesting on site. However, since no northern harriers are expected to nest in the study area, the proposed project would not have a significant adverse impact to this species.

Two horned larks observed in the study area on April 7, 2009, may have been California horned larks, but the subspecies could not be determined. California horned larks are expected to occasionally visit the site, but nesting by this open ground-nesting species would be highly unlikely given the amount of human foot traffic and disturbance observed on site. Allen's hummingbirds were seen during every bird survey in 2009 and probably nest on site. This species thrives in the ornamental plantings of Orange County and is unlikely to suffer any adverse effects from the proposed project. In fact, any increase in ornamental trees and shrubs as a result of project landscaping may well benefit the species.

Shallow Topographic Depressions

As already indicated, the two shallow upland depressions (i.e., Areas A and B on Figure 5) have no substantially greater biological significance than the surrounding habitat areas, and they are not subject to either ACOE or CDFG jurisdiction. Therefore, the proposed project will not result in a significant adverse impact to biological resources associated with these two areas referred to as "seasonal ponds" by Hamilton (1998) and identified as "ephemeral ponds" by MBA (2004).

Wetlands and Potential Jurisdictional Drainages

The proposed project would include the construction of three pedestrian footbridges across the jurisdictional drainages in the study area. These bridges are proposed to span the drainages and avoid any direct impacts to the ACOE or CDFG jurisdictional areas delineated by LSA. There are no proposed support structures or other portions of the bridges that would be installed within the ACOE or CDFG jurisdictional limits on site. Furthermore, grading and other construction disturbances are not proposed to occur within the ACOE or CDFG jurisdictional limits. Consequently, no discharge of fill material into any of the federal (Section 404 of the Clean Water Act) jurisdictional waters or wetlands identified and delineated on site is proposed as part of the construction activities. Therefore, construction of the proposed project would result in less than significant impacts to the ACOE or CDFG jurisdictional areas.

The construction of footbridges across the jurisdictional drainages would provide shade to the vegetation growing under the proposed bridges. Therefore, constructing the pedestrian bridges could indirectly impact vegetation under the bridges. It is estimated that the pedestrian bridges would range from approximately 4 ft above the wetlands for the smaller bridges and between 14 and 17 ft above the wetlands for the larger bridges. The bridges would be approximately 12 to 15 ft in width. The resulting shadow would be relatively narrow and therefore temporally fleeting with the movement of the sun across the sky. Also, the areas of the site exposed to shade would vary with the seasons and time of day. The existing habitat appears to be thriving in conditions that include shade from existing on-site trees. Much of the understory of the wetlands habitat on site is thus already subject to shading. The existing trees below the proposed bridges are not currently shaded, with the exception of shadows created by the variable topography on site. The exposure of the vegetation to shade as a result of the pedestrian bridges would likely have a negligible effect on the performance of the vegetation and would not adversely affect the viability of the wetland habitat on site. Therefore, the effects of shading are not expected to result in a potential significant adverse impact to vegetation or wildlife from a CEQA standpoint; however, CDFG may require a Streambed Alteration Agreement to address the resulting effects of shading that would result from the construction of the three pedestrian footbridges.

Grading and other proposed construction work would occur around the perimeter of, and in relatively close proximity to, the jurisdictional areas associated with the two drainages on site. This could result in incidental, or accidental, discharge of materials into jurisdictional areas, which would be a significant project impact.

According to the Drainage Study prepared by ARUP (2009), the proposed project will result in the reduction of approximately 11 percent of the storm water runoff presently conveyed into Drainage B. This is not expected to result in a significant adverse impact to the wetland habitat associated with that drainage.

MITIGATION MEASURES

Orange County Central and Coastal Subregion NCCP/HCP

The Irvine Company previously owned the northern and central parcels of the study area in 1996 when the Implementation Agreement for the Orange County Central and Coastal Region NCCP/HCP (NCCP) was signed. The City acquired the central parcel from the Irvine Company in November 2007 and acquired the northern parcel in October 2008. All of the approvals and authorizations the Irvine Company agreed to in the NCCP Implementation Agreement, remain with the property and are transferred to the new property owner (i.e., City). In this particular case, compliance with the terms and conditions of the NCCP Implementation Agreement and construction minimization measures identified in the NCCP EIR/EIS Appendix H, serves as suitable mitigation for project-specific and cumulative impacts to native habitat and associated general wildlife on site. Coulter's saltbush is not a covered species in the NCCP and as such will require species-specific mitigation (see below).

Translocation of Coulter's Saltbush Population

To mitigate for the potential significant impact to Coulter's saltbush on site, the population will be translocated to a suitable receptor site in an area to be permanently preserved. A comprehensive translocation plan will first need to be prepared, and the precise methodology for the translocation of the existing population of Coulter's saltbush from the impact area will be provided in this plan. The location of the suitable receptor site will be provided in the translocation plan. Also, the City will contract with a qualified, experienced biologist to prepare this plan and to supervise and monitor implementation of the plan. Realistic performance standards for evaluating the mitigation success with regard to translocating this plant species may be difficult to achieve given the lack of control over and predictability of various natural factors (e.g., pollination, herbivory, rainfall, soil compatibility) and due to the lack of information available from previous translocation efforts pertaining to this species. Therefore, success of the mitigation will be based largely on the effort put forth in trying to establish a viable population of Coulter's saltbush and the valuable scientific information obtained, rather than on the specific number of individuals that flower in a given year. The biologist will monitor the population of Coulter's saltbush for 5 years following translocation and will document the methods and results, including implementation of any requisite maintenance and/or remedial measures, in annual reports. Establishment of a viable population will be deemed successful and the performance standards met if at least half (i.e., 9) of the plants are evident in any given year following the third year of the monitoring period. This mitigation standard may be adjusted any time prior to the end of the monitoring period under mutual agreement of the City and the resource agencies (i.e., USFWS and CDFG), particularly if factors beyond human control limit the ability to establish a viable population of Coulter's saltbush within the 5-year monitoring period. Successful completion of this mitigation measure will reduce the project impacts to Coulter's saltbush to less than significant.

Active Nesting by Birds

If possible, project construction activities should occur outside the active breeding season for birds (i.e., February 15–August 15). If avoidance of the breeding season is not possible, a nesting bird survey will be conducted by a qualified biologist prior to construction activities to ensure that there are no active bird nests present within 100 ft of the construction activities. If nesting birds are discovered during preconstruction surveys, a buffer appropriate for the applicable circumstances and also based on the specific nesting bird species identified (e.g., up to 500 ft depending on the species) will be established where no construction activities or other disturbances are allowed to occur until after the birds have fledged from the nest. Implementation of these mitigation measures will reduce the potential significant impacts to nesting birds, other than just raptors, to less than significant.

Wetland/Riparian Habitat Enhancement

There is a potential to significantly and adversely affect wetlands, streamcourses, and riparian habitat on site, if fill material should be accidentally discharged into these jurisdictional areas. Therefore, the City will implement the following mitigation measures as part of proposed construction activities to prevent these potentially significant impacts from occurring. Orange snow fencing will be installed along the entire construction perimeter around the jurisdictional drainages prior to the commencement of construction activities associated with the central parcel. The orange snow fence will be highly visible and will help construction personnel and equipment operators avoid potential unnecessary impacts to the nearby drainages. The orange snow fence will be maintained and left in place until all construction activities in the central parcel are complete, after which the orange snow fence is to be removed from the site.

In addition, a qualified biologist will monitor construction activities. In particular, the biological monitor will be present on site when the orange snow fence is installed to ensure that it is installed at the appropriate location outside the ACOE and CDFG jurisdictional limits. The biological monitor will be present during any grading or vegetation removal activities occurring within 300 ft of the orange snow fencing. Also, the biological monitor will be notified prior to removal of the orange snow fence at the completion of construction activities in the central parcel, and the biological monitor will conduct a final inspection of the area. The biological monitor will, as necessary, maintain direct contact with a City representative throughout the construction process.

Implementation of the mitigation measures recommended above will help prevent any incidental or accidental discharge of fill into jurisdictional areas during construction activities and will reduce the potential impacts to the jurisdictional areas associated with the two drainages to less than significant.

REFERENCES

Abrams, L. 1923 (v. I), 1944 (v. II), 1951 (v. III). *Illustrated Flora of the Pacific States; Washington, Oregon, and California*, Vols. I–III. Stanford University Press, Stanford, California.

Abrams, L., and R.S. Ferris. 1960. *Illustrated Flora of the Pacific States; Washington, Oregon, and California*, Vol. IV. Stanford University Press, Stanford, California.

California Department of Fish and Game, Natural Heritage Division, Natural Diversity Database (CNDDB). 2003. *RareFind, Version 3.1.0*. Records search executed February 2009, covering the *Laguna Beach, California* USGS quadrangle. The Resources Agency, Sacramento, California.

California Native Plant Society. 2009. *CNPS Online Inventory of Rare and Endangered Plants of California*. CNPS: Sacramento, California.

County of Orange, Environmental Management Agency, 1996. *Final Central and Coastal Subregion Natural Community Conservation Plan & Habitat Conservation Plan*, Parts I and II.

Dames & Moore and David Bramlet, Consulting Biologist, 1992. *Habitat Classification System: Natural Resources, Geographic Information System* (*GIS*) *Project*. Prepared for County of Orange, Environmental Management Agency, Santa Ana, California.

Hamilton, Robert A., 1998. *Letter Report, Initial Biological Survey, Dedicated Open Space Parcel at Newport Fashion Island, Newport Village Site.* Prepared for Stop Polluting Our Newport (SPON), Balboa Island, California.

Hamilton, R. A., and D.R. Willick. 1996. *The Birds of Orange County, California: Status and Distribution*. Sea & Sage Press, Sage & Sage Audubon Society, Irvine.

Hickman, J. C., ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, California. 1,400 pp.

Jones & Stokes Associates, Inc., 1993. *Methods Used to Survey the Vegetation of Orange County Parks and Open Space Areas and The Irvine Company Property*. Prepared for County of Orange, Environmental Management Agency, Santa Ana, California.

Michael Brandman Associates, 2004. *Biological Resources Assessment, 12.5-Acre Newport Village Park, City of Newport Beach, Orange County, California.* Prepared for Hall & Foreman, Inc., Irvine, California.

———, 2004. *Delineation of Jurisdictional Waters and Wetlands, 12.5-Acre Newport Village Park, City of Newport Beach, Orange County, California.* Prepared for Hall & Foreman, Inc., Irvine, California.

Roberts, F.M., Jr. 2008. *The Vascular Plants of Orange County, California, An Annotated Checklist*, F.M. Roberts Publications, San Luis Rey, California. 256 pp.

APPENDIX A

VASCULAR PLANT SPECIES OBSERVED

APPENDIX A
VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed in the study area by LSA senior botanist Jim Harrison during fieldwork conducted on February 4, February 12, April 1, April 29, and June 29, 2009.

* Introduced species not native to California

GYMNOSPERMAE		**CONE-BEARING PLANTS**
Pinaceae		**Pine Family**
*	*Pinus* sp.	Pine
ANGIOSPERMAE: DICOTYLEDONAE		**DICOT FLOWERING PLANTS**
Aizoaceae		**Carpet-weed Family**
*	*Carpobrotus edulis*	Hottentot-fig
*	*Malephora crocea*	Croceum ice plant
*	*Mesembryanthemum crystallinum*	Crystal ice plant
*	*Mesembryanthemum nodiflorum*	Small-flowered ice plant
Anacardiaceae		**Sumac Family**
	Rhus integrifolia	Lemonade berry
Apiaceae		**Carrot Family**
	Apiastrum angustifolium	Mock parsley
*	*Apium graveolens*	Common celery
*	*Foeniculum vulgare*	Sweet fennel
Apocynaceae		**Dogbane Family**
*	*Vinca major*	Blue periwinkle
Asteraceae		**Sunflower Family**
	Artemisia californica	California sagebrush
	Baccharis pilularis	Coyote bush
	Baccharis salicifolia	Mule fat
*	*Centaurea melitensis*	Tocalote
*	*Chrysanthemum coronarium*	Garland chrysanthemum
*	*Cirsium vulgare*	Bull thistle
	Conyza canadensis	Common horseweed
	Corethrogyne filaginifolia var. *filaginifolia*	Cudweed aster
*	*Cynara cardunculus*	Artichoke thistle
	Deinandra fasciculata	Fascicled tarweed
	Encelia californica	California encelia
	Gnaphalium bicolor	Bicolored cudweed

	Gnaphalium californicum	California everlasting
*	*Gnaphalium luteo-album*	Weedy cudweed
	Grindelia camporum var. *camporum*	Big gumplant
	Hazardia squarrosa	Saw-toothed goldenbush
	Heterotheca grandiflora	Telegraph weed
*	*Hypochaeris glabra*	Smooth cat's-ear
	Isocoma menziesii var. *vernonioides*	Coastal goldenbush
*	*Lactuca serriola*	Prickly lettuce
*	*Osteospermum fruiticosum*	Trailing African daisy
*	*Picris echioides*	Bristly ox-tongue
	Pluchea odorata	Marsh fleabane
	Psilocarphus brevissimus var. *brevissimus*	Woolly marbles
*	*Pulicaria paludosa*	Spanish sunflower
*	*Sonchus asper* ssp. *asper*	Prickly sow-thistle
*	*Sonchus oleraceus*	Common sow-thistle
*	*Taraxacum officinale*	Common dandelion
	Uropappus lindleyi	Silver puffs
Boraginaceae		**Borage Family**
	Amsinckia menziesii var. *intermedia*	Common fiddleneck
	Cryptantha sp.	Cryptantha
*	*Echium candicans*	Pride of Madeira
	Heliotropium curassavicum	Salt heliotrope
	Pectocarya linearis ssp. *ferocula*	Slender pectocarya
Brassicaceae		**Mustard Family**
*	*Brassica nigra*	Black mustard
*	*Brassica rapa*	Field mustard
	Descurainia pinnata	Western tansy-mustard
*	*Hirschfeldia incana*	Shortpod mustard
	Lepidium nitidum var. *nitidum*	Shining peppergrass
*	*Lobularia maritima*	Sweet-alyssum
*	*Rorippa nasturtium-aquaticum*	White water-cress
Cactaceae		**Cactus Family**
	Opuntia littoralis	Coastal prickly pear
Capparaceae		**Caper Family**
	Isomeris arborea	Bladderpod
Caryophyllaceae		**Pink Family**
*	*Spergularia bocconei*	Boccone's sand spurry
Chenopodiaceae		**Goosefoot Family**
	Atriplex argentea var. *argentea*	Common silver-scale
	Atriplex coulteri	Coulter=s saltbush
*	*Atriplex semibaccata*	Australian saltbush
*	*Chenopodium berlandieri*	Pitseed goosefoot

*	*Salsola tragus*	Russian-thistle
Convolvulaceae		**Morning-glory Family**
*	*Convolvulus arvensis*	Field bindweed
Crassulaceae		**Stonecrop Family**
	Crassula connata	Sand pygmy-stonecrop
Cucurbitaceae		**Gourd Family**
	Marah macrocarpus	Wild cucumber
Euphorbiaceae		**Spurge Family**
	Chamaesyce sp.	Spurge
	Croton setigerus	Doveweed
*	*Euphorbia peplus*	Petty spurge
*	*Ricinus communis*	Castor bean
Fabaceae		**Legume Family**
*	*Acacia* sp.	Acacia
*	*Acacia longifolia*	Sydney golden wattle
	Lotus hamatus	San Diego lotus
	Lotus purshianus var. *purshianus*	Spanish lotus
	Lotus scoparius var. *scoparius*	Coastal deerweed
	Lupinus succulentus	Arroyo lupine
*	*Medicago polymorpha*	California burclover
*	*Melilotus indicus*	Yellow sweet-clover
*	*Trifolium hirtum*	Bristled clover
Geraniaceae		**Geranium Family**
*	*Erodium brachycarpum*	Short-fruited filaree
*	*Erodium cicutarium*	Red-stemmed filaree
	Geranium carolinianum	Carolina geranium
Lamiaceae		**Mint Family**
	Salvia mellifera	Black sage
Malvaceae		**Mallow Family**
*	*Malva parviflora*	Cheeseweed
*	*Malva sylvestris*	High mallow
Myoporaceae		**Myoporum Family**
*	*Myoporum laetum*	Myoporum
Myrtaceae		**Myrtle Family**
*	*Callistemon* sp.	Bottlebrush
*	*Eucalyptus camaldulensis*	River red gum
Nyctaginaceae		**Four O'clock Family**

*	*Bougainvillea* sp.	Bougainvillea
	Mirabilis californica	California wishbone bush
Oxalidaceae		**Oxalis Family**
*	*Oxalis pes-caprae*	Bermuda-buttercup
Plantaginaceae		**Plantain Family**
	Plantago erecta	California plantain
*	*Plantago lanceolata*	English plantain
Plumbaginaceae		**Leadwort Family**
*	*Limonium ramosissimum*	Province sea-lavender
*	*Limonium sinuatum*	Winged sea-lavender
Polygonaceae		**Buckwheat Family**
	Eriogonum giganteum	Island buckwheat
	Eriogonum fasciculatum	California buckwheat
	Eriogonum parvifolium	Bluff buckwheat
*	*Polygonum arenastrum*	Common knotweed
	Pterostegia drymarioides	Granny's hairnet
*	*Rumex crispus*	Curly dock
Portulacaceae		**Purslane Family**
	Calandrinia ciliata	Red maids
Primulaceae		**Primrose Family**
*	*Anagallis arvensis*	Scarlet pimpernel
Rhamnaceae		**Buckthorn Family**
	Ceanothus oliganthus var. *sorediatus*	Jim brush
Rosaceae		**Rose Family**
	Heteromeles arbutifolia	Toyon
Salicaceae		**Willow Family**
	Salix gooddingii	Goodding's black willow
	Salix lasiolepis	Arroyo willow
	Salix lucida ssp. *lasiandra*	Yellow willow
Scrophulariaceae		**Figwort Family**
	Linaria canadensis var. *texana*	Larger blue toadflax
	Mimulus aurantiacus	Bush monkey flower
*	*Veronica anagallis-aquatica*	Water speedwell
Solanaceae		**Nightshade Family**
*	*Nicotiana glauca*	Tree tobacco
	Solanum douglasii	Douglas' nightshade

Verbenaceae		**Vervain Family**
*	*Lantana camara*	Lantana
*	*Verbena tenuisecta*	Moss verbena
ANGIOSPERMAE: MONOCOTYLEDONAE		**MONOCOT FLOWERING PLANTS**
Araceae		**Arum Family**
*	*Zantedeschia aethiopica*	Calla lily
Arecaceae		**Palm Family**
*	*Phoenix dactylifera*	Date palm
	Washingtonia filifera	California fan palm
Cyperaceae		**Sedge Family**
*	*Cyperus involucratus*	Africa umbrella-sedge
	Scirpus californicus	California bulrush
Juncaceae		**Rush Family**
	Juncus bufonius	Toad rush
Lemnaceae		**Duckweed Family**
	Lemna sp.	Duckweed
Liliaceae		**Lily Family**
*	*Asphodelus fistulosus*	Onionweed
	Dichelostemma capitatum ssp. *capitatum*	Blue dicks
Poaceae		**Grass Family**
*	*Avena barbata*	Slender wild oat
*	*Avena fatua*	Common wild oat
*	*Bromus catharticus*	Rescue grass
*	*Bromus diandrus*	Ripgut grass
*	*Bromus hordeaceus*	Soft chess
*	*Bromus madritensis* ssp. *rubens*	Foxtail chess
*	*Cortaderia jubata*	Jubatagrass
*	*Cortaderia selloana*	Pampas grass
*	*Cynodon dactylon*	Bermuda grass
	Distichlis spicata	Saltgrass
*	*Hordeum murinum* ssp. *leporinum*	Hare barley
	Nassella lepida	Foothill needlegrass
	Nassella pulchra	Purple needlegrass
*	*Pennisetum clandestinum*	Kikuyu grass
*	*Polypogon interruptus*	Ditch polypogon
*	*Vulpia myuros* var. *myuros*	Rattail fescue

Typhaceae	**Cat-tail Family**
Typha angustifolia	Narrow-leaved cat-tail
Typha domingensis	Southern cat-tail
Typha latifolia	Broad-leaved cat-tail

Taxonomy and scientific nomenclature generally conform to Hickman (1993). Common names for each taxa generally conform to Roberts (2008) except where Abrams (1923, 1944, 1951) and Abrams and Ferris (1960) were used, particularly when species-specific common names were not identified in Roberts (2008).

APPENDIX B

ANIMAL SPECIES DETECTED

APPENDIX B
ANIMAL SPECIES DETECTED

This is a list of the conspicuous aerial insects, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

* Species not native to the study area

ZYGOPTERA	**DAMSELFLIES**
Coenagrionidae	**Pond Damsels**
cf. *Argia vivida*	Vivid dancer
ANISOPTERA	**TYPICAL DRAGONFLIES**
Libellulidae	**Cruisers, Emeralds, Baskettails, and Skimmers**
Sympetrum corruptum	Variegated meadowhawk
Pantala hymenaea	Spot-winged glider
LEPIDOPTERA	**BUTTERFLIES**
Pieridae	**Whites and Sulphurs**
* cf. *Pieris rapae*	Cabbage white
Lycaenidae	**Gossamer-Wing Butterflies**
Plebejus acmon	Acmon blue
Nymphalidae	**Brush-Footed Butterflies**
Vanessa cardui	Painted lady
AMPHIBIA	**AMPHIBIANS**
Plethodontidae	**Lungless Salamanders**
Batrachoseps major	Garden slender salamander

REPTILIA	**REPTILES**
Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard
Uta stansburiana	Common side-blotched lizard
Scincidae	**Skinks**
Plestiodon skiltonianus	Western skink
Anguidae	**Alligator Lizards and Relatives**
Elgaria multicarinata	Southern alligator lizard
AVES	**BIRDS**
Anatidae	**Ducks, Geese, and Swans**
Anas platyrhynchos	Mallard
Odontophoridae	**New World Quail**
Callipepla californica	California quail
Phalacrocoracidae	**Cormorants**
Phalacrocorax auritus	Double-crested cormorant
Ardeidae	**Herons, Bitterns, and Allies**
Ardea herodias	Great blue heron
Accipitridae	**Hawks, Kites, Eagles, and Allies**
Circus cyaneus	Northern harrier
Buteo lineatus	Red-shouldered hawk
Columbidae	**Pigeons and Doves**
* *Streptopelia decaocto*	Eurasian collared-dove
Zenaida macroura	Mourning dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	Western kingbird
Corvidae	**Crows and Jays**
Corvus brachyrhynchos	American crow

Corvus corax	Common raven
Alaudidae	**Larks**
Eremophila alpestris	Horned lark
Aegithalidae	**Long-Tailed Tits and Bushtits**
Psaltriparus minimus	Bushtit
Troglodytidae	**Wrens**
Troglodytes aedon	House wren
Sylviidae	**Old World Warblers and Gnatcatchers**
Polioptila caerulea	Blue-gray gnatcatcher
Turdidae	**Thrushes**
Catharus guttatus	Hermit thrush
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	Northern mockingbird
Sturnidae	**Starlings**
* *Sturnus vulgaris*	European starling
Motacillidae	**Wagtails and Pipits**
Anthus rubescens	American pipit
Parulidae	**Wood Warblers**
Vermivora celata	Orange-crowned warbler
Dendroica coronata	Yellow-rumped warbler
Dendroica nigrescens	Black-throated gray warbler
Dendroica townsendi	Townsend's warbler
Geothlypis trichas	Common yellowthroat
Wilsonia pusilla	Wilson's warbler
Thraupidae	**Tanagers**
Piranga ludoviciana	Western tanager
Emberizidae	**Emberizids**
Pipilo maculatus	Spotted towhee
Pipilo crissalis	California towhee
Spizella breweri	Brewer's sparrow
Passerculus sandwichensis	Savannah sparrow
Passerella iliaca	Fox sparrow
Melospiza melodia	Song sparrow
Melospiza lincolnii	Lincoln's sparrow
Zonotrichia leucophrys	White-crowned sparrow
Zonotrichia atricapilla	Golden-crowned sparrow

Cardinalidae	**Cardinals, Saltators, and Allies**
Pheucticus melanocephalus	Black-headed grosbeak
Passerina amoena	Lazuli bunting
Icteridae	**Blackbirds**
Icterus cucullatus	Hooded oriole
Icterus bullockii	Bullock's oriole
Fringillidae	**Fringilline and Cardueline Finches and Allies**
Carpodacus mexicanus	House finch
Carduelis pinus	Pine siskin
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch
Passeridae	**Old World Sparrows**
* *Passer domesticus*	House sparrow
MAMMALIA	**MAMMALS**
Sciuridae	**Squirrels, Chipmunks, and Marmots**
Spermophilus beecheyi	California ground squirrel
Geomyidae	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Audubon's cottontail
Procyonidae	**Raccoons and Allies**
Procyon lotor	Raccoon

Taxonomy and nomenclature are based on the following.

Damselflies and dragonflies: Manolis, T. (2003, Dragonflies and Damselflies of California, University of California Press, Berkeley).

Butterflies: North American Butterfly Association (2001, NABA checklist and English Names of North American Butterflies, Second Edition, North American Butterfly Association, Morristown, New Jersey).

Amphibians and reptiles: Crother, B.I. ed. (2008. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 37) for species

taxonomy and nomenclature; Stebbins, R.C. (2003, A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, 2004, 2005, 2006, 2007, and 2008 supplements; see http://aou.org.whsites.net/checklist/index.php3).

Mammals: Wilson, D.E., and D.M. Reeder, eds. (2005. Mammal Species of the World, 3rd ed. Johns Hopkins University Press, Baltimore, Maryland; see http://vertebrates.si.edu/mammals/msw/).

APPENDIX C

SUMMARY OF SPECIAL-INTEREST SPECIES

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
PLANTS				
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Found in sandy soils in Chaparral, Coastal Scrub, & Dunes below 5,000 ft elev. Known from Ventura County to Baja California and east to Arizona.	Jan.–Sep.	Fed.: --- State: SP CNPS: 1B.1	**Low.** Not observed during surveys. Marginally suitable habitat and soils present on site.
Aphanisma *Aphanisma blitoides*	Coastal Bluff Scrub, Coastal Dunes, Coastal Sage Scrub below 1,000 ft elevation. A pop. in Laguna Beach along bluff at Arch Beach, and another at Reef Point & Crystal Cove.	April–May	US: -- CA: SP CNPS: 1B.2	**Low.** Not observed. Although known to occur along coast in local area, existing site conditions would likely preclude its occurrence.
Coulter's saltbush *Atriplex coulteri*	Alkaline depressions in Coastal Bluff Scrub, Coastal Dunes, Coastal Scrub, Valley & Foothill Grassland; Los Angeles County east to western San Bernardino County and south to Baja California.	March–October	US: -- CA: SP CNPS: 1B.2	**Present.** 18 individuals observed on site during LSA surveys. A single population occurring along eastern edge of Central Parcel.
South Coast saltscale *Atriplex pacifica*	Annual herb found in Coastal Sage Scrub, Playas and Chenopod Scrub in association with alkali soils.	March–October	US: -- CA: SP CNPS: 1B.2	**Not expected.** Not observed. Site lacks suitable soils for this species.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	Alkaline flats and coastal bluffs below 660 ft elevation. Coastal Bluff Scrub, Coastal Sage Scrub; Coastal Los Angeles County to Laguna Beach, Orange County.	April–October	US: -- CA: SP CNPS: 1B.2	**Not expected.** Not observed. Site lacks suitable soils and conditions for this species.
Thread-leaved brodiaea *Brodiaea filifolia*	Clay soils; open Grasslands at edges of Vernal Pools or floodplains. Sea level to 2,500 ft elevation. Los Angeles, Orange, Riverside, and San Diego Counties.; known from about 20 locations.	April–June	US: FT CA: CE CNPS: 1B.1	**Not expected.** Not observed during surveys. Site lacks suitable habitat and conditions to support this species.
Intermediate mariposa lily *Calochortus weedii* var. *intermedius*	Rocky areas in hills with Annual Grassland and Coastal Sage Scrub. Below 2,000 ft elevation. Los Angeles, Orange and Riverside Counties.	June–July	US: -- CA: SP CNPS: 1B.2	**Moderate.** Suitable habitat on site. Although known to occur regionally, not observed on site.
Southern tarplant *Centromadia parryi* ssp. *australis*	Coastal Salt Marsh margins, vernally mesic Grasslands, Vernal Pools, often in ruderal, disturbed areas (e.g., drainage ditches, dirt road edges, road ruts, etc.) below 1,400 ft elevation. Coastal Southern California from Santa Barbara County south to north Baja California; possibly Santa Catalina Island.	Jun.–Nov.	Fed.: --- State: SP CNPS: 1B.1	**Low.** Not observed during surveys. Suitable habitat generally lacking or only marginally suitable on site.
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	Dry rocky or stony places below 1,500 ft elevation, often on serpentine. Annual Grassland and Coastal Sage Scrub. Coastal areas from Ventura County south to Baja California.	May–June	US: -- CA: SP CNPS: 1B.1	**Low.** Not observed during surveys. Although known to occur in other coastal locations, site conditions lacking or only marginally suitable for this species.

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
Many-stemmed dudleya *Dudleya multicaulis*	Often on clay soils also around granitic outcrops in Chaparral, Coastal Sage Scrub, and Grassland; below 2,500 ft elevation. Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.	May–July	US: -- CA: SP CNPS: 1B.2	**Low.** Not observed during surveys. Although known to occur in other coastal locations, conditions generally lacking on site.
Cliff spurge *Euphorbia misera*	Primarily on rocky, sea bluffs in Coastal Bluff Scrub below 500 ft elevation. Corona Del Mar (Orange County) south to Baja California, San Clemente & Santa Catalina Islands; isolated population in Creosote Bush Scrub at Whitewater, Riverside County.	January–August	US: -- CA: SP CNPS: 2.2	**Absent.** Not observed. Site lacks suitable habitat for this species. Habitat conspicuous enough that it would have been detected if present on site.
San Diego barrel cactus *Ferocactus viridescens*	On dry hills in Chaparral, Coastal Sage Scrub, and Grassland; below 1,500 ft elevation. Orange and San Diego Counties to Baja California.	May–June	US: -- CA: SP CNPS: 2.1	**Absent.** Not observed. Habitat conspicuous enough that it would have been detected if present on site.
Vernal barley *Hordeum intercedum*	Saline streambeds; alkaline flats & depressions in Grasslands; Vernal Pools. Cismontane So. California, incl. Channel Islands, to northwest. Baja California.	Mar.–Jun.	Fed.: --- State: SP CNPS: 3.2	**Moderate.** Not observed during surveys. Reportedly occurring on site during previous surveys.
Mesa horkelia *Horkelia cuneata* ssp. *puberula*	Sandy or gravelly soils in Maritime Chaparral, Cismontane Woodland, Coastal Sage Scrub between approx. 200 and 2,700 ft elevation. Primarily coastal Southern California from San Luis Obispo to northern San Diego Counties.	February–July (sometimes as late as Sept.)	US: -- CA: SP CNPS: 1B.1	**Low.** Not observed. Site lacks typical conditions suitable for supporting this species.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Marshes, Playas, Vernal Pools, Grassland; sea level to 3,000 ft elevation. Inland Southern California and along coast from San Luis Obispo County to Baja California.	March–June	US: -- CA: SP CNPS: 1B.1	**Low.** Not observed. Site lacks suitable habitat and conditions for this species.
Mud nama *Nama stenocarpum*	Muddy places (lake margins, riverbanks, etc.) below 1,000 ft elevation. Los Angeles County to Baja California east across Colorado Desert to Texas & north Mexico.	January–July	US: -- CA: SP CNPS: 2.2	**Low.** Not observed. Only marginally suitable conditions for this species exist along drainages.
Prostrate navarretia *Navarretia prostrata*	Mesic conditions assoc. w/ Coastal Scrub, Valley & Foothill Grassland (alkaline), and Vernal Pools below 2,300 ft elevation. Los Angeles, Orange, San Diego, and western Riverside Counties. Monterey and Merced Counties in northern California.	Apr.–Jul.	Fed.: --- State: SP CNPS: 1B.1	**Low.** Not observed. Suitable conditions generally lacking on site.
Allen's pentachaeta *Pentachaeta aurea* ssp. *allenii*	Valley & Foothill Grasslands, and openings in Coastal Sage Scrub between approximately 200 and 1,700 ft elevation. Known from fewer than 20 occurrences in Orange County only.	March–June	US: -- CA: SP CNPS: 1B.1	**Low to moderate.** Although suitable habitat for this species exists on site, it was not observed on site during surveys conducted at the optimal time of year for this species.

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
Nuttall's scrub oak *Quercus dumosa*	An evergreen shrub generally found on sandstone and sandy soils along the immediate coast below 1,000 ft elevation. Primarily on north-facing slopes in Chaparral; occasionally in Coastal Sage Scrub. Patchy distribution from south Santa Barbara County into Baja California.	February–March	US: -- CA: SP CNPS: 1B.1	**Absent.** Not observed during surveys. Habitat conspicuous enough that it would have been detected if present on site.
Big-leaved crownbeard *Verbesina dissita*	90% in Southern Maritime Chaparral, 10% in Coastal Sage Scrub; Steep, rocky, primarily north-facing slopes within 1.5 miles of ocean, in gravelly soils. Mill Creek, San Bernardino Mts.; South Laguna Beach (Arch Beach/hills adjacent to Hobo Canyon), Orange County; north Baja California.	April–July	US: FT CA: CT CNPS: 1B.1	**Low.** Not observed during surveys. Vegetative cover sufficiently open to allow for thorough inspection of shrubs and understory. This species would have been detected if present on site. Also, site generally lacks the primary habitat and conditions that typically support this species.
CRUSTACEANS				
San Diego fairy shrimp *Branchinecta sandiegoensis*	Ponded areas such as vernal pools, cattle watering holes, basins, etc. Found primarily in coastal San Diego County, but recently discovered in southern and central Orange County.	Spring	US: FE CA: --	**Not expected.** Not known locally. Suitable habitat and conditions lacking on site. Conducted fairy shrimp dry season surveys of two shallow depressions on site and yielded negative results.
AMPHIBIANS				
Western spadefoot *Spea hammondii*	Grasslands and occasionally hardwood woodlands; largely terrestrial but for breeding, requires rainpools or other ponded water for 3+ weeks; burrows in loose soils during dry season; Central Valley and foothills, coast ranges, inland valleys, to Baja California.	Oct.–Apr. (following onset of winter rains)	US: -- CA: CSC	**Not expected.** Habitat appears marginal and no potential breeding pools observed. Site isolated.
REPTILES				
California legless lizard *Anniella pulchra pulchra*	Central California to northern Baja California. Frequents loose soil and humus of relatively open habitats. Susceptible to drying, and lives only where damp soil is available.	Nearly year-round	US: -- CA: CSC	**Not expected.** Habitat appears marginal; site isolated.
Coast (San Diego) horned lizard *Phrynosoma coronatum (blainvillei*)	Wide variety of habitats including coastal sage scrub, grassland, riparian woodland; typically on or near loose sandy soils; coastal and inland areas from Ventura County to Baja California.	Apr.–July with reduced activity Aug.–Oct.	US: -- CA: CSC	**Not expected.** Habitat appears marginal and no food sources (e.g., harvester ants) were observed; site isolated.
Orange-throated whiptail *Aspidoscelis hyperthra*	Floodplains and terraces with perennial plants and open areas nearby; sea level to 3,000 ft elevation; inland and coastal valleys of Riverside, Orange, and San Diego counties to Baja California.	Mar.–July with reduced activity August–October	US: -- CA: CSC	**Not expected.** Habitat appears marginally suitable; site isolated.

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
Coastal western whiptail *Aspidoscelis tigris stejnegeri*	Wide variety of habitats including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	Apr.–Aug.	US: -- CA: SA	**Not expected**. Habitat appears suitable; site isolated.
San Bernardino ringneck snake *Diadophis punctatus modestus*	Under surface objects along drainage courses, in mesic chaparral and oak and walnut woodland communities. Moist habitats of southwestern California from about Ventura to Orange Counties.	Year-round	US: -- CA: SA	**Not expected**. Habitat appears suitable; site isolated.
Coast patch-nosed snake *Salvadora hexalepis virgultea*	Coastal chaparral, washes, sandy flats and rocky areas from San Luis Obispo County to northwestern Baja California.	Active diurnally throughout most of the year	US: -- CA: CSC	**Not expected.** Habitat appears marginally suitable; site isolated..
Northern red-diamond rattlesnake *Crotalus ruber ruber*	Desert scrub, thornscrub, open chaparral and woodland; occasional in grassland and cultivated areas. Prefers rocky areas and dense vegetation. Orange and western Riverside Counties south to Baja California.	Mid-spring to mid fall	US: -- CA: CSC	**Not expected**. Habitat appears marginally suitable; site isolated..
BIRDS				
White-tailed kite *Elanus leucurus*	Open country in South America and southern North America.	Year-round	US: -- CA: CFP	**Low.** Occasional visitors are possible.
Northern harrier *Circus cyaneus*	Open country in the Temperate Zone worldwide.	Year-round	US: -- CA: CSC (nesting)	**Species observed, but nesting not expected.**
Cooper's hawk *Accipiter cooperi*	Primarily forests and woodlands throughout North America.	Year-round	US: -- CA: SA (nesting)	**Low.** Individuals probably visit the site, but nesting is unlikely.
Merlin *Falco columbarius*	Open country; breeds in the Holarctic and winters south to the Tropics	Fall & winter	US: -- CA: SA	**Moderate.** Probably forages occasionally in the area.
American peregrine falcon *Falco peregrinus anatum*	Widespread, but scarce and local throughout North America. Historically, nested in Laguna Beach; currently nests on buildings and bridges in the Los Angeles Basin.	Year-round	US: -- CA: *, CFP	**Moderate.** Probably forages occasionally in the area.
Burrowing owl *Athene cunicularia*	Open country in western North America.	Year-round	US: -- CA: CSC (Burrow sites & some wintering sites)	**Low.** Now rare and local in Orange County. Not seen during extensive 2009 surveys.

* On August 6, 2009, the Fish and Game Commission voted unanimously to remove American peregrine falcon from California's Endangered Species list. The official delisting is pending agency finalization.

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
Costa's hummingbird *Calypte costae*	Primarily deserts, arid brushy foothills, and chaparral in the southwestern United States and northwestern Mexico.	Spring through fall	US: --- CA: SA (nesting)	**Low.** Nesting birds in Orange County are generally restricted to more inland areas.
Allen's hummingbird *Selasphorus sasin*	Chaparral, open oak woodland riparian woodland and residential areas on the breeding grounds from southwestern Oregon to southwestern California; primarily montane woodland on the wintering grounds in central Mexico.	Spring through fall	US: --- CA: SA (nesting)	**Observed.** Nesting is likely**.**
Nuttall's woodpecker *Picoides nuttallii*	Primarily oak, pine-oak, and riparian woodland in California and northwestern Baja California.	Year round	US: --- CA: SA (nesting)	**Not expected.** Habitat is marginal and isolated.
Loggerhead shrike *Lanius ludovicianus*	Open country in much of North America.	Year-round	US: -- CA: CSC (nesting)	**Low.** Now very rare and local in Orange County. Not observed during extensive 2009 surveys.
Least Bell's vireo *Vireo bellii pusillus*	Formerly occurred in well-developed riparian areas from north-central California to northwestern Baja California. Now absent from the northern portion of its range, but populations in Southern California have rebounded in response to intense management efforts. Winters in western Mexico.	Apr.–Sept.	US: FE CA: CE	**Not expected.** Habitat is marginal and isolated. Not observed during extensive surveys in 2009.
California horned lark *Eremophila alpestris actia*	Open grasslands and fields, agricultural areas from northern coastal California to northwestern Baja California.	Year-round	US: --- CA: SA	**Species observed, but subspecies unknown.** Occasional visitors are expected; nesting is not.
San Diego cactus wren *Campylorhynchus brunneicapillus sandiegensis*	Inhabits cactus scrub from southern Orange County to northwestern Baja California.	Year-round	US: -- CA: CSC	**Not expected.** Habitat is probably unsuitable and is isolated. Also, probably outside the taxon's range.
Coastal California gnatcatcher *Polioptila californica californica*	Coastal sage scrub; occurs only in cismontane Southern California and northwestern Baja California in low-lying foothills and valleys.	Year-round	US: FT CA: CSC	**Not expected.** Occurred formerly, but not observed during 2009 protocol surveys.
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	Steep, rocky coastal sage scrub and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	Year-round	US: -- CA: SA	**Not expected.** Habitat is marginal and isolated.
Tricolored blackbird	Open country in western Oregon, California, and northwestern Baja California.	Year-round	US: -- CA: CSC	**Low.** Occasional foraging birds may visit the site; nesting is not expected.

APPENDIX C
SUMMARY OF SPECIAL-INTEREST SPECIES

SPECIES	HABITAT AND DISTRIBUTION	ACTIVITY PERIOD	STATUS DESIGNATION	OCCURRENCE PROBABILITY
Agelaius tricolor				
MAMMALS				
Pacific pocket mouse *Perognathus longimembris pacificus*	Historically occupied open habitats on sandy soils along the coast from Los Angeles to the Mexican border. Now known from only four sites in Orange and San Diego Counties.	Apr.–Sept.	US: FE CA: CSC	**Not expected.** Habitat suitability may be marginal; site is isolated. Not found during 2009 protocol trapping survey.
San Diego desert woodrat *Neotoma lepida intermedia*	Frequents poorly vegetated arid lands and is especially associated with cactus patches. Occurs along the Pacific slope from about San Luis Obispo to northwestern Baja California.	Year-round	US: -- CA: CSC	**Not expected.** Not found during small mammal trapping survey.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Open country of coastal Southern California and northern Baja California.	Year-round	US: -- CA: CSC	**Not expected.** Probably occurred formerly, but the species is now rare and local in coastal Orange County. Not seen during extensive 2009 surveys.
Western mastiff bat *Eumops perotis californicus*	Ranged historically throughout much of the southwestern United States and northwestern Mexico. In California, most records are from rocky areas at low elevations where roosting occurs primarily in crevices.	Warmer months. Nocturnal	US: -- CA: CSC	**Low.** Observed regularly in the general vicinity as foraging animals range widely.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	Primarily arid lowland scrub in the vicinity of cliffs and riparian areas in the southwestern United States and western Mexico.	Warmer months	US: --- CA: CSC	**Not expected.** Relatively rare and local in Orange County.
Western red bat *Lasiurus blossevillii*	Forages over a wide range of habitats, but generally roosts in woodlands and forests. Ranges from southwestern Canada through the western United States and Middle America to South America.	Year-round; primarily warmer months	US: --- CA: SA	**Not expected.** Relatively rare and local in Orange County.
Hoary bat *Lasiurus cinereus*	Wooded areas over much of North America.	Primarily winter months	US: --- CA: SA	**Low.** Habitat suitability may be marginal; site is isolated.
Southwestern yellow bat *Lasiurus xanthinus*	Varied habitats, but usually near water; often associated with palm trees. Southwestern United States to southern Mexico.	Year-round; primarily warmer months	US: --- CA: CSC	**Not expected.** Relatively rare and local in Orange County.
Pallid bat *Antrozous pallidus*	Varied habitats in western North America.	Year-round. Nocturnal	US: -- CA: CSC	**Low.** Habitat suitability may be marginal; site is isolated.
Western small-footed myotis *Myotis ciliolabrum*	Roosts in cliffs; forages nearby.	Warmer months	US: -- CA: SA	**Low.** Habitat suitability may be marginal; site is isolated.
Yuma myotis *Myotis yumanensis*	Varied habitats in western North America.	Nocturnal; warmer months	US: -- CA: SA	**Low.** Habitat suitability may be marginal; site is isolated.

Legend

US: Federal Classifications

FE Taxa federally listed as Endangered.
FT Taxa federally listed as Threatened.
FPE Taxa proposed to be federally listed as Endangered.
FPT Taxa proposed to be federally listed as Threatened.

CA: State Classifications

CE Taxa State-listed as Endangered.
CT Taxa State-listed as Threatened.
CR Taxa State-listed as Rare.
CFP California Fully Protected. Refers to taxa legally protected under special legislation enacted prior to the California Endangered Species Act.
CCE Candidate for State listing as Endangered.
CCT Candidate for State listing as Threatened.
CSC Taxa identified as California Species of Special Concern.
SA Special Animal. Refers to taxa included on the California Natural Diversity Database "Special Animals" List.
SP Special Plant. Refers to taxa included on the California Natural Diversity Database "Special Plants" List.

CNPS: California Native Plant Society Classifications

1A Plants presumed by CNPS to be extinct in California.
1B Plants considered by CNPS to be rare, threatened or endangered in California and elsewhere.
2 Plants considered by CNPS to be rare, threatened or endangered in California, but more common elsewhere.
3 Plants suggested by CNPS for consideration as endangered but about which more information is needed.
4 Plants of limited distribution whose status is monitored by CNPS.

CNPS "Threat Code" extensions and their meanings:

.1 Plants considered by CNPS to be seriously endangered in California.
.2 Plants considered by CNPS to be fairly endangered in California.
.3 Plants considered by CNPS to be not very endangered in California.

APPENDIX D

COASTAL CALIFORNIA GNATCATCHER REPORT

LSA ASSOCIATES, INC.
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IRVINE, CALIFORNIA 92614
949.553.0666 TEL
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BERKELEY
CARLSBAD
FORT COLLINS
FRESNO
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO
SOUTH SAN FRANCISCO

June 5, 2009

Sandra Marquez
United States Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011

Lyann Comrack
Nongame Wildlife Program
California Department of Fish and Game
1812 Ninth Street
Sacramento, CA 95811

Subject: Coastal California Gnatcatcher Survey Results: Newport Beach City Hall and Park Development Plan Project, March–April 2009

Dear Ms. Marquez and Ms. Comrack:

This letter report documents the results of protocol surveys for the coastal California gnatcatcher (*Polioptila californica californica*) conducted by LSA Associates, Inc. (LSA). Surveys were conducted on the Newport Beach City Hall and Park Development Plan project site located in the City of Newport Beach, Orange County, California (Figures 1 and 2, attached). The coastal California gnatcatcher is a United States Fish and Wildlife Service (USFWS) federally threatened species that is known to have occupied the survey site in the past.

No California gnatcatchers were found at this time.

STUDY AREA

The project site consists of three separate parcels commonly referred to as the northern, central, and southern parcels and is located near Fashion Island along MacArthur Boulevard between Pacific Coast Highway and San Joaquin Hills Road in the City of Newport Beach, Orange County, California. The southern parcel is completely developed (i.e., Newport Beach Public Library), while the northern and central parcels are both currently undeveloped open space separated by San Miguel Drive. The study area is centered on approximately 33˚36'37" N, 117˚52'17" W and has an average elevation of approximately 250 feet above mean sea level. Vegetation on site is dominated by coastal sage scrub and ruderal, nonnative grasslands.

METHODS

Richard Erickson conducted six protocol surveys from March 17 to April 21, 2009. During each of the surveys, he walked slowly through the coastal sage scrub and adjacent habitats, listening for coastal California gnatcatchers. A taped coastal California gnatcatcher recording was played periodically along the survey route.

Mr. Erickson's surveys were conducted pursuant to Federal Fish and Wildlife Permit TE-777965-8 (April 8, 2008–April 7, 2012) and a temporary authorization from the California Department of Fish and Game (CDFG) (May 12, 2003–March 31, 2007; renewal request submitted March 26, 2007, extending coverage indefinitely) in lieu of a Memorandum of Understanding between LSA and the CDFG. The survey schedule and conditions are shown in Table A.

Table A: Survey Schedule and Conditions

Date (2009)	Time	Weather	Surveyor
March 17	0750–1020	Clear, mild, calm	RE
March 24	0750–0940	Clear, cool, light wind	RE
March 31	0820–1000	Clear, mild, calm	RE
April 7	0805–0940	Clear, mild, calm	RE
April 14	0805–0935	Mostly cloudy, mild, light wind	RE
April 21	0715–0915	Partly cloudy, mild, light wind	RE

Surveyor: RE = Richard Erickson.

RESULTS

No coastal California gnatcatchers were observed during the surveys. Neither was the species observed during a five-night protocol survey for the endangered Pacific pocket mouse (*Perognathus longimembris pacificus*) at the end of April 2009.

Also, the brown-headed cowbird (*Molothrus ater*)—a brood parasite of California gnatcatchers and other passerines—was not detected on any survey.

If you have any questions or comments, please call (949) 553-0666 or email me at richard.erickson@lsa-assoc.com.

Sincerely,

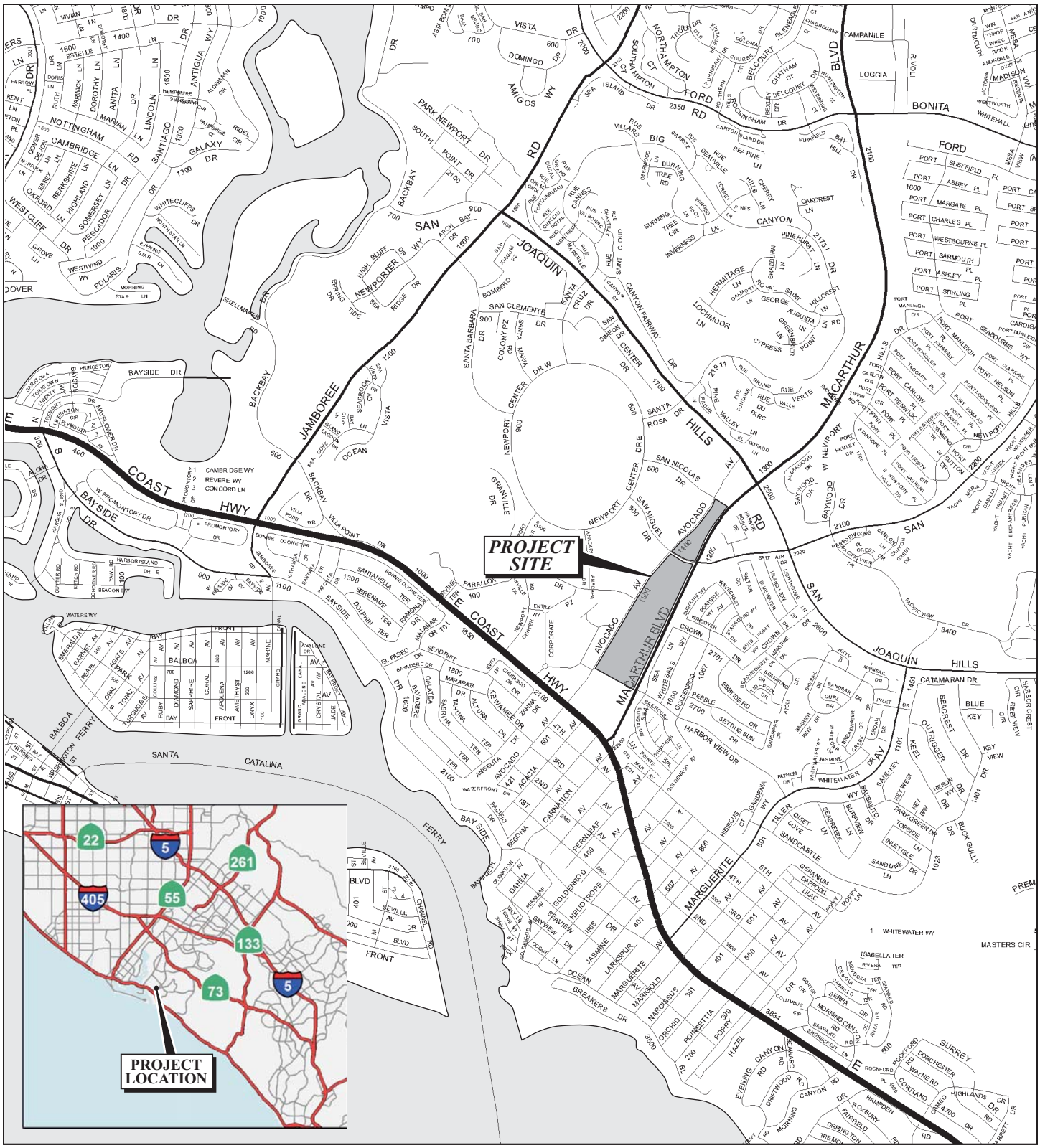
LSA ASSOCIATES, INC.

Richard Erickson
Biologist/Associate

Attachments: Figures 1 and 2
Appendix A: Annual Species Detected

I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENT MY WORK:

SURVEYOR:	PERMIT NUMBER:	DATE:
Richard Erickson	TE-777965-7	June 5, 2009



LSA

FIGURE 1

N

0 1000 2000

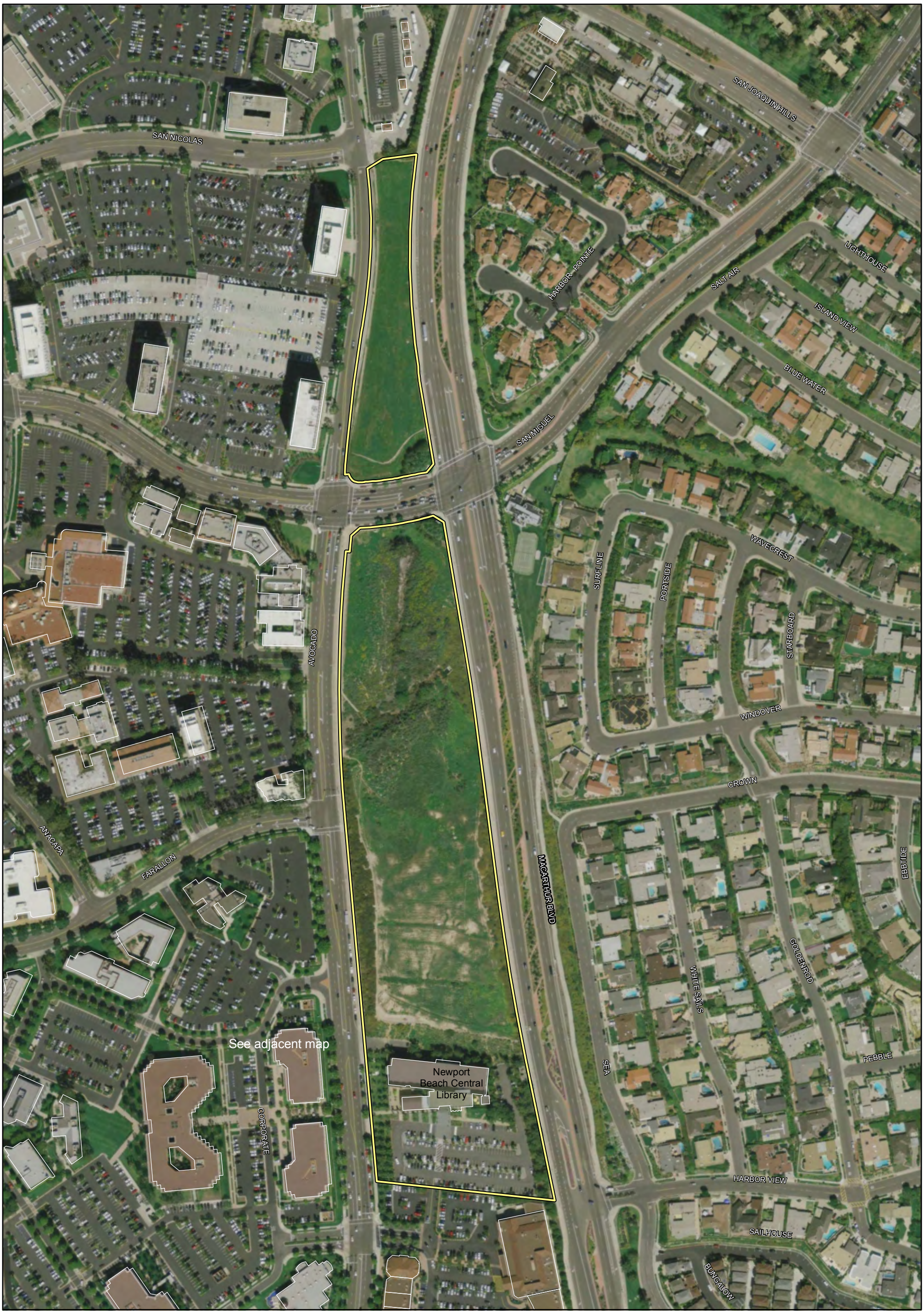
FEET

SOURCE: The Thomas Guide

Newport Beach City Hall and Park Development Plan

Project Location

I:\CNB0901\G\Location.cdr (3/24/09)



LSA

LEGEND

Project Boundary

FIGURE 2

0 125 250

FEET

SOURCE: Digital Globe (4/08); City of Newport Beach (2/06, 1/09)

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Newport Beach City Hall and Park Development Plan

California Gnatcatcher Survey Area

APPENDIX A
ANIMAL SPECIES DETECTED

APPENDIX A
ANIMAL SPECIES DETECTED

This is a list of the conspicuous aerial insects, amphibians, reptiles, birds, and mammals noted in the study area by LSA biologists. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

* Species not native to the study area

ZYGOPTERA	**DAMSELFLIES**
Coenagrionidae	**Pond Damsels**
cf. *Argia vivida*	Vivid dancer
ANISOPTERA	**TYPICAL DRAGONFLIES**
Libellulidae	**Cruisers, Emeralds, Baskettails, and Skimmers**
Sympetrum corruptum	Variegated meadowhawk
Pantala hymenaea	Spot-winged glider
LEPIDOPTERA	**BUTTERFLIES**
Pieridae	**Whites and Sulphurs**
* cf. *Pieris rapae*	Cabbage white
Lycaenidae	**Gossamer-Wing Butterflies**
Plebejus acmon	Acmon blue
Nymphalidae	**Brush-Footed Butterflies**
Vanessa cardui	Painted lady
AMPHIBIA	**AMPHIBIANS**
Plethodontidae	**Lungless Salamanders**
Batrachoseps major	Garden slender salamander
REPTILIA	**REPTILES**
Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard
Uta stansburiana	Common side-blotched lizard
Scincidae	**Skinks**
Plestiodon skiltonianus	Western skink

Anguidae	**Alligator Lizards and Relatives**
Elgaria multicarinata	Southern alligator lizard
AVES	**BIRDS**
Anatidae	**Ducks, Geese, and Swans**
Anas platyrhynchos	Mallard
Odontophoridae	**New World Quail**
Callipepla californica	California quail
Phalacrocoracidae	**Cormorants**
Phalacrocorax auritus	Double-crested cormorant
Ardeidae	**Herons, Bitterns, and Allies**
Ardea herodias	Great blue heron
Accipitridae	**Hawks, Kites, Eagles, and Allies**
Circus cyaneus	Northern harrier
Buteo lineatus	Red-shouldered hawk
Columbidae	**Pigeons and Doves**
* *Streptopelia decaocto*	Eurasian collared-dove
Zenaida macroura	Mourning dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	Western kingbird
Corvidae	**Crows and Jays**
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Alaudidae	**Larks**
Eremophila alpestris	Horned lark
Aegithalidae	**Long-Tailed Tits and Bushtits**
Psaltriparus minimus	Bushtit

Troglodytidae	**Wrens**
Troglodytes aedon	House wren
Sylviidae	**Old World Warblers and Gnatcatchers**
Polioptila caerulea	Blue-gray gnatcatcher
Turdidae	**Thrushes**
Catharus guttatus	Hermit thrush
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	Northern mockingbird
Sturnidae	**Starlings**
* *Sturnus vulgaris*	European starling
Motacillidae	**Wagtails and Pipits**
Anthus rubescens	American pipit
Parulidae	**Wood Warblers**
Vermivora celata	Orange-crowned warbler
Dendroica coronata	Yellow-rumped warbler
Dendroica nigrescens	Black-throated gray warbler
Dendroica townsendi	Townsend's warbler
Geothlypis trichas	Common yellowthroat
Wilsonia pusilla	Wilson's warbler
Thraupidae	**Tanagers**
Piranga ludoviciana	Western tanager
Emberizidae	**Emberizids**
Pipilo maculatus	Spotted towhee
Pipilo crissalis	California towhee
Spizella breweri	Brewer's sparrow
Passerculus sandwichensis	Savannah sparrow
Passerella iliaca	Fox sparrow
Melospiza melodia	Song sparrow
Melospiza lincolnii	Lincoln's sparrow
Zonotrichia leucophrys	White-crowned sparrow
Zonotrichia atricapilla	Golden-crowned sparrow
Cardinalidae	**Cardinals, Saltators, and Allies**
Pheucticus melanocephalus	Black-headed grosbeak
Passerina amoena	Lazuli bunting
Icteridae	**Blackbirds**
Icterus cucullatus	Hooded oriole
Icterus bullockii	Bullock's oriole

Fringillidae	**Fringilline and Cardueline Finches and Allies**
Carpodacus mexicanus	House finch
Carduelis pinus	Pine siskin
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch
Passeridae	**Old World Sparrows**
* *Passer domesticus*	House sparrow
MAMMALIA	**MAMMALS**
Sciuridae	**Squirrels, Chipmunks, and Marmots**
Spermophilus beecheyi	California ground squirrel
Geomyidae	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Audubon's cottontail
Procyonidae	**Raccoons and Allies**
Procyon lotor	Raccoon

Taxonomy and nomenclature are based on the following.

Damselflies and dragonflies: Manolis, T. (2003, Dragonflies and Damselflies of California, University of California Press, Berkeley).

Butterflies: North American Butterfly Association (2001, NABA checklist and English Names of North American Butterflies, Second Edition, North American Butterfly Association, Morristown, New Jersey).

Amphibians and reptiles: Crother, B.I. ed. (2008. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 37) for species taxonomy and nomenclature; Stebbins, R.C. (2003, A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, 2004, 2005, 2006, 2007, and 2008 supplements; see http://aou.org.whsites.net/checklist/index.php3).

Mammals: Wilson, D.E., and D.M. Reeder, eds. (2005. Mammal Species of the World, 3rd ed. Johns Hopkins University Press, Baltimore, Maryland; see http://vertebrates.si.edu/mammals/msw/).

APPENDIX E

PACIFIC POCKET MOUSE REPORT

LSA ASSOCIATES, INC.
20 EXECUTIVE PARK, SUITE 200
IRVINE, CALIFORNIA 92614
949.553.0666 TEL
949.553.8076 FAX

BERKELEY
CARLSBAD
FORT COLLINS
FRESNO
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO
SOUTH SAN FRANCISCO

July 1, 2009

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

Ms. Esther Burkett
Nongame Wildlife Program
California Department of Fish and Game
1812 9th Street
Sacramento, California 95811

Subject: Newport Beach City Hall and Park Development Plan Project, Pacific Pocket Mouse Trapping, April–May 2009

Dear Ms. Marquez and Ms. Burkett:

This letter report documents the results of five nights of small mammal live trapping on the Newport Beach City Hall and Park Development Plan project site located in the City of Newport Beach, Orange County, California. The trapping was conducted to determine the presence or absence of the endangered Pacific pocket mouse (*Perognathus longimembris pacificus*) according to survey guidelines established by the United States Fish and Wildlife Service. Trapping was conducted within areas of suitable habitat. No Pacific pocket mice were captured.

STUDY AREA

The project site is located in a remnant parcel of open space near Fashion Island along MacArthur Boulevard between Pacific Coast Highway and San Joaquin Hills Road in the City of Newport Beach, Orange County, California. Specifically, the site is located in an unsectioned portion of Township 7 South, and within portions of Ranges 10 and 11West, San Bernardino Baseline and Meridian, and is depicted on the United States Geological Survey (USGS) *Laguna Beach, California* 7.5-minute topographic quadrangle (Figure 1; all figures attached). Approximate Universal Transverse Mercator (UTM) coordinates are $^{37}20^{000m}$ on the north, $^{37}19^{600m}$ on the south, $^{4}19^{400m}$ on the west, and $^{4}19^{600m}$ on the east. The elevation of the study area averages approximately 250 feet above mean sea level. Vegetation on site is dominated by coastal sage scrub and ruderal, nonnative grasslands.

METHODS

Richard Erickson and/or Leo Simone were present and responsible for the entire trapping effort pursuant to the LSA Associates, Inc. (LSA) Federal 10(a)(1)(A) Permit TE-777965-8 (expires April 17, 2012) and a temporary authorization from the California Department of Fish and Game (Department) (May 12, 2003–March 31, 2007; renewal request submitted March 26, 2007, extending coverage indefinitely) in lieu of a Memorandum of Understanding between LSA and the Department.

A total of 100 Sherman live traps were set in two traplines, as shown in Figure 2. The traps were set and baited in the evening with a mixture of wild birdseed and rolled oats. Traps were checked at midnight and at dawn, at which time captured animals were identified and released unharmed.

RESULTS

Trapping resulted in 54 small mammal captures involving three species. A summary of all trapping results is shown in Table A. No Pacific pocket mice were captured.

Please contact Richard Erickson or Leo Simone if you have any questions about this survey.

Sincerely,

LSA ASSOCIATES, INC.

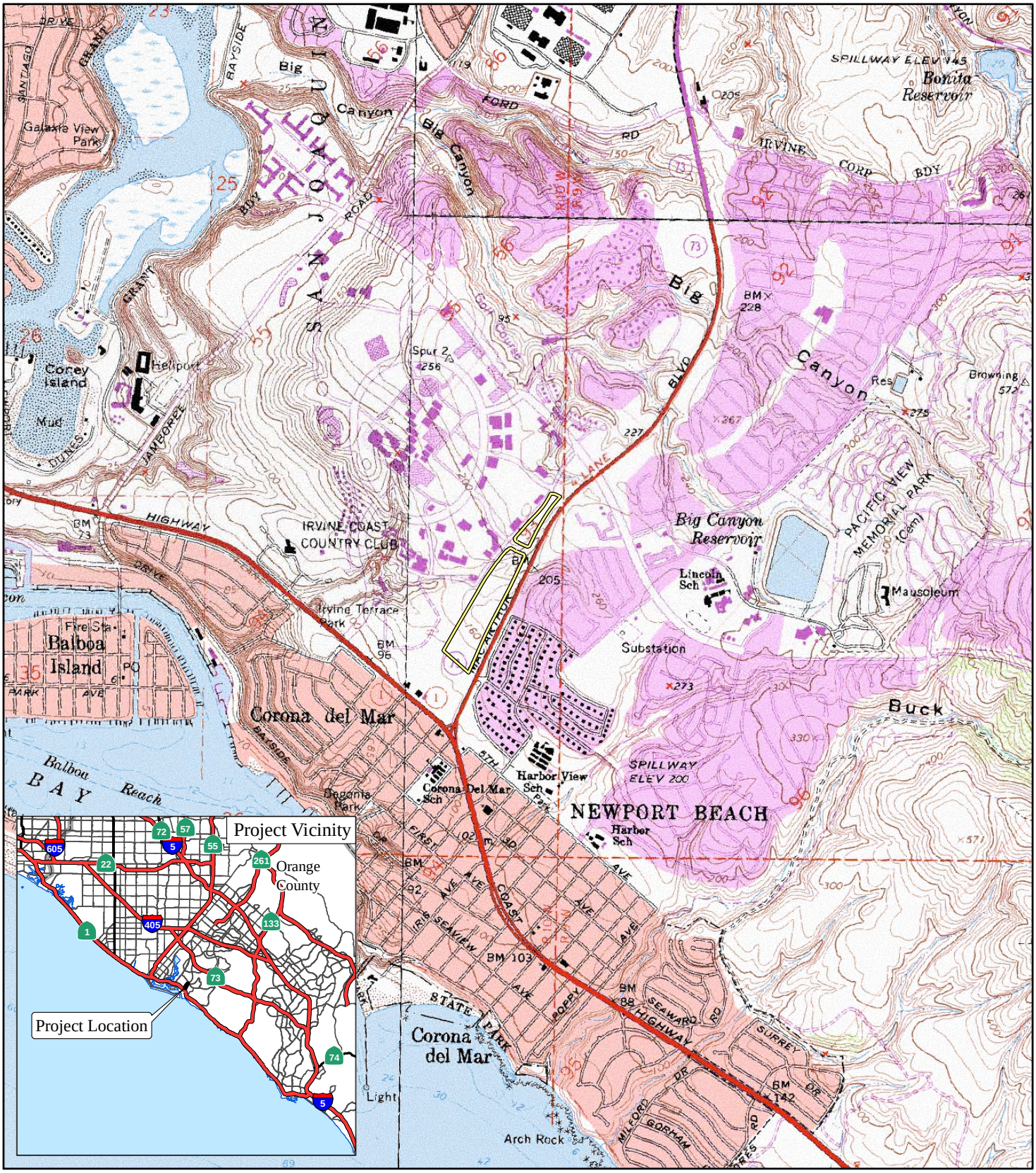
Richard Erickson
Associate/Biologist

Leo Simone
Senior Biologist

Attachments: Figures 1 and 2
Table A
CNDDB Form

I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENT MY WORK:

SURVEYOR:	PERMIT NUMBER:	DATE:
Richard Erickson	TE-777965-7	June 5, 2009
Leo Simone	TE-777965-7	June 5, 2009



LSA

LEGEND

Project Boundary

FIGURE 1

N

0 1000 2000

FEET

Newport Beach City Hall and Park Development Plan Project

Project Location Map

SOURCE: USGS 7.5min. Quad. (Tustin (1981), Newport Beach (1981), Laguna Beach (1981)); City of Newport Beach (1/09)

I:\CNB0901\GIS\ProjectVicinity_USGS.mxd (5/8/2009)

Northern Parcel

Central Parcel

SAN NICOLAS

SAN MIGUEL

A (50)

B (50)

MACARTHUR BLVD

AVOCADO

SEA

See adjacent map

Newport Beach Central Library

LSA

LEGEND

Project Boundary

Pacific Pocket Mouse Traplines (number of traps)

FIGURE 2

0 70 140

FEET

SOURCE: City of Newport Beach (2/06, 1/09)

I:\CNB0901\GIS\Trapline_Locations.mxd (6/3/2009)

Newport Beach City Hall and Park Development Plan

Trapline Locations

Table A: Newport Beach City Hall and Park Development Plan Project Site – Trapping Summary, April–May 2009

Date	Capture Totals										Grand Total
	Apr. 26 p.m.	**Apr. 27 a.m.**	**Apr. 27 p.m.**	**Apr. 28 a.m.**	**Apr. 228 p.m.**	**Apr. 29 a.m.**	**Apr. 29 p.m.**	**Apr. 30 a.m.**	**Apr. 30 p.m.**	**May 1 a.m.**	
Number of Traps Checked	100		100		100		100		100		**50**
Species											
California vole (*Microtus californicus*)	0	0	0	1	0	0	0	0	0	0	**1**
Western harvest mouse (*Reithrodontomys megalotis*)	1	0	2	0	8	3	4	7	4	5	**34**
House mouse (*Mus musculus*)	0	1	0	3	3	2	0	3	4	3	**19**
Total Rodent Captures	**1**	**1**	**2**	**4**	**11**	**5**	**4**	**10**	**8**	**8**	**54**

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/26/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: Perognathus longimembris pacificus

Common Name: Pacific pocket mouse

Species Found? ☐ Yes ☑ No — not present (If not, why?)

Total No. Individuals _____ Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ (Yes, Occ. #) ☐ no ☑ unk.

Collection? If yes: _____ (Number) _____ (Museum / Herbarium)

Reporter: Richard A. Erickson
Address: LSA Associates, 20 Executive Park, Suite 200, Irvine, CA 92614
E-mail Address: Richard.Erickson@LSA.assoc.com
Phone: 949 553-0666

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description *(please attach map AND/OR fill out your choice of coordinates, below)*

see attached

County: Orange Landowner / Mgr.: City of Newport Beach

Quad Name: _____ Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☐

Coordinates:

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

coastal sage scrub and
coastal sage scrub/grassland ecotone

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☐ Fair ☑ Poor

Immediate AND surrounding land use:

Visible disturbances: habitat onsite is fine but it is limited

Threats: in size and completely isolated

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

APPENDIX F

FAIRY SHRIMP DRY SEASON SURVEY REPORT

2009 DRY SEASON VERNAL POOL SHRIMP CYST SURVEYS OF THE NEWPORT BEACH CITY HALL AND PARK PROPERTY

NEWPORT BEACH, ORANGE COUNTY, CALIFORNIA

90-Day Report Submitted to:

United States Fish and Wildlife Service
Recovery Branch
2800 Cottage Way, Suite W2605
Sacramento, California 95825

Surveys Conducted for:

City of Newport Beach
3300 Newport Boulevard
Newport Beach, California 92663

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. CNB0901

LSA

June 2009

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FIGURES

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INTRODUCTION

This report presents the results of a 2009 dry season survey for listed vernal pool crustaceans conducted by LSA Associates, Inc (LSA) on the Newport Beach City Hall and Park Development Plan property (the proposed City Hall Property) located within the City of Newport Beach, Orange County, California. The proposed City Hall Property is located in the historical range of a federally listed vernal pool crustacean, San Diego fairy shrimp (*Branchinecta sandiegoensis*). There is no typical habitat for fairy shrimp on the site, but there are concerns that the species could occupy two shallow, topographically low areas located in the central portion of the property. This dry season survey was conducted to assist in determining whether these two features could be considered potential habitat for this listed species.

This survey was conducted under the authority of Permit TE-839213-2, issued to David Muth, an LSA employee, by the United States Fish and Wildlife Service (USFWS), and with the approval of Sandy Marquez of the USFWS via email on April 23, 2009. Preparation of this report within 90 days of the completion of work is required as a condition of LSA's permit.

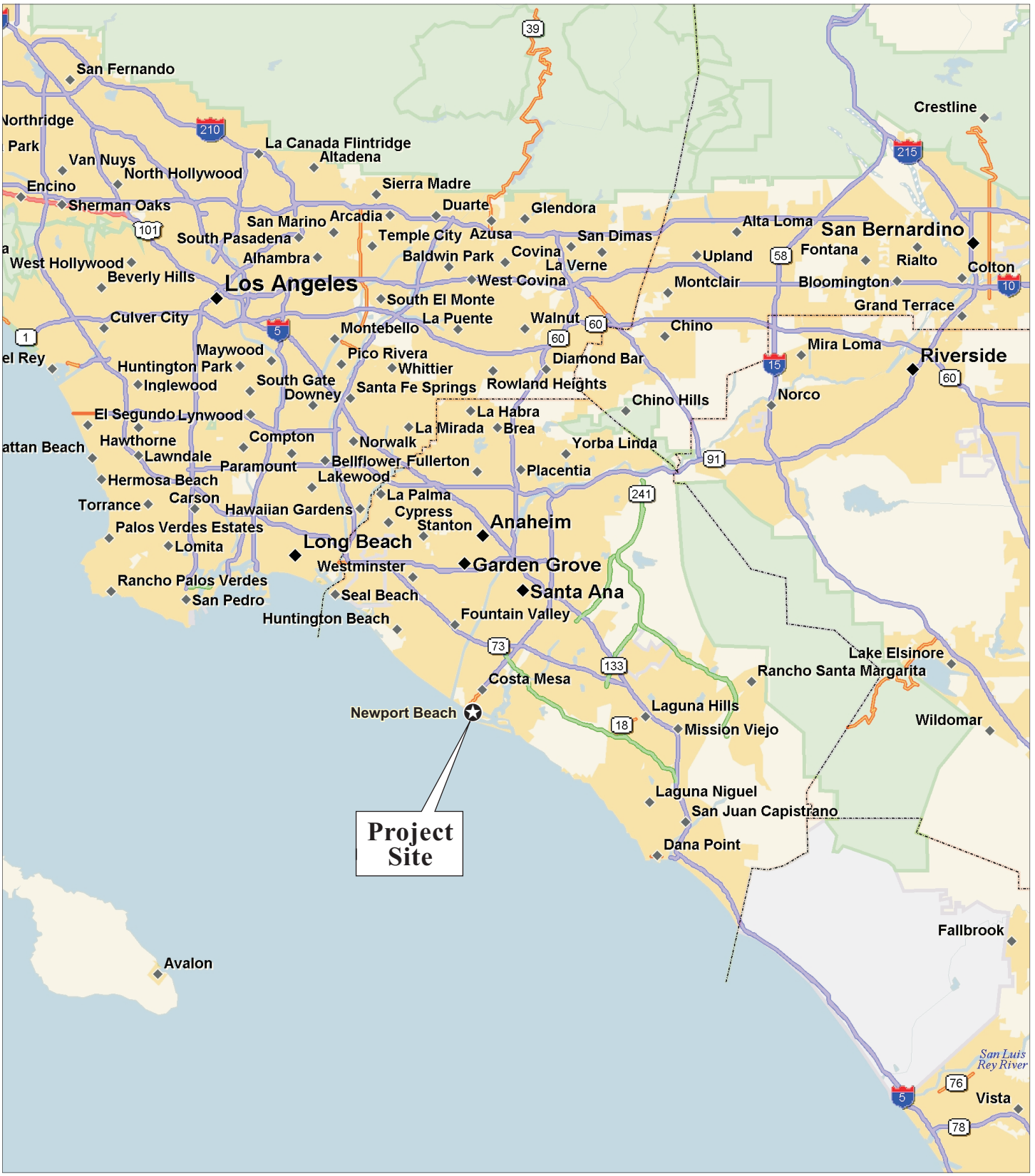
PROJECT LOCATION

The City Hall Property project site is located along MacArthur Boulevard between State Route 1 (Coast Highway) and San Joaquin Hills Road. The property is bordered by MacArthur Boulevard on the east and Avocado Avenue on the west. San Miguel Drive splits the property. The study area can be found in an unsectioned portion of Township 6 South, Range 10 West on the United States Geological Survey (USGS) *Tustin, California* 7.5′ quadrangle. The proposed City Hall Property is surrounded by lands that include residential subdivisions and rural residential and commercial uses. Figures 1 and 2 present the regional and project site locations.

ENVIRONMENTAL SETTING

Most of the proposed City Hall Property project site consists of degraded scrub and grassland habitats. Portions appear to have been occasionally disked and used for pasture or agriculture. Previous biological studies (MBA 2004) cite the occurrence of two "ephemeral ponds" in the Central Parcel of the City Hall Property. The shallow, low-lying area located nearer the intersection of Avocado Avenue and Farallon Drive is referred to as Area A, and the shallow depression located nearer MacArthur Boulevard is referred to as Area B (Figure 3).

The two low-lying areas (A and B) on the City Hall Property are dominated by upland plant species. The presence of upland perennial shrubs such as California sagebrush (*Artemisia californica*) in and around these shallow topographic depressions supports a conclusion that these areas do not pond with any regularity; otherwise, these upland shrubs could not persist. Dominant plant species in Area A



LSA

FIGURE 1

Newport Beach City Hall and Park Development Plan Project

Regional Location

N

0 10

MILES

SOURCE: ©2006 DeLORME STREET ATLAS USA®2006

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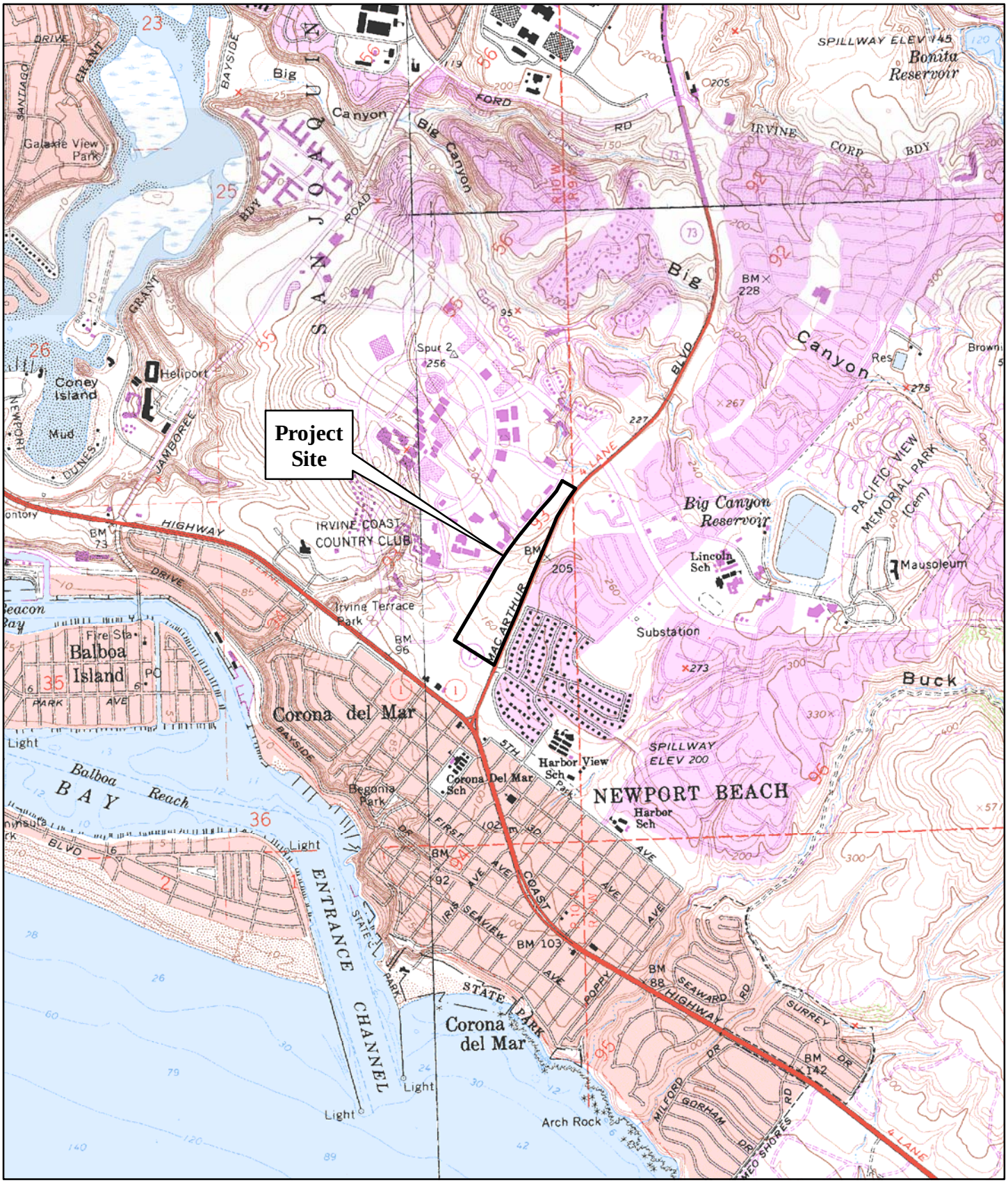

LSA

FIGURE 2

Newport Beach City Hall and Park Development Plan

Project Site Location

SOURCE: USGS 7.5' QUADS - LAGUNA BEACH, NEWPORT BEACH, AND TUSTIN, CALIF.

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LSA

LEGEND

Project Boundary

Shallow Topographic Depressions

0 70 140

FEET

SOURCE: City of Newport Beach (2/06, 1/09)

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FIGURE 3

Newport Beach City Hall and Park Development Plan Project

Shallow Topographic Depressions

included California sagebrush, coastal deerweed (*Lotus scoparius*), scarlet pimpernel (*Anagallis arvensis*), sand pygmy-stonecrop (*Crassula* sp.), tocalote (*Centaurea melitensis*), filaree (*Erodium* sp.), and mulefat (*Baccharis salicifolia*). Dominant plant species in Area B included yellow sweet clover (*Melilotus officinalis*), red-stemmed filaree (*Erodium cicuarium*), short-fruited filaree (*Erodium* sp.), sand pygmy-stonecrop, tocalote, and scarlet pimpernel. Woolly marbles (*Psilocarphus brevissimus* var. *brevissimus*) were common but not dominant in both areas. LSA used the extent of the woolly marble distribution at each area to more definitively delineate the extent of Areas A and B.

The presence of woolly marbles does indicate some level of soil saturation sufficient enough to support the initial introduction and continued persistence of that particular plant species. However, the occurrence of woolly marbles does not equate to the regular frequency of ponding at the two sites. In this particular instance, the woolly marbles would appear to be persistent remnants initially introduced on site from some previous ponding event. Although typically considered a vernal pool indicator species, woolly marbles are not always associated with vernal pools. In some cases, this species can occur in nonvernal pool areas where soils such as heavy clays retain sufficient moisture to allow the species to germinate and continue to persist. No other vernal pool indicator plants, such as the more typical popcornflowers (*Plagiobothrys* sp.), goldfields (*Lasthenia* sp.), or mesamints (*Pogogyne* sp.), or other signs of vernal pools were observed in Areas A and B, or on the City Hall Property for that matter.

In February 2009, LSA compared the hydrologic conditions of Areas A and B with areas having analogous features associated with the vernal pools located at Fairview Park in Costa Mesa, California. These shallow depressions at Fairview Park were used as reference sites for comparing instances of inundation at Fairview Park with Areas A and B on site. On February 6, 2009, LSA examined the vernal pools at Fairview Park and then immediately drove to City Hall Property to examine Areas A and B. February 6 was the first rainy day in a series of five consecutive days with measurable rainfall. Soils were dry and there was no evidence of inundation at either Fairview Park or Areas A and B. On February 9, 2009, LSA repeated the visits to Fairview Park, followed immediately by a visit to the site. Approximately 0.7 inches of cumulative rainfall had occurred in the previous 3 days. LSA observed inundation in several shallow depressions at Fairview Park but noted no inundation at the two areas on site. Likewise, on February 19, 2009, LSA repeated the same method and observed extensive ponding at Fairview Park but still did not observe any inundation or even soil saturation at Areas A and B. Approximately 1 inch of cumulative rainfall had occurred in the previous 5 days.

Independent biologist Robb Hamilton reports observing these two low areas ponded during a site visit in March of 1998 (R. Hamilton, personal communication). LSA notes that this reported ponding occurred during the rainy season of an exceptionally wet year and shortly following one of the wettest, if not the wettest, Februarys on record. Additional information on the duration of the observed ponding is not available. Many upland areas were observed inundated as a result of the extremely heavy rainfall occurring in February of 1998 (LSA observations).

LSA conducted a detailed evaluation of the soils and vegetation associated with City Hall Property Areas A and B on April 1, 2009. The only wetland soil character observed during this visit was occasional soil mottling. The presence of mottles in the soils associated with Areas A and B indicates some past inundation, like that which occurred in 1998. Where mottles form, the soils have become saturated for a sufficient duration to cause the formation of anaerobic soil conditions and to trigger

the reduction of iron in the soils. However, once formed, these mottles can persist in the soils for years or even decades, provided the soils are not disturbed. Mottles in soil are not necessarily an indication of the frequency of inundation or soil saturation, but rather an indication of at least some past inundation or soil saturation event where anaerobiosis and reduction occurred.

Based on the data presented above, it is apparent that the ponding of water in proposed City Hall Property Areas A and B only occurs during extraordinarily wet years or after a series of exceptionally heavy rainfall events. Such ponding is likely to be of short duration, allowing the continued presence of upland plant species.

Photographs of the site are provided in Figure 4.

Photo 1: Overview of site looking south with Area B in foreground

Photo 2: Area A, looking south

LSA

Newport Beach City Hall
and Park Development Project

Dry Season Listed Crustacean Surveys
Site Photographs

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Photo 3: Area B, looking east

Photo 4: Closeup of Area B, looking west

LSA

Newport Beach City Hall
and Park Development Project

Dry Season Listed Crustacean Surveys
Site Photographs

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METHODS

The 2009 dry season surveys of the City Hall Property were conducted in accordance with the *United States Fish and Wildlife Service Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for Listed Vernal Pool Branchiopods*, dated April 19, 1996.

LSA biologist David Muth collected soil material from City Hall Property Areas A and B on May 3, 2009. A series of 10 0.l-liter soil samples was collected from the bottom of each feature. The soil was dry at the time of collection and stored in marked plastic zip-lock bags marked to indicate the site and location of collection.

The soil was processed on May 18, 2006, and examined on May 20, 2006. The soil samples were processed individually by placing each in a 5-gallon bucket containing 1 to 2 gallons of water to saturate the soil. After saturating the soil sample for approximately 10 to 15 minutes, the bucket was stirred and poured through a series of four sieves with mesh sizes of 710, 355, 212, and 150 microns (as recommended by Richard Hill of the California Department of Transportation [Caltrans]). The sieves were stacked, with the largest mesh size at the top and the smallest mesh size on the bottom. Samples were poured and washed through the set with water. Material trapped in the three smallest sieve sizes in each set was saved for analysis by washing the material into coffee filters and leaving it to dry. Sieved soil material was examined under a 10- to 40-power Olympus stereo-optic scope. A reference egg collection was used for comparison of any eggs found in the samples. Soil material will be stored with LSA until final disposition can be arranged.

RESULTS

No fairy shrimp eggs were observed in any of the processed soil samples collected from the City Hall Property. The samples also did not contain any microscopic material, such as *Isoetes* spores or cladoceran ephippium, typically associated with vernally ponded wetlands. Soil contents appeared to be more typical of upland situations.

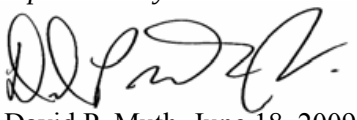
CONCLUSION

Areas A and B on the proposed City Hall Property do not appear to provide conditions suitable for the vernal pool crustaceans, including the San Diego fairy shrimp. Areas A and B present as upland areas that typically remain dry, only ponding water during the occasional high or extensive rainfall. While the diapause period of fairy shrimp eggs has evolved to survive a few years of failed rainy seasons in vernally ponded situations, the eggs cannot survive or persist in uplands that may occasionally pond during the exceptional rain event. In addition, a ponding event must be of a sufficient duration (i.e., 2 to 3 weeks) to sustain these animals throughout their lifecycle. The instances of ponding within Areas A and B appear to be too infrequent and ephemeral to sustain a viable population of any vernal pool invertebrates.

The negative results of this survey, taken in conjunction with LSA's determination that the features sampled do not represent habitat for listed vernal pool crustaceans, indicate that the proposed City Hall Property does not support the federally endangered San Diego fairy shrimp. There do not appear to be any additional features on the City Hall Property suitable for use by any vernal pool species. Development of the City Hall Property should have no impact on listed vernal pool crustaceans, including the San Diego fairy shrimp.

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.



David P. Muth, June 18, 2009
Permit #s TE797234 and TE839213

LITERATURE REVIEWED

Barbour, M. G. and J. Major. 1988. *Terrestrial Vegetation of California*. California Native Plant Society, University of California, Davis, CA. 1020+pp.

California Natural Diversity Database. 2003. Query regarding listed vernal pool fairy shrimp and tadpole shrimp for the USGS *Tustin, California,* and surrounding quadrangles. California Department of Fish and Game, Sacramento, CA.

Eriksen, C and D. Belk. 1999. *Fairy Shrimp of California=s Puddles, Pools, and Playas*. Mad River Press, Inc. Eureka, CA. 196 pp.

Hickman, J. C., ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, CA. 1400 pp.

Michael Brandman Associates. 2002.

United States Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the San Diego Fairy Shrimp; Final Rule. Federal Register Vol. 62, No. 22: pages 4925-4939.

———. 1996. United States Fish and Wildlife Service Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for Listed Vernal Pool Branchiopods, dated April 19, 1996.

Zedler, P. H. *1987. Ecology of Southern California Vernal Pools: A Community Profile.* Biological Report 85 (7.11). San Diego State University, CA, United States Fish and Wildlife Service.

APPENDIX A

USFWS DRY SEASON SURVEY DATA SHEETS

pool 1

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Dry Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: _____ no __X__ yes

Required color slides and/or photographs for the project site are included: _____ no __X__ yes

Date: 05 / / 2009 Time: _____ County: Orange Quad: Tustin

Collector(s): David Muth Permit #: TE794234

Site/Project Name: Newport Beach City Hall and Park Pool #: 1

Township: 6 South Range: 10 West Section: _____ _____lat. _____ long.

Habitat Condition: (circle where appropriate)

- undisturbed (disturbed) tire tracks (garbage) (discing/plowing)

(ungrazed) grazed: cattle horses sheep other_____

- land use of habitat: (light) moderate heavy

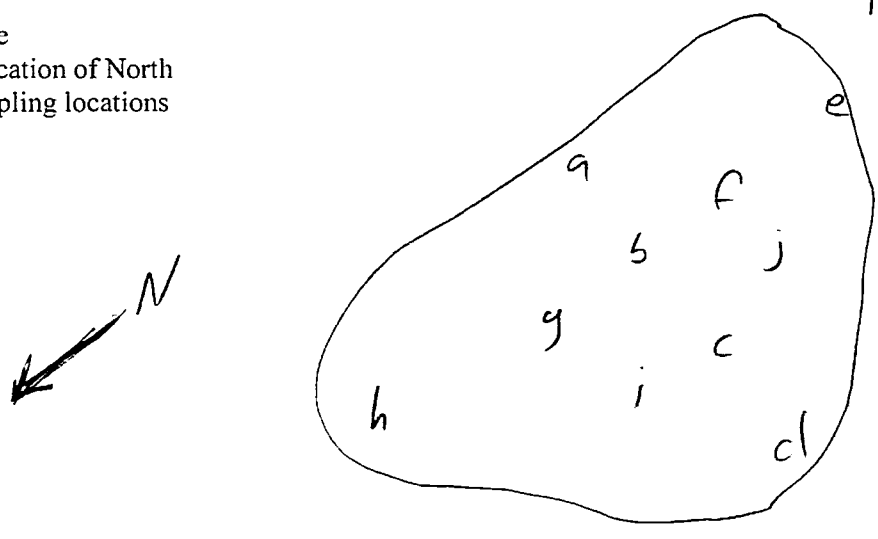
Pool Bottom Surface: (circle where appropriate)

hardpan claypan cobbly/rocky lava flow other Compacted Soils

Pool Depth: 2-3 cm (estimated maximum) Surface Area: 130 m2 (estimated maximum)

Sketch of pool and transects showing: 16m

- scale
- indication of North
- sampling locations



U.S Fish and Wildlife Service Vernal Pool Data Sheet pool 1

Dry Season Survey

Soil Analysis

Note: Please fill out the required information completely for each site visit.

Sample ID	Sample Volume(ml	Genus (/species)	# Cysts (or None)	Cyst Density (#/100ml
a	10	Ø		
b	10	Ø		
c	10	Ø		
d	10	Ø		
e	10	Ø		
f	10	Ø		
g	10	Ø		
h	10	Ø		
i	10	Ø		
j	10	Ø		

Voucher Specimens

Cysts shall be stored dry and shall be preserved according to the standards of the institution in which they will be accessioned.

Genus (/species)	# Cysts	Catalog/Accession #	Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Dry Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: _____ no __X__ yes

Required color slides and/or photographs for the project site are included: _____ no __X__ yes

Date: 05 / / 2009 Time: _____ County: Orange Quad: Tustin

Collector(s): David Muth Permit #: TE794234

Site/Project Name: Newport Beach City Hall and Park Pool #: 2

Township: 6 South Range: 10 West Section: _____ _____lat. _____ long.

Habitat Condition: (circle where appropriate)

- undisturbed	disturbed:	tire tracks	garbage	discing/plowing	
- ungrazed	grazed:	cattle	horses	sheep	other_____
- land use of habitat:			light	moderate	heavy

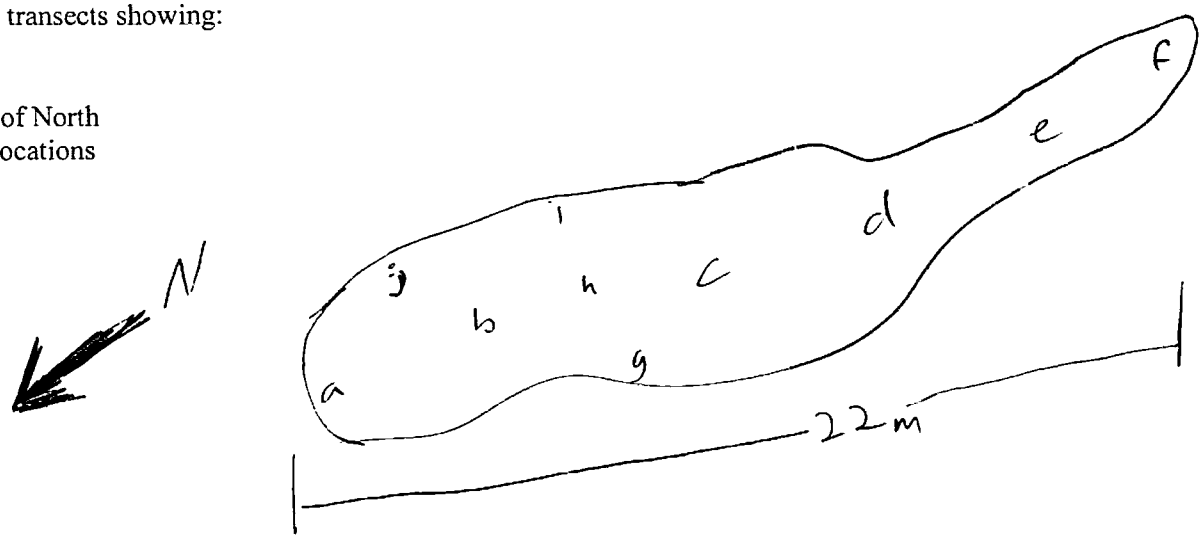
Pool Bottom Surface: (circle where appropriate)

hardpan claypan cobbly/rocky lava flow other Compacted soil

Pool Depth: 2-4 cm (estimated maximum) Surface Area: 220 m2 (estimated maximum)

Sketch of pool and transects showing:

- scale
- indication of North
- sampling locations



U.S Fish and Wildlife Service Vernal Pool Data Sheet

Dry Season Survey

Soil Analysis

Note: Please fill out the required information completely for each site visit.

Sample ID	Sample Volume(ml	Genus (/species)	# Cysts (or None)	Cyst Density (#/100ml
a	10	Ø		
b	10	Ø		
c	10	Ø		
d	10	Ø		
e	10	Ø		
f	10	Ø		
g	10	Ø		
h	10	Ø		
i	10	Ø		
j	10	Ø		

Voucher Specimens

Cysts shall be stored dry and shall be preserved according to the standards of the institution in which they will be accessioned.

Genus (/species)	# Cysts	Catalog/Accession #	Pool #

APPENDIX G

JURISDICTIONAL DELINEATION REPORT

DELINEATION OF U.S. ARMY CORPS OF ENGINEERS AND CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

NEWPORT BEACH CITY HALL AND PARK DEVELOPMENT PLAN PROJECT

CITY OF NEWPORT BEACH

ORANGE COUNTY, CALIFORNIA

Submitted to:

City of Newport Beach
3300 Newport Beach Boulevard
Newport Beach, California 92663
(949) 644-3200

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. CNB0901

LSA

July 2009

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INTRODUCTION AND SITE DESCRIPTION

LSA Associates, Inc. (LSA) has prepared this Jurisdictional Delineation (JD) report at the request of the City of Newport Beach (City) to identify areas within a 20-acre (ac) project area that are potentially subject to United States Army Corps of Engineers (ACOE) jurisdiction pursuant to Section 404 of the federal Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code.

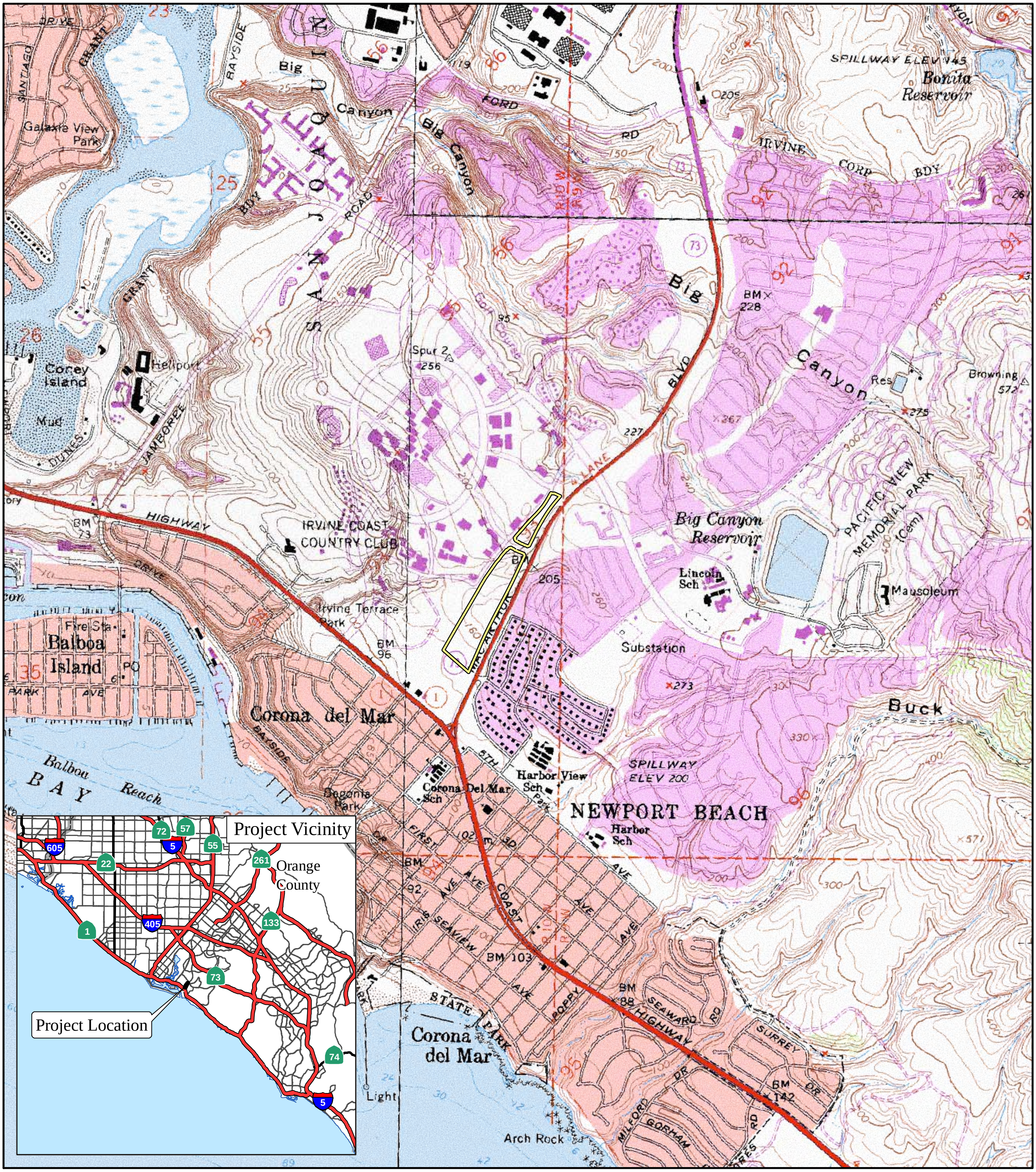
The project area consists of three parcels (colloquially referred to as the northern, central, and southern parcels) located between MacArthur Boulevard and Avocado Avenue in Newport Beach, California (Figure 1). The combined total area of the northern, central, and southern parcels is approximately 20 ac and has an average elevation of 250 feet (ft) above mean sea level (amsl). The southern parcel is completely developed (i.e., Newport Beach Public Library) and has no jurisdictional areas. The northern and central parcels, both of which are currently undeveloped, are separated by San Miguel Drive. The study area is completely surrounded by existing urban and commercial uses.

In 2004, Michael Brandman Associates (MBA) conducted a JD of the central parcel. As a follow up to that delineation, LSA conducted a JD that included both the central and northern parcels (hereinafter referred to as the "study area"). This delineation was conducted in accordance with current ACOE and CDFG guidelines.

The study area is located between MacArthur Boulevard and Avocado Avenue and is generally south of San Joaquin Hills Road and north of Pacific Coast Highway. The study area is located in an unsectioned portion of Township 7 South and within portions of Ranges 10 and 11 West, San Bernardino Baseline and Meridian, on the United States Geological Survey (USGS) *Laguna Beach, California* 7.5-minute series topographic quadrangle (Figure 1). Approximate Universal Transverse Mercator (UTM) coordinates are $^{37}20^{000m}$ on the north, $^{37}19^{600m}$ on the south, $^{4}19^{400m}$ on the west, and $^{4}19^{600m}$ on the east.

Overall, vegetation within the study area primarily consists of upland plant communities, including coastal sage scrub (CSS) and ruderal, nonnative grasslands. Two unnamed drainages are associated with small ravines located in the northern portion of the central parcel. These drainages primarily support coastal sage scrub habitat on the somewhat steep slopes and freshwater marsh, willow riparian scrub, and mulefat scrub plant communities in the bottom of these drainages. The average annual rainfall for this area is approximately 13 inches, and the study area received approximately 8.4 inches of measurable rainfall for the 2008/2009 rainy season.

The findings and conclusions presented in this report, including the location and extent of wetlands and other waters that may be subject to regulatory jurisdiction, represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the ACOE and the CDFG.



LSA

LEGEND

Project Boundary

FIGURE 1

N

0 1000 2000

FEET

Newport Beach City Hall and Park Development Plan Project

Project Location Map

SOURCE: USGS 7.5min. Quad. (Tustin (1981), Newport Beach (1981), Laguna Beach (1981)); City of Newport Beach (1/09)

I:\CNB0901\GIS\ProjectVicinity_USGS.mxd (5/8/2009)

REGULATORY BACKGROUND

United States Army Corps of Engineers

The ACOE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and nonwetland bodies of water that meet specific criteria. ACOE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct; through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. The following definition of waters of the United States is taken from the discussion provided at 33 Code of Federal Regulations (CFR) 328.3:

"The term waters of the United States means:

> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce . . . ;
>
> (2) All interstate waters including interstate wetlands;
>
> (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation or destruction of which could affect interstate or foreign commerce . . . ;
>
> (4) All impoundments of waters otherwise defined as waters of the United States under the definition; and
>
> (5) Tributaries of waters defined in paragraphs (a) (1)–(4) of this section."

The ACOE typically regulates as waters of the United States any body of water displaying an ordinary high water mark (OHWM). ACOE jurisdiction over nontidal waters of the United States extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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 area." (33 CFR 328.3) Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

As discussed above, ACOE regulatory jurisdiction under Section 404 of the CWA is founded on a connection between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. In the past, an indirect nexus could potentially be established if isolated waters provided habitat for migratory birds, even in the absence of a surface connection to a navigable water of the United States. The 1984 rule that enabled the ACOE to expand jurisdiction over isolated waters of this type became known as the Migratory Bird Rule. However, on January 9, 2001, the United States Supreme Court narrowly limited the ACOE jurisdiction of "nonnavigable, isolated, intrastate" waters based solely on the use of such waters by migratory birds and, particularly, the use of indirect

indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. The Court's ruling derives from the case *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, No. 99-1178 (SWANCC)*. The Supreme Court determined that the ACOE exceeded its statutory authority by asserting CWA jurisdiction over an abandoned sand and gravel pit in northern Illinois that provides habitat for migratory birds.

In 2006, the United States Supreme Court further considered the ACOE jurisdiction of "waters of the United States" in the consolidated cases Rapanos v. United States and Carabell v. United States (126 S. Ct. 2208), collectively referred to as Rapanos. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. On June 5, 2007, the ACOE issued guidance regarding the Rapanos decision. This guidance states that the ACOE will continue to assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically three months), and wetlands that directly abut relatively permanent tributaries. The ACOE will determine jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent and wetlands adjacent to nonnavigable tributaries that are not relatively permanent only after making a significant nexus finding.

Furthermore, the preamble to ACOE regulations (Preamble Section 328.3, Definitions) states that the ACOE does not generally consider the following waters to be waters of the United States The ACOE does, however, reserve the right to regulate these waters on a case-by-case basis.

- Nontidal drainage and irrigation ditches excavated on dry land
- Artificially irrigated areas that would revert to upland if the irrigation ceased
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and that are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

Waters found to be isolated and not subject to CWA regulation are often still regulated by the Regional Water Quality Control Board (RWQCB) under the State Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Wetlands

Wetland delineations for Section 404 purposes must be conducted according to the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Supplement) (ACOE 2006) and the Corps of Engineers 1987 Wetland Delineation Manual (1987

Manual) (Environmental Laboratory 1987). Where there are differences between the two documents, the Regional Supplement takes precedence over the 1987 Manual.

The ACOE and United States Environmental Protection Agency (EPA) define wetlands as follows:

> "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soils indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes have lasted more than a few days or have occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding or highly ephemeral stream systems. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas. Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The Regional Supplement provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation. Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988), published by the United States Fish and Wildlife Service (USFWS). Each species on the list is rated according to a wetland indicator category, as shown in Table A. To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated as OBL, FACW, or FAC).

Table A: Hydrophytic Vegetation

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability > 99 percent)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67–99 percent)
Facultative (FAC)	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66 percent)
Facultative Upland (FACU)	Usually occur in nonwetlands (estimated probability 67–99 percent)
Obligate Upland (UPL)	Almost always occur in nonwetlands (estimated probability > 99 percent)

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately); when more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the ACOE recommends the use of the "50/20" rule (also known as the dominance test) from the Regional Supplement for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species composing 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a sampling plot. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, ACOE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (ACOE 2006). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibit morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils.[1] Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.[2] Soils are considered likely to meet the definition of a hydric soil hydric when one or more of the following criteria are met:

1. All Histels except Folistels and Histosols except Folists; or

[1] The hydric soil definition and criteria included in the 1987 Manual are obsolete. Users of the Manual are directed to the United States Department of Agriculture (USDA) Natural Resources Conservation Service Web site for the most current information on hydric soils.

[2] Current definition as of 1994 (FR July 13, 1994).

2. Soils that are frequently ponded for long duration or very long duration[1] during the growing season; or
3. Soils that are frequently flooded for long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. While saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters [cm], below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria, a National List of Hydric Soils was created from the National Soil Information System (NASIS) database and is updated annually.

The Regional Supplement has a number of field indicators that may be used to identify hydric soils. The Natural Resources Conservation Service (NRCS) (2003) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation; accumulation of organic matter; and the reduction, translocation, and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology. Under natural conditions, development of hydrophytic vegetation and hydric soils are dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (Environmental Laboratory 1987). The wetland hydrology parameter is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (ACOE 2006).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators that are commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

Regulatory Guidance Letter (June 26, 2008)

The ACOE issued a new Regulatory Guidance Letter (RGL) on June 26, 2008, which allows a permit applicant to request either an approved JD or preliminary JD to help implement Section 404 of the CWA and Sections 9 and 10 of the Rivers and Harbors Act of 1899 (RHA). This RGL explains the differences between these two types of JDs and provides guidance on when an approved JD is required and when a landowner, permit applicant, or other "affected party" can decline to request and obtain an approved JD and elect to use a preliminary JD instead.

[1] Long duration is defined as a single event ranging from 7 to 30 days; very long duration is defined as a single event that lasts longer than 30 days.

An approved JD is an official ACOE determination that jurisdictional "waters of the United States," or "navigable waters of the United States," or both, are either present or absent on a particular site. An approved JD precisely identifies the limits of those waters in the study area determined to be jurisdictional under the CWA/RHA.

While a permit applicant can elect to request and obtain an approved JD, he or she can instead obtain a preliminary JD. Preliminary JDs are nonbinding "written indications that there may be waters of the United States, including wetlands, on a parcel or indications of the approximate location(s) of waters of the United States or wetlands on a parcel. Preliminary JDs are advisory in nature and may not be appealed." A landowner, permit applicant, or other "affected party" may elect to use a preliminary JD to voluntarily waive or set aside questions regarding CWA/RHA jurisdiction over a particular site, usually in the interest of allowing the landowner or other "affected party" to move ahead expeditiously to obtain an ACOE permit authorization where the party determines that it is in his or her best interest to do so. A landowner, permit applicant, or other "affected party" may elect to use a preliminary JD even where initial indications are that the water bodies or wetlands on a site may not be jurisdictional if the affected party makes an informed, voluntary decision that is in his or her best interest not to request and obtain an approved JD. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on site as if they are jurisdictional waters of the United States. When the ACOE provides a preliminary JD or authorizes an activity based on a preliminary JD, the ACOE is making no legally binding determination of any type regarding whether CWA/RHA jurisdiction exists over the particular water body or wetland in question. A preliminary JD is "preliminary" in the sense that a recipient of a preliminary JD can later request and obtain an approved JD if that later becomes necessary or appropriate during the permit process or during the administrative appeal process.

The key distinction between an approved JD and preliminary JD is that a preliminary JD can only be used to determine that wetlands or other water bodies that exist on a particular site "may be" jurisdictional waters of the United States. A preliminary JD by definition cannot be used to determine either that there are no wetlands or other water bodies on a site at all (i.e., that there are no aquatic resources on the site and the entire site is composed of uplands), that there are no jurisdictional wetlands or other water bodies on a site, or that only a portion of the wetlands or water bodies on a site are jurisdictional. A definitive, official determination that there are, or that there are not, jurisdictional "waters of the United States" on a site can only made by an approved JD. The ACOE retains the ability to use a "no-permit-required" letter to indicate that a specific proposed activity is not subject to CWA/RHA jurisdiction when that is determined appropriate, but a "no-permit-required" letter cannot make any sort of determination regarding whether there are jurisdictional wetlands or other water bodies on a site.

California Department of Fish and Game

The CDFG, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel

bed and banks and at least an intermittent flow of water. The CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFG.

In obtaining CDFG agreements, the limits of wetlands are not typically determined. The reason for this is that CDFG generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mulefat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with ACOE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFG jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet ACOE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

Regional Water Quality Control Board

The California RWQCB is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those of the ACOE (i.e., waters of the United States, including any wetlands). RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act.

METHODOLOGY

As indicated above, MBA conducted a JD of the central parcel in 2004. LSA reviewed the MBA delineation report in preparation for LSA's delineation. The fieldwork associated with this JD was conducted by LSA senior biologist Jim Harrison in February and April of 2009, and as indicated in the Introduction, included both the central and northern parcels. Areas of potential jurisdiction were evaluated according to current ACOE and CDFG guidelines and criteria. The boundaries of the potential jurisdictional areas were observed in the field and mapped using a Trimble global positioning system (GPS) unit. Measurements of potential ACOE and CDFG jurisdictional areas were determined by a combination of direct measurements taken in the field and taken from a recently flown aerial photograph.

Areas supporting species of plant life potentially indicative of wetlands were evaluated according to routine wetland delineation procedures described in the Regional Supplement. Representative sample plots were selected and examined in the field in areas where wetland jurisdiction was in question or needed to be confirmed. At the sample plot, the dominant plant species in each strata were identified and their wetland indicator status noted (Reed 1988). A small sample pit (up to 24 inches deep) was dug at the plot in order to examine soil characteristics and composition. Where possible, soil matrix colors were classified according to the Munsell Soil Color Charts (Munsell Color 2000). Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators were noted. The locations of the sample plots and the potential jurisdictional areas are shown on Figure 2. A wetland data form was completed for each sample plot, and a copy of these data forms is included in Appendix A of this report. An analysis of the functions and values of the drainage is included in Appendix B.

LSA

FIGURE 2

LEGEND

Project Boundary

Sample Plot Locations

CDFG Jurisdiction (0.55 ac)

ACOE Jurisdiction

Non-Wetland Waters (0.05 ac)

Wetland Waters (0.36 ac)

0 70 140

FEET

SOURCE: City of Newport Beach (2/06, 1/09)

I:\CNB0901\GIS\Pot_Juris_Areas_Fig2.mxd (6/11/2009)

Newport Beach City Hall and Park Development Plan Project

Potential Jurisdictional Areas

RESULTS

Potential ACOE Jurisdiction: Waters of the United States

Like MBA (2004), LSA also identified potential ACOE jurisdiction associated with two primary drainages located on the central parcel of the study area (Figure 2). These unnamed drainages are situated in two small ravines on site. The main drainage (hereinafter referred to as Drainage A) extends generally east to west. Runoff in this drainage is conveyed onto the site from a large concrete box culvert and ultimately drains into a large standpipe on the western end of the drainage. The other drainage (hereinafter referred to as Drainage B) extends southwesterly from near the northeast corner of the central parcel to Drainage A. Runoff in this drainage is conveyed onto the site from an existing underground concrete culvert at the northeast end of the drainage and ultimately empties into Drainage A. Overall, runoff is conveyed onto the site, into these earthen-bottomed drainage courses, and then back into the underground storm drain system where it is ultimately conveyed to the Pacific Ocean, a navigable water of the U.S.

Although the primary source of water in both Drainages A and B is from urban runoff, the drainage courses are essentially natural in origin. Both drainages exhibit an OHWM and have connectivity to a traditional navigable water. Consequently, the boundary of potential ACOE jurisdiction in both drainages extends to the OHWM. There is 0.41 ac of potential ACOE jurisdictional waters of the United States (both wetland and nonwetland).

LSA observed several concrete drainage ditches located in both the northern and central parcels. These artificial ditches were constructed for the purpose of collecting surface runoff and conveying the runoff into the storm drain system to prevent surface erosion and the flooding of adjacent landscape and structures. These concrete v-ditches and other concrete drainages are not considered waterbodies by the ACOE since nothing more than rills and other erosion features would form in the absence of these artificial drainages. Therefore, these concrete v-ditches and drainages would not be waters subject to ACOE or CDFG jurisdiction.

Potential ACOE Jurisdiction: Wetland Waters of the United States

Vegetation. Vegetation within Drainage A consisted of freshwater marsh, willow riparian scrub, mulefat scrub, and coastal sage scrub (CSS), and the vegetation associated with Drainage B consisted of only freshwater marsh and CSS. The freshwater marsh, willow riparian scrub, and mulefat scrub were dominated by wetland indicator plants, including cat-tails (*Typha* spp.) (OBL), California bulrush (*Scirpus californicus*) (OBL), white water-cress (*Rorippa nasturium-aquaticum*) (OBL), water speedwell (*Veronica anagallis-aquatica*) (OBL), marsh fleabane (*Pluchea odorata*) (OBL), arroyo willows (*Salix lasiolepis*) (FACW), and mulefat (*Baccharis salicifolia*) (FACW). Areas supporting freshwater marsh, willow riparian scrub, and mulefat scrub habitat satisfied the hydrophytic vegetation criterion for ACOE jurisdictional wetlands.

The CSS habitat associated with Drainages A and B was dominated by nonwetland (upland) indicator plants, including California sagebrush (*Artemisia californica*) (UPL) and California encelia (*Encelia californica*) (UPL). Other upland plants scattered in and around the drainages included coastal deerweed (*Lotus scoparius* var. *scoparius*) (UPL), coyote bush (*Baccharis pilularis*) (UPL), and

lemonadeberry (*Rhus integrifolia*) (UPL). These areas did not satisfy the hydrophytic vegetation criterion.

Soils. The *Soil Survey of Orange County and Western Part of Riverside County, California* identifies and describes the soil expected to correspond to the area where the two drainages occur in the study area as Calleguas clay loam. According to the Soil Survey, these soils are well-drained and are typically associated with very steep slopes where erosion is common.

The soils observed in Drainages A and B appear to conform generally to the soils described in the Soil Survey. The increase in sediments and organics in the drainage bottoms was not described in the Soils Survey. The silty clay loam soils observed in Drainages A and B had a medium texture, and the color generally tended to range from pale brown (Munsell Color 10 YR 6/3) to a dark grayish brown (Munsell Color 10 YR 4/2) throughout the entire soil profile, except when associated with more perennial flows where organics were more prevalent in the soils. The soils in these cases tended to be more black (2.5 Y 2.5/1). Hydric soils were present in Drainages A and B, where flows were either perennial or at least intermittent.

Hydrology. Inundation, a primary wetland hydrology indicator, was evident in Drainages A and B during field work conducted by LSA. Drainage A may have perennial flows, but certainly appears to receive sufficient runoff to stay inundated for much of the year in most years, thus satisfying the wetland hydrology criterion. Drainage B appears to have either perennial or intermittent flows in at least the northern portion of the drainage; however, the southern portion of Drainage B does not appear to remain inundated for very long during most years and would not satisfy the wetland hydrology criterion.

LSA thoroughly assessed the hydrology, vegetation, and soils associated with the two shallow depressions (i.e., Areas A and B) on site. Although some wetland indicator plants were present, the vegetation was dominated by upland indicator plants (see wetland data forms in Appendix A). The wetland indicator plants present are likely remnants from an extraordinary rainfall event that occurred in the past and resulted in the inundation of these shallow depressions. The presence of some relict mottles in the soils further confirms this notion of past inundation. Moreover, the two shallow depressions on site failed to become inundated or even exhibit saturated soils following several days of steady rainfall on two separate occasions this year. At the same time, LSA noted inundation at actual vernal pools/seasonal wetlands not far from the project area (i.e., Fairview Park). LSA concluded that these two shallow depressions on site only become inundated during years, or following a concentrated period, of extraordinary rainfall. Also, these two depressions are physically and hydrologically isolated from the two natural drainages and, having failed to satisfy the three wetland criteria, are not adjacent wetlands. As also concluded by MBA in 2004, neither of these two isolated depressions would be subject to ACOE or CDFG jurisdiction, pursuant to Section 404 of the CWA or Section 1602 of the California Fish and Game Code. Additional information regarding these two shallow depressions in the study area is provided in the BA prepared by LSA (2009).

In conclusion, the potential wetland waters of the U.S. in Drainages A and B, as shown on Figure 2, have a prevalence of hydrophytic vegetation and also satisfy the wetland hydrology and hydric soils criteria. The distinction between upland and wetland areas associated with Drainages A and B was

rather abrupt and well-defined by the physical features evident during the site surveys. LSA identified a total of 0.36 ac of potential wetland waters of the U.S. associated with Drainages A and B in the study area. There were no adjacent wetlands extending beyond the limits of the OHWM in either Drainage A or Drainage B. In other words, potential jurisdictional wetlands are confined to within the OHWMs. Although the potential nonwetland waters of the U.S. as shown on Figure 2 exhibit periodic flows, these areas lacked a predominance of hydrophytic vegetation and thereby failed to satisfy the wetland criteria.

Potential CDFG Jurisdiction

Drainages A and B exhibit a definable streambed and banks. Also, freshwater marsh and riparian scrub habitats are associated with much of the drainage bottoms, but not all of the drainage bottoms are composed of these habitat types. The banks of the drainages are primarily composed of CSS habitat. Potential CDFG jurisdiction in Drainages A and B, as shown on Figure 2, not only include the area corresponding to the drainage bottoms and banks but also extends slightly beyond to include the adjacent riparian canopy.

All of the areas satisfying the ACOE jurisdictional criteria for waters of the United States, as described above, would also be subject to potential CDFG jurisdiction. In addition, streambed banks and/or adjacent riparian habitat extending beyond the limits of ACOE jurisdiction are typically considered subject to potential CDFG jurisdiction. This applies to Drainage A where additional stream banks and riparian habitat extend beyond the limits of potential ACOE jurisdiction. The total acreage of potential CDFG jurisdiction within the study area is 0.55 ac.

Table B: Potential Jurisdictional Acreages

Drainage Area	ACOE Jurisdiction (ac)		CDFG Jurisdiction (ac)
	Wetland Waters of the U.S.	Non-Wetland Waters of the U.S.	Streambed & Associated Riparian Habitat
A	0.21	0.02	0.37
B	0.15	0.03	0.18
Total	**0.36**	**0.05**	**0.55**

ac = acres
ACOE = United States Army Corps of Engineers
CDFG = California Department of Fish and Game
U.S. = United States

REFERENCES

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

Federal Interagency Committee for Wetland Delineation. 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. United States Army Corps of Engineers, United States Environmental Protection Agency, United States Fish and Wildlife Service, and United States Department of Agriculture Soil Conservation Service, Washington, D.C. Cooperative Technical publication. 76 pp. plus appendices.

Hamilton, Robert A., 1998. *Letter Report, Initial Biological Survey, Dedicated Open Space Parcel at Newport Fashion Island, Newport Village Site.* Prepared for Stop Polluting Our Newport (SPON), Balboa Island, California.

Hickman, J.C., ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, CA. 1,400 pp.

LSA Associates, Inc. 2004. *Biological Resources Assessment, Newport Beach City Hall and Park Development Plan, Newport Beach, California.* Prepared for City of Newport Beach, Newport Beach, California.

Michael Brandman Associates, 2004. *Delineation of Jurisdictional Waters and Wetlands, 12.5-Acre Newport Village Park, City of Newport Beach, Orange County, California.* Prepared for Hall & Foreman, Inc., Irvine, California.

Munsell Color. 2000 (rev. ed.). *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Instruments Corporation, New Windsor, NY.

Reed, P.B., Jr. 1988. *National List of Plant Species that Occur in Wetlands: California (Region 0)*. United States Fish and Wildlife Service Biological Report 88 (26.10). 135 pp.

State Water Resources Control Board. *Workplan: Filling the Gaps in Wetland Protection.* September 2004.

United States Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, United States Army Engineer Research and Development Center, Vicksburg, MS.

———. 2007. *CECW-OR Memorandum: Clean Water Act Jurisdiction Following the United States Supreme Court's Decision in Rapanos v. United States & Carabell v. United States.*

———. 2008. *Regulatory Guidance Letter No. 08-02: Subject – Jurisdictional Determinations.*

———. 1992. CECW-OR Memorandum: Clarification and Interpretation of the 1987 Manual.

———. 1991. CECW-OR Memorandum: Questions and Answers on the 1987 Manual.

United States Department of Agriculture, Soil Survey Staff. 1975. *Soil Taxonomy*. Agriculture Handbook No. 436. United States Government Printing Office, Washington, D.C. 754 pp.

Wetland Research and Technology Center. 1993. Draft Training Package, Wetland Delineator Certification Program. Environmental Laboratory, EP-W, Vicksburg, MS.

Woodruff, G.A., and W.Z. Brock. 1978. *Soil Survey of Orange County and Western Part of Riverside County, California*. United States Department of Agriculture, Soil Conservation Service in cooperation with the University of California, Agricultural Experiment Station.

APPENDIX A

COPY OF WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newport Beach City Hall City/County: Newport Beach Sampling Date: 1 Apr 2009

Applicant/Owner: City of Newport Beach State: CA Sampling Point: 1

Investigator(s): Jim Harrison Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: Rainfall to date this season slightly below normal. Sample plot located in an artificially created water bar (lateral depression along slope to slow down and capture ~~water~~ surface sheet flows). Conditions stabilized since previous disturbance

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Rumex crispus	15	Yes	FACW
2. Erodium brachycarpum	65-70	Yes	UPL
3. Brassica rapa	15	Yes	UPL
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
	95-100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
	_____ = Total Cover		

% Bare Ground in Herb Stratum < 5% % Cover of Biotic Crust —

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	15	x 2 =	30
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	80	x 5 =	400
Column Totals:	95 (A)		430 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Vegetation fairly dense. Site appears to have been disturbed in past but is completely recovered.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18in.	7.5YR 3/2	100					silty loam	
18-24in	7.5YR 3/2	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: No mottles present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: NRA Delineation (2004)

Remarks: Soil damp near 24 inches but not saturated.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newport Beach City Hall City/County: Newport Beach Sampling Date: 1 Apr. 2009

Applicant/Owner: City State: CA Sampling Point: 2

Investigator(s): Jim Harrison Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Rainfall to date only slightly below normal. Sample plot area was disturbed in past but appears normal now.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicifolia	20	Y	FACW
2. Artem. calif.	15	Y	UPL
3. Lotus scopar.	30	Y	UPL
4. Baccharis pilularis	4	N	UPL
5.			
	69 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Melilotus indica	30	Y	FAC
2. Centaurea melitensis	10	Y	UPL
3. Anagallis arvensis	5	Y	FAC ~~UPL~~
4. Crassula connata	2	N	FAC
5. Erodium brachycarpum	2	N	UPL
6. E. cicutarium	1	N	UPL
7. Psilocarphus brevissimus	1	N	OBL
8.			
	51 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum — % Cover of Biotic Crust —

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 ~~33~~ % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	20	x 2 =	40
FAC species	32	x 3 =	96
FACU species	0	x 4 =	0
UPL species	67	x 5 =	335
Column Totals:	120 (A)		472 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

No Dominance Test is >50%

No Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Some remnant wetland indicator plants present; presumably became established during previous episode(s) of inundation during exceptionally wet storm events or rainy years.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	~~7.5YR 3/2~~		5YR 6/6	<5	C	M	~~silty loam~~ sandy silt	relictual mottles; not abundant
18-24	~~7.5YR 3/2~~ 5YR 4/3		—	—	—	—	~~silty clay loam~~ sandy loam	—
	5YR 4/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks: Mottles diffuse around edges indicating reduction of iron in soil some years ago but ~~reduction~~ hydric soil conditions not recent or periodic. Does not meet Arid West Supplement definition of a Depleted Matrix or Redox Depressions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: MBA Delineation (2004).

Remarks: ~~Mod~~ Monitored this sample plot following different storm events: no inundation or soil saturation. No water down to 24 inches. Oxidized rhizospheres evident but not along living roots. Rhizosphere associated w/ old root material or root channels. Evidence of past saturation of soil. Only expected to become saturated/inundated during very extreme rainfall events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newport Beach City Hall City/County: Newport Beach Sampling Date: 1 Apr. 2009

Applicant/Owner: City State: CA Sampling Point: 3

Investigator(s): Jim Harrison Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	**Is the Sampled Area within a Wetland?** Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. Artemisia calif.		N	UPL
2. ~~Cent.~~			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: ___)			
1. Melilotus indica		Y	FAC
2. Erodium brachycarpum		Y	UPL
3. E. cicutarium		Y	UPL
4. Crassula connata		Y	FAC
5. Anagallis arvensis		Y	FAC
6. Centaurea melitensis		N	UPL
7. Deinandra fasciculatum		N	UPL
8. Psilocarphus brevissimus		N	OBL
		= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: Marginal hydrophytic vegetation. Woolly marbles indication of past inundation, established during past ponding event and continue to persist from periodic moisture.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	5YR 4/3		5YR 6/6	<5	C	M	~~silty loam~~ Sandy silt	relictual mottles (some)
18-24	5YR 4/3						~~Silty clay loam~~ Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks: Mottles diffuse around edges, indication of relictual hydric soil event. Does not meet definition of Depleted Matrix or Redox Depressions in Arid West Supplement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

MBA Delineation (2004)

Remarks: No evidence of any recent inundation or saturated soils. No water in pit to 24 inches. Oxidized rhizospheres present but not along living roots. Only expected to become saturated/inundated during extreme rainfall events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newport Beach City Hall City/County: Newport Beach Sampling Date: 1 Apr. 2009

Applicant/Owner: City State: CA Sampling Point: 4

Investigator(s): Jim Harrison Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____

Hydric Soil Present? Yes _____ No X

Wetland Hydrology Present? Yes _____ No X

Is the Sampled Area within a Wetland? Yes _____ No X

Remarks: Riprap and nearby standpipe installed previously, but area/vegetation has appeared to recover and stabilize. No evidence of surface inundation or saturated soil recently. Slopes toward bottom of Drainage A to east.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Callistoma sp. (1)		N	UPL
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicif.		Y	FACW
2. B. pilularis		N	UPL
3. Artem. calif.		N	UPL
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Lobularia maritima		N	UPL
2. Cynara cardunculus (1)		N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60-70 % Cover of Biotic Crust —

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Area dominated by Mulefat Scrub habitat. Much of area unvegetated riprap.

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2		—	—	—	—	silty clay loam	
6-18	10YR 4/4		—	—	—	—	Sandy silt (compacted)	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Scattered riprap w/ some exposed bare ground intermingled. No mottles or other indicators of depleted or reduced matrices.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): 0-18 in.

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 0-18 in.

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: MBA Delineation (2004).

Remarks: Sample plot sloping to east where another standpipe collects runoff from east end of Drainage A and all of Drainage B. No OHWM evident. Standpipe in sample plot for overflow from lower standpipe in event of flooding.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newport Beach City Hall City/County: Newport Beach Sampling Date: 1 Apr. 2009

Applicant/Owner: City State: CA Sampling Point: 5

Investigator(s): Jim Harrison Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or (Hydrology) X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No X

Hydric Soil Present? Yes _____ No X

Wetland Hydrology Present? Yes [redacted] No X

Is the Sampled Area within a Wetland? Yes _____ No X

Remarks: Hydrology is naturally problematic here. Drainage B drains into Drainage A, but southern reach of Drainage B is elevationally slightly higher than northern reach. Also, southern reach has sandy, well drained soils. Therefore, soils remain inundated/saturated in northern portion of Drainage B but [redacted] do not persist in southern reach. Creates bottleneck & inhibits flow of runoff into Drainage A except when water levels & volumes increase.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Artemisia californica	35	Y	UPL
2. Baccharis pilularis	35	Y	UPL
3. Rhus integrifolia	25	Y	UPL
4. Baccharis salicifolia	5	N	FACW
5.			
	95 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Foeniculum vulgare	20	Y	~~UPL~~ FACU
2. Carpobrotus edulis	5	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust [redacted] 75%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5 [redacted]	x 2 =	[redacted] 10
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	100	x 5 =	500
Column Totals:	125 (A)		590 (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Upland CSS vegetation is dominant in this reach of Drainage B.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/4		—		—	—	Sandy loam	
16-24	10YR 6/3		—		—	—	silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks: No organic streaking in sandy soil layer. Some dried algal material on surface but no extensive accummulation of organics in soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: MBA Delineation (2004).

Remarks: Did not observe any standing water or saturated soils @ sample plot location during 1 Apr. 2009 site visit, but did observe flows being conveyed in this reach in February 2009 after storm events. Only experiences periodic inundation or saturation. This high ground in drainage with sandy well drained soils precludes frequent or extensive inundation or retention of moisture in soils in most years.

APPENDIX B

FUNCTIONS AND VALUE ANALYSIS

APPENDIX B

ANALYSIS OF FUNCTIONS AND VALUES OF POTENTIAL WATERS OF THE UNITED STATES

The following is an assessment of the functions and values attributable to the identified potential jurisdictional waters in the study area. All waters have some degree of functionality, and no single drainage can perform all of the functions considered below. The following functions are analyzed at low, moderate, or high value levels. The individual drainage is analyzed in Table B-1 (following) based on the criteria outlined below.

Hydrologic Regime. This function is the ability of a wetland or stream to absorb and store water belowground. The degree of this saturation is dependent on the soil composition and is affected by prior flooding events. For example, clay soils possess more pore space than sandy soils. However, the smaller pore size slows the rate at which water is absorbed and released and, therefore, clay soil has a lower capacity to store water than sandy soils. The storage of water below ground allows for the fluctuation between anaerobic and aerobic conditions that benefit environmental conditions necessary for microbial cycling.

Flood Storage and Flood Flow Modification. This function is determined based on the ability of a wetland or stream at which the peak flow in a watershed can be attenuated during major storm events and during peak domestic flows to take in surface water that may otherwise cause flooding. This is dependent on the size of the wetland or stream, the amount of water it can hold, and the location in the watershed. For instance, larger wetlands or streams that have a greater capacity to receive waters have a greater ability to reduce flooding. In addition, areas high in the watershed may have more ability to reduce flooding in downstream areas, but areas lower in the watershed may have greater benefits to a specific area. Vegetation, shape, and the configuration of the wetland or stream may also affect flood storage by dissipating the energy of flows during flood events.

Sediment Retention. Removal of sediment is the process that keeps sediments from migrating downstream. This is accomplished through the natural process of sediment retention and entrapment. This function is dependent on the sediment load being delivered by runoff into the watershed. Similar to above, the vegetation, shape, and configuration of a wetland will also affect sediment retention if water is detained for long durations, as would be the case with dense vegetation, a bowl-shaped watershed, or slow-moving water. This function would be demonstrated (i.e., high) if the turbidity of the incoming water is greater than that of the outgoing water.

Nutrient Retention and Transformation. Nutrient cycling consists of two variables: uptake of nutrients by plants and detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive with regard to nutrients than upland habitats. The regular availability of water associated with the wetland or stream may cause the growth of plants (nutrient uptake) and associated detritivores and generate nutrients that may be utilized by a variety of aquatic and terrestrial wildlife downstream.

Toxicant Trapping. The major processes by which wetlands remove nutrients and toxicants are as follows: (1) by trapping sediments rich in nutrients and toxicants, (2) by absorption to soils high in clay content or organic matter, and (3) through nitrification and denitrification in alternating oxic and anoxic conditions. Removal of nutrients and toxicants is closely tied to the processes that provide for sediment removal.

Social Significance. This is a measure of the probability that a wetland or stream will be utilized by the public because of its natural features, economic value, official status, and/or location. This includes its being utilized by the public for recreational uses, such as boating, fishing, birding, walking, and other passive recreational activities. In addition, a wetland or stream that is utilized as an outdoor classroom, is a location for scientific study, or is near a nature center would have a higher social significance standing.

Wildlife Habitat. General habitat suitability is the ability of a wetland to provide habitat for a wide range of wildlife. Vegetation is a large component of wildlife habitat. As plant community diversity increases along with connectivity with other habitats, so does potential wildlife diversity. In addition, a variety of open water, intermittent ponding, and perennial ponding is also an important habitat element for wildlife.

Aquatic Habitat. The ability of a wetland or stream to support aquatic species requires that there be ample food supply, pool and riffle complexes, and sufficient soil substrate. Food supply is typically in the form of aquatic invertebrates and detrital matter from nearby vegetation. Pool and riffle complexes provide a variety of habitats for species diversity as well as habitat for breeding and rearing activities. Species diversity is directly related to the complexity of the habitat structure.

Table B-1: Functions and Values of Drainages within the Study Area

Drainage Number	Hydrologic Regime	Flood Storage & Flood Flow Modification	Sediment Retention	Nutrient Retention & Transformation	Toxicant Trapping	Social Significance	Wildlife Habitat	Aquatic Habitat
A	Moderate	Moderate	High	High	High	Moderate	High	Moderate
B	Moderate	Moderate	High	High	High	Moderate	High	Moderate

APPENDIX H

NCCP CONSTRUCTION MINIMIZATION MEASURES

APPENDIX H
NCCP CONSTRUCTION-RELATED MINIMIZATION MEASURES

NCCP/HCP FEIS/FEIR No. 553, Section 7.5.3

1. To the maximum extent practicable, no grading of CSS habitat that is occupied by nesting gnatcatchers will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFG with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.

2. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.

3. A monitoring biologist, acceptable to USFWS/CDFG will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFG at least seven (7) calendar days (and preferably fourteen (14) calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It will be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.

4. Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking or storage of equipment or materials will be permitted within such marked areas.

5. In areas bordering the NCCP reserve system or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation

routes between cut-and-fill locations will be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.

6. CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.