BIOLOGICAL TECHNICAL REPORT

For the

OMNI LA COSTA CHAMPIONS COURSE RENOVATION PROJECT

Prepared for:

LC Investment 2010 dba Omni La Costa Resort & Spa
TRT Holdings Inc.
4001 Maple Ave.
Suite 300
Dallas, TX 75219

Prepared by:

PLANNING SYSTEMS
1530 Faraday Ave.
Suite 100
Carlsbad, CA 92008

September, 2022

PLANNING SYSTEMS

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1.0 SUMMARY OF FINDINGS

Per the request of Mr. Clint Gulick of TRT Holdings, an affiliated entity of LC Investment 2010 LLC, dba Omni La Costa Resort & Spa; Planning Systems has conducted a biological resources assessment of the Champion's Course of the Omni La Costa Golf Course ("Champions Course") and assessed the environmental impacts which will result from the improvements identified in a proposed renovation program. This Golf Course renovation program is proposed by the owner of the property, LC Investment 2010 LLC dba Omni La Costa Resort & Spa ("Omni"). Omni hired Planning Systems to conduct an updated biological resources reconnaissance survey, update vegetation mapping and provide a biological technical report for the Champions Course property. This biological technical report summarizes the existing vegetation communities, potential for presence of special-status plant and animal species, and biological impacts expected to result from implementation of the renovation program.

The Champions Course is the existing northern 18-hole leg of the 36-hole Omni La Costa Golf Course. Shallow grading of much of the surface of the Champions Course, and gravel, sand and grass replacement will occur on a number of tee boxes, greens and bunkers. This program is intended to upgrade the course to state-of-the-art professional standards in order to provide improved play, to drain more efficiently, and to replace high-water use landscaping with more sustainable, irrigation-efficient plantings and play area.

Records searches and field investigation of the Champions Course property have been conducted. This investigation concludes that construction of the Champions Course renovation project is expected to permanently affect 44.12 acres of Urban/Developed (mostly golf course) land cover, 3.94 acres of Fresh Water (golf water hazards) , and 1.32 acres of Disturbed habitat.

Payment of a mitigation fee to the City of Carlsbad for impacts to the Disturbed habitat will be required as environmental compensation for direct impacts to vegetation resulting from implementation of the golf course renovation project. In addition, the developer will be required to provide funding in an amount adequate (not to exceed $100,000) to support removal of invasive, non-native vegetation in the freshwater marsh and slopes on the adjacent conservancy preserve property owned the Center for Natural Lands Management (CNLM). This compensatory mitigation is necessary in order to offset the significant impacts associated with the loss of environmentally beneficial qualities resulting from the elimination of 3.94 acres of artificial water hazard ponds (two ponds) which serve as a resting, drinking and foraging place for mammals and migrating birds. No other mitigation is expected to be required.

A single Species of Special Concern (Orange-tailed whiptail) reptile was observed offsite approximately 100-feet to the east of the Champions Course boundary. No direct impacts to special species plants or animals is anticipated from implementation of the project. The project is consistent with the City of Carlsbad Habitat Management Plan ("HMP").

The employment of additional measures listed at the end of the report will help to avoid or minimize other indirect impacts to special-status wildlife species and habitat.

2.0 INTRODUCTION

2.1 PROJECT LOCATION

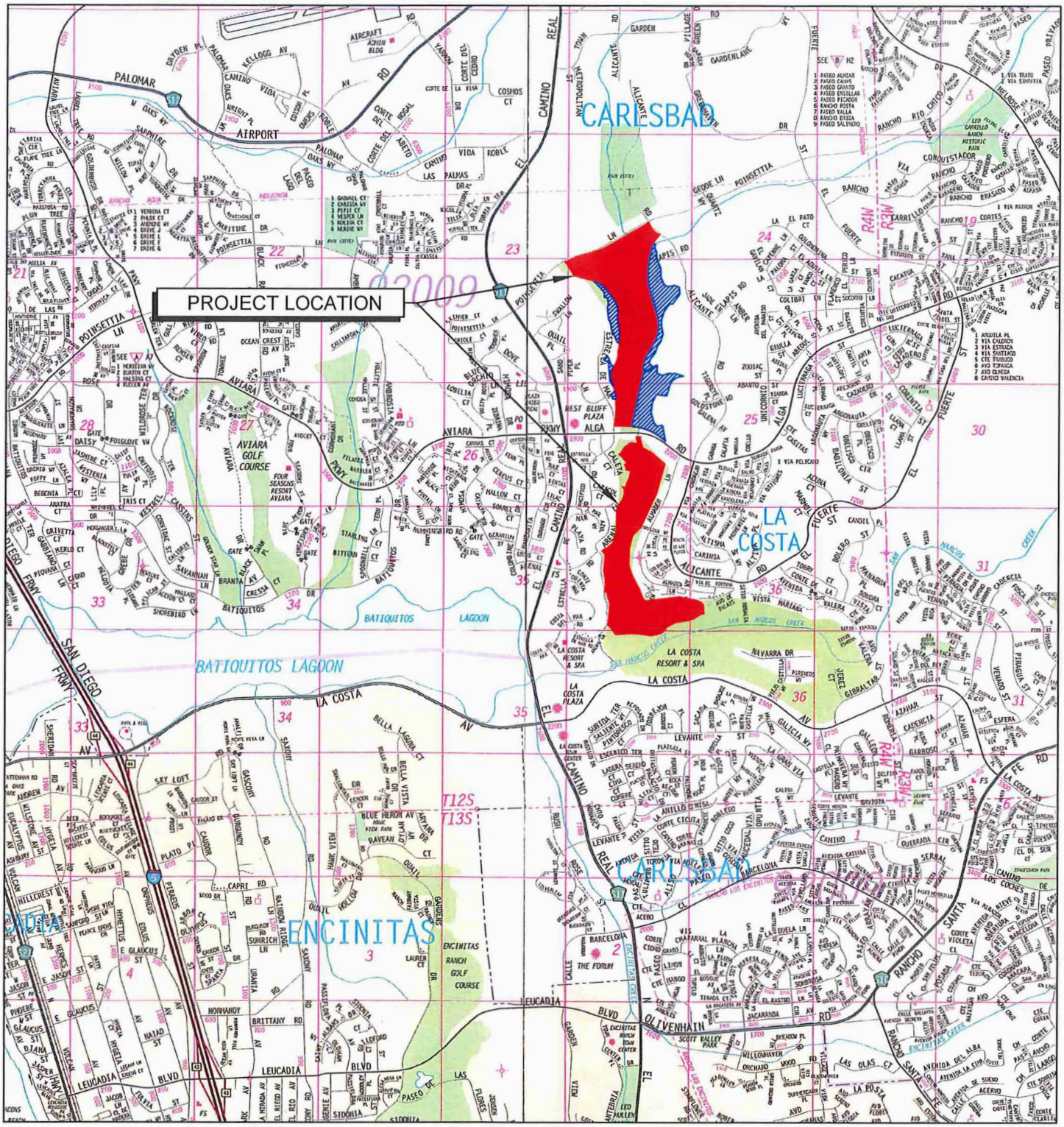
The Omni La Costa Champions Course is located on the USGS Encinitas 7.5 minute quadrangle map, at 20 ft. to 126 ft. elevation above sea level. The course is located within a broad, north-south trending alluvial valley located in the southeastern portion of the city of Carlsbad. The project ("Champions Course") is located between Poinsettia Lane [on the north] and San Marcos Creek [on the south], in the City of Carlsbad, California (*Figure 1; Location Map*).

The site exists in an urbanized state as an active, operating, full-service golf course. The course was constructed in 1965, and had a single restoration (in 2003) prior to the present. The eastern half of the course (Legends Course) was the subject of a similar renovation in 2013. No renovation improvements are proposed on the 18 holes of the Legends Course. Surrounding land uses to the west, north and east primarily consist of single family homes. The main facilities associated with the Omni La Costa Resort and Spa are located to the southwest. The South Course of the Golf Course is located south and east of the Champions Course. The entire course is subject to the City of Carlsbad's Habitat Management Plan ("HMP") and is not within the California Coastal Zone.

For purposes of this analysis, a Biological Study Area ("Study Area") including and around the perimeter of the limits of the renovation program was identified within onsite APN's 213-111-00, 213-111-15, 213-112-31, 213-112-32, 216-593-05, 216-592-01, 216-590-02 and adjacent offsite APN's 213-111-10 and 213-111-11. The Study Area totals 188.83 acres, although the Champions Course is only 159.70 acres of this area. Up to 49.38 acres of the 159 acre project area will be subject to the renovation improvements. These 66.24 acres are distributed in dozens of smaller irregular pieces, hopscotched throughout the course. Preliminary plans for the renovation were reviewed to identify the areas that will be impacted by the renovation operations.

The Study Area is situated in a highly-urbanized environment. The site is located within the Carlsbad Hydrological Unit drainage basin, one of 12 hydrologic units identified in San Diego County by the RWQCB. More specifically, it is located within the San Marcos Creek Hydrologic Area. The San Marcos Creek conveys flows westward from the San Marcos and southeast Carlsbad area, through the Legends Course section of the golf course just south of the Champions Course, on through tidally-influenced downstream Batiquitos Lagoon, and ultimately into the Pacific Ocean. Please see *Figure 2; USGS Map*.

The bioregion that generally defines the area is influenced by a coastal Mediterranean climate. The area's climate, coupled with coastal geological formations and land features, give rise to an array of habitat types and species that are unique to coastal southern California.



SOURCE: The Thomas Guide, San Diego County

Plan Legend

HMP Hardline Area Adjacent to Omni La Costa Golf Course

NORTH

0 1500 3000 6000 FT

SCALE: 1" = 3000'

Figure 1
Location Map
Omni Resort - Champions Course
Carlsbad, California

September 15, 2022

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Figure 2
USGS Location Map
Omni Resort - Champions Course
Carlsbad, California

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2.2 PROJECT DESCRIPTION

As described by Omni, the course facilities on the Champions Section are now of somewhat obsolete design and timeworn condition, and do not possess environmentally sustainable sod and cover, or an efficient or effective planting, irrigation and underdrain system. The Champions Course renovation program will involve adding and removing golf hazards, relocating and reshaping fairways and greens, re-landscaping to drought-tolerant plantings, realigning cart paths, and adding retaining walls and foot bridges. Sand, gravel and grass replacement will occur on a number of tee boxes, greens, bunkers and fairways. The existing course layout and sequence of play will remain largely the same.

More specifically, the changes are can be defined as follows;

1. Adjust several tee boxes and green layout to increase course length and improve play.
2. Adjust fairways, rough and sand trap locations.
3. Introduce "barranca" areas consisting of mostly grasses and sand that utilize drought-tolerant, arid plantings.
4. Introduce naturalized plantings into areas of play that will use low-water plantings.
5. Introduce naturalized plantings on slopes (in out of play areas) to define limits of play and for ornamental effect.
6. Adjust cart path routes to achieve improved circulation.
7. Remove 3.94 acres of existing artificial ponds (water hazards) to reduce water usage and to improve play.
8. Re-grade as necessary to achieve the design goals.

While renovation of the Champions Course is proposed, no substantive change to the overall golf course design or drainage pattern of the property will result from implementation of the project.

3.0 REGULATORY FRAMEWORK

3.1 LOCAL CONSERVATION PLANS

Federal and state law allows for local or regional agencies to prepare and receive approval of habitat preservation programs which are intended to preserve the diversity of habitat and protect sensitive biological resources while at the same time allow for lawful development and activities consistent with the approved programs. These programs are authorized through the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA), subject to preparation and implementation of approved Habitat Conservation Plans (HCP's). HCP's are approved by the USFWS, CDFW and the local agency. The following is a summary of the applicable HCP regulatory policy documents in the City of Carlsbad.

3.1.1 North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County, including Carlsbad. The MHCP is divided into seven subarea plans, one for each jurisdiction within the MHCP area. These subarea plans are permitted and implemented separately from one another. In Carlsbad, the approved subarea plan is the Habitat Management Plan for Natural Communities in the City of Carlsbad, City of Carlsbad 2004 (HMP). This HMP is the roadmap for protection of habitat areas and linkages within the City of Carlsbad.

3.1.2 City of Carlsbad Habitat Management Plan

The project Study Area occurs within the boundaries of the adopted Carlsbad HMP and therefore the project is subject to HMP regulations. The HMP was adopted by the City in December 1999, and the final approvals from USFWS and CDFW, including implementing agreement and terms and conditions, were granted in November 2004. The purpose of the Carlsbad HMP is to guide the design, management, monitoring and public use of a habitat preserve system throughout Carlsbad.

The Carlsbad HMP calls for 6,478 acres of natural habitat to be preserved within the City as well as an additional 308 acres of habitat outside the City. The HMP identifies core candidate preserve areas, linkages, and special resource areas which are intended to form the background pattern of protected open spaces throughout the City.

The project site is located within Local Facility Management Zones 6 and 10, which includes much of the area in this southeastern section of Carlsbad. The northern section of the course (in Zone 10, north of Alga Road) contains existing HMP Hardline Preserve property east and west of the golf course property. The Hardline Preserve areas are intended to remain in their natural state. None of this hardlined property extends into the golf course. The relationship of this hardline to the golf course is depicted on *Figure 3*. No HMP Proposed Hardline or HMP Standards Areas are located in the vicinity of the project. Although portions of the course are adjacent to Existing Hardlined areas, the HMP identifies the entirety of the golf course as "development area", and does not indicate any attempt to preserve areas on the golf course property in their natural state.

3.2 FEDERAL AND STATE REGULATIONS

3.2.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973, as amended, is administered by the U.S. Fish & Wildlife Service (USFWS) and is intended to provide a means to conserve the habitats upon which endangered and threatened animal species depend, and to provide programs for the conservation of those species in order to avoid eventual extinction of plants and wildlife. FESA defines an endangered species as "*any species that is in danger of extinction throughout all or a significant portion of its range*." A threatened species is defined as "*any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range*." Under the terms of FESA, it is unlawful to "take" any listed species. "Take" is defined as, "*harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct*."

The FESA however, allows for the issuance of lawful incidental take permits for listed species under Section 10, which provides for the approval of habitat conservation plans (HCP's) on private property without any other federal agency involvement. The Carlsbad HMP functions as an approved HCP for the take of federally-listed endangered species on the subject property.

3.2.2 California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA), which prohibits the "take" of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Similar to the FESA, under the terms of CESA, "take" is defined as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*." CESA also stipulates that state agencies may not approve projects that will "*jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species*."

CESA defines a state endangered species as "*a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease*." CESA defines a threatened species as "*a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter*."

Therefore, CESA authorizes the taking of state threatened or endangered species if the take is incidental to otherwise lawful activity and if specific protection and management criteria are met. These provisions require CDFW to coordinate consultations with the U.S. Fish and Wildlife Service (USFWS) for actions involving federally listed species that are also state-listed species. Plant or animal species that are federally listed or state-listed as endangered or threatened are considered special-status species. The location of those species within the Study Area and, more specifically, on the subject property, and the anticipated impacts to those species and their habitats

resulting from implementation of the project are addressed in the following chapters of this biological technical report, including the appendices.

3.2.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was passed by the U.S. Congress in 1918 and it protects the active nesting of over 800 species of birds throughout the country. This Act is enforced by the USFWS. The USFWS has defined "active nests" as those bird nests containing eggs, chicks, or fledglings. This report addresses the project's likelihood of resulting in violations of the MBTA, and includes mitigation measures which would minimize the possibility of such violations.

3.3 JURISDICTIONAL AQUATIC RESOURCES

Both the U.S. federal government and the State of California regulate the filling, dredging or otherwise physical impacting of streams, channels and waterways, including ephemeral drainages, dry streambeds, and wetlands. Description of these resources and the federal and state agencies charged with administering these statutes and their responsibilities are described briefly below.

3.3.1 Waters of the United States

The U.S. Army Corps of Engineers (USACE) asserts regulatory jurisdiction over activities affecting wetland and non-wetland Waters of the U.S. (WOUS) pursuant to Section 404 of the federal Clean Water Act ("CWA"). The term "Waters of the U.S." is defined in regulations promulgated by the USACE under the authority of the CWA and typically includes all navigable waters (including all waters subject to the ebb and flow of the tide); all interstate waters and wetlands; all impoundments of waters mentioned above; all tributaries to waters mentioned above; the territorial seas; and all wetlands adjacent to waters mentioned in this list.

The USACE also, however, asserts regulatory jurisdiction over activities affecting non-wetland WOUS. These areas are determined to be potential non-wetland WOUS if there is evidence of regular channeled surface flow (e.g., bed and bank) but either the vegetation or soils criterion was not met. Jurisdictional limits for these areas were measured according to the presence of a discernible Ordinary High Water Mark (OHWM). The USACE and the California Regional Water Quality Control Board (RWQCB) regulate wetland and non-wetland waters of the U.S. pursuant to the requirements of the U.S. Clean Water Act.

Under normal conditions, the USACE will assert jurisdiction over the following features:

- *Traditional navigable waterways and their adjacent wetlands.*
- *Non-navigable tributaries of traditional navigable waterways that typically flow year-round or have a continuous flow at least seasonally (typically 3 months) and wetlands that directly abut such tributaries.*
- *Non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary.*

Alternatively, the USACE will typically not assert jurisdiction over the following features:

- *Swales or erosional features (e.g., gullies and small washes characterized by low volume and infrequent or short-duration flows).*
- *Ditches (including roadside ditches) excavated wholly in uplands and draining only uplands that do not carry a relatively permanent flow of water.*

The California RWQCB is responsible for the administration of Section 401 of the CWA. Typically, those areas subject to RWQCB jurisdiction coincide with those of the USACE. Pursuant to Section 401 of the CWA; *"...any applicant for a federal permit for activities that involve a discharge to waters of the United States shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act."*

3.3.2 Waters of the State

Pursuant to Sections 1600-1616 of the California Fish and Game Code, CDFW regulates any activity that will substantially divert or obstruct the natural flow, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake. An applicant must notify CDFW prior to such activities and obtain and execute an approved Lake or Streambed Alteration Agreement.

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of; (a) definable bed and banks and (b) existing fish or wildlife resources. Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that support riparian hydrologic systems.

CDFW generally does not assert jurisdiction over human-made water bodies unless they are located where such natural features were previously located or where they are contiguous with existing or prior natural jurisdictional areas. While CDFW streambed limits frequently closely resemble the limits described by USACE regulations, they also include riparian habitat supported by the river, stream or lake regardless of the presence or absence of hydric and saturated soils conditions. Notification to CDFW is generally required for any project that will take place within or in the close vicinity of a river, stream, lake, or their tributaries.

3.3.3 Porter-Cologne Water Quality Control Act

Pursuant to the State of California Porter -Cologne Water Quality Control Act, the RWQCB regulates discharges of pollutants into "waters of the state", which are broadly defined as any surface water or groundwater within the boundaries of the state. This authority is independent of any federal requirements, and is applicable to all waters of the state regardless of whether federal CWA jurisdiction applies or not. To ensure that "isolated" waters (those not providing a direct connection via waterway to the coastline) in California are also protected by the state, the RWQCB has issued general Waste Discharge Requirements regulating discharges to isolated waters that are not under federal CWA jurisdiction. The RWQCB enforces the terms of this Act.

4.0 METHODS

Biologists and Regulatory Specialists from Planning Systems conducted literature and database research, and followed-up with field surveys in order to collect data and draw the conclusions articulated in this report. A review of relevant maps, databases, and literature pertaining to biological resources known to occur within the vicinity of the project was performed using the California Natural Diversity Data Base (CNDDB) (CDFW 2015), USFWS occurrence data (USFWS 2015), and California Native Plant Society (CNPS) (CNPS 2015). The Carlsbad HMP was also reviewed with respect to species covered by this plan. The purpose of the review of this information was to determine if sensitive habitats, or special-status plant and wildlife species were known to inhabit the combined project area, and what resulting constraints these inhabitants might have on the presently-developed property.

4.1 FIELD INVESTIGATION

The biological investigation performed for the project included a general observational survey of the Study Area for plant communities. Minimal effort was made to identify specific sensitive plants and animals, inasmuch as the areas proposed for the revitalization described above is, in all cases, active golf course play area, which is the subject of daily foot and golf cart traffic, and regular landscape maintenance. Land that is impacted by such regular use does not typically accommodate native habitats or sensitive plants. Survey fieldwork was conducted on February 19, 2021, March 2, 2021, on October 2, 2021, and again on February 18, 2022. The entire course was traversed on golf cart and foot and was surveyed and described by Greg Evans, biologist and Paul Klukas, regulatory specialist. The Study area 100-foot buffer was observed through binoculars. The staff personnel documented the general site conditions and limits of plant communities.

During the field investigation, identified resources were surveyed visually and documented on an aerial photograph. Both drone and field photography was also used to identify the limits of vegetation and land cover communities. The vegetation types and land covers were classified according to Holland (1986) and Oberbauer et al. (2008) classification systems. The biologist assessed the habitat suitability for potential sensitive plant and animal species, and identified any potential sensitive communities within the Study Area.

Field documentation to classify habitat present was conducted using a 2020 aerial photograph of the area on a topography map with 1-foot contour intervals. Vegetation communities were mapped by the biologist in the field directly onto a 200-scale (1 inch = 200 feet) false-color digital orthographic map of the property (Google Earth 2020). A Trimble R2 GNSS handheld sub-meter receiver was used to verify locations or land cover boundaries as necessary. These boundaries and locations were digitized in the office using TerraFlex and AutoCAD computer software. Photographs of the areas surveyed from ground level and via drone photography are provided in **Appendix A**. A list of plant species observed on the property is provided in **Appendix B**.

All wildlife visually observed and wildlife sign detected, including tracks, scat, carcasses, burrows, and vocalizations were recorded and are include as **Appendix C** to this report. Notes were made on the general habitat types, species observed, and the conditions of the site. No focused wildlife surveys were conducted as part of this site investigation. This is as a result of the fact that the golf course repairs will take place within an open space area, and the repairs will not result in any change to this open space land use. Upon completion of the repair project, it is expected that any wildlife using the site will be able to continue that use of the site.

4.2 JURISDICTIONAL DELINEATION

A Jurisdictional Delineation was conducted for the Study Area. Suspected areas subject to U.S. Army Corps of Engineers or the California Department of Fish and Wildlife. Candidate jurisdictional areas were field checked for evidence of stream activity and/or wetland vegetation, soils and hydrology. In the field, boundaries and dimensions of jurisdictional features were recorded on aerial photographs and GPS. Features within the Study Area were investigated for the presence of drainages, water bodies, riparian habitats, potential wetlands and connectivity to traditional navigable waterways. A Jurisdictional Delineation report was prepared and is **Appendix D** of this report.

4.3 SURVEY LIMITATIONS

Plant communities observed in the field were identified and are listed in this report. Although the biologist was on the alert for identification of any rare plants during the site reconnaissance, focused rare plant surveys were not conducted due to the recognition that scarce native habitat exists on the Champions course, and the area of proposed renovation program is regularly trampled by golfers and rigidly maintained by course maintenance personnel.

5.0 VEGETATION COMMUNITIES

5.1 VEGETATION OVERVIEW

Vegetation communities, habitat types, and land covers are classified in this report according to the Carlsbad HMP, with further guidance from Oberbauer (2008). These identified communities and land covers and are intended to generally define the biological resource baseline condition for the proposed project footprint and immediately adjacent areas, in order to appropriately evaluate the project's potential impact to biological resources.

The Study Area supports a limited variety of vegetation communities and land covers. The vast majority of the Study Area has been previously developed and is covered with golf course improvements, including play area, cart paths, out-of-bounds buffers, and parking lot. Scarce land remains for natural vegetative or their vegetation communities. The area of project impact consists entirely of previously-developed property, including a golf course and its support buildings, parking lots and vehicle drives. Golf course-related ornamental (Urban Developed) vegetation, including mowed and maintained turf grass is, by far, the most prevalent vegetative habitat type within the Study Area. Native vegetation occurs only in the context of sporadic individuals in the existing landscape palette mix for the Champions Course, and some volunteer plants which have sprung up in and around the course perimeter or near the water hazard ponds which are found interspersed throughout the course.

The existing vegetation is mostly comprised of ornamental grasses and plants. Ornamental vegetation includes commonly-found non-native landscape species which have been planted in the golf course. This includes species of turf grasses, flowering annuals, and trees and bushes, including tree species eucalyptus (*Eucalyptus spp.*), pepper trees (*Schinus spp.*), California sycamore (*Platanus racemosa*), White alder (*Alnus rhombifolia*), non-native oak trees (*Quercus ilex and Q. suber*), pine trees (*Pinus spp.*), California walnut (*Juglans californica*), Pink trumpet tree (*Tabebuia impetginosa*), Bottlebrush (*Callistemon spp.*) and the London plane tree (*Platanus hispanica*).

Typical shrubs within the Champions Course include the Dwarf myrtle (*Myrtus communis compacta*), Prostrate acacia (*Acacia redolens*), Mexican bird of paradise (*Caesalpinia gillesii*), New Zealand flax (*Phormium tenax atropurpurem*), Bougainvilia (*Bougainvilia purple queen*) and Indian hawthorne (*Rhaphiolepis idica dancer*). The vast acreage of grasses on the existing course include Bermuda grass (*Cynodon dactylon*), Fescue grass (*Festula ssp.*), and other Urban Developed vegetation types.

Ruderal vegetation exists in several places on the periphery of the Champions Course. Such vegetation is characterized as that which has been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association. This vegetation is nearly exclusively composed of non-native plant species which take advantage of the disturbed character that prevents natural revegetation, such as Fountain grass (*Pennisetum spp.*), Wild oat (*Avena fatua*) and Russian thistle (*Centaurea spp.*)

Native plant species are frequently used in landscaping of golf courses in southern California due to the infrequent and minimal average rainfall. Such native shrubs such as Toyon (*Heteromeles arbutifolium*), Pigeon point coyote bush ((*Baccharis pilularis*), coast live oaks (*Quercus agrifolia*), elderberry and the California walnut are found distributed sparsely in the Study Area. While the larger of these trees and bush species were likely planted for landscaping of the golf course years ago, the occasional smaller specimens appear to be young volunteers.

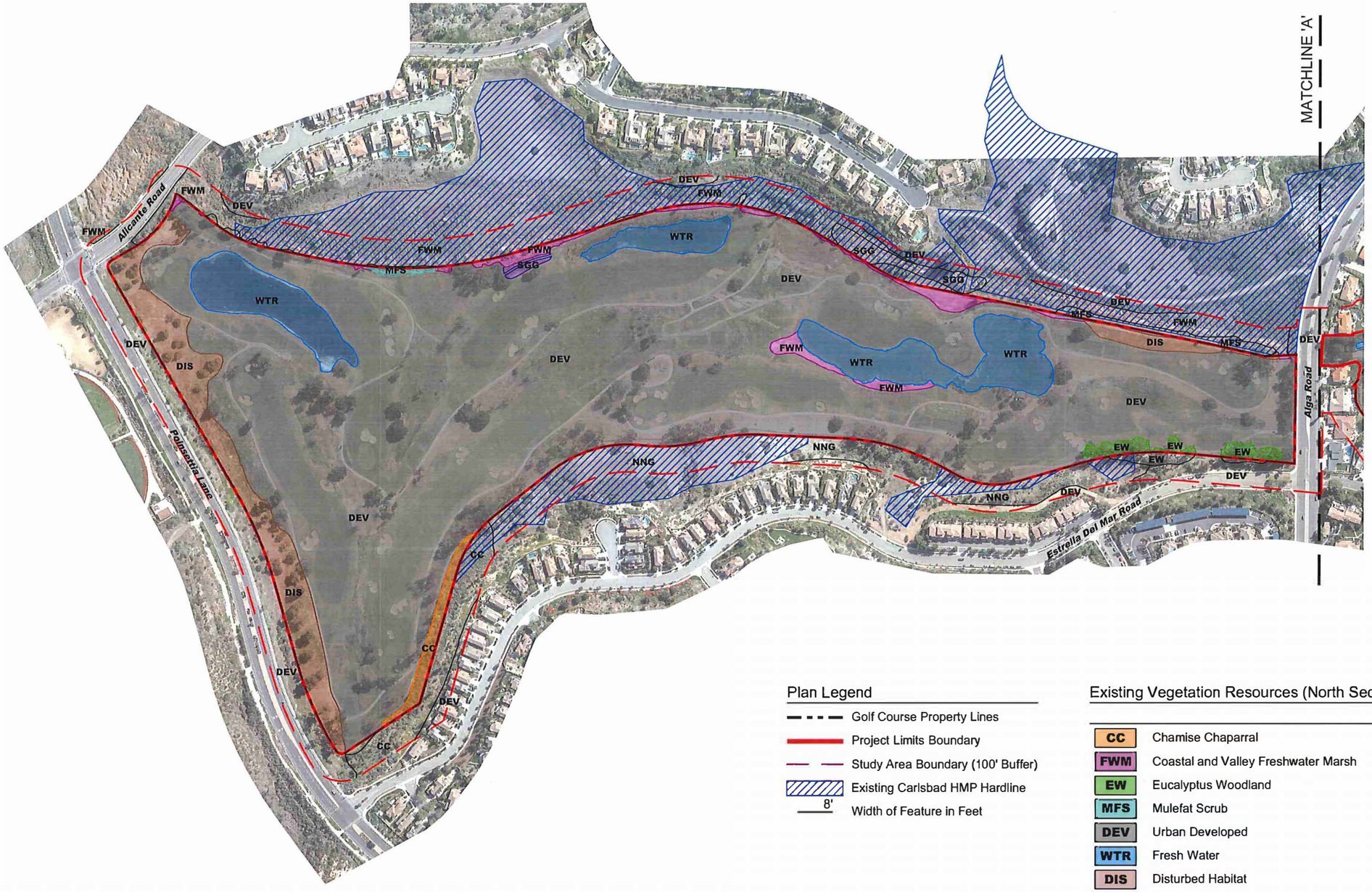
5.2 VEGETATION COMMUNITIES AND LAND COVER TYPES

A total of five (5) vegetation communities and three (3) land cover types were mapped within the Study Area. The distribution of vegetation communities and land covers on the property are depicted on *Figures 3 and 4; Vegetation Resources Analysis*, and are quantified on the following table:

Table 1: Study Area Vegetation Communities (Acres)

Vegetation Community/Land Cover	Code	Total Acres on Golf Course Site
Urban/Developed	12000	138.89
Fresh Water	64140	11.88
Coastal and Valley Freshwater Marsh	52410	2.23
Disturbed Habitat	11300	5.29
Saltgrass Grassland	42130	0.12
Mule Fat Scrub	63310	0.14
Chamise Chaparral	37200	0.60
Eucalyptus Woodland	79100	0.55
TOTAL		159.70

Urban/Developed Land Cover (12000) (153.94 acres). Urban/Developed land cover includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. Onsite, Urban/Developed land cover is characterized almost totally by planted ornamental, upland vegetation. This is, by far, the most prevalent vegetative habitat type or land cover within the Study Area. This land cover is such that the land surface has been physically altered to an extent that native vegetation is no longer supported. The Champions Course is landscaped with a variety of ornamental plants. Native vegetation occurs only in the context of a small number of plantings in the original palette mix for the course, and, more frequently, volunteer plants which have sprung up in and around the course perimeter or near the water hazard ponds which are found interspersed throughout the course. The course is regularly-maintained, tread-upon by foot traffic and golf cart activity, and is regularly mowed and irrigated. Vegetation within the golf course is dominated by non-native ornamental species, including domestic grasses, shrubs and mature trees.



Plan Legend

- Golf Course Property Lines
- Project Limits Boundary
- Study Area Boundary (100' Buffer)
- Existing Carlsbad HMP Hardline
- 8' Width of Feature in Feet

Existing Vegetation Resources (North Section)

		Total (ac.)
CC	Chamise Chaparral	0.60
FWM	Coastal and Valley Freshwater Marsh	1.45
EW	Eucalyptus Woodland	0.55
MFS	Mulefat Scrub	0.14
DEV	Urban Developed	66.25
WTR	Fresh Water	6.57
DIS	Disturbed Habitat	5.29
SGG	Saltgrass Grassland	0.12
	Total (North Section):	*80.97*

Figure 3

Vegetation Resources Analysis - North Section

Omni Resort - Champions Course

Carlsbad, California

NORTH

0 200 400 800 FT

Scale: 1" = 400'

September 15, 2022

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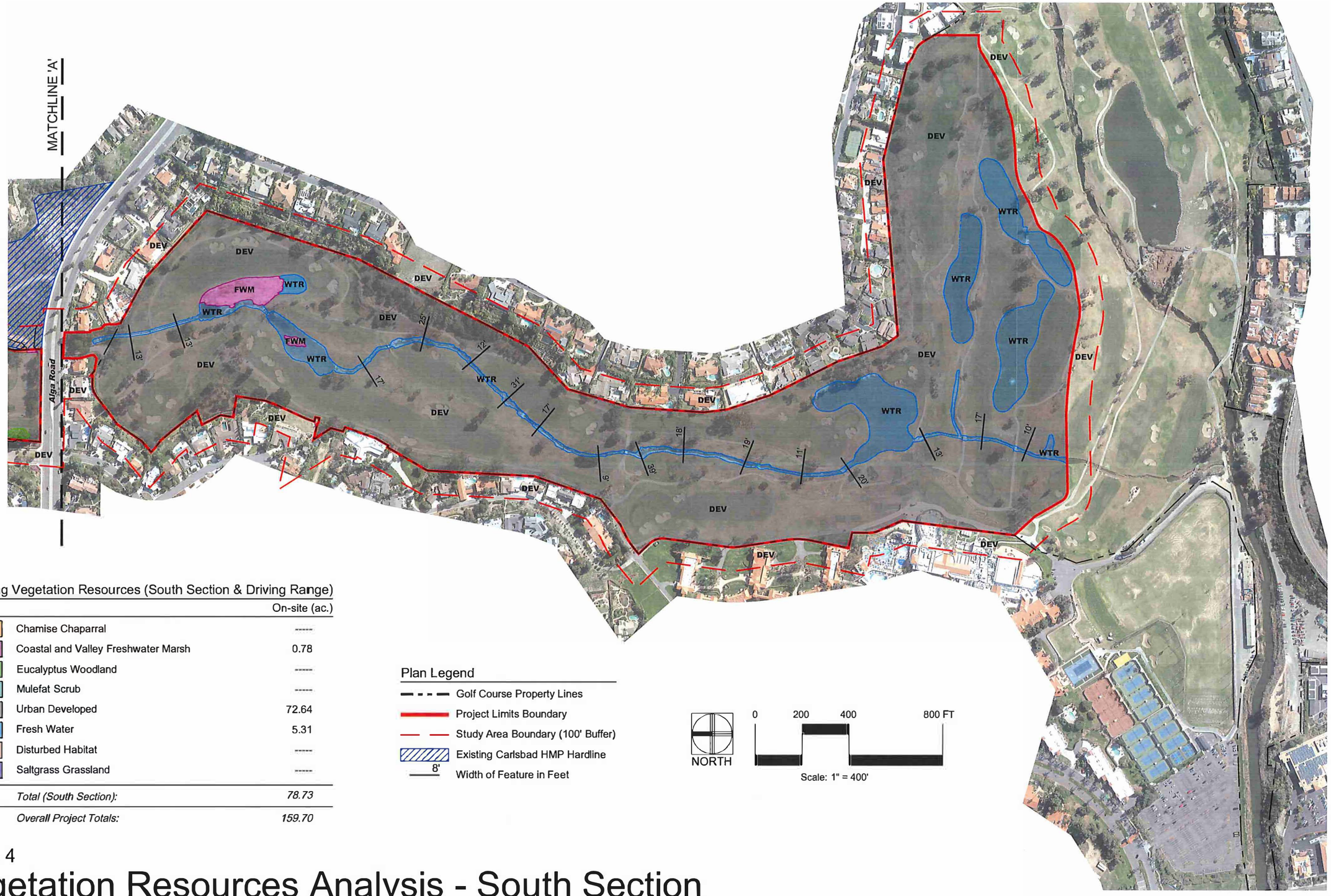


Existing Vegetation Resources (South Section & Driving Range)

		On-site (ac.)
CC	Chamise Chaparral	-----
FWM	Coastal and Valley Freshwater Marsh	0.78
EW	Eucalyptus Woodland	-----
MFS	Mulefat Scrub	-----
DEV	Urban Developed	72.64
WTR	Fresh Water	5.31
DIS	Disturbed Habitat	-----
SGG	Saltgrass Grassland	-----
	Total (South Section):	*78.73*
	Overall Project Totals:	*159.70*

Plan Legend

- Golf Course Property Lines
- Project Limits Boundary
- Study Area Boundary (100' Buffer)
- Existing Carlsbad HMP Hardline
- 8' Width of Feature in Feet

NORTH

0 200 400 800 FT

Scale: 1" = 400'

Figure 4

Vegetation Resources Analysis - South Section

Omni Resort - Champions Course

Carlsbad, California

September 15, 2022

PLANNING SYSTEMS
LAND USE/COASTAL PLANNING
LANDSCAPE ARCHITECTURE
POLICY AND PROCESSING
ENVIRONMENTAL MITIGATION
1630 FARADAY AVENUE, SUITE 100, CARLSBAD, CA 92008
(760) 931-0760 FAX (760) 931-5744

Vegetation occupying the course are turfs such as; Bermuda grass (*Cynodon dactylon*), Bent grass (*Agrostis*) Zoysia grass (*Zoysia*) and to a lesser degree, other non-native grasses. Shrubs occurring within the golf course are numerous. Examples of the more populous species of shrubs on the course are; Japanese boxwood (*Buxus japonica*), Rosemary (*Rosmarinus officinalis*), Oleander (*Nerium oleander*) and Common sage (*Salvia officinalis*).

Numerous mature trees exist in the Urban/Developed land cover on the course. These trees include Strawberry tree (Arbutus marina), London plane tree (*Platanus acerifolia*), and several species of Eucalyptus (*Eucalyptus sp.*) including primarily Red ironbark eucalyptus (*Eucalyptus sideroxylon*), and a number of pine species (*Pinus sp.*) and Ash (*Fraxinus*). A handful of Weeping willow (*Salix babilonica*) individuals also inhabit the property. Of the plants and trees on the golf course site, only the Coast live oak (*Quercus agrifolia*) is a native to the area. The course repair project avoids impacts to all Coast live oak individuals on the property.

Fresh Water (64140) (12.63 acres). The ten (10) man-made water hazard ponds disbursed throughout the Champions Course constitute a Fresh Water land cover. These covers are year-round bodies of fresh water containing less than 10% vegetative cover. Also, the channelized drainage streambed south of Alga Road constitutes a narrow ribbon of Fresh Water meandering downstream to its confluence with San Marcos Creek. For purposes of this analysis, the Fresh Water land cover is not considered a "special status" vegetation alliance. Also, the Fresh Water ponds not directly connected to a downstream navigable water are not regulated by the Corps pursuant to Section 404 of the Clean Water Act. Fresh Water covers 12.63 acres of the project property.

Coastal and Valley Freshwater Marsh (52410) (2.23 acres). The Coastal and Valley Freshwater Marsh ("CVFM") is a wetland community of native and non-native low-growing, aquatic species. Within the Study Area, the community includes primarily cattail (*Typha sp.*), Mexican rush (*Juncus mexicanus*), California bulrush (*Schoenoplectus acutus*), Olney's bulrush (*Schoenoplectus americanus*), pale spikerush (*Eleocharis macrostachya*) and other species. The onsite CVFM is found in several locations around the perimeters of the freshwater ponds. The main CVFM is however located primarily offsite, east of the north leg of the course, as a low-growing marsh habitat, and does not contain any riparian forest. This offsite CVFM is generally wide and shallow, and although these is seasonal fluctuation in the level of hydrology, the CVFM in the main drainage in the Study Area appears to be almost permanently flooded by fresh water and thus is saturated for long periods of time. A small occasional thicket of arroyo willow (*Salix lasiolepis*) can be found just upstream from Alga Road.

Some areas of "emergent" CVFM exist along the edges of the Champions Course water features. For purposes of this analysis, the emergent CVFM on the periphery of the water features is not considered a "special status" vegetation alliance.

Disturbed Habitat (11300) (5.29 acres). Disturbed habitat or disturbed land includes land largely cleared of vegetation, land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously graded, cleared or abandoned landscaping), and land showing signs of past or present human or animal usage that removes any capability of providing viable habitat. Onsite, Disturbed Habitat vegetation is nearly exclusively composed of non-native plant species which take advantage of the disturbed character that prevents natural revegetation, such as Fountain grass (*Pennisetum*

spp.), Wild oat (*Avena fatua*), Wild lettuce (*Lactuca serriola*) and Russian thistle (*Centaurea spp.*). Native species are scattered within the disturbed habitat in very low numbers including fascicled tarweed (*Deinandra fasciculata*) and white-margin sandmat (*Euphorbia albomarginata*). Disturbed Habitat occurs over 5.29 acres of flat [golf out-of-bounds] land situated at the extreme north end of the course.

Saltgrass Grassland (42130) (0.12 acres). Saltgrass grassland is a very low growing (less than 2 inches in height) grassland dominated by Saltgrass (*Distichlis spicata*). It is found on approximately 0.12 acres of the Golf Course property, sandwiched between the golf play area and the CVFM drainage. Although it is not connected to the CVFM due to the placement of a soil berm between the two many years ago, the saturation of the clay soil from the CVFM has been sufficiently wet for the Saltgrass to dominate a small area previously covered with domestic course grasses. Saltgrass is considered a wetland indicator, native to southern California.

Mulefat Scrub (63310) (0.14 acres). Mulefat scrub is an evergreen habitat dominated almost exclusively by Mulefat (*Baccharis salicifolia*). Onsite, the Mulefat scrub is located along the west side of a single section of the CVFM, between the course and the CVFM, north of Alga Road. The soil along this area is somewhat dryer than the majority of the CVFM, and thus cannot support the scope and scale of vegetation species that occur within the CVFM. Mulefat is equally likely to occur in wetlands as in non-wetlands. Thus, a Mulefat scrub habitat has a wetland status of "Facultative".

Chamise Chaparral (37200) (0.60 acres). Chamise chaparral is found in a band of sloping land between existing houses and the Champions Course, in the extreme northwest corner of the course. Chamise chaparral is a chaparral community overwhelmingly dominated by chamise (*Adenostoma fasciculatum*). Other associated species contribute little to the cover. Generally, mature stands are densely interwoven with very little herbaceous understory or litter. Other species present in this community include Mission manzanita (*Xylococcus bicolor*) and Laurel sumac (*Malosma laurina*).

Eucalyptus Woodland (79100) (0.55 acres). Eucalyptus woodland covers approximately 0.55 acres onsite. It is dominated by eucalyptus (*Eucalyptus sp.*), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis ssp. Obtuse*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however as a wildlife habitat, these woodlands provide potential nesting sites for a variety of raptors.

5.3 TOPOGRAPHY

Overall, the Champions Course property consists of a very gently-sloping (almost flat) alluvial valley, with the highest elevation of 126 feet above mean sea level (AMSL) at the extreme north end of the Study Area, and a lowest elevation of 20 feet AMSL at the south end, where the low point confluences with San Marcos Creek. Drainage and runoff flows into the Study Area from the north, through culverts under Poinsettia Lane and Alicante Road. The surrounding Golf Course is generally flat, with artificially-constructed high points, bunkers and fairways.

5.4 SOILS

The National Cooperative Soil Survey (NCSS) has mapped the following soil types as occurring on and in the general vicinity of the project site:

Altamont Clay (AtE). The Altamont series consists of well-drained soils that formed in material weathered from fine grained sandstone and shale. On the subject property, these soils are on gently sloping to flat uplands 0 to 15% slopes. The Clay content is high. The texture of the soil is clay loam, silty clay or clay.

Corralitos loamy sand (CsB). The Corralitos series consists of medium-deep, somewhat excessively drained soils that has been imported as undocumented fill throughout much of the site. It ranges in depths from one-half to one foot, and consists of fine sandy clay that is damp to moist, stiff, dark brown; and silty fine to medium sand that is damp, medium dense, and brown. Varying amounts of mica are observed in the undocumented fill. This soil is on 0-5% slopes.

Huerhuero-Urban land complex (HuC). The Huerhuerto series consists of moderately well-drained sandy clay that is moist to saturated, stiff, dark brown with varying amounts and size of sand to clayey fine to coarse sand that is saturated, medium dense to silty sand that is moist, medium dense, and brown, on 0 to 5% slopes.

Salinas clay loam (SbC). The Salinas series consists of deep, well-drained soils that formed in alluvium weathered from sandstone and shale. Salinas soils are found in valley bottoms, similar to that in which the Golf Course is situated. It is typically found in 0-9% slope areas.

Salinas clay (ScA). This soil consists of well drained soils on rolling uplands with slopes of 5 to 15% at low elevations. These Salinas soils formed in residuum weathered from shale, sandstone, and consolidated sediments. They have slow runoff when soil is dry, medium to rapid when soils are moist.

Visalia sandy loam (VaB). The Visalia series consists of shallow, moderately well and well drained soils that formed in alluvium from mixed rock sources. They are found on alluvial fans, floodplains and in small basins at low elevations. Slopes are smooth and range from 0 to 15%. Visalia soils are used for grazing and for production of cultivated areas.

Groundwater on the site is encountered at 7 to 15 feet below the surface.

5.5 SPECIAL STATUS PLANTS

Special status plant species are those species that have been afforded special status and/or recognition by the USFWS, CDFW and/or the City of Carlsbad (through implementation of the HMP). Their status is often based on one or more of their distributional attributes; geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be more or less abundant but occur only in very selective habitats. Lastly, a species may be widespread but exist naturally in small populations.

A literature review resulted in a total of 10 special status plant species that were reported to historically or presently occur within one mile of the Study Area, including San Diego thornmint (*Acanthomintha ilicifolia*), California adolphia (*Adolphia Californica*) San Diego ambrosia (*Ambrosia pumila*), San Diego goldenstar (*Bloomeria clevelandii*), Thread leaved brodiaea (*Brodiaea filifolia*), Wart-stemmed ceanothus (*Ceanothus verrucosus*), Summer holly (*Comarostaphylis diversivfolia ssp.*), Blochman's dedleya (*Dudleya blochmaniae ssp blochmaniae*), Cliff spurge (*Euphorbia misera*), and San Diego marsh elder (*Iva hayesiana*). These plant species and their status are listed on the table below.

Table 2: Special Status Plant Species Reported Within One Mile of the Study Area

Common Name ***Scientific Name***	**Listing Status**	**Comments**
San Diego Thorn-mint *Acanthomintha ilicifolia*	FT/SE CRPR 1B.1; NE	Occurs in clay substrates within chaparral, coastal scrub, grassland and vernal pool habitats. Not expected to occur onsite based on the urban activity on the project site and lack of suitable habitat.
California Adolphia *Adolphia californica*	CRPR 2B.1	None observed onsite. Not expected to occur onsite based on the urban activities and maintenance on the site.
San Diego Ambrosia *Ambrosia pumila*	FE CRPR 1B.1; NE	Occurs in sandy loam or clay substrates within chaparral, coastal sage scrub, vernal pool and grassland habitats. Not expected to occur onsite based on the lack of suitable habitat.
San Diego Goldenstar *Muilla clevelandii*	CRPR 1B.1	Occurs in clay substrates within chaparral, coastal scrub, grassland and vernal pool habitats. Not expected to occur onsite based on the urbanized condition of the project site and lack of suitable habitats.
Thread-leaved Brodiaea *Brodiaea filifolia*	FT/SE CRPR 1B.1; NE	Occurs is clay substrates within chaparral, coastal scrub, grassland and vernal pool habitats. Not expected to occur onsite based on the lack of suitable habitat.

Wart-stemmed Ceanothus *Ceanothus verrucosus*	CRPR 2B.2	Not detected onsite.
Summer Holly *Comarostaphylis diversifolia ssp. diversifolia*	CRPR 1B.2; NE	Not detected onsite.
Blochman's Dudleya *Dudleya blochmaniae ssp. blochmaniae*	CRPR 1B.1;	Occurs in rocky, clay substrates in coastal sage, chaparral and grassland habitats. Not expected to occur onsite based on lack of suitable habitat.
Cliff Spurge Euphorbia misera	CRPR 2B.2;	Occurs in rocky habitats. Not detected onsite.
San Diego Marsh Elder *Iva hayesiana*	CRPR 2B.2	Occurs in marshes and playas. Not observed in the Study Area.

San Diego thornmint, San Diego ambrosia, and Thread leaved brodiaea are the only State or Federally listed plant species that have historically been identified within the one-mile radius. The balance of the species fall into one of three California Rare Plant Ranks ("CRPR"). Generally, rarity increases with a lower-number CRPR listing status. Blochman's dedleya is listed as the most rare rank at CNPS 1B.1; Summer holly is 1B.2; California adolphia and San Diego goldenstar are somewhat less rare at CNPS Status 2B.1; Wart-stemmed ceanothus, Cliff spurge and San Diego marsh elder all are CNPS Rank 2B.2.

Based on the results of the biological surveys, none of these ten (10) special-status plant species was determined to have a moderate or higher potential of occurring within the BSA due to the active, urbanized nature of the property and the regular landscape maintenance activities on the property. Also the majority of the referenced special-species plants occur in native habitats, which are generally not found on the subject property. No special-status plant species were observed at all in the Study Area during the vegetation surveys. A list of all plant species recorded during the vegetation mapping effort is included as **Appendix B** to this report.

5.6 SPECIAL STATUS WILDLIFE

Scholarly studies have shown that golf courses provide a range of habitats that support a wide variety of birds and other wildlife, including Special Status wildlife. Special Status animal or wildlife species are those that are considered federal or state threatened or endangered; MSCP Covered Species; or MSCP Narrow Endemic species. Local, state, and federal agencies regulate sensitive species and require an assessment of their presence or potential presence to be conducted on site prior as part of any biological technical report. For the purposes of this document, species are considered sensitive if they are: (1) listed as rare, endangered or threatened by the federal or state regulatory agencies; or (2) included on the City of Carlsbad draft HMP or MHCP list of species evaluated for coverage or list of narrow endemic plant species.

The results of the literature review in and around the subject area indicate the potential occurrence of 10 listed species and 15 other special-status wildlife species in the geographical vicinity of Carlsbad and the Study Area. Those species were considered for their potential to occur in the Study Area. These 25 special-status wildlife species are listed in the following table:

Table 3: Sensitive Wildlife Species Listed as Potentially Occurring Within the Area

Common Name *Scientific Name*	**Listing Status**	**Comments**
INVERTEBRATES		
Harbison's Dun Skipper *Euphyes vestries harbisoni*	HC	Not expected to occur onsite based on a lack of host plant, San Diego sedge (*Carex spissa*).
Hermes Copper Butterfly *Lycaena hermes*	FC	Not expected to occur onsite based on a lack of host plant, spiny red berry (*Rhamnus crocea*).
Quino Checkerspot Butterfly *Euphydryas editha quino*	FE	Not expected to occur onsite based on a lack of cryptobiotic soil crusts and. host plant *Plantago*.
Riverside Fairy Shrimp *Streptocephalus woottoni*	FE NE	Occurs in vernal pools and seasonal depressions. Not expected to occur onsite based on a lack of these habitats.
Salt Marsh (Wandering) Skipper *Panoquina errans*	HC	Not expected to occur onsite based on a lack of saltmarsh habitat within the Study Area.
San Diego Fairy Shrimp *Branchinecta sandiegoensis*	FE NE	Occurs in vernal pools and seasonal depressions. Not expected to occur onsite based on a lack of these habitats.
AMPHIBIANS/REPTILES		
Arroyo Toad *Anaxyrus californicus*	FE/SSC	Breeds in intermittent drainages and aestivates within floodprone areas and adjacent scrub and woodland habitats. Not expected to occur onsite based on a lack of suitable habitat.
Orange-throated Whiptail *Aspidoscelis hyperythra*	SSC HC	May occasionally occur onsite within the disturbed habitats. Suitable habitat is located in disturbed areas north and east of the Champions Course. One individual observed immediately offsite.
San Diego Horned Lizard *Phrynosoma coronatum blainvillei*	SSC	Occurs in open coastal sage scrub and chaparral habitats. Not expected to occur onsite based on a lack of suitable habitat and urban conditions documented onsite.

Southwestern Pond Turtle *Actinemys marmorata pallida*	SSC	Occurs within and adjacent to creeks and open water. Not observed onsite.
Western Spadefoot *Spea hammondii*	SSC	Breeds within vernal pools and seasonal depressions – aestivates in adjacent grassland habitats. Not expected to occur onsite based on a lack of suitable habitat.
BIRDS		
American Peregrine Falcon *Falco peregrinus anatum*	SFP HC	Typically breeds on cliffs. Not expected to occur onsite based on a lack of suitable nesting habitat.
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi*	SE HC	Occurs within pickleweed dominated coastal marshes. Not expected to occur onsite based on a lack of suitable nesting habitat.
Burrowing Owl *Athene cunicularia hypuaea*	SSC	No potential burrows documented within or adjacent to project site. Not expected to occur onsite based on a lack of suitable nesting/refugia habitat.
California Brown Pelican *Pelecanus occidentalis californicus*	SFP HC	Primarily occur along the sea coast and are rarely found over two miles inland. Not expected to occur onsite based on a lack of foraging and nesting habitat.
California Least Tern *Sterna antillarum browni*	FE/SE/S WL SFP HC	Feeds and breeds in shallow estuaries or lagoons. Not expected to occur onsite based on a lack of suitable foraging and nesting habitat.
Coastal California Gnatcatcher *Polioptila californica californica*	FT/SSC HC	Not expected to breed or forage onsite based on a lack of suitable coastal sage scrub habitat.
Cooper's Hawk *Accipiter cooperii*	SWL HC	May occasionally forage onsite. Not expected to breed onsite based on a lack of suitable nesting habitat.
Elegant Tern *Sterna elegans*	SWL HC	Occurs near coastline. Not expected to occur onsite based on urban activity and a lack of suitable foraging and nesting habitat.
Grasshopper Sparrow *Ammodramus savannarum*	SSC	May occasionally forage onsite. Not expected to breed onsite based on a lack of suitable nesting habitat.
Large-billed Savannah Sparrow *Passerculus sandwichensis rostratus*	SSC HC	Occurs in coastal marshes and beaches and does not breed in California. Not expected to occur onsite based on a lack of suitable habitat.

Least Bell's Vireo *Vireo bellii pusillus*	FE/SE HC	Occurs within riparian habitat. Not expected to occur onsite based on a lack of suitable nesting/foraging habitat.
Light-footed Clapper Rail *Rallus longirostris levipes*	FE/SE/SFP HC	Occurs within coastal salt marsh/lagoons in cordgrass and pickleweed. Not expected to occur onsite based on a lack of suitable foraging and nesting habitat.
Long-Billed Curlew *Numenius americanus*	SWL	Occurs within cultivated lands, salt marshes and breeds in native grasslands adjacent to inundated areas. Not expected to occur onsite based on a lack of suitable nesting habitat.
Northern Harrier *Circus cyaneus*	SSC	May occasionally forage onsite. Not expected to breed onsite based on a lack of suitable nesting habitat.
Osprey *Pandion haliaetus*	SWL HC	Occurs near lakes and ponds. Not expected to occur onsite based on a lack of suitable foraging and nesting habitat.
Southern California Rufous-crowned Sparrow *Aimophila ruficeps canescens*	CWL HC	May occasionally forage onsite. Suitable habitat is located immediately south of Adams Street within the coastal sage scrub vegetation. Not expected to breed onsite based on a lack of suitable nesting habitat.
Southwestern Willow Flycatcher *Empidonax traillii extimus*	FE/SE HC	Occurs in riparian habitat. Not expected to occur onsite based on a lack of suitable nesting habitat.
Western Snowy Plover *Charadrius alexandrinus nivosus*	FT/SSC HC	Nests on beaches and banks of lagoons and estuaries. Not expected to occur onsite based on a lack of suitable nesting habitat.
White-faced Ibis *Plegadis chihi*	SWL HC	Occurs in marsh habitats. Not expected to occur onsite based on a lack of suitable foraging and nesting habitat.
White-tailed Kite *Elanus leucurus*	SFP	May occasionally forage onsite. Not expected to breed onsite based on a lack of suitable nesting habitat.
Yellow-breasted Chat *Icteria virens*	SSC HC	Occurs within riparian and adjacent scrub habitats. Not observed onsite.
MAMMALS		
Pacific Pocket Mouse *Perognathus longimembris pacificus*	FE/SSC	Occurs in river and marine alluvium. Although suitable soils were documented onsite, the species is not expected to occur onsite based on the lack of suitable vegetative habitat.

Stephens' Kangaroo Rat *Dipodomys stephensi*	FE/ST	No kangaroo rat burrows were documented onsite. Not expected to occur onsite based on a lack of suitable habitat.
San Diego Black-Tailed Jackrabbit *Lepus californicus bennettii*	SSC	Occurs is open scrub and grassland habitats. Not expected to occur onsite based on a lack of observations and suitable habitat.

HC = Carlsbad HMP Covered, NE = MHCP Narrow Endemic Species

Of these 25 special-status wildlife species, only orange-throated whiptail was observed during the biological surveys. Orange-throated whiptail is considered a California Species of Special Concern. The remaining 25 special-status species identified by the literature review have a low or very low potential to occur within the BSA due to the absence of suitable habitat. A wildlife list indicating animals observed during the surveys is included as **Appendix B** to this report.

Orange-throated Whiptail (*Aspidoscelis hyperythra*) SSC. One orange-throated whiptail individual was observed approximately 100-feet offsite, on the eastern side of the offsite CVFM drainage, on the northern leg of the Study Area. The Orange-throated Whiptail occasionally utilizes disturbed habitats for foraging and refugia. Therefore, much of the habitat on the periphery of the Champions Course and the Study Area is suitable to support this species. The California Natural Diversity Database ("CNDDB") lists numerous records of Orange-throated whiptail occurring nearby.

None of the wildlife species observed on the property are listed as threatened or endangered. No nesting bird activity was observed as a result of the time of year. A list of all wildlife species recorded during the vegetation mapping effort is included as **Appendix C** to this report.

Birds observed but not considered sensitive includes; California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thyromanes bewickii*), wrentit (*Chamacea fasciata*), California towhee and spotted towhee (*P. maculates*), and house wren (*Troglodytes aedon parkmanii*). Mourning dove (*Zenaida macroura marginella*), and western kingbird (*Tyrannus verticalis*) were commonly observed on or around the Champions Course. The Cliff swallow (*Hirundo pyrrhonata*) and Common raven (*Corvus corax*) were observed flying over the property. Raptors regularly observed on the site include red-tailed hawk (*Buteo jamaicensis*), Great horned owl (*Bubo virginianus*) and American crow (*Corvus brachyrhynchos*). No adequate nesting habitat is present on the site to accommodate these and other raptor species.

The Brush Rabbit (*Sylvilagus bachmani*) and the California Ground Squirrel (*Otospermophilus beecheyi*) were observed on the site. Evidence of Coyote (*Canis latrans*) and Striped Skunk (*Mephitis mephitis*) was evident based on the observation of scat. Squirrel burrows were observed in several areas of the site. No other evidence of mammals or large animals was observed during the survey.

5.7 U.S. FISH & WILDLIFE SERVICE CRITICAL HABITAT AREAS

The Study Area is not located within a USFWS designated critical habitat for any federally listed species.

5.8 WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors link areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or urban disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they discourage the infusion of new individuals and genetic information. Corridors effectively act as links between different populations of a species.

To address this need for wildlife corridors, the City of Carlsbad HMP addresses potential impacts to native and sensitive species and habitats while also providing mitigation options in the form of conserved lands that satisfy the need for open space connectivity that is conducive to animal movement. In addition, these protected habitat corridors allow the dispersal of individuals away from high human population areas and facilitate the exchange of genetic traits between populations. Thus the HMP preserve is a network of large blocks of open spaces with interconnecting linkages which serve to benefit the animals which live and utilize these areas.

The Carlsbad HMP provides a planning tool which accommodates large blocks of habitat (Core Areas) and connections between these areas (Linkages). This planning effort resulted in adoption of "hardlines", which were geographical demarcations of the most important habitat and linkages throughout the City, and which are to be maintained as permanent open space. Although existing Hardline Preserve property exists immediately to the northeast and northwest of the golf course, no part of the golf course property contains a hardline.

The Champion's Course does, however, possess a high value as a migration corridor for wildlife species, as the overall 36-hole Omni La Costa Golf Course is the largest remaining open area in a fragmented open space vicinity that is surrounded by urban development. Mammals such as coyotes, bobcats, and deer have been observed using the course at night as a movement corridor. Migrating birds, including ducks and geese have been observed using it during the daytime. The Omni La Costa Golf Couse links the Batiquitos Lagoon northward to Rancho La Costa and Rancho Carrillo preserves eastward to the Rancho La Costa Upland Preserve and other open spaces.

Through implementation of the project, no substantive change to the existing open space character of the site will take place. The proposed elimination of the two northerly artificial ponds will, however, result in a minor reduction in environmentally-beneficial qualities to migrating birds and mammals. Therefore the project will result in a significant impact to the beneficial values associated with those ponds and thus impacting the natural functioning of the golf course as a migration corridor.

5.9 AQUATIC RESOURCES

A jurisdictional delineation has been conducted for the property. Suspected jurisdictional areas were field checked for evidence of stream activity and/or wetland vegetation, soils and hydrology. Thus, the subject site was investigated and observed for both jurisdictional wetlands and qualifying non-wetland WOUS.

The subject site has been historically altered from agricultural fields [row crops] in the 1950's and early 1960's into a golf course, as part of the infant master planned development of the 1,500 acre La Costa planned community. Since that time, drainage and runoff flows onto the site from the north, through culverts under Poinsettia Lane and Alicante Road at the north end of the Champions Course. As the drainage enters the property, it flows as an identified blue-line stream, in a relatively narrow ribbon along the eastern boundary of the course, providing for a low-lying Coastal and Valley Freshwater habitat just east of the course for approximately 4,250 feet (0.8 mile) until it becomes channelized in a 15-foot wide box culvert under Alga Road. As the drainage exits the box culvert on the downstream (south) side of the roadway, it resumes its flow southward, in a narrow (four-feet generally) concrete channel configuration, and into a number of Golf Course water hazard ponds, entering and exiting one, with channelized connection to another, and another (three ponds in total); ultimately to confluence with west-flowing San Marcos Creek in route to downstream Batiquitos Lagoon and ultimately the Pacific Ocean. Much of the channelized sections possess strong natural bed and bank characteristics. The entire length of the main drainage from entry to the Golf Course to San Marcos Creek is 9,750 feet (1.8 miles). No other defined drainages into the Unnamed Tributary or separate identified feeder branches exist in the area of the project.

Several man-made water hazard ponds also exist on the Champions Course. USACE guidance states that their jurisdiction over wetlands created by artificial means is not assumed. In practice, the USACE generally does not assume jurisdiction over areas that are; (1) artificially irrigated and would revert to upland habitat if the irrigation ceased; or, (2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing. Other areas that are not considered jurisdictional Waters of the United States include waste treatment ponds, ponds formed by construction activities including borrow pits until abandoned, and ponds created for aesthetic reasons such as reflecting or ornamental ponds. Additionally, USACE guidance states that waters of the U.S. do not include "prior converted cropland".

A wetland delineation was perform for the Champions Course property. This delineation report is included as Appendix D to this report.

6.0 IMPACT DETERMINATIONS

6.1 VEGETATION COMMUNITIES

The Champions Course Renovation project would result in both temporary and permanent impacts to only non-sensitive land cover. These impacted land covers are Urban Developed, Fresh Water ponds, and Disturbed Habitat. Impact totals are as follows (see Table below and *Figures* 5 and 6; *Vegetation Impacts Assessment*).

As can be concluded from the table below and the following *Figures*, over 90% of the impacts within the Study Area will be to Urban Developed land cover (44.12 acres). Less than 1% of the impacts will be to two (2) of the ten (10) Fresh Water ponds (3.94 acres total impacts), which will be modified into barranca features, as discussed previously. Neither of these land covers are considered biologically sensitive, however the two ponds, along with the other eight remaining ponds of the site, do provide environmentally beneficial uses for mammals and migrating birds. This analysis concludes that no impacts to sensitive habitats will result from implementation of the project.[1] Please see *Table 4* below.

Table 4: Existing Vegetation Communities Acreages

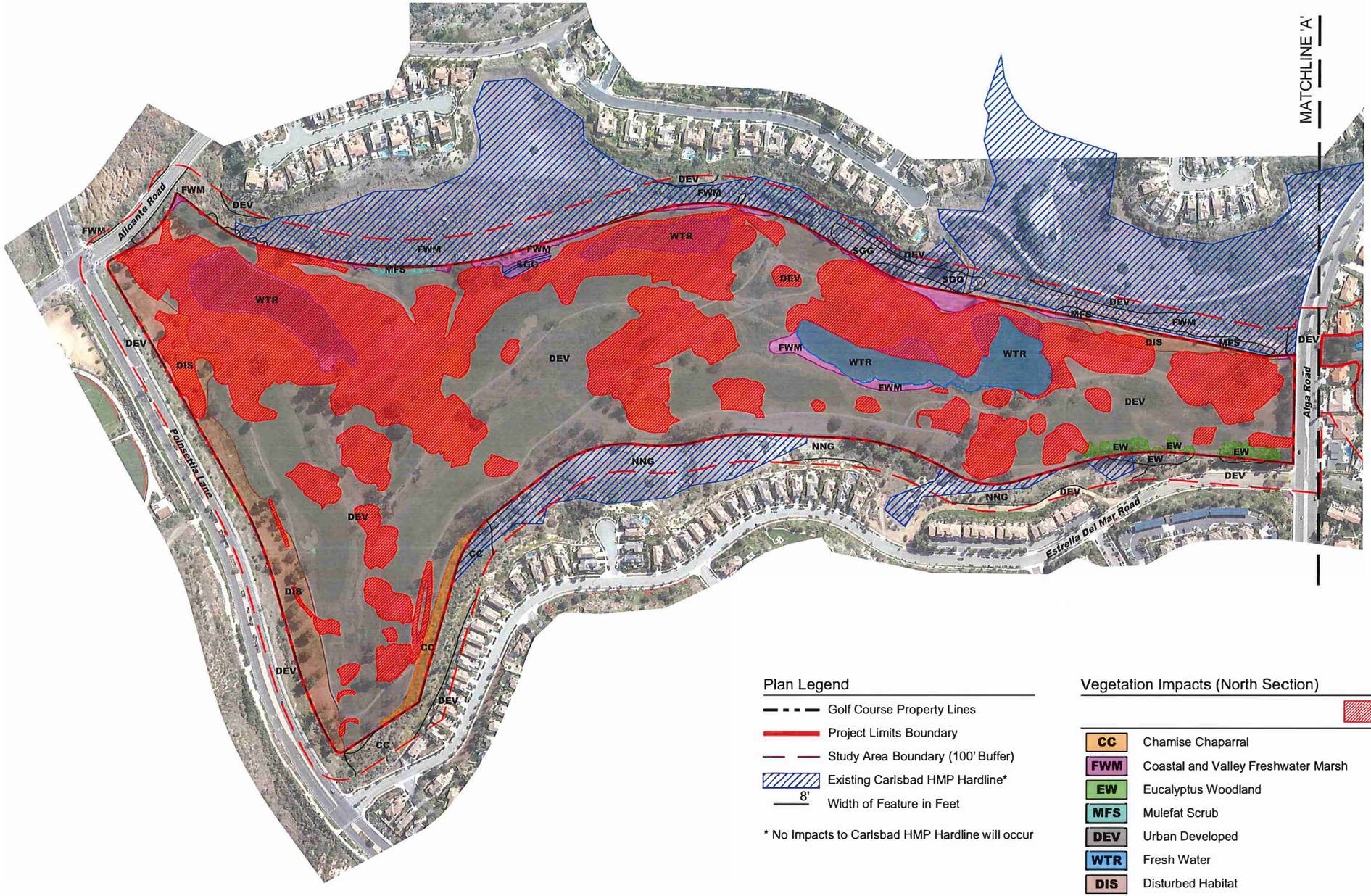
Vegetation Community/Land Cover	Code	Total Acres on Golf Course Property	Impacted Area (Ac.)	Non-Impacted Area (Ac.)
Urban/Developed	12000	138.98	44.12	94.77
Fresh Water	64140	11.88	3.94	7.94
Coastal and Valley Freshwater Marsh*	52410	2.23	0.00	2.23
Disturbed Habitat	11300	5.29	1.32	3.97
Saltgrass Grassland*	42130	0.12	0.00	0.12
Mule Fat Scrub*	63310	0.14	0.00	0.14
Chamise Chaparral*	37200	0.60	0.00	0.60
Eucalyptus Woodland	79100	0.55	0.00	0.55
TOTAL		159.70	49.38	110.32

*Sensitive vegetation communities

6.2 SPECIAL STATUS PLANT SPECIES

No special status plants were observed within the golf course area of the property during the biological survey. Given the active urban character and rigidly maintained state of the site, and the resulting absence of suitable habitat, there is a low potential for occurrence of any special-status plants within the golf course area of the property.

[1] While no significant impacts to sensitive habitats will result, this report concludes that a significant loss of environmentally beneficial uses will result from the loss of resting, drinking and foraging sites associated with elimination of the two man-made golf ponds.



Plan Legend

- Golf Course Property Lines
- Project Limits Boundary
- Study Area Boundary (100' Buffer)
- Existing Carlsbad HMP Hardline*
- 8' Width of Feature in Feet

* No Impacts to Carlsbad HMP Hardline will occur

Vegetation Impacts (North Section)

		Impacted Area** (acres)
CC	Chamise Chaparral	0.00
FWM	Coastal and Valley Freshwater Marsh	0.00
EW	Eucalyptus Woodland	0.00
MFS	Mulefat Scrub	0.00
DEV	Urban Developed	29.47
WTR	Fresh Water	3.94
DIS	Disturbed Habitat	1.32
SGG	Saltgrass Grassland	0.00
	Total (North Section):	*34.73*

**All proposed impacts are within project limit boundary (Omni La Costa properties).

Figure 5

Vegetation Impacts Analysis - North Section

Omni Resort - Champions Course

Carlsbad, California

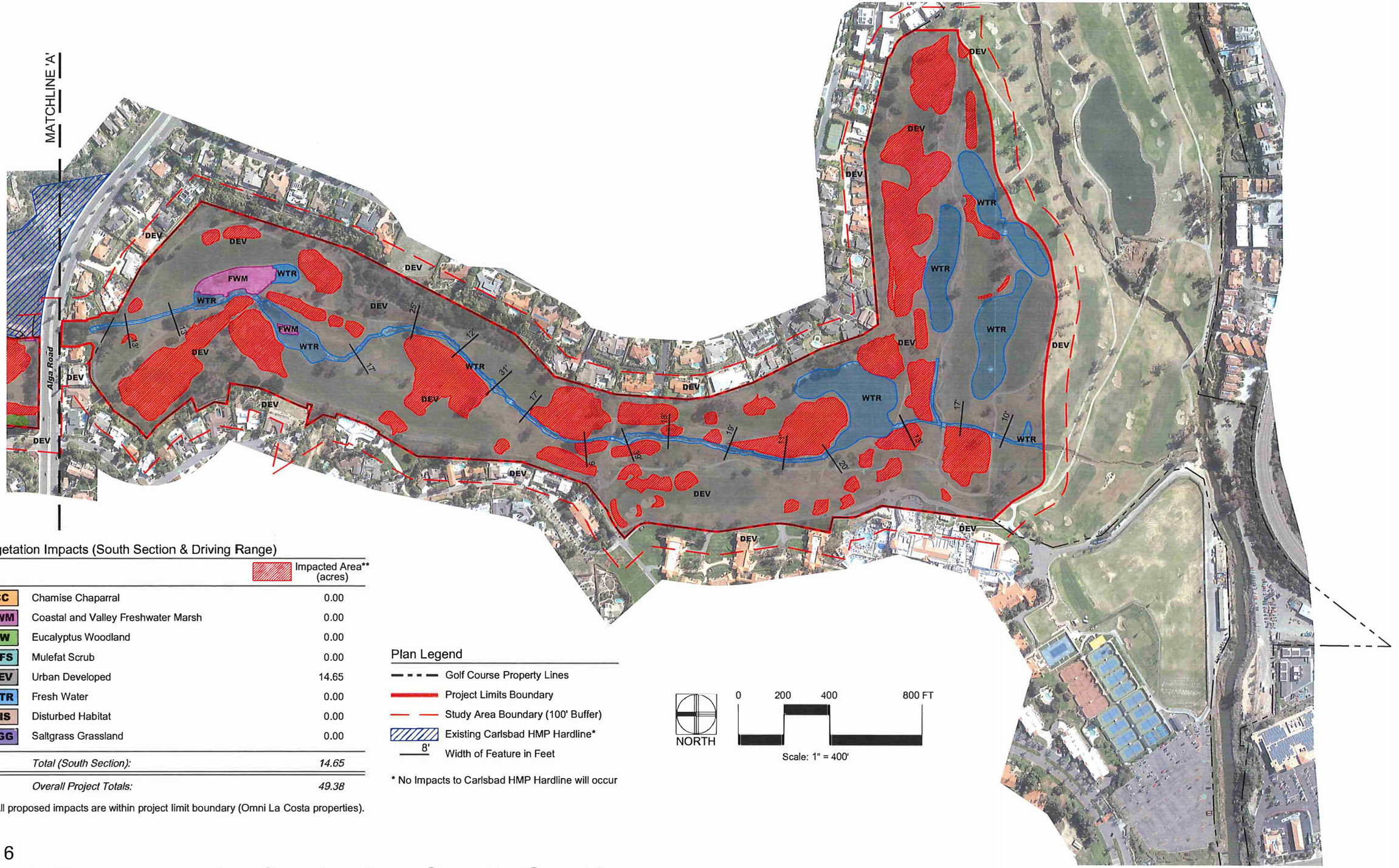
NORTH

0 200 400 800 FT

Scale: 1" = 400'

September 15, 2022

PLANNING SYSTEMS
LAND USE/COASTAL PLANNING
LANDSCAPE ARCHITECTURE
POLICY AND PROCESSING
ENVIRONMENTAL MITIGATION
1530 FARADAY AVENUE, SUITE 100, CARLSBAD, CA 92008
(760) 931-0780 FAX (760) 931-6744



Vegetation Impacts (South Section & Driving Range)

		Impacted Area** (acres)
CC	Chamise Chaparral	0.00
FWM	Coastal and Valley Freshwater Marsh	0.00
EW	Eucalyptus Woodland	0.00
MFS	Mulefat Scrub	0.00
DEV	Urban Developed	14.65
WTR	Fresh Water	0.00
DIS	Disturbed Habitat	0.00
SGG	Saltgrass Grassland	0.00
	Total (South Section):	*14.65*
	Overall Project Totals:	*49.38*

**All proposed impacts are within project limit boundary (Omni La Costa properties).

Plan Legend

- Golf Course Property Lines
- Project Limits Boundary
- Study Area Boundary (100' Buffer)
- Existing Carlsbad HMP Hardline*
- 8' Width of Feature in Feet

* No Impacts to Carlsbad HMP Hardline will occur

NORTH

0 200 400 800 FT

Scale: 1" = 400'

Figure 6

Vegetation Impacts Analysis - South Section

Omni Resort - Champions Course

Carlsbad, California

September 15, 2022

PLANNING SYSTEMS
LAND USE/COASTAL PLANNING
LANDSCAPE ARCHITECTURE
POLICY AND PROCESSING
ENVIRONMENTAL MITIGATION
1630 FARADAY AVENUE, SUITE 100, CARLSBAD, CA 92008
(760) 931-0780 FAX (760) 931-5744

The Study Area does support some native habitats but those are primarily not within the Champions Course limits. The course, however, does provide potential nesting and foraging habitat for a variety of songbirds and raptors in the area. Although no active nests were identified during the 2021 surveys, there is a significant potential for birds to nest within the taller trees on the course. In the event that work occurs during the breeding season (February 15 through September 1), nesting raptors and other nesting birds could be impacted by vegetation clearing activities. These impacts will have an adverse effect on sensitive species and will require mitigation. Habitat impacts will be mitigated according to ratios, as required by the Carlsbad HMP and will offset any potential impacts to special-status species.

The project does have the potential to substantially affect offsite adjacent natural communities if the proposed landscaping includes invasive plants. The use of invasive plant species in landscaping adjacent to the conserved areas is strongly discouraged. Irrigation runoff shall also be prevented from entering into the conservation areas from adjacent landscaping to reduce nitrogen, introduce pesticides, or excess moisture. Only native or compatible non-invasive plant species should be used in landscaping, and no species listed on the California Invasive Plant Council (Cal-IPC) "Invasive Plant Inventory" list should be used in landscaping or erosion control plans.

6.3 SPECIAL STATUS WILDLIFE SPECIES

Although one Orange-throated Whiptail (*Aspidoscelis hyperythra*) reptile was observed within the Study Area albeit not on the Champions Course property, no special-status wildlife species were observed in the area proposed for grading and landscape modification. Orange-throated whiptails are HMP Covered Species. The Orange-throated whiptail was observed on the eastern edge of the Coastal and Valley Freshwater Marsh, offsite, and will not be impacted by the proposed course construction. Considering the urban character of the course property, it is concluded that there is a low potential for impacts to special status species as a result of project-related activities.

6.4 NARROW ENDEMIC SPECIES

No Narrow Endemic Species were observed during the biological surveys. The project is not expected to affect any Narrow Endemic Species.

6.5 WILDLIFE CORRIDOR MOVEMENTS

The golf course possesses a high value as a migration corridor for wildlife species, as the course is the largest remaining open area in a fragmented open space vicinity that is surrounded by urban development. However, the project will not result in a substantive change to the existing open space character of the site as a result of implementation of the project. Therefore it is concluded that the project will not interfere with or result in a permanent, direct disturbance to a wildlife corridor.

However, the proposed elimination of two artificial water hazard ponds at the north end of the course will result in an indirect effect on wildlife that use this water source, including mammals and birds. The environmentally-beneficial qualities of providing a drinking source for mammals, and a resting and foraging area for migrating birds in their travel route as they journey in search

of food, water, mates and other necessary resources is expected to be reduced by implementation of the project. The proposed replacement of these two ponds with barrancas (shallow arroyos) could contribute to a reduction in the abundance of water-loving fowl. Compensatory mitigation for this indirect impact will be required.

In addition, although wildlife movement may be disrupted temporarily during construction due to noise or increased human presence, these impacts are considered temporary in nature, and implementation of the overall project will not result in permanent direct impacts to the adjacent offsite hardline or to wildlife movement functions. Following construction, wildlife will continue to use the site to aid in movement to other areas of biological value. Therefore, direct, permanent impacts to wildlife corridors/habitat linkages are not anticipated. As a result, it is concluded that, with the exception of the loss of environmental benefits associated with the elimination of the two ponds, the project will not interfere substantially with the movement of any native resident or migratory fish or wild life species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

6.6 HMP COMPLIANCE

No HMP-identified Focus Planning Areas (FPAs), including Core Areas, Linkages, or Special Resource Areas are identified for this property in the HMP. Core #8 occurs across El Camino Real to the west, including Batiquitos Lagoon and Green Valley, west and south of the subject property. Conservation of land within Carlsbad is generally implemented as either an existing hardline area, a proposed hardline area, or a Standards Area. No Existing or Proposed "Hardline" or "Standards" areas exist on the property. The property does not directly impact sensitive species.

6.6.1 Direct Impacts

The project does not impact any hardline area. Further, it is concluded that the project will not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance; and will not conflict with the provisions of the draft City of Carlsbad HMP, NCCP or other approved local, regional or state habitat conservation plan. All project-related impacts will occur in areas outside HMP Hardline Preserve.

The HMP requires mitigation for permanent direct impacts to vegetation communities and land cover, as follows:

Table 5: HMP-Required Mitigation for Impacts to Vegetation Communities

Vegetation Community	HMP-Required Mitigation Ratio	Permanent Impacts (Ac.)	Required Mitigation (Ac.)
Disturbed habitat	Per-acre in-lieu Fee	1.32	1.32
Fresh water (Golf course ponds)	N/A[2]	3.94	0
Urban/Developed	N/A	44.12	0
TOTAL		49.38	1.32

[2] Separate mitigation funding, not associated with the HMP will be required for the loss of environmentally beneficial use associated with the elimination of two ponds.

For any created or revegetated area, a long-term management plan, property analysis record (or equivalent), funding agreement, funding, long- term management agreement, and conservation easement must be approved by the City and resource agencies, and finalized prior to issuance of the grading permit or clearing of any habitat, whichever occurs first. Funding typically must be through a non-wasting endowment held by a qualified third party financial institution. It is concluded that the project, subject to payment of the applicable HMP fee for impacts to Disturbed Habitat, is in compliance with the Carlsbad HMP.

Further, the loss of two of the ten artificial ponds on the property will contribute to the loss of environmental benefits associated with the movement of native wildlife residents and migratory birds who use the open water for resting, drinking, foraging and searching for mates. This impact is significant, and will require mitigation in the form of funding of enhancement of the adjacent freshwater marsh habitat in Drainage A; specifically the elimination of invasive, non-native plant species. A mitigation measure to this effect is required in order to offset this loss of environmental quality.

The project does not propose any direct impacts to natural habitats or to HMP Covered Species.

6.6.2 Indirect Impacts

The following section addresses potential indirect impacts associated with proposed development adjacent to existing natural open space areas. Specifically, the project is located directly adjacent to existing HMP Hardline Preserve areas on the east and west side of the golf course, on the section north of Alga Road. Therefore, the following outline summarizes the proposed project respective of each HMP adjacency standard (Carlsbad HMP F.3) for properties in proximity to existing or proposed conserved open space areas. As stated by the City of Carlsbad:

> *The HMP will result in an urban wildlife preserve system in which conserved habitat areas are adjacent to development of various types. In order to prevent negative effects of either area on the other, these adjacency standards must be addressed in the planning of any development/habitat interface."* (City of Carlsbad HMP, 2004)

The HMP Adjacency Standards are as follows:

Fire Management. The proposed project does not increase the fuel load from the existing golf course situation adjacent to the Hardlined areas. In the event of wildfire, access of fire suppression equipment across the course is maintained. No encroachment of fuel modification into the Hardline is proposed. The course will be maintained, mowed and trimmed regularly. No high fuel landscape materials are proposed within any fuel management zone. The project area is expected to perform as a fire break in the event of large wildfire. Therefore, no significant impacts from fire management or fuel modification zones are anticipated.

Erosion Control. Erosion control measures should be implemented to avoid new surface drainage or erosion in the area near the adjacent Hardlines. The adjacent Hardlined areas are both situated at a higher elevation than the subject property, and thus the property cannot physically contribute to erosion on those preserves. The subject site is fully landscaped with grass and regularly irrigated (with recycled water) to maintain protection against soil erosion. The site is almost flat, which discourages high levels of erosion into downstream areas, including San

Marcos Creek and Batiquitos Lagoon. Therefore, no significant impacts from erosion control are anticipated.

Landscaping Restrictions. The use of invasive plant species in landscaping adjacent to HMP Hardlined areas is prohibited. No invasive, non-native plant species, including but not limited to the list of invasive exotic plants occurring or potentially occurring in the city of Carlsbad as listed in the HMP (Table 12) will be used in the project landscaping. The landscaping will be regularly monitored to ensure that invasives do not volunteer in the course. Therefore, no significant impacts from landscaping restrictions are anticipated.

Fencing, Signs and Lighting. If necessary, fencing and signage should be used as necessary to prevent harmful or unauthorized use of the adjacent Hardline Preserve. Fences that restrict animal movement across movement corridors and habitat linkages should be avoided. No fencing exists between the open space preserves and the golf course. However, the vegetation along both perimeters is very dense, such that it does not invite humans into the Hardline areas. No substantive change to the interface between the open space and the golf course is proposed. Signs are provided at this location to instruct golfers that the adjacent area is an environmentally sensitive preserve, and no entrance into the area is allowed. The golf course is not occupied by humans at night. Any security lighting provided will be shielded away and downward from the preserve. Therefore, no significant impacts from fencing, signs and lighting is anticipated.

Predator and Exotic Species Control. Non-native and feral animals will not be allowed on the course. Therefore, no significant impacts from predator and exotic species control is anticipated.

Noise. Construction of the project has the potential to result in temporary indirect impacts to common and/or sensitive nesting birds during project construction within the general bird breeding season (February 15 to September 15). Mitigation measures to avoid indirect impacts from noise to nesting birds are identified in Section 7.0, Mitigation, of this report. The project will not result in permanent impacts to the open space preserve from noise.

Subject to compliance with the above customary HMP Adjacency Standards, the project will not result in any indirect impacts to HMP Covered Species.

6.7 AQUATIC RESOURCES

The jurisdictional delineation concludes that potential USACE jurisdiction within the Study Area totals approximately 11.51 acres, of which 9.23 acres consist of jurisdictional wetlands. Per a review the proposed grading plan design, the project design avoids impacts to these areas. Thus, implementation of the proposed project will result in impacts to a total of zero (0) acres of USACE jurisdictional area.

Potential RWQCB jurisdiction within the subject area totals approximately 11.51 acres, of which 9.23 acres consist of jurisdictional wetlands. Per a review of the proposed grading plan design, the project design avoids impacts to these areas. Thus, implementation of the proposed project will result in impacts to a total of zero (0) acres of RWQCB jurisdictional area.

Potential CDFW jurisdiction at the site totals approximately 13.10 acres. The project design avoids impacts to these areas. Thus, implementation of the proposed project will result in impacts to a total of zero (0) acres of CDFW jurisdictional area.

Thus, it is concluded that no significant impacts to state and federal jurisdictional areas will result from implementation of the project. No mitigation for impacts to wetlands is required.

The jurisdictional delineation study and conclusions is attached as **Appendix D** to this report.

7.0 MITIGATION

Mitigation measures are proposed for potential impacts resulting from implementation of the Champions Course Renovation project. These measures include mitigating for anticipated impacts to HMP-covered vegetation, jurisdictional aquatic resources, minimization of temporary construction impacts, and impacts associated with nesting birds protected under the Migratory Bird Treaty Act.

Impacts to HMP-Covered Vegetation. Approximately 1.32 acres of Disturbed Habitat impacted by the vegetation clearing and replacement associated with the proposed project. Disturbed Habitat is mitigated through payment to the City of Carlsbad of a per-acre in-lieu mitigation fee, in an amount established by the Carlsbad City Council, prior to issuance of the grading permit for the project.

All other vegetation or land cover impacts do not necessitate mitigation. All impacts will however require soil stabilization after the work is complete. Impacts to Urban/Developed or Fresh Water land cover are not discussed further in this section.

Loss of Beneficial Quality. In order to mitigate for the loss of 3.94 acres of environmentally-beneficial uses associated with the replacement of two golf course ponds, the developer shall provide funding in an amount sufficient (not to exceed $100,000) to support enhancement of the freshwater marsh and adjacent slopes within the adjacent Rancho La Costa conservancy preserve, located on the east side of the north section of the golf course (APN's 213-111-10 & 213-112-11). This funding will ensure the removal of invasive non-natives, which will reduce competition for native plant species, and will provide additional freshwater marsh habitat for native wildlife, replacing that lost from elimination of the two golf course ponds.

HMP-Covered Species. In order to avoid and/or and minimize impacts to orange-throated whiptail, a biologist should conduct a pre-construction survey of the proposed impact area prior to vegetation clearing, grubbing, or overland travel. If orange-throated whiptail is observed during the pre-construction survey, then the individual(s) will be flushed away from the proposed development area. Should the individual(s) not disperse, then the individual(s) should be captured by the biologist and relocated away from the proposed area of proposed impacts.

Breeding Season Restrictions. If onsite ornamental trees are to be removed, it is recommended that the tree removal be schedule during the non-bird breeding season (bird breeding season is February 15 through August 31). If tree removal is scheduled during the breeding season, a qualified biologist should conduct surveys for active bird nests immediately prior to tree removal so as to avoid conflicts with the Migratory Bird Treaty Act.

Nesting Migratory Birds. Impacts to nesting birds protected under the MBTA and Section 3503.5 of the California Fish and Game Code will be avoided to the greatest extent practicable either by conducting vegetation clearing, grubbing, and overland travel (to access the sewer line boring locations) outside of the typical bird breeding season (i.e., between September 16 and February 14), or by having a biologist perform a preclearance nesting bird survey within the

proposed clearance/access area and appropriate buffer no more than 48 hours prior to clearing and grubbing of vegetation during the bird breeding season. If clearing, grubbing, or overland travel does not occur within 48 hours of the nesting bird survey, then the area would be resurveyed. If nesting birds are found, then the qualified biologist should establish an adequate buffer zone (on a species-by-species, case-by-case basis) in which construction activities are prohibited until the nest is no longer active. The size of the buffer zone is determined by the biological monitor based on the amount, intensity, and duration of construction, and can be altered based on site conditions. If appropriate, as determined by the biological monitor, additional monitoring of the nesting birds may be conducted during construction to ensure that nesting activities are not disrupted.

8.0 RESOURCES

CDFW. 2015 and 2021. *RareFind Version 3.1.0,* Records search executed in March 2015 and July 2021, covering the United States Geological Survey 7.5-minute series topographic map, *Encinitas, California* quadrangle. Resource Management and Planning Division. Biogeographic Data Branch, Natural Diversity Database. Sacramento, California.

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City of Carlsbad. December 1999. Habitat Management Plan for Natural Communities in the City of Carlsbad.

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APPENDIX A
SITE PHOTOGRAPHS

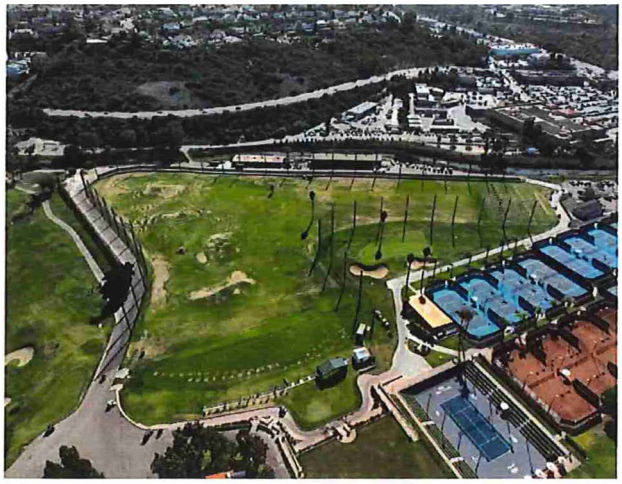

Photo taken from the air of the driving range.

Photo of the golf course Fairways 17, 18 and 19 at the south end of the project area.

Photo taken from the air of one of the golf course ponds near the south end of the project area.

Photo taken from the air of the north-south trending streambed drainage.

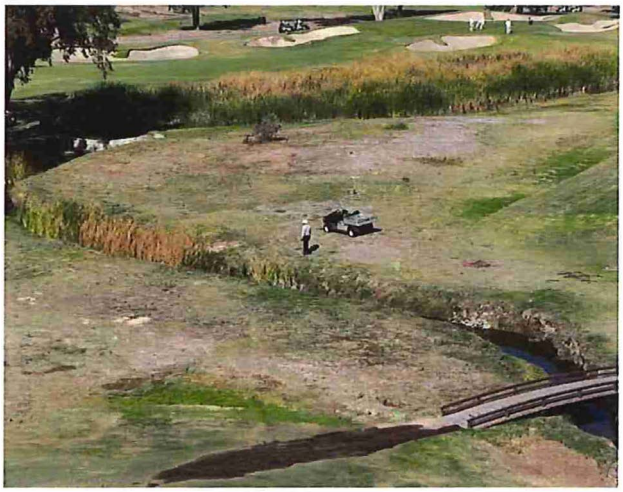

Photo of the streambed channel in the southern portion of the property.

Photo of emergent cattails growing in one of the golf course ponds.

Photo of cattails growing in one of the ponds.

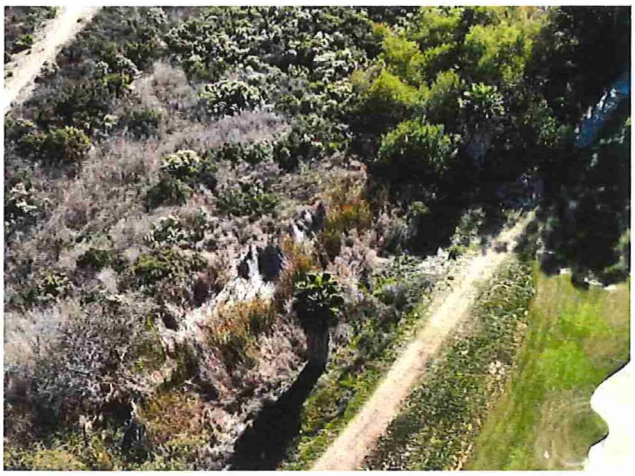

Photo of the FWM just offsite [east] of the golf course renovation area.

Photo from the air of the FWM. The service road is on the edge of the golf course

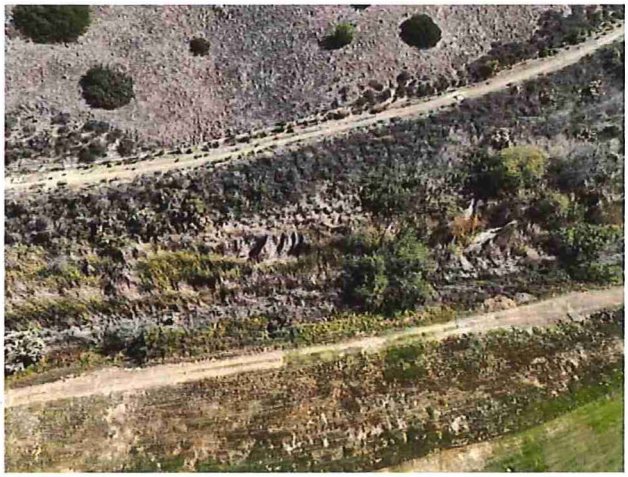

Photo of the FWM, service road, and edge of the golf course.

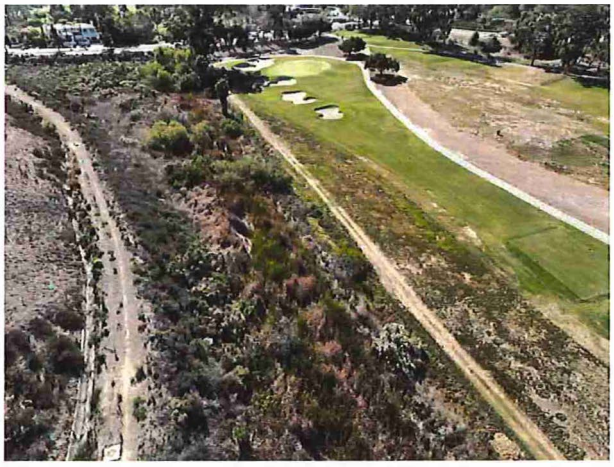

Photo taken from the air of the FWM, the service road, and the eastern edge of the golf course.

Photo of two of the golf course ponds on the north side of Alga Road.

Photo of golf course ponds with emergent growth of cattails and California bulrush.

Another photo taken from the air of emergent growth of cattails and California bulrush

Photo of Fairway 2 taken from the ground.

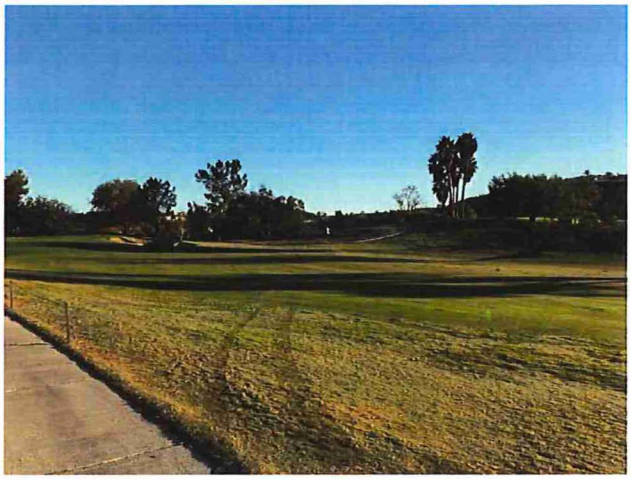

Photo of another fairway on the course. All devoid of native vegetation.

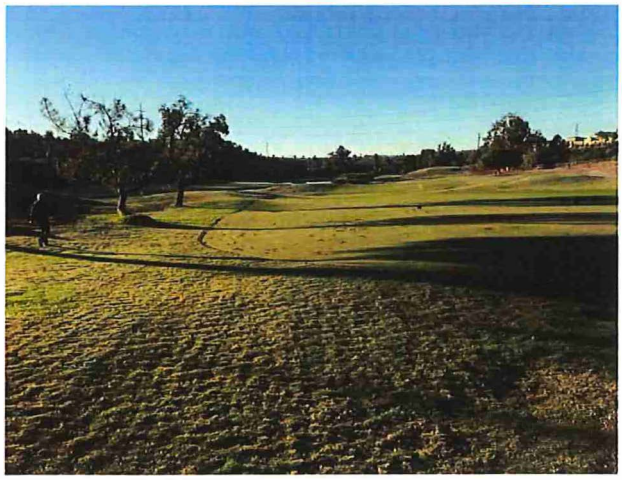

Photo of golf fairways.

Photo of golf fairways.

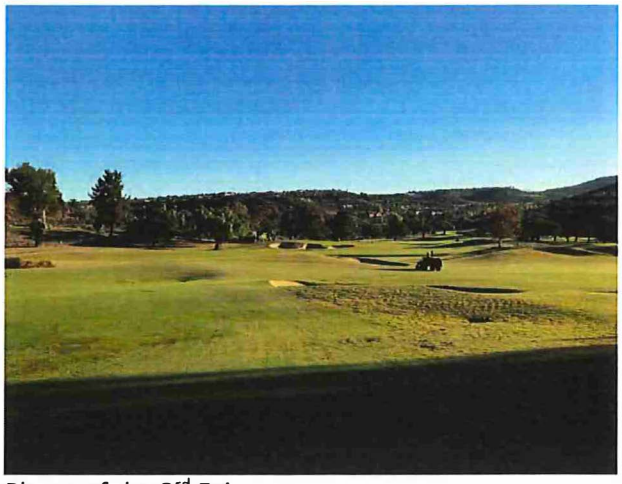

Photo of the 3rd Fairway.

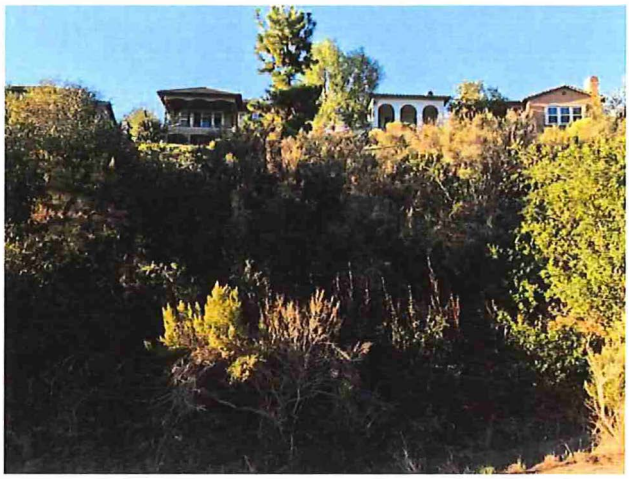

Photo of the Chamise Chaparral, mostly offsite in the northwest corner of the property.

Photo from the ground of the out-of-bounds area on the east side of the course.

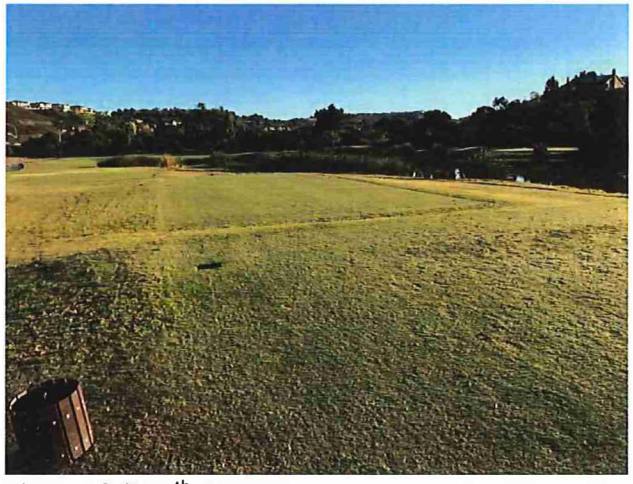

Photo of the 6th Fairway.

Photo of the interface between the golf course and the FWM which is mostly offsite.

Photo of one of the golf course ponds with emergent cattails on its perimeter.

Photo of saltgrass grassland (Distichlis) invading areas that had previously been active golf course play area.

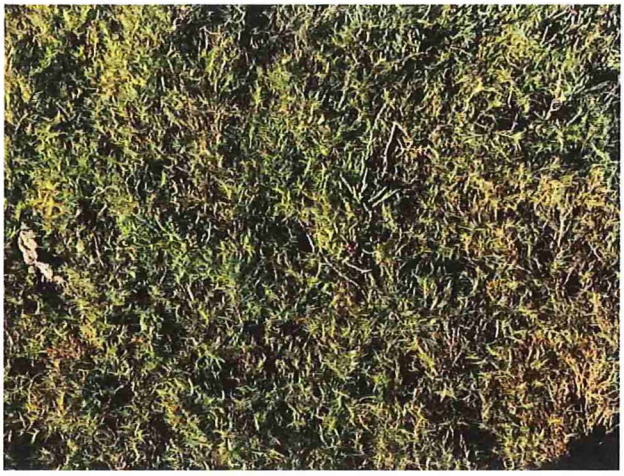

Photo of FAC-wetland saltgrass invading the eastern edge of the course.

Photo of FWM offsite to the east.

Photo of golf course pond near 16th Fairway.

APPENDIX B
VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed within the Study Area during the biological surveys.

Scientific Name	Common Name
Asteraceae	**Sunflower family**
Baccharis pilularis	Coyote bush
Chrysanthemum coronarium	Garland chrysanthemum
Encelia californica	California encelia
Artemisia 'Powis Castle'	NCN
Centaurea spp.	Russian thistle
Deinandra fasciculata	Fasciled tarweed
Euphorbia albomarginata	White-margin sandmat
Buxus japonica	Japanese boxwood
Baccharis salicifolia	Mulefat
Coreopsis maritime	NCN
Senecio serpens	Serpens
Tagetes lemmonu	Copper Canyon Daisy
Brassicaceae	**Mustard family**
Lactuca serriola	Wild lettuce
Raphanus sativus	Wild radish
Fabaceae	**Pea family**
Acacia sp.	Acacia
Algoyane hugelii	Blue hybiscus
Myrtaceae	**Myrtle family**
Eucalyptus spp.	Eucalyptus
Callistemon spp.	Bottlebrush
Tristania conferta	Brisbane Box
Feijoa sellowiana	Pineapple Guava
Myrtus communis compacta	Dwarf Myrtle
Plumbaginaceae	Leadwort family
Limonium sp.	Sea lavender (non-native
Tamaricaceae	**Tamarisk family**
Tamarix sp.	Tamarisk
Arecaceae	**Palm family**
Washingtonia robusta	Mexican fan palm
Archontophoenix alexandrae	King palms

Poaceae	**Grass family**
Avena fatua	Wild oat
Agristis capillaris	Common bentgrass
Cynodon dactylon	Bermuda grass
Distichlis spicata	Saltgrass
Festuca ssp.	Fescue grass
Nassella tenuissima	Mexican Feather Grass
Bromus diandrus	Ripgut brome
Pennisetum spp.	Fountain grass
Poa pratensis	Bluegrass
Miscantus hybrid	Sentinal maiden grass
Hordeum murinum	Mouse barley
Zoysia spp.	Zoysia grass
Muhienbergia rigens	Deer grass

Aizoaceae	**Ice Plant family**
Carpobrotus edulis	Hottentot-fig

Fabaceae	**Pea family**
Cassia leptophyllum	Gold Medallion Tree
Cercis canadensis	Eastern Redbud
Tipuana tipu	Tipu Tree
Erythrina crista-galli	Coral Tree
Cercis occidentalis	Western Rosebud
Acacia redolens	Prostrate Acacia (Low boy)
Caesalpinia gillesii	Mexican Bird of Paradise

Geraniaceae	**Geranium family**
Erodium botrys	Longbeak stork's bill

Anacardiaceae	**Pepper family**
Schinus terebinthifolia	Brazilian pepper

Lamiaceae	**Mint family**
Salvia mellifera	Black Sage
Phlomis fruitcosa	Jerusalem Sage
Salvia officinalis	Common Sage
Rosmarinus spp.	Rosemary
Salvia greggll	Autumn Sage
Westringia fruticosum	Coast Rosemary
Rosemarinus 'Lockwood Forest'	Prostrate Rosemary

Salicaceae	**Willow family**
Salix lasiolepis	Arroyo willow
Salix babylonica	Weeping willow

Sapindaceae	**Soapberry family**
Koelreuteria bipinnata	Chinese Flame tree

Juglans californica	California Walnut
Betulaceae	**Alder family**
Alnus rhombifolia	White Alder
Ericaceae	**Heather family**
Arbutus 'Marina'	Strawberry Tree
Bignoniaceae	**Bigonia family**
Chliopsis linearis	Desert Willow
Tabebuia impetginosa	Pink Trumpet Tree
Tecoma capensis	Cape Honeysuckle
Tecoma stans	Yellow Bells
Lauraceae	**Laurel family**
Cinnamomum camphora	Camphor tree
Oleaceae	**Ash family**
Fraxinus o. 'Raywood'	Claret Ash
Malvaceae	Mallows Family
Ligustrum 'Texanum'	Texas Privet
Fremontodendron spp	Flannel Bush
Bougainvillea purple queen	Bougainvillea
Alyogyne huegelil	Blue Hibiscus
Laveatera assurgentiflora	Tree Mallow
Rutaceae	**Citrus family**
Geijera parviflora	Australian willow
Geijera parviflora	NCN
Lythraceae	**Loosestrife family**
Rhaphiolepis Indica 'Dancer'	Indian Hawthorne
Lagerstroemia 'Tuscarora'	Crape Myrtle
Pinaceae	**Pine family**
Pinus canariensis	Canary Island pine
Pinus radiata	Monterey Pine
Pinus ponderosa	Ponderosa Pine
Pinus halepensis	Aleppo Pine
Anacardiaceae	**Cashew family**
Pistacia chinensis	Chinese Pistache
Rhus lancea	African Sumac
Schinus molle	California Pepper
Rhus laurina	Laurel Sumac
Fagaceae	**Beech & Oak family**
Quercus agrifolia	Coast Live Oak

Quercus ilex	Holly Oak
Quercus suber	Cork Oak
Quercus virginiana	Southern Live Oak
Apocynaceae	**Dogbane family**
Nerium oleander	Yellow Oleander
Amaryllidaceae	**Amaryllis family**
Agapanthus spp	Lily of the Nile
Asparagaceae	**Asparagus family**
Agave attenuata	Blue Agave
Haemodoraceae	**Bloodwort family**
Anigozanthos spp.	Kangamo Paw
Nyctaginaceae	**Four O'Clock family**
Bougainvillea spp.	Bougainvillea
Cyperaceae	**Sedge family**
Carex pansa	California Meadow Sedge
Rhamnaceae	**Buckthorn family**
Ceanothus spp.	California Wild Lilac
Cistaceae	**NCN**
Cistus	Rock Rose
Asphodelaceae	**NCN**
Dianella tasmanica variegata	Varigated flax lily
Phormium tenax	New Zealand Flax
Elaeagnaceae	**Oleaster family**
Eleagnus pungens	Fruitland Silverberry
Liliaceae	**Lily family**
Hemerocallis spp	Day Lily
Rosaceae	**Rose Family**
Heteromeles arbutifolia	Toyon
Prunus ilicifolia	Cherry
Adenostoma fasciculatum	Chamise
Rhaphiolepis spp.	India Hawthorn
Rosa californica	California Wild Rose
Verbenaceae	**Verbena family**
Lantana spp	Lantana
Myricaceae	**Myrica family**

Myrica californica	Pacific Wax Myrtle

Pittosporaceae	**Cheesewoods family**
Pittosporum tobria 'Wheeler's dwarf'	Wheeler's dwarf
Pittosporum spp.	Mock Orange

Adoxaceae	**Moschatel family**
Sambuca mexicana	Blue elderberry
Sambucus Nigra	Black elderberry

Azioaceae	**Fig-Marigold family**
Crassula ovata 'Crosby Compact'	Jade plant
Lampranthus	Trailing ice plant

Caprifoliaceae	**Honeysuckle family**
Lonicera japonica	Halls Japanese Honeycuckle

Typhacae	**Typha family**
Typha spp.	Cattail
Juncus mexicanus	Mexican rush
Schoenoplectus acutus	California bulrush
Eleocharis macrostachya	Pale spikerush
Schoenoplectus Americanus	Oleney's bulrush

APPENDIX C

WILDLIFE OBSERVED

The following is a list of the wildlife observed during the biological surveys.

Scientific Name	Common Name
LEPIDOPTERA	**BUTTERFLIES**
Lycaenidae	**Gossamer-Wing Butterflies**
Icaricia acmon	Acmon blue
Hesperiidae	**Skippers**
Erynnis funeralis	Funereal duskywing
Pieris Rapae	Cabbage white butterfly
Papilionidae	**Swallowtail butterflies**
Papilo zelicaon	Anise Swallow tail butterfly
Anisoptera	**Dragon Fly**
Ladona Sp.	Dragon Fly
Apidae	**Bee Family**
Bombini Sp.	Bumblebee
REPTILIA	**REPTILES**
Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard
Teiidae	**Whiptails**
Aspidoscelis hyperythra	Orange-throated whiptail
AVES	**BIRDS**
Accipitridae	**Kites, Hawks, and Eagles**
Pandion haliaetus	Osprey
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Strigidae	**True Owls**
Bubo virginianus	Great Horned Owl
Anatidae	**Water Birds**
Anas platyrhynchos	Mallard
Anas rubripes	American black duck
Anas Americana	American Widgeon
Mergus merganser	Common merganser
Branta Canadensis	Canada Goose
Apodidae	**Swifts**
Cypseloides niger	Black swift
Laridae	**Gulls, Terns, Skimmers**
Larus occidentalis	Western gull
Larus californicus	California gull
Icteridae	Troupials and Allies
Molothrus ater	Brown-headed cowbird
Trochilidae	**Hummingbirds**

Calypte anna	Anna's hummingbird
Corvidae	**Crows and Ravens**
Corvus brachyrhynchos	American crow
Pica hudsonia	Black-billed magpie
Corvus corax	Common Raven
Aphelocoma coerulescens obscura	Scrub Jay
Columbidae	**Doves and Pidgeons**
Columba livia	Rock pigeon
Patagioenas fasciata	Band-tailed pigeon
Zenaida macroura	Mourning Dove
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	Northern rough-winged swallow
Hirundo Rustica	Barn Swallow
Hirundo phurrhonota tachina	Cliff swallow
Passerellidae	**Passerine Birds**
Melospiza melodia	Song sparrow
Spizella passerine	Chipping sparrow
Zonotrichia albicollis	White-throated sparrow
P. maculates	Spotted towhee
Sylviidae	**Warblers**
Chamacea fasciata	Wrentit
Aegithalidae	**Bushtits**
Psaltriparus minimus	Bushtit
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon parkmanii	House wren
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	Northern mockingbird
Sturnidae	**Starlings**
*Sturnus vulgaris**	European starling
Parulidae	**Wood Warblers**
Wilsonia pusilla	Wilson's warbler
Emberizidae	**Emberizines**
Melozone crissalis	California towhee
Zonotrichia leucophrys	White-crowned sparrow
Fringillidae	**Finches**
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Podicipedidae	**Grebes**
Aechmorphorous occidentalis	Western grebe
Odontophoridae	**New World Quails**
Callipepla Californica	California quail
Tyrannidae	**Tyrant Flycatchers**
Saynoris nigricans semiatra	Black Phoebe
Tyrannus verticalis	Western Kingbird

MAMMALIA	**MAMMALS**
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Desert cottontail
Sylvilagus bachmanii	Brush Rabbit
Rodentia	**Rodents**
Neotoma fuscipes	Wood rat
Microtus species	Field Mouse
Thomomys bottae	Valley pocket gopher
Spermophilus beecheyi	California ground squirrel
Canidae	**Canines**
Canis latrans	Coyote
Mephitidae	**Skunks**
Mephitis mephitis	Striped Skunk

APPENDIX D
JURISDICTIONAL DELINEATION