HELIX Environmental Planning

Brown Field Municipal Airport Master Plan Update

Biological Technical Report

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Submitted to:

City of San Diego
Real Estate Assets, Airports Division
3750 John J. Montgomery Drive, MS 14
San Diego, CA 92123

Prepared for:

C&S Engineers, Inc.
2355 Northside Drive, Suite 350
San Diego, CA 92108

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

ADD	Assistant Deputy Director
ALP	Airport Layout Plan
AMP	Airport Master Plan
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
ASMD	Area Specific Management Directives
BCME	Biological Construction Mitigation/Monitoring Exhibit
BLA	Boundary Line Adjustment
BMP	Best Management Practices
CFG Code	California Fish and Game Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of San Diego
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CSVR	Consultant Site Visit Record
CWA	Clean Water Act
EAA	Experimental Aircraft Association
EIR	Environmental Impact Report
ESA	Endangered Species Act
ESL	Environmentally Sensitive Lands
FAA	Federal Aviation Administration
FESA	Federal Endangered Species Act
HELIX	HELIX Environmental Planning, Inc.
ITP	Incidental Take Permit
LUAG	Land Use Adjacency Guidelines
MAP	Metropolitan Airpark Project
MBTA	Migratory Bird Treaty Act
MHPA	Multi-habitat Planning Area
MM	Mitigation Measure
MSCP	Multiple Species Conservation Program
RWQCB	Regional Water Quality Control Board

ACRONYMS AND ABBREVIATIONS (cont.)

SAP	Subarea Plan
SDM	Brown Field Municipal Airport
SDMMP	San Diego Management and Monitoring Program
sf	square feet
SSC	Species of Special Concern
Staff Report	California Department of Fish and Game 2012 Staff Report on Burrowing Owl Mitigation
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WL	Watch List

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

The purpose of this report is to document the existing biological conditions within the approximately 551.9-acre Brown Field Municipal Airport Master Plan Update (AMP) area ("AMP area") and provide an analysis of potential impacts from implementation of future projects under the AMP to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for project review under the California Environmental Quality Act (CEQA) by describing the proposed AMP, evaluating potential impacts, and identifying mitigation measures.

1.2 PROJECT LOCATION

Brown Field Municipal Airport (SDM; Airport) is located in the Otay Mesa community of the City of San Diego (City), California (Figure 1, *Regional Location*). More specifically, the Airport is located north of Otay Mesa Road, south of Otay River, east of Otay Valley Road, and west of State Route (SR) 125 (Figure 2, *Project Vicinity [Aerial Photograph]*). The Airport is in Sections 27, 28, and 32 of Township 18 South, Range 1 West on the Otay Mesa U.S. Geological Survey 7.5-minute quadrangle map (Figure 3, *Project Vicinity [USGS Topography]*). The northern portion of the AMP area is partially within the Multi-Habitat Planning Area (MHPA; Figure 4, *MSCP Regional Context*) of the City's Multiple Species Conservation Program (MSCP) Subarea Plan (SAP). The AMP area is wholly or partially within the following 20 Assessor's Parcel Numbers (APNs) 6450901600, 6460501000, 6460501100, 6460501200, 6460501300, 6460501400, 6460501500, 6460501600, 6460501700, 6460501800, 6460501900, 6460502000, 6460502100, 6460502200, 6460502300, 6460502400, 6460502500, 6460502600, 6460502700, and 6462501300.

1.3 PROJECT DESCRIPTION

1.3.1 Project Background

The City of San Diego (City) owns and operates SDM as a General Aviation airport located within the Otay Mesa community. Airport planning occurs at national, state, regional, and local levels; in 2017, the City began developing an update to the AMP to determine the extent, type, and schedule of development needed. An AMP presents the community and airport's vision for a 20-year strategic development plan based on forecasted activity. It is used as a decision-making tool and is intended to complement other local and regional plans.

The AMP for SDM consists of a report documenting existing conditions of the airport, a forecast of activity, facility requirements (the airport's needs based on the forecast and compliance with Federal Aviation Administration [FAA] Design Standards for airports), development and evaluation of alternatives to meet those needs, and a funding plan for that development. The AMP also includes an Airport Layout Plan (ALP) which graphically depicts all planned development at the airport within the 20-year planning period as determined in the AMP. This drawing requires approval by the FAA, which makes the airport eligible to receive federal funding for airport improvements and maintenance under the FAA's Airport Improvement Program. The conceptual plan selected by the Airports Advisory

Committee to implement the AMP (Preferred Alternative) is illustrated on Figure 5, *Proposed Airport Plan* and is referred to for the purposes of this CEQA analysis as the proposed project.

1.3.2 Project Description

As shown on Figure 5, the conceptual plan would involve both landside and airside components. Much of Brown Field has been leased by the City to the proposed developers of the Metropolitan Airpark Project (MAP)[1], a project which was reviewed previously in a separate Environmental Impact Report (EIR; SCH No. 2010071054) and is not part of the scope of the AMP. The primary landside improvement to be covered by the AMP project is a new 14,000 square foot (sf) terminal building. The proposed improvement includes demolishing the existing building while retaining and moving the existing historic control tower. The proposed new Customs facility has received a CEQA exemption and is not part of the AMP.

The Proposed Airport Plan shows construction of up to 84 new hangars; however, the hangars would not be developed by the City until there is sufficient demand, and net demand may be affected by how quickly the MAP project is built out. An aircraft wash rack is proposed within the hangar AMP area as well as approximately 60 new automobile parking spaces, which are intended to compensate for the loss of a parking area off the west end of the runway apron because of proposed AMP improvements. Airside improvements proposed at Brown Field include a new runup area and reconfiguring several taxiways to bring them into compliance with current FAA design standards. The airside and landside components are discussed in greater detail below in Section 1.3.

1.4 PROPOSED AIRPORT PLAN COMPONENTS

1.4.1 Landside Components

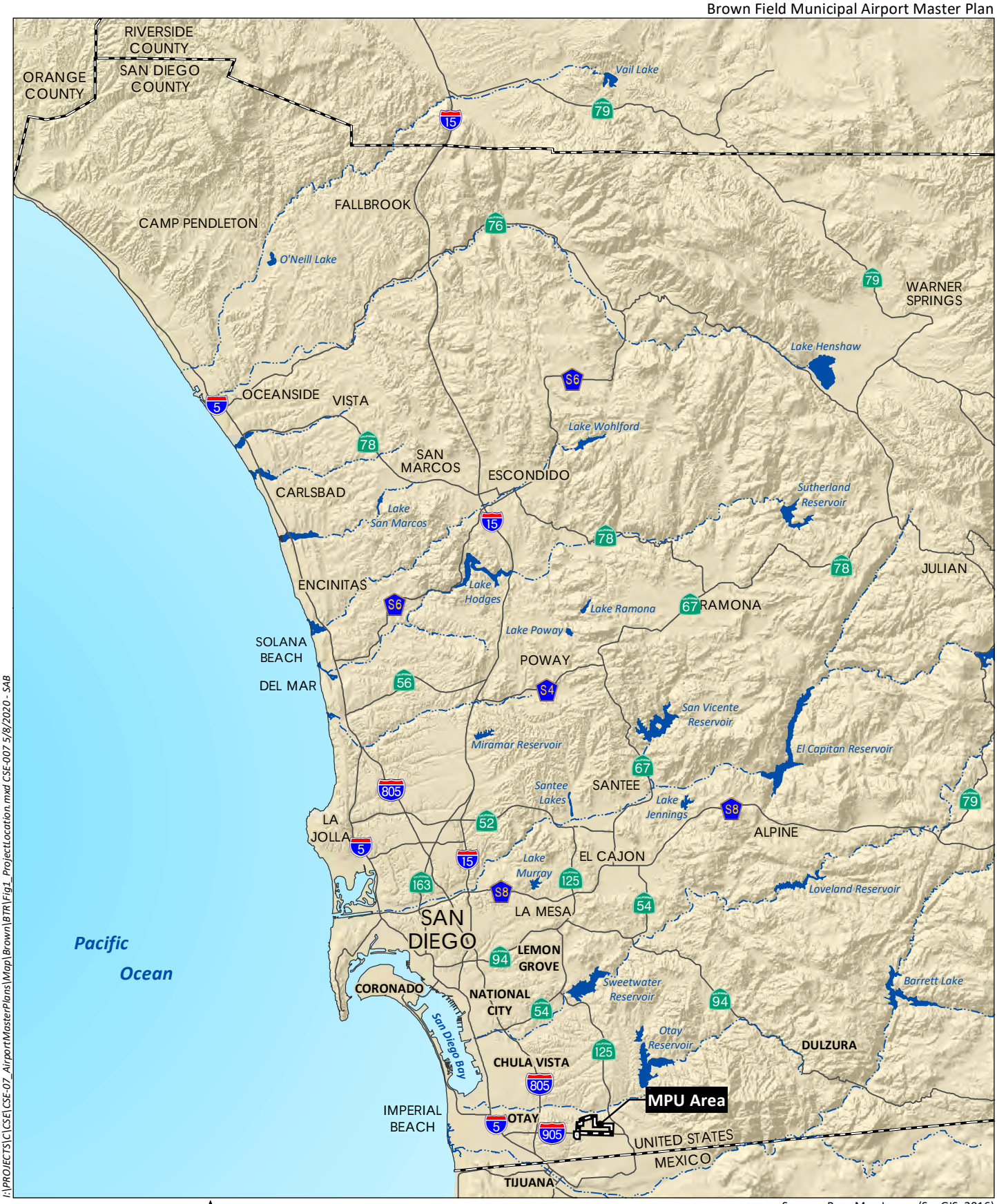
1.4.1.1 New Airfield Terminal

The existing City terminal building is approximately 12,600 square feet and houses City staff and terminal area, offices for the San Diego Jet Center, and the Landing Strip restaurant. The Master Planning process determined that the existing size of the terminal facility is adequate to serve the airfield. However, the inventory and facility requirements evaluation identified several age, configuration, and other environmental issues for the existing building. Concerns included cracks in the foundation, hazardous material in the structure, pest infestation, and inadequate space for airport personnel operations. It was thus concluded that a new terminal needs to be constructed.

1.4.1.2 Hangar Sites

The AMP proposes construction of up to 84 hangars to accommodate future demand over the 20-year planning period. This includes 13 T-hangars (18,000 sf) near the Experimental Aircraft Association (EAA) leasehold as well as 71 hangars (90,000 sf) on the western end of the airfield. However, the hangars would not be developed until there is sufficient demand, and net demand may be affected by how fast the MAP project (not part of the AMP) is built out.

[1] Now known as San Diego Airpark.



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0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1

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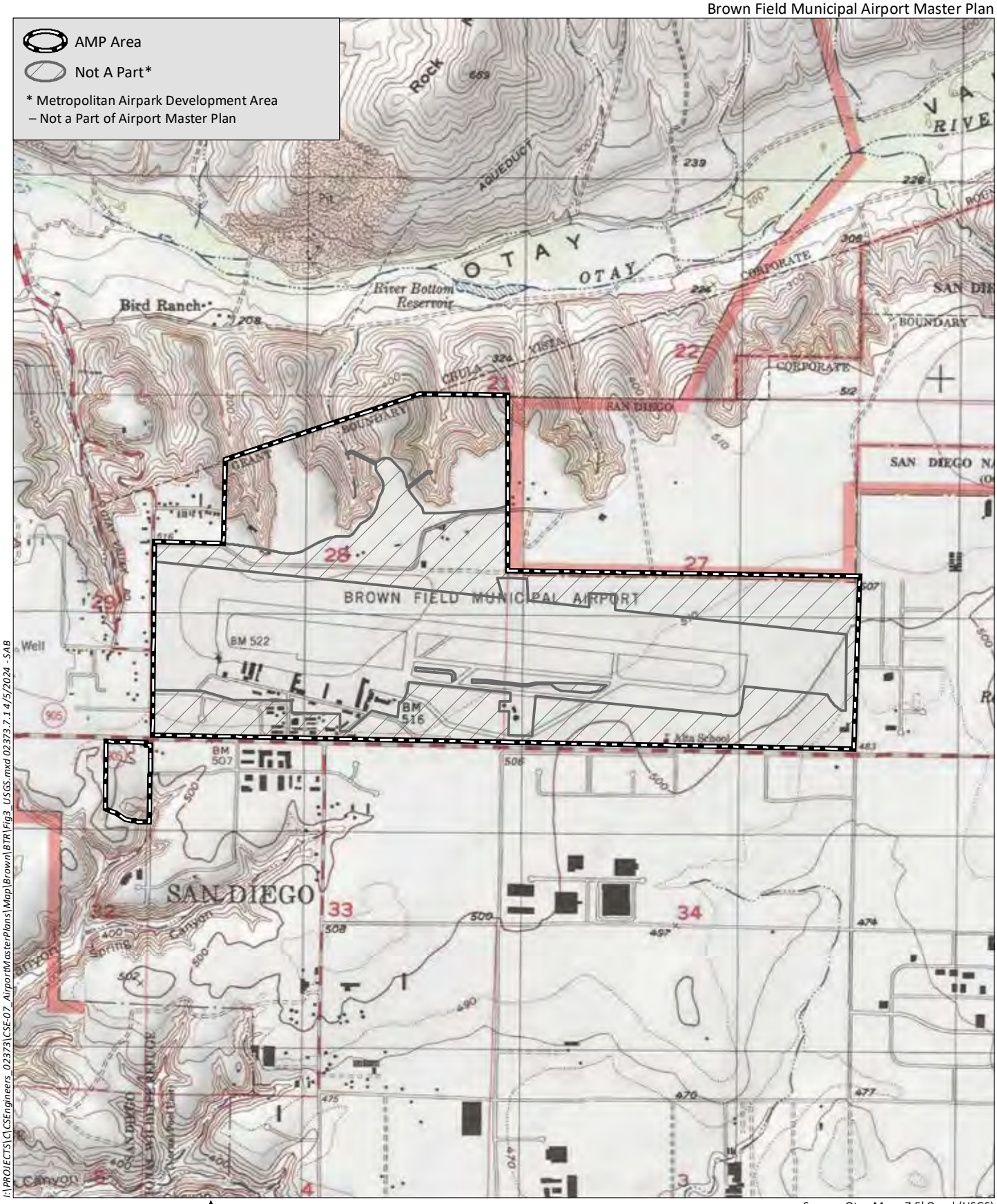
0 2,000 Feet

Source: Aerial (SanGIS 2023)

HELIX Environmental Planning

Project Vicinity (Aerial Photograph)

Figure 2



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Source: Otay Mesa 7.5' Quad (USGS)

HELIX Environmental Planning

Project Vicinity (USGS Topography)

Figure 3

AMP Area
Not A Part*
Permanent Impacts
Temporary Impacts
Staging Area
Otay Valley Regional Park
City of San Diego MHPA

* Metropolitan Airpark Development Area
– Not a Part of Airport Master Plan

Unnamed 368 St
Heritage Rd
Avenida De Las Vistas
Vista Santo Domingo
Otay Valley Rd
Pogo Row
125
Exposition Way
Corporate Center Dr
Datsun St
Innovative Dr
Progressive Ave
Curran St
Boeing St
Otay Mesa Rd
Pacific Rim Ct
Camino Maquiladora
Cactus Rd
Continental St
Britannia Blvd
Gailes Blvd
Alisa Ct
Saint Andrews Ave
905
Gateway Park Dr
Panasonic Way
Waterville Rd
Gigantic St
La Media Rd
Radar Rd
Windsock St

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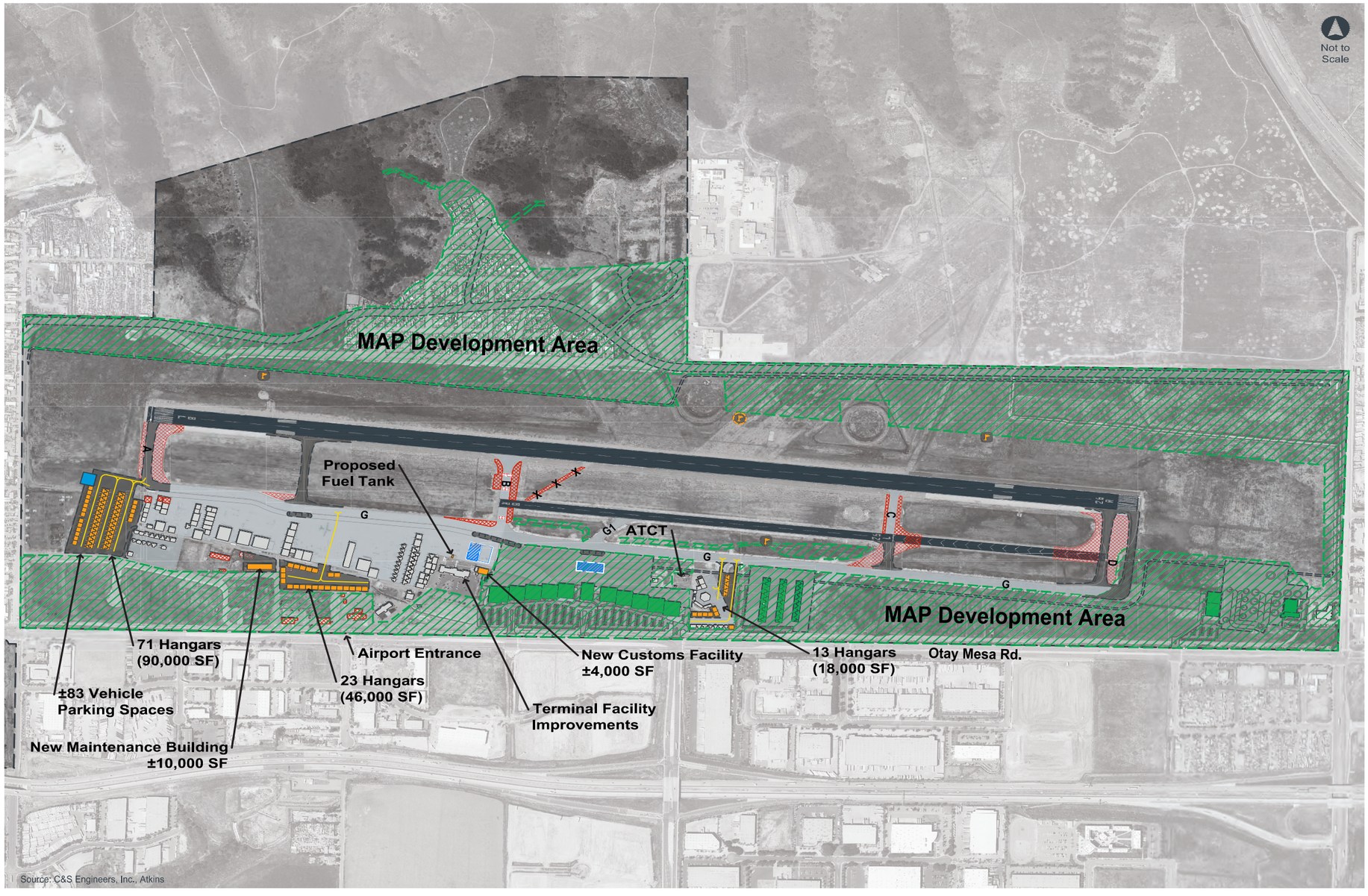
0 1,000 Feet

Source: Aerial (SanGIS, 2023)

HELIX Environmental Planning

MSCP Regional Context

Figure 4



SD Airports

Brown Field Municipal Airport Master Plan

Legend

- Property Line
- Existing Buildings
- Proposed Buildings
- Existing Airfield Pavement
- Proposed Pavement
- MAP Development Area
- Proposed MAP Buildings
- Proposed Demolition
- Proposed Taxiway/Taxilane Centerline
- Proposed Wash Rack
- Existing Customs Box
- Proposed Customs Box Expansion
- Proposed Segmented Circle
- Proposed Wind Cone
- Proposed "No-Taxi" Island

Source: C&S Companies 2024

1.4.1.3 Maintenance Facilities

Currently, a number of small structures house equipment and supplies across the airfield. The proposed plan includes consolidation of these facilities into one 10,000 sf centralized maintenance building to be constructed west of the terminal building and east of the western hangar site, as shown on Figure 5.

1.4.1.4 Support Structures and Facilities

A location for a new wash rack has been identified at the western end of the airfield, near the proposed western hangar location. In addition, various utility and fencing improvements around the airfield are proposed.

1.4.1.5 Access, Circulation, and Parking

Currently, primary access to the airfield is via Otay Mesa Road to Continental Street, which provides direct access to the terminal, the parking lots to the north and south of the terminal building, and the hangars and accessory structures west of the terminal building. Continental Street also provides access to the operating ATCT and the EAA leasehold to the east of the terminal, south of Taxiway A. As part of the MAP project, a new airfield entrance is proposed from Otay Mesa Road, south of the EAA leasehold. The new entrance would serve the EAA leasehold as well as the ATCT. The AMP would propose to provide a total of 65 vehicle parking spaces adjacent to the western hangar site (see Figure 5).

1.4.2 Airside Components

1.4.2.1 Taxiway Reconfigurations

There are four existing taxiways within SDM that are proposed to be modified as part of the AMP to bring them into compliance with current FAA recommendations/requirements.

- **Taxiway A:** The proposed airfield pavement at old Taxiway C, providing additional access to Taxiway A by the EAA leasehold, would be removed. The proposed landside development at EAA provides a second point of airside access to Taxiway A.

- **Taxiway B** in the west central portion of the AMP area has pavement on either side of it that cannot be used by aircraft because they would encroach into the Taxiway Object Free Area should they do so. As shown on Figure 5, the extra pavement on both the east and west sides of Taxiway B would be demolished. In addition, the closed taxiway adjacent to Taxiway B will be demolished because it is deteriorating, causing a potential foreign object debris issue for the main runway.

- **Taxiway C** is an acute angled taxiway, located between the 26L threshold and Taxiway A in the eastern portion of the AMP area, which provides access to the Runway 26L threshold. The project would demolish portions of the FAA's inadvisable acute angled Taxiway C to reconfigure it to 90-degrees.

- **Taxiway D** in the eastern portion of the AMP area currently provides a wide expanse of pavement which is discouraged by the FAA. A portion of the pavement at Taxiway D would be demolished and additional pavement installed to create dual entrance taxiways to Runway 26R. The dual taxiways would allow for aircraft to safely run-up and bypass one another.

1.5 COMPONENTS EXCLUDED FROM THE MASTER PLAN

As denoted by the green hatch on Figure 5, a large portion of the airfield's 880 acres are being leased to the private developers of the MAP and are not a part of the proposed Master Plan Update. These "Not a Part" areas include most of the lands directly adjacent to Otay Mesa Road, as well as to the north of runway 8L/26R. These areas are subject to a separate EIR and would be unaffected by the Master Plan Update. Any future projects that may be proposed within the green-hatched areas would be subject to the MAP EIR (SCH No. 2010071054) or required to complete their own CEQA review as-needed. In addition, the new customs facility within airport property has received a CEQA exemption and is not a part of the AMP.

2.0 SURVEY METHODS

2.1 LITERATURE REVIEW

Baseline biological resources information for the AMP area was reviewed and compiled from several sources, including the City's Revised Final Vernal Pool Habitat Conservation Plan (VPHCP; 2019), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; [CDFW] 2019), U.S. Fish and Wildlife Service (USFWS) sensitive species database (USFWS 2019), and biological reports for various projects including Merkel and Associates 2008 constraints report, and several studies associated with the MAP project (Sage Institute, Inc. [Sage Institute] 2011a-c; Environmental Science Associates [ESA] 2013 and 2014; ECORP Consulting, Inc. [ECORP] 2015; ESA and Sage Institute 2016). Soils information was obtained from the U.S. Department of Agriculture Web Soil Service (U.S. Department of Agriculture [USDA] 2019). The working paper for the project (Atkins 2017) was also used as a resource.

2.2 GENERAL BIOLOGICAL SURVEY

The baseline data was supplemented with a site visit by HELIX on June 6, 2017, to verify and update previous vegetation mapping, note the presence of any additional sensitive species observed, and conduct habitat assessments for sensitive species. Vegetation communities were mapped on an aerial photograph (1"=100' scale) with overlaid topography. A list of plant and animal species observed or detected within the project area was prepared. Plant species were identified in the field or later in the laboratory with the aid of botanical keys. Animals were identified in the field by direct visual observation with the aid of binoculars or indirectly by detection of calls, tracks, burrows, or scat. Focused surveys were not conducted as part of the field effort for the Master Plan Update, although results of biological surveys from various projects conducted on the airport over the past several years have been incorporated to the extent available. Updated surveys to document vernal pools in the AMP area would be required per MM BIO-1b and MM BIO-3 prior to implementing projects identified in the AMP that would affect non-native grassland or disturbed habitat (i.e., non-developed lands).

2.3 JURISDICTIONAL DELINEATION

Jurisdictional delineations are used to identify and map water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the

CWA and/or Porter-Cologne Water Quality Act, and streambed habitats potentially subject to CDFW jurisdiction pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code).

Results of a jurisdictional delineation conducted by Sage Institute (2011a) were used to depict potential non-vernal pool jurisdictional resources in the AMP area, while vernal pool boundaries depicted herein were obtained from the City's 2019 VPHCP. HELIX conducted a qualitative review of the delineation and determined that site conditions observed during HELIX's 2017 general biological survey have not changed substantially since Sage Institute's delineation.

2.4 SURVEY LIMITATIONS

HELIX's fieldwork conducted for the AMP was limited to a single day general biological survey on June 6, 2017 (see Section 2.2 above). Focused plant and animal surveys were not conducted for the project; however, numerous biological surveys have been conducted on the airport for various projects and sensitive species data was compiled from these sources. Animal species observed were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. The lists of species identified in this document are not necessarily comprehensive accounts of all species that utilize the AMP area as species that are nocturnal, secretive, or seasonally restricted may not have been observed. Those species that are of special status and have potential to occur in the AMP area, however, are still addressed in this report.

2.5 NOMENCLATURE

Nomenclature used in this report follows the conventions used in the City's Biology Guidelines (City 2018) and the MSCP (City 1997a). Vegetation community classifications follow Holland (1986) and Oberbauer (2008); plant names follow the "Jepson Manual" (Baldwin et al. 2012) or Rebman and Simpson (2014). Animal nomenclature is taken from the American Ornithological Society (2023) for birds, Bradley et al. (2014) for mammals, and Collins and Taggart (2006) for reptiles. Sensitive plant species status follows the California Native Plant Society (CNPS; 2024) and sensitive animal species status follows the CDFW (2024a-b).

3.0 REGULATORY FRAMEWORK

The AMP is governed by several federal, state, and local policies and regulations and such regulatory act(s) and plan(s) that apply to the AMP are further discussed below.

3.1 FEDERAL

3.1.1 Endangered Species Act

Administered by the USFWS, the Federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that impact endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitats, so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat.

Sections 7 and 10(a) of the FESA regulate actions that could impact endangered or threatened species. Section 7 generally describes a process of federal interagency consultation and issuance of a biological opinion and incidental take statement when federal actions may adversely affect listed species. Section 10(a) generally describes a process for preparation of a Habitat Conservation Plan and issuance of an Incidental Take Permit (ITP). Pursuant to Section 10(a), the City was issued a take permit for their adopted MSCP SAP and VPHCP. Actions consistent with the adopted SAP and VPHCP have authorized take authority for covered species.

3.1.2 Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (H.R. 4114). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on disturbance of active bird nests during the nesting season.

3.1.3 Clean Water Act

The Federal CWA is legislation (33 U.S. Code §1251 et seq.) that regulates water quality standards and impacts (fills and discharges) to surface waters, including wetlands. The CWA is administered by USACE and RWQCB under the 404 and 401 programs, respectively. Impacts to areas regulated by the CWA require a USACE 404 permit and a 401 Certification from the RWQCB.

3.2 STATE OF CALIFORNIA

3.2.1 Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated because of the environmental review process in accordance with existing laws and regulations.

3.2.2 Endangered Species Act

The California Endangered Species Act (CESA) established that it is State policy to conserve, protect, restore, and enhance state endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may “take” plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code

Section 2080.1[a]). For state-only listed species, Section 2081 of CFG Code authorizes the CDFW to issue an Incidental Take Permit for state listed threatened and endangered species if specific criteria are met. The City was issued a take permit for their adopted MSCP SAP pursuant to Section 2081. Actions consistent with the adopted SAP and VPHCP have authorized take authority for covered species.

3.2.3 California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds would not be disturbed, subject to approval by CDFW and/or USFWS.

3.3 CITY OF SAN DIEGO

3.3.1 Environmentally Sensitive Lands

Environmentally Sensitive Lands (ESL) include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains. Mitigation requirements for sensitive biological resources follow the requirements of the City's Biology Guidelines (2018) as outlined in the City's Municipal Code ESL Regulations (Chapter 14, Article 3, Division 1). Impacts to biological resources within and outside the MHPA must comply with the ESL Regulations, which also serve as standards for the determination of biological impacts and mitigation under the CEQA in the City.

The purpose of the ESL Regulations is to, "protect, preserve and, where damaged, restore the ESL of San Diego and the viability of the species supported by those lands." The regulations applicable to the project and discussed in this report require that development avoid impacts to certain sensitive biological resources as much as possible including but not limited to MHPA lands; wetlands and vernal pools in naturally occurring complexes; federal and State listed, non-MSCP Covered Species; and MSCP Narrow Endemic species. Furthermore, the ESL Regulations state that wetlands impacts should be avoided, and unavoidable impacts should be minimized to the maximum extent practicable. Where impacts are unavoidable, deviation findings must be made in accordance with Section 143.0150 of the City Municipal Code. In addition to protecting wetlands, the ESL Regulations require that a buffer be maintained around wetlands, as appropriate, to protect wetland-associated functions and values.

The City's Land Development Code (§113.0101) defines wetlands as areas that are characterized by any of the following conditions:

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to, salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools;

2. Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation, or catastrophic or recurring natural events or processes have acted to preclude the establishment of wetland vegetation, as in the case of salt pannes and mudflats;

3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands;

4. Areas mapped as wetlands on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

3.3.2 Multiple Species Conservation Program

The MSCP is a long-term regional conservation plan established to protect sensitive species and habitats within San Diego County. The MSCP is separated into local SAPs that are implemented independently from each other. The entire AMP area is within the City of San Diego SAP. The City's MSCP SAP (1997a) was prepared pursuant to the outline developed by USFWS and CDFW to meet the requirements of the State Natural Communities Conservation Planning Act of 1992. Adopted by the City in March 1997, the SAP forms the basis for the MSCP Implementing Agreement, which is the contract between the City, USFWS, and CDFW (City 1997b). The Implementing Agreement ensures implementation of the SAP and thereby allows the City to issue "take" permits under the federal and state ESAs to address impacts at the local level. Under the FESA, an ITP is required when non-federal activities would result in "take" of a threatened or endangered species. A habitat conservation plan, such as the City's MSCP SAP, must accompany an application for a federal ITP. In July 1997, USFWS, CDFW, and City entered into the 50-year MSCP Implementing Agreement, wherein the City received its FESA Section 10(a) ITP (City 1997b).

The City's MSCP SAP covers the entire 206,124 acres in the City. The SAP identifies lands designated as MHPA, which is a "hard-line" preserve developed by the City in cooperation with the wildlife agencies, developers, property owners, and various environmental groups. Within the MHPA, biological core resource areas and corridors targeted for conservation are identified and discussed, in which development restrictions may occur (City 1997a).

Pursuant to the MSCP permit issued pursuant to Section 10(a), the City has incidental "take" authority over 85 rare, threatened, and endangered species including regionally sensitive species that it aims to conserve (i.e., "MSCP Covered Species). "MSCP Covered" refers to species that are covered by the City's federal and state ITPs and considered to be adequately protected within the City's Preserve, the MHPA. Special "Conditions of Coverage" apply to MSCP Covered Species that would be potentially impacted by projects including modifying project design to avoid impacts to Covered Species in the MHPA where feasible. Additionally, projects must adhere to MSCP SAP requirements including those for Boundary Line Adjustments (BLAs; MSCP Section 1.1.1); Compatible Land Uses, General Planning Policies/Design Guidelines, and MHPA Land Use Adjacency Guidelines (LUAGs; MSCP Sections 1.4.1-1.4.3), as well as general and specific management policies where applicable). Additional state and federal policy, regulations, and permits may also be required for wetlands and species not covered or fully covered under the MSCP.

The AMP area lies within the "Southern Area" of the City MSCP SAP and portions are designated as MHPA. Section 1.2.1 of the MSCP does not identify any specific MHPA guidelines for the AMP area. Section 1.4.1 of the MSCP SAP provides guidelines for compatible uses within the MHPA, and

Section 1.4.2 provides general planning policies and design guidelines. Section 1.5.2 of the SAP provides general management directives including mitigation, restoration, public access, trails and recreation, litter/trash storage, adjacency management issues, exotics control, and flood control guidance. Project consistency with the MSCP guidelines and policies is summarized in Section 5.0 of this report.

3.3.2.1 Multi-Habitat Planning Area

The MHPA is the area within which the permanent MSCP preserve to be assembled and managed for its biological resources. Input from responsible agencies and other interested participants resulted in adoption of the City's MHPA in 1997. The City's MHPA areas are defined by "hard-line" limits, "with limited development permitted based on the development area allowance of the OR-1-2 zone [open space residential zone]" (City 1997a) and MSCP SAP requirements.

The MHPA consists of public and private lands, much of which has been conserved. Conserved lands include lands that have been set aside for mitigation or purchased for conservation. These lands may be owned by the City (i.e., dedicated lands) or other agencies, may have conservation easements, or may have other restrictions (per the City's ESL regulations) that protect the overall quality of the resources and prohibit development.

In general, a maximum 25 percent encroachment into the MHPA is allowed for development. If 25 percent of a site is outside the MHPA, development could be restricted to this area. In addition, development is required to be in the least sensitive area feasible. Should more than 25 percent encroachment be desired, an MHPA BLA may be proposed. The City's MSCP SAP states that adjustments to the MHPA boundary line are permitted without the need to amend the City's SAP, provided the boundary adjustment results in an area of equivalent or higher biological value. To meet this standard, the area(s) proposed for addition to the MHPA must meet the six functional equivalency criteria set forth in Section 5.4.2 of the Final MSCP Plan (County of San Diego [County] 1998). All MHPA BLAs require approval by the Wildlife Agencies and approval from a City discretionary hearing body.

For parcels located outside the MHPA, "there is no limit on the encroachment into sensitive biological resources, with the exception of wetlands, and listed non-covered species' habitat (which are regulated by state and federal agencies) and narrow endemic species." However, "impacts to sensitive biological resources must be assessed and mitigation, where necessary, must be provided in conformance" with the City's ESL Ordinance as implemented through compliance with the City's Biology Guidelines (City 2018).

The MSCP includes management priorities to be undertaken by the City as part of its MSCP implementation requirements. Those actions, identified as Priority 1, are required to be implemented by the City as a condition of the MSCP ITP to ensure that MSCP Covered Species are adequately protected. The actions identified as Priority 2 may be undertaken by the City as a resources permit.

3.3.3 Vernal Pool Habitat Conservation Plan

The City's VPHCP is a habitat conservation plan focusing on vernal pools and seven associated threatened and endangered species that do not have federal take coverage under the MSCP SAP. The City and the USFWS entered into a Planning Agreement to develop a habitat conservation plan for vernal pool habitats and species in October 2009, and the final VPHCP was completed in October 2017, and revised final VPHCP in October 2019. The plan provides coverage for the following seven species (five plant and two crustacean): San Diego button-celery (*Eryngium aristulatum* var. *parishii*), Otay Mesa

mint (*Pogogyne nudiuscula*), San Diego mesa mint (*Pogogyne abramsii*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and Riverside fairy shrimp (*Streptocephalus woottonii*). The City has state coverage of these seven species under the MSCP SAP; however, no federal coverage was provided for these species.

The VPHCP expands the MHPA established in the MSCP SAP and conserves additional lands containing vernal pools and vernal pool species. The VPHCP provides long-term conservation and management for vernal pool species and was written to comply with the requirements of the FESA Section 10(a)(1)(B), as well as being designed to meet the requirements under CFG Code Section 2800 for listed and non-listed species conserved under a Natural Community Conservation Plan. The VPHCP provides methods to help ensure minimization and mitigation is adequate for the covered species and is intended to meet all standard requirements of the USFWS to issue permits for incidental take of threatened and endangered plant and animal species.

The goals of the VPHCP are:

1. Provide for the conservation and management of covered species addressed by the VPHCP (covered species).

2. Preserve vernal pool resources through conservation partnerships between federal, state, local agencies, and private development partnerships.

3. Allow for appropriate and compatible economic growth and development that is consistent with applicable laws.

4. Provide a basis for permits necessary for lawful incidental take of vernal pool covered species.

5. Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements of FESA, CESA, CEQA, the California Natural Community Conservation Planning Act of 1991, and the National Environmental Policy Act within the VPHCP Area.

6. Provide more efficient project review process that results in greater conservation values than project-by-project, species by species review.

7. Provide clear expectations and regulatory predictability for persons carrying out covered activities within the VPHCP Plan Area.

Implementation of habitat-based and species-specific objectives to achieve the above goals are outlined in Chapter 5 of the VPHCP. The VPHCP expires in 2047.

As discussed in Section 4.2.7 of the VPHCP, federal aviation regulations require that the airport be maintained and operated in a manner that promotes the health, safety, and welfare of airport users, and the surrounding communities. As part of this mandate, the airport has required operations and standard activities that have the potential to impact covered species and/or vernal pool habitat. Table 4-7 of the VPHCP identifies these covered airport activities.

4.0 SURVEY RESULTS

4.1 AIRPORT MASTER PLAN UPDATE AREA DESCRIPTION

This section of the report describes the physical characteristics of the AMP area, including topography, soils, and land uses, as well as general conservation planning context.

4.1.1 Topography and Soils

Topographically the AMP area is generally flat. The most obvious change in elevation is in the northern portion of the AMP area, where three canyons cut into the mesa, sloping downward towards the Otay River, which is located off site to the north. The AMP area is at an elevation of approximately 510 and 525 feet above mean sea level (AMSL) throughout most of the property. The Otay River Valley at the north edge of the property is at approximately 350 feet AMSL. The southwestern parcel of the property, which is disconnected from the main airport property and located south of Otay Mesa Road, is generally at the same elevation as the main portion of the airport.

The AMP area is mapped as supporting six soil types (USDA 2019): Diablo clay, 15 to 30 percent slopes; Diablo clay, 30 to 50 percent slopes; gravel pits; Olivenhain cobbly loam, 30 to 50 percent slopes; Stockpen gravelly clay loam, zero to two percent slopes; and Stockpen gravelly clay loam, two to five percent slopes. Stockpen gravelly clay loam, 0 to 20 percent slopes is the most common soil type in the AMP area. The Diablo clay series is found in the northwestern corner of the AMP area. The gravel pit soils are in the southwest parcel.

4.1.2 Land Uses

Land uses include existing airport facilities, including runways, parking, and buildings. Most of the facilities are adjacent to maintained grassland areas; however, the northernmost portion of the AMP area contains unnamed canyons with native habitats set back over 1,000 feet from the runway.

Land uses surrounding the AMP area include industrial and commercial businesses and SR 905 to the south; auto storage and sales to the west; and industrial and commercial development to west and north. Additional land uses to the north include the Otay Valley Regional Park and the Otay Valley Ranch Preserve (Figure 4).

4.1.3 Regional Conservation Planning Context

The AMP area is within the “Southern Area” of the City’s MSCP SAP and portions of the project AMP area are designated as MHPA. MHPA lands are concentrated in the canyons in the northern portion of the AMP area, outside of active airfield uses (Figure 4). The MHPA also covers the disjunct southwestern parcel.

Vernal pools occurring in the AMP area are part of the VPHCP’s South Planning Unit, which is located generally south of SR 94 and north of the U.S./Mexico international border. The South Planning Unit contains the majority of the vernal pools in the VPHCP. Areas containing vernal pools include Otay Mesa, Proctor Valley, Otay Lakes, and Marron Valley (City 2019).

4.1.4 Critical Habitat Designations

No USFWS-designated critical habitat occurs within the AMP area; however, critical habitat for the following five species occurs adjacent to the airport property: Otay tarplant (*Deinandra conjugens*), Quino checkerspot butterfly (*Euphydryas editha quino*), Riverside fairy shrimp, San Diego fairy shrimp, and spreading navarretia (Figure 6, *USFWS Critical Habitat*).

4.2 BIOLOGICAL RESOURCES

This section describes the existing biological resources within the AMP area, including vegetation communities; general flora and fauna; and rare, threatened, endangered, endemic, sensitive, MSCP-covered species, VPHCP-covered species, and jurisdictional resources. Lists of plant and animal species observed or detected during HELIX's general biological survey are provided in Appendices A and B, respectively; the potential for MSCP Narrow Endemic and sensitive plant and animal species to occur in the AMP area are analyzed in Appendices C and D, respectively. Sensitive species occurring or with high potential to occur in the AMP area are discussed in detail in Section 4.3 of this report.

4.2.1 Vegetation Communities

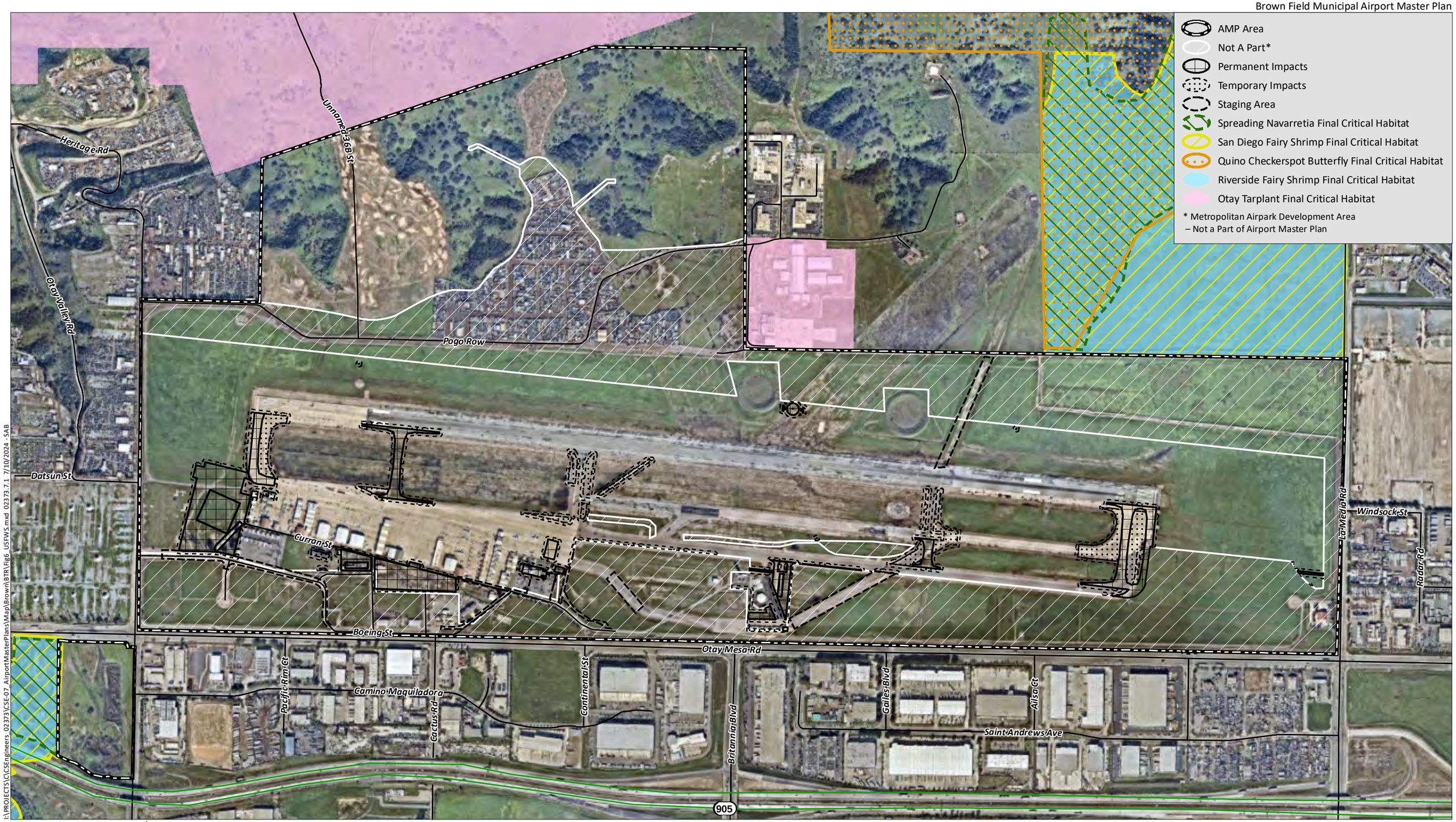
A total of 10 vegetation communities (including land cover types) were recorded within the AMP area, incorporating approximately 551.9 acres (Table 1, *Existing Vegetation Communities and Land Cover Types within the Project Area*; Figure 7, *Vegetation and Sensitive Biological Resources*). They include four wetland habitat types (southern willow scrub, disturbed wetland, vernal pool, and open water) and six upland habitat/land cover types (maritime succulent scrub, Diegan coastal sage scrub [including a disturbed phase], baccharis scrub, non-native grassland, disturbed habitat, and developed). In this document, "disturbed phase" is used as a subcategory for classification of vegetation communities where more than half of the vegetation normally present is either bare ground and/or consists of weedy or non-native species characteristic of disturbed areas. These vegetation communities and land cover types are discussed in detail below.

Table 1
EXISTING VEGETATION COMMUNITIES AND LAND COVER TYPES WITHIN THE PROJECT AREA

Vegetation Community or Land Cover Type[1]	Tier	Inside MHPA	Outside MHPA	Total Area*
Southern willow scrub (63320)	Wetland	2.04	0.00	2.04
Disturbed wetland (11200)	Wetland	0.20	0.00	0.20
Vernal pool (44000)	Wetland	0.84	2.68	3.53
Open water (64100)	Wetland	0.21	0.00	0.21
Maritime succulent scrub (32400)	I	7.7	0.00	7.7
Diegan coastal sage scrub (32500) – including disturbed phase	II	61.7	0.0	61.7
Baccharis scrub (32530)	II	1.0	0.0	1.0
Non-native grassland (42200)	IIIB	59.1	221.3	280.4
Disturbed habitat (11300)	IV	37.9	5.9	43.8
Developed (12000)	--	1.0	150.3	151.3
	TOTAL	171.7	380.2	551.9

* Totals reflect rounding (0.1 for uplands and 0.01 for sensitive uplands and wetlands/riparian).

[1] Vegetation community codes are from Oberbauer (2008).



Source: Aerial (SanGIS, 2023)

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USFWS Critical Habitat

Figure 6

AMP Area
Not A Part*
City of San Diego MHPA

SD Zoo Institute for Conservation Research (2018)
- Burrowing Owl Observation April 2018*(Athene cunicularia)*
- Burrowing Owl Observation May 2018*(Athene cunicularia)*
- Burrowing Owl Observation July 2018*(Athene cunicularia)*

HELIX (2017)
- Yellow Warbler*(Setophaga petechia)*

ECORP (2015)
- Coastal California Gnatcatcher*(Polioptila californica californica)*

ESA (2014)
- Burrowing Owl Breeding Pair*(Athene cunicularia)*
- Burrowing Owl Individual*(Athene cunicularia)*

Sage Institute (2011)
- San Diego Button-celery*(Eryngium aristulatum* var. *parishii)*
- San Diego Fairy Shrimp*(Branchinecta sandiegonensis)*

Vegetation
- Baccharis Scrub
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Developed
- Disturbed Habitat
- Disturbed Wetland
- Maritime Succulent Scrub
- Non-Native Grassland
- Open Water
- Southern Willow Scrub
- Vernal Pool[1]

* Metropolitan Airpark Development Area – Not a Part of Airport Master Plan

[1] Source: Revised Final City of San Diego Vernal Pool Habitat Conservation Plan (2019).

Unnamed 36B St
Heritage Rd
Otay Valley Rd
Pogo Row
Datsun St
Curran St
Sikorsky St
Grumman St
Lycoming St
Boeing St
Continental St
Otay Mesa Rd
Pacific Rim Ct
Camino Maquiladora
Cactus Rd
Continental St
Britannia Blvd
Gailes Blvd
Ailsa Ct
Saint Andrews Ave
La Media Rd
Windsock St
Radar Rd
905
905

0 800 Feet

Source: Aerial (SanGIS, 2023)

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Vegetation and Sensitive Biological Resources

Figure 7

Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter deciduous stands of trees dominated by willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*). This vegetation community appears as a single layer; it lacks separate shrub and tree layers and generally appears as a mass of short trees or large shrubs. It occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986).

Arroyo willow (*Salix lasiolepis*) is the dominant species present in this habitat in the AMP area, which occurs in the disjunct airport-owned parcel at the southwest corner of Otay Mesa Road and Heritage Road (herein referred to as the southwest parcel). A total of 2.04 acres of southern willow scrub was mapped within this parcel.

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include annual beard grass (*Polypogon monspeliensis*), bristly ox-tongue (*Helminthotheca echioides*), giant reed (*Arundo donax*), tamarisk (*Tamarix* sp.), cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*).

Disturbed wetland in the AMP area is composed of giant reed, pampas grass (*Cortaderia* sp.), and curly dock (*Rumex crispus*). This habitat occurs as a single stand of habitat within a canyon in the northwestern portion of the AMP area, totaling 0.20 acre.

Vernal Pool

Vernal pools are ephemeral wetlands that form in small pools and swales as a result of a subsurface hardpan or claypan that inhibits the downward percolation of water. The landscape conditions usually consist of relatively level areas (e.g., mesas) with low hummocks (mima mounds) and shallow basins (vernal pools). If sufficient rainfall occurs during the rainy season, the combination of landscape position, low soil permeability, and climatic conditions results in water ponding in the pools, that then gradually evaporates and becomes completely dry over the summer and fall. Vernal pools may not fill at all with water during dry years. These highly specialized wetland habitats support a unique flora and are identified by having at least one indicator plant species present (USACE 1997).

Vernal pool boundaries for the AMP area were obtained from the City's Vernal Pool Database, as depicted in the City's 2019 VPHCP. Pursuant to the VPHCP, a total of 17 vernal pools occur in the AMP area and are situated within the J-35 complex. Characteristic species present in the AMP area vernal pools include dwarf woolly-marbles (*Psilocarphus brevissimus*), spikerush (*Eleocharis* sp.), and lythrum (*Lythrum hyssopifolia*). Vernal pools total 3.53 acres in the AMP area.

Open Water

Open water includes areas where standing freshwater is present, with little to no vegetation growing within it, such as the center of a lake, pond, or river. Open water was mapped in the southwestern parcel, totaling 0.21 acre.

Maritime Succulent Scrub

Maritime succulent scrub is a low, open scrub dominated by drought deciduous, subligneous, malacophyllous shrubs with a rich mixture of stem and leaf succulents. The ground is usually bare between shrubs. It is found on thin, rocky or sandy soils, often on steep slopes. Characteristic species include California acalypha (*Acalypha californica*), Shaw's agave (*Agave shawii*), California sagebrush (*Artemisia californica*), golden spined cereus (*Bergerocactus emoryi*), California encelia (*Encelia californica*), cliff spurge (*Euphorbia misera*), San Diego barrel cactus (*Ferocactus viridescens*), California boxthorn (*Lycium californicum*), cholla (*Opuntia* spp.), lemonadeberry (*Rhus integrifolia*), and San Diego sunflower (*Bahiopsis laciniata*).

Characteristic species observed in this habitat in the AMP area include California encelia, San Diego sunflower, California sagebrush, San Diego barrel cactus, bladderpod (*Peritoma arborea*), chalk lettuce (*Dudleya pulverulenta*), jojoba (*Simmondsia chinensis*), and coast cholla (*Cylindropuntia prolifera*). This habitat occurs in the canyons in the northern portion of the AMP area, totaling 7.7 acres.

Diegan Coastal Sage Scrub (including disturbed phase)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric AMP areas characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush, lemonadeberry, California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

Diegan coastal sage scrub in the AMP area is dominated by California sagebrush, California buckwheat, lemonadeberry, and California encelia. This habitat occurs on the canyon slopes in the northern portion of the AMP area, adjacent to maritime succulent scrub, as well as within the southwestern parcel, totaling 61.7 acres (including 11.5 acres of disturbed sage scrub).

Baccharis Scrub

Baccharis scrub is a subtype of Diegan coastal sage scrub but dominated by baccharis species (broom baccharis (*Baccharis sarothroides*) and/or coyote brush [*B. pilularis*]). It often occurs within Diegan coastal sage scrub on disturbed sites and areas with nutrient-poor soils, and on upper terraces of streams and in detention basins, where it may co-occur with San Diego goldenbush (*Isocoma menziesii*). Baccharis scrub in the AMP area is confined to the southwestern parcel and totals 1.0 acre.

Non-Native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*B. diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that make up the biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate like California. Non-native grassland is the most common vegetation type found in the AMP area, it is found throughout the airport surrounding developed areas, and within the northern portion of the AMP area.

Characteristic species present include oats, red brome, ripgut, and barley (*Hordeum murinum*). Non-native grassland totals 280.4 acres (51 percent) of the AMP area.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed habitat in the AMP area includes such species as garland daisy (*Glebionis coronaria*), telegraph weed (*Heterotheca grandiflora*), filaree (*Erodium* sp.), Russian thistle (*Salsola tragus*), and iceplant (*Mesembryanthemum crystallinum* and *M. nodiflorum*). The largest areas of disturbed habitat occur near the canyons in the northern portion of the AMP area, with smaller, scattered patches occurring adjacent to existing developed areas in the southwest. Disturbed habitat totals 43.8 acres in the AMP area.

Developed

Developed land is where permanent structures, pavement, and/or gravel occurs, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Developed portions of the AMP area consist of existing buildings, parking areas, landscaping, taxiways, and runways, together occupying a total of 151.3 acres (27 percent) of the AMP area.

Plant Species Observed

A total of 70 plant species were observed during the 2017 general biological survey of the AMP area. Of these, 30 are native species and 40 species are non-native species (Appendix A).

4.2.2 Zoological Resources – Fauna

Animal Species Observed

Animal species within the project area were detected by direct observation, calls, scat, tracks, and sign. A total of 29 animal species were detected during the 2017 general biological survey of the AMP area (Appendix B).

4.3 SENSITIVE BIOLOGICAL RESOURCES

According to City Municipal Code (Chapter 11, Article 3, Division 1) and Appendix I of the City's Biology Guidelines (City 2018), sensitive biological resources refers to upland and/or wetland areas that meet any one of the following criteria:

(a) Lands that have been included in the MHPA as identified in the City's MSCP SAP and VPHCP;

(b) Wetlands (as defined by Municipal Code Section 113.0103);

(c) Lands outside of the MHPA that contain Tier I, Tier II, Tier IIIA, or Tier IIIB habitats;

(d) Lands supporting species or subspecies listed as rare, endangered, or threatened;

(e) Lands containing habitats with narrow endemic or vernal pool species as listed in the City's Biology Guidelines (City 2018); and

(f) Lands containing habitats of Covered Species as listed in the City's Biology Guidelines (City 2018).

4.3.1 Sensitive Plant Species

Sensitive plant species are those that are considered federal, state, or CNPS rare, threatened, or endangered; MSCP or VPHCP Covered Species; or MSCP Narrow Endemic species (Appendix C). More specifically, if a species is designated with any of the following statuses (a-c below), it is considered sensitive per City Municipal Code (Chapter 11, Article 3, Division 1):

(a) A species or subspecies is listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;

(b) A species is a Narrow Endemic as listed in the Biology Guidelines in the Land Development Manual (City 2018); and/or

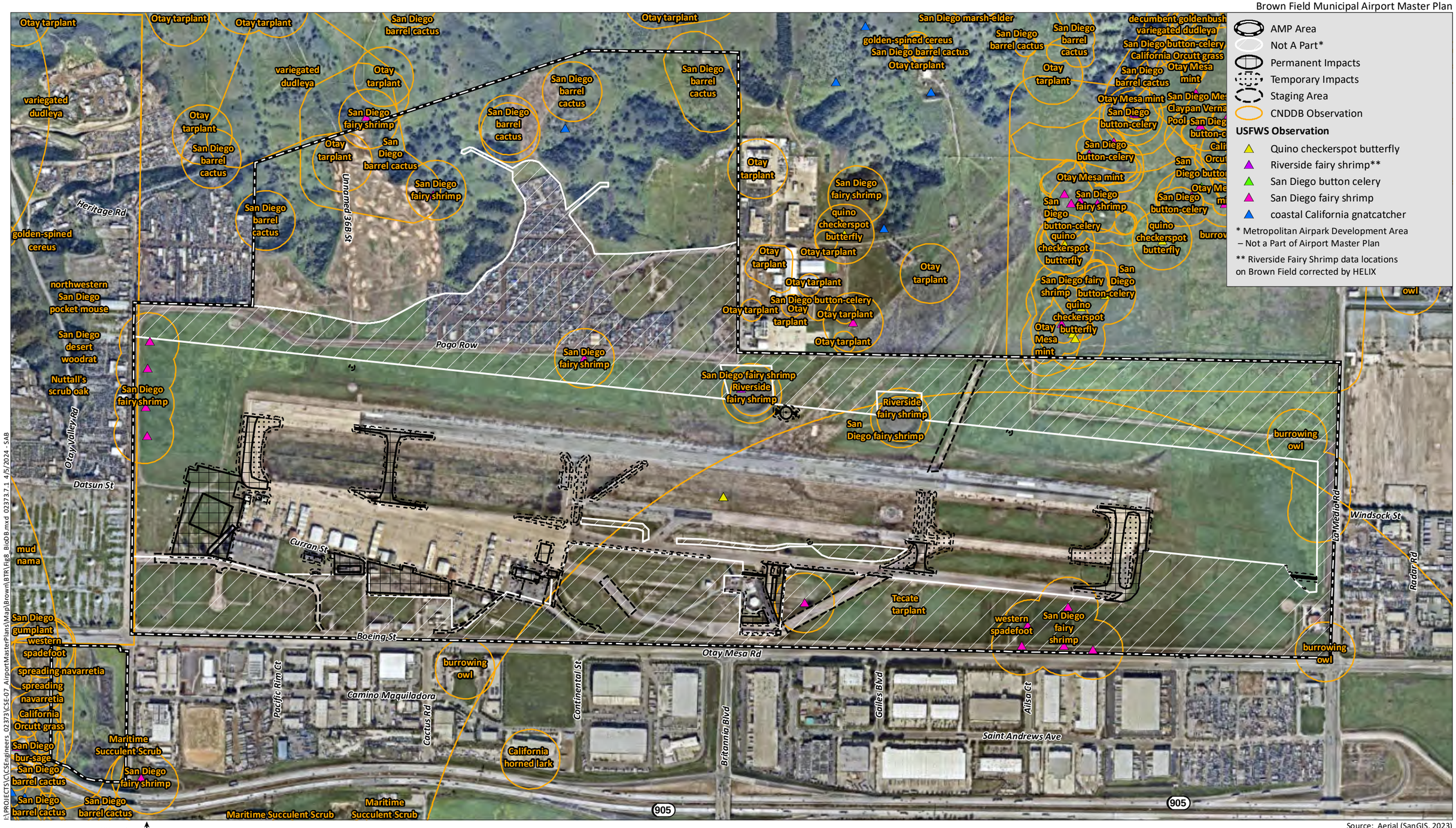
(c) A species is an MSCP Covered Species or VPHCP Covered Species as listed in the Biology Guidelines in the Land Development Manual (City 2018).

A plant species is also considered sensitive if it is included in the CNPS Inventory of Rare and Endangered Plants with an assigned California Rare Plant Rank (CRPR) of 2 or lower (CNPS 2018), although species with lower CRPR ranks (i.e., CRPR 3 and 4 species) also may be considered sensitive species by local jurisdictions; however, no CRPR 3 or 4 species are specifically identified as sensitive species in the City's Biology Guidelines, MSCP SAP, or VPHCP. According to the CNPS, CRPR 1 and 2 species meet the state CEQA Guidelines definition for Rare or Endangered and, therefore, must be considered in project CEQA analysis. While CRPR 3 and 4 species do not have this requirement, CNPS recommends that they be disclosed.

Sensitive plant status is often based on one or more of three 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 abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations.

A search of CNDDB, USFWS, and MSCP databases returned records of 39 sensitive species reported within 1,000 feet of the AMP area (Figure 8, *CNDDB/USFWS Sensitive Species Database Records*). These species, as well as City Narrow Endemic species, were individually analyzed for potential to occur in the AMP area based on the presence of suitable habitat (e.g., vegetation communities, soils, elevation, and geographic range, life form, blooming period, etc.; Appendices C and D, respectively).

The following eight sensitive plant species documented in the AMP area are a compilation of the results of the HELIX general biological survey, prior surveys of the airport property conducted by others, and



Source: Aerial (SanGIS, 2023)

HELIX Environmental Planning

CNDDB/USFWS Sensitive Species Database Records

Figure 8

searches of the USFWS, CNDDB, and MSCP databases. Some species are known to be extant in the AMP area, while others may no longer be present. Refer to Appendix C for additional information.

Federally or State Listed Plant Species

Two federally and state listed plant species have been recorded within the airport boundary: San Diego button-celery (*Eryngium aristulatum* var*. parishii*) and Otay tarplant (*Deinandra conjugens*). Additional information is provided below.

San Diego Button-celery (*Eryngium aristulatum* var. *parishii*)
Listing[2]: FE/SE; CNPS List 1B.1; City MSCP Narrow Endemic; VPHCP Covered
Distribution: San Diego and Riverside counties; Baja California, Mexico
Habitat: Vernal pools or mima mound areas with vernally moist conditions are preferred habitat
Presence: Approximately 90 individuals observed in association with a single vernal pool in the southeast portion of the airport boundary in 2011 (Sage Institute 2011b). This occurrence is outside the AMP area in the MAP development area. This species has not been documented in any other location on the airport property.

Otay Tarplant (*Deinandra conjugens*)
Listing: FT/SE; CRPR 1B.1; City MSCP Narrow Endemic; City MSCP Covered
Distribution: Southern San Diego County and northwestern Baja California, Mexico. In San Diego County, found in scattered localities from the vicinity of Sweetwater Reservoir south to the Mexico border.
Habitat: Fractured clay soils in grasslands or lightly vegetated coastal sage scrub
Presence: Most recent record is from 1999, when species was observed in the northwest corner of the AMP area near the canyons. Species was not detected during subsequent rare plant surveys when species was detectable at nearby reference sites (Merkel and Associates 2008), or during 2011 biological surveys (Sage Institute 2011b).

Other Sensitive Plant Species

Six other sensitive plant species have been recorded in the AMP area, including three CRPR designation 1 or 2 species: San Diego barrel cactus (*Ferocactus viridescens*), San Diego bur-sage (*Ambrosia chenopodiifolia*), and variegated dudleya (*Dudleya variegata*); and three CRPR designation 4 species: ashy spike-moss (*Selaginella cinerascens*), San Diego County needlegrass (*Stipa diegoense*), and San Diego sunflower (*Bahiopsis laciniata*). Additional information is provided below.

Ashy Spike-moss (*Selaginella cinerascens*)
Listing: --/--; CRPR 4.1
Distribution: Orange and San Diego counties; northwestern Baja California, Mexico
Habitat: Flat mesas in coastal sage scrub and chaparral.
Presence: Mapped in sage scrub in the northern portion of the AMP area in 1998. Presumed extant.

[2] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; CRPR = California Rare Plant Rank: 1A – presumed extinct; 1B – rare, threatened, or endangered in California and elsewhere; 2A – presumed extirpated in California but more common elsewhere; 2B – rare, threatened, or endangered in California but more common elsewhere; 3 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered

San Diego Barrel Cactus (*Ferocactus viridescens*)
Listing: --/--; CRPR 2B.1; City MCSP Covered
Distribution: San Diego County; Baja California, Mexico
Habitat: Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Occasionally found on vernal pool periphery and mima mound topography in Otay Mesa.
Presence: Species is abundant in maritime succulent scrub and sage scrub along upper fringes of the canyons in the northern portion of the AMP area.

San Diego Bur-sage (*Ambrosia chenopodiifolia*)
Listing: --/--; CRPR 2B.1
Distribution: Southwestern San Diego County, Arizona, and Mexico below 600 feet in elevation. Known from several AMP areas in Otay Mesa.
Habitat: Arid, low-growing, fairly open Diegan coastal sage scrub is preferred.
Presence: Mapped in sage scrub in one of the northern canyons in 1998. Presumed extant.

San Diego County Needlegrass (*Stipa diegoense*)
Listing: --/--; CRPR 4.2
Distribution: San Diego County; Baja California, Mexico; Channel Islands
Habitat: Chaparral and sage scrub ecotone is preferred. The species is closely associated with metavolcanic soils and can been found in fine sandy loam and rocky silt loams. Peaks and upper ridgelines of mountains appear the preferred microhabitat.
Presence: Mapped in sage scrub in one of the northern canyons in 1998. Presumed extant.

San Diego Sunflower (*Bahiopsis laciniata*)
Listing: --/--; CRPR 4.2
Distribution: San Diego and Orange County; Baja California, Mexico
Habitat: Diegan coastal sage scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.
Presence: Species is abundant in maritime succulent scrub and sage scrub along upper fringes of the canyons in the northern portion of the AMP area.

Variegated Dudleya (*Dudleya variegata*)
Listing: --/--; CRPR 1B.2; City MSCP Narrow Endemic; City MCSP Covered
Distribution: Southern San Diego County; northwestern Baja California, Mexico
Habitat: Openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to vernal pools and mima mound topography characterize habitats utilized by this species
Presence: Mapped in sage scrub in one of the northern canyons in 1998. Presumed extant.

Apart from those species listed above, no other species were determined to have high potential to occur on AMP area (Appendix C).

4.3.2 Sensitive Wildlife Species

Sensitive wildlife species are those that are considered federal or state threatened or endangered; MSCP Covered Species; or MSCP Narrow Endemic species (Appendix D). More specifically, if a species is designated with any of the following statuses (a-c below), it is considered sensitive per City Municipal Code (Chapter 11, Article 3, Division 1):

(a) A species or subspecies is listed as endangered or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;

(b) A species is a Narrow Endemic as listed in the Biology Guidelines in the Land Development Manual (City 2018); and/or

(c) A species is a MSCP Covered Species or VPHCP Covered Species as listed in the Biology Guidelines in the Land Development Manual (City 2018).

A species is also be considered sensitive if it is included on the CDFW's Special Animals List (CDFW 2024b) as a candidate for federal or state listing, state Species of Special Concern (SSC), state Watch List (WL) species, state Fully Protected species, or federal Bird of Conservation Concern (Appendix D). Generally, the principal reason an individual taxon (species or subspecies) is considered sensitive is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

In addition, active nests of most bird species, regardless of sensitivity status, are protected by the federal MBTA and CFG Code. The project is required to adhere to the MBTA and CFG Code statues regarding protection of avian nesting.

Discussion of the following 15 sensitive animal species documented in the AMP area or with high potential to occur in the AMP area are a compilation of the results of the HELIX general biological survey, previous airport surveys by others, and searches of the USFWS listed species database and CNDDB.

Federally or State Listed Animal Species

Three federally listed animal species and one state listed animal species have been documented in the AMP area; these include the federally listed coastal California gnatcatcher (*Polioptila californica californica*), Riverside fairy shrimp, and San Diego fairy shrimp, and the state listed American peregrine falcon (*Falco peregrinus anatum*). Additional information is provided below.

A review of the USFWS database for listed species occurrences indicates that a fifth species, the federally listed endangered Quino checkerspot (*Euphydryas editha quino*), was present in the AMP area in 1976 and 1977; however, focused surveys conducted in 2011, 2008, and 1998 failed to detect this species. It is presumed absent from the AMP area.

American Peregrine Falcon (*Falco peregrinus anatum*)
Status[3]: Delisted; BCC/SE; FP; City MSCP Covered
Distribution: Rare in San Diego County year-round but more abundant near the coast and in winter.

[3] Status is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; C = Candidate; R = Rare; FP = Fully Protected; BCC = Bird of Conservation Concern; SSC = State Species of Special Concern; WL = CDFW Watch List; BGEPA = Listed under the Bald and Golden Eagle Protection Act.

Habitat: Nesting usually occurs on cliff ledges near water where prey (shorebirds and ducks) is concentrated, but also may nest on tall buildings and bridges. Preferred hunting areas are agricultural fields, meadows, marshes, and lakes.
Presence: One individual was observed perched on a fence in the north-central part of the AMP area during surveys for the MAP project (Sage Institute 2011a). Suitable foraging habitat occurs on site, but suitable nesting habitat is not present.

Coastal California Gnatcatcher (*Polioptila californica californica*)
Status: FT/SSC; City MSCP Covered
Distribution: In San Diego County, occurs throughout coastal lowlands.
Habitat: Coastal sage scrub, coastal bluff scrub, and coastal sage-chaparral scrub.
Presence: A single male was detected within Diegan coastal sage scrub in a canyon in the northern portion of the AMP area in 2015 (ECORP 2015). This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Riverside Fairy Shrimp (*Streptocephalus woottonii*)
Status: FE/--; VPHCP Covered
Distribution: Western Riverside County, Orange County; and San Diego County. Known from 45 vernal pool complexes, including 26 in San Diego County, including within the City of San Diego, Marine Corps Air Station Miramar, Marine Corps Base Camp Pendleton, and Otay Mesa.
Habitat: Vernal pools and other non-vegetated ephemeral pools greater than 12 inches deep.
Presence: Species was detected in two AMP area pools in 1998. The species was not detected during subsequent surveys conducted in 2008, 2009, 2010, and 2011 (ESA 2013).

San Diego Fairy Shrimp (*Branchinecta sandiegonensis*)
Status: FE/--; VPHCP Covered
Distribution: San Diego County and extreme northern Baja California, Mexico.
Habitat: Seasonally astatic pools which occur in tectonic swales or earth slump basins and other areas of shallow, standing water often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.
Presence: Surveys conducted for the MAP project found adult San Diego fairy shrimp in five vernal pools on the airport property (Sage Institute 2011c), all of which are outside the AMP area in the MAP development area. CNDDB and USFWS records contain 14 locations for this species, four of which overlap with survey results for the MAP project, and ten which do not. The additional ten observations were in two locations north of the runway, four locations along the site's western boundary, two locations in the southeast MAP development area, and two locations on a mesa near the northern canyons.

Other Sensitive Animal Species

Eleven other sensitive animal species have either been documented in the AMP area or were determined to have high potential to occur in the AMP area: burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (*Aquila chrysaetos*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), orange-throated whiptail (*Aspidoscelis hyperythra*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and yellow warbler (*Setophaga petechia*). Additional information is provided below.

Burrowing Owl (*Athene cunicularia*)
Listing: BCC/SSC (nesting sites and some wintering sites); City MSCP Covered
Distribution: In San Diego County, occurs in a few scattered sites
Habitat: Grassland or open scrub habitats
Presence: Several surveys performed between 1997 and 2014 identified a significant burrowing owl population within the airport boundary. The 2014 survey identified 14 active burrows, nine of which were occupied by breeding pairs and five were occupied by individual owls (ESA 2014). Similarly, 11 active nesting pairs and two individual owls were documented in 2011 (Sage Institute 2011a). This species was also observed by HELIX in 2017, as well as during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018). The San Diego Zoo Institute for Conservation Research also had numerous observations of this species during surveys conducted in 2018 in association with mitigation for the MAP project[4]. Both the City and CDFW have identified this population as important to the long-term survival of the species in San Diego County (ESA and Sage Institute 2016). The majority of these observations have occurred within the MAP development area, outside of the AMP area. The 2014 survey results are provided in Figure 7.

California Horned Lark (*Eremophila alpestris actia*)
Status: --/WL
Distribution: Observed year-round scattered throughout San Diego County
Habitat: Coastal strand, arid grasslands, and sandy desert floors
Presence: Observed foraging in AMP area in 2017. This species was also detected in abundance during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018). It is a commonly occurring species on SDM.

Golden Eagle (*Aquila chrysaetos*)
Status: BGEPA; BCC/WL, Fully Protected
Distribution: In San Diego County, has the largest territory and lowest population density of any bird (Unitt 2004). Scattered throughout undeveloped San Diego County year-round.
Habitat: Nesting occurs on cliff ledges or in trees on steep slopes, with foraging occurring primarily in grassland and sage scrub. Not usually observed near development.
Presence: Observed flying over the northern portion of the AMP area in 1998. No suitable nesting habitat occurs on AMP area.

Grasshopper Sparrow (*Ammodramus savannarum*)
Status: --/SSC
Distribution: Scattered in small numbers throughout San Diego County year-round.
Habitat: Grassland
Presence: Species is known from the site vicinity, although not detected during surveys (Sage Institute 2011a).

Loggerhead Shrike (*Lanius ludovicianus*)
Status: BCC/SSC
Distribution: An uncommon year-round resident observed throughout San Diego County but absent from pinyon woodlands in higher elevations of the Santa Rosa and Vallecito mountains.
Habitat: Grassland, open sage scrub, chaparral, and desert scrub

[4] Locations obtained from shape file data provided to City from San Diego Zoo Institute for Conservation Research.

Presence: Observed in coastal sage scrub in the northern portion of the AMP area in 1998 and during surveys for the MAP project. This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Northern Harrier (*Circus cyaneus*)
Status: --/SSC; City MSCP Covered
Distribution: In San Diego County, distribution is primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert.
Habitat: Open grassland and marsh
Presence: Observed in the northern portion of the AMP area in 1998 and during surveys for the MAP project. This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Orange-throated Whiptail (*Aspidoscelis hyperythra*)
Status: --/WL
Distribution: Southern Orange County and southern San Bernardino County, south through Baja California
Habitat: Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites.
Presence: Observed in the southwest parcel in 1998. Likely occurs in sage scrub and maritime succulent scrub in the canyons in the northern portion of the AMP area.

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)
Listing: --/SSC
Distribution: Southern Santa Barbara County, south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico. Localities on the eastern edge of its range include Jacumba and San Felipe Valley in San Diego County.
Habitat: Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.
Presence: Observed in the southwest parcel in 1998 (southwest corner of Otay Mesa Road and Heritage Road) and on the MAP project area during MAP surveys (Sage Institute 2011a). This species was also detected numerous times during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Coastal Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)
Status: BCC/SSC; City MSCP Covered
Distribution: Observed in coastal lowlands of San Diego County
Habitat: Cactus thickets
Presence: Observed in coastal sage scrub in a canyon in the northern portion of the AMP area in 1998, as well as observation of a pair of wrens in this same area by USGS biologists conducting surveys in 2017 (personal communication with City Airport biologist, 2020). USGS Biologist Shannon Mendia detected a breeding pair of cactus wrens in May of 2023 in the canyon north of the AMP area, adjacent to MAP mitigation site A.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)
Status: --/WL; City MSCP Covered
Distribution: Observed throughout coastal lowlands and foothills of San Diego County

Habitat: Coastal sage scrub and open chaparral as well as shrubby grasslands
Presence: Observed in coastal sage scrub in the northern portion of the AMP area in 1998.

White-tailed Kite (*Elanus leucurus*)
Status: --/Fully Protected
Distribution: Primarily occurs throughout coastal slopes of San Diego County
Habitat: Riparian woodlands and oak or sycamore groves adjacent to grassland
Presence: Observed foraging in AMP area during surveys for the MAP project (Sage Institute 2011a). This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Yellow Warbler (*Setophaga petechia*)
Status: BCC/SSC
Distribution: Observed throughout California during the breeding season with rare sightings in winter.
Habitat: Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.
Presence: One individual was detected in southern willow scrub in the southwest parcel by HELIX in 2017. This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Apart from those species listed above, no other species were determined to have high potential to occur in the AMP area (Appendix D).

Crotch's Bumble Bee (*Bombus crotchii*)
Although not likely to use the airfield, a brief discussion of Crotch's bumble bee (*Bombus crotchii*) is provided herein since it is currently a state candidate endangered species and is therefore afforded protection under CESA. While this species could potentially occur in scrub habitats and grassland in the MHPA north of the airfield, it has low potential to use the airfield due to limited presence of suitable floral resources combined with regular mowing of these areas, which removes the limited nectar resources that may be present (Appendix D). The MAP development project will further separate the airfield from potential habitat for this species in the MHPA in the northern part of the AMP area.

4.4 JURISDICTIONAL RESOURCES

The AMP area supports areas that could be considered jurisdictional waters or wetlands by the USACE, RWQCB, CDFW, and/or City. Potential jurisdictional waters and wetlands in the AMP area (including on the southwestern parcel) include vernal pools, southern willow scrub, disturbed wetland, open water, and drainage ditches (Figure 9, *Potential Jurisdictional Waters and Wetlands*; Table 2, *Potentially Jurisdictional Waters and Wetlands*). The acreages of jurisdiction by habitat type were not available for this document; an updated jurisdictional delineation would be needed to determine types and amounts of jurisdictional wetlands and waters present by agency.

The areas presented below are the currently known cumulative summary of these resources in the AMP area, and jurisdiction between agencies may overlap. The ditches may be considered non-wetland waters of the U.S. by the USACE/RWQCB and stream channel by CDFW. Vernal pools are expected to fall under the jurisdiction of the RWQCB and potentially of the USACE, but not CDFW. All portions of southern willow scrub, disturbed wetland, and open water would likely fall under CDFW jurisdiction, and portions of these habitats are expected to fall under USACE and RWQCB jurisdiction. Drainage ditches may be considered non-wetland waters of the U.S. by the USACE/RWQCB and streambed by CDFW. City

wetlands are expected to include vernal pools, southern willow scrub, and disturbed wetland, but not open water or drainage ditches. Only the USACE, RWQCB, and CDFW can make a final determination of jurisdictional boundaries.

Table 2
POTENTIALLY JURISDICTIONAL WATERS AND WETLANDS

Jurisdictional Areas	Area[1] (Ac.)
Wetland	
Southern willow scrub	2.04
Disturbed wetland	0.20
Vernal pool	3.76
Wetland Subtotal	**6.00**
Waters	
Open water	0.21
Drainage ditch	TBD[2]
Waters Subtotal	**0.21**
TOTAL	**6.21**[3]

[1] Rounded to nearest 0.01.
[2] To be determined through a formal jurisdictional delineation prior to project implementation.
[3] Total does not include acreage of potentially jurisdictional drainage ditches.

4.5 WILDLIFE CORRIDORS AND LINKAGES

Wildlife corridors and linkages are linear spaces of undeveloped native habitats that connect both large and small natural open space and provide opportunities for wildlife movement on a local and regional scale. Wildlife corridors contribute to sustainability of populations by providing access to larger areas of suitable habitat for dispersal, foraging, and mating. Linkages between wildlife corridors connect isolated blocks of habitat and allow movement or dispersal over a large scale and the mixing of genes between populations (i.e., gene pool diversity).

The AMP area contains areas mapped as MHPA under the City's SAP and VPHCP. A total of 171.7 acres of MHPA is mapped in the AMP area; it includes the canyons and associated habitats in the northernmost portions of the property, as well as the southwestern parcel (Figure 4). Although the AMP area does not act as a linkage, the northern MHPA areas help buffer the Otay River corridor and connect to a small portion of the Otay Valley Regional Park. These MHPA lands contain native habitat that is used by sensitive wildlife (e.g., coastal California gnatcatcher) and also support sensitive plant species.

There are several undeveloped properties to the south of the AMP area, but they are separated from the AMP area by Otay Mesa Road and only provide small areas of low-quality habitat. Wetland habitat on the southwestern parcel is not contiguous with wetland habitat further off site to the south, which is cut off by SR 905. Connectivity to the wetland south of the southwestern parcel would only be achieved if wildlife traveled along the area adjacent to Heritage Road, underneath an underpass, making it highly constrained.

Although much of the AMP area has been subject to repeated disturbances over many years and, with the exception of native scrub habitats in the northern canyons, supports a predominance of non-native plant species, these areas continue to provide low- to moderate-quality foraging and breeding habitat

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0 800 Feet

Source: Aerial (SanGIS, 2023)

HELIX Environmental Planning

Potential Jurisdictional Waters and Wetlands

Figure 9

for several native species. The AMP area supports several wildlife species (i.e., birds, mammals, reptiles); and while large mammals such as deer are unlikely to use areas on the airfield, medium-sized mammals (i.e., coyotes) are frequently observed on the airfield. Coyotes are able to gain access to the site by crawling under the fence, particular the northwestern portion of the perimeter fence which is adjacent to the Lonestar preserve, currently owned and managed by Caltrans. No specific regional movement corridors have been identified within the AMP area. Lands surrounding the project area to the east, west, and south have been mostly developed for commercial uses or roads.

5.0 REGIONAL CONSERVATION PLAN COMPLIANCE

Projects in the City are reviewed for conformance with the MSCP SAP and VPHCP guidelines and policies. Guidelines and policies applicable to the proposed project are described below (Section 5.1 addresses MSCP SAP and Section 5.2 addresses VPHCP).

5.1 MULTIPLE SPECIES CONSERVATION PROGRAM SUBAREA PLAN COMPLIANCE

5.1.1 Compatible Land Uses – MSCP SAP Section 1.4.1

Land uses deemed compatible with the goals and objectives of the MSCP are allowed within the MHPA. Such uses include: passive recreation, utility lines and roads, limited water facilities and other essential public facilities, limited low density housing, BMZ 2, and limited agriculture.

All project components are located outside of the MHPA and are, therefore, consistent with Section 1.4.1 of the MSCP SAP (compatible land uses within the MHPA); no further analysis is required.

5.1.2 General Planning Policies and Design Guidelines – MSCP SAP Section 1.4.2

The MSCP SAP Planning Policies and Design Guidelines are established for the following actions within the MHPA: roads and utilities; fencing, lighting, and signage; materials storage; mining, extraction, and processing facilities; and flood control.

All project components are located outside of the MHPA and are, therefore, consistent with Section 1.4.2 of the MSCP SAP (general planning policies and design guidelines for development within the MHPA); no further analysis is required.

5.1.3 Land Use Adjacency Guidelines – MSCP SAP Section 1.4.3

To address the integrity of the MHPA and avoid/minimize indirect impacts to the MHPA, guidelines were developed to manage land uses adjacent to the MHPA during construction and implementation of a project. These guidelines address the issues of drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/land development. Per the City's SAP, projects that are within or adjacent to the MHPA must demonstrate compliance with the LUAGs.

Portions of the overall AMP area are within or adjacent to the MHPA; therefore, implementation and compliance with the LUAGs are required. However, all project impacts associated with the implementation of the AMP are located entirely outside of the MHPA and at a distance greater than 500 feet from the MHPA; thus, no direct or indirect impacts to the MHPA would occur, and project implementation would not conflict with LUAGs for the MHPA. A discussion of consistency with each LUAG is provided below.

Drainage: *All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA.*

All AMP development areas are set back more than 500 feet from the MHPA and will be designed to avoid drainage into the MHPA. Chemicals (i.e., fuel, oil, etc.) required for the operation of the airport will be handled in a manner that is safe as required by the US Environmental Protection Agency. Chemicals, toxins, and petroleum will be prevented from entering the MHPA.

Toxics: *Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA.*

No recreation or agriculture are included as part of the AMP. Existing airport uses would continue, no changes in land use will result from project implementation that would cause impacts to the MHPA.

Lighting: *Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA.*

The AMP does not include lighting adjacent to the MHPA.

Noise: *Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA.*

All AMP project components are set back at least 500 feet from the MHPA. No noise impact would occur to resources in the MHPA.

Barriers: *New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.*

The AMP does not propose development adjacent to the MHPA.

Invasives: *No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.*

The AMP does not include impacts adjacent to the MHPA. Furthermore, the project would conform to the City's Landscape Guidelines prohibiting the planting of invasive species, as well as conforming to standard Best Management Practices (BMPs) during construction to help avoid the introduction of invasive plants into the AMP area, and dispersal of invasive plants from the AMP area by equipment. Any revegetation that may occur in association with the project would not include invasive species.

Brush Management: *New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA.*

The AMP is not a residential development, and does not propose brush management adjacent to the MHPA. All AMP development impacts are greater than 500 feet from the MHPA.

Grading/Land Development: *Manufactured slopes associated with AMP area development shall be included within the development footprint for projects within or adjacent to the MHPA.*

The AMP would not construct manufactured slopes adjacent to the MHPA.

5.1.4 General Management Directives – MSCP SAP Section 1.5.2

The AMP has considered the general MSCP management directives (MSCP SAP Section 1.5.2) in the overall design and has incorporated components as applicable. The only potentially applicable directive is mitigation, as summarized below.

- *Mitigation – Consistent with general management directives, biological mitigation required for the project will be performed in accordance with the City's ESL Ordinance and Biology Guidelines.*

The AMP will conform to the above directive by ensuring that mitigation is conducted in accordance with the City's Biology Guidelines.

5.1.5 Area Specific Management Directives – MSCP SAP Section 1.5.3

This section presents Area Specific Management Directives (ASMDs) for Otay Mesa from the MSCP SAP (Section 1.5.3). The three directives relating to Northeast Otay Mesa/Brown Field are listed below along with the project consistency with the directives.

Priority 1 Directives:

1. *Delineate the MHPA boundaries along areas of the mesa and slopes north of Brown Field with markers and signs to inform Brown Field employees, contractors, and other people of the boundaries of the MHPA to prevent disturbance of the area. This area should be made off-limits to illegal tilling of the mesas (except where required for brush management), dumping, storage of materials, and other disturbances. Fencing or other protection mechanisms will only be necessary if continued disturbance of these areas is evident.*

Fencing and signs are installed along the MHPA boundary on SDM.

2. *Retain mesa areas which are currently non-native grasslands in order to allow regeneration or continue in their present state, thus providing needed raptor foraging area. If regeneration to coastal sage scrub or other native habitats appears to be unbalancing the need for grassland areas in the future, assess these areas for management that would maintain a grassland (preferably native) community.*

Impacts resulting from the AMP would avoid the grassland mesa north of Brown Field. Therefore, AMP activities would not conflict with this management directive. Evaluating potential management needs for this area are tasks that pertain to the City's ongoing San Diego Management and Monitoring Program (SDMMP) for the MSCP. Additionally, there are two ongoing restoration projects being implemented on the mesas in the northern area of Brown Field. These sites are mitigation for the MAP project and will be passed on to the City for management after restoration goals have been met for five years or seven years depending on the site.

Priority 2 Directive:

1. The Priority 2 Management Directive for Otay Mesa is: *Evaluate the mesa north of Brown Field for potential research opportunities in studying natural regeneration. If regeneration is not possible, pursue restoration of disturbed habitats in this area*.

Impacts resulting from the AMP would avoid the mesa north of Brown Field. Therefore, AMP activities would not conflict with this management directive. Evaluating potential research opportunities and restoration for this area are tasks that pertain to the City's ongoing SDMMP for the MSCP. As noted above, active restoration of the mesa in the north is being implemented as required by mitigation for the MAP project.

5.1.6 Area Specific Management Directives for MSCP Covered Species

This section presents the MSCP ASMDs for the 13 MSCP Covered Species detected or with high to moderate potential to occur in the AMP area, including seven species that occur or could occur within, or in proximity to, AMP development areas (San Diego button-celery, Otay tarplant, San Diego fairy shrimp, Riverside fairy shrimp, northern harrier, burrowing owl, and American peregrine falcon), and six species with potential to occur only in the northern canyons, i.e., species whose habitat is sage scrub or maritime succulent scrub (variegated dudleya, San Diego barrel cactus, orange-throated whiptail, coastal cactus wren, coastal California gnatcatcher, and southern California rufous-crowned sparrow). Each of these species are listed below along with the ASMDs and the AMP consistency for each species. The ASMDs are presented in italics, which would be made conditions of the Site Development Permit and are required to be placed on construction plans as part of the Environmental Requirements along with CEQA Mitigation Monitoring and Reporting Programs.

San Diego Button Celery: *Area specific management directives must include specific measures to protect against detrimental edge effects.*

No direct impacts are expected to occur to San Diego button celery, which is over 300 feet away from AMP development impacts. Dust control and implementation of standard construction BMPs will prevent indirect impacts to this species, and biological monitoring during construction will help ensure avoidance of edge effects. It is noted that this species occurrence is within the impact area for the MAP project and may no longer be extant at the time of future projects implemented under the AMP.

Otay Tarplant: *MSCP coverage of this species requires avoidance of populations in the Otay River Valley through sensitive design and development of the active recreation areas as described in the Otay Ranch RMP and GDP. One of the seven major populations occurs within an amendment area (Proctor Valley). At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included (proposed take authorization amendments will be subject to public review through CEQA and NEPA processes and take authorization amendments require approval by*

CDFW and USFWS). Area specific management directives must include specific measures for monitoring of populations and adaptive management of preserves (taking into consideration the extreme population fluctuations from year to year), and specific measures to protect against detrimental edge effects to this species.

No direct impacts are expected to occur, as this species has not been documented within the airfield portion of the AMP and regular mowing and airport maintenance activities reduce the quality of potential habitat for this species. The most recent record for this species in the AMP area is from 1999, when it was observed in the northwest corner of the site near the canyons. The AMP will not impact any preserve lands. Dust control and implementation of standard construction BMPs will prevent indirect impacts to this species, and biological monitoring during construction will help ensure avoidance of edge effects.

San Diego Barrel Cactus: *Area specific management directives must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too frequent fire cycle.*

Implementation of the AMP is not expected to increase potential edge effects on San Diego barrel cactus given that the habitats in which this species is most likely to occur (sage scrub and maritime succulent scrub) are over 1,000 feet away from future projects proposed under the AMP. Nonetheless, future projects constructed under the AMP would implement dust control, site fencing, and other standard construction BMPs, to minimize the potential for indirect impacts to this species during construction. Biological monitoring also would be implemented during construction to help ensure adherence to BMPs. Further, the areas of potential habitat occur within the MHPA, which will continue to be monitored by the City per the monitoring and management components of the MSCP SAP. There is no public access to the MHPA on SDM, thus guarding against unauthorized collection of this species. Fire control would be implemented if a fire were to occur on site, as the project site is a municipal airport with adjacent urban development.

Variegated Dudleya: *Area specific management directives must include species-specific monitoring and specific measures to protect against detrimental edge effects, including effects caused by recreational activities. Some populations now occur within a major amendment area (Otay Mountain) and at the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included. (Proposed take authorization amendments will have public review through CEQA and NEPA processes and require approval by CDFW and USFWS.*

The AMP is not within an MSCP major amendment area. Implementation of the AMP is not expected to increase potential edge effects on variegated dudleya given that the habitats in which this species is most likely to occur (sage scrub and maritime succulent scrub) are over 1,000 feet away from future projects proposed under the AMP. Nonetheless, future projects constructed under the AMP would implement dust control, site fencing, and other standard construction BMPs, to minimize the potential for indirect impacts to this species during construction. Biological monitoring also would be implemented during construction to help ensure adherence to BMPs. Further, the areas of potential habitat occur within the MHPA, which will continue to be monitored by the City per the monitoring and management components of the MSCP SAP.

San Diego Fairy Shrimp: *Area specific management directives must include specific measures to protect against detrimental edge effects to this species.*

No direct impacts are expected to occur to San Diego fairy shrimp, as this species has not been detected in the project footprint. The nearest documented occurrence is adjacent to existing pavement that will be used for construction staging and the next nearest record is in the same pool as the San Diego button-celery discussed above. Dust control and implementation of standard construction BMPs will prevent indirect impacts to this species, and biological monitoring during construction will help ensure avoidance of edge effects. It is noted that the two locations discussed above are within the impact area for the MAP project and may no longer be extant at the time of future projects implemented under the AMP.

Riverside Fairy Shrimp: *Area specific management directives must include specific measures to protect against detrimental edge effects to this species.*

No direct impacts are expected to occur to Riverside fairy shrimp, as this species has not been detected in the AMP development footprint. Dust control and implementation of standard construction BMPs will prevent indirect impacts to this species, and biological monitoring during construction will help ensure avoidance of edge effects.

Orange-throated Whiptail: *Area specific management directives must address edge effects.*

Implementation of the AMP is not expected to increase potential edge effects on orange-throated whiptail given that the habitats in which this species is likely to occur (sage scrub and maritime succulent scrub) are over 1,000 feet away from future projects proposed under the AMP. Nonetheless, the AMP would incorporate measures during construction and post construction to minimize potential detrimental edge effects to this species, per MM BIO-6. Specifically, work-limits perimeter fencing would be installed, and its accuracy would be verified prior to construction impacts. Biological monitoring also would be implemented during construction to help ensure adherence to BMPs.

American Peregrine Falcon: *No area specific management directives are provided for this species in the MSCP conditions for coverage. It is noted in the document that "This species has very low population numbers in the County, being primarily a rare fall and winter visitor. All three nests sites occur outside of the MHPA: one on Coronado Bridge, one on a crane in Port Authority jurisdiction, and one on Pt. Loma federal lands. Participating jurisdictions' guidelines and ordinances, and state and federal wetland regulations will provide additional habitat protection resulting in no net loss of wetlands."*

This species does not have ASMDs, and implementation of projects identified under the AMP would not impact nesting habitat for this species. The AMP would conform to City guidelines and ordinances.

Burrowing Owl: *During the environmental analysis of proposed projects, burrowing owl surveys (using appropriate protocols) must be conducted in suitable habitat to determine if this species is present and the location of active burrows. If burrowing owls are detected, the following mitigation measures must be implemented: within the MHPA, impacts must be avoided; outside of the MHPA, impacts to the species must be avoided to the maximum extent practicable; any impacted individuals must be relocated out of the impact area using passive or active methodologies approved by the wildlife agencies; mitigation for impacts to occupied habitat (at the Subarea Plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements.*

Management plans/directives must include: enhancement of known, historical and potential burrowing owl habitat; and management for ground squirrels (the primary excavator of burrowing owl burrows). Enhancement measures may include creation of artificial burrows and vegetation management to enhance foraging habitat. Management plans must also include: monitoring of burrowing owl nest AMP areas to determine use and nesting success; predator control; establishing a 300-foot-wide impact avoidance area (within the preserve) around occupied burrows.

Protocol burrowing owl surveys will be conducted prior to construction of individual projects implemented under the AMP. To avoid direct impacts to breeding owls, clearing, grubbing, and grading of occupied habitat will not be allowed during the breeding season (February 1 to August 31). Impacts to burrowing owl burrows will require mitigation and monitoring as outlined in the ASMD. Mitigation for loss of occupied habitat will be implemented to offset these impacts.

Coastal Cactus Wren: *The restoration of maritime succulent scrub habitat as specified in the Otay Ranch RMP and GDP must occur at the specified 1:1 ratio. Area specific management directives must include restoration of maritime succulent scrub habitat, including propagation of cactus patches, active/adaptive management of cactus wren habitat, monitoring of populations within preserves and specific measures to reduce or eliminate detrimental edge effects. No clearing of occupied habitat may occur from the period February 15 through August 15.*

The AMP would not clear occupied habitat for this species; potential habitat is not present within the proposed future work areas. Additionally, implementation of the AMP is not expected to increase potential edge effects on coastal cactus wren given that the habitats in which this species is likely to occur (sage scrub and maritime succulent scrub) are over 1,000 feet away from future projects proposed under the AMP. All areas of potential habitat for this species occur within the MHPA, which will continue to be monitored by the City per the monitoring and management components of the MSCP SAP, with restoration of maritime succulent scrub and propagation of cactus patches conducted at the discretion of the City as part of the overall SDMMP for the MSCP.

Coastal California Gnatcatcher: *Area specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. Additionally, no clearing of occupied habitat within the City MHPA or County's Biological Core Resource Areas between March 1 and August 15.*

The AMP would not clear occupied habitat for this species; potential habitat is not present within the proposed future work areas. Additionally, implementation of the AMP is not expected to increase potential edge effects on coastal California gnatcatcher given that the habitats in which this species is likely to occur (sage scrub and maritime succulent scrub) are over 1,000 feet away from future projects proposed under the AMP. Fire control would be implemented if a fire were to occur on site, as the project site is a municipal airport with adjacent urban development. All areas of potential habitat for this species occur within the MHPA, which will continue to be monitored by the City per the monitoring and management components of the MSCP SAP, with management activities to maintain or improve habitat quality conducted at the discretion of the City as part of the overall SDMMP for the MSCP.

Northern Harrier: *Area specific management directives must: manage agricultural and disturbed lands within four miles of nesting habitat to provide foraging habitat; include an impact avoidance area (900 foot or maximum possible within the preserved) around active nests; and include measures of*

maintaining winter foraging habitat in preserve areas in Proctor Valley, around Sweetwater Reservoir, San Miguel Ranch, Otay Ranch east of Wueste Road, Lake Hodges, and San Pasqual Valley.

The AMP would not impact any preserve lands and impacts to foraging habitat would be mitigated according to the City's biology guidelines and the MSCP SAP.

Southern California Rufous-crowned Sparrow: *Area specific management directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.*

Fire would not be used to aid in maintaining dynamic processes due to the site being part of the airport property and presence of adjacent development. Potential habitat for this species occurs on site only within the MHPA, which is maintained by the City as part of the overall SDMMP for the MSCP. If SDMMP monitoring of the habitat identifies a need to create or perpetuate open phases of coastal sage scrub, it would be conducted through means other than the use of fire (e.g., selective thinning with the use of hand tools).

5.2 VERNAL POOL HABITAT CONSERVATION PLAN COMPLIANCE

5.2.1 Minor Amendments to the VPHCP

Per Section 8.4.3 of the VPHCP, the Minor Amendment Process has been identified for Brown Field Municipal Airport, from which the following information is taken. The Minor Amendment Process would allow impacts to vernal pool habitat and VPHCP covered species located within the legal boundaries of the airport property while meeting health and safety requirements of the airports.

Approval of a Minor Amendment requires a project submittal by the Permittee (Real Estate Assets, Airports Division) to the Wildlife Agencies (USFWS Field Office Supervisor and CDFW's NCCP Program Manager) for a consistency determination with the VPHCP. The consistency determination would be based on the VPHCP; the Vernal Pool Management and Monitoring Plan (VPMMP [City 2020]); funding for the required management, monitoring, and reporting activities; and the City's ESL and Biology Guidelines. If a project is consistent with the VPHCP, the Wildlife Agencies will provide a Letter of Concurrence and the project will proceed in accordance with the VPHCP.

Projects processed via a Minor Amendment that are issued a Letter of Conformance would be afforded the VPHCP benefits of a streamlined environmental and permit process including:

- Wetland deviation is not required for impacts outside the MHPA;
- Mitigation ratios are set to ensure consistent standards;
- Includes VPMMP;
- Covered Activities include all required airport maintenance and operations activities; and
- If Section 7 consultation is required, USFWS issues a stream-lined consultation (generally
- 1-2 pages).

If a project is determined to be not in conformance, or if the Minor Amendment Process is not used, then the VPHCP benefits of the streamlined environmental and permitting process would not apply.

Projects would be evaluated on a case-by-case basis consistent with the existing regulations for wetlands not covered by the VPHCP.

5.2.2 Covered Airport Activities

Section 4.2.7 of the VPHCP includes discussion of the Brown Field Municipal Airport. Federal aviation regulations require the airport be maintained and operated in a manner that promotes the health, safety, and welfare of airport users, and the surrounding community. The following are covered airport activities in the VPHCP: maintenance and inspections of all existing safety areas, runway protection zones, critical areas, infields, runway and taxi shoulders, and storm water conveyances; maintenance, access, inspections, and operation of all existing equipment and infrastructure for public safety and normal airport operations; Capital Improvement Program rehabilitation and/or maintenance of existing airport infrastructure; and maintenance and inspection of exiting public right of way access. The covered activities and corresponding conditions are included in Table 4-7 of the VPHCP, and are shown below in Table 3, *Covered Airport Activities*.

Table 3
COVERED AIRPORT ACTIVITIES[1]

Covered Activity	Description	Conditions
Maintenance and inspection of all existing safety areas, object-free areas, runway protection zones, critical areas, infields, runway and taxiway shoulders, and storm water conveyances.	All activities necessary to keep all existing safety areas, object-free areas, runway protection zones, critical areas, infields, runway and taxiway shoulders, and storm water conveyances free from aviation obstructions and could include mowing of grass, spraying, and erosion control.	Airport Division would develop an Operation Plan that specifically addresses maintenance and inspection activities within and adjacent to on-site vernal pool resources in accordance with the VPHCP. The Operation Plan would focus on ways to accomplish the required activities while avoiding and/or minimizing impacts to vernal pool resources to the maximum extent practicable given FAA safety requirements and shall be submitted to the Wildlife Agencies and FAA for review and approval. If impacts to vernal pools cannot be avoided, a comprehensive mitigation plan consistent with the VPHCP and approved through the City's discretionary permitting process would be developed, which would allow for all identified activities to continue in perpetuity. In addition, a wildlife assessment study will be conducted, reviewed, and approved by the City and FAA to determine where, if any, mitigation could occur within or near airport boundaries. Unless concurred to by the FAA, mitigation
Maintenance, access, inspections, and operation of all existing equipment and infrastructure for public safety and normal airport operations.	This includes activities related to: navigational aids; localizer and glide slope critical areas; visual approach slope indicators; precision approach path indicators; approach lights; runway end identifier lights; wind socks; rotating beacons; segmented circles; airfield signs; lights; markings; fencing and gates, all above-ground and underground utilities, including electrical, sewer, water, communications, and their associated easements; automated weather stations, air traffic control towers; communication stations; survey markers and monuments and their associated access roads.	

Covered Activity	Description	Conditions
Capital Improvement Program rehabilitation and/or maintenance of existing airport infrastructure.	This includes runways, taxiways, helicopter landing and parking areas, blast pads, run-up areas, overruns, aircraft parking aprons, and vehicle parking areas (sweeping, painting, pavement repairs, etc.) and their associated access roads.	or a conservation bank for non-aviation projects cannot occur within airport boundaries.
Maintenance and inspection of existing public right-of-way access.	This includes all activities necessary for normal airport operations, including use of access roads.	

[1] Source: Table 4-7 of the VPHCP

While the AMP does not propose impacts to previously documented vernal pools, it is important to note that the covered airport activities for ongoing airport maintenance and operations that are identified in the VPHCP and summarized in the preceding paragraph would apply to future projects constructed under the AMP.

5.2.3 Avoidance and Minimization Measures

The following information is taken from Section 5.2.1 of the VPHCP, which identifies avoidance and minimization measures to address potential indirect impacts to vernal pools preserved under the VPHCP. As required by FESA, the VPHCP includes measures to avoid or minimize the impact of the taking of covered species.

Indirect impacts to conserved vernal pools shall be minimized by requiring development projects adjacent to the Preserve or MHPA, to comply with existing Land Use Adjacency Guidelines (see Section 1.4.3 of the MSCP SAP and Section 10.4 of the MSCP Implementing Agreement) and as described below. Areas designated for conservation and described in this chapter include substantial amounts of high-quality habitat for covered species and vernal pool habitat. Covered activities that result in permanent impacts are anticipated to occur primarily in areas with low-quality habitat. Most vernal pool preservation and enhancement (VPHCP Table 5-1 and VPHCP Sections 5.2.2 and 5.2.3) will be concentrated within the MHPA away from covered activities.

General avoidance and minimization measures for covered projects and covered activities are as follows:

1. Any development adjacent to the MHPA shall be constructed to slope away from the extant pools to be avoided, to ensure that runoff from the project does not flow into the pools.

2. Covered projects shall require temporary fencing (with silt barriers) of the limits of project impacts (including construction staging areas and access routes) to prevent additional vernal pool impacts and prevent the spread of silt from the construction zone into adjacent vernal pools. Fencing shall be installed in a manner that does not impact habitats to be avoided. Final construction plans shall include photographs that show the fenced limits of impact and all areas of vernal pools to be impacted or avoided. If work inadvertently occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been remedied to the satisfaction of the City. Temporary construction fencing shall be removed upon project completion.

3. Impacts from fugitive dust that may occur during construction grading shall be avoided and minimized through watering and other appropriate measures.

4. A qualified monitoring biologist that has been approved by the City shall be on-site during project construction activities to ensure compliance with all mitigation measures identified in the CEQA environmental document. The biologist shall be knowledgeable of vernal pool species biology and ecology. The biologist shall perform the following duties:

    a. Oversee installation of and inspect the fencing and erosion control measures within or upslope of vernal pool restoration and/or preservation areas a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control measures are repaired immediately.

    b. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust.

    c. Train all contractors and construction personnel on the biological resources associated with this project and ensure that training is implemented by construction personnel. At a minimum, training shall include (1) the purpose for resource protection; (2) a description of the vernal pool species and their habitat(s); (3) the conservation measures that must be implemented during project construction to conserve the vernal pool species, including strictly limiting activities, and vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); (4) environmentally responsible construction practices as outlined in measures 5, 6 and 7; (5) the protocol to resolve conflicts that may arise at any time during the construction process; and (6) the general provisions of the project's mitigation monitoring and reporting program (MMRP), the need to adhere to the provisions of FESA, and the penalties associated with violating FESA.

    d. Halt work, if necessary, and confer with the City to ensure the proper implementation of species and habitat protection measures. The biologist shall report any violation to the City within 24 hours of its occurrence.

    e. Submit regular (e.g., weekly) letter reports to the City during project construction and a final report following completion of construction. The final report shall include as-built construction drawings with an overlay of habitat that was impacted and avoided, photographs of habitat areas that were avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conservation measures was achieved.

5. The following conditions shall be implemented during project construction:

    a. Employees shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint.

    b. The project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site.

c. Disposal or temporary placement of excess fill, brush, or other debris shall be limited to areas within the fenced project footprint.

6. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering the vernal pools or their watersheds, and shall be shown on the construction plans. Fueling of equipment shall take place within existing paved areas greater than 100 feet from the vernal pools or their watersheds. Contractor equipment shall be checked for leaks prior to operation and repaired, as necessary. A spill kit for each piece of construction equipment shall be onsite and must be used in the event of a spill. "No-fueling zones" shall be designated on construction plans.

7. Grading activities immediately adjacent to vernal pools shall be timed to avoid wet weather to minimize potential impacts (e.g., siltation) to the vernal pools unless the area to be graded is at an elevation below the pools. To achieve this goal, grading adjacent to avoided pools shall comply with the following:

    a. Grading shall occur only when the soil is dry to the touch both at the surface and 1 inch below. A visual check for color differences (i.e., darker soil indicating moisture) in the soil between the surface and 1 inch below indicates whether the soil is dry.

    b. After a rain of greater than 0.2 inch, grading shall occur only after the soil surface has dried sufficiently as described above, and no sooner than 2 days (48 hours) after the rain event ends.

    c. To prevent erosion and siltation from storm water runoff due to unexpected rains, best management practices (i.e., silt fences) shall be implemented as needed during grading.

    d. If rain occurs during grading, work shall stop and resume only after soils are dry, as described above.

    e. Grading shall be done in a manner to prevent runoff from entering preserved vernal pools.

    f. If necessary, water spraying shall be conducted at a level sufficient to control fugitive dust but not to cause runoff into vernal pools.

    g. If mechanized grading is necessary, grading shall be performed in a manner to minimize soil compaction (i.e., use the smallest type of equipment needed to feasibly accomplish the work).

8. Prior to project construction, topsoil shall be salvaged from the impacted vernal pools or road ruts with fairy shrimp on-site consistent with the requirements of the approved restoration plan (e.g., free of versatile fairy shrimp [*Branchinecta lindahli*]). Vernal pool soil (inoculum) shall be collected when dry to avoid damaging or destroying fairy shrimp cysts and plant seeds. Hand tools (i.e., shovels and trowels) shall be used to remove the first 2 inches of soil from the pools. Whenever possible, the trowel shall be used to pry up intact chunks of soil, rather than loosening the soil by raking and shoveling, which can damage the cysts. The soil from each pool

shall be stored individually in labeled boxes that are adequately ventilated and kept out of direct sunlight in order to prevent the occurrence of fungus or excessive heating of the soil, and stored off-site at an appropriate facility for vernal pool inoculum. Inoculum from different source pools shall not be mixed for seeding any restored pools, unless otherwise approved by the City and Wildlife Agencies. The collected soils shall be spread out and raked into the bottoms of the restored pools. Topsoil and plant materials salvaged from the upland habitat areas to be impacted shall be transplanted to, and/or used as a seed/cutting source for, the upland habitat restoration/creation areas to the maximum extent practicable as approved by the City.

9. Permanent protective fencing along any interface with developed areas and/or use other measures approved by the City to deter human and pet entrance into on- or off-site habitat shall be installed. Fencing shall be shown on the development plans and should have no gates (accept to allow access for maintenance and monitoring of the biological conservation easement areas) and be designed to prevent intrusion by pets. Signage for the biological conservation easement area shall be posted and maintained at conspicuous locations. The requirement for fencing and/or other preventative measures shall be included in the project's mitigation program.

As noted previously, no direct impacts to known vernal pools would occur and all project impacts are outside of the MHPA. Approximately twelve vernal pools are known to occur in the AMP area but they are outside of the AMP impact area and classified as not conserved in the VPHCP management plan (Figure J35 of the VPMMP). If future surveys identify vernal pools within the AMP impact area, additional appropriate measures to comply with the VPHCP would be implemented, as necessary.

Specific minimization measures in Section 5.2.1 of the VPHCP and the project's compliance are listed below:

- Development adjacent to the MHPA shall slope away from avoided pools.

Project compliance: AMP development areas are not adjacent to the MHPA.

- Temporary fencing with silt fencing shall be required.

Project compliance: Construction limits would be demarcated with construction and silt fencing.

- Impacts from fugitive dust would be avoided and minimized through watering and other appropriate measures.

Project compliance: Routine dust control via watering truck would be implemented throughout ground disturbing activities.

- A qualified biologist shall be on site during project construction activities to ensure compliance with all mitigation requirements.

Project compliance: Biological monitoring by a qualified biologist would be implemented during project construction with potential to impact sensitive biological resources.

- Employees shall limit activities to the fenced project footprint, and the site shall be kept free of debris and food-related trash items.

Project compliance: A qualified biologist would monitor construction, including verifying that construction activities do not exceed the authorized work limits and that good housekeeping is adhered to during construction.

- Equipment maintenance, staging, and disposal of fuel, oil coolant shall occur within designated areas within the fenced project impact limits.

Project compliance: Designated equipment staging/maintenance/fueling/etc. shall be demarcated on the final construction plans. Additionally, a qualified biologist would monitor project compliance regarding equipment.

- Permanent fencing along the interface with development areas and/or other use other measures approved by the City to deter human and pet access.

Project compliance: The airport property is fenced and access to the airfield is restricted and controlled.

In summary, the project conforms to the provisions of the City's VPHCP and would implement avoidance and minimization measures identified in Section 5.2.1 of the VPHCP.

5.2.4 Mitigation Framework

5.2.4.1 Compensatory Mitigation

The following information is taken from VPHCP Section 5.3.1 regarding compensatory mitigation requirements for vernal pools.

Impacts outside and within the MHPA shall be limited to covered projects, future projects, and covered activities (VPHCP Chapter 4). Mitigation shall be consistent with requirements established in the VPHCP, the City's Biology Guidelines, and the ESL Regulations for wetland impacts. Mitigation will prevent any net loss of vernal pool functions and values of impacted vernal pools.

Consistent with the ESL Regulations, the VPHCP Mitigation Framework includes compensatory measures that would result in a biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the biological resources to be conserved. As required by the Mitigation Framework, the biologically superior mitigation shall include either:

(1) Standard mitigation including wetland vernal pool restoration and enhancement (of the same type of wetland resource that is being impacted) that results in high-quality wetlands; and a biologically superior project design whose avoided area(s) (i) is in a configuration or alignment that optimizes the potential long-term biological viability of the on-site sensitive biological resources, and/or (ii) conserves the rarest and highest quality on-site biological resources; or

(2) For a project not consistent with (1) above, extraordinary mitigation is required.

Examples of increased function and value include, but are not limited to, an increase in the availability of habitat for native fauna, an increase in native flora diversity, a decrease in invasive species, an increase in ground water recharge, water quality improvements and sedimentation deposition rates. Success criteria using the best currently available information for the particular mitigation habitat shall be required as part of the restoration or enhancement plan.

Mitigation for projects impacting vernal pools shall include salvage of sensitive species, when appropriate (i.e., high quality and no presence of versatile fairy shrimp), from vernal pools to be impacted, introduction of salvaged material into restored vernal pool habitat where appropriate (e.g., same vernal pool series), and maintenance of salvaged material pending successful restoration of the vernal pools. Use of salvaged materials shall be determined on a project-specific basis during the project-level review phase. Salvaged material shall not be introduced to existing vernal pools containing the same species outside the vernal pool series unless approved by USFWS. The mitigation sites shall include preservation of the appropriate area of watershed and a buffer based on functions and values and a hydraulic analysis that evaluates surface and/or subsurface flow; however, if such an analysis is not conducted, there shall be a default of a minimum 100-foot buffer from the watershed. In addition, specific requirements for the J13 San Diego button-celery population in Otay Mesa and spreading navarretia at the NDU 1&2 complex to ensure no net loss of habitat, maintain population size, and prevent loss of genetics have been included as a requirement of the VPHCP (See VPHCP Section 5.2.3, Species Protection).

Impacts to vernal pool habitat within the MHPA require a deviation from the City's ESL Regulations. Any impacts to vernal pools, inside and outside the MHPA, must be mitigated "in-kind" and achieve a "no-net loss" of wetland function and values (except as provided for in the City's ESL Wetland Deviation Section 143.0510 (d)(2) Economic Viability Option). Standard mitigation ratios for vernal pools can range from 2:1 when no listed species are present, and up to 4:1 for when listed species with very limited distributions are present (e.g., San Diego mesa mint). Consistent with the City's Biology Guidelines for the biologically superior alternative, extraordinary mitigation ratios for vernal pools can range from 4:1 when no listed species are present, and up to 8:1 when listed species with very limited distributions are present.

5.2.4.2 General Conditions for Compensatory Mitigation

The following information is taken from VPHCP Section 5.3.2, which provides details of vernal pool mitigation plan requirements, long-term management, mitigation for previously undocumented occurrences of covered species, and compliance with archaeological resources regulations.

Project-specific vernal pool restoration, enhancement, and preservation plans that are required as part of compensatory mitigation under the VPHCP Mitigation Framework shall be consistent with the general requirements outlined in the City's Biology Guidelines. The restoration/enhancement/preservation plan and perpetual management and monitoring plan shall be mailed to the Wildlife Agencies for technical review, as generally defined below, and approval. Upon receipt of the plans, the Wildlife Agencies shall have 30 working days in which to review and provide written comments to the City. Subsequent reviews and comments shall be completed within 15 working days. Failure to respond within the specified timelines shall result in approval of the draft plans unless an extension is agreed to by all parties. General conditions specific to vernal pool restoration/enhancement/preservation and perpetual management and monitoring plans are as follows:

1. The project proponent shall submit a vernal pool restoration/enhancement/preservation plan to the City (Development Services Environmental Analysis Section and Planning Department MSCP Staff) and Wildlife Agencies for approval as part of the development review process and the plan shall be included as an attachment to the project's CEQA document. The restoration plan shall be consistent (as applicable) with the restoration plan outline included in Attachment B of the City's Biology Guidelines. The plan must be approved and implemented prior to or concurrent

with project impacts. In addition, the restoration plan shall include the following information and conditions:

a. Implementation of the enhancement/restoration shall be conducted under the direction of a qualified biologist (vernal pool restoration specialist) with at least three years of vernal pool restoration experience, to be approved by the City and Wildlife Agencies.

b. To avoid impacts to any extant vernal pools, all conservation measures required at the project construction site to avoid and minimize impacts to adjacent vernal pools and their watersheds shall also be implemented at the restoration site and thus specified in the restoration plan.

c. All vernal pools to be avoided and their watersheds shall be enhanced, as deemed appropriate by the Wildlife Agencies, to achieve the same success criteria or better as the restored pools and surrounding uplands. Enhancement activities will include addition of vernal pool plant species and addition of appropriate upland habitat (e.g., coastal sage scrub, native grassland and/or chaparral) compared to the surrounding uplands. All plant material used for enhancement will be collected from local sources (i.e., as close to the site as reasonably feasible). This establishment can be accomplished by redistributing topsoil containing seeds, spores, bulbs, eggs, and other propagules from affected pools and adjacent vernal pool and upland habitats; by the translocation of propagules of individual species from off-site habitats; and by the use of commercially available native plant species and/or any vernal pool inoculum or plant material from an off-site source approved by the Wildlife Agencies. Topsoil and plant materials from the native habitats to be affected on-site will be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable. Nonnative invasive weed control shall be implemented within the restoration areas to protect and enhance habitat remaining on-site.

d. All restoration/enhancement/preservation activities shall commence the first summer-fall season prior to, or concurrently with, the initiation of project impacts.

e. Discussion and a table on the exact activities that shall occur at each restored or enhanced vernal pools. The discussion and table shall also include the initial and planned conditions of the pools (i.e., basin size, average depth, ponding duration), existing native and nonnative cover and presence of listed species.

f. All final specifications and topographic-based grading, planting, and watering plans shall have 0.5-foot contours for the vernal pools, watersheds, and surrounding uplands (including adjacent mima mounds) at the restoration sites. The basis for this fine-scale resolution is the micro-depth (i.e., several inches) of the vernal pools that shall be restored. The grading plans shall also show the watersheds of extant vernal pools, and overflow pathways that hydrologically connect the restored pools in a way that mimics natural vernal pool complex topography/hydrology.

g. A hydraulic analysis (i.e., surface and/or subsurface flow, where applicable) that shows each vernal pool proposed for restoration and its watershed, and hydrologic connection between the pools is required. The restored pools and their watersheds shall not impact

the watersheds of any extant pools except where needed to establish hydrologic connections.

h. As a last resort and after approval by the Wildlife Agencies, additional inoculum from donor vernal pools as close to the project site as possible may be used to supplement the inoculum collected at the project impact site. If inoculum is used for restoration and enhancement, the plan shall identify any proposed donor pools and include documentation that they are free of versatile fairy shrimp (*Branchinecta lindahli*). No more than 10% of the basin area of any donor pool shall be used for collection of inoculum. Collection of inoculum from donor pools shall be coordinated with the Wildlife Agencies.

i. Inoculum and planting shall not be installed until the City and Wildlife Agencies have approved habitat restoration site grading. All planting shall be installed in a way that mimics natural plant distribution, and not in rows. Inoculum shall not be introduced into the restored or enhanced pools until after they have been demonstrated to retain water for the appropriate amount of time to support the targeted vernal pool species (i.e., at least 21 to 28 days for San Diego fairy shrimp or 30 to 60 days for Riverside fairy shrimp) and have been surveyed for versatile fairy shrimp to the satisfaction of the City and Wildlife Agencies. If versatile fairy shrimp are detected in the restored or enhanced pools, inoculum shall not be introduced until appropriate measures to address versatile fairy shrimp are approved by the City and Wildlife Agencies. Inoculum shall be spread evenly over the surface, no more than 0.25 inch deep. If any ponding water is present at the time of soil inoculation, the soil shall only be placed on the wet soil adjacent to the ponded areas. Inoculum shall be placed into the bottoms of the restored/enhanced pools in a manner that preserves, to the maximum extent possible, the orientation of the fairy shrimp cysts and plant seeds within the surface layer of soil (e.g., collected inoculum shall be shallowly distributed within the pond so that cysts have the potential to be brought into solution upon inundation).

j. Plant palettes (species, size, and number/acre) and seed mix (species and pounds/acre) shall be included in the restoration/enhancement plan. The plant palette shall include native species specifically associated with the on-site habitat type(s) and should be from a local source. The source and proof of local origin of all plant material and seed shall be provided.

k. Native plants and animals shall be established within the restored/enhanced pools, their watersheds, and surrounding uplands. This can be accomplished by redistributing topsoil containing seeds, spores, bulbs, eggs, and other propagules from affected pools and adjacent vernal pool and upland habitats; by the translocation of propagules of individual species; and by the use of commercially available native plant species. Any vernal pool inoculum or plant material from an off-site source must be approved by the City and Wildlife Agencies. Topsoil and plant materials from the native habitats to be affected on-site shall be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable. Exotic weed control shall be implemented within the restoration/enhancement areas to protect and enhance habitat remaining on-site.

l. In the event that natural rain is inadequate to support plant establishment, artificial watering of the restored/enhanced pools and their watersheds may be done upon approval by the City and Wildlife Agencies in order to establish plants but not hydrate shrimp. Any artificial watering shall be done in a manner that prevents ponding in the pools. Any water to be used shall be identified and documented to be free of contaminants that could harm the pools.

m. All weeding within and immediately adjacent to the enhanced/restored pools shall be performed by hand. All workers conducting weed removal activities shall be educated to distinguish between native and nonnative species so that local native plants are not inadvertently killed by weed removal activities.

n. All herbicide and pesticide use shall be under the direction of a licensed pest control advisor and shall be applied by a licensed applicator, under the supervision of a vernal pool restoration specialist. Glyphosate-based herbicides, such as RoundUp or Aquamaster, shall be applied on all areas that have been dethatched. Herbicide shall only be applied when wind speed is less than 5 miles per hour, and spray nozzles shall be of a design to maximize the size of droplets, to reduce the potential for drift of herbicide to non-target plants. A ten-foot buffer shall be maintained between concentrations of any sensitive plant species. Application of herbicide shall not occur if rain is projected within 24 hours of the scheduled application. When vernal pools are ponding or close to saturation, only hand herbicide application (i.e., saturated glove technique) shall be used in and around the edges of pools by specially trained herbicide applicators under the direct supervision of the vernal pool restoration specialist. When vernal pools are not ponding or close to saturation, herbicide may be sprayed but applicators must stay at least three feet from the edge of the pools.

o. A final implementation schedule shall be included that indicates when all vernal pool impacts, as well as vernal pool restoration/enhancement grading and planting, shall begin and end. A temporal loss of vernal pools shall be avoided by initiating the restoration work prior to or concurrent with impacts. This will minimize the length of time inoculum is kept in storage and ensure that there is appropriate habitat to translocate it to.

p. A minimum of five years of monitoring shall be conducted to ensure that success criteria are achieved. Success criteria for vernal pool and upland habitat restoration/enhancement areas shall include quantitative hydrological, vegetation transects, fairy shrimp protocol surveys, or other measurements as approved by the City and Wildlife Agencies (e.g., viable cyst, hatched fairy shrimp, and gravid female measurements), floral and faunal inventories, and photographic documentation. To minimize impacts to the vernal pool's soil surface during restoration, enhancement, and monitoring, cobbles shall be oriented within the vernal pools to serve as stepping stones. Reference data shall be established from a vernal pool reference or control site located within each of the three VPHCP subareas (North, Central, South). The vernal pool control sites shall be approved by the City and Wildlife Agencies.

q. Restoration success for fairy shrimp shall be determined by measuring the ponding of water, and density of viable cysts, hatched fairy shrimp, and gravid females, within the

restored pools. Water measurements shall be taken in the restored pools to determine the depth, duration, and quality (e.g., pH, temperature, total dissolved solids, and salinity) of ponding. Dry samples shall be taken in the restored and reference pools to determine the density of viable cysts in the soils. Dry sampling shall occur in the first year of the restoration monitoring program to establish a baseline, and the last year to identify changes to viable cyst density. Wet samples shall also be taken in the restored and reference pools to determine the density of hatched fairy shrimp and gravid females. The pools shall pond for a period of time similarly to reference vernal pools during an average rainfall year and at an appropriate depth and quality to support fairy shrimp. The hatched fairy shrimp and gravid female density of the restored pools shall not differ significantly ($p < 0.05$) from reference pools for, at least, three wet seasons before a determination of success can be made. The average viable cyst density of the restored pools shall not differ significantly ($p < 0.05$) from reference pools at the end of the monitoring period before a determination of success can be made. Vernal pools selected as reference or control pools for evaluating restoration success shall be identified and described in the restoration plan. Alternate methods of determining success may be used upon approval by the City and Wildlife Agencies.

r. To ensure that the construction and operation of the project do not adversely affect the vernal pools on-site, post-construction monitoring shall be conducted throughout the rainy season of an adequate rainfall year (i.e., 55% of average rainfall) to verify that avoidance measures were successful and determine whether the project is changing the hydrology of, or causing erosion and sediment delivery to, these vernal pools (based on pre-construction conditions). Monitoring shall occur for three years following project construction. In the event that sufficient rainfall to demonstrate adequate ponding does not occur during the three years following project construction, monitoring shall continue in one-year increments, to a maximum of five years. A monitoring report shall be submitted to the City and Wildlife Agencies by September 1 following each monitoring season. The monitoring program shall be described in the final vernal pool restoration/ enhancement plan. If monitoring detects impacts to the adjacent vernal pools from construction and/or operation of the proposed project (e.g., from changes in hydrology) within the monitoring period, remediation shall be required.

s. Monitoring and success criteria for vernal pool and upland restoration/enhancement areas shall include coastal sage scrub, native grassland, and chaparral species richness and cover criteria for all five years of monitoring. Success criteria for weed cover shall be as follows: 0% cover for weed species categorized as High or Moderate in the Cal-IPC Invasive Plant Inventory, and relative cover of all other weed species is no more than 5% and 10% coverage in the pool basins and watersheds, respectively, for other exotic/weed species for all five years of the monitoring period. Container plant survival success criteria shall be 80% of the initial plantings for the first five years. At the first and second anniversaries of plant installation, all dead plants shall be replaced unless their function has been replaced by natural recruitment. The method used for monitoring shall be described and a map of proposed sampling locations shall be included. Photo points shall be used for qualitative monitoring and stratified-random sampling shall be used for all quantitative monitoring.

t. Verification that restoration/enhancement of vernal pools is complete shall require written sign-off by the City and Wildlife Agencies. If a performance criterion is not met for any of the restored/enhanced vernal pools or upland habitat in any year, or if the final success criteria are not met, the project proponent shall prepare an analysis of the cause(s) of failure and, if deemed necessary by the City or Wildlife Agencies, propose remedial actions for approval. If any of the restored/enhanced vernal pools or upland habitat has not met a performance criterion during the initial five-year period, the project proponent's maintenance and monitoring obligations shall continue until the City and Wildlife Agencies deem the restoration/enhancement successful. Contingency measures may be required by the City or Wildlife Agencies. Restoration/enhancement shall not be deemed successful until success criteria are achieved. If contingency measures are required, restoration/enhancement shall not be deemed successful until at least two years after any required contingency measures are implemented, as determined by the City and Wildlife Agencies.

u. Annual reports shall be submitted to the City and Wildlife Agencies by December 1 of each year that assess both the attainment of yearly success criteria and progress toward the final success criteria. The reports shall also summarize the project's compliance with all applicable mitigation measures and permit conditions.

2. The project proponent shall ensure the long-term management of the on-site areas shall occur in perpetuity (see VPHCP Chapter 7). Each project proponent shall implement a perpetual management, maintenance, and monitoring plan (e.g., Habitat Management Plan) for their respective biological conservation easement areas. The plan, which shall be approved by the City and Wildlife Agencies and funding source must be established prior to, or concurrent with, impacts. The plan should include, but not be limited to, the following: method of protecting the resources in perpetuity (i.e., covenant of easement dedication to the City, or a deed restriction or other conservation mechanism consistent with California Civil Code Section 815, et seq. and/or Government Code Section 65870 and acceptable to the Wildlife Agencies; monitoring schedule; measures to prevent human and exotic species encroachment; funding mechanism; and contingency measures should problems occur. In addition, the plan shall include the proposed land manager's name, qualifications, business address, and contact information. The project proponent shall also establish a nonwasting endowment or similar secure funding method in an amount approved by the City and the Wildlife Agencies based on a Property Analysis Record (PAR; Center for Natural Lands Management ©1998), or similar cost estimation method, to secure the ongoing funding for the perpetual long-term management, maintenance, and monitoring of the biological conservation easement area by an agency, nonprofit organization, or other entity approved by the City and the Wildlife Agencies.

3. In the event that a new occurrence of a covered species is identified (i.e., previously undocumented) within an area to be impacted by a covered project or covered activity, mitigation shall be required in the form of salvage and restoration for the impact to the new occurrence. Mitigation shall occur consistent with Conditions 1 and 2 above, as well as the City's Biology Guidelines.

Prior to issuance of any permit for a future development project implemented in accordance with the VPHCP Plan Area that could directly affect an archaeological resource, the City shall require (1) an inventory of the site to determine the presence of archaeological resources and (2) the appropriate

mitigation for any significant resources that may be impacted by a development activity. Sites may include residential and commercial properties, privies, trash pits, building foundations, and industrial features representing the contributions of people from diverse socioeconomic and ethnic backgrounds. Sites may also include resources associated with prehistoric Native American activities.

6.0 PROJECT IMPACT ANALYSIS

This section presents an analysis of anticipated impacts to biological resources associated with the AMP. Overall, cumulative impacts are also addressed. Refer to Section 7.0 for a discussion of impacts considered significant under the City's Significance Determination Thresholds (City 2022).

6.1 DIRECT IMPACTS

Permanent impacts were analyzed and quantified by overlaying the proposed boundaries of future projects associated with AMP improvements onto the baseline biological maps. Temporary impacts were determined by buffering each future project by 25 feet to provide sufficient area to allow for construction equipment to maneuver during buildout of each project and for placement of silt/ESA fencing. Staging areas to be used during construction for equipment and materials staging are also depicted.

6.1.1 Vegetation Communities

Of the 551.9 acres within the project area, approximately 37.5 acres (seven percent) would be directly impacted by future implementation of individual projects under the AMP (Table 4, *AMP Impacts to Vegetation and Land Cover Types*; Figure 10, *Project Impacts/Vegetation and Sensitive Biological Resources*). These impacts, which are entirely outside of the MHPA, are composed of 17.1 acres of permanent impacts and 20.4 acres of temporary impacts (including 4.3 acres of construction staging areas). A total of 12.6 acres of sensitive uplands (i.e., Tier IIIB vegetation) and 24.9 acres of non-sensitive uplands would be impacted.

Impacts to 12.6 acres of sensitive habitats are limited to upland communities consisting entirely of non-native grassland, of which 7.2 acres would be permanently impacted and 5.4 acres would be temporarily impacted during construction, including 2.2 acres of staging areas. The 5.4 acres of temporary impacts within sensitive vegetation communities are limited to non-native grassland and would occur entirely outside of the MHPA. Per the City's Biology Guidelines, temporary disruptions of habitat and temporary staging areas that do not alter landform and that will be revegetated are generally not considered to be permanent habitat loss. The 5.4 acres of temporarily impacted non-native grassland would not alter the landform and would be revegetated in accordance with City revegetation guidelines, as referenced in Attachment III of the City's 2018 Biology Guidelines. A revegetation plan will be prepared for the non-native grassland temporary impact areas and would include a seed palette of native species appropriate to the area, a 120-day plant establishment period, and a 25-month maintenance period.

Implementation of the AMP would not impact known vernal pools or other types of wetlands. Updated surveys to document vernal pools in the AMP area would be required prior to implementation of projects identified in the AMP that would affect non-native grassland or disturbed habitat (i.e., non-developed lands). This survey requirement is incorporated as a mitigation measure for the AMP.

Table 4
AMP IMPACTS TO VEGETATION AND LAND COVER TYPES (acres)[1]

Vegetation Community or Land Cover Type	Tier	Baseline Acreage	Impacts Inside the MHPA[3]	Impacts Outside the MHPA[3]		Total Impacts
				Temporary[4]	Permanent	
Wetland						
Southern willow scrub (63320)[2]	Wetland	2.04	--	--	--	--
Disturbed wetland (11200)	Wetland	0.20	--	--	--	--
Vernal pool (44000)	Wetland	3.53	--	--	--	--
Open water (64100)	Wetland	0.21	--	--	--	--
Wetland Subtotal		***5.98***	***--***	--	--	--
Sensitive Upland						
Maritime succulent scrub (32400)	I	7.7	--	--	--	--
Diegan coastal sage scrub (32500) – including disturbed	II	61.7	--	--	--	--
Baccharis scrub (32530)	II	1.0	--	--	--	--
Non-native grassland (42200)	IIIB	280.4	--	5.4[5]	7.2	12.6
Sensitive Upland Subtotal		***350.8***	***--***	***5.4***	***7.2***	***12.6***
Non-Sensitive Upland						
Disturbed habitat (11300)	IV	43.8	--	0.6	2.9	3.5
Developed (12000)	--	151.3	--	14.4	7.0	21.4
Non-Sensitive Upland Subtotal		***195.1***	***--***	***15.0***	***9.9***	***24.9***
TOTAL		**551.9**	**--**	**20.4**	**17.1**	**37.5**

1 Totals reflect rounding (0.1 for uplands and 0.01 for wetlands/riparian).
2 Codes refer to Oberbauer 2008.
3 Permanent and temporary
4 Includes temporary construction impacts and construction staging areas.
5 Temporary impacts within non-native grassland include 2.2 acres of staging areas and 3.2 acres of temporary disturbance during construction.

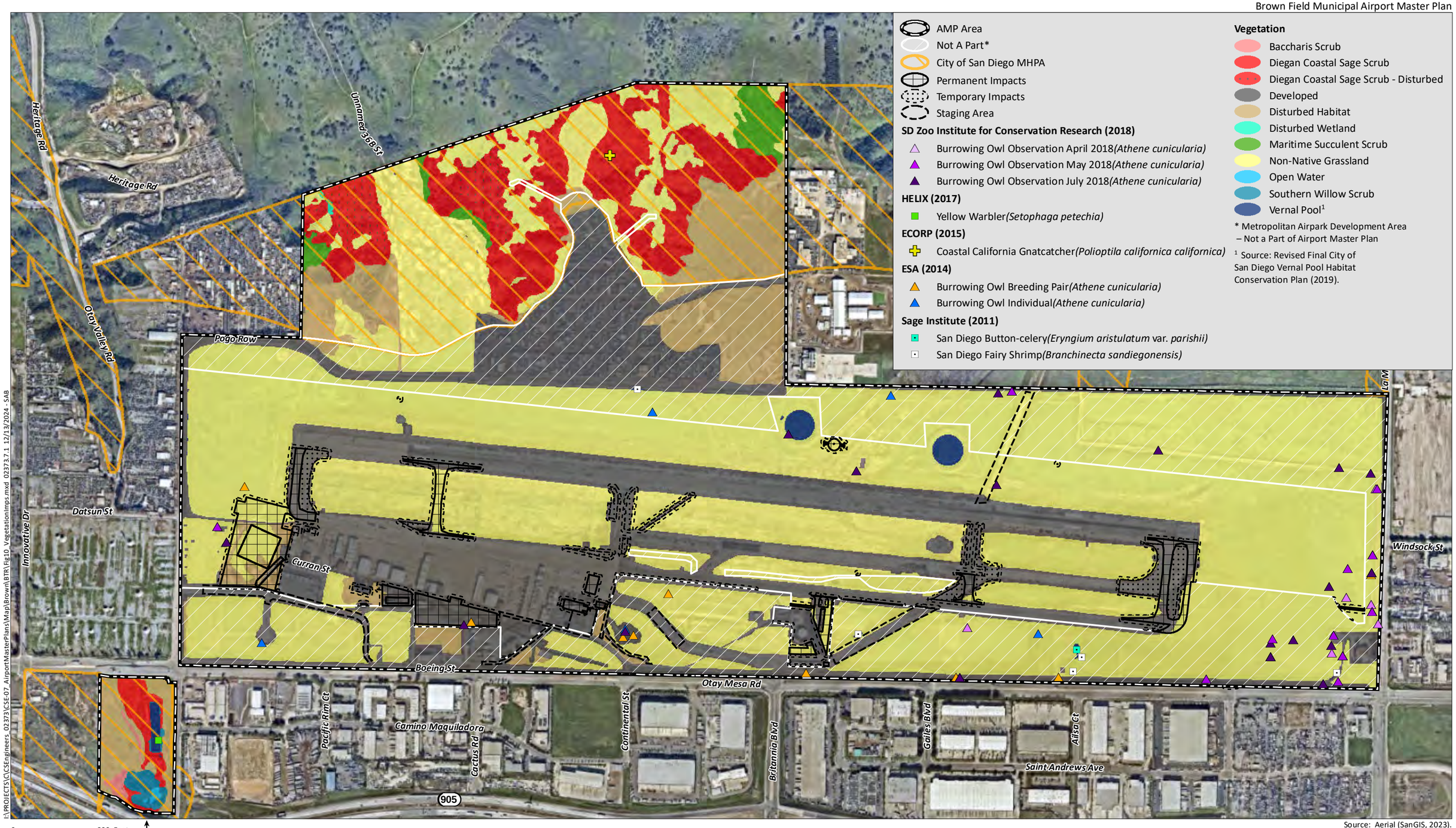
6.1.2 Sensitive Plants

The AMP would not result in direct impacts to any sensitive plant species. All sensitive plant species would be avoided by project activities.

6.1.3 Sensitive Wildlife

The AMP would result in direct impacts to 12.6 acres of non-native grassland used, or potentially used, by burrowing owl, horned lark, loggerhead shrike, golden eagle, grasshopper sparrow, white-tailed kite, northern harrier, American peregrine falcon, and San Diego black-tailed jackrabbit. Such impacts would be the result of vegetation removal associated with clearing, grubbing, and grading, which could cause loss of habitat and/or direct injury or mortality to individuals.

Other sensitive wildlife species occurring in the AMP area or with high potential to occur in the AMP area are associated with sage scrub, vernal pool, or other habitats that would not be impacted by implementation of the AMP.



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Source: Aerial (SanGIS, 2023).

HELIX Environmental Planning

Project Impacts/ Vegetation and Sensitive Biological Resources

Figure 10

As stated previously in Section 4.3.2, Crotch's bumble bee has low potential to use the airfield due to limited presence of suitable floral resources combined with regular mowing of these areas, which removes the limited nectar resources that may be present. Regular mowing of the airfield is required for airport operation safety. Although this species has low potential to use the airfield, individual projects will conduct habitat assessments and surveys, as applicable, on a case-by-case basis.

6.1.4 Jurisdictional Resources

Vernal pools or other wetlands, or open water habitat, would not be impacted by the AMP. The only potentially jurisdictional resource that may be impacted consists of a small area of drainage ditch (approximately 17 linear feet of ditch; Figure 11, *Project Impacts/Potential Jurisdictional Waters and Wetlands*). The ditch may be considered non-wetland waters of the U.S. by the USACE/RWQCB and stream channel by CDFW. This potential impact would occur to a very short reach of ditch from the addition of pavement at the outer edge of Taxiway D in the southeastern portion of the AMP area. It is noted that the remainder of this ditch is in the MAP development area.

Impacts to the drainage ditch may require issuance of a CWA Section 404 permit from the USACE, a CWA Section 401 Water Quality Certification or state Porter-Cologne Water Quality Control Act Waste Discharge Requirements from the RWQCB, and/or a Streambed Alteration Agreement from CDFW. Only the USACE, RWQCB, and CDFW can make a final determination of jurisdictional boundaries.

6.1.5 Wildlife Corridors

As discussed previously, there are no regionally identified wildlife corridors or habitat linkages in the AMP area. The AMP would entirely avoid impacts within the MHPA and would not create any barriers to wildlife movement within the MHPA or result in impacts to wildlife connectivity between the AMP area and the Otay Valley Regional Park or Otay Ranch Preserve located north of the AMP area. No impact would occur to wildlife corridors or linkages.

6.2 INDIRECT IMPACTS

Indirect impacts can be short-term or long-term and include areas and activities adjacent to a project (i.e., edge effects). Examples of short-term indirect impacts include construction-related noises, dust, increased human presence, and hydrology modifications. Long-term indirect impacts primarily result from anthropogenic disturbances by humans such as noise, lighting, domesticated animals, spread of non-native ornamental and weedy plant species, and urban run-off (including potentially toxic or hazardous chemicals).

Implementation of the AMP would not result in indirect impacts to biological resources in the MHPA, as no conflict with LUAGs would occur (refer to Section 5.1.3), and, as previously stated, the MHPA is greater than 500 feet distant from all AMP improvements.

Indirect impacts could result from construction-related noise affecting sensitive bird species during the nesting season, including nesting burrowing owl, northern harrier, and horned lark.

The AMP would not result in substantial changes in lighting or human access in comparison to the baseline condition, since AMP project areas are within and adjacent to existing developed areas of the airport that already are subject to these effects.

Implementation of standard construction BMPs for erosion and sediment control (e.g., preservation of existing vegetation, mulching, hydroseeding, soil binding, silt fencing, fiber rolls, gravel bag berms, sweeping, sandbag barriers, storm drain inlet protection), conformance with state Construction General Permit requirements, and preparation of Storm Water Quality Management Plans, as applicable, would address potential indirect impacts resulting from dust, hydrology modifications, and stormwater runoff.

6.3 CUMULATIVE IMPACTS

Adverse cumulative impacts are not expected from implementation of the AMP. Projects which adhere to the MSCP SAP are not expected to have significant cumulative impacts to resources regulated and covered by the MSCP SAP. The AMP is within the existing boundary of the Brown Field Municipal Airport. Impacts from implementation of future projects under the AMP are limited to developed, disturbed habitat, and non-native grassland, and are located entirely outside of the MHPA. The project would comply with the MSCP SAP (including Biology Guidelines and ESL Regulations), the MHPA LUAG requirements, and the VPHCP avoidance/minimization measures. As such, no cumulative impacts to vegetation, sensitive species, jurisdictional resources, or wildlife movement would occur from implementation of the AMP.

7.0 THRESHOLDS AND DETERMINATION OF SIGNIFICANCE

The following guidance (Appendix I, City Biology Guidelines 2018) is used to determine potential significance of impacts on biological resources pursuant to the City's Significance Determination Thresholds (City 2022). A project would result in a significant or potentially significant biological resource impact if it would result in:

1. A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP, VPHCP, or other local or regional plans, policies or regulations, or by the CDFW or USFWS.

2. A substantial adverse impact on any Tier I, Tier II, Tier IIIA, or Tier IIIB Habitats as identified in the City's Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or considered sensitive by CDFW or USFWS.

3. A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means.

4. Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, VPHCP, or impede the use of native wildlife nursery sites.

5. A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP or VPHCP plan area or in the surrounding region.

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Source: Aerial (SanGIS, 2023)

HELIX Environmental Planning

Project Impacts/ Potential Jurisdictional Waters and Wetlands

Figure 11

6. Introducing land use within an area adjacent to the MHPA that would result in adverse edge effects.

7. A conflict with any local policies or ordinances protecting biological resources.

8. An introduction of invasive species of plants into a natural open space area.

Proposed impacts resulting from implementation of the AMP are evaluated below in terms of significance and the corresponding determinations are provided below.

7.1 SIGNIFICANCE DETERMINATIONS

The AMP would result in significant or potentially significant impacts under guidance criteria No. 1 and 2; no significant impact would occur under criteria 3 through 8. Further discussion is provided below.

7.1.1 Sensitive Species Impacts – Guidance Criterion 1

Sensitive Plant Species

Sensitive plant species would not be impacted by future projects implemented as part of the AMP; thus, no significant impact would occur.

Sensitive Animal Species

Impacts to burrowing owl from the permanent removal of 7.2 acres of non-native grassland and temporary removal of 5.4 acres of non-native grassland (12.6 acres in total) are considered significant given the overall reduction in habitat for this species and downward population trend in the region over the last two decades. Burrowing owl is a high-profile species for CDFW, USFWS, and the MSCP, and the City and CDFW have identified this population as important to the long-term survival of the species in San Diego County (ESA and Sage Institute 2016). Significant impacts also would occur if nesting burrowing owl was directly or indirectly affected by project construction.

Impacts to 12.6 acres of non-native grassland foraging habitat for MSCP-covered white-tailed kite, northern harrier, American peregrine falcon, and golden eagle are not considered significant for these species due to the adequate species coverage and suitable habitats protected under the MSCP within the MHPA. Northern harrier also has the potential to nest in the AMP area, and any impacts to nesting raptors would be considered significant.

Impacts to horned lark, loggerhead shrike, grasshopper sparrow, and San Diego black-tailed jackrabbit (species not covered by the MSCP) by the removal of 12.6 acres of non-native grassland would be less than significant due to the small number of individuals potentially affected, the relatively small amount of habitat impacted, and the remaining suitable habitat in the project area and adjacent conserved lands.

Significant impacts also could occur if nesting birds were directly impacted by project implementation.

Short-term noise effects during construction are not considered significant as they (a) would not affect species within the MHPA given the project's distance from the MHPA (greater than 500 feet), (b) are not

expected to substantially increase noise levels from the existing baseline condition of ongoing airport operations, and (c) would avoid the burrowing owl breeding season.

Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2, BIO-3, BIO-4, BIO-5, and BIO-6 would reduce these impacts to below a level of significance.

7.1.2 Sensitive Habitats Impacts – Guidance Criterion 2

Implementation of the AMP would result in direct impacts to 12.6 acres of Tier IIIB habitats (non-native grassland); these impacts would be considered significant and would require mitigation at ratios prescribed by the City's Biology Guidelines.

Significant impacts also could occur if the project were to impact lands outside of the approved impact footprint, either directly through habitat removal, or indirectly through runoff, sedimentation, fugitive dust, or other edge effects.

Implementation of Mitigation Measures BIO-1a, BIO-2, and BIO-6 would reduce these impacts to below a level of significance.

7.1.3 Wetland Impacts – Guidance Criterion 3

The AMP would not impact known vernal pools or other wetlands, or open water habitat. The only potentially jurisdictional resource that may be impacted by the project consists of a small area of drainage ditch (approximately 17 linear feet of ditch; Figure 11). The impacted ditch may be considered non-wetland waters of the U.S. by the USACE/RWQCB and stream channel by CDFW; however, impacts to this non--wetland channel would not be significant under this threshold. Permits from the regulatory agencies would be required if the impacted ditch is determined to be jurisdictional.

7.1.4 Wildlife Movement – Guidance Criterion 4

As discussed previously, there are no regionally identified wildlife corridors or habitat linkages in the AMP area, the project would entirely avoid impacts within the MHPA and would not create any barriers to wildlife movement. No impact would occur to wildlife corridors or linkages.

7.1.5 Adopted Plans – Guidance Criterion 5

Projects in the City are reviewed for compliance with the VPHCP and MSCP SAP guidelines and policies. As discussed in Sections 5.1 and 5.2 of this document, the AMP conforms to the VPHCP and MSCP SAP; no impact would occur.

7.1.6 Multi-Habitat Planning Area Land Use Adjacency – Guidance Criterion 6

The City's MSCP SAP addresses the impacts to preserve areas from adjacent development in Section 1.4.3, Land Use Adjacency Guidelines (City 1997a). The LUAGs provide requirements for land uses adjacent to the habitat preserve in order to minimize indirect impacts to the sensitive resources contained therein.

The AMP development areas are located entirely outside of the MHPA and all project components are greater than 500 feet from the MHPA; therefore, the AMP would not result in indirect impacts/edge effects to the MHPA and would not conflict with the LUAGs.

7.1.7 Local Policies or Ordinances – Guidance Criterion 7

The AMP is consistent with the City's Land Development Code Biology Guidelines; no conflict with local policies or ordinances protecting biological resources would occur.

7.1.8 Invasive Species – Guidance Criterion 8

The AMP development area is not adjacent to the MHPA and would not result in the introduction of invasive species of plants into a natural open space area. The AMP development areas are within and adjacent lands that support a predominance of non-native plant species (non-native grassland, disturbed habitat, and urban/developed lands). Furthermore, any landscaping or revegetation associated with the project would not include plant species identified as invasive by the California Invasive Plant Council (2019).

8.0 MITIGATION AND MONITORING REQUIREMENTS

8.1 MITIGATION

The following Mitigation Measures (MMs) shall be implemented to reduce potential impacts from implementation of the AMP to below the level of significance.

8.1.1 Mitigation for Sensitive Habitat Impacts

MM BIO-1a **Sensitive Habitat Mitigation Ratios.** Impacts to 12.6 acres of non-native grassland (Tier IIIB) habitat (composed of 7.2 acres of permanent impact and 5.4 acres of temporary impact; Table 4) shall be mitigated in accordance with ratios provided in Table 3 of the City's Biology Guidelines. Tier IIIB mitigation shall be through a minimum of 1:1 preservation if mitigation occurs outside the MHPA or 0.5:1 preservation if mitigation occurs within the MHPA (Table 5, *Mitigation for Impacts to Sensitive Habitats*). Mitigation for temporary impacts may occur through on- or off-site preservation or through on-site restoration of the temporary impact areas.

Table 5
MITIGATION FOR IMPACTS TO SENSITIVE HABITATS (acres)[1]

Habitat	Tier	Impact		Mitigation Ratio[2] Outside MHPA/ Inside MHPA	Required Mitigation
		Permanent	Temporary		
Sensitive Uplands Habitat					
Non-native grassland	IIIB	7.2	5.4	1:1/0.5:1	12.6 / 6.3[3]
	TOTAL	**7.2**	**5.4**	**--**	**12.6 / 6.3**

[1] All data is in acres rounded to the nearest 0.1 acre.
[2] Mitigation ratios per City Biology Guidelines and all mitigation is inside the MHPA.

[3] A total of 12.6 acres of mitigation required if mitigation occurs outside the MHPA, 6.3 acres if inside the MHPA.

MM BIO-1b **Vernal Pool Surveys.** Updated surveys to map vernal pools will be conducted prior to implementation of AMP projects which would affect non-developed lands (i.e., non-native grassland or disturbed habitat).

MM BIO-2: **Biological Monitoring During Construction.** Construction monitoring will be required during project construction. A qualified biologist will verify the limits of construction and provide biological monitoring during the installation of construction fencing, as well as during clearing and grubbing.

8.1.2 Sensitive Species Impacts

MM BIO-3 **Project-specific Biological Resource Surveys**. Prior to the construction of any improvement project sited within or adjacent to an undeveloped open space area (i.e., an area supporting naturalized habitat, sensitive habitat, and/or habitat potentially suitable for special-status species), the City shall retain a qualified biologist to perform a reconnaissance survey to verify existing biological resources on and adjacent to the project construction areas. The City shall provide the biologist with a copy of project plans that clearly depict the construction work limits, including construction staging, storage, and access areas, to determine which specific portion(s) of the project will require inspection of adjacent open space areas. The survey shall verify whether the planned construction activities would occur on or in the immediate vicinity of habitat suitable for special-status species. The surveys shall also verify whether the construction activities may result in direct or indirect impacts to special-status species. The survey results shall be submitted to the City to determine the need to implement additional mitigation measures to avoid, minimize, and mitigate impacts to such resources, as applicable. If suitable habitat for special-status plant species is confirmed within or immediately adjacent to potential impact areas of the project, then the City shall retain a qualified biologist to conduct focused presence/absence surveys for rare plants prior to project construction. Surveys shall follow protocols and guidelines approved by the USFWS, CDFW, and CNPS and shall be conducted by qualified biologists. Mitigation for impacts to sensitive plant species with CNPS California Rare Plant Rank 1A, 1B, 2A, or 2B shall be determined by the City in consultation with the CDFW and/or USFWS, as applicable. If suitable habitat for special-status wildlife species is confirmed within or adjacent to potential impact areas of the project, then the City shall retain a qualified biologist to conduct focused, protocol-level surveys for special-status wildlife species prior to commencement of construction activities. Surveys shall follow protocols and guidelines approved by the USFWS and/or CDFW and shall be conducted by qualified biologists permitted by the USFWS and the CDFW, as applicable. Mitigation for impacts to sensitive wildlife species shall be determined by the City in consultation with the CDFW and/or USFWS, as applicable.

MM BIO-4 **Burrowing Owl Pre-construction Survey** - Species Specific Mitigation (Required to meet MSCP Subarea Plan Conditions of Coverage) for Potential Impacts to Western Burrowing Owl and Associated Habitat located OUTSIDE the MHPA (BUOW and associated habitat impacts within the MHPA MUST BE AVOIDED):

The following species-specific mitigation shall be implemented to meet the MSCP Subarea Plan Conditions of Coverage for potential impacts to burrowing owl (BUOW) and associated habitat located outside of the MHPA.

PRECONSTRUCTION SURVEY ELEMENT

Prior to Permit or Notice to Proceed Issuance:

1. As this project has been determined to be BUOW occupied or to have BUOW occupation potential, the Applicant Department or Permit Holder shall submit evidence to the ADD of Entitlements and Multiple Species Conservation Program (MSCP) staff verifying that a Biologist possessing qualifications pursuant **"**Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency Department of Fish and Game. March 7, 2012 (hereafter referred as CDFG 2012, Staff Report), has been retained to implement a burrowing owl construction impact avoidance program.

2. The qualified BUOW biologist (or their designated biological representative) shall attend the pre-construction meeting to inform construction personnel about the City's BUOW requirements and subsequent survey schedule.

Prior to Start of Construction:

1. The Applicant Department or Permit Holder and Qualified Biologist must ensure that initial pre-construction/take avoidance surveys of the project "site" are completed between 14 and 30 days before initial construction activities, including brushing, clearing, grubbing, or grading of the project site; regardless of the time of the year. "Site" means the project site and the area within a radius of 450 feet of the project site. The report shall be submitted and approved by the Wildlife Agencies and/or City MSCP staff prior to construction or BUOW eviction(s) and shall include maps of the project site and BUOW locations on aerial photos.

2. The pre-construction survey shall follow the methods described in CDFG 2012, Staff Report, Appendix D.

3. Twenty-four hours prior to commencement of ground disturbing activities, the Qualified Biologist shall verify results of preconstruction/take avoidance surveys. Verification shall be provided to the City's Mitigation Monitoring and Coordination (MMC) and MSCP Sections. If results of the preconstruction surveys have changed and BUOW are present in areas not previously identified, immediate notification to the City and Wildlife Agencies shall be provided prior to ground disturbing activities.

During Construction:

1. **Best Management Practices shall be employed as** BUOWs are known to use open pipes, culverts, excavated holes, and other burrow-like structures at construction sites. Legally permitted active construction projects which are BUOW occupied and have followed all protocol in this mitigation section, or sites within 450 feet of occupied BUOW areas, should undertake measures to discourage BUOWs from recolonizing previously occupied areas or colonizing new portions of the site. Such measures include,

but are not limited to, ensuring that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms.

2. **On-going BUOW Detection** - If BUOWs or active burrows are not detected during the pre-construction surveys, Section "A" below shall be followed. If BUOWs or burrows are detected during the pre-construction surveys, Section "B" shall be followed. NEITHER THE MSCP SUBAREA PLAN NOR THIS MITIGATION SECTION ALLOWS FOR ANY BUOWs TO BE INJURED OR KILLED OUTSIDE **OR** WITHIN THE MHPA; in addition, IMPACTS TO BUOWs WITHIN THE MHPA MUST BE AVOIDED.

A. Post Survey Follow Up if Burrowing Owls and/or Signs of Active Natural or Artificial Burrows Are <u>Not</u> Detected During the Initial Pre-Construction Survey - Monitoring the site for new burrows is required using CDFW Staff Report 2012 Appendix D methods for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule).*

1) If no active burrows are found but BUOWs are observed to occasionally (1-3 sightings) use the site for roosting or foraging, they should be allowed to do so with no changes in the construction or construction schedule.

2) If no active burrows are found but BUOWs are observed during follow up monitoring to repeatedly (4 or more sightings) use the site for roosting or foraging, the City's MMC and MSCP Sections shall be notified and any portion of the site where owls have been sites and that has not been graded or otherwise disturbed shall be avoided until further notice.

3) If a BUOW begins using a burrow on the site at any time after the initial pre-construction survey, procedures described in Section B must be followed.

4) Any actions other than these require the approval of the City and the Wildlife Agencies.

B. Post Survey Follow Up if Burrowing Owls and/or Active Natural or Artificial Burrows are detected during the Initial Pre-Construction Survey - Monitoring the site for new burrows is required using Appendix D CDFG 2012, Staff Report for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule which adheres to the required number of surveys in the detection protocol).*

1) This section (B) applies only to sites (including biologically defined territory) wholly outside of the MHPA – **all direct and indirect impacts to BUOWs within the MHPA <u>SHALL</u> be avoided.**

2) If one or more BUOWs are using any burrows (including pipes, culverts, debris piles *etc.*) on or within 300 feet of the proposed construction area, the City's MMC and MSCP Sections shall be contacted. The City's MSCP and MMC Section shall contact the Wildlife Agencies regarding eviction/collapsing burrows and enlist appropriate

City biologist for on-going coordination with the Wildlife Agencies and the qualified consulting BUOW biologist. No construction shall occur within 300 feet of an active burrow without written concurrence from the Wildlife Agencies. This distance may increase or decrease, depending on the burrow's location in relation to the site's topography, and other physical and biological characteristics.

a) **Outside the Breeding Season** - If the BUOW is using a burrow on site outside the breeding season (i.e., September 1 – January 31), the BUOW may be evicted after the qualified BUOW biologist has determined via fiber optic camera or other appropriate device, that no eggs, young, or adults are in the burrow. Eviction requires preparation of an Exclusion Plan prepared in accordance with CDFW Staff Report 2012, Appendix E (or most recent guidance available) for review and submittal to Wildlife Agencies. Written concurrence from the Wildlife Agencies is required prior to Exclusion Plan implementation.

b) **During Breeding Season** - If a BUOW is using a burrow on-site during the breeding season (Feb 1-Aug 31), construction shall not occur within 300 feet of the burrow until the young have fledged and are no longer dependent on the burrow, at which time the BUOWs can be evicted. Eviction requires preparation of an Exclusion Plan prepared in accordance with CDFW Staff Report 2012, Appendix E (or most recent guidance available) for review and submittal to Wildlife Agencies. Written concurrence from the Wildlife Agencies is required prior to Exclusion Plan implementation.

3. Survey Reporting During Construction - Details of construction surveys and evictions (if applicable) carried out shall be immediately (within five working days or sooner) reported to the City's MMC, and MSCP Sections and the Wildlife Agencies and must be provided in writing (as by e-mail) and acknowledged to have been received by the required Agencies and DSD Staff member(s).

Post Construction:

Details of all surveys and actions undertaken on-site with respect to BUOWs (i.e., occupation, eviction, locations etc.) shall be reported to the City's MMC Section and the Wildlife Agencies within 21 days post-construction and prior to the release of any grading bonds. This report must include summaries of all previous reports for the site; and maps of the project site and BUOW locations on aerial photos.

MM BIO-5 Burrowing Owl Occupied Habitat

A. Impacts to non-native grassland occupied by burrowing owl will be mitigated in-kind at ratios identified in BIO-1 and such mitigation lands must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements. Such lands will either be within the MHPA, contiguous with MHPA lands or other preserve lands, or in another location with long-term viability that is acceptable to the City, CDFW, and USFWS. The search for potential mitigation land will focus first on lands within Otay Mesa. If mitigation land cannot be located within Otay Mesa, suitable lands within the City's MSCP SAP boundary will be considered.

B. A Burrowing Owl Mitigation Plan shall be prepared and approved by the City, CDFW, and USFWS prior to issuance of any construction permits associated with the AMP.

8.1.3 Biological Resource Protection During Construction

The following biological resource protection measures will be implemented during construction to help ensure avoidance of indirect impacts to sensitive habitat and species and such measures will be shown on the construction plans:

MM BIO-6 **Construction Plan Requirements -** Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the following project requirements are shown on the construction plans:

I. Prior to Construction

A. Biologist Verification – The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City Biology Guidelines (2018), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.

B. Pre-construction Meeting – The Qualified Biologist shall attend the pre-construction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

C. Biological Documents – The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, MSCP, ESL Ordinance, project permit conditions; CEQA; ESAs; and/or other local, state or federal requirements.

D. Biological Construction Mitigation/Monitoring Exhibit (BCME) – The Qualified Biologist shall present a BCME that includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

E. Avian Protection Requirements – To avoid direct impacts to avian species identified as a listed, candidate, sensitive, or special status species (burrowing owl, coastal cactus wren, northern harrier, white-tailed kite, horned lark, grasshopper sparrow, loggerhead shrike, coastal California gnatcatcher, southern California rufous-crowned sparrow, and

yellow warbler), no clearing, grubbing, or grading shall occur during the general avian breeding season (February 1 to September 15) without a pre-construction nesting bird survey. If grubbing, clearing, or grading would occur during the general avian breeding season, a qualified biologist shall survey the project area no more than seven days prior to the commencement of the activities to determine if active bird nests belonging to listed, candidate, sensitive, or special status species are present in the affected areas. If the qualified biologist determines that no active nests occur, the activities shall be allowed to proceed. If the qualified biologist determines that an active nest is present, appropriate setbacks shall be implemented as determined by the biologist. No impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, as determined by the qualified biologist. The results of the pre-construction nesting bird survey shall be reported to the City in a brief memorandum.

F. Burrowing Owl Protection Requirement – No clearing, grubbing, grading, or other construction activities shall occur in occupied burrowing habitat between February 1 and August 31, the breeding season of the burrowing owl.

G. Resource Delineation – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the project site.

H. Education – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site area educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

A. Monitoring – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. Subsequent Resource Identification – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens

for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, state CEQA, and other applicable local, state, and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

9.0 ACKNOWLEDGEMENTS

The following people contributed to the preparation of this report:

Sean Bohac[1]	Certificate in GIS, San Diego Mesa College, 2003 B.S., Biology, The Evergreen State College, 1998
Erica Harris[2]	B.S., Biology, emphasis in Zoology, San Diego State University, 2009
Shelby Howard[3,5]	M.S., Biology, San Diego State University, 2004 B.S., Biology, University of Texas, El Paso, 1999
Laura Moreton[2,4]	M.S., Biodiversity Survey, University of Sussex, 2007 B.S., Biology, San Diego State University, 2006 A.S., Biology, Southwestern College, 2004
Stacy Nigro[2,4]	B.S., Forest Resources and Conservation, Emphasis in Wildlife Ecology, University of Florida, 1994
Aleksandra Richards[6]	M.A., International Relations, University of San Diego, 2010 B.A., Communications, Emphasis in Print Journalism, California State University Fullerton, 2008

[1]GIS Specialist; [2]Biologist; [3]Principal; [4]Primary Author; [5]Contributing Author, [6]Technical Editor

10.0 REFERENCES

American Ornithological Society (AOS). 2023. AOS Checklist of North and Middle American Birds (online checklist). Retrieved from: https://checklist.americanornithology.org/taxa/.

Atkins. 2017. Airport Master Plan Brown Field Municipal Airport. Working Paper 4 – Environmental Overview. October.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds.). 2012. The Jepson manual: vascular plants of California, second edition. Berkeley, CA: University of California Press.

Bradley, R.D., Ammerman, L.K., Baker, R.J., Bradley, L.C., Cook, J.A., Dowler, R.D. Jones, C., Schmidly, D.J, Stangi, F.B., Van De Bussche, R.A., Wursig, B. (2014). Revised checklist of North American mammals north of Mexico. Museum of Texas Tech University Occasional Papers. 327:1-27.

California Department of Fish and Wildlife. 2019. California Natural Diversity Data Base. RareFind 5.

2024a. State and Federally Listed Endangered & Threatened Animals of California. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. January.

2024b. Special Animals List. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. January.

2012. Staff Report on Burrowing Owl Mitigation. March 7.

California Invasive Plant Council. 2019. California Invasive Plant Inventory Database. Available at: http://www.cal-ipc.org/paf/.

California Native Plant Society. 2024. Inventory of Rare and Endangered Plants (online edition, v-9.5). Available at: http://www.rareplants.cnps.org.

Collins, Joseph T. and Travis W. Taggart. 2006. The Center for North American Herpetology (CNAH): The Academic Portal to North American Herpetology. Available at: http://www.cnah.org/.

ECORP Consulting, Inc. 2015. Results for Protocol-level coastal California Gnatcatcher Surveys for the Metropolitan Airport Project, Brown Field Municipal Airport, San Diego, California. April 1.

Environmental Science Associates (ESA). 2014. Brown Field Municipal Airport Burrowing Owl Protocol Survey. June 3.

2013. Metropolitan Airpark Project. Final Environmental Impact Report. May.

EnviroSystems Management, Inc. 2018. Brown Field Municipal Airport Wildlife Hazard Assessment. November.

ESA and Sage institute, Inc. 2016. Biological Assessment Metropolitan Airpark Project. Brown Field Municipal Airport. San Diego, San Diego County, California. February 1.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. State of California, The Resources Agency, 156 pp.

Merkel and Associates. 2008. Brown Field Redevelopment Biological Resources Constraints Analysis Letter Report. August 18.

Oberbauer, T. 2008. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. Revised from 1996 and 2005. July.

Rebman, J.P. and M.G. Simpson. 2014. Checklist of the Vascular Plants of San Diego County. 5th Edition. San Diego Natural History Museum, San Diego, California. 132 pp.

Sage Institute, Inc. 2011a. Draft Metropolitan Airpark Project 2011 Biology Survey Report. August 1.

2011b. Metropolitan Airpark Project 2011 Floristic Inventory and Rare Plant Survey. June.

2011c. Metropolitan Airpark Project 2010-2011 Vernal Pool Branchiopod Wet Season Survey 90-Day Report. May.

San Diego, City of. 2022. California Environmental Quality Act Significance Determination Thresholds. City of San Diego. Planning Department.

2019. Revised Final Vernal Pool Habitat Conservation Plan. Prepared by City of San Diego. October.

2020. Revised Final Vernal Pool Management and Monitoring Plan (VPMMP). Prepared by City of San Diego. January.

2018. City of San Diego Municipal Code, Land Development Code, Biology Guidelines. Amended. February 1 by Resolution No. R-311507.

1997a. Multiple Species Conservation Program. City of San Diego MSCP Subarea Plan. March.

1997b. Implementing Agreement by and between USFWS, CDFW, and City of San Diego. To Establish a Multiple Species Conservation Program "MSCP" for the Conservation of Threatened, Endangered, and other Species in the Vicinity of San Diego, California. July.

San Diego, County of. 1998. Final Multiple Species Conservation Program. MSCP Plan August.

San Diego Zoo Institute for Conservation Research (ICR). 2018. Shape File Data for Spring 2018 Burrowing Owl Surveys.

Unitt, P. 2004. San Diego County Bird Atlas. No. 39. Proceedings of the San Diego Society of Natural History. October 31.

U.S. Army Corps of Engineers. 1997. Indicator Species for Vernal Pools. November.

U.S. Department of Agriculture. 2019. Web Soil Survey. Natural Resources Conservation Service. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed: May 2019.

U.S. Fish and Wildlife Service. 2019. Occurrence Information for Multiple Species within Jurisdiction of the Carlsbad Fish and Wildlife Office. Carlsbad Fish and Wildlife Office. Available at: https://www.fws.gov/office/carlsbad-fish-and-wildlife. May.

Appendix A

Plant Species Observed

Family	Scientific Name*,†	Common Name	Habitat[1]
Dicots			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	DCSS, DW
Aizoaceae	*Carpobrotus edulis**,high	hottentot-fig	DH
	*Mesembryanthemum nodiflorum**,lim	slender leaved ice plant	DH
Anacardiaceae	*Malosma laurina*	laurel sumac	NNG, DCSS, MSS
	Rhus integrifolia	lemonadeberry	DCSS, MSS
Apiaceae	*Foeniculum vulgare**,high	fennel	DH, NNG
Apocynaceae	*Nerium oleander**	oleander	DEV
Asteraceae	*Artemisia californica*	California sagebrush	NNG, DCSS, BS, MSS
	Baccharis salicifolia	mule fat	SWS
	Baccharis sarothroides	broom baccharis	DCSS, BS
	Bahiopsis laciniata†	San Diego sunflower	DCSS, MSS
	*Centaurea melitensis**,mod	tocalote	NNG
	Deinandra fasciculata	fascicled tarplant	DH, DCSS, MSS
	*Dittrichia graveolens**,mod	stinkwort	DH
	Encelia californica	California encelia	DCSS, MSS
	Erigeron canadensis	horseweed	NNG
	Grindelia camporum	gumplant	DH
	*Hedypnois cretica**	Crete hedypnois	DH
	*Helminthotheca echioides**,lim	bristly ox-tongue	DH
	Heterotheca grandiflora	telegraph weed	DH
	*Lactuca serriola**	wild lettuce	DH
	Psilocarphus brevissimus var. *brevissimus*	dwarf woolly-heads	NNG
	*Sonchus asper**	prickly sow thistle	DH, NNG
	Symphyotrichum subulatum	eastern annual saltmarsh aster	NNG
Brassicaceae	*Brassica nigra**,mod	black mustard	NNG
	*Hirschfeldia incana**,mod	short-pod mustard	NNG, MSS
Boraginaceae	*Heliotropium curassavicum* var. *occulatum*	salt heliotrope	DCSS
Cactaceae	*Cylindropuntia prolifera*	coastal cholla	DCSS, MSS
	Ferocactus viridescens†	San Diego barrel cactus	DCSS, MSS
	Mammillaria dioica	fish hook cactus	MSS
Capparaceae	*Peritoma arborea*	bladderpod	DCSS, MSS
Chenopodiaceae	*Amaranthus albus**	white tumbleweed	DH
	*Atriplex semibaccata**,mod	Australian saltbush	DH, DCSS
	*Salsola tragus**,lim	Russian thistle	DH, DCSS
Crassulaceae	*Dudleya edulis*	ladies-fingers	MSS
	Dudleya pulverulenta	chalk-lettuce	MSS
	*Ricinus communis**,lim	castor bean	DH
Fabaceae	*Acacia* sp.*	acacia	MSS
	Acmispon glaber	deerweed	DCSS, MSS
Geraniaceae	*Erodium* sp.*	filaree	DH, NNG
Gentianaceae	*Zeltnera exaltata*	cancha lagua	DCSS
	Salvia mellifera	black sage	DCSS, MSS
Malvaceae	*Malva parviflora**	cheeseweed	DH, NNG
Myrsinaceae	*Anagallis arvensis**	scarlet pimpernel	DCSS
Myrtaceae	*Eucalyptus* sp.*	eucalyptus	DH, DEV

Family	Scientific Name*,†	Common Name	Habitat[1]
Plantaginaceae	*Plantago major**	common plantain	DH
Polygonaceae	*Eriogonum fasciculatum*	buckwheat	DCSS, BS, MSS
	*Rumex crispus**,lim	curly dock	DH, SWS, DW
Salicaceae	*Salix gooddingii*	black willow	SWS
	Salix lasiolepis	arroyo willow	SWS
Simmondsiaceae	*Simmondsia chinensis*	jojoba	MSS
Solanaceae	*Nicotiana glauca**,mod	tree tobacco	DH
Tamaricaceae	*Tamarix* sp.*,high	tamarisk	DH
Monocots			
Arecaceae	*Phoenix canariensis**,lim	Canary Island date palm	DH
	*Washingtonia robusta**,mod	Mexican fan palm	DH, SWS, DEV
Cyperaceae	*Schoenoplectus americanus*	American rush	SWS
Poaceae	*Arundo donax**,high	giant reed	DH, DW
	Avena sp.*	oat	DH, NNG, DCSS, BS, MSS
	*Bromus diandrus**,mod	common ripgut grass	NNG, DCSS. BS, MSS
	*Bromus madritensis**	foxtail chess	NNG, DCSS, BS, MSS
	*Cortaderia selloana**,high	white pampas grass	DW
	*Cynodon dactylon**,mod	Bermuda grass	DH, DCSS
	Hordeum sp.*	barley	NNG
	*Lamarckia aurea**	goldentop	NNG
	*Lolium multiflorum**,mod	Italian ryegrass	DH
	*Melinis repens**	Natal grass	DH
	*Pennisetum setaceum**,mod	purple fountain grass	DH
	Phalaris sp.*	canary grass	DH
	*Stipa miliacea**,lim	smilo grass	DCSS
	Stipa sp.	needlegrass	NNG, DCSS, MSS

* Non-Native Species

† Special Status Species

[1] CC= chamise chaparral; BS= baccharis scrub (including disturbed); DCSS=Diegan coastal sage scrub (including disturbed); DH=disturbed habitat; DW=disturbed wetland; EW=eucalyptus woodland; NNG=non-native grassland; NNV=non-native vegetation; SWS=southern willow scrub (including disturbed).

Appendix B

Animal Species Observed or Detected

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Lepidoptera	Riodinidae	*Apodemia mormo virgulti*	Behr's metalmark
VERTEBRATES			
Birds			
Accipitriformes	Accipitridae	*Buteo jamaicensis*	red-tailed hawk
Apodiformes	Apodidae	*Aeronautes saxatalis*	white-throated swift
Charadriiformes	Charadriidae	*Charadrius vociferous*	killdeer
Columbiformes	Columbidae	*Columba livia*	rock pigeon
		Streptopelia decaocto	Eurasian collared-dove
		Zenaida macroura	mourning dove
Falconiformes	Falconidae	*Falco sparverius*	American kestrel
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit
	Alaudidae	*Eremophila alpestris*	horned lark
	Cardinalidae	*Passerina caerulea*	blue grosbeak
	Corvidae	*Corvus corax*	common raven
	Fringillidae	*Haemorhous mexicanus*	house finch
	Hirundinidae	*Petrochelidon pyrrhonota*	cliff swallow
	Icteriidae	*Agelaius phoeniceus*	red-winged blackbird
		Sturnella neglecta	western meadowlark
	Mimidae	*Mimus polyglottos*	northern mockingbird
	Parulidae	*Setophaga petechia†*	yellow warbler
	Passerellidae	*Melozone crissalis*	California towhee
		Melospiza melodia	song sparrow
		Pipilo maculatus	spotted towhee
	Sylviidae	*Chamaea fasciata*	wrentit
	Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Tyrannidae	*Sayornis saya*	Say's phoebe
		Tyrannus vociferans	Cassin's kingbird
Strigiformes	Strigidae	*Athene cunicularia†*	burrowing owl
Mammals			
Carnivora	Canidae	*Canis latrans*	coyote
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

† Special Status Species

Appendix C

Sensitive Plant Species with Potential to Occur

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
City of San Diego Narrow Endemic Plants				
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE CRPR 1B.1 MSCP Covered	Small annual herb. Occurs on clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral. Flowering period: April–June. Elevation: 100–3,150 feet (30–960 meters).	**Low**. The most recent observation of this species in the vicinity of the project area was in 1937. Although limited suitable habitat is present on site, this species has not been found on site during focused surveys.
Agave shawii	Shaw's agave	--/-- CRPR 2B.1 MSCP Covered	Shrub. Found in coastal areas in coastal sage scrub habits. Flowering period: September–March. Elevation: 0–315 feet (0–95 meters).	**None.** This species occurs in coastal areas. Project site is too far inland for this species to occur.
Ambrosia pumila	San Diego ambrosia	FE/-- CRPR 1B.1 MSCP Covered	Small herb. Occurs on clay soils. Found in grasslands, valley bottoms and dry drainages, also can occur on slopes, disturbed places, and in coastal sage scrub. Flowering period: April–October. Elevation: 165–1,970 feet (50–600 meters).	**Low.** The most recent sightings of this species date back to the 1980s and are over half a mile south of the project site. Although limited suitable habitat is present on site, this species has not been found on site during focused surveys.
Aphanisma blitoides	ashanisma	--/-- CRPR 1B.2 MSCP Covered	Herb. Found in coastal bluff scrub, coastal dunes, and coastal scrub. Usually on bluffs and slopes near the ocean in sandy or clay soils. Flowering period: March–June. Elevation: 10–1,000 feet (3–305 meters).	**None.** This species is found predominantly along the coast. The project site is too far inland for this species to occur.
Astragalus tener var. *titi*	coastal dunes milkvetch	FE/SE CRPR 1B.1 MSCP Covered	Annual herb. Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. Flowering period: March–May. Elevation: 3–150 feet (1–45 meters).	**None.** This species is found predominantly along the coast. The project site is too far inland for this species to occur.
Cylindropuntia californica var. *californica* (*Opuntia parryi* var. *serpentine*)	snake cholla	--/-- CRPR 1B.1 MSCP Covered	Stem succulent. Found in chaparral and coastal scrub. Flowering period: April–July. Elevation: 50–950 feet (15–290 meters).	**Low.** This perennial stem succulent would likely have been observed if present. Suitable habitat on site is limited to the northern canyons.

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
Deinandra conjugens	Otay tarplant	FT/SE CRPR 1B.1 MSCP Covered	Annual herb. Found on fractured clay soils in grasslands or lightly vegetated coastal sage scrub in southern San Diego County and northwestern Baja California, Mexico. In San Diego County, found in scattered localities from the vicinity of Sweetwater Reservoir south to the Mexico border. Flowering Period: May–June. Elevation: 65–985 feet (20–300 meters).	**Moderate.** Most recent record on site is from 1999, when species was observed in the northwest corner of the site near the canyons. Species was not detected during subsequent rare plant surveys when species was detectable at nearby reference sites (Merkel 2008), or during 2011 biological surveys.
Dudleya brevifolia	short-leaved dudleya	--/SE CRPR 1B.1 MSCP Covered	Small leaf succulent. Occurs in open areas and sandstone bluffs in chamise chaparral or Torrey pine forest. Flowering period: April–May. Elevation: 0–410 feet (0–125 meters).	**None.** Suitable habitat does not occur on the project site.
Dudleya variegata	variegated dudleya	--/-- CRPR 1B.2 MCSP Covered	Openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to vernal pools and mima mound topography characterize habitats utilized by this species Southern San Diego County; northwestern Baja California, Mexico Flowering period: April–June. Elevation: 0–985 feet (0–300 meters).	**Moderate.** Mapped in sage scrub in one of the northern canyons in 1998. Suitable habitat on site is limited to the northern canyons.
Navarretia fossalis	spreading navarretia	FT/-- CRPR 1B.1 VPHCP Covered	Annual herb. Grows in vernal pools, vernal swales, or roadside depressions. Population size is strongly correlated with rainfall. Depth of pool appears to be a significant factor as this species is rarely found in shallow pools. Found in western Riverside and southwestern San Diego counties as well as northwestern Baja California, Mexico. Flowering period: April–June. Elevation: 100–4,265 feet (30–1,300 meters).	**Low.** The most recent observation of this species in the vicinity of the project area was in 1969. Although limited suitable habitat is present on site, this species has not been found on site during focused surveys.

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
Orcuttia californica	California orcutt grass	FE/SE CRPR 1B.1 VPHCP Covered	Annual grass. Grows in vernal pools in valley grassland and wetland communities. Flowering period: April–August. Elevation: 197–2,165 feet (700 meters).	**Low.** Although limited suitable habitat is present on site, this species has not been found on site during focused surveys. Annual mowing of grassland further reduces the potential for this species.
Pogogyne abramsii	San Diego mesa mint	FE/SE CRPR 1B.1 VPHCP Covered	Small herb. Occurs in vernal pools within grasslands, chamise chaparral, or coastal sage scrub communities. Flowering period: March–July. Elevation: 230–640 feet (70–195 meters).	**Low.** The most recent sighting of this species in the area was in 1980 over half a mile to the west of the project site.
Pogogyne nudiuscula	Otay Mesa mint	FE/SE CRPR 1B.1 VPHCP Covered	Annual herb. Grows in coastal mesa vernal pools within chaparral, coastal sage scrub, and wetland communities. Flowering period: March–June. Elevation: 328–820 feet (100–250 meters).	**Low.** This species was last observed within one mile of the airport in 2009.
Other Plant Species				
Ambrosia chenopodiifolia	San Diego bur-sage	--/-- CRPR 2B.1	Shrub. Arid, low-growing, fairly open Diegan coastal sage scrub is preferred Southwestern San Diego County, Arizona, and Mexico. Known from several sites in Otay Mesa. Flowering period: April–June. Elevation: 0–820 feet (0–250 meters).	**High.** This species was mapped in sage scrub in one of the northern canyons in 1998, and population is considered likely to be extant. Suitable habitat on site is limited to the northern canyons.
Bahiopsis laciniata	San Diego sunflower	--/-- CRPR 4.2	Shrub. Found in Diegan coastal sage scrub where shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types in San Diego and Orange Counties, and Baja California, Mexico. Flowering period: February to August. Elevation: 295–2,460 feet (90–750 meters).	**Present.** Species is abundant in maritime succulent scrub and sage scrub along upper fringes of the canyons in the northern portion of the site. Suitable habitat on site is limited to the northern canyons.

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
Bergerocactus emoryi	golden-spined cereus	--/-- CRPR 2B.2	Stem succulent shrub. Occurs coastaly on sandy open hills within chaparral, sage scrub, and closed-cone pine forests. Flowering period: May–June. Elevation: below 328 feet (100 meters).	**Low.** This conspicuous stem succulent would likely have been observed if present. Suitable habitat on site is limited to the northern canyons.
Dicranostegia orcuttiana	Orcutt's birds-beak	--/-- CRPR 2B.1	Annual herb. Found in seasonally dry drainages and upland adjacent to riparian habitat. Flowering period: March–August. Elevation: below 1,148 feet (350 meters).	**Low.** The most recent observation of this species near the project area was in 1937. Species has low potential to occur on the southwestern parcel, but suitable habitat is not present on the main airfield.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE CNPS List 1B.1 VPHCP Covered	Small annual or perennial herb. Grows in vernal pools or mima mound areas with vernally moist conditions in San Diego and Riverside counties, as well as Baja California, Mexico. Flowering period: April–June. Elevation: 0–2,315 feet (0–705 meters).	**Low on Site; Present in MAP area.** Approximately 90 individuals observed in association with a single vernal pool in the southeast portion of the airport boundary in 2011 (Sage Institute 2011b). This occurrence is outside the project site in the MAP area. This species has not been documented in any other location on the airport property.
Ferocactus viridescens	San Diego barrel cactus	--/-- CRPR 2B.1 MSCP Covered	Perennial stem succulent. Found in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Flowering period: May–June. Elevation: 10–1,476 feet (3–450 meters).	**Present.** Species is abundant in maritime succulent scrub and sage scrub along upper fringes of the canyons in the northern portion of the site.
Grindelia hallii	San Diego gumplant	--/-- CRPR 1B.2	Perennial herb. Found in chaparral, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland. Flowering period May–October. Elevation: 606–5,725 feet (185–1,745 meters).	**Low.** Although limited suitable habitat is present on site, this species has not been found on site during focused surveys. The most recent sighting of this species in the vicinity of the project site was in 1935.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	--/-- CRPR 1B.2	Perennial shrub. Found in chaparral and coastal scrub often on sandy, disturbed areas. Flowering period: April–November. Elevation: 32–442 feet (10–135 meters).	**Low.** This conspicuous shrub would have likely been observed if present.

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
Iva hayesiana	San Diego marsh-elder	--/-- CRPR 2B.2	Perennial herb. Found in alkali flats, depressions, and streambanks within wetland communities. Flowering period: March–September. Elevation: below 984 (2,953) feet (300 [900] meters).	**Low.** This conspicuous shrub would have been observed if present. Suitable habitat on site is limited to the southwestern parcel.
Nama stenocarpa	mud nama	--/-- CRPR 2B.2	Annual herb. Occurs in freshwater wetlands and wetland-riparian habitats. Prefers riparian, lake-margins, streambanks, and edges. Flowering Period: March–October. Elevation: 0–2,655 feet (0–810 meters).	**Low.** Although limited suitable habitat is present on site, this species has not been found on site during focused surveys.
Quercus dumosa	Nuttall's scrub oak	--/-- CRPR 1B.1	Perennial evergreen shrub. Found on sandy soils or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub. Flowering period: February-April (sometimes as late as August). Elevation: 49–1,312 feet (15–400 meters).	**Low.** This conspicuous shrub would likely have been observed if present. Suitable habitat on site is limited to the northern canyons.
Selaginella cinerascens	ashy spike-moss	--/-- CRPR 4.1	Prostrate fern. Found in Orange and San Diego Counties and northwestern Baja California, Mexico. Prefers flat mesas in coastal sage scrub and chaparral. A good indicator of site degradation, as it rarely inhabits disturbed soils. Flowering period: none. Elevation: 0–1640 feet (0–550 meters).	**Moderate.** Mapped in sage scrub in the northern portion of the site in 1998. Suitable habitat on site is limited to the northern canyons.
Stipa diegoense	San Diego county needlegrass	--/-- CRPR 4.2	Grass. Chaparral and sage scrub ecotone are preferred. The species is closely associated with metavolcanic soils and can been found in fine sandy loam and rocky silt loams. Peaks and upper ridgelines of mountains appear the preferred microhabitat. Occurs in San Diego County, Baja California, Mexico, and the Channel Islands. Flowering period: February-June. Elevation: 0–7,480 feet (0–2280 meters).	**Moderate.** Mapped in sage scrub in one of the northern canyons in 1998. Suitable habitat on site is limited to the northern canyons.

Species Name	Common Name	Status[1]	Habit, Ecology and Life History	Potential to Occur
Streptanthus bernardinus	Laguna Mountains jewelflower	--/-- CRPR 4.3	Perennial herb. Occurs on montane peak tops in lower montane coniferous forest. While typically in mesic situations, it can occupy drier embankments in granitic gravels and sand. Flowering period: June–August. Elevation: 3,937–8,202 feet (1,200–2,500 meters).	**None.** Suitable habitat not present on site.
Tetracoccus dioicus	Parry's tetracoccus	--/-- CRPR 1B.2 MSCP Covered	Shrub. Occurs on gabbro soils in low growing chamise chaparral and sage scrub. Usually, conditions are quite xeric with only limited annual growth. Flowering period: April–May. Elevation: below 3,281 feet (1,000 meters).	**Low.** This conspicuous shrub would likely have been observed if present. Suitable habitat on site is limited to the northern canyons.

[1] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R= Rare. CRPR = California Rare Plant Rank: 1A–presumed extinct; 1B–rare, threatened, or endangered in California and elsewhere; 2A–presumed extirpated in California but more common elsewhere; 2B–rare, threatened, or endangered in California but more common elsewhere; 3–more information needed; 4–watch list for species of limited distribution. Extension codes: .1–seriously endangered; .2–moderately endangered; .3–not very endangered

Appendix D

Sensitive Animal Species with Potential to Occur

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
INVERTEBRATES				
Bombus crotchii	Crotch's bumble bee	--/CE	Inhabits shrublands, chaparral, and open grasslands with suitable nectar and pollen sources. Primarily nests underground and forages on a wide variety of flowers, but a short tongue renders it best suited to open flowers with short corollas. Most commonly observed on flowering species in the Fabaceae, Asteraceae, and Lamiaceae families. Occurrence has also been linked to habitats containing *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia* genera.	**Low.** Species has low potential to forage or nest on the airfield due to limited presence of suitable floral resources (non-native grasses dominate the airfield) combined with regular mowing of these areas.
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/-- VPHCP Covered	Endemic to San Diego and Orange County mesas. Found in vernal pools in chaparral, coastal scrub, vernal pool, and wetland habitat.	**Present.** Adult San Diego fairy shrimp have been documented in vernal pools on site (Sage Institute 2011).
Callophrys thornei	Thorne's hairstreak	--/-- MSCP Covered	Associated with the endemic tecate cypress (*Cupressus forbesii*). Only known from vicinity of Otay Mountain.	**None.** Host plant is not present on site and suitable habitat is not present.

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Euphydryas editha quino	Quino checkerspot butterfly	FE/-- MSCP NE	Occurs in California from western Riverside County southwards to southern San Diego County. Inhabits open and sparsely vegetated areas that contain larval host plant species (principally dot-seed plantain [*Plantago erecta*], woolly plantain [*Plantago patagonia*] but also Coulter's snapdragon [*Antirrhinum coulterianum*], and rigid bird's beak [*Cordylanthus rigidus*]) and nectar sources. Often found on rounded hilltops, ridgelines, and occasionally rocky outcrops. Occurs within a wide range of open-canopied habitats including vernal pools, sage scrub, chaparral, grassland, and open oak and juniper woodland communities.	**Low.** USFWS database records shown this species on site in 1976 and 1977 However, focused surveys conducted in 2011, 2008, and 1998 failed to detect this species. It is presumed absent from the airport property.
Streptocephalus woottonii	Riverside fairy shrimp	FE/-- VPHCP Covered	Occur in seasonally astatic pools which occur in tectonic swales or earth slump basins and other areas of shallow, standing water. Often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral. Occurs in San Diego County and extreme northern Baja California, Mexico.	**Moderate.** Species was detected in two onsite pools in 1998. Subsequent surveys conducted in 2008, 2009, 2010, and 2011 were negative for this species (ESA 2013).
VERTEBRATES				
Amphibians and Reptiles				
Aspidoscelis hyperythra	orange-throated whiptail	--/WL MSCP Covered	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats including chaparral, cismontane woodland, and coastal scrub. Prefers washes and sandy areas with patches of brush and rocks. Perennial plants are necessary for its food source, termites.	**High.** Observed in the southwest parcel in 1998. Species likely occurs in sage scrub and maritime succulent scrub in the northern portion of the site.

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Coluber fuliginosus	Baja California coachwhip	--/SSC	Occurs from extreme southern San Diego County at elevations below 7,700 feet. Habitat generalist found in open terrain but more common in grasslands, scrublands, and coastal sand dunes in California. Diet consists of a wide variety of prey including rodents, lizards, snakes, turtles, insects, bird and lizard eggs, and carrion.	**Low.** There is suitable habitat for this species on site however it has not been observed during surveys.
Spea hammondii	western spadefoot toad	PT/SSC	Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).	**Low.** Suitable habitat present but species not detected during multiple fairy shrimp surveys on site.
Birds				
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	--/WL MSCP Covered	Coastal sage scrub, open chaparral, and shrubby grasslands	**High.** Species observed in coastal sage scrub in the northern portion of the AMP area in 1998. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018). Suitable habitat on site is limited to the northern canyons.
Ammodramus savannarum	grasshopper sparrow	--/SSC	Occurs in small numbers in grasslands throughout San Diego County.	**High.** Suitable habitat is present, although species has not been detected on site, it is known from the project vicinity (Sage Institute 2011a).

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Aquila chrysaetos	golden eagle	BCC/WL MSCP Covered	Nesting occurs on cliff ledges or in trees on steep slopes, with foraging occurring primarily in grassland and sage scrub. Not usually observed near development. In San Diego County, has the largest territory and lowest population density of any bird. Scattered throughout undeveloped San Diego County year-round.	**Low**. Observed flying over the northern portion of the site in 1998. Although foraging habitat is present, no suitable nesting habitat occurs on site.
Athene cunicularia	burrowing owl	BCC/SSC MSCP Covered	Found in grassland or open scrub habitats in San Diego County. Requires burrows and rodents for prey.	**Present.** Several surveys performed between 1997 and 2014 identified a significant burrowing owl population on site. The 2014 survey identified 14 active burrows, nine of which were occupied by breeding pairs and five were occupied by individual owls (ESA 2014). Similarly, 11 active nesting pairs and two individual owls were documented in 2011 (Sage Institute 2011a). This species was also observed by HELIX in 2017, as well as during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018). The San Diego Zoo Institute for Conservation Research also had numerous observations of this species during surveys conducted in 2018 in association with mitigation for the MAP project. Both the City and CDFW have identified this population as important to the long-term survival of the species in San Diego County (ESA and Sage Institute 2016).

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	BCC/SSC MSCP Covered	Species limited to locations with an abundance of cactus thickets. High affinity to small home range. Observed in coastal lowlands of San Diego County.	**Moderate.** Observed in coastal sage scrub in the northern portion of the site in 1998, as well as observation of a pair of wrens in this same area by USGS biologists conducting surveys in 2017 (personal communication with City Airport biologist, 2020). Suitable habitat on site is limited to the northern canyons.
Circus cyaneus	northern harrier	--/SSC MSCP Covered	Prefers open grassland and marsh in San Diego County. Their distribution is primarily scattered throughout lowlands, but they can also be observed in foothills, mountains, and desert.	**High.** Suitable foraging habitat is present. Observed in the northern portion of the site in 1998 and during surveys conducted for the MAP project. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).
Elanus leucurus	white-tailed kite	--/FP	Prefers rolling foothills and valley margins with scattered oaks and river bottomlands, or marshes next to deciduous woodland. Also known to use open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**High.** Observed on site during surveys for the MAP project. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).
Eremophila alpestris actia	horned lark	--/WL	Found on sandy beaches and in agricultural fields, grassland, and open areas.	**Present.** Observed on the airport property during the 2017 general biological survey. Species was also detected in abundance during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018). It is a commonly occurring species on SDM.

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Falco peregrinus anatum	American peregrine falcon	Delisted; BCC/SE/FP MSCP Covered	Nesting usually occurs on cliff ledges near water where prey (shorebirds and ducks) is concentrated, but also may nest on tall buildings and bridges. Preferred hunting areas are agricultural fields, meadows, marshes, and lakes.	**High.** One individual was observed perched on a fence in the north-central part of the AMP area during surveys for the MAP project (Sage Institute 2011). Suitable foraging habitat occurs on site, but suitable nesting habitat is not present.
Lanius ludovicianus	loggerhead shrike	BCC/SSC	Inhabits grassland, open sage scrub, chaparral, and desert scrub. An uncommon year-round resident observed throughout San Diego County but absent from pinyon woodlands in higher elevations of the Santa Rosa and Vallecito mountains.	**High.** Suitable foraging habitat is present. Observed in the northern portion of the site in 1998 and during surveys conducted for the MAP project. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).
Polioptila californica californica	coastal California gnatcatcher	FT/SSC MSCP Covered	Occurs in coastal sage scrub with California sagebrush (*Artemesia californcia*) as a dominant or co-dominant species, at elevations below 2,500 feet.	**High.** A single male was detected within Diegan coastal sage scrub in the northern portion of the site in 2015 (ECORP 2015). Suitable habitat on site is limited to the northern canyons. This species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Setophaga petechia	yellow warbler	BCC/SSC	Prefers riparian woodland, riparian forest, mule fat scrub, and southern willow scrub. Observed throughout California during the breeding season with rare sightings in winter.	**Present.** One individual was detected in southern willow scrub in the southwestern parcel by HELIX in 2017 (southwest corner of Otay Mesa Road and Heritage Road). Suitable habitat is limited to the southwestern parcel. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).
Mammals				
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	--/SSC	Occurs throughout southwestern California from western Riverside County to northern Baja California at elevations below 6,000 feet. Inhabits coastal sage scrub, grasslands, and chaparral communities, and generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates. Forage for seeds from California sagebrush, California buckwheat, lemonade berry, and grasses under shrub and tree canopies, or around rock crevices.	**Low.** Suitable habitat for this species occurs in the northern canyons on site, however it has not been observed during biological surveys.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	--/SSC	Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is some shrub cover present. Found in southern Santa Barbara County, south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico. Localities on the eastern edge of its range include Jacumba and San Felipe Valley in San Diego County.	**High.** Observed in the southwest parcel in 1998 (southwest corner of Otay Mesa Road and Heritage Road) and on the MAP site in 2011. Species was also detected during the 2017-2018 wildlife hazard assessment field surveys for SDM (EnviroSystems Management, Inc. 2018).

Species Name	Common Name	Status[1]	Habitat Associations	Potential to Occur
Neotoma lepida intermedia	San Diego desert woodrat	--/SSC	Found in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca. Inhabit the coastal slope of southern California from San Luis Obispo County south into coastal northwestern Baja California, Mexico.	**Moderate.** Suitable habitat for this species occurs on site however it has not been observed during biological surveys. Suitable habitat on site is limited to the southwestern parcel and the northern canyons.

[1] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; C=Candidate; R = Rare; FP = Fully Protected; BCC = Bird of Conservation Concern; SSC = State Species of Special Concern; WL = Watch List; Proposed.