



**Biological Technical Report
for the Avion Project
San Diego, California**

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A handwritten signature in blue ink, appearing to read "Gerry Scheid".

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List of Abbreviated Terms

ADD	Assistant Deputy Director
ASMD	Area Specific Management Directives
BCME	Biological Construction Mitigation/Monitoring Exhibit
BLA	Boundary Line Adjustment
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of San Diego
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSV	Consultant Site Visit Record
DSD	Development Services Department
ESA	Endangered Species Act
ESL	Environmentally sensitive land
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Planning Area
MMC	City's Mitigation Monitoring Coordination
MSCP	Multiple Species Conservation Program
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 Summary

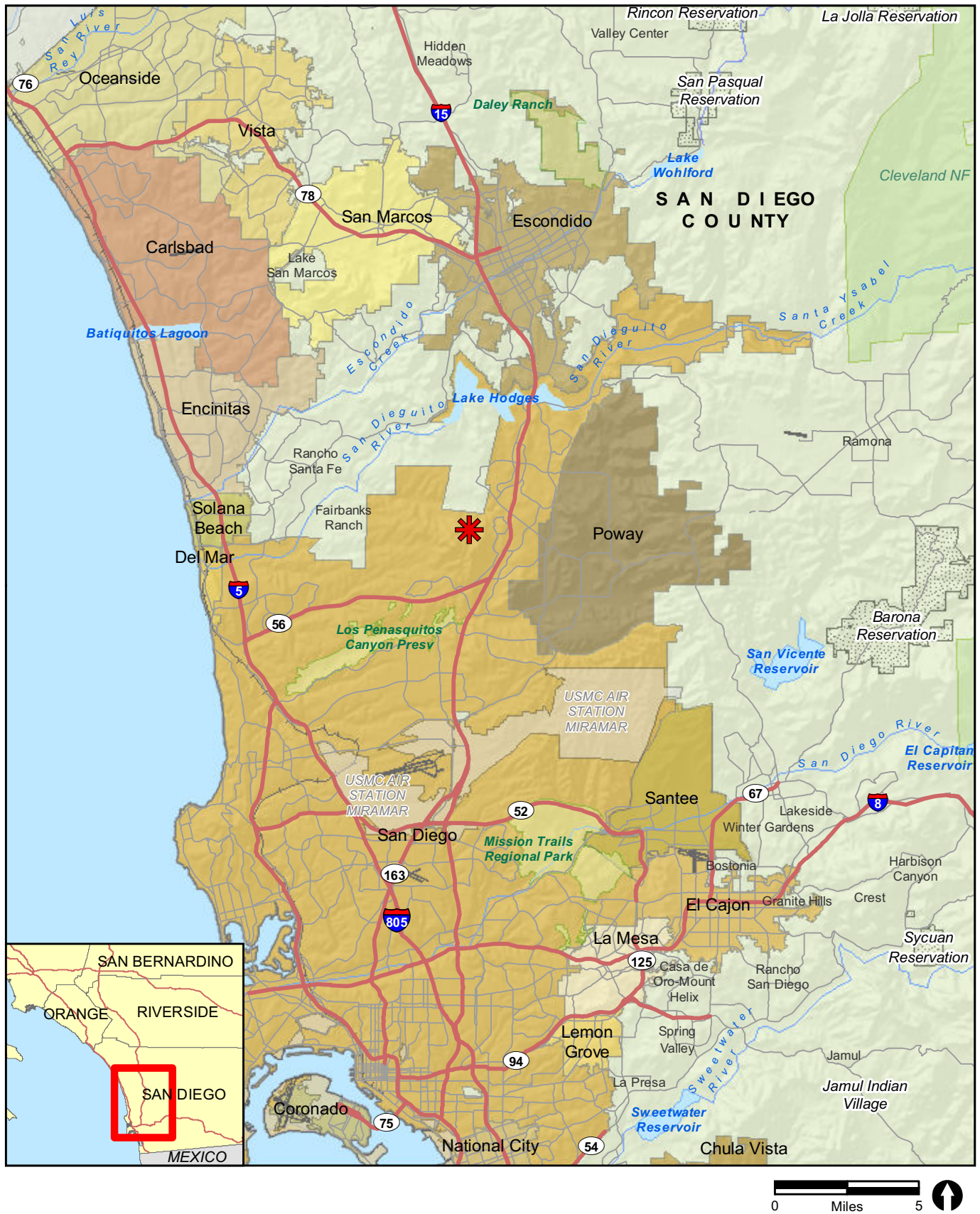
The Avion project (project) would have impacts to sensitive vegetation communities that total 15.2 acres comprised of 0.56 acre of coastal sage scrub, 13.14 acres of southern mixed chaparral, and 1.5 acres of non-native grassland. The project would also have minor encroachments into the current Multi-Habitat Planning Area (MHPA). The project proposes an MHPA Boundary Line Adjustment (BLA) that would remove these minor encroachment areas and transfer undisturbed on-site habitat not currently in the MHPA into the MHPA preserve. Once approved, the MHPA BLA would preserve enough native habitat (24.03 acres) on the site to mitigate for impacts to sensitive vegetation communities from the project. Compliance with the MHPA Land Use Guidelines would avoid and/or minimize potential significant indirect impacts to biological resources in the adjacent MHPA lands.

2.0 Introduction

The project site consists of a 41.48-acre parcel of undeveloped land located in the northern part of the City of San Diego, approximately 1.2 miles west of Interstate 15 (Figure 1). The project site occurs in Section 5, Township 13 and 14 South, Range 2 West, of the U.S. Geological Survey (USGS) 1996 7.5-minute topographic map, Poway quadrangle (Figure 2; USGS 1996). Carmel Valley Road/Bernardo Center Drive is located approximately 0.6 mile to the north, and Black Mountain Road is located approximately 1.4 miles to the west.

Heritage Bluffs, a new residential development currently under construction, abuts the northern edge of the property. Future access would be provided at the northeast corner of the project site via Winecreek Road. Land uses surrounding the Avion site include a portion of the Black Mountain Open Space Park to the west, east, and south, and the Heritage Bluffs residential development to the north, and additional Black Mountain Open Space Park open space lands to the northwest (Figure 3).

The project site was previously analyzed as Southeast Perimeter Parcel C in the Black Mountain Ranch (Subarea I) Subarea Plan EIR (96-7902) (Subarea Plan EIR). The project would develop 84 detached multi-family residential units and associated infrastructure (i.e., private drives, sewer, water, etc.), which would be consistent with the land use identified for the project site in the Subarea Plan EIR. Project density on-site would be less than what was assumed and analyzed for the property under the Subarea Plan EIR, and the project would transfer the remaining density (14 market-rate units and 19 affordable housing units) to the Black Mountain Ranch North Village Town Center, pursuant to the density transfer allowances established by the Subarea Plan.



✱ Project Location

FIGURE 1
Regional Location

This topographic map depicts the La Jolla area, including the San Diego and Imperial Counties. Key features include:

- Black Mountain:** A prominent peak with a summit elevation of 1552 feet, located in the center-left of the map.
- La Jolla Valley:** Situated to the north of Black Mountain, featuring a 'Water Tank' and a 'Well'.
- Rolling Hills Park:** Located to the east of Black Mountain.
- Black Mountain:** A smaller peak to the south of the main Black Mountain, with an elevation of 1225 feet.
- Topography:** The map is characterized by dense contour lines indicating steep slopes and valleys.
- Infrastructure:** Roads are shown, including a 'ROAD' running along the bottom right. A 'Golf Course' is also visible on the right side.
- Other Features:** A 'Water Tank' is located near the top center, and a 'Well' is marked near the center. A 'Hilltop Community Park' is shown in the bottom left corner.

 Project Boundary

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FIGURE 2
Project Location on USGS Map





-  Project Boundary
-  Heritage Bluffs Boundary

FIGURE 3
Project Location on Aerial Photograph

Access to the Avion project would be through an extension of a main private driveway off the existing Wine Creek Drive cul-de-sac at the northeastern corner of the site. The private driveway would require the construction of an arch-culvert bridge over the existing water course to gain access to the primary development area. The main private driveway would be approximately 60 feet wide.

3.0 Survey Methods

RECON biologists conducted a general biological survey of the project site on November 13 and December 8, 2017 to document the existing conditions of the biological resources occurring on the site. The project site was walked on foot and notes were taken on the flora and fauna observed during the survey (Table 1). In addition, a jurisdictional waters delineation was conducted on November 29, 2017, on the site to locate the extent of any wetland and non-wetland waters. A spring survey to look for sensitive plant species was conducted on the site on March 21, 2018. This survey also included a focused spring survey for thread-leaved brodiaea. Additional focused surveys for thread-leaved brodiaea were conducted on March 14 and April 12, 2019.

Date	Surveyors	Type of Survey	Beginning Conditions	Ending Conditions
11/13/17	Gerry Scheid Beth Procsal	General Biology Survey	8:00 a.m.; 60° F; wind 0-1 mph; 60% cloud cover	12:00 p.m.; 72° F; wind 0-1 mph; 40% cloud cover
11/29/17	Gerry Scheid	Wetland Delineation	12:00 p.m.; 75° F; wind 0-1 mph; 30% cloud cover	5:00 p.m.; 65° F; wind 0-1 mph; 30% cloud cover
12/8/17	Gerry Scheid Beth Procsal	General Biology Survey	8:00 a.m.; 65° F; wind 0-1 mph; 50% cloud cover	12:00 p.m.; 74° F; wind 0-1 mph; 20% cloud cover
3/21/18	Gerry Scheid	Spring Rare Plant Survey; Focused Thread-leaved Brodiaea Survey	10:00 a.m.; 70° F; wind 0-5 mph; 20% cloud cover	2:00 p.m.; 75° F; wind 0-5 mph; 20% cloud cover
3/14/19	Gerry Scheid	Spring Rare Plant Survey; Focused Thread-leaved Brodiaea Survey	NA	NA
4/12/19	Gerry Scheid	Spring Rare Plant Survey; Focused Thread-leaved Brodiaea Survey	NA	NA

NA = not applicable.

Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as growing season and blooming period. It was anticipated that the site has the potential to support sensitive plant species and, therefore, a springtime survey was recommended and conducted (see Table 1). Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were noted.

Floral nomenclature for common plants follows Hickman (1993), for ornamental plants Brenzel (2001), and for sensitive plants California Native Plant Society (CNPS; 2016). Vegetation community classifications follow Oberbauer (2008), which is based on Holland's 1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (2015) and Unitt (2004); for mammals with Baker et al. (2003) and Hall (1981); for amphibians and reptiles with Crother (2001) and Crother et al. (2008); and for invertebrates with Mattoni (1990), and Opler and Wright (1999).

Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; CNPS 2016; Reiser 2001), and species occurrence records from the California Natural Diversity Database (CNDDB; State of California 2017a, 2017b, 2017c, 2017d) and other sites in the vicinity of the survey area.

4.0 Regulatory Compliance

4.1 Nesting Birds

The project would be required to comply with restrictions associated with nesting bird species per Section 3503 of the California Fish and Game Code and the Migratory Bird Treaty Act of 1918 (MBTA). Under Section 3503 of the California Department of Wildlife (CDFW) Code, 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. Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (raptors) or Strigiformes (owls), or of their nests and eggs (State of California 1991). The MBTA was established to provide protection to the breeding activities of migratory birds throughout the United States. The MBTA protects migratory birds and their breeding activities from take and harassment.

4.2 Multi-Habitat Planning Area (MHPA)

MHPA lands are those that have been included within the City of San Diego's (City) Multiple Species Conservation Program (MSCP) Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. MHPA lands are considered by the City to be a sensitive biological resource.

MHPA lands once occurred over the majority of the property. In 1998, the Subarea Plan EIR evaluated whether the project site (Southeast Perimeter Parcel C) and several other perimeter properties would impact the MHPA. As part of this subarea plan, an MHPA BLA was approved that reconfigured the MHPA boundary over the project site to further exclude portions of the central ridge and lower flat land, while still including the canyons to the east and west of the ridge (Figure 4).



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FIGURE 4
1998 Black Mountain Ranch SUBAREA Plan MHPA Boundary Line Adjustment

Projects with encroachments into the current MHPA boundary require an MHPA Boundary Line Adjustment (BLA) to remove the areas proposed to be impacted and transfer other portions of the project site into the MHPA to compensate for the areas lost to impact (see Section 5.0).

5.0 Existing Conditions

The project site is located at the upper end of a broad north-south trending valley. Residential development exists to the northeast and open space areas border the site to the north, south, east, and west. A ridgeline occurs in the central portion of the site that rises in elevation from north to south from 740 feet mean sea level to 915 feet mean sea level. The ridge is bounded by two small canyons, one to the east and one to the west, with one main drainage course and smaller tributaries in each.

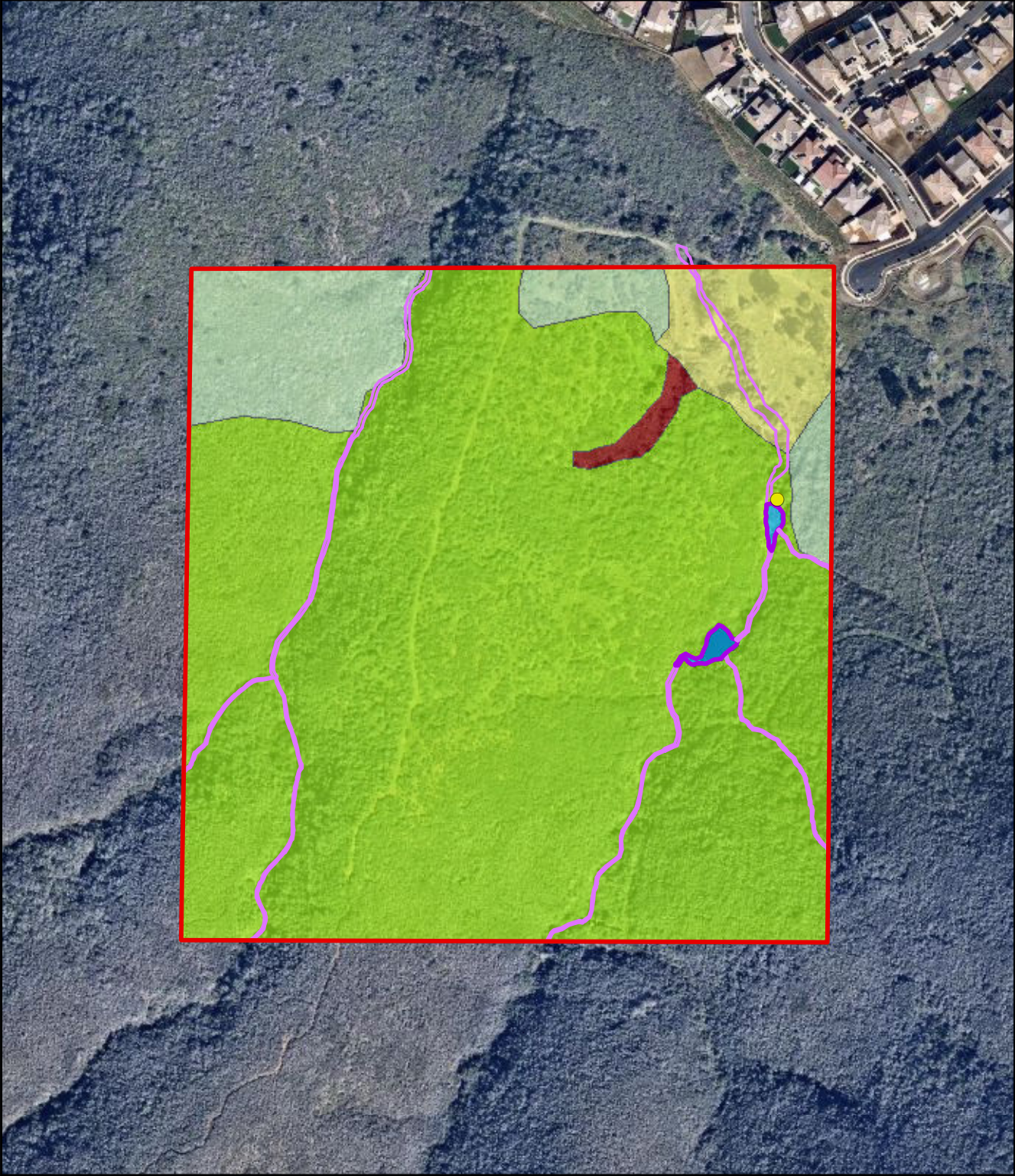
The eastern drainage course has two impoundment areas where earthen dams were built to retain water. These earthen dams have been breached for some time and the impoundments currently only hold water for very short durations and only after a series of major storm events. Patches of freshwater marsh comprised of herbaceous plant species occur in the old impoundments (see Section 5.1.4, Freshwater Marsh, below).

A dirt road occurs along the crest of the ridge. Remnant concrete slabs from former structures occur at the north end of the site. The presence of various abandoned objects such as metal tanks, agricultural staking, and old irrigation lines indicate that the site was once used for minor agricultural activities.

One soil type occurs on the site, San Miguel-Exchequer rocky silt loam (U.S. Department of Agriculture [USDA] 1973). This relatively shallow rocky soil is derived from meta-volcanic parent materials.

5.1 Botany

Four vegetation communities and one land cover type occur on the project site (Table 2). Southern mixed chaparral comprises the majority of the site with lesser acreages of coastal sage scrub, non-native grassland, and freshwater marsh patches (Figure 5). A total of 62 plant species were observed during the survey, 36 native, and 26 non-native species (Attachment 1).



- Project Boundary
- San Diego Desert Woodrat Nest
- Jurisdictional Waters**
- Wetland Waters
- Non-wetland Water/Streambed

Vegetation Community/Land Cover Type

- Coastal Sage Scrub
- Disturbed Land
- Freshwater Marsh
- Non-native Grassland
- Southern Mixed Chaparral

FIGURE 5
Existing Biological Resources

Table 2 Existing Vegetation Communities and Land Cover Types (acres)			
Vegetation Communities/ Land Cover Types	Existing Acres Inside MHPA	Existing Acres Outside MHPA	Total
Coastal Sage Scrub	3.58	0.74	4.32
Southern Mixed Chaparral	15.03	19.36	34.39
Non-native Grassland	0.23	2.06	2.29
Freshwater Marsh	0.13	--	0.13
Disturbed Land	--	0.35	0.35
TOTAL	18.97	22.51	41.48

5.1.1 Southern Mixed Chaparral

The southern mixed chaparral on the site is dominated by a mixture of chaparral shrub species that includes chamise (*Adenostoma fasciculatum*), laurel sumac (*Malosma laurina*), mission manzanita (*Xylococcus bicolor*), toyon (*Heteromeles arbutifolia*), and lilac (*Ceanothus tomentosus*). Dense chaparral covers the slopes to the east and west while a more open chaparral occurs along the ridge and eastern flank.

5.1.2 Coastal Sage Scrub

Patches of coastal sage scrub vegetation occur in the northeast corner and northwest portion of the site. Black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, and California sagebrush (*Artemisia californica*) make up this shrub community.

5.1.3 Non-native Grassland

Non-native grassland occurs in the northeast portion of the site in the flatter land where past land use was most intense. The grassland area supports a mixture of non-native annual grasses such as purple falsebrome (*Brachypodium distachyon*), smooth brome (*Bromus hordaceus*), red brome (*Bromus madritensis*), ripgut grass (*Bromus diandrus*), and slender wild oat (*Avena barbata*). Scattered non-native trees were planted in this area and include species of eucalyptus (*Eucalyptus* spp.), Italian cypress (*Cupressus sempervirens*), Canary Island pine (*Pinus canariensis*), and Peruvian peppertree (*Schinus molles*).

5.1.4 Freshwater Marsh

Two impoundments occur along the drainage course within the eastern canyon. These impoundments have been breached and do not hold water for long durations anymore, but do support herbaceous freshwater marsh vegetation. Plant species observed in the impoundments include annual beardgrass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), pale spike rush (*Eleocharis macrostachya*), alkali heliotrope (*Heliotropium curassavicum*), and hedge nettle (*Stachys rigida*).

5.1.5 Disturbed Land

A small area of disturbed land occurs in the north-central portion of the site where past land use had altered the soils. Non-native plants such as black mustard (*Brassica nigra*), star-thistle (*Centaurea meletensis*), stinkwort (*Dittrichia graveolens*), and Italian thistle (*Carduus pycnocephalus*) dominate this area in a dense stand.

5.2 Zoology

A list of the wildlife species detected in the survey areas is provided in Attachment 2. A general discussion of wildlife usage in the survey areas is presented below.

5.2.1 Amphibians

No amphibians were observed during the survey. The site lacks a permanent water source; therefore, it is unlikely that amphibians occur on the site.

5.2.2 Reptiles

No reptile species were observed during the survey. The site likely supports a small population of common lizard species such as the western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*).

5.2.3 Birds

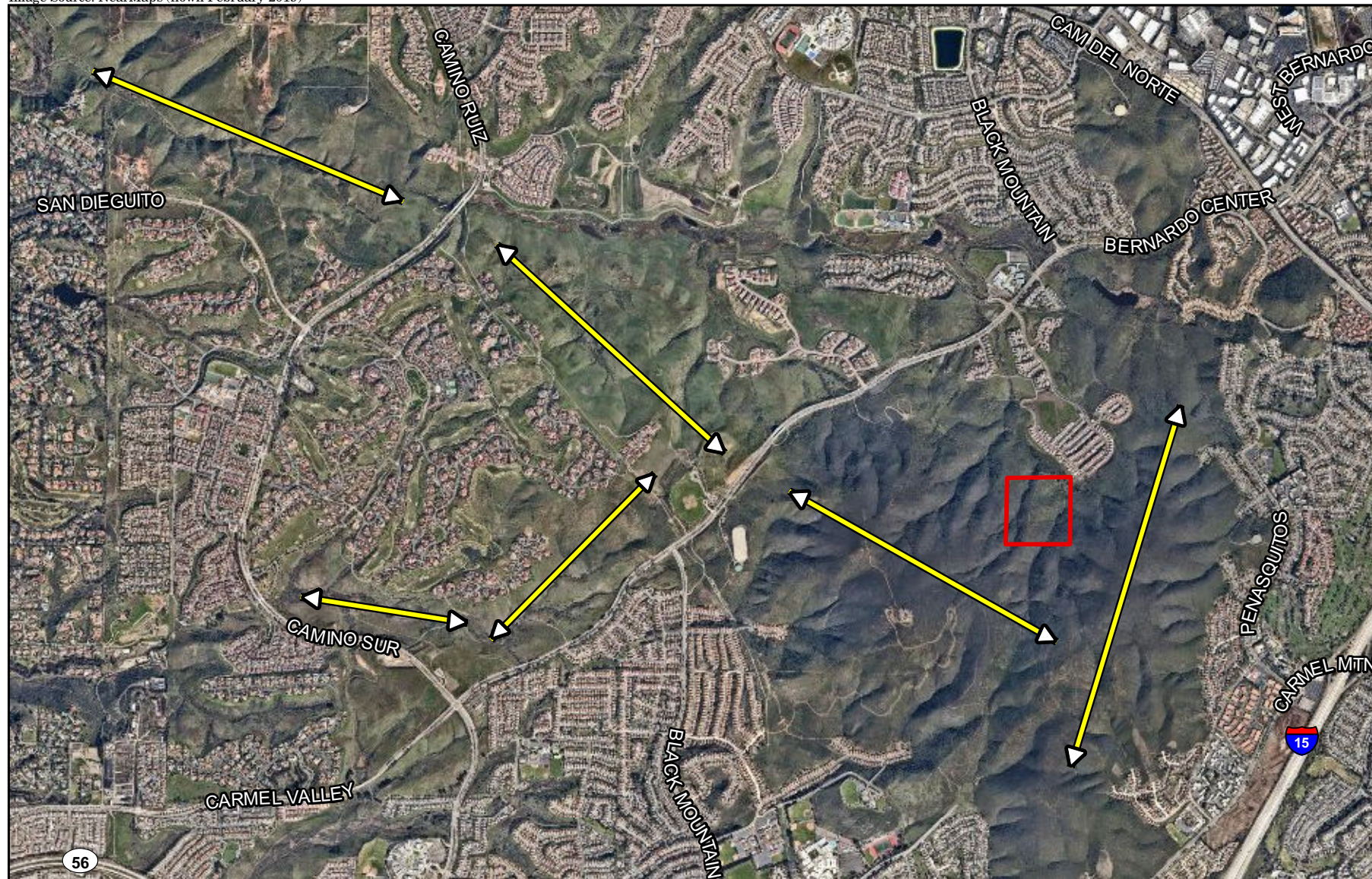
Fifteen bird species were observed on the site during the survey. Common bird species observed include wrentit (*Chamaea fasciata henshawi*), black phoebe (*Sayornis nigricans semiatra*), and Anna's hummingbird (*Calypte anna*).

5.2.4 Mammals

Four mammal species were detected on the site. Coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), and southern mule deer (*Odocoileus hemionus fuliginata*) were all detected by the presence of their scat. San Diego desert woodrat (*Neotoma lepida intermedia*; CDFW Species of Special Concern) was detected by the presence of a nest.

5.3 Wildlife Corridor

Regional wildlife corridors were established as part of the MSCP planning that is documented in the Subarea Plan EIR. These established wildlife corridors connected the La Jolla Valley and associated Lusardi Creek lowlands to the Black Mountain Open Space Preserve to the east and south (Figure 6). The anticipated development boundary of the Avion property adjacent to the Black Mountain Open Space Preserve were accounted for in the development of these regional wildlife corridors.





 Anticipated Wildlife Movement
 Avion Project Boundary

FIGURE 6

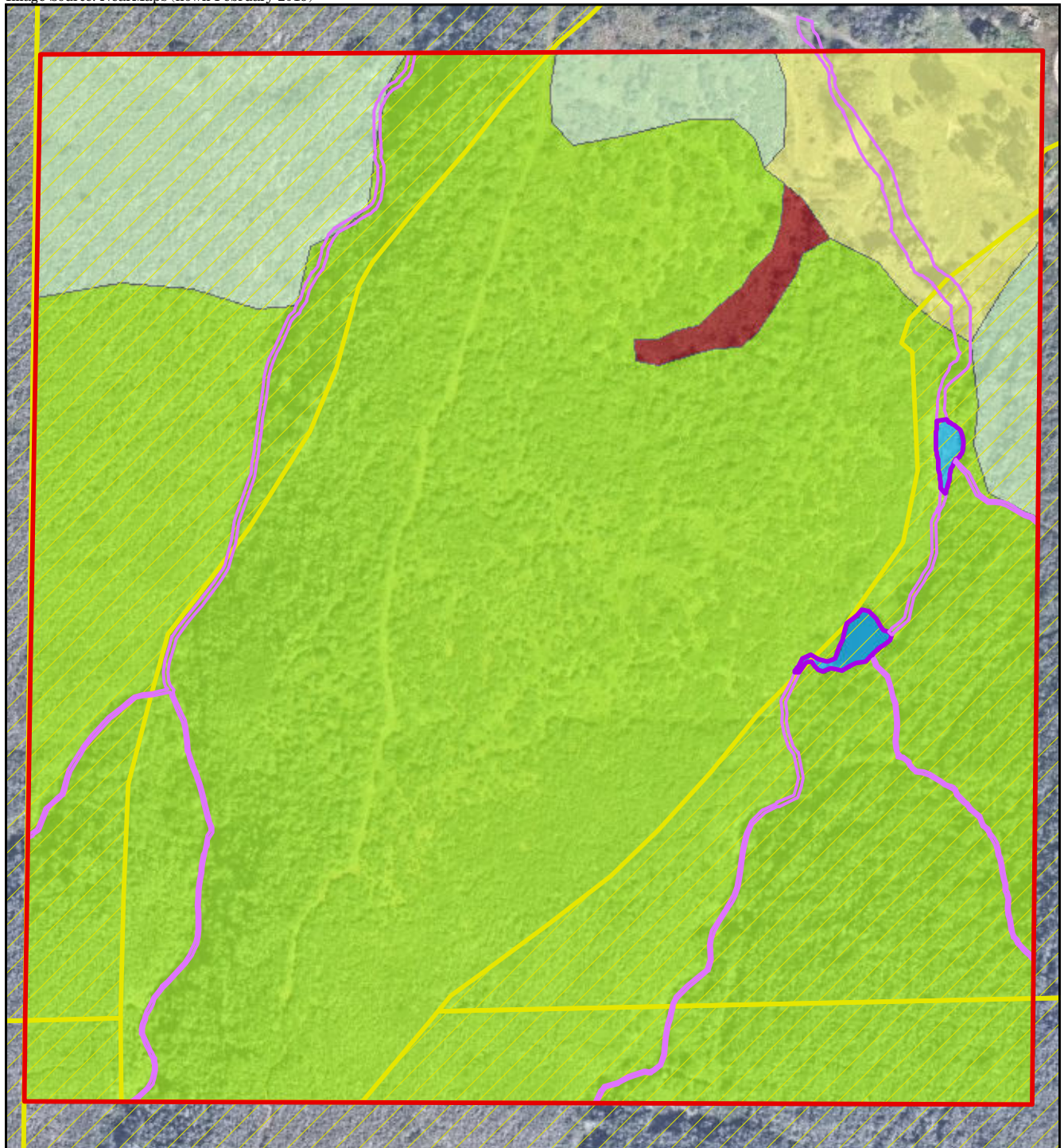
Location of Primary Subarea Plan Wildlife Corridors

The Avion project site is surrounded by portions of the Black Mountain Open Space Preserve and currently wildlife movement can occur across the property in all directions except from the northeast where movement is impeded by the existing Heritage Bluffs II residential area. The proposed Avion project would have minor local restrictions to wildlife as it extends the developed area to the southwest of the Heritage Bluffs II development. However, wildlife movement from a regional perspective would not be adversely disrupted by the project as connections to large areas of native habitat would remain functional and in conformance with the Subarea Plan objectives for regional wildlife movement (see Figure 6).

6.0 MHPA BLA Analysis

The current MHPA boundary in the vicinity of the project site is shown on Figure 7a. Minor encroachments into the current MHPA boundary on the eastern portion of the site would occur under the project (Figure 7b). These encroachments would impact a total of 0.55 acre comprised of 0.14 acre of coastal sage scrub, 0.27 acre of southern mixed chaparral, and 0.14 acre of non-native grassland. Under the proposed MHPA BLA, these impact areas would be removed from the current MHPA and on-site land not currently within the MHPA would be added into the preserve. Land added into the MHPA with the BLA would include 5.61 acres comprised of 4.99 acres of southern mixed chaparral, 0.49 acre of non-native grassland, and 0.13 acre of coastal sage scrub (Table 3).

Table 3 Summary of Proposed MHPA Boundary Line Adjustment				
Vegetation Communities/ Land Cover Types	Existing MHPA Acres	Deletions (Impact) Acres	Added Acres	Proposed MHPA with BLA (Net Change)
Coastal Sage Scrub	3.58	0.14	0.13	3.57 (-0.01)
Southern Mixed Chaparral	15.03	0.27	4.99	19.75 (+4.72)
Non-native Grassland	0.23	0.14	0.49	0.58 (+0.35)
Freshwater Marsh	0.13	--	--	0.13 (0)
Disturbed Land	--	--	--	--
TOTAL	18.97	0.55	5.61	24.03 (+5.06)



- Project Boundary
- Existing MHPA Boundary

Jurisdictional Waters

- Wetland Waters
- Non-wetland Water/Streambed

Vegetation Community/Land Cover Type

- Coastal Sage Scrub
- Disturbed Land
- Freshwater Marsh
- Non-native Grassland
- Southern Mixed Chaparral

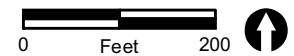
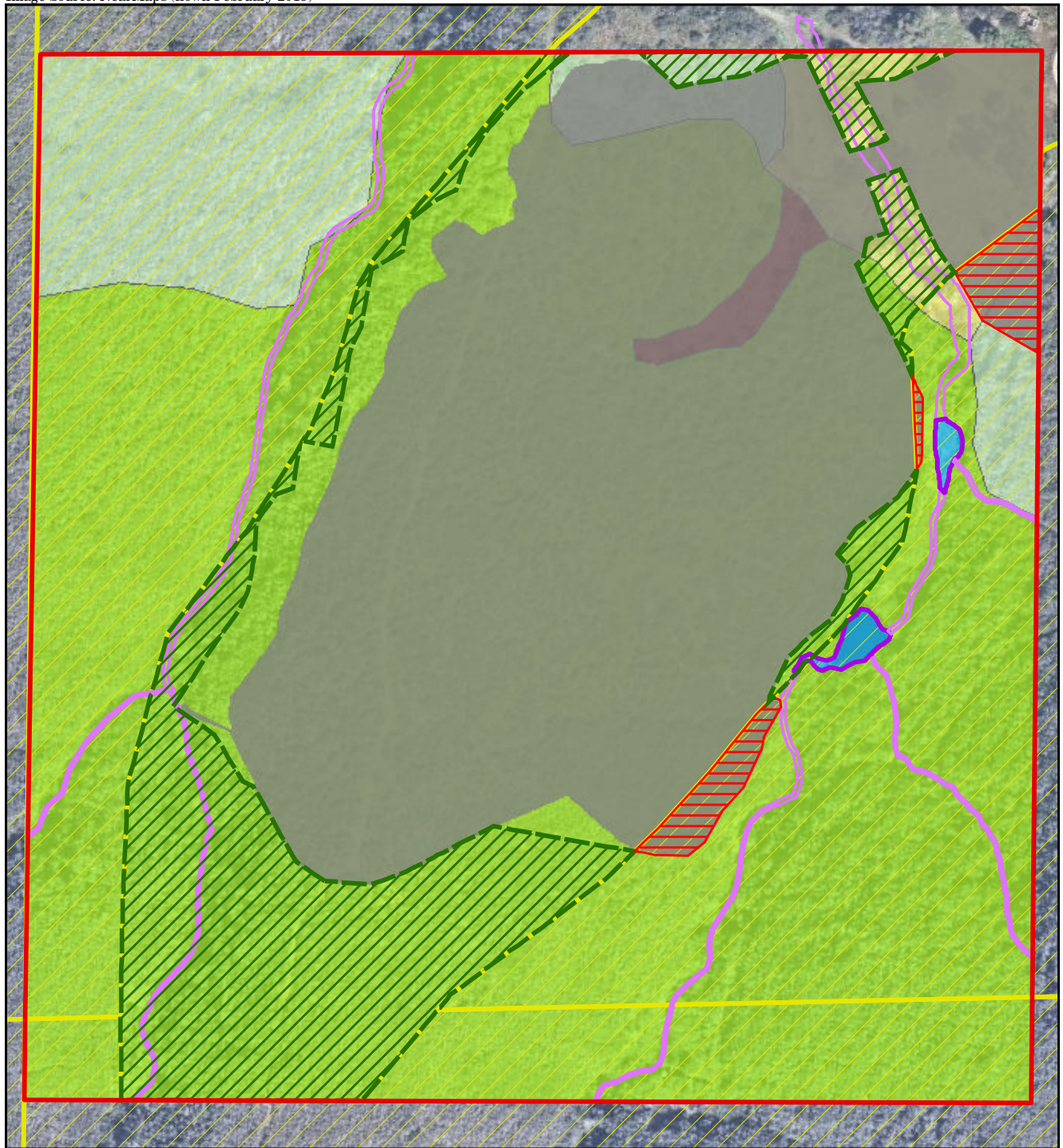


FIGURE 7a

Existing MHPA Boundary



- Project Boundary
- Limit of Disturbance
- Existing MHPA Boundary
- MHPA Addition
- MHPA Deletion

Jurisdictional Waters

- Wetland Waters
- Non-wetland Water/Streambed

Vegetation Community/Land Cover Type

- Coastal Sage Scrub
- Disturbed Land
- Freshwater Marsh
- Non-native Grassland
- Southern Mixed Chaparral

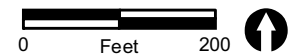


FIGURE 7b

Proposed MHPA Boundary Line Adjustment

6.1 Boundary Adjustment Criteria

The overall MSCP policy for BLAs requires that they must transfer equal or higher biological values of impacted species and habitats into the preserve. A comparison of the biological values of the impacted areas and land to be transferred into the preserve is presented below. This comparison is based on the six biological factors required by the MSCP for a MHPA BLA.

6.1.1 Effects on Significantly and Sufficiently Conserved Habitats

The amount and distribution of habitats considered significantly and sufficiently conserved within the preserve areas would be functionally equivalent to the impacted areas. The BLA would also result in an increase in total area due to an increase in acreage of southern mixed chaparral and non-native grassland. The areas of coastal sage scrub, southern mixed chaparral, and non-native grassland conserved together on-site within the adjusted MHPA would add approximately 5.06 acres of native habitat in excess of the amount of native habitat deleted, resulting in increases in the area of significantly conserved Tier III-A and III-B habitats within the MSCP subarea. The habitat value would be functionally higher relative to the current MHPA, despite the minor loss (0.01 acre) of coastal sage scrub as there would be a net gain of undisturbed native habitat to the MHPA. Thus, the proposed habitat exchange would maintain and slightly improve the conservation, configuration, and area of significantly or sufficiently conserved habitats within this portion of the MHPA.

6.1.2 Effects to Covered Species

The approved land exchange in this portion of the MHPA would maintain the overall conservation of covered species, as no covered species occur within the area to be deleted from the MHPA. The addition of southern mixed chaparral and non-native grassland habitats within the lands to be added to the MHPA may increase habitat for covered species that may occur in the vicinity of the project (e.g., coastal California gnatcatcher [*Poliioptila californica californica*], Cooper's hawk [*Accipiter cooperii*]).

6.1.3 Effects on Habitat Linkages and the Function of Preserve Areas

The project site is part of, and adjacent to, an existing open space area. Although it is reasonable to assume that wildlife may currently move locally through the project area, the site is somewhat restricted by residential development and paved roads in the Heritage Bluffs II project to the northeast. Currently, local wildlife movement may occur on the Avion site to the west, east, and south as the site is adjacent to MHPA lands within the undeveloped Black Mountain Park Open Space (see Figure 6). In addition, some local north-south wildlife movement is possible along the ephemeral drainages that occur in the bottoms of the canyons. The proposed private drive crossing of the eastern drainage would

be constructed as an arch culvert with a span of approximately 42 feet wide and 21 feet high, a span and height that would continue to allow local wildlife movement through this area (Figures 8a and 8b).

Although the Avion project would have minor affects to the existing habitat linkages to the southwest of the Heritage Bluffs II project through the loss of habitat, the MHPA boundary adjustment would offset this affect through the preservation of habitat linkages along the west, east, and south sides of the project where newly added MHPA area would occur. The addition of these conserved lands would enhance the local habitat linkages in these directions.

Thus, effects of the approved changes to the MHPA boundary would be negligible with respect to the function of the preserve area and habitat linkages. All of the changes approved are adjacent to a major wildlife corridor and associated linkages that would remain intact with linkages present.

6.1.4 Effects on Preserve Configuration and Management

The proposed modifications to the MHPA boundary do not change the proportions or decrease the total area of the MHPA. The minor changes in shape or length of edges of the MHPA boundary are due to relatively small encroachments by the project. These minor encroachments into the MHPA would be offset by gains in native habitat acreage primarily on the southern portion of the site. The resulting MHPA preserve area configuration would be similar to the pre-construction condition and include the addition of land to the MHPA. The approved changes to the MHPA boundary would not conflict with any of the previously identified conservation or management needs for the subarea or cause the need for additional measures.

6.1.5 Effects on Ecotones or Other Conditions Affecting Species Diversity

The proposed changes to the MHPA boundary at this location would improve the extent of open space and local habitat linkages to the surrounding MHPA preserve lands. These modifications to the MHPA would maintain the local topographic and structural diversity of the preserve while slightly improving the habitat interfaces along the southern, western, and eastern project site borders over the current preserve design at this portion of the MHPA.

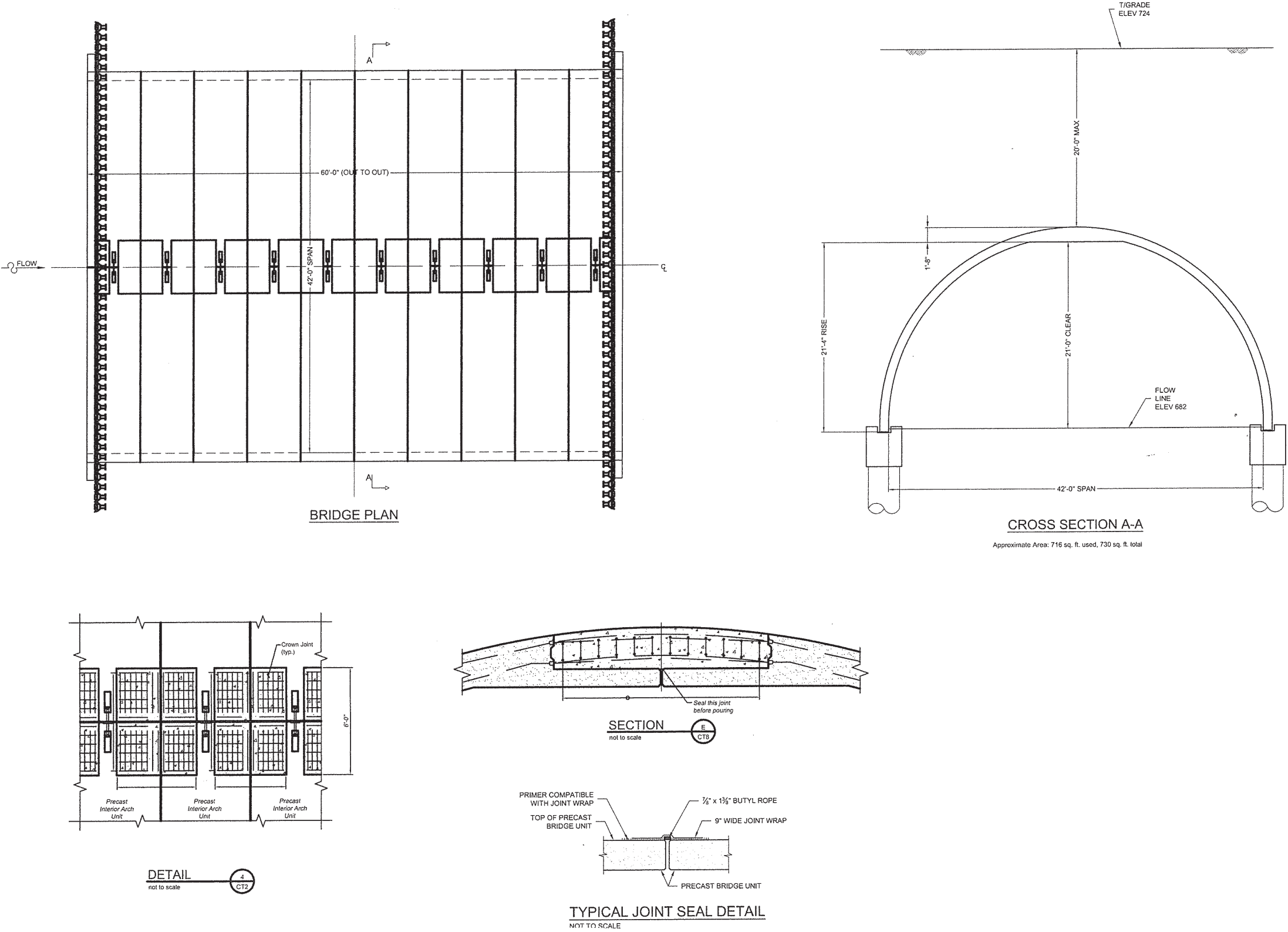


FIGURE 8a
Arch Culvert Bridge Design

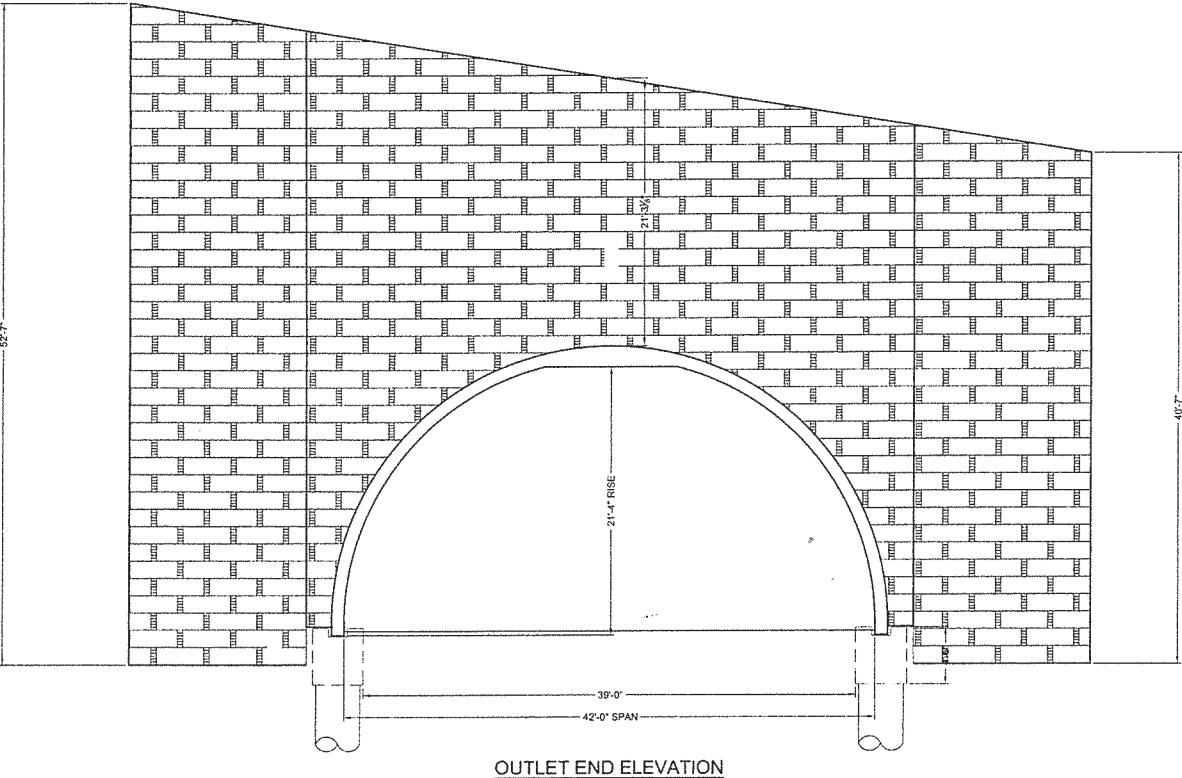
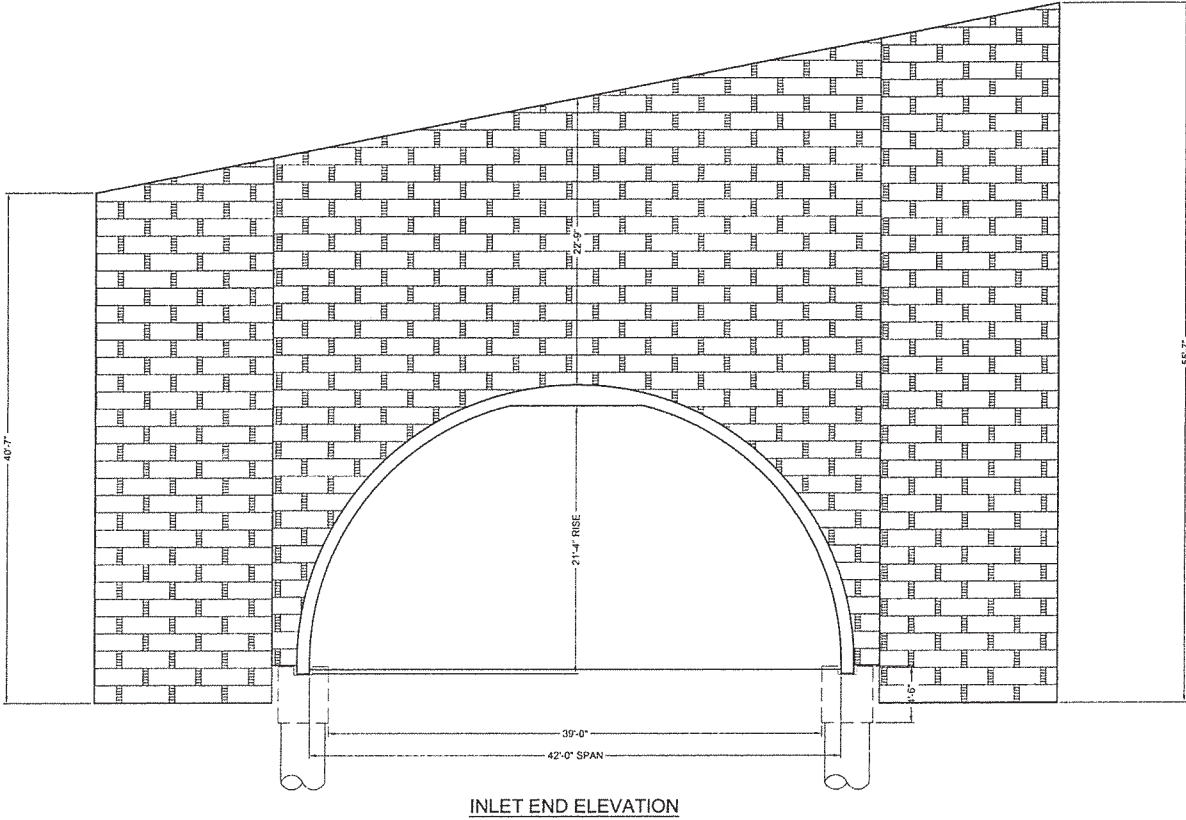


FIGURE 8b
Arch Culvert Wall Design

6.1.6 Effects to Species of Concern Not Covered under the MSCP

The proposed MHPA BLA at this location would not significantly increase the likelihood that any uncovered species would be listed under either the federal or state Endangered Species Act. The observed nest of the San Diego woodrat would be avoided and the surrounding habitat would be preserved in open space.

6.2 MHPA BLA Summary

The proposed MHPA BLA would be beneficial to the overall MHPA preserve at this location due to an increase in Tier III-A and III-B habitats and acreage of preserved land. The minor losses of coastal sage scrub, southern mixed chaparral, and non-native grassland habitats from encroachments into the current MHPA total 0.55 acre and would be offset by additions of coastal sage scrub, southern mixed chaparral and non-native grassland habitats into the MHPA currently located within the southern portion of the project site totaling 5.06 acres. This proposed land exchange complies with the overall MSCP policy for BLAs, as the approved BLA would transfer equal or higher biological values of impacted species and habitats into the preserve. This conclusion is based on the comparison of biological value provided by the evaluation of the six biological factors required by the MSCP for a MHPA BLA as discussed above.

7.0 Sensitive Biological Resources

7.1 Sensitivity Criteria

For purposes of this report, species will be considered sensitive if they are: (1) covered species or narrow endemic species under the City MSCP, (2) listed by state or federal agencies as threatened or endangered or are proposed for listing; (3) on California Rare Plant Rank 1B (considered endangered throughout its range) or California Rare Plant Rank 2 (considered endangered in California but more common elsewhere) of the CNPS Inventory of Rare and Endangered Vascular Plants of California (2016); or (4) considered rare, endangered, or threatened by the CNDDDB (State of California 2016a, b), the City's biology guidelines (City of San Diego 2012), or local conservation organizations or specialists. Noteworthy plant species are considered to be those that are on California Rare Plant Rank 3 (more information about the plant's distribution and rarity needed) and California Rare Plant Rank 4 (plants of limited distribution) of the CNPS Inventory. Sensitive vegetation communities are those identified by the CNDDDB (Holland 1986) or identified by the City (2012).

All wetland areas and non-wetland waters of the U.S. are considered sensitive. Wetlands and non-wetland waters are under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Streambeds and associated vegetation are under the jurisdiction of CDFW. The City defines wetlands as:

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation;
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; and
3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands (City of San Diego 2012).

Assessments for the potential occurrence of sensitive species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB, and species occurrence records from other sites in the vicinity of the project site.

7.2 Vegetation Communities

Coastal sage scrub, southern mixed chaparral, non-native grassland, and freshwater marsh are all considered sensitive vegetation types under the City (City of San Diego 2012). Coastal sage scrub is ranked as a Tier II habitat, southern mixed chaparral as a Tier III-A habitat, non-native grassland as a Tier III-B habitat, and freshwater marsh as a wetland habitat. All these habitat designations require mitigation for impacts to these habitat types.

7.3 Sensitive Plants

A spring survey to look for sensitive plant species was conducted on the site on March 21, 2018. No sensitive plant species were observed during the spring survey and none are expected to occur on the site. A list of sensitive plant species, including species endemic to San Diego County, with the potential for occurrence on the site is provided in Attachment 3.

One sensitive plant species, thread-leaved brodiaea (*Brodiaea filifolia*), was initially considered to have a potential to occur on the project site solely due to close proximity to a known population to the north that occurs within the Heritage Brodiaea Preserve. The Heritage Brodiaea Preserve population of thread-leaved brodiaea occurs within open space set aside as part of the Heritage Bluffs II development project. Over ten thousand individual thread-leaved brodiaea plants have been documented in this preserve. The thread-leaved brodiaea in the Heritage Brodiaea Preserve occur on heavy clay soils.

Thus, a focused spring survey for thread-leaved brodiaea was also conducted on the Avion project site on March 21, 2018. Additional focused surveys for thread-leaved brodiaea were conducted on March 14 and April 12, 2019. These surveys were timed to coincide with the emergence and observability of the existing population of this species within the Heritage Brodiaea Preserve. No thread-leaved brodiaea plants were observed on the Avion project site and none are expected to occur. Therefore, there is a low potential for this species to occur on the site due to the following several factors.

- **Historically Chaparral/Sage Scrub Habitat** – A review of historical aerial photographs back to 1953 show that the Avion project area was vegetated with shrublands (i.e., chaparral, coastal sage scrub) while the location of the Heritage Preserve to the north has been grassland to the present. By the mid-1960s the Avion site had an established homestead that cleared the surrounding shrublands for access, buildings, and local agricultural activities. The non-native grassland areas that currently occur on the site colonized some of these disturbed areas once they were abandoned.
- **Poor Quality Grassland Habitat** – The non-native grassland vegetation on the project site has been subject to historical disturbances (e.g., dirt roads, clearing, agricultural activities, homestead, etc.). The non-native grassland that developed after the homestead was abandoned grew a tall, thick thatch that makes it difficult for herbaceous species other than grasses to persist. This grass thatch is much taller and denser than that where the known thread-leaved brodiaea population to the north occurs. The non-native grassland on the site currently supports an active gopher population that is present throughout the habitat. This level of gopher activity confined to a relatively small area creates conditions that are not suitable for plants that grow from bulbs or corms.
- **Low Plant Species Composition** – The existing non-native grassland areas on the site are comprised of dense stands of non-native grasses almost to the complete exclusion of other plant species. No plant species from bulbs or corms occur in the grassland on the site. This condition is in sharp contrast to the Heritage Brodiaea Preserve where the less dense grassland (i.e., lower thatch development) habitat on heavy clay soil supports bulb and corm species such as thread-leaved brodiaea, blue-eyed grass, blue dicks, death camas, and goldenstar in relatively large numbers.
- **Lack of Clay Soil** – Thread-leaved brodiaea in San Diego County occurs primarily on clay soils that are vernal moist, typically derived from granitic rock, and that support native grassland, annual grasslands, alkali grasslands, or open sage/chaparral scrub habitats (USFWS 1998, 2005). The species may also occur on soils with a clay subsurface, or clay lenses within loamy, silty loam, loamy sand, silty deposits with cobbles, or alkaline soils. The Avion site occurs on shallow San Miguel-Exchequer rocky silt loam soils derived from meta-volcanic rock. The brodiaea population within the Heritage Preserve to the north occurs solely on Auld clay soils. This Auld clay soil lens does not extend onto the Avion site.
- **Past Surveys** – Thread-leaved brodiaea was not observed on the project site during a past biological survey conducted on the site in 2013 (RECON 2013). Numerous other surveys conducted over the last five years of the adjacent land to the north where the Heritage Bluffs II and East Clusters development projects are located did not find thread-leaved brodiaea in close proximity to the southern boundary of the Avion project site.

7.4 Sensitive Wildlife Species

Two sensitive wildlife species were observed during the survey. A Cooper's hawk (*Accipiter cooperii*) was observed flying over the project site. A nest of the San Diego desert woodrat was observed in the chaparral vegetation. The woodrat nest is located in dense chaparral in the northeastern portion of the project site to the east of the drainage course (see Figure 5).

Four other sensitive species have a moderate potential to occur on the project site due to the habitat conditions. Two sensitive reptile species, Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) and coastal whiptail (*Aspidoscelis tigris stejnegeri*), may occur in small numbers in the shrub land habitats on the project site. Two sensitive bird species, coastal California gnatcatcher (*Polioptila californica californica*) and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), have the potential to occur in small numbers in the coastal sage scrub and southern mixed chaparral areas on the project site. A list of sensitive wildlife species with the potential to occur on the site is provided in Attachment 4.

A habitat assessment for the potential for the site to support western burrowing owl (*Athene cunicularia hypugaea*) was conducted during the general survey of the site. It was determined that there is a low potential for this species to occur on-site, as the non-native grassland present is likely too small an acreage to support burrowing owl, the structure of the grassland (i.e., tall, dense) is not optimal for burrowing owl, and the lack of observations of suitable burrows, burrow complexes, or any sign of burrowing owl presence on-site.

7.4.1 Area Specific Management Directives

Measures to protect the MHPA are outlined in the MSCP and include general and specific guidelines for development within and adjacent to the MHPA, and management and monitoring goals for specific areas, habitat, and species. These guidelines are intended to preclude impacts, particularly those related to urban edge effects which include (but are not limited to) trampling, dumping, vehicular traffic, competition with invasive species (i.e., parasitism or predation from invasive animal species and habitat degradation from introduction of non-native plant species), predation by domestic animals, noise, collecting, recreational activities, and other human intrusion (City of San Diego 1997). The MSCP, Appendix A (City of San Diego 1997), also outlines species specific conditions of coverage for all covered species. These conditions of coverage are outlined in below.

Belding's Orange-throated Whiptail

The area-specific management directives (ASMDs) for Belding's orange-throated whiptail must address edge effects.

- To address edge effects, the entire development footprint shall be located outside of the MHPA. Manufactured slopes adjacent to the MHPA would be steep and

relatively high to minimize potential edge effects and prevent encroachment into the MHPA. These slopes would be re-vegetated with native species.

Cooper's Hawk

The ASMDs for Cooper's hawk include a 300-foot impact avoidance area around active nests, and minimization of disturbance in oak woodlands and oak riparian forests.

- Should an active Cooper's hawk, or raptor nest, be detected within the MHPA during the pre-grading survey, discussed in Section 7.2.1, appropriate construction setback of 300 feet will be implemented until the fledglings are independent of the nest.

Coastal California Gnatcatcher

For coastal California gnatcatchers, the ASMDs must include additional 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. No clearing of occupied habitat within the City of San Diego's MHPAs may occur during this species' breeding season between March 1 and August 15.

- The entire development footprint is outside of the MHPA. The manufactured slopes adjacent to the MHPA would be steep, relatively high, and revegetated with native species; therefore, the proposed project should not increase edge effects in the MHPA. A buffer occurs between the development footprint and the MHPA which should help protect from accidental fires spreading into the MHPA from the proposed project. As stated in the MHPA Adjacency Guidelines under Brush Management, vegetation clearing will be done consistent with City of San Diego standards and will avoid/minimize impacts to species such as the coastal California gnatcatcher.

Southern California Rufous-crowned Sparrow

For this species, the management directive includes maintenance of dynamic processes, such a fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.

- The project would not alter the current dynamic processes, such as fire, as a buffer is provided between the development footprint and the MHPA which should help protect from accidental fires spreading into the MHPA from the proposed project.

7.5 Jurisdictional Waters

The drainage courses, their tributaries, and the two impoundment areas are considered federal and state jurisdictional waters (Table 4; Attachment 5). The major drainage courses

are federal (USACE) non-wetland waters and state (CDFW, Regional Water Quality Control Board) streambed features that are ephemeral. These drainage courses do not support wetland vegetation, but occur within the upland chaparral habitat in the canyon bottoms. The two impoundments support herbaceous wetland plant species, hydric soils, and secondary wetland hydrology indicators, and therefore, are federal and state wetlands. As the two impoundment areas support herbaceous wetland plants they are considered a wetland under the City's biology guidelines (City of San Diego 2012).

Table 4 Jurisdictional Waters		
Jurisdictional Waters Type	Existing Acres	Agency
Wetland	0.13	U.S. Army Corps of Engineers Regional Water Quality Control Board California Department of Fish and Wildlife City of San Diego
Non-wetland water/Streambed	0.63	U.S. Army Corps of Engineers Regional Water Quality Control Board California Department of Fish and Wildlife
TOTAL	0.76	

In accordance with San Diego Municipal Code Section 143.0141, a wetland buffer that ranges between 171 feet and 186 feet is being maintained on the eastern side of the project to protect and maintain the functions and values of the remaining on-site wetland areas (Figure 9). The buffer is located between the jurisdictional wetlands and the edge of the development to avoid and minimize any indirect edge effects to the wetlands. The buffer would include the manufactured 2.2:1 to 1.5:1 slopes to the east of the project, approximately 30 to 96 feet tall. These steep slopes would be revegetated with native species and also function as a barrier to pedestrians as the slopes would be too steep to walk. The proposed private drive crossing to be located at the lower end of the eastern drainage on-site would be constructed as an arch culvert bridge (see Figures 8a and 8b) with the footings for the bridge located at least 15 feet from either bank of the existing drainage course.

Current functions and values of the non-wetland waters in the western ephemeral drainage and wetlands and non-wetland waters along the eastern ephemeral drainage are primarily the conveyance of natural runoff during storm events. The seasonal runoff supports only small patches of herbaceous wetland vegetation above the old impoundment areas in the eastern drainage, so wetland habitat values are relatively low due to lack of habitat structure and plant diversity. These existing functions and values would be maintained as the project would not impair flows in these drainages. Habitat functions and values within these impoundments would continue to be relatively low after the project is built because the existing herbaceous freshwater marsh vegetation would essentially remain the same. No habitat value for aquatic wildlife is expected to improve as the impoundment does not hold water due to the breach in the earth dam. The wetland buffer would provide separation and restrict access to these wetlands by the distance to development and steepness of the manufactured slopes that would deter any pedestrians to enter into mapped wetlands.








- | | | | |
|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|-----------------------------|
|  | Project Boundary | Jurisdictional Waters | |
|  | Plan Lines |  | Wetland Waters |
| | |  | Non-wetland Water/Streambed |
| | |  | Wetland Buffer Distance |

FIGURE 9

Location of Jurisdictional Waters/Wetland
and Wetland Buffer

The wetland buffer distances would provide vertical and horizontal separation from potential indirect noise and lighting impacts associated with the project. The buffer would minimize any incidental indirect impacts during the grading of the site and any post-construction uses adjacent to the wetlands.

7.6 MHPA Land Use Adjacency Guidelines

The project has the potential for indirect impacts to the adjacent MHPA along the western, eastern, and southern boundaries. As stated in the MSCP Section 1.4.3 (City of San Diego 1997), land uses adjacent to the MHPA are to be managed to ensure minimal impacts to the MHPA. The MSCP establishes adjacency guidelines to be addressed on a project-by-project basis to minimize direct and indirect impacts and maintain the function of the MHPA. The guidelines listed in Section 1.4.3 of the MSCP (City of San Diego 1997) are outlined below with corresponding project action.

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. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.

- The project has been designed so as to not drain directly into the MHPA. All drainage will be treated on-site within the development footprint using detention/water quality basins to dissipate/detain and filter/treat runoff. The runoff from the development (storm water, irrigation, etc.), with the exception of the eastern fill slope, would be captured in storm drains that flow to the bioretention basin located in the northern portion of the site. The eastern fill slope would drain directly into the existing drainage course. Temporary irrigation of this slope would occur during the establishment of native vegetation to stabilize the slope and this supplemental irrigation would be discontinued within a couple of years. Irrigation rates during this period could be adjusted to minimize any excess runoff.

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. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.

- The project would incorporate measures to reduce impacts caused by the application and/or drainage of chemicals or project generated by-products such as pesticides, herbicides, animal waste, and other substances that are potentially toxic or impactive to native habitats/flora/fauna (including water) into the MHPA. All construction-related activity that may have potential for leakage or intrusion shall be monitored by the Qualified Biologist/Owner's Representative or Resident Engineer to ensure there is no impact to the MHPA. The project has been designed to limit post-development storm water runoff discharge rates and velocities to maintain or reduce pre-development erosion and to reduce nutrients, organic compounds, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides by applying best management practices (BMPs).

Construction BMPs, such as monitoring, flagging, staking or silt/bio fencing around sensitive areas would be used to ensure toxins from construction and project implementation would not impact the MHPA.

Lighting. Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.

- Lighting for the project would be shielded and/or directed away from the MHPA. Lighting for the project would be responsive to the species in the area as well as the overall rural surroundings. Understanding that some species rely on darkness for shelter, feeding patterns, migrating, etc., the areas adjacent to any MHPA would be especially sensitive to light exposure in order to retain native characteristics. Placement and use of lighting associated with the project would be designed to be shielded and directed downward to minimize light pollution of adjacent MHPA lands and accommodate the habits of nocturnal species that prefer to move and forage in darkness.

Additionally, the MHPA is located at the bottom of a manufactured slope and there would be a 20- to 30-foot elevation difference from the project. Any lighting for the project at the top of the slope would be shielded and directed away from the MHPA such that no direct illumination would occur towards 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. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

- There is suitable Diegan coastal sage scrub habitat within the MHPA in the northwestern and northeastern portions of the site to support coastal California

gnatcatcher. Protocol surveys shall be conducted to determine the presence or absence of this sensitive bird species if construction occurs within its breeding season noted above. If coastal California gnatcatcher is present within the MHPA, construction noise levels at the MHPA boundary shall not exceed 60 A-weighted decibels. Additionally, development adjacent to the MHPA has been designed to minimize noise impacts to coastal California gnatcatcher. A benefit of the project design is the MHPA is at a lower elevation than the entire project site; therefore, it is not anticipated that the MHPA will be impacted by excessive noise.

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.

- Brush management is required on all premises that are within 100 feet of a structure and contain highly flammable, native, or naturalized vegetation. The standard brush management zone (Zone) widths are 35 feet for Zone 1 and 65 feet for Zone 2 as stated in Table 142-04h of the City Municipal Code. The project proposes to implement Alternative Compliance measures to traditional brush management zones that involve a reduction in Zone 1 limits consistent with the current requirements of Municipal Code Section 142.0412. By reducing the Zone 1 limit and providing a non-combustible wall between Zone 1 and Zone 2, the overall impact to vegetation is reduced as the graded area is less. All Zone 1 impacts are located within the grading limits. The majority of the Zone 2 impacts are also located within the grading limits. Although 1.32 acres of Zone 2 impacts to southern mixed chaparral lie outside of the grading limits primarily on the western side of the project area, Zone 2 impacts are considered “impact neutral” and involve only minor thinning, trimming, and pruning of vegetation without destroying habitat value. This 1.32-acre of Zone 2 located in southern mixed chaparral habitat is not included in the project’s mitigation area and is not counted toward satisfying mitigation acreage. The Zone 2 zones located adjacent to the MHPA would be managed by the homeowners association. Therefore, the proposed brush management zones would comply with the City requirements.

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

- The planting palette depicted on the landscape plans for the project do not include any invasive or non-native plant species adjacent to the MHPA area. Additionally, according to City standards for brush management, Zone 2 will include only native, locally indigenous species.

Native shrub species and hydroseed would be installed on the manufactured slope adjacent to the MHPA on the western and eastern slopes of the project and only temporarily irrigated until the plants have become established. It is recommended that they be irrigated using a temporary aboveground irrigation system. The plants should be installed in late winter to early spring, as this is the optimal time for native plant growth and seed germination. A 120-day plant establishment period and a 24-month maintenance and monitoring period are necessary to ensure that the native plants establish successfully. Maintenance activities would involve control of non-native plant species, maintenance and removal of the temporary irrigation system, and replacement planting (if necessary). The site should be monitored by a biologist quarterly to evaluate site conditions and to recommend remedial actions, if needed.

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

- The proposed manufactured slopes for the project are within the development footprint and do not encroach into the MHPA.

Barriers/Access. 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 project would include boundary fencing along lots at the top of slopes and at the edge of most private drives to delineate residential use areas from adjacent MHPA open space areas. Lots adjacent to MHPA open space would have a glass-block view fence and lots at the top of slopes would have a metal picket view fence. The entry private drive would have a 3-rail concrete fence to deter access to the adjacent MHPA open space area. The private drive that terminates in the southwest portion of the site dead ends into a steep cut slope which with signage would deter pedestrian access to the MHPA. The private drive in the southeast portion of the site adjacent to open space would be at the top of a steep slope that, along with signage, would restrict access to the adjacent MHPA located at the toe of the slope.
- Signs should be posted at the edge of unfenced private drives and along perimeter segments fenced with the 3-rail concrete fence to inform residents of the restricted adjacent MHPA open space preserve areas.
- The project would include native vegetated slopes adjacent to the MHPA boundary. These vegetated steep (2.2:1-1.5:1) slopes would also function as a deterrent to pedestrian access into the MHPA.

8.0 Project Impacts

The project would develop approximately 16 acres of the project site for residential housing and associated infrastructure. The limits of grading and impact are shown on Figure 10.

8.1 Direct Impacts

Direct impacts to biological resources occurring on the project site would result from the grading of the proposed development area. These direct impacts are discussed below.

8.1.1 Vegetation Communities

The project grading would impact coastal sage scrub, southern mixed chaparral, non-native grassland, and disturbed land both inside and outside of the MHPA (Table 5). The project proposes to implement Alternative Compliance measures to traditional brush management zones that involve a reduction in Zone 1 limits. By reducing the Zone 1 limit and providing a non-combustible wall between Zone 1 and Zone 2, the overall impact to vegetation is reduced as the graded area is less. All Zone 1 impacts are located within the grading limits. The majority of the Zone 2 impacts are also located within the grading limits; however, 1.32 acres of Zone 2 impacts to southern mixed chaparral lie outside of the grading limits primarily on the western side of the project area (see Figure 10). The Zone 2 impacts are considered “impact neutral” and involve only minor thinning, trimming, and pruning of vegetation.

Table 5 Impacts to Vegetation Communities and Land Cover Types (acres)					
Vegetation Communities/ Land Cover Types	Permanent Impact ¹		Construction Zone Impact ²		Total
	Inside MHPA ³	Outside MHPA	Inside MHPA	Outside MHPA	
Coastal Sage Scrub	0	0.53	0	0.03	0.56
Southern Mixed Chaparral	0	13.04	0	0.10	13.14
Non-native Grassland	0	1.33	0	0.17	1.50
Freshwater Marsh	0	0	0	0	0
Disturbed Land	0	0.35	0	0	0.35
TOTAL	0	15.25	0	0.30	15.55
¹ Includes all Brush Management Zone 1 impacts.					
² Construction Zone impact area refers to area needed for remedial work to construct the manufactured slopes.					
³ Assumes MHPA BLA approved					

8.1.2 Sensitive Plants

No sensitive plant species were observed on the project site and none are expected to occur due to lack of appropriate habitat and/or soil conditions. No impacts to sensitive plant species would occur.



Project Boundary

Plan Lines

Limit of Grading

Construction Zone

Brush Management Zone 1

Brush Management Zone 2

Adjusted MHPA

Jurisdictional Waters

Wetland Waters

Non-wetland Water/Streambed

Vegetation Community/Land Cover Type

Coastal Sage Scrub

Disturbed Land

Freshwater Marsh

Non-native Grassland

Southern Mixed Chaparral

San Diego Desert Woodrat Nest

0 Feet 200



FIGURE 10

Location of Project Impacts

8.1.3 Sensitive Wildlife

Potential impacts to sensitive wildlife species observed (e.g., San Diego desert woodrat nest) have been avoided. The woodrat nest occurs approximately 50 feet east of the grading limit and 45 feet east of where the limit fence would be placed.

Potential impacts to species with a moderate potential for occurrence (e.g., Belding's orange-throated whiptail, coastal whiptail, southern California rufous-crowned sparrow) are not expected to affect a large number of individuals; therefore, any impacts to these species are not considered significant. Potential impacts to the Cooper's hawk would be considered significant, but could be mitigated with implementation of breeding season restrictions (see Section 9.2, E. Avian Protection Requirements).

8.1.3.1 General Wildlife

Direct impacts are anticipated to occur to small mammals and reptiles with low mobility during the grading of the project site. A biological monitor would be required to be present on-site during grading to preclude any avoidable/known impacts. Birds which are not nesting are expected to be able to avoid being impacted. Impacts to general wildlife are, therefore, considered less than significant.

8.1.3.2 Nesting Birds

Direct impacts could occur to Cooper's hawk and/or rufous-crowned sparrow that have a moderate to high potential to occur within the project area due to mass grading and vegetation removal. Impacts to these species identified as listed, candidate, sensitive, or special status in the MSCP are considered significant and require biological monitoring and avoidance of typical nesting periods (see Section 9.2).

8.1.4 Jurisdictional Waters

No impacts are proposed to federal, state, or city jurisdictional waters, including wetlands. The major access private drive into the project site would cross the eastern drainage course; however, the crossing would be an arch-culvert type bridge crossing resulting in no permanent impacts to the bed or bank of the drainage. The drainage course would remain in its natural soft-bottom configuration. Grading limits along the western and eastern boundaries do not encroach into the ephemeral streambeds or wetlands.

Post development, the ephemeral drainage courses and wetlands would be buffered from the adjacent development by initial setbacks during grading and the steep manufactured slopes once the site has been developed. The functional wetland buffer would be approximately 171 to 186 feet on the east portion of the project site. The wetland buffer distances would protect and maintain the biological, chemical, and physical functions of the wetlands.

8.2 Indirect Impacts

As the project site is adjacent to the MHPA, it has the potential to inadvertently indirectly impact sensitive native and non-native habitats that may be occupied by three sensitive bird sensitive species. Indirect impacts are anticipated to occur to sensitive nesting birds (i.e., Cooper's hawk, rufous-crowned sparrow), if present, due to grading, drainage, use of toxins, increase access of the area by humans and their pets, excessive noise and lighting generated by project construction and implementation. Potential indirect impacts to these three sensitive bird species, if present, could occur from construction and implementation of the project within or adjacent to the MHPA. Any indirect impacts to these three sensitive bird species within the MHPA can be avoided by compliance with the MHPA Land Use Adjacency Guidelines covered in Section 5.6 above. Therefore, no significant indirect impacts are anticipated to occur.

9.0 Mitigation

Impacts to biological resources were evaluated through review of the project's consistency with the City's Environmentally Sensitive Lands (ESL) Regulations and Biology Guidelines, as well as the MSCP Subarea Plan. As such, mitigation is required for project impacts that are considered significant under the California Environmental Quality Act (CEQA; City of San Diego 2016), including impacts to sensitive or listed species and sensitive vegetation communities. All impacts to sensitive biological resources should be avoided to the maximum extent feasible and minimized when possible. Mitigation measures typically employed include resource avoidance, dedication/acquisition of habitat, or habitat restoration.

9.1 Upland Vegetation Communities

Mitigation for impacts to coastal sage scrub (Tier II), southern mixed chaparral (Tier III-A), and non-native grassland (Tier III-B) communities would be achieved through the preservation of habitat on the site located outside of the development area. Impacts to a total of 15.2 acres of sensitive vegetation would be mitigated by the on-site preservation of 24.03 acres of sensitive vegetation as summarized by habitat type in Table 6. The preserved habitat areas on the site would all be within the boundaries of the MHPA BLA dedicated to the City.

The preserved habitat is located within the MHPA and would be dedicated to the City of San Diego upon acceptance by the City of San Diego Parks and Recreation Open Space Division. Management of the MHPA would be conducted by the City of San Diego consistent with Section 1.5, Management Framework Plan of the MSCP Subarea Plan (City of San Diego 1997).

Table 6
Mitigation Requirement for Sensitive Vegetation Communities

Vegetation Community (Tier)	Impact Inside MHPA	Mitigation Ratio with Preservation Inside MHPA	Sub- Total	Impact Outside MHPA	Mitigation Ratio with Preservation Inside MHPA	Sub- Total	Total Mitigation Requirement	On-site Preservation Inside MHPA ¹	Remaining Mitigation Requirement
Coastal Sage Scrub (Tier II)	0.14	1:1	0.14	0.60	1:1	0.60	0.74	3.53	0
Southern Mixed Chaparral (Tier III-A)	0.32	1:1	0.32	12.99	0.5:1	6.49	6.81	19.47	0
Non-native Grassland (Tier III-B)	0.14	1:1	0.14	1.58	0.5:1	0.79	0.93	0.53	0 ²
Freshwater Marsh (Wetland)	0	N/A	0	0	N/A	0	0	0.13	0
Total	0.60		0.60	15.17		7.88	8.48	23.66	0

¹With Multi-Habitat PMHPA BLA.

²Assumes up-tier mitigation for non-native grassland

9.2 Standard City Construction Measures

Mitigation for general impacts to biological resources would be incorporated via standard measures including general mitigation measures, biological protections during construction, (includes monitoring, preconstruction meetings, and development of a Biological Condition Monitoring Exhibit, etc.) as described below.

Mitigation During Construction – The following City standard mitigation would be included in the environmental document:

Biological Resource Protection During Construction

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's Biological Guidelines (2012), 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. **Preconstruction Meeting** - The Qualified Biologist shall attend the preconstruction 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 the City's Biology Guidelines, MSCP, ESL Ordinance, project permit conditions; CEQA; endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **Biological Construction Mitigation/Monitoring Exhibit (BCME)** - The Qualified Biologist shall present a BCME, which 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 U.S. Fish and Wildlife Service protocol), timing of surveys, wetland buffers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City Assistant Deputy Director (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 any direct impacts to Cooper's hawk, rufous-crowned sparrow, and coastal California gnatcatcher or any species identified as listed, candidate, sensitive, or special status in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). . If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a preconstruction survey to determine the presence or absence of nesting for these three sensitive bird species on the proposed area of disturbance. The preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the preconstruction survey to the City's Development Services Department (DSD) for review and approval prior to initiating any construction activities. If nesting activities for any of the above-mentioned sensitive bird species are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section or Resident Engineer, and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.
- F. **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 and fauna species, including nesting Cooper's hawk, rufous-crowned sparrow, and coastal California gnatcatcher) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. **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 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 preconstruction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to the 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 for Cooper’s hawk, rufous-crowned sparrow, and coastal California gnatcatcher, 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, 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.

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ATTACHMENTS

ATTACHMENT 1

Plant Species Observed

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
LYCOPODS			
SELAGINELLACEAE	SPIKE-MOSS FAMILY		
<i>Selaginella bigelovii</i> Underw.	Bigelow's spike-moss	SMC	N
GYMNOSPERMS			
CUPRESSACEAE	CYPRESS FAMILY		
<i>Cupressus sempervirens</i>	Italian cypress	NNG	I
PINACEAE	PINE FAMILY		
<i>Pinus</i> sp.	pine	DIS	I
<i>Pinus canariensis</i> C. Sm.	Canary Island pine	DIS, NNG	I
ANGIOSPERMS: MONOCOTS			
AGAVACEAE	AGAVE FAMILY		
<i>Yucca</i> sp.	ornamental yucca	NNG	I
CYPERACEAE	SEDGE FAMILY		
<i>Eleocharis macrostachya</i> Britton	pale spike-rush	FM	N
POACEAE (GRAMINEAE)	GRASS FAMILY		
<i>Avena barbata</i> Pott ex Link	slender wild oat	SMC	I
<i>Brachypodium distachyon</i> (L.) P. Beauv.	purple falsebrome	NNG	I
<i>Bromus diandrus</i> Roth	ripgut grass	SMC, DIS, NNG	I
<i>Bromus hordeaceus</i> L.	soft chess	SMC, NNG	I
<i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husn.	red brome	SMC, NNG	I
<i>Elymus</i> [= <i>Leymus</i>] <i>condensatus</i> J. Presl	giant wild-rye	SMC, NNG	N
<i>Festuca</i> sp.	fescue	SMC	I
<i>Polypogon monspeliensis</i> (L.) Desf.	annual beard grass, rabbitfoot grass	FM	I
<i>Stipa</i> [= <i>Nassella</i>] <i>pulchra</i> Hitchc.	purple needle grass	SMC, CSS	N
ANGIOSPERMS: DICOTS			
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Malosma laurina</i> Nutt. ex Abrams	laurel sumac	SMC, CSS	N
<i>Rhus integrifolia</i> (Nutt.) Benth. & Hook. f. ex Rothr.	lemonade berry	SMC, NNG	N
<i>Schinus molle</i> L.	Peruvian pepper tree	DIS	I
APIACEAE (UMBELLIFERAE)	CARROT FAMILY		
<i>Foeniculum vulgare</i> Mill.	fennel	SMC, NNG	I

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
APOCYNACEAE	DOGBANE FAMILY		
<i>Asclepias californica</i> Greene	California milkweed, round-hooded milkweed	SMC	N
ASTERACEAE	SUNFLOWER FAMILY		
<i>Artemisia californica</i> Less.	California sagebrush	SMC, CSS	N
<i>Baccharis pilularis</i> DC.	chaparral broom, coyote brush	SMC, NNG	N
<i>Carduus pycnocephalus</i> L.	Italian thistle	DIS, FM	I
<i>Centaurea melitensis</i> L.	tocalote, Maltese star-thistle	DIS	I
<i>Cynara cardunculus</i> L. ssp. <i>flavescens</i> Wiklund	cardoon, artichoke thistle	SMC, NNG	I
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>fasciculata</i> (DC.) Greene	fascicled tarweed	SMC	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	NNG	I
<i>Eriophyllum confertiflorum</i> (DC.) A. Gray var. <i>confertiflorum</i>	long-stem golden-yarrow	SMC, CSS	N
<i>Gnaphalium</i> sp.	cudweed, everlasting	SMC	N
<i>Hazardia squarrosa</i> (Hook. & Arn.) Greene	saw-toothed goldenbush	SMC, CSS	N
<i>Lactuca serriola</i> L.	prickly lettuce	FM	I
<i>Pseudognaphalium beneolens</i> [= <i>Gnaphalium canescens</i> ssp. <i>beneolens</i>] (Davidson) Anderb.	fragrant everlasting	SMC	N
BORAGINACEAE	BORAGE FAMILY		
<i>Heliotropium curassavicum</i> L. var. <i>oculatum</i> (A. Heller) I. M. Johnst. ex Tidestr.	seaside heliotrope, alkali heliotrope	FM	N
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY		
<i>Brassica</i> sp.	mustard	DIS	I
<i>Brassica nigra</i> (L.) W.D.J. Koch	black mustard	DIS	I
<i>Lepidium virginicum</i> L. ssp. <i>menziesii</i> (DC.) Thell. [= <i>Lepidium virginicum</i> var. <i>robinsonii</i>]	Menzies' [=Robinson's] peppergrass	DIS	N
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Dysphania</i> [= <i>Chenopodium</i>] <i>ambrosioides</i> (L.) Mosyakin & Clemants	Mexican tea	SMC	I
ERICACEAE	HEATH FAMILY		
<i>Xylococcus bicolor</i> Nutt.	mission manzanita	SMC	N
EUPHORBIACEAE	SPURGE FAMILY		
<i>Croton</i> [= <i>Eremocarpus</i>] <i>setiger</i> Hook.	turkey-mullein, dove weed	SMC	N

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY		
<i>Acmispon glaber</i> (Vogel) Brouillet [= <i>Lotus scoparius</i>]	deerweed, California broom	SMC, CSS	N
GROSSULARIACEAE	GOOSEBERRY FAMILY		
<i>Ribes indecorum</i> Eastw.	white-flowering currant	SMC	N
<i>Ribes speciosum</i> Pursh	fuchsia-flowered gooseberry	SMC	N
LAMIACEAE	MINT FAMILY		
<i>Salvia mellifera</i> Greene	black sage	SMC, CSS	N
<i>Stachys rigida</i> [= <i>Stachys ajugoides</i>] Nutt. ex Benth. var. <i>rigida</i>	hedge nettle	FM	N
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus</i> sp.	gum tree	NNG	I
OLEACEAE	OLIVE FAMILY		
<i>Olea europaea</i> L.	olive	DIS	I
<i>Cordylanthus rigidus</i> (Benth.) Jeps. ssp. <i>setigerus</i> T.I. Chuang & Heckard	thread-leaved bird's-beak	SMC	N
PAPAVERACEAE	POPPY FAMILY		
<i>Dendromecon rigida</i> Benth.	bush poppy	SMC	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY		
<i>Mimulus aurantiacus</i> Curtis	bush monkey-flower	SMC	N
PLANTAGINACEAE	PLANTAIN FAMILY		
<i>Plantago major</i> L.	common plantain	DIS	I
PLATANACEAE	PLANE TREE OR SYCAMORE FAMILY		
<i>Platanus racemosa</i> Nutt.	western sycamore	SMC	N
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Eriogonum fasciculatum</i> Benth.	California buckwheat	SMC, CSS	N
<i>Rumex crispus</i> L.	curly dock	FM	I
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Ceanothus tomentosus</i> Parry	Ramona lilac	SMC	N
ROSACEAE	ROSE FAMILY		
<i>Adenostoma fasciculatum</i> Hook. & Arn.	chamise, greasewood	SMC	N
<i>Cercocarpus minutiflorus</i> Abrams	San Diego mountain-mahogany	SMC	N
<i>Heteromeles arbutifolia</i> (Lindl.) M. Roem.	toyon, Christmas berry	SMC	N

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
RUBIACEAE	MADDER FAMILY		
<i>Galium angustifolium</i> Nutt. ex A. Gray ssp. <i>angustifolium</i>	narrow-leaf bedstraw	SMC	N
RUTACEAE	RUE FAMILY		
<i>Cneoridium dumosum</i> (Nutt. ex Torr. & A. Gray) Baill.	bushrue	SMC	N
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Scrophularia californica</i> Cham. & Schltdl.	California figwort	SMC	N
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Nicotiana glauca</i> Graham	tree tobacco	SMC	I
<i>Solanum xanti</i> [= <i>Solanum tenuilobatum</i>] A. Gray	chaparral nightshade	SMC	N
<p><i>Notes:</i> Scientific and common names were primarily derived from the Jepson Online Interchange (University of California 2016). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014). Additional common names were obtained from the USDA maintained database (USDA 2013) or the Sunset Western Garden Book (Brenzel 2001) for ornamental/horticultural plants.</p> <div> <div> HABITATS CSS = Coastal Sage Scrub DIS = Disturbed Land FM = Freshwater Marsh NNG = Non-Native Grassland SMC = Southern Mixed Chaparral </div> <div> ORIGIN N = Native to locality I = Introduced species from outside locality (I) = Introduced species to the ecoregion in which the survey occurred; however, native to other ecoregions within San Diego County. </div> </div>			

ATTACHMENT 2

Wildlife Species Observed

**Attachment 2
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-Site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES (Nomenclature for fairy shrimp from Eriksen and Belk 1999; for spiders and insects from Evans 2008; for butterflies from San Diego Natural History Museum 2002)				
PIERIDAE	WHITES & SULPHURS			
<i>Pieris rapae</i>	cabbage white (I)	SMC, CSS		°
LYCAENIDAE	BLUES, COPPERS, & HAIRSTREAKS			
<i>Icaricia acmon acmon</i>	Acmon blue	SMC, CSS		°
RIODINIDAE	METALMARKS			
<i>Apodemia mormo virgulti</i>	Behr's metalmark	SMC, CSS		°
<i>Vanessa cardui</i>	painted lady	SMC, CSS		°
BIRDS (Nomenclature from American Ornithologists' Union 2015 and Unitt 2004)				
CATHARTIDAE	NEW WORLD VULTURES			
<i>Cathartes aura</i>	turkey vulture	SMC, CSS, NNG	F / M, S	°
ACCIPITRIDAE	HAWKS, KITES, & EAGLES			
<i>Accipiter cooperii</i>	Cooper's hawk	SMC, CSS, NNG	F / Y	°
<i>Buteo jamaicensis</i>	red-tailed hawk	SMC, CSS, NNG	F / Y	°
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte anna</i>	Anna's hummingbird	SMC, CSS	C / Y	°
PICIDAE	WOODPECKERS & SAPSUCKERS			
<i>Picoides nuttallii</i>	Nuttall's woodpecker	SMC, CSS	F / Y	°
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Sayornis nigricans semiatra</i>	black phoebe	SMC, CSS	C / Y	°
<i>Sayornis saya</i>	Say's phoebe	SMC, CSS	C / W	°
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Aphelocoma californica</i>	California scrub-jay	SMC, CSS	F / Y	°
AEGITHALIDAE	BUSHTIT			
<i>Psaltiriparus minimus melanurus</i>	bushtit	SMC, CSS	C / Y	°
TIMALIIDAE	BABBLERS			
<i>Chamaea fasciata henshawi</i>	wrentit	SMC, CSS	C / Y	°

**Attachment 2
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-Site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Toxostoma redivivum redivivum</i>	California thrasher	SMC, CSS	F / Y	°
PARULIDAE	WOOD WARBLERS			
<i>Setophaga [=Dendroica] coronata</i>	yellow-rumped warbler	SMC, CSS	U / W	°
EMBERIZIDAE	EMBERIZIDS			
<i>Melospiza melodia</i>	song sparrow	SMC, CSS, NNG	C / Y	°
<i>Melospiza [=Pipilo] crissalis</i>	California towhee	SMC, CSS	C / Y	°
FRINGILLIDAE	FINCHES			
<i>Spinus [=Carduelis] psaltria hesperophilus</i>	lesser goldfinch	SMC, CSS	C / Y	°
LEPORIDAE	RABBITS & HARES			
<i>Sylvilagus audubonii</i>	desert cottontail	SMC, CSS		scat
MURIDAE				
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	SMC, CSS		nest
CANIDAE	CANIDS			
<i>Canis latrans</i>	coyote	SMC, CSS		scat
CERVIDAE	DEER			
<i>Odocoileus hemionus fuliginata</i>	southern mule deer	SMC, CSS		scat
<p>(I) = Introduced species</p> <p>HABITATS ABUNDANCE (birds only; based on Garrett and Dunn 1981)</p> <p>CSS = Coastal sage scrub, inland sage scrub C = Common to abundant; almost always encountered in proper habitat, usually in moderate to large numbers</p> <p>NNG = Non-native grassland F = Fairly common; usually encountered in proper habitat, generally not in large numbers</p> <p>SMC = Southern mixed chaparral U = Uncommon; occurs in small numbers or only locally</p> <p>SEASONALITY (birds only)</p> <p>M = Migrant; uses site for brief periods of time, primarily during spring and fall months</p> <p>S = Spring/summer resident; probable breeder on-site or in vicinity</p> <p>W = Winter visitor; does not breed locally</p> <p>Y = Year-round resident; probable breeder on-site or in vicinity</p>				

ATTACHMENT 3

Sensitive Plant Species Observed
or with the Potential for Occurrence

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
ANGIOSPERMS: DICOTS						
CHENOPODIACEAE GOOSEFOOT FAMILY						
<i>Aphanisma blitoides</i> aphanisma	—/—	1B.2	NE, MSCP	Annual herb; coastal bluff scrub, coastal sage scrub; sandy soils; blooms March–June; elevation less than 1,000 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.
APIACEAE CARROT FAMILY						
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	CE/FE	1B.1	NE, MSCP	Biennial/perennial herb; vernal pools, mesic areas of coastal sage scrub and grasslands, blooms April–June; elevation less than 2,000 feet. Known from San Diego and Riverside counties. Additional populations occur in Baja California, Mexico.	No	Not expected to occur due to lack of appropriate vernal pool habitat and soils.
ASTERACEAE SUNFLOWER FAMILY						
<i>Ambrosia pumila</i> San Diego ambrosia	—/FE	1B.1	NE, MSCP	Perennial herb (rhizomatous); chaparral, coastal sage scrub, valley and foothill grasslands, creek beds, vernal pools, often in disturbed areas; blooms May–September; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Baccharis vanessae</i> Encinitas baccharis [=Encinitas coyote brush]	CE/FT	1B.1	NE, MSCP	Perennial deciduous shrub; chaparral; maritime; sandstone; blooms August– November; elevation less than 2,500 feet. San Diego County endemic. Known from fewer than 20 occurrences. Extirpated from Encinitas area.	No	Not expected to occur due to lack of appropriate habitat and soils.

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Corethrogyne</i> [= <i>Lessingia</i>] <i>filaginifolia</i> var. <i>incana</i> San Diego sand aster	—/—	1B.1	—	Perennial herb; chaparral, coastal bluff scrub, coastal sage scrub; blooms June–September; elevation less than 400 feet. Known in California from fewer than 10 occurrences all of which are in San Diego County. Additional populations in Baja California, Mexico.	No	Not expected to occur on the site as it would have been observable at the time of the survey.
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>conjugens</i> Otay tarplant	CE/FT	1B.1	NE, MSCP	Annual herb; clayey soils of coastal scrub openings, valley and foothill grassland; blooms April–June, elevation less than 1,000 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Isocoma menziesii</i> var. <i>decumbens</i> decumbent goldenbush	—/—	1B.2	—	Perennial shrub; chaparral, coastal sage scrub; sandy soils, often in disturbed areas; blooms April–November; elevation less than 500 feet.	No	Not expected to occur on the site as it would have been observable at the time of the survey.
<i>Iva hayesiana</i> San Diego marsh-elder	—/—	2B.2	—	Perennial herb; marshes and swamps, playas, riparian areas; blooms April–September; elevation below 1,700 feet.	No	Not expected to occur on the site as it would have been observable at the time of the survey.
BRASSICACEAE MUSTARD FAMILY						
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's peppergrass	—/—	4.3	—	Annual herb; coastal sage scrub, chaparral; blooms January–July; elevation less than 2,900 feet.	No	Low potential to occur, not observed.
CACTACEAE CACTUS FAMILY						
<i>Cylindropuntia californica</i> var. <i>californica</i> [= <i>Opuntia</i> <i>parryi</i> var. <i>serpentina</i>] snake cholla	—/—	1B.1	NE, MSCP	Perennial stem succulent; chaparral, coastal sage scrub; blooms April–May; elevation 100–500 feet.	No	Not expected to occur on the site as it would have been observable at the time of the survey.
<i>Ferocactus viridescens</i> San Diego barrel cactus	—/—	2B.1	MSCP	Perennial stem succulent; chaparral, coastal sage scrub, valley and foothill grasslands, vernal pools; blooms May–June; elevation less than 1,500 feet.	No	Low potential to occur, not observed.

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
CRASSULACEAE STONECROP FAMILY						
<i>Dudleya brevifolia</i> [= <i>D. blochmaniae</i> ssp. <i>brevifolia</i>] short-leaved dudleya [short-leaved live-forever]	CE/–	1B.1	NE, MSCP	Perennial herb; southern maritime chaparral, coastal sage scrub on Torrey sandstone; blooms in April; elevation less than 1,000 feet. San Diego County endemic. Known from fewer than five occurrences in the Del Mar and La Jolla areas.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Dudleya variegata</i> variegated dudleya	–/–	1B.2	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 1,900 feet.	No	Low potential to occur, not observed.
ERICACEAE HEATH FAMILY						
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	–/FE	1B.1	MSCP	Perennial evergreen shrub; southern maritime chaparral; sandy soil; blooms December–April; elevation less than 1,200 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> summer holly	–/–	1B.2	–	Perennial evergreen shrub; chaparral; blooms April–June; elevation 100–2,600 feet.	No	Low potential to occur, not observed.
FABACEAE LEGUME FAMILY						
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milkvetch	CE/FE	1B.1	NE, MSCP	Annual herb; coastal bluff scrub, coastal dunes, sandy soils, mesic coastal prairie; blooms March–May; elevation less than 200 feet. California endemic. Known from fewer than 10 occurrences in San Diego (presumed extirpated), Los Angeles (presumed extirpated), and Monterey counties.	No	Not expected to occur due to lack of appropriate habitat and soils.

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
FAGACEAE OAK FAMILY						
<i>Quercus dumosa</i> Nuttall's scrub oak	—/—	1B.1	—	Perennial evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub; sandy and clay loam soils; blooms February–March; elevation less than 1,300 feet.	No	Low potential to occur, not observed.
LAMIACEAE MINT FAMILY						
<i>Acanthomintha ilicifolia</i> San Diego thornmint	CE/FT	1B.1	NE, MSCP	Annual herb; chaparral, coastal sage scrub, and grasslands; friable or broken clay soils; blooms April–June; elevation less than 3,200 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Pogogyne abramsii</i> San Diego mesa mint	CE/FE	1B.1	NE, MSCP	Annual herb; vernal pools; blooms April–July; elevation 300–700 feet. San Diego County endemic.	No	Not expected to occur due to lack of appropriate habitat and soils.
<i>Pogogyne nudiuscula</i> Otay mesa mint	CE/FE	1B.1	NE, MSCP	Annual herb; vernal pools; blooms May–July; elevation 300–820 feet. In California, known from approximately 10 occurrences in Otay Mesa in San Diego County. Additional populations occur in Baja California, Mexico.	No	Not expected to occur due to lack of appropriate habitat and soils.
POLEMONIACEAE PHLOX FAMILY						
<i>Navarretia fossalis</i> spreading navarretia [=prostrate navarretia]	—/FT	1B.1	NE, MSCP	Annual herb; vernal pools, marshes and swamps, chenopod scrub; blooms April–June; elevation 100–4,300 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.
RHAMNACEAE BUCKTHORN FAMILY						
<i>Adolphia californica</i> California adolphia	—/—	2B.1	—	Perennial deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms December–May; elevation 100–2,500 feet.	No	Low potential to occur, not observed.

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Ceanothus verrucosus</i> wart-stemmed ceanothus	—/—	2B.2	MSCP	Perennial evergreen shrub; chaparral; blooms December–April; elevation less than 1,300 feet.	No	Low potential to occur, not observed.
THEMIDACEAE BRODIAEA FAMILY						
<i>Bloomeria</i> [=Muilla] <i>clevelandii</i> San Diego goldenstar	—/—	1B.1	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; clay soils; blooms May; elevation 170–1,500 feet.	No	Not expected to occur due to lack of appropriate clay soils.
<i>Brodiaea filifolia</i> thread-leaved brodiaea [=thread-leaf brodiaea]	CE/FT	1B.1	MSCP	Perennial herb (bulbiferous); cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools; often clay soils; blooms March–June; elevation less than 43,800 feet. California endemic. Known from San Diego, Riverside, Orange, Los Angeles, and San Bernardino counties.	No	Moderate potential to occur on the site due to proximity to known population to the north. However, clay soils are lacking on the site.
ANGIOSPERMS: MONOCOTS						
AGAVACEAE AGAVE FAMILY						
<i>Agave shawii</i> var. <i>shawii</i> Shaw's agave	—/—	2B.1	NE, MSCP	Perennial leaf succulent; coastal bluff scrub, coastal sage scrub, maritime succulent scrub; blooms September– May; elevation less than 400 feet.	No	Low potential to occur, not observed.
POACEAE GRASS FAMILY						
<i>Orcuttia californica</i> California Orcutt grass	CE/FE	1B.1	NE, MSCP	Annual herb; vernal pools; blooms April–August; elevation 50–2,200 feet.	No	Not expected to occur due to lack of appropriate habitat and soils.

Attachment 3
Sensitive Plant Species
Observed or with the Potential for Occurrence

FEDERAL CANDIDATES AND LISTED PLANTS

FE = Federally listed endangered
 FT = Federally listed threatened
 FC = Federal candidate for listing as endangered or threatened

STATE LISTED PLANTS

CE = State listed endangered
 CR = State listed rare
 CT = State listed threatened

CALIFORNIA NATIVE PLANT SOCIETY (CNPS): CALIFORNIA RARE PLANT RANKS (CRPR)

1A = Species presumed extinct.
 1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
 2A = Plants presumed extirpated in California, but more common elsewhere.
 2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
 3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.
 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.
 .1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat).
 .2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat).
 .3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known).
 CBR = Considered but rejected

CITY OF SAN DIEGO

NE = Narrow endemic
 MSCP = Multiple Species Conservation Program covered species

ATTACHMENT 4

Sensitive Wildlife Species Occurring or with the Potential to Occur

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
REPTILES (Nomenclature from Crother et al. 2008)					
IGUANIDAE IGUANID LIZARDS					
Coast horned lizard <i>Phrynosoma blainvillii</i> [= <i>P. coronatum</i> coastal population]	CSC, MSCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	No	Low	Site lacks fine loose soil preferred by this species.
TEIIDAE WHIPTAIL LIZARDS					
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	Moderate	Habitat for this species is present on the site.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	CSC	Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	No	Moderate	Habitat for this species is present on the site.
CROTALIDAE RATTLESNAKES					
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	No	Low	Species not observed.
BIRDS (Nomenclature from American Ornithologists' Union 2015 and Unitt 2004)					
ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	WL, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	Yes	High	Species observed.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
STRIGIDAE TYPICAL OWLS					
Western burrowing owl (burrow sites) <i>Athene cunicularia hypugaea</i>	CSC, MSCP	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	No	Low	Acreage and quality of non- native grassland on-site not suitable to support burrowing owl. Suitable borrows, burrow complexes, or any other sign of burrowing owl presence not observed.
ALAUDIDAE LARKS					
California horned lark <i>Eremophila alpestris actia</i>	WL	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub.	No	Low	Although habitat for this species is present it was not observed on the site.
SYLVIIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	No	Moderate	Habitat for this species is present.
EMBERIZIDAE EMBERIZIDS					
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	WL, MSCP	Coastal sage scrub, chaparral, grassland. Resident.	No	Moderate	Habitat for this species is present.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
MAMMALS (Nomenclature from Hall 1981)					
MOLOSSIDAE FREE-TAILED BATS					
Western mastiff bat <i>Eumops perotis californicus</i>	CSC	Woodlands, rocky habitat, arid and semiarid lowlands, cliffs, crevices, buildings, tree hollows. Audible echolocation signal.	No	Low	Preferred roosting habitat not present.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	CSC	Normally roost in crevice in rocks, slopes, cliffs. Lower elevations in San Diego and Imperial Counties. Colonial. Leave roosts well after dark.	No	Low	Preferred roosting habitat not present.
LEPORIDAE RABBITS & HARES					
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC	Open areas of scrub, grasslands, agricultural fields.	No	Low	Steep, dense brush habitat not preferred by this species.
MURIDAE OLD WORLD MICE & RATS (I)					
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC	Coastal sage scrub and chaparral.	Yes	High	Observed nest.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
<p>(I) = Introduced species</p> <p>STATUS CODES</p> <p><u>Listed/Proposed</u></p> <p>FT = Listed as threatened by the federal government</p> <p><u>Other</u></p> <p>CSC = California Department of Fish and Wildlife species of special concern</p> <p>WL = California Department of Fish and Wildlife watch list species</p> <p>MSCP = City and County of San Diego Multiple Species Conservation Program covered species</p> <p>* = Taxa listed with an asterisk fall into one or more of the following categories:</p> <ul style="list-style-type: none"> • Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines • Taxa that are biologically rare, very restricted in distribution, or declining throughout their range • Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California • Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands) 					

ATTACHMENT 5

Jurisdictional Waters Delineation



**Jurisdictional Waters Delineation
for the Avion Project
San Diego, California**

Prepared for
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A handwritten signature in cursive script, reading "Gerry Scheid".

Gerry Scheid, Senior Biologist

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ATTACHMENT

1: Field Data Sheets	
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Acronyms

ACOE	U.S. Army Corps of Engineers
City	City of San Diego
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
FAC	facultative
FACU	facultative upland
FACW	facultative wet
NI	not indicated
OBL	obligate
RECON	RECON Environmental, Inc.
RWQCB	Regional Water Quality Control Board
UPL	upland

1.0 Summary of Findings

RECON Environmental, Inc. (RECON) biologists performed a routine wetland delineation on the 41.48-acre Avion Property (project) located within in the City of San Diego, California. Methods for delineating wetlands followed guidelines set forth by the U.S. Army Corps of Engineers (ACOE; 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008).

ACOE federal waters of the U.S., California Department of Fish and Wildlife (CDFW) and California Regional Water Quality Control Board (RWQCB) waters of the state, and City of San Diego wetlands were all delineated within the project area. ACOE jurisdictional waters of the U.S. total 0.13 acre of wetland and 0.63 acre of non-wetland waters on-site. CDFW and RWQCB jurisdictional waters of the state total 0.13 acre of wetland and 0.63 acre of streambed. City of San Diego wetlands in the survey area also total 0.13 acre.

Each of the agencies will verify this delineation during the discretionary review and permitting processes. Under a no-net-loss to wetlands policy, the agencies will require that impacts be avoided and minimized to the greatest extent practicable, and that any unavoidable impacts be mitigated.

2.0 Introduction

The project site consists of a 41.48-acre parcel of undeveloped land located in the northern part of the City of San Diego, approximately 1.2 miles west of Interstate 15 (Figure 1). The project site occurs in Section 5, Township 13 and 14 South, Range 2 West, of the U.S. Geological Survey (USGS) 1996 7.5-minute topographic map, Poway quadrangle (Figure 2; USGS 1996). Carmel Valley Road/Bernardo Center Drive is located approximately 0.6 mile to the north, and Black Mountain Road is located approximately 1.4 miles to the west.

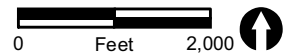
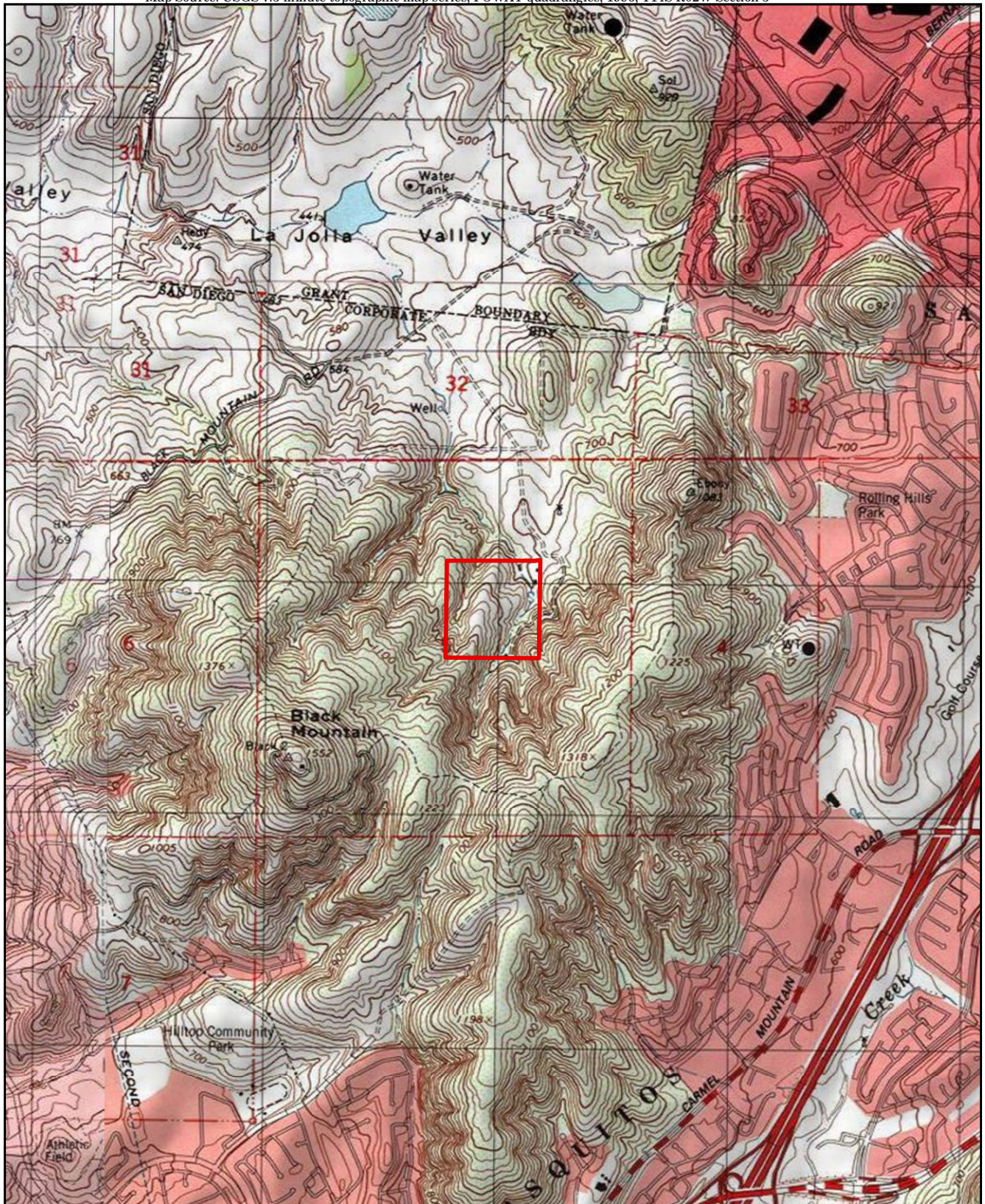
Heritage Bluffs, a new residential development currently under construction, abuts the northern edge of the property. Future access would be provided at the northeast corner of the project site via Winecreek Road. Land uses surrounding the Avion site include a portion of the Black Mountain Open Space Park to the west, east, and south, and the Heritage Bluffs residential development to the north, and additional Black Mountain Open Space Park open space lands to the northwest (Figure 3).

The project site was previously analyzed as Southeast Perimeter Parcel C in the Black Mountain Ranch (Subarea I) Subarea Plan EIR (96-7902) (Subarea Plan EIR). The project would develop 84 detached multi-family residential units and associated infrastructure (i.e., private drives, sewer, water, etc.), which would be consistent with the land use identified for the project site in the Subarea Plan EIR. Project density on-site would be less than what was assumed and analyzed for the property under the Subarea Plan EIR, and the project would transfer the remaining density (14 market-rate units and 19 affordable housing units) to the Black Mountain Ranch North Village Town Center, pursuant to the density transfer allowances established by the Subarea Plan.

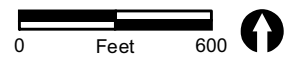


✱ Project Location

FIGURE 1
Regional Location



 Project Boundary



- Project Boundary
- Heritage Bluffs Boundary

This report describes the results of a jurisdictional waters delineation conducted on the project site and includes the jurisdictional waters delineation data necessary for a jurisdictional determination by the ACOE, CDFW, RWQCB, and City of San Diego. Review and approval of the jurisdictional waters delineation would occur during the discretionary review and permit processes for each agency.

3.0 Methods

RECON biologists performed a routine jurisdictional waters delineation within the project site on November 29 and December 8, 2017, according to the guidelines set forth by ACOE (1987, 2008). A jurisdictional waters delineation is used to identify and map the extent of the wetlands and waters of the U.S., waters of the state, and City of San Diego wetlands. Prior to conducting the delineation, an aerial photograph was examined to aid in the determination of potential federal, state, and City jurisdictional waters in the survey area. Once on-site, the survey area was examined to determine the presence of any indicators of jurisdictional waters, including wetland vegetation, hydric soils, and hydrology.

Soil test pits were located (1) within potential wetland areas and (2) in or adjacent to the spot where the boundary between wetland and upland was inferred (based on changes in the topography, hydrology, and composition of the vegetation). While in the field, the survey area was also examined for potential ACOE waters of the U.S., potential waters of the state, and potential City wetlands.

3.1 ACOE Waters of the U.S.

According to the ACOE manual (ACOE 1987), wetland waters of the U.S. are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The definition of a wetland includes the phrase “under normal circumstances” because there are situations in which the vegetation of a wetland has been removed or altered as a result of a recent natural event or human activities (ACOE 1987).

Atypical situations and problem areas may lack one or more of the three criteria and still be considered wetlands. Background information on the previous condition of the area and/or field observations may indicate that the site met the wetland criteria prior to disturbance. Additional delineation procedures would be employed if normal circumstances did not occur on a site. For the survey area, atypical situations or problem areas do not occur; normal circumstances are present.

3.1.1 Regulatory Definition

In accordance with Section 404 of the Clean Water Act (CWA), ACOE regulates the discharge of dredged or fill material into waters of the U.S. The term “waters of the U.S.” is defined as:

- All waters currently used, or used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation, or destruction of which could affect foreign commerce including any such waters, (1) which could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are, or could be, taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industries in interstate commerce.
- All other impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified above;
- The territorial seas; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the paragraphs above [33 Code of Federal Regulations Part 328.3(a)].

3.1.2 Wetland Parameters

Wetlands are delineated using three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. According to ACOE, indicators for all three parameters must be present to qualify as a wetland.

3.1.2.1 Hydrophytic Vegetation

Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (ACOE 1987). The potential wetland areas within the survey area were surveyed by walking through the project site and making observations of those areas exhibiting characteristics of jurisdictional waters or wetlands. Vegetation units with potential wetland areas were examined, and data for each vegetation stratum (i.e., tree, shrub, herb, and vine) were recorded on the datasheet provided in the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (hereafter referred to as *Arid Supplement*; ACOE 2008). The percent absolute cover of each species present was visually estimated and recorded.

The wetland indicator status of each species recorded was determined by using the list of wetland plants for the arid southwest provided by the ACOE (2013). An obligate (OBL) indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A facultative wet (FACW) indicator status refers to plants that occur in wetlands (67 to 99 percent probability) but are occasionally found in non-wetlands. A facultative (FAC) indicator status refers to plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34 to 66 percent). Facultative upland (FACU) species are more often found in upland sites. Upland (UPL) species have a high probability to occur in upland sites. A not indicated (NI) status refers to species that have insufficient data available to determine an indicator status at this time for the local region.

Plant species nomenclature follows that contained in the *online Jepson Flora* (Jepson Flora Project 2015). Dominant species with an indicator status of NI or not listed in the 1997 list were evaluated as either wetland or upland indicator species based on local professional knowledge of where the species are most often observed in habitats characteristic of southern California.

There are three indicators or tests to determine hydrophytic vegetation on a site: the dominance test, prevalence index, and morphological adaptations. The 50/20 rule is a repeatable and objective procedure for selecting a dominant plant species and is recommended when data are available for all species in the community (ACOE 2008). Dominant species are those plants that individually or collectively contribute more than 50 percent of the total vegetative cover plus those species that, by themselves, comprise 20 percent or more of the total cover.

If the vegetation at a particular site passes the dominance test (using the 50/20 rule), the hydrophytic vegetation criterion is considered fulfilled. If it fails the dominance test and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to apply the prevalence index. The prevalence index is a weighted-average wetland indicator status of all plant species at a test site, where each indicator status category is given a numeric code and weighted by percent cover (ACOE 2008). If a prevalence index is 3.0 or less, the hydrophytic vegetation criterion is considered fulfilled.

If a site fails the prevalence index and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to assess the presence or absence of morphological adaptations. To apply this indicator, morphological features must be observed on more than 50 percent of the individuals of a FACU species living in an area where indicators of hydric soil and wetland hydrology are present (ACOE 2008). Once this indicator is applied, the dominance test and/or the prevalence index are/is recalculated using a FAC indicator status of this species (ACOE 2008).

3.1.2.2 Hydric Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of

hydrophytic vegetation (ACOE 1987). Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds (ACOE 2008). The hydric soil criterion is considered fulfilled at a location if soils in the area can be inferred to have a high groundwater table, evidence of prolonged soil saturation exists, or any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile are present.

A sample point was selected within a potential wetland area where the apparent boundary between wetland and upland was inferred based on changes in the composition of the vegetation and topography. The soil pit was dug to a depth of at least 18 inches or to a depth necessary to determine soil color, evidence of soil saturation, depth to groundwater, and indicators of a reducing soil environment (e.g., mottling, gleying, and sulfidic odor).

Hydric soil indicators are presented in three groups in the *Arid Supplement* (ACOE 2008): “all soils, sandy soils, and loamy and clayey soils.” Indicators applicable to all soil textures are indicated as A1 through A10 on the datasheet and include histosols, histic epipedon, stratified layers, and muck, among others. Indicators of sandy soils are noted as S1 through S6 and include sandy gleyed matrix, sandy redox, and stripped matrix. F1 (loamy mucky mineral) through F9 (vernal pools) are indicators of hydric conditions within loamy and clayey soils. A complete description of each of the hydric soil indicators is provided in the 2008 *Arid Supplement* and should be referenced during each delineation.

3.1.2.3 Wetland Hydrology

The presence of wetland hydrology indicators confirm that inundation or saturation has occurred on a site, but may not provide information about the timing, duration, or frequency of the event. Hydrology features are generally the most ephemeral of the three wetland parameters (ACOE 2008).

In the 2008 *Arid Supplement*, wetland hydrology indicators are divided into four groups. Those that are determined based on direct observation are in Group A. These include the presence of surface water, a high-water table, and saturation. Water marks, drift deposits, surface soil cracks, and other indicators of flooding or ponding fall within Group B. Group C consists of indicators that provide indirect evidence that a site was saturated recently, such as the presence of sulfidic odors or oxidized rhizospheres along living roots. Group D consists of vegetation and soil features that indicate recent wet conditions, such as the FAC-neutral test or a shallow aquitard (ACOE 2008). These indicators are further classified as primary or secondary indicators.

Hydrologic information for the site was obtained by reviewing U.S. Geological Survey topographic maps and by directly observing hydrology indicators in the field. The wetland hydrology criterion is considered fulfilled at a location if, based upon the conclusions inferred from the field observations, an area has a high probability of being periodically inundated or has soils saturated to the surface at some time during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (ACOE 1987). If at least one primary indicator or at least two secondary indicators are found at a sample point, the wetland hydrology criterion is considered fulfilled.

3.2 CDFW and RWQCB Waters of the State

Under Sections 1600–1607 of the Fish and Game Code, CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., southern willow scrub) associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider.

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes waters of the state as mandated by both the federal CWA Section 401 and the California Porter–Cologne Water Quality Control Act.

3.3 City of San Diego Wetlands

According to the City of San Diego’s Municipal Code (City of San Diego 2012), wetlands are 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; (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 (3) areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands or catastrophic reoccurring natural events that prevent establishment of vegetation; (4) areas mapped as *wetlands* on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone) (City of San Diego 2012).

4.0 Results of Field Data

A description of the major vegetation units observed and soil types encountered, and a discussion of the local hydrology in the project area are presented below. Copies of the field data forms summarizing information on vegetation, soils, and hydrology observed at each sample site are provided in Attachment 1.

4.1 Vegetation

Four vegetation communities and one land cover type occur on the project site. Southern mixed chaparral comprises the majority of the site with lesser acreages of coastal sage scrub, non-native grassland, and two small freshwater marsh patches. Areas with and without hydrophytic vegetation occur on-site. Areas with hydrophytic vegetation, in general, were considered potential jurisdictional waters. Locations on-site without hydrophytic vegetation were considered upland, unless evidence suggested that a wetland or other jurisdictional water might occur at the particular location. Vegetation dominated by OBL, FACW, and/or FAC hydrophytic indicator plant species usually satisfies the

hydrophytic vegetation criteria, one of the three criteria necessary to be identified as an ACOE wetland.

4.1.1 Areas with Hydrophytic Vegetation

Hydrophytic vegetation within the survey area occurs within the areas considered wetland. These areas are dominated by FACW and FAC hydrophytic vegetation indicators such as rabbit-foot grass (*Polypogon monspeliensis*) and curly dock (*Rumex crispus*).

4.1.2 Areas Lacking Hydrophytic Vegetation

The coastal sage scrub vegetation community and the ornamental plantings areas are dominated by upland plant species and do not satisfy the hydrophytic vegetation criteria. These vegetation types occur adjacent to the outside of the bed and bank of the drainage or along the slopes adjacent to State Route 56.

4.2 Soils

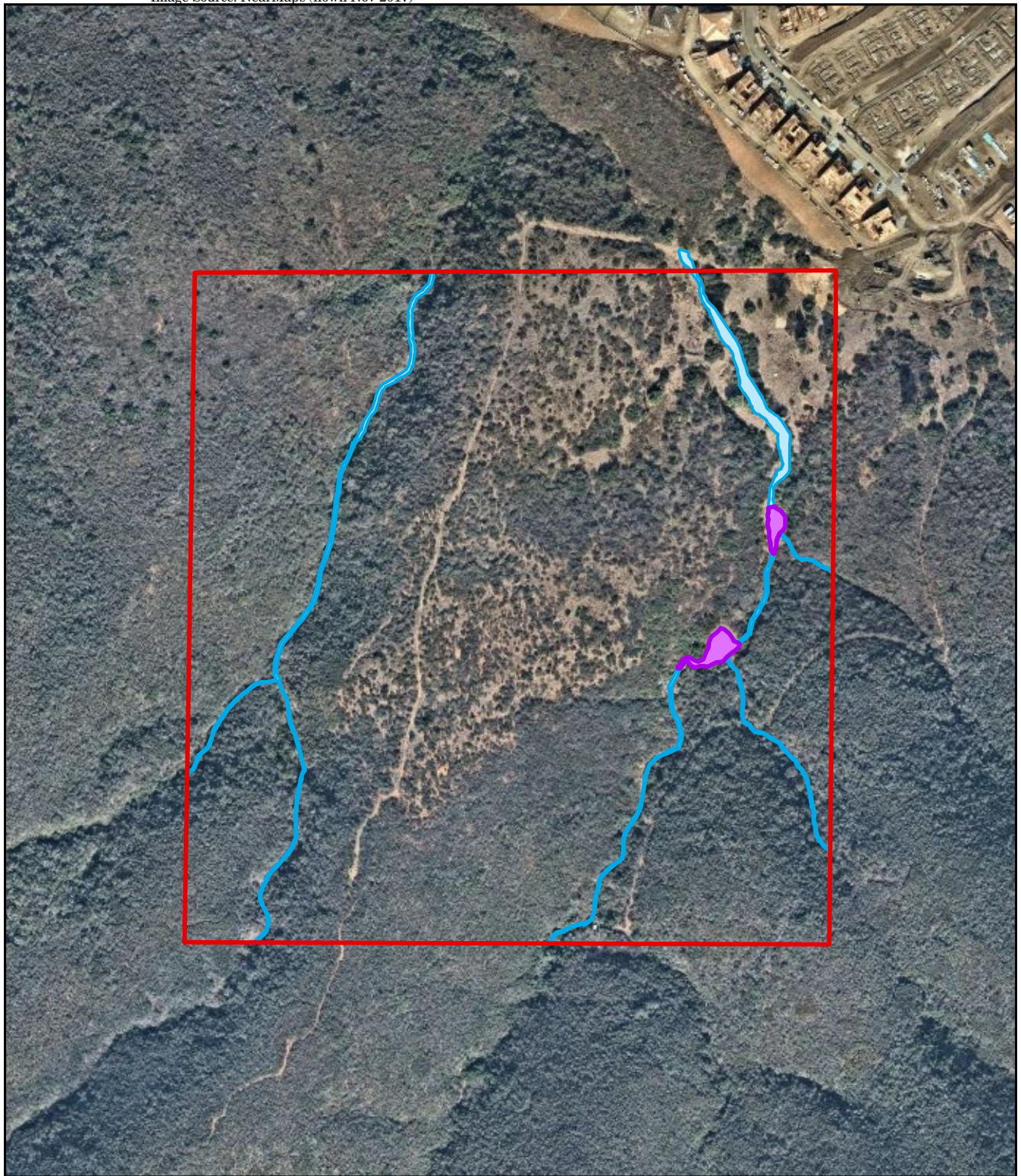
One soil series is present on-site: San Miguel-Exchequer rocky silt loam (U.S. Department of Agriculture 1973). Sample points were selected within potential wetland areas and where the apparent boundary between wetland and upland was inferred, based on changes in the topography, hydrology, and composition of the vegetation. Soil test pits were dug to search for indicators of hydric soil conditions. Hydric soil indicators observed in the test pits included a low chroma matrix color and the presence of mottles.

4.3 Hydrology

Two primary drainage courses occur within the project site. These drainages have an ephemeral hydrologic regime. Hydrology inputs are solely from seasonal precipitation inputs. Flows in these drainages travel in a northerly direction and drain into Lusardi Creek located to the north. Lusardi Creek drains westerly and connects to the Pacific Ocean via the San Dieguito River. Hydrology indicators observed included sediment deposits and drainage patterns.

5.0 Jurisdictional Waters Delineation

ACOE, CDFW, RWQCB and the City of San Diego will verify this jurisdictional waters delineation during the discretionary and permit review processes to make a final jurisdictional determination with respect to Section 404 of the CWA, Section 1600 of the Fish and Game Code, the California Porter-Cologne Water Quality Control Act, and the City of San Diego's Biology Guidelines (City of San Diego 2012). The location of federal waters of the U.S., waters of the state, and City wetlands are shown on Figure 4. A total of 0.13 acre of federal, state, and City wetland and 0.63 acre of federal and state non-wetland waters/streambed occur in the project area.



- Project Boundary
- Jurisdictional Waters**
- Wetland (USACE, RWQCB, CDFW, City)
- Non-wetland Water / Streambed (USACE, RWQCB, CDFW)

5.1 Waters of the U.S. (ACOE Jurisdiction)

Federal waters of the U.S. on-site include 0.13 acre of wetland waters and 0.63 acre of non-wetland ephemeral waters. The limit of the federal jurisdictional waters was determined by the lateral extent of the hydrophytic vegetation and Ordinary High Water Mark. Secondary wetland hydrology indicators observed included sediment deposits and drainage patterns.

5.2 Waters of the State (CDFW and RWQCB Jurisdiction)

Wetland waters of the state totaling 0.13 acre and streambed totaling 0.63 acre occur on-site. The limit of the CDFW wetland was estimated to be at the outer drip line of the canopy for the riparian vegetation, including the limits of the bed and bank. The RWQCB takes jurisdiction over all waters of the state and all waters of the U.S. as mandated by both the federal CWA and the California Porter–Cologne Water Quality Control Act. The extent of RWQCB jurisdiction in this case is the same as the limits of the waters of the state as all federal waters of the U.S. are within this limit and total 0.13 acre of wetland and 0.63 acre of streambed.

5.3 City Wetlands

The City of San Diego takes jurisdiction over all naturally occurring wetland vegetation. For this project, City wetlands are the same as those delineated as waters of the state and total 0.13-acre.

6.0 Regulatory Issues

ACOE, CDFW, and RWQCB jurisdictional waters are regulated by federal and state governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Unavoidable and authorized impacts would require mitigation through habitat creation, enhancement, or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to ACOE, CDFW, and RWQCB jurisdictional waters would require a Section 404 permit authorization from ACOE, a 1600 Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB, along with compensatory mitigation.

7.0 References Cited

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1973 Soil Survey, San Diego Area, California. Soil Conservation Service and Forest Service. Roy H. Bowman, ed. San Diego. December.

ATTACHMENT 1

Field Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Avion Property City/County: San Diego / San Diego Sampling Date: 11/29/17
 Applicant/Owner: CalAtlantic Homes State: CA Sampling Point: 1
 Investigator(s): G. Scheid Section, Township, Range: Sec. 5 T13/14 R2W Poway Quad.
 Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): concve Slope (%): 0-5%
 Subregion (LRR): LRR-C Lat: 32 deg. 59 min. 16 sec. Long: 117 deg. 6 min. 19 sec. Datum: NAD83
 Soil Map Unit Name: San Miguel-Exchequer rocky silt loam NWI classification: Riverine
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample is within an impoundment area along the drainage course. The earthen dam has been breached.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
= Total Cover					
Sapling/Shrub Stratum (Plot size: <u> </u>)					
1. <u>None</u>					Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
= Total Cover					
Herb Stratum (Plot size: <u> </u>)					
1. <u>Rumex crispus</u>		40	Yes	FAC	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Polypogon monspeliensis</u>		20	Yes	FACW	
3. <u>Heliotropium curassivicum</u>		5	No	FACU	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
65 = Total Cover					
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>					
= Total Cover					
% Bare Ground in Herb Stratum <u>35</u>		% Cover of Biotic Crust <u>0</u>			

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	7.5YR 4/4	100						
6-18	10YR 5/2	95	5YR 6/8	5	RM	M	Silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Delineation conducted during an extended dry period. Presence of secondary hydrology indicators in conjunction with presence of hydrophytic vegetation and hydric soils used to determine wetland hydrology.	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Avion Property City/County: San Diego / San Diego Sampling Date: 11/29/17
 Applicant/Owner: CalAtlantic Homes State: CA Sampling Point: 2
 Investigator(s): G. Scheid Section, Township, Range: Sec. 5 T13/14 R2W Poway Quad.
 Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): concve Slope (%): 0-5%
 Subregion (LRR): LRR-C Lat: 32 deg. 59 min. 13 sec. Long: 117 deg. 6 min. 21 sec. Datum: NAD83
 Soil Map Unit Name: San Miguel-Exchequer rocky silt loam NWI classification: Riverine
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Sample is within an impoundment area along the drainage course. The earthen dam has been breached.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
= Total Cover					
Sapling/Shrub Stratum (Plot size: <u> </u>)					
1. <u>none</u>					Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
= Total Cover					
Herb Stratum (Plot size: <u> </u>)					
1. <u>Polypogon monspeliensis</u>		30	Yes	FACW	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rumex crispus</u>		20	Yes	FAC	
3. <u>Eleocharis macrostachya</u>		15	No	FACW	
4. <u>Stachys rigida</u>		5	No	FACW	
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
70 = Total Cover					
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>					Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>					
= Total Cover					
% Bare Ground in Herb Stratum <u>30</u>		% Cover of Biotic Crust <u>0</u>			

Remarks:

SOIL

Sampling Point: 2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	7.5YR 4/4	100						
4-18	10YR5/2	95	5YR 5/8	5	RM	M	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|-----------------------------------------------------------|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- | |
|--------------------------------------------------------------------------------|
| <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:
 Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☐ No ☒ Depth (inches): _____
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)
Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Delineation conducted during an extended dry period. Presence of secondary hydrology indicators in conjunction with presence of hydrophytic vegetation and hydric soils used to determine wetland hydrology.