BIOLOGICAL RESOURCES LETTER REPORT

GOOD SHEPHERD CATHOLIC CEMETERY PROJECT

COUNTY PROJECT NUMBER: PDS2020-MUP-20-004

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SUMMARY

The Diocese of San Diego (Diocese) proposes to construct a cemetery at the subject project site in an unincorporated area of San Diego County (County), near the Cities of Oceanside and Vista, California (see Attachment A, Figure 1; all figures are in Attachment A). The project site consists of four lots (Assessor's Parcel Numbers [APNs] 169-210-02, 169-220-01, 169-220-02, and 169-220-03) totaling approximately 14.61 acres (this includes the Keys Place cul-de-sac [0.12 acre]). In addition, as required by the County, LSA surveyed an additional 100-foot buffer surrounding the project boundary. This survey area is referred to as the Biological Study Area (BSA), which totals approximately 24.75 acres.

The project site consists of disturbed habitat (nonnative, weedy annual species and unvegetated areas occupied by clusters of unplanted nursery container plants) and developed land. Outside the project site, but within the County-required 100-foot buffer (included in the BSA), there is nonnative riparian and Arundo-dominated riparian vegetation. Three ephemeral earthen drainage features occur in the northern half of the BSA.

There are no special-status plant species with a moderate or higher potential to occur within the BSA, based on the results of a database records search, observations made during the general biological resources survey and rare plant survey, and the absence of suitable habitat on site. No special-status plant species were observed during the general biological resources survey or rare plant survey. Although no special-status wildlife species were observed during the general biological resources survey, the following special-status species have a moderate potential to occur within the BSA, based on the results of the database records search of a 2-mile radius around the BSA and observations made during the general biological resources survey: Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), hoary bat (*Lasiurus cinereus*), and western yellow bat (*Lasiurus xanthinus*). This list contains species that are not considered special-status by federal or State governments, but were included in the biological resources scoping attachment to the major pre-application scoping letter provided by the County (County 2018).

The project is expected to permanently affect 13.57 acres of disturbed habitat and 0.88 acre of developed land. The project is also expected to permanently affect 0.22 acre of streambed and banks and nonwetland waters of the State subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB), respectively, and 0.19 acre of nonwetland waters of the United States subject to the jurisdiction of the United States Army Corps of Engineers. No mitigation will be required for permanent impacts to disturbed habitat and developed land; however, the Diocese will consult with representatives from the CDFW, the Corps, and the RWQCB to determine the appropriate mitigation for permanent impacts to drainage features. Impacts to nonwetland waters of the State subject to the jurisdiction of the RWQCB, nonwetland waters of the United States subject to the jurisdiction of the Corps, and streambed and banks subject to the jurisdiction of the CDFW will require permits from these resource agencies.

The BSA contains an approximately 0.12-acre area classified as County Resource Protection Ordinance (RPO) Wetland; however, the area is outside of the Dicoese's property boundary. The proposed project will include a 50-foot wide County-required wetland buffer around the RPO

Wetland. The proposed project will not affect the RPO Wetland or its buffer. An open space easement (including appropriate open space signage and/or fencing) will be established to protect the RPO Wetland buffer; however, the easement will not include the wetland, as it is not on the Diocese's property. A County-required 100-foot limited building zone easement will be established around the RPO Wetland buffer.

Table A presents a summary of impacts to biological resources and anticipated mitigation associated with construction of the project.

Table A: Summary of Impacts to Biological Resources and Required Mitigation

Vegetation Communities	Impact Area (acres)	Required Mitigation (acres)
Nonnative Riparian	—	—
Arundo-dominated Riparian	—	—
Disturbed Habitat	13.57	—
Developed Land	0.88	—
Total Acres[1]	**14.45**	—
Aquatic Resources		
Jurisdictional Streambed/Banks	0.22	0.44[2]
Nonwetland Waters of the State	0.22	0.44[2]
Nonwetland Waters of the United States	0.19	0.38[2]

[1] Total may not equal sum due to rounding.

[2] Due to the disturbed nature and low functions and values of the drainage features on site, LSA estimates that a 2:1 mitigation to impact ratio will satisfy the mitigation requirements for impacts to waters of the United States, waters of the State, and jurisdictional streambeds and banks. However, the Diocese will consult with representatives from the Corps, the CDFW, and the RWQCB to determine the appropriate mitigation for permanent impacts to drainage features.

INTRODUCTION, PROJECT DESCRIPTION, LOCATION, AND SETTING

The Diocese proposes to construct a cemetery at the subject project site in an unincorporated area of the San Diego County, near the Cities of Oceanside and Vista, California. The project site consists of four lots (APNs 169-210-02, 169-220-01, 169-220-02, and 169-220-03) totaling approximately 14.61 acres. The cemetery will be constructed in multiple phases over time based on funding. The existing house at 1505 Buena Vista Drive (APN 169-220-02) will remain and be used as an office. Other improvements include construction of a 2,176-square foot administrative office, 220-square foot gatehouse, landscaping, internal circulation system, and utility improvements. The remainder of the site will be reserved for grave sites. The Diocese will implement an off-site mitigation program for impacts to drainage features within the project site.

The BSA consists of disturbed habitat (nonnative, weedy annual species and unvegetated areas occupied by clusters of unplanted nursery container plants) and developed land. Outside the project site, but within the County-required 100-foot buffer, there is nonnative riparian and Arundo-dominated riparian vegetation. Three ephemeral earthen drainage features occur in the northern half of the project site. The following soils are present within the project site: Cieneba coarse sandy loam (15 to 30 percent slopes eroded), Bosanko clay (9 to 15 percent slopes), Cieneba coarse sandy

loam (5 to 15 percent slopes eroded), Diablo clay (9 to 15 percent slopes), and Fallbrook sandy loam (15 to 30 percent slopes).

LSA performed the following activities to assess impacts to biological resources that may result from the proposed project:

Literature and Database Review

Prior to the general biological resources survey, LSA Senior Biologist Jaime Morales conducted a database records search to identify the previously recorded existence or potential occurrence of special-status biological resources (e.g., plant and animal species, and vegetation communities) within or in the vicinity of the BSA. Special-status species potentially relevant to the project are those that are federally and/or State-listed, proposed for listing, or candidate species for designation as endangered; species listed as species of concern by the CDFW (formerly the California Department of Fish and Game [CDFG] Special Animals List [CDFW 2018] and the Special Plants List [CDFG 2012]); plants with a California Rare Plant Ranking (CRPR) of 1B or 2B by the California Native Plant Society (CNPS); and plants or animals on the San Diego County Multiple Species Conservation Program (MSCP) Covered Species List (MSCP 2008).

LSA reviewed the following databases:

- The California Natural Diversity Data Base information (Version 5.2.14, August 2, 2017), which is administered by the CDFW. This database includes special-status plant and animal species, as well as special-status natural communities that occur in California. LSA reviewed species information within a 2-mile radius of the BSA.
- The CNPS Online Inventory of Rare and Endangered Plants of California (Version 8-03, August 2017, CNPS Inventory).

General Biological Resources Survey

Mr. Morales conducted a general biological resources survey on August 3, 2017, from 0945 to 1130 hours. He walked the entire project site and accessible portions of an additional County-required 100-foot buffer within adjoining properties. Inaccessible areas within the buffer were visually surveyed from the nearest accessible vantage points or by using a field map containing a 2016 aerial photograph base at a scale of 1 inch = 127.5 feet. The project site plus the 100-foot mapping buffer make up the BSA. The survey included the following elements:

- Mapping of vegetation communities;
- A directed search for special-status plant species with potential to occur in the BSA;
- A general inventory of plant and wildlife species;
- An evaluation of habitat suitability for special-status resources identified during the literature search;

- Preliminary identification of areas that may be considered wetland and/or nonwetland waters of the United States and State of California, streambeds as defined by the CDFW, and County RPO Wetlands; and
- Notes on other pertinent features or conditions of the site and adjacent lands.

All plant species observed in the BSA were recorded and are listed in Attachment B. Mr. Morales mapped the vegetation communities on the aerial photograph field map, which were then digitized using geographic information system (GIS) software. Vegetation community categories are in accordance with the categories described in the *Draft Vegetation Communities of San Diego County* (Oberbauer 2008). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 1996).

All wildlife observed and wildlife signs detected (including tracks, scat, carcasses, burrows, excavations, and vocalizations) were recorded during the survey and are listed in Attachment C. Additional survey time was spent in those habitats most likely to be used by wildlife or in habitats with the potential to support State- and/or federally-listed or proposed species. Notes were made on the general habitat types, species observed, and the conditions of the site.

Special-status plant and wildlife species with a potential to occur in the BSA are described in Attachment D.

Jurisdictional Delineation

Mr. Morales performed the jurisdictional delineation fieldwork on November 16, 2018. He surveyed the BSA on foot and evaluated all areas of potential jurisdiction according to Corps, RWQCB, CDFW, and County criteria. Data were recorded directly on a field map containing a 2017 aerial photograph base at a scale of 1 inch = 100 feet provided by Hofman Planning and Engineering.

LSA evaluated areas supporting hydrology or species of plant life potentially indicative of wetlands according to routine wetland delineation procedures described in the *Regional Supplement to the Corps of Engineers wetland Delineation manual: Arid West Region (Version 2.0) (Regional Supplement) (Corps 2008)*. Representative sample points were selected and examined in the field in those areas where wetland jurisdiction was in question or needed to be confirmed. At each sample point, the dominant and subdominant plant species were identified and their wetland indicator status (Lichvar et al. 2016) noted. When possible, a small sample pit (approximately 16 inches deep) was dug in order to examine soil characteristics and composition. Soil matrix colors were classified according to the Munsell Soil Color Charts (Munsell Color 2000). Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators, were recorded. General site characteristics were also noted. Standard data forms were completed for each sample point.

San Diego County Resource Protection Ordinance (RPO) Wetlands

The County restricts, to varying degrees, impacts to various natural resources including wetlands. According to Section 86.602 of the San Diego County Code of Regulatory Ordinances, a wetland is defined as land having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytic plant species;
- The substratum is predominantly undrained hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

The following shall not be considered RPO wetlands:

- Lands that have attributes specified above solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Development Services determines that they have negligible biological function or value as wetlands, are small and geographically isolated from other wetland systems, are not vernal pools, and do not have substantial or locally important populations of wetland-dependent sensitive species.
- Lands that have been degraded by past legal land disturbance activities, to the point that the Director of Planning and Development Services determines that they have negligible biological function or value as wetlands even if restored to the extent feasible and do not have substantial or locally important populations of wetland-dependent sensitive species.

The results of the jurisdictional delineation are presented in a report titled *Jurisdictional Delineation Report: Good Shepherd Catholic Cemetery Project – Cities of Oceanside and Vista, San Diego County, California* prepared by LSA (2021). A copy of the report is included as Attachment E.

Rare Plant Survey

LSA Associate Biologist/Botanist Stanley Spencer, Ph.D. conducted a focused survey for rare plants that included, but was not limited to, the plant species listed in the biological resources scoping attachment to the major pre-application scoping letter provided by the County. The survey was conducted throughout areas of suitable habitat in accordance with accepted protocol. The objective of the survey was to determine presence or absence of threatened, endangered, or other special-status plants and, if present, to quantify and map the extent and distribution of the species. All plant species detected on the site during the survey were identified to the extent necessary to determine rarity and listing status. The survey consisted of three site visits spanning the 2019 peak flowering season of the target species. The first site visit was in April, the second in mid-May, and the third in June.

The results of the rare plant survey are presented in a memorandum (*Results of a Special-Status Plan Survey on the Good Shepherd Catholic Cemetery Project Site* [LSA 2019]) included as Attachment F.

REGIONAL CONTEXT

From a geographic perspective, the BSA is in Section 36, Township 11 South, and Range 4 West of the United States Geological Survey (USGS) *San Luis Rey* and *San Marcos, California* 7.5-minute topographic quadrangle maps. The BSA is within the South Coast subregion of the Southwestern

California region of the California Floristic Province and within Watershed Hydrologic Unit 12: Agua Hedionda Creek. Specifically, the BSA is in the Carlsbad Watershed and is approximately 5 miles east of Buena Vista Lagoon and 4 miles northeast of Agua Hedionda Lagoon. Numerous streams are in the vicinity of the BSA.

The project is in an area designated as outside of Pre-Approved Mitigation Area (PAMA) within the Draft North County MSCP Plan Area. As such, the proposed project must be designed to meet the criteria provided in the *County of San Diego Guidelines for Determining Significance* (County Guidelines, September 15, 2010). The BSA is not within or adjacent to National Forests or Bureau of Land Management lands. However, the BSA is approximately 1.25 miles east and 0.75 mile north of Carlsbad Highlands Ecological Reserve and Dawson Los Monos Canyon Reserve, respectively.

Figure 2 shows the project boundary in relation to the surrounding lands, unincorporated lands in the Draft North County MSCP Subarea Plan, lands within the City of Carlsbad Habitat Management Plan, and waterbodies within the Carlsbad Watershed.

HABITATS/VEGETATION COMMUNITIES

Table B presents the total acreages of the vegetation communities identified in the BSA and the project boundary, while Figure 3 shows the vegetation communities in the BSA on an aerial photograph.

Table B: Vegetation Communities within the BSA and Project Boundary

Vegetation Communities	Holland Codes	Acreage within the BSA	Acreage within the Project Boundary
Nonnative Riparian	65000	0.09	—
Arundo-dominated Riparian	65100	0.12	—
Disturbed Habitat	11300	17.77	13.57
Developed Land	12000	6.77	0.88
Total Acres[1]		**24.75**	**14.45**

[1] Total may not equal sum due to rounding.
BSA = Biological Study Area

Because *Arundo*-dominated riparian comprises a hydrophytic plant species, it is considered a County RPO Wetland. Disturbed habitat and developed land are of low biological value and are not considered Resource Protection Ordinance Sensitive Habitat according to the County Guidelines and they are not considered sensitive by State or Federal agencies and have low conservation value. The following is a description of each of the vegetation communities present within the BSA along with its numeric code (Holland Code) found in *Draft Vegetation Communities of San Diego County*.

Nonnative Riparian (65000)

This vegetation community occurs outside of the project boundary, but within the 100-foot mapping buffer. It occurs east of and adjacent to the northern drainage (Feature 3) and consists of a densely-vegetated thicket of sweet gum (*Eucalyptus* sp.) trees.

Arundo-Dominated Riparian (65100)

This vegetation community, which is a subset of the Nonnative Riparian category, occurs outside of the project site, but within the 100-foot mapping buffer. It occurs downstream of and adjacent to the western terminus of the southern drainage (Feature 2) and consists of a dense patch of giant reed (*Arundo donax*). This vegetation community is considered an RPO Wetland due to a predominance of giant reed, a hydrophytic plant species.

Disturbed Habitat (11300)

The areas of the BSA consisting of disturbed habitat were dominated by routinely mowed nonnative, weedy annual species including tocalote (*Centaurea melitensis*), short-pod mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), Hottentot fig (*Carpobrotus edulis*), and garland daisy (*Glebionis coronaria*). The native annual species fascicled tarweed (*Deinandra fasciculata*) was also present in this vegetation community. This vegetation community also includes areas with potted nursery container plants (small shrub species and tree species) or temporary buildings containing plants (e.g., greenhouses).

Three ephemeral drainages and a depression present at the northern half of the BSA were vegetated with nonnative annual upland vegetation; however, a few hydrophytic plants, including Mexican fan palm (*Washingtonia robusta*), mule fat (*Baccharis salicifolia*), curly dock (*Rumex crispus*), and Goodding's black willow (*Salix goodingii*), are sparsely scattered along the drainages and in the depression.

Developed Land (12000)

Developed land within the BSA refers to residential development and associated landscaping.

SPECIAL-STATUS SPECIES

Table C lists criteria for evaluating special-status plant and wildlife species potential for occurrence. Attachment D contains a table naming the special-status plant and wildlife species with the potential to occur in the BSA and/or the project vicinity (up to 2 miles). The table in Attachment D includes sensitive species from a comprehensive list contained in the biological resources scoping attachment to the major pre-application scoping letter provided by the County.

Table C: Criteria for Evaluating Special-Status Plant and Wildlife Species Potential for Occurrence

PFO	Criteria
Not Expected	Species is restricted to habitats or environmental conditions that do not occur in the study area.
Low	Historical records for this species do not exist in the study area, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate	Either a historical record exists of the species in the study area and marginal habitat exists in the proposed work areas or the habitat requirements or environmental conditions associated with the species occur in the proposed work areas, but no historical records exist in the study area.
High	Both a historical record exists of the species and the habitat requirements and environmental conditions associated with the species occur in the study area.

Table C: Criteria for Evaluating Special-Status Plant and Wildlife Species Potential for Occurrence

PFO	Criteria
Present	Species was detected in or near the study area during project surveys.

PFO = potential for occurrence

Special-Status Plants

There are no special-status plant species with a moderate or higher potential to occur within the project site, based on the results of the database records search of a 2-mile radius around the BSA, observations made during the general biological resources survey and rare plant survey, and the absence of suitable habitat on site.

No special-status plant species were observed during the general biological resources survey.

Special-Status Wildlife

Based on the results of the database records search of a 2-mile radius around the BSA and observations made during the general biological resources survey and rare plant survey, the following special-status wildlife species have a moderate potential to occur within the BSA: Cooper's hawk, sharp-shinned hawk, red-shouldered hawk, turkey vulture, hoary bat, and western yellow bat.

Cooper's hawk is in Group 1 of the County's Sensitive Animal List and has a moderate probability of nesting and foraging within the BSA. Although no CNDDB occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey, suitable nesting and foraging habitat (trees and disturbed areas containing nonnative grasses, respectively) was present within the BSA and this species was reported in the San Diego Bird Atlas square that includes the BSA (Unitt 2004).

Sharp-shinned hawk is in Group 1 of the County's Sensitive Animal List and is a California Species of Special Concern Watch List species that has moderate probability of nesting and foraging within the BSA. Although no CNDDB occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey, suitable nesting and foraging habitat (trees and disturbed areas containing nonnative grasses, respectively) was present within the BSA and this species was reported in the San Diego Bird Atlas square that includes the BSA (Unitt 2004).

Red-shouldered hawk is in Group 1 of the County's Sensitive Animal List. This species was included on a County-provided list of sensitive species to be reviewed for potential to occur within the study area. Although this species was not observed during the biological survey or rare plant survey, it has a moderate probability to occur within the BSA because it was reported in the San Diego Bird Atlas square that includes the BSA (Unitt 2004) and suitable nesting and foraging habitats (trees and disturbed areas containing nonnative grasses, respectively) were present within the BSA.

Turkey vulture is in Group 1 of the County's Sensitive Animal List. This species was included on a County-provided list of sensitive species to be reviewed for potential to occur within the study area.

Although this species was not observed during the biological survey or rare plant survey, it has a moderate probability to occur within the BSA because it was reported in the San Diego Bird Atlas square that includes the BSA and suitable foraging habitat (disturbed areas containing nonnative grasses) was present within the BSA.

Hoary bat is considered a Special Animal by the CDFW and it has a moderate probability of roosting within the BSA. Although this species was not observed during the biological survey or rare plant survey, suitable roosting habitat (trees) was present within the BSA and there is a CNDDB occurrence between 1.5 and 2 miles north of the BSA. This species is not on the County's Sensitive Animal List.

Western yellow bat is a California Species of Special Concern species that has a moderate probability of roosting within the BSA. Although this species was not observed during the biological survey, suitable roosting habitat (unmaintained Mexican fan palm trees) was present within the BSA and there is a CNDDB occurrence between 1.5 and 2 miles north of the BSA. This species is not on the County's Sensitive Animal List.

No special-status animal species were observed during the general biological resources survey.

Botta's pocket gopher (*Thomomys bottae*) burrows were observed throughout the western half of the site, where the ground was less compacted. No large mammals were observed, although there is the potential for coyote (*Canis latrans*) to occur within the BSA. Migratory birds have the potential to forage and nest in vegetation within the BSA. Raptors have the potential to forage within the BSA and to nest in trees along the edges of the BSA.

JURISDICTIONAL WETLANDS AND WATERWAYS

The BSA contains three ephemeral drainage features potentially subject to regulation by the Corps, RWQCB, CDFW, and County. The following describes the features present in the BSA as they were observed during the jurisdictional delineation fieldwork. Figure 4 displays the locations of these features on an aerial photograph.

Functions and values for these drainage features were determined to have low significance in terms of resources.

Feature 1

This feature consists of an ephemeral drainage vegetated predominantly by nonnative annual upland vegetation, namely short-pod mustard (*Hirschfeldia incana*; Wetland Indicator Status: Obligate Upland species [UPL] and tocalote (*Centaurea melintensis*; Wetland Indicator Status: UPL) with a few sparsely-scattered hydrophytic plants, such as Gooding's black willow (*Salix gooddingii*; Wetland Indicator Status: Facultative Wetland species [FACW]) and curly dock (*Rumex crispus*; Wetland Indicator Status: Facultative species [FAC]). The feature begins along the southwestern edge of the property and conveys runoff flows from the adjacent Shadowridge Heights apartment complex in a northerly direction until it converges with Feature 2. Within the 100-foot County-required survey buffer, and within the Shadowridge Heights apartment complex property, a section of Feature 1 is vegetated by sweet gum (*Eucalyptus* sp.; Wetland Indicator Status: Obligate Upland species) trees and some

scattered arroyo willow (*Salix lasiolepis*; Wetland Indicator Status: FACW), red willow (*Salix laevigata*; Wetland Indicator Status: FACW), and coast live oak (*Quercus agrifolia*; Wetland Indicator Status: UPL) trees and/or saplings; however, hydrophytic vegetation does not dominate this area. In the BSA, this feature displays an ordinary high water mark (OHWM) of varying width (0.5 to 3.5 feet) and 1- to 4-foot wide stream banks. LSA collected Sample Points 1 and 2 within the drainage to determine whether they, and areas they represented, met the criteria for wetland waters of the United States. The area represented by Sample Point 1 was dominated by sweet gum, willow, and coast live oak trees and saplings, coyote brush (*Baccharis pilularis*; Wetland Indicator Status: UPL) shrubs, black mustard (*Brassica nigra*; Wetland Indicator Status: UPL), and Hottentot fig (*Carpobrotus edulis*; Wetland Indicator Status: UPL). Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 1 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soil displayed no hydric soils indicators. The area represented by Sample Point 2 was dominated by short-pod mustard and tocalote plants, Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 2 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soil displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology, Feature 1 is not considered wetland waters of the United States. However, because Feature 1 displays a visible OHWM and conveys flows to Feature 2, which has a direct connection to the Pacific Ocean (discussed below), this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, Feature 1 does not meet the criteria for RPO Wetland.

Feature 2

This feature consists of an ephemeral drainage that widens to a vegetated depression near the western end and then narrows again before exiting the project site and conveying flows into a dense patch of Arundo-dominated riparian vegetation. Feature 2 begins in the eastern half of the BSA and appears to convey flows from the adjacent nursery in a northwesterly direction. The drainage component of this feature is vegetated predominantly by nonnative annual upland vegetation (short-pod mustard and tocalote), while the depression includes nonnative upland species and curly dock. The western end of the feature (outside of the project property, but within the 100-foot mapping buffer) is vegetated by Arundo-dominated riparian vegetation consisting of giant reed (Wetland Indicator Status: FACW). In the BSA, this feature displays an OHWM of varying width (0.5 to 3.5 feet) and 0.5- to 4-foot wide stream banks. The vegetated depression varies in width (up to 20 feet) and displays defined banks. From the western edge of the BSA, Feature 2 continues in a northwesterly direction for approximately 1,200 feet to a concrete storm drain structure, which ultimately conveys flows to the Pacific Ocean, a traditional navigable water. LSA collected Sample Points 3 and 4 within the vegetated depression and Sample Point 5 within the Arundo-dominated riparian vegetation at the western end of Feature 2 to determine if these areas, and areas they represented, met the criteria for wetland waters of the United States. The area represented by Sample Point 3 was dominated by curly dock, short-pod mustard, and fascicled tarweed (*Deinandra fasciculata*; Wetland Indicator Status: Facultative Upland species [FACU]), Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 2 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix in the upper 4 inches and

a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 12 inches. The soils displayed no hydric soils indicators. The area represented by Sample Point 4 was dominated by curly dock, short-pod mustard, and fascicled tarweed. Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 3 revealed dry sandy soil with a Munsell soil color of 10YR 4/3 throughout the matrix in the upper 6 inches and a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 14 inches. The soils displayed no hydric soils indicators. The area represented by Sample Point 4 was dominated by giant reed. No evidence of wetland hydrology indicators was observed. Analysis of the soils at Sample Point 5 revealed dry sandy soil with a Munsell soil color of 10YR 4/3 throughout the matrix in the upper 6 inches and a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 8 inches. The soils displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation (except for the Arundo-dominated riparian vegetation, which is dominated by giant reed, a hydrophytic plant species), hydric soils, and wetland hydrology, Feature 2 is not considered a wetland water of the United States. However, because Feature 2 displays a visible OHWM and conveys flows to a concrete storm drain structure, which has a direct connection to the Pacific Ocean, this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, most of Feature 2 does not meet the criteria for RPO Wetland. However, the *Arundo*-dominated riparian vegetation at the western end of Feature 2 meets the criteria for RPO Wetland because the dominant species is a hydrophyte.

Feature 3

This feature consists of an ephemeral drainage vegetated predominantly by nonnative annual upland vegetation (short-pod mustard and tocalote). Nonnative riparian vegetation dominated by sweet gum trees provides a canopy over the eastern end of the drainage. The feature is in the northern quarter of the BSA and conveys flows from upstream sources (earthen and concrete ditches and runoff) through the BSA in a northwesterly direction before making a sharp southerly turn and converging into Feature 2. In the BSA, this feature displays an OHWM of varying width (0.5 to 4.5 feet) and 1- to 6-foot wide stream banks. LSA collected Sample Point 5 within the drainage feature to determine if it, and areas it represented, met the criteria for wetland waters of the United States. The area represented by Sample Point 6 was dominated by short-pod mustard and tocalote. Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 5 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soils displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology, Feature 3 is not considered wetland waters of the United States. However, because Feature 3 displays a visible OHWM and conveys flows to a concrete storm drain structure after converging with Feature 2, which has a direction connection to the Pacific Ocean, this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, Feature 3 does not meet the criteria for RPO Wetland.

Potential Corps Jurisdiction

The ephemeral drainages within the BSA display visible OHWMs and have a direct connection to the Pacific Ocean. Therefore, they are considered nonwetland waters of the United States and potentially subject to Corps jurisdiction. Although an area at the western end of Feature 2 contains a predominance of hydrophytic vegetation, wetland hydrology and hydric soils are absent from the ephemeral drainages; therefore, these ephemeral drainages are not considered wetland waters of the United States. Table D displays the acreages of waters of the United States present within the BSA.

Table D: Potential Waters of the United States within the BSA

Feature	Linear Feet	Wetland Waters (acres)	Nonwetland Waters (acres)
1	474	0.00	0.03
2	1,019	0.00	0.31
3	674	0.00	0.03
Total	**2,167**	**0.00**	**0.37**

BSA = Biological Study Area

Potential RWQCB Jurisdiction

Features 1 through 3 are nonwetland waters of the State subject to the jurisdiction of the RWQCB. Table E displays the acreages of waters of the State within the BSA.

Table E: Potential Waters of the State within the BSA

Feature	Linear Feet	Wetland Waters (acres)	Nonwetland Waters (acres)
1	474	—	0.04
2	1,019	—	0.34
3	674	—	0.05
Total*	**2,167**	—	**0.43**

BSA = Biological Study Area
*Total may not equal sum due to rounding.

Potential CDFW Jurisdiction

All of the areas satisfying the RWQCB jurisdictional criteria for waters of the State are also potentially subject to CDFW jurisdiction, pursuant to Section 1602 of the California Fish and Game Code. Additionally, associated riparian vegetation extending beyond the limits of the stream banks is subject to CDFW jurisdiction. Table F displays the acreage of potential CDFW jurisdiction present within the BSA.

Table F: Potential CDFW Jurisdiction Within the BSA

Feature	Streambed/Banks and Riparian Vegetation (acres)
1	0.04
2	0.34

Table F: Potential CDFW Jurisdiction Within the BSA

Feature	Streambed/Banks and Riparian Vegetation (acres)
3	0.05
Total*	**0.43**

CDFW = California Department of Fish and Wildlife
BSA = Biological Study Area
*Total may not equal sum due to rounding.

Potential San Diego County RPO Wetlands

Because the drainage features within the BSA have substrata that are non-hydric soils, only areas within the BSA containing a predominance of hydrophytic vegetation (*Arundo*-dominated riparian) were mapped as County RPO Wetlands. An area containing this vegetation community is within the BSA, but outside of the Diocese's property boundary. Table G displays the total acreage of potential County RPO wetlands identified in the BSA. Figure 4 displays a 50-foot wide County-required wetland buffer around the area mapped as RPO Wetland. This buffer would occupy a 0.15-acre area within the Diocese property boundary. This buffer width is appropriate because, although the area mapped as RPO Wetland contains hydrophytic vegetation, it is composed entirely of the highly invasive nonnative species giant reed. Furthermore, the RPO Wetland is fed by off-site irrigation and runoff and does not connect to a significant riparian corridor. Additionally, the RPO Wetland provides minimal function as a wildlife corridor due to the location of a chain-link fence and the high density of the giant reed. Finally, adjacent land use is not expected to result in substantial edge effects. Construction will not affect the RPO Wetland or its buffer. An open space easement (including appropriate open space signage and/or fencing) will be established to protect the RPO Wetland buffer; however, the easement will not include the wetland, as it is not on the Diocese's property. A County-required 100-foot limited building zone easement will be established around the RPO Wetland buffer.

Table G: Potential San Diego County RPO Wetlands within the BSA

Feature	Streambed/Banks (acres)
1	—
2	0.12
3	—
Total	**0.12**

RPO = Resource Protection Ordinance
BSA = Biological Study Area

OTHER UNIQUE FEATURES/RESOURCES

Elevations at the site range from approximately 350 to 460 feet above mean sea level. The topography consists of relatively flat land with a gentle northwest-facing slope. No mapped sensitive soils occur within the BSA. Overall, the BSA provides minimal function as a wildlife corridor because it is disturbed and surrounded by residential and commercial development, including roads, which restricts wildlife movement through the general area.

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

Construction of this project would result in permanent loss of disturbed habitat and developed land. Permanent loss involves long-term impacts associated with permanent features consisting of an administrative office, a gatehouse, landscaping, internal circulation system, and utility improvements.

Direct impacts to disturbed habitat will result from permanent clearing of vegetation. It is anticipated that any wildlife within the project site will be displaced. Direct impacts to developed land will result from road improvements.

Indirect impacts to adjacent areas may result from noise and dust generated by construction-related activities, which have the potential to disturb nearby wildlife and, in the case of dust, vegetation. Additionally, while not anticipated, if construction is performed at night, lighting has the potential to indirectly affect wildlife.

Because the BSA provides minimal function as a wildlife corridor, the project will not interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation ordinance, and would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Vegetation Communities

Figure 5 is an aerial photograph depicting the anticipated impacts to vegetation communities within the BSA. Table H outlines the expected mitigation for permanent impacts to each vegetation community type as a result of project-related activities.

Table H: Anticipated Mitigation for Permanent Impacts to Vegetation Communities

Vegetation Community	Existing Area within Project Boundary (acres)*	Impact (acres)	Impact Neutral (acres)**	Mitigation Ratio	Mitigation Required (acres)	Off-Site Mitigation (acres)
Nonnative Riparian	—	—	—	3:1	—	—
Arundo-dominated Riparian	—	—	—	3:1	—	—
Disturbed Habitat	13.57	13.57	0.15	N/A	—	—
Developed Land	0.88	0.88	—	N/A	—	—
Total[1]	**14.45**	**14.45**	**0.15**		—	—

Table H: Anticipated Mitigation for Permanent Impacts to Vegetation Communities

Vegetation Community	Existing Area within Project Boundary (acres)*	Impact (acres)	Impact Neutral (acres)**	Mitigation Ratio	Mitigation Required (acres)	Off-Site Mitigation (acres)

*Existing area within the project boundary does not include the additional 100-buffer required by the County.
**The impact neutral area corresponds to the RPO Wetland buffer.
[1] Total may not equal sum due to rounding.

Per the County Guidelines, permanent impacts to disturbed habitat and developed land do not require mitigation.

Special-Status Plant Species

Based on the results from the database records search, the absence of suitable habitat on site, and because no special-status plant species were observed during the general biological resources survey or rare plant survey, special-status plant species are not expected to be affected by project-related activities. The project will not have a substantial adverse effect on special-status plant species.

Special-Status Wildlife Species

Special-Status Avian Species and Nesting Birds

Although no special-status bird species were observed during the general biological resources survey, Cooper's hawk, sharp-shinned hawk, red-shouldered hawk, and turkey vulture have a moderate potential to occur within the BSA based on the presence of suitable habitat within the BSA and known occurrences in the San Diego Bird Atlas square that includes the BSA (Unitt 2004). Because Cooper's hawk, sharp-shinned hawk, red-shouldered hawk, and turkey vulture are categorized as Group 1 animal species on the County's Sensitive Animal List, and because development of the project site would result in the loss of functional foraging habitat for these species and other raptors, the project will have a substantial adverse effect on raptor species.

Temporary and permanent impacts to foraging and nesting habitat for these species and other bird species that are not considered special-status, but are protected by the California Fish and Game Code and the Migratory Bird Treaty Act, are expected to occur. If project-related activities are conducted during the typical bird breeding season (February 1 through August 31), these activities could affect individual birds, breeding activities, and active nests directly or indirectly (e.g., noise and fugitive dust).

Section 3503.5 of the California Fish and Game Code states that "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted thereto." To comply with this law, LSA recommends that a qualified biologist perform a pre-construction nesting bird survey in suitable nesting habitat prior to the commencement of construction to avoid impacts to nesting birds. The contractor should create and implement a plan to minimize fugitive dust, which will reduce indirect impacts to birds. If active bird nests are identified during the pre-construction nesting bird survey, then a qualified biologist should establish an adequate buffer zone in which construction activities are prohibited until the nest is no

longer active. If the species is federally or State-listed as threatened or endangered, then consultation with the USFWS and CDFW will be required for direction on appropriate buffer zone radius. If the species is not federally or State-listed as threatened or endangered, then the size of the buffer zone will be determined by the qualified biologist based on the amount, intensity, and duration of construction, and can be altered based on site conditions.

Special-Status Mammal Species

Although no special-status mammal species were observed during the biological resources survey, there is a moderate potential for hoary bat and western yellow bat to occur within the BSA due to the presence of suitable habitat. Clearing/disturbance of trees within the BSA has the potential to affect these foliage-roosting bat species directly through the loss of suitable roosting habitat. Furthermore, these species could be indirectly affected by impacts associated with activities that generate high amounts of vibration, noise, or possible night lighting. Because western yellow bat is a California Species of Special Concern, and because development of this project would result in the loss of suitable roosting habitat for this species and other foliage-roosting bat species, the project will have a substantial adverse effect on bat species.

LSA recommends that a qualified biologist perform a pre-construction bat survey in suitable roosting habitat prior to the commencement of construction to avoid impacts to foliage-roosting bats. If special-status bats are identified during the pre-construction survey, then a qualified biologist should establish an adequate buffer zone in which construction activities are prohibited until the bats can be evicted. Removal of special-status bats will require consultation with the CDFW.

Because these bat species are not on included in Group I or II of the County's Sensitive Animal List, the project will not have a substantial adverse effect on special-status bat species.

Jurisdictional Wetlands and Waterways

Features 1 and 2 are expected to be permanently affected by project-related activities. Both features are subject to regulation by the Corps, CDFW, and RWQCB. Figure 6 shows the anticipated impacts to nonwetland waters of the United States, nonwetland waters of the State, and CDFW jurisdiction within the BSA on an aerial photograph. Tables I, and J, and K outline the expected mitigation for impacts to aquatic resources resulting from project-related activities. The project will avoid impacts to County RPO Wetlands and the County-required 50-foot wetland buffer.

Table I: Anticipated Mitigation for Impacts to Potential Waters of the United States

Feature	Linear Feet	Wetland Waters of the U.S. (acres)	Nonwetland Waters of the U.S. (acres)	Total Water of the U.S. (acres)	Anticipated Mitigation Ratio (acres)[2]	Anticipated Mitigation Required (acres)
1	292	—	0.01	0.01	2:1	0.02
2	867	—	0.18	0.18	2:1	0.36
3	—	—	—	—	—	—
Total[1]	**1,159**	—	**0.19**	**0.19**	**2:1**	**0.38**

Table I: Anticipated Mitigation for Impacts to Potential Waters of the United States

Feature	Linear Feet	Wetland Waters of the U.S. (acres)	Nonwetland Waters of the U.S. (acres)	Total Water of the U.S. (acres)	Anticipated Mitigation Ratio (acres)[2]	Anticipated Mitigation Required (acres)

[1] Total may not equal sum due to rounding.
[2] Due to the disturbed nature and low functions and values of the drainage features on site, LSA estimates that a 2:1 mitigation to impact ratio will satisfy the mitigation requirements for impacts to waters of the U.S., waters of the States, and jurisdictional streambeds and banks. However, the Diocese will consult with representatives from the CDFW, the Corps, and the RWQCB to determine the appropriate mitigation for permanent impacts to drainage features.
U.S. = United States

Table J: Anticipated Mitigation for Impacts to Potential Waters of the State

Feature	Linear Feet	Wetland Waters of the State (acres)	Nonwetland Waters of the State (acres)	Total Water of the State (acres)	Anticipated Mitigation Ratio (acres)[2]	Anticipated Mitigation Required (acres)
1	292	—	0.01	0.01	2:1	0.02
2	867	—	0.21	0.21	2:1	0.42
3	—	—	—	—	—	—
Total[1]	**1,159**	—	**0.22**	**0.22**	**2:1**	**0.44**

[1] Total may not equal sum due to rounding.
[2] Due to the disturbed nature and low functions and values of the drainage features on site, LSA estimates that a 2:1 mitigation to impact ratio will satisfy the mitigation requirements for impacts to waters of the U.S, waters of the State,. and jurisdictional streambeds and banks. However, the Diocese will consult with representatives from the CDFW, the Corps, and the RWQCB to determine the appropriate mitigation for permanent impacts to drainage features.

Table K: Anticipated Mitigation for Impacts to Potential CDFW Jurisdiction

Feature	Streambed/Banks (acres)	Anticipated Mitigation Ratio (acres)[2]	Anticipated Mitigation Required (acres)
1	0.01	2:1	0.02
2	0.21	2:1	0.42
3	—	—	—
Total[1]	**0.22**	**2:1**	**0.44**

[1] Total may not equal sum due to rounding.
[2] Due to the disturbed nature and low functions and values of the drainage features on site, LSA estimates that a 2:1 mitigation to impact ratio will satisfy the mitigation requirements for impacts to waters of the U.S., waters of the State, and jurisdictional streambeds and banks. However, the Diocese will consult with representatives from the CDFW, the Corps, and the RWQCB to determine the appropriate mitigation for permanent impacts to drainage features.
CDFW = California Department of Fish and Wildlife

By meeting the mitigation acreage requirement for impacts to streambeds and banks (CDFW jurisdiction), the project will meet the mitigation requirements for impacts to nonwetland waters of the United States and nonwetland waters of the State because of the higher acreage of impacts to streambeds and banks. The Diocese proposes to mitigate for impacts to potentially jurisdictional streambeds and banks by purchasing off-site mitigation bank credits. Impacts to aquatic resources will require review by the resource agencies. The resource agencies will likely require the following permits: a Corps Section 404 Nationwide Permit, an RWQCB Section 401 water quality certification, and a CDFW Streambed Alteration Agreement. The quantity and source of mitigation bank credits will be determined after consultation with the resource agencies.

The project will not have a substantial adverse effect on riparian habitat or sensitive natural communities for the following reasons:

- The drainage features on site are vegetated by nonnative upland species;
- No wetland or riparian habitat is present within the property boundary; and
- Although the *Arundo*-dominated habitat within the BSA, but outside of the property boundary, is considered an RPO Wetland, a 50-foot wetland buffer will be implemented to protect it.

The project will not have a substantial adverse effect on federal wetlands because none occurs on site.

CUMULATIVE IMPACTS

The cumulative study area includes the section of the Draft North County MSCP Area that contains the BSA, as well as portions of lands within the City of Carlsbad's Habitat Management Plan to the west, lands within the City of Oceanside Subarea Plan to the north, and lands within the City of Escondido's Multiple Habitat Conservation Program Subarea Plan and the City of San Diego's MSCP Subarea Plan to the east. The purpose of these habitat conservation programs is to take a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity, which is the most appropriate way to assess and address the potential cumulative impacts stemming from multiple projects in the same geographic area. These programs focus on the long-term stability of wildlife and plant communities and include key interests in the process. These programs identify and provide for the regional protection of plants, animals, and their habitats while allowing compatible and appropriate economic activity. Potential impacts to sensitive habitats and associated species have been addressed in a regional context through these programs.

Although the project will directly and permanently affect disturbed habitat and developed land at the project site, these impacts will be addressed through compliance with the County Guidelines. Furthermore, special-status plant and wildlife species are not expected to be cumulatively affected by project-related activities because avoidance and minimization mitigation measures will be implemented. Through compliance with the County Guidelines, the project will offset cumulative impacts to a less than significant level.

Pending and future projects will also be required to comply with the regional habitat conservation programs, such as the County MSCP, which will address project-specific impacts and appropriate mitigation to offset cumulative impacts to a less than significant level.

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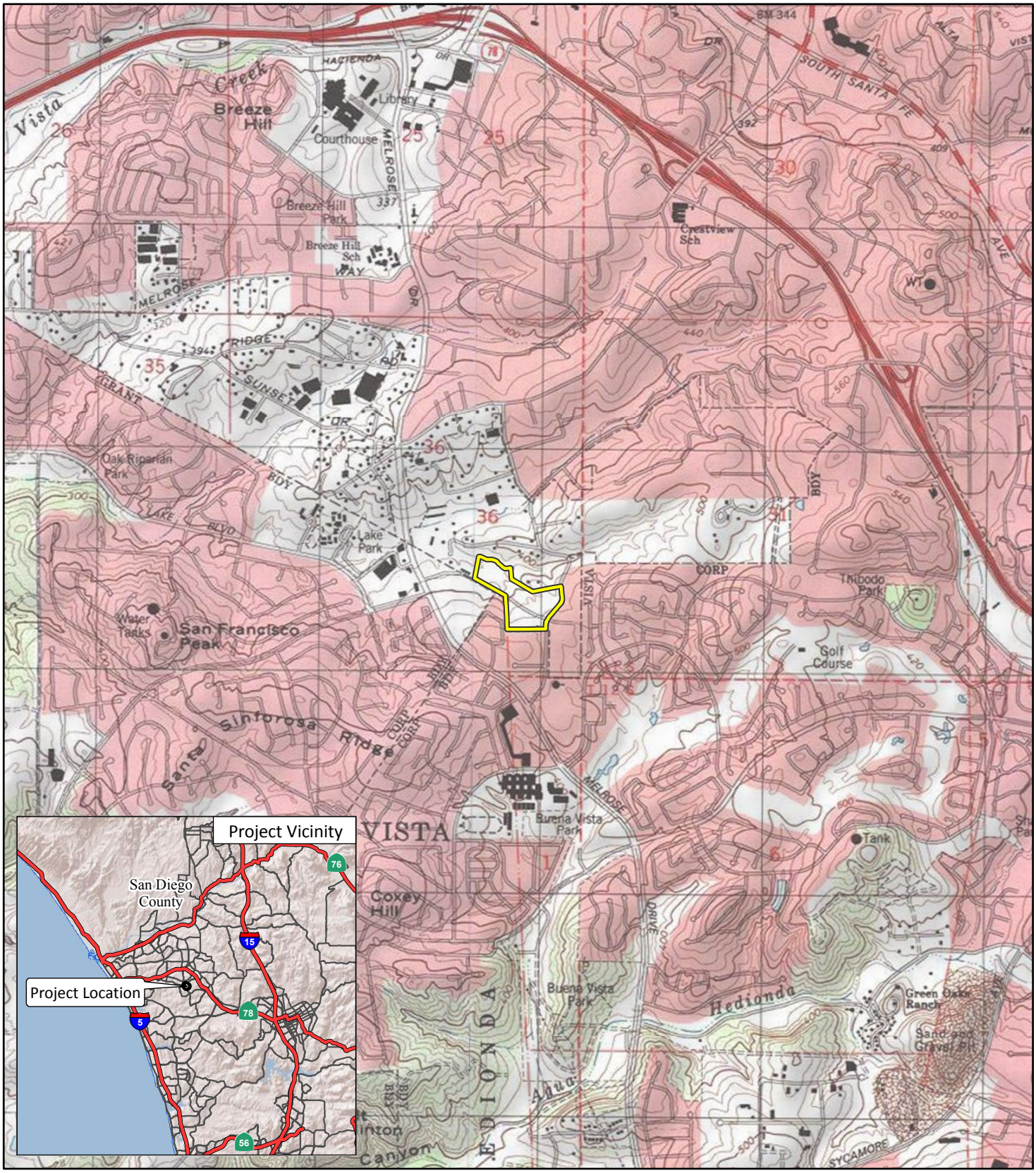
ATTACHMENTS

A. Figures 1–6 and Site Photographs
B. Vascular Plant Species Observed
C. Wildlife Species Observed
D. Special-Status Species Summary Table
E. Jurisdictional Delineation Report
F. Rare Plant Survey Report

ATTACHMENT A:

FIGURES 1–6 AND SITE PHOTOGRAPHS



LSA

FIGURE 1

SOURCE: USGS 7.5' Quad - San Marcos (1983)

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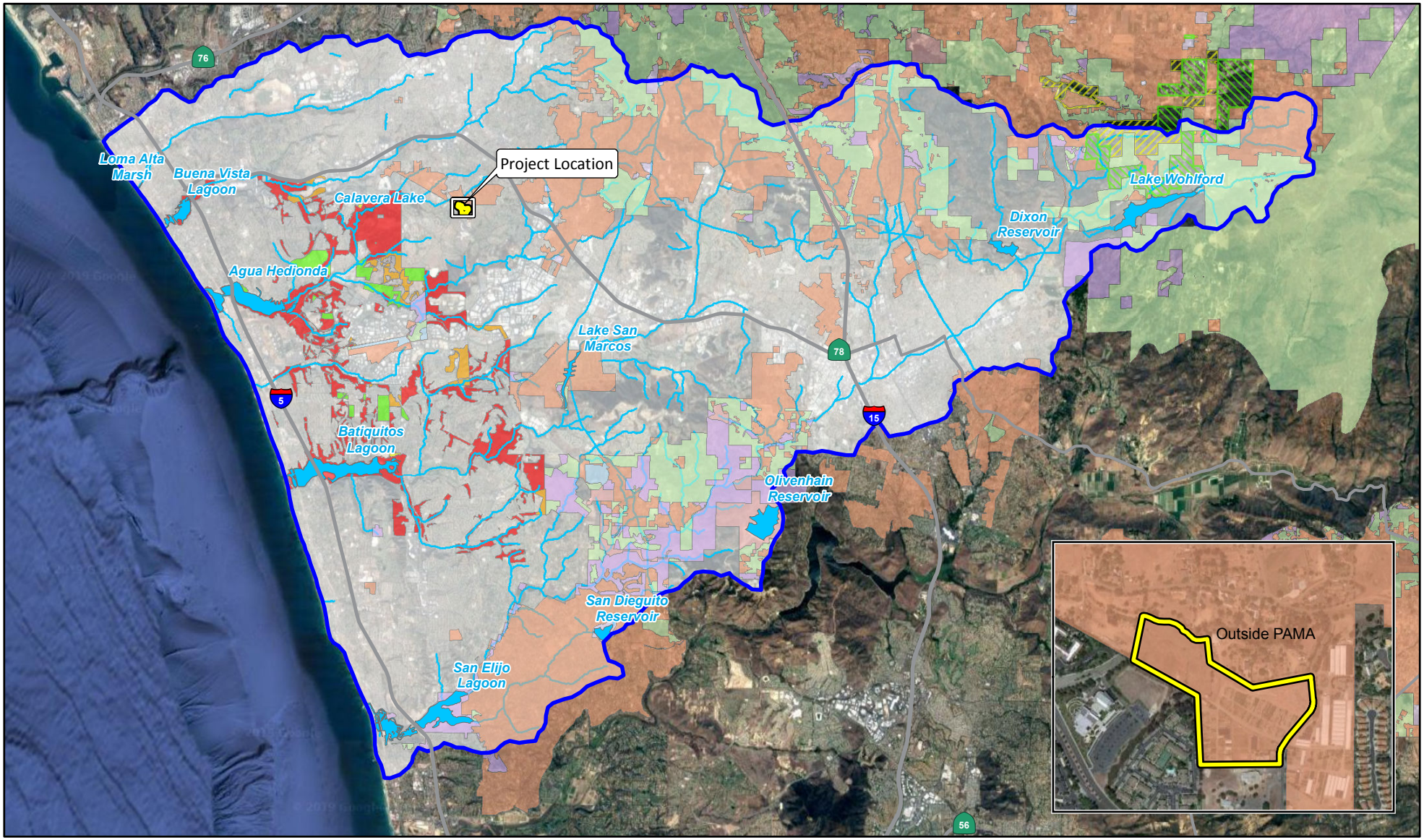
Good Shepherd Catholic Cemetery Project

Project Location



LSA

LEGEND

Project Boundary	City of Carlsbad HMP	San Diego County MSCP	Preserve Areas
Waters	Existing Hardline	North County Plan	Special Districts
Rivers and Streams	Outside-Conserved	Other Lands	Take Authorized
NHD_WaterbodyClip	Proposed Hardline	Outside PAMA	Tribal Lands in Fee
Carlsbad Watershed	Standards Area	PAMA	Tribal Lands in Trust

0 1.5 3
MILES

SOURCE: Google Maps (2018); SanGIS (4/2019); CalWater (2004); National Hydrography Dataset (2017); City of Carlsbad (2017)
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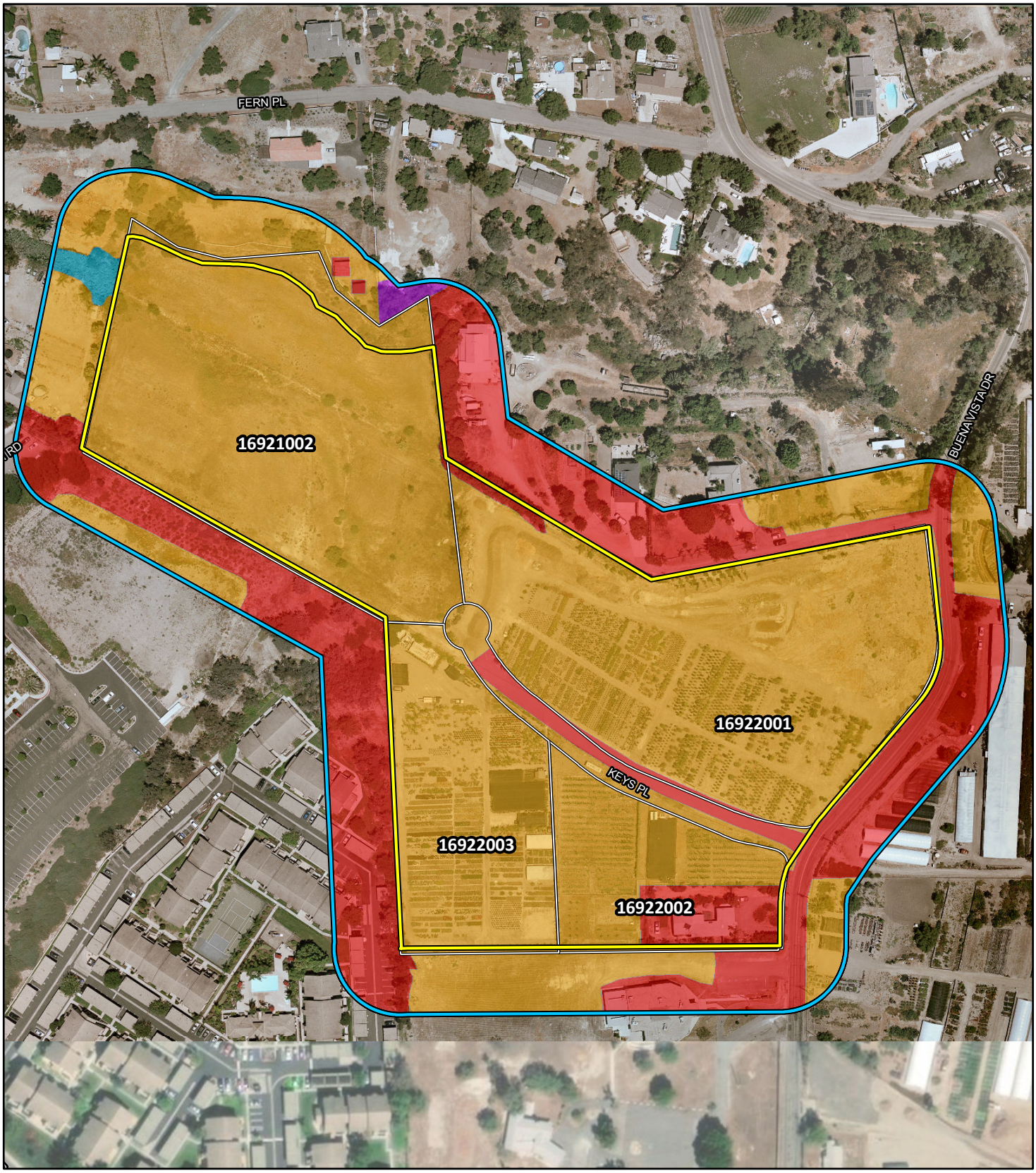
FIGURE 2

Good Shepherd Catholic Cemetery Project

Regional Context



LSA

FIGURE 3

LEGEND

- Project Boundary
- Biological Study Area*
- Parcel Lot Lines (with APNs)

*Biological Study Area includes a County-required 100-foot buffer

- Arundo Dominated Riparian (0.12 Ac)
- Nonnative Riparian (0.09 Ac)
- Developed (6.77 Ac)
- Disturbed (17.77 Ac)

N

0 100 200
FEET

SOURCE: Hofman (2017)

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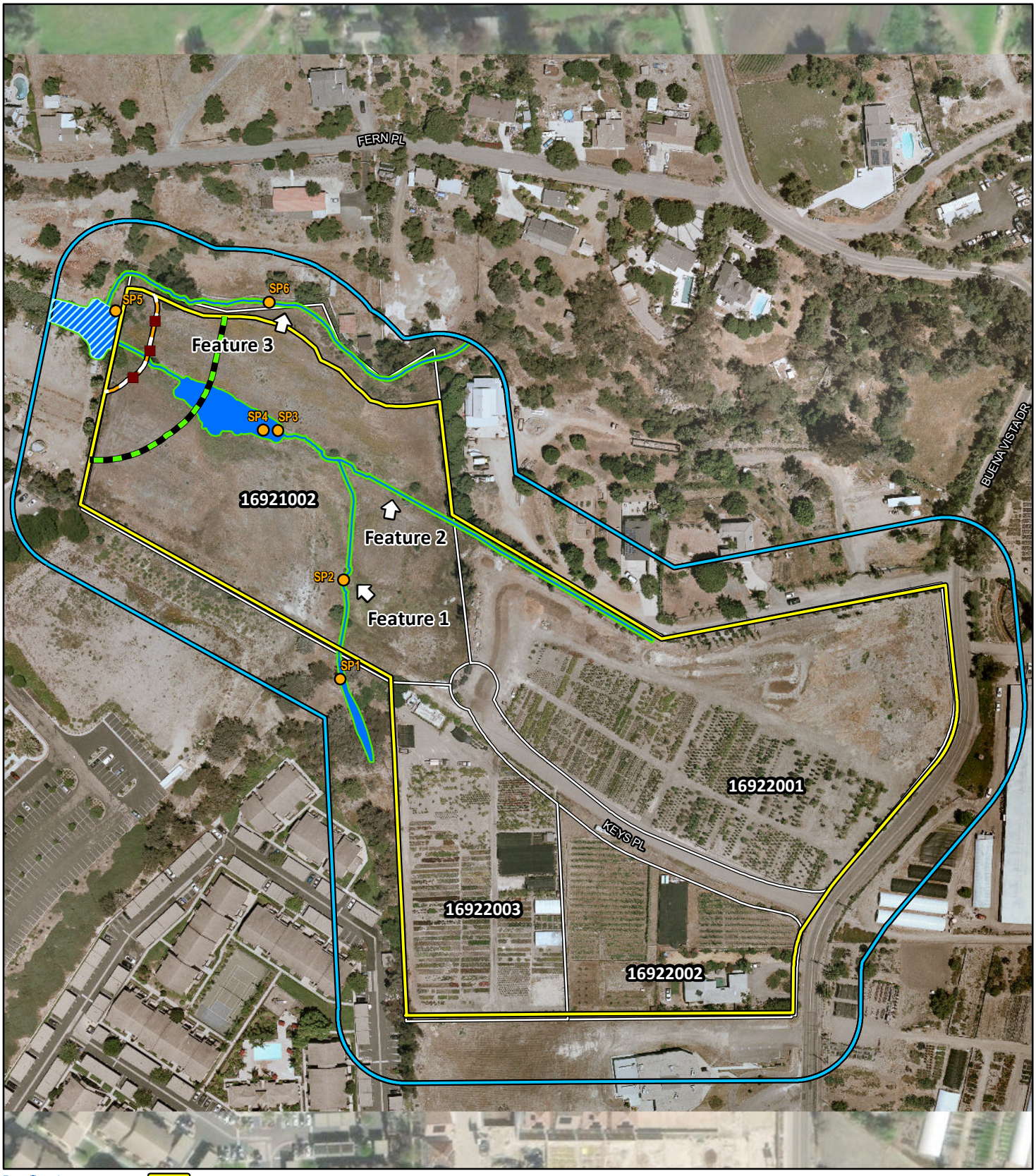
Good Shepherd Catholic Cemetery Project

Vegetation Map



LSA

Project Boundary
Biological Study Area*
County-Required 50-foot Wetland Buffer/Proposed Open Space
Parcel Lot Lines (with APNs)

Limited Building Zone (LBZ) Easement
Proposed Open Space Fencing
Proposed Open Space Sign Posts
Sample Point

Jurisdictional Delineation
Nonwetland Waters of the U.S. (0.37 Ac)
Nonwetland Waters of the State/ CDFW Jurisdictional Streambed/Banks (0.43 Ac)
Resource Protection Ordinance Wetland (0.12 Ac)

FIGURE 4

N

0 100 200
FEET

SOURCE: Hofman (4/2021)

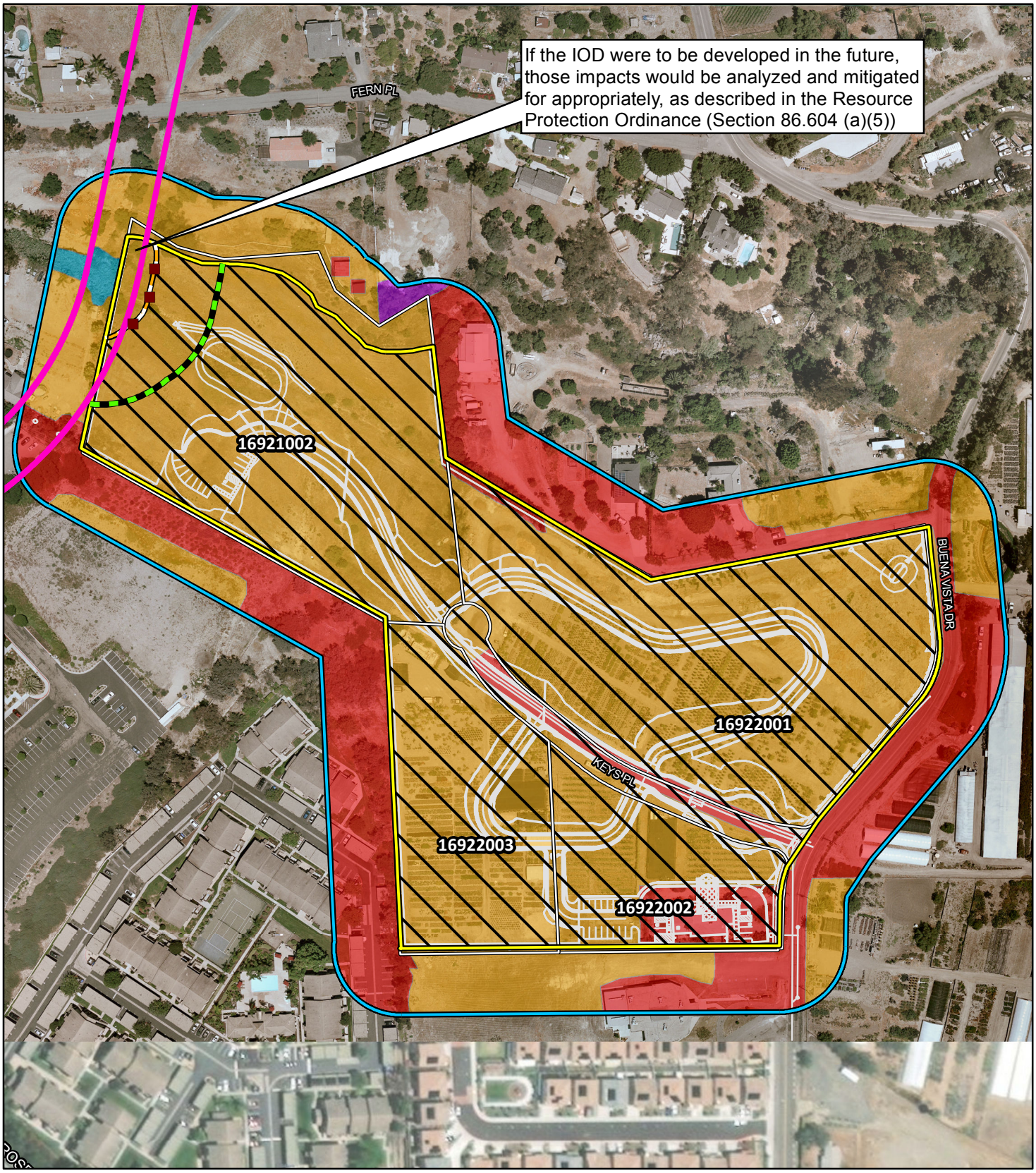
*Biological Study Area includes a County-required 100-foot buffer

Note: Aquatic features are represented by cartographic lines. Please refer to the text for exact measurements.

Good Shepherd Catholic Cemetery Project

Aquatic Resources Map

\\acorp04\CBDImages\DSD1701\GIS\AquaticResources.mxd (10/9/2021)



LSA

LEGEND

- Project Boundary
- Biological Study Area*
- County-Required 50-foot Wetland Buffer/Proposed Open Space
- Permanent Impact Area**
- Parcel Lot Lines (with APNs)
- Irrevocable Offer of Dedication (IOD)
- Site Plan
- Limited Building Zone (LBZ) Easement
- Proposed Open Space Fencing
- Proposed Open Space Sign Posts
- Arundo Dominated Riparian
- Nonnative Riparian
- Developed
- Disturbed

*Biological Study Area includes a County-required 100-foot buffer
**Areas within the permanent impact area not occupied by permanent structures will be used for gravesites

N

0 100 200
FEET

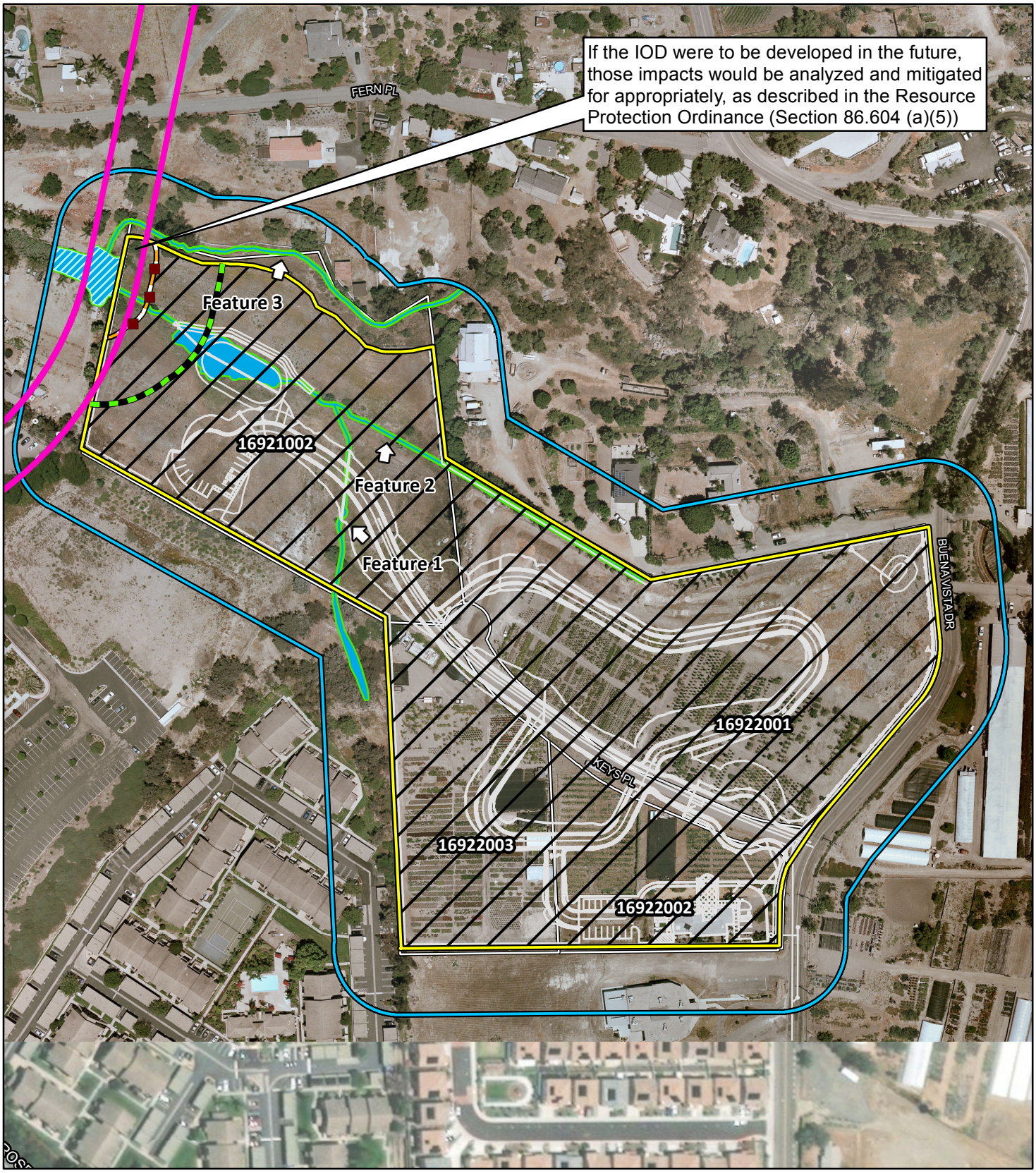
SOURCE: Hofman (4/2021)

FIGURE 5

Good Shepherd Catholic Cemetery Project

Vegetation Impacts

I:\DSD1701\GIS\MXD\Bio\VegetationImpacts.mxd (4/19/2022)



LSA

LEGEND

- Project Boundary
- Biological Study Area*
- County-Required 50-foot Wetland Buffer
- Permanent Impact Area**
- Parcel Lot Lines (with APNs)
- Irrevocable Offer of Dedication (IOD)
- Site Plan
- Limited Building Zone (LBZ) Easement
- Proposed Open Space Fencing
- Proposed Open Space Sign Posts

Jurisdictional Delineation

- Nonwetland Waters of the U.S.
- CDFW Jurisdictional Streambed/Banks
- Resource Protection Ordinance Wetland

*Biological Study Area includes a County-required 100-foot buffer

**Areas within the permanent impact area not occupied by permanent structures will be used for gravesites

Note: Aquatic features are represented by cartographic lines. Please refer to the text for exact measurements.

0 100 200

FEET

SOURCE: Hofman (4/2021)

FIGURE 6

Good Shepherd Catholic Cemetery Project

Aquatic Resources Impacts

I:\DSD1701\GIS\MXD\Bio\AquaticResourcesImpacts.mxd (4/19/2022)

Photograph 1: View of the southern end of Drainage Feature 1, facing west.

Photograph 2: View of Drainage Feature 1, facing north.

Photograph 3: View of the vegetated depression along Drainage Feature 2, facing northwest.

Photograph 4: View of Drainage Feature 3, facing northwest.

Photograph 5: View of area where Sample Point 1 was collected, facing west.

Photograph 6: View of Sample Point 2, facing north.

Photograph 7: View of Sample Point 3, facing northwest.

Photograph 8: View of Sample Point 4, facing west.

Photograph 9: View of area where Sample Point 5 was collected, facing west.

Photograph 10: View of where Sample Point 6 was collected, facing north.

ATTACHMENT B:

VASCULAR PLANT SPECIES OBSERVED

The following vascular plant species were observed within the BSA by LSA during the biological survey.

Vascular Plant Species Observed

Scientific Name	Common Name
Aizoaceae	**Carpet weed family**
Carpobrotus edulis (nonnative species)	Hottentot-fig
Anacardiaceae	**Sumac family**
Schinus molle (nonnative species)	Peruvian peppertree
Apiaceae	**Carrot family**
Foeniculum vulgare (nonnative species)	Fennel
Asteraceae	**Sunflower family**
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Carduus pycnocephalus (nonnative species)	Italian Thistle
Centaurea melitensis (nonnative species)	Tocalote
Deinandra fasciculata	Fascicled tarweed
Glebionis coronaria (nonnative species)	Garland chrysanthemum
Helminthotheca echioides (nonnative species)	Bristly ox-tongue
Pseudognaphalium luteoalbum (nonnative species)	Jersey cudweed
Brassicaceae	**Mustard family**
Hirschfeldia incana (nonnative species)	Shortpod mustard
Raphanus sativus (nonnative species)	Wild radish
Euphorbiaceae	**Spurge family**
Croton setigerus	Dove weed
Fabaceae	**Pea family**
Acmispon glaber	Deerweed
Fagaceae	**Beech family**
Quercus agrifolia	Coast live oak
Lamiaceae	**Mint family**
Marrubium vulgare (nonnative species)	Horehound
Myrtaceae	**Myrtle family**
Eucalyptus sp. (nonnative species)	Eucalyptus
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Rumex crispus (nonnative species)	Curly dock
Salicaceae	**Willow family**
Salix gooddingii	Goodding's black willow

Vascular Plant Species Observed

Scientific Name	Common Name
Scrophulariaceae	**Figwort family**
Myoporum laetum (nonnative species)	Myoporum
Arecaceae	**Palm family**
Washingtonia robusta (nonnative species)	Mexican fan palm
Poaceae	**Grass family**
Arundo donax (nonnative species)	Giant reed
Cortaderia selloana (nonnative species)	Uruguayan pampas grass
Festuca myuros (nonnative species)	Rat-tail fescue

Taxonomy and scientific nomenclature generally conform to Hickman (1993). Common names for each taxa generally conform to the Checklist of the Vascular Plants of San Diego County (Simpson and Rebman 2006).

ATTACHMENT C:

WILDLIFE SPECIES OBSERVED

This is a list of the conspicuous aerial insects, reptiles, birds, and mammals noted in or adjacent to the BSA by LSA during the biological survey. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

Wildlife Species Observed

Scientific Name	Common Name
LEPIDOPTERA	**BUTTERFLIES**
Pieridae	**Sulphers and Whites**
Pontia protodice	Common (checkered) white
REPTILIA	**REPTILES**
Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard
AVES	**BIRDS**
Accipitridae	**Kites, Hawks, and Eagles**
Buteo jamaicensis	Red-tailed hawk
Columbidae	**Pigeons and Doves**
Zenaida macroura	Mourning dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Corvidae	**Crows and Ravens**
Corvus brachyrhynchos	American crow
Aegithalidae	**Bushtits**
Psaltriparus minimus	Bushtit
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	Northern mockingbird
Emberizidae	**Buntings and New World Sparrows**
Melozone crissalis	California towhee
MAMMALIA	**MAMMALS**
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Desert cottontail
Rodentia	**Rodents**
Spermophilus beecheyi	California ground squirrel

Taxonomy and nomenclature are based primarily on the following:

Damselflies and dragonflies: Paulson, D. (2009, Dragonflies and Damselflies of the West, Princeton University Press, Princeton, New Jersey).

Butterflies: North American Butterfly Association (2001, NABA checklist and English Names of North American Butterflies, Second Edition, North American Butterfly Association, Morristown, New Jersey; see http://www.naba.org/pubs/checklst.html).

Amphibians and reptiles: Crother, B.I. ed. (2012, Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 39) for species taxonomy and nomenclature; Stebbins, R.C., and S.M. McGinnis (2012, Field Guide to Amphibians and Reptiles of California, Revised Edition, University of California Press, Berkeley) for sequence and higher order taxonomy.

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and supplements; see http://www.aou.org/checklist/north/index.php).

Mammals: Wilson, D.E., and D.M. Reeder, eds. (2005, Mammal Species of the World, Third Edition, Johns Hopkins University Press, Baltimore, Maryland; see http://www.vertebrates.si.edu/msw/mswcfapp/msw/index.cfm).

ATTACHMENT D:

SPECIAL-STATUS SPECIES SUMMARY TABLE

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Plants				
Acanthomintha ilicifolia **San Diego thorn-mint**	US: FT CA: SE CRPR: 1B.1 MSCP: C	Annual herb endemic to active vertisol clay soils of mesas and valleys within grasslands, chaparral, coastal scrub, and vernal pool communities; known from southwestern San Diego County and Baja California; 30 to 3,000 feet elevation.	Blooms April through June (annual herb)	**Not Expected.** Suitable soils and habitat for this species were not present within the BSA and no known occurrences of this species were identified within 2 miles of the BSA. This species was not observed during the biological survey or rare plant survey.
Adolphia californica **California adolphia**	US: – CA: SP CRPR: 2B.1 MSCP: –	Sandy/gravelly to clay soils within grasslands, coastal sage scrub, and chaparral communities; known from western San Diego County and Baja California; 50 to 1,300 feet elevation.	Blooms December through May (perennial deciduous shrub)	**Not Expected.** Although marginally suitable habitat was present within the BSA, the only known occurrences of this species within 2 miles of were identified in high-quality coastal sage scrub and this perennial species was not observed during the biological survey or rare plant survey.
Ambrosia pumila **San Diego ambrosia**	US: FE CA: SP CRPR: 1B.1 MSCP: C	Occurs in open habitats, usually near drainages or vernal pools, usually in sandy loam or on clay (including upland clay slopes) from 70 to 1,600 feet elevation. Known from western Riverside and western San Diego Counties. Also occurs in Mexico.	Generally non-flowering (perennial herb)	**Not Expected.** Suitable habitat (vernal pools) for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Aphanisma blitoides **Aphanisma**	US: – CA: SP CRPR: 1B.2 MSCP: C	Sandy or clay soils on slopes or bluffs near the ocean, usually in coastal bluff scrub, coastal dunes, or coastal scrub, below 1,000 feet elevation.	Blooms March through June (annual herb)	**Not Expected.** Suitable habitat (coastal bluff scrub, coastal dunes, or coastal scrub) for this species was not present within the BSA,

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		Known in California from Ventura, Santa Barbara, Los Angeles, Orange, and San Diego Counties. Also occurs in Mexico.		no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Brodiaea filifolia **Thread-leaved brodiaea**	US: FT CA: SE CRPR: 1B.1 MSCP: C	Usually on clay or associated with vernal pools or alkaline flats; occasionally in vernally moist sites in fine soils (clay loam, silt loam, fine sandy loam, loam, loamy fine sand). Typically associated with needlegrass or alkali grassland or vernal pools. Occurs from 80 to 4,000 feet elevation. Known only from Los Angeles, Orange, Riverside, San Bernardino, San Diego, and San Luis Obispo Counties, California.	Blooms March through June (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA. This perennial herb was not observed during the biological survey or rare plant survey. The nearest occurrences of this species (from 1977 and 1980) are presumed extirpated.
Brodiaea orcuttii **Orcutt's brodiaea**	US: – CA: SP CRPR: 1B.1 MSCP: C	Clay and some serpentine soils, usually associated with streams or vernal pools, from 100 to 5,600 feet elevation. In California, known only from Riverside and San Diego Counties. Also occurs in Mexico.	May through July (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA. This perennial herb was not observed during the biological survey or rare plant survey. The nearest occurrence of this species (from 1936) is possibly extirpated.
Calandrinia breweri **Brewer's calandrinia**	US: – CA: SP CRPR: 4.2 MSCP: –	Chaparral, northern coastal scrub, coastal sage scrub along the west coast of California.	March through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Cistanthe maritima **Seaside calandrinia**	US: – CA: SP CRPR: 4.2 MSCP: –	Valley grassland and coastal sage scrub in coastal Southern California.	March through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
				occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Camissoniopsis lewisii **Lewis's evening primrose**	US: – CA: SP CRPR: 3 MSCP: –	Sandy or clay areas in coastal scrub, grassland, and woodland below 1,000 feet elevation. In California, known only from Los Angeles and San Diego Counties. Believed extirpated from Orange County. Also occurs in Mexico.	March through June (annual herb)	**Low.** Although marginally-suitable habitat (disturbed areas with nonnative grasses in sandy or clay areas) for this species was present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Ceanothus verrucosus **Wart-stemmed ceanothus**	US: – CA: SP CRPR: 2B.2 MSCP: C	Chaparral in western San Diego County and northern Baja California; sea level to 1,250 feet elevation.	Blooms December through May (perennial shrub)	**Not Expected.** Suitable habitat for this species was not present within the BSA. This perennial shrub was not observed during the biological survey or rare plant survey. The nearest occurrence of this species is approximately 1.75 miles northeast (1929).
Chaenactis glabriuscula var. *orcuttiana* **Orcutt's pincushion**	US: – CA: SP CRPR: 1B.1 MSCP: –	Sandy areas of coastal bluff scrub and coastal sand dunes below 300 feet elevation. In California, known only from Los Angeles, Orange (believed extirpated), San Diego, and Ventura Counties. Also occurs in Mexico.	Blooms January through August (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Chorizanthe procumbens	US: – CA: – CRPR: –	In chaparral, valley grassland, pinyon-juniper	Blooms April through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Prostrate spineflower	MSCP: –	woodland, and coastal sage scrub.		the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Comarostaphylis diversifolia ssp. *diverifolia* **Summer holly**	US: – CA: SP CRPR: 1B.2 MSCP: –	Chaparral or cismontane woodland at 100 to 2,600 feet. In California, known only from Orange, Riverside, and Santa Barbara, and San Diego Counties. Also occurs in Mexico.	Blooms April through June (evergreen shrub)	**Not Expected.** Suitable habitat for this species was not present within the project site. This evergreen shrub was not observed during the biological survey or rare plant survey. The nearest occurrence of this species is approximately 2 miles south of the BSA (2017).
Convolvulus simulans **Small-flowered morning-glory**	US: – CA: SP CRPR: 4.2 MSCP: –	Wet clay and serpentine seeps and ridges in chaparral, coastal scrub, and valley and foothill grassland from 100 to 2,300 feet elevation. Known from Contra Costa County to Baja California, including the Channel Islands. Rare in Southern California.	Blooms March–July (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey.
Dichondra occidentalis **Western dichondra**	US: – CA: SP CRPR: 4.2 MSCP: –	Mostly dry sandy banks in scrub or under trees; coastal sage scrub, chaparral, oak woodland. Coastal Orange and San Diego Counties; elevations 200 to 1,700 feet.	Blooms March through May (perennial rhizomatous herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Dudleya blochmaniae ssp. *blochmaniae* **Blochman's dudleya**	US: – CA: SP CRPR: 1B.1 MSCP: –	Dry rocky places, often on clay or serpentine, in chaparral, coastal sage scrub, or grassland, below 1,500 feet elevation. In California, known only from	May through June (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties. Also occurs in Mexico.		within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Dudleya multicaulis **Many-stemmed dudleya**	US: – CA: SP CRPR: 1B.2 MSCP: –	Heavy, often clay soils or around granitic outcrops in chaparral, coastal sage scrub, and grassland below 2,600 feet elevation. Known only from Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.	Blooms April through July (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Dudleya viscida **Sticky dudleya**	US: – CA: SP CRPR: 1B.2 MSCP: C	Rocky areas in coastal bluff scrub, chaparral, coastal sage scrub, and cismontane woodland from 30 to 1,800 feet elevation. Known only from Orange and San Diego Counties, California.	May through June (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA. This perennial herb was not observed during the biological survey or rare plant survey. The nearest occurrence of this species is approximately 1 mile southwest (unknown date).
Ericameria palmeri var. *palmeri* **Palmer's goldenbush**	US: – CA: SP CRPR: 1B.1 MSCP: C	On granitic soils and moist, steep hillsides within coastal scrub and chaparral; known from western San Diego County and Baja California; 100 to 2,000 feet elevation.	Blooms July through November (perennial evergreen shrub)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Eryngium aristulatum var. *parishii* **San Diego button-celery**	US: FE CA: SE CRPR: 1B.1 MSCP: C	Vernal pools at 50 to 2,000 feet elevation. In California, known only from Riverside and San Diego Counties. In Riverside County, this species is known only from the Santa Rosa Plateau.	Blooms April through June (annual/perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Eryngium pendletonense **Pendleton button-celery**	US: – CA: SP CRPR: 1B.1 MSCP: –	Vernally mesic sites in coastal bluff scrub, valley and foothill grassland, and vernal pools at 50 to 360 feet elevation. Known only from San Diego County.	April through June (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Euphorbia misera **Cliff spurge**	US: – CA: SP CRPR: 2B.2 MSCP: –	Rocky sites within coastal bluff scrub, coastal sage scrub, and Mojavean desert scrub at 30 to 1,600 feet elevation. In California, known only from the Channel Islands, coastal Orange and San Diego Counties, and Riverside County deserts. Also occurs in Mexico.	December through August (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Ferocactus viridescens **San Diego barrel cactus**	US: – CA: SP CRPR: 2B.1 MSCP: C	Often on undisturbed, exposed, level or south-facing slopes within chaparral, coastal scrub, and grasslands; known from southwestern San Diego County and Baja California; 10 to 1,500 feet elevation.	Blooms May–June (perennial stem succulent)	**Not Expected.** Suitable habitat (undisturbed south-facing slopes) for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Holocarpha virgata ssp. *elongata* **Graceful tarplant**	US: – CA: SP CRPR: 4.2 MSCP: –	Found in chaparral, coastal scrub, valley and foothill grassland, and cismontane woodland; 200 to 3,600 feet elevation. Known from Orange, Riverside, and San Diego Counties.	Blooms May through November (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Horkelia cuneata ssp. *puberula* **Mesa horkelia**	US: – CA: SP CRPR: 1B.1 MSCP: –	Sandy or gravelly soils in chaparral, or rarely in cismontane woodland or coastal scrub at 200 to 2,700 feet elevation. Known only from San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Bernardino Counties, California. Believed extirpated from Riverside and San Diego Counties.	February through July (sometimes to September) (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Isocoma menziesii var. *decumbens* **Decumbent goldenbush**	US: – CA: SP CRPR: 1B.2 MSCP: –	Sandy soils, often in disturbed areas, in coastal scrub and chaparral from 30 to 3,000 feet elevation. Known from mainland Orange and San Diego Counties and from San Clemente and Santa Catalina Islands in California. Also occurs in Baja California.	Blooms April through November (perennial shrub)	**Low.** Marginally suitable habitat (sandy soils in disturbed areas) was present within the BSA and this species has been documented approximately 1.5 miles west of the BSA. However, this perennial species was not observed during the biological survey or the rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Iva hayesiana **San Diego marsh-elder**	US: – CA: SP CRPR: 2B.2 MSCP: –	River washes, marshes, swamps, and playas at 30 to 1,650 feet elevation. Known from western San Diego County and Baja California.	Blooms April through October (perennial shrub or subshrub)	**Not Expected.** Although known occurrences of this species were identified approximately 1.5 miles west of the BSA, suitable habitat for this species was not present within the BSA. This perennial species was not observed during the biological survey or rare plant survey.
Juncus acutus ssp. *leopodii* **Southwestern spiny rush**	US: – CA: SP CRPR: 4.2 MSCP: –	Moist, saline places in salt marshes, alkaline seeps, and coastal dunes (mesic sites); 10 to 2,950 feet elevation. Known from Imperial, Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties, Arizona, and Baja California.	Blooms May–June (perennial rhizomatous herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey or rare plant survey.
Lepidium virginicum var. *robinsonii* **Robinson's pepper-grass**	US: – CA: SP CRPR: 4.3 MSCP: –	Dry soils in coastal sage scrub and chaparral and occasionally in wetlands below 2,900 feet elevation. In California, known only from Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino and San Diego Counties, and Santa Cruz Island. Also occurs in Mexico.	Blooms January through July (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Leptosyne maritima **Sea dahlia**	US: – CA: SP CRPR: 2B.2 MSCP: –	Occurs in a variety of soil types, including sandstone, within coastal scrub and coastal bluff scrub at 15 to 500 feet elevation. Known from coastal San Diego County and Baja California.	Blooms March through May (perennial herb)	**Not Expected.** Although a known occurrence of this species was identified approximately 2 miles west of the BSA, suitable habitat for this species was not present within the BSA and this perennial herb was not observed during the biological survey or rare plant survey.
Lycium californicum **California box-thorn**	US: – CA: SP CRPR: 4.2 MSCP: –	Occurs in coastal sage scrub in coastal Southern California.	Blooms March through August (shrub)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Microseris douglasii ssp. *platycarpha* **Small-flowered microseris**	US: – CA: SP CRPR: 4.2 MSCP: –	Valley grassland, foothill woodland, and coastal sage scrub in Southern California.	Blooms March through May (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Mucronea californica **California spineflower**	US: – CA: SP CRPR: 4.2 MSCP: –	Sandy soils in coastal sage scrub and chaparral, below 4,600 feet elevation; central-western and southwestern California.	March through July (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Myosurus minimus ssp. *apus* **Little mousetail**	US: – CA: SP CRPR: 3.1 MSCP: –	Alkaline areas in vernal pools at 70 to 2,100 feet elevation. In California, known only from the Central Valley of the coastal and inland areas of Southern California. Also occurs in Oregon and Mexico.	Blooms March through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Navarretia fossalis **Spreading navarretia**	US: FT CA: SP CRPR: 1B.1 MSCP: C	In vernal pools, playas, shallow freshwater marshes and similar sites at 100 to 4,300 feet elevation. In California, known only from Los Angeles, San Luis Obispo, Riverside, and San Diego Counties. Also occurs in Mexico.	Blooms April through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Pentachaeta aurea ssp. *aurea* **Golden-rayed pentachaeta**	US: – CA: SP CRPR: 4.2 MSCP: –	In chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland habitats. Known from Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, in addition to Baja California. 260 to 6,000 feet elevation.	Blooms March through July (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Phacelia stellaris **Brand's star phacelia**	US: SC CA: SP CRPR: 1B.1 MSCP: –	Dunes and sandy openings in coastal scrub communities at 20 to 1,300 feet elevation. In western Riverside County, this species appears to be restricted to sandy washes and benches in alluvial floodplains. Known only from Los Angeles (believed extirpated), Riverside and San Diego Counties, California. The most recent record of this species from Los Angeles County was in 1943.	Blooms March through June (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Piperia cooperi **Cooper's rein orchid**	US: – CA: SP CRPR: 4.2 MSCP: –	Chaparral, coastal sage scrub, and oak woodland in Southern California and Baja California.	Blooms March through June (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Quercus dumosa **Nuttall's scrub oak**	US: – CA: SP CRPR: 1B.1 MSCP: –	On sandy and clay loam soils near the coast within closed-cone coniferous forest, chaparral, and coastal scrub from 50 to 1,300 feet elevation. Known from western Orange, Santa Barbara, and San Diego Counties. Also known from Baja California.	Blooms February through August (perennial evergreen shrub)	**Not Expected.** Although known occurrences of this species were identified between 1.5 and 2 miles west of the BSA (2010), suitable habitat for this species was not present within the BSA. This conspicuous perennial evergreen shrub was not observed during the biological survey or rare plant survey.
Romneya coulteri **Coulter's Matilija poppy**	US: – CA: SP CRPR: 4.2 MSCP: –	Dry washes and canyons below 4,000 feet elevation. Coastal sage scrub and chaparral away from the immediate coast. Known only from Los Angeles, Orange, Riverside and San Diego Counties.	Blooms May through July (perennial herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
				species was not observed during the biological survey or rare plant survey.
Selaginella cinerascens **Ashy spike-moss**	US: – CA: SP CRPR: 4.1 MSCP: –	In chaparral and coastal scrub often on clay soil both in open areas and in the shade of larger plants from 65 to 2,100 feet in elevation. Known in Orange, Riverside, and San Diego Counties in addition to Baja California.	Perennial (perennial rhizomatous herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this perennial species was not observed during the biological survey.
Senecio aphanactis **Rayless ragwort**	US: – CA: SP CRPR: 2B.2 MSCP: –	Openings (especially alkaline flats) in cismontane woodland, coastal sage scrub, and chaparral at 50 to 1,900 feet elevation. Known in California from Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, Santa Clara, San Diego, San Luis Obispo, Solano, and Ventura Counties. Also occurs in Baja California.	Blooms January through April (annual herb)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this annual species was not observed during the biological survey or rare plant survey.
Viguiera purisimae **La purisima viguera**	US: – CA: SP CRPR: 2B.3 MSCP: –	Dry, rocky places in coastal bluff scrub and chaparral 1,200 to 1,400 feet elevation. Known in California only from Camp Pendleton in San Diego County. Also occurs in Mexico.	Blooms April through September (shrub)	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this shrub species was not observed during the biological survey or rare plant survey.
Invertebrates				
Branchinecta sandiegonensis **San Diego fairy shrimp**	US: FE CA: SA MSCP: C	Small, shallow (usually less than 30 centimeters deep), relatively clear but unpredictable vernal pools on coastal terraces. Pools must retain water for a minimum of 13 days for this species to reproduce (3	Seasonally following rains in late fall, winter and spring	**Not Expected.** Suitable habitat for this species was not present within the BSA, as the water flows too fast through the drainages and does not pond enough to support this species.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		to 8 days for hatching, and 10 to 20 days to reach reproductive maturity). Known from Orange and San Diego Counties, and Baja California.		Furthermore, there is little evidence of multi-week ponding even during wet years. Additionally, no known occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey.
Danaus plexippus (wintering sites) **Monarch butterfly**	US: – CA: SA MSCP: –	Winter roosts are located in wind-protected tree groves (Eucalyptus, Monterey Pine, Cypress) with nectar and water sources nearby.	September through March	**Low.** Although eucalyptus trees occur within the BSA, no records of winter roost were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey. This is potential for the species to occur within the BSA, but there is a low potential for this species to roost in the BSA.
Linderiella occidentalis **California linderiella**	US: – CA: SA MSCP: –	Found in a variety of natural and artificial seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. Wetland habitats vary in size from very small (2 square meters) to very large (356,253 square meters) and exhibit extremes in depth (2 to 15 cm) and volume (23 to 9,262,573 cubic meters).	September through March	**Not Expected.** Suitable habitat for this species was not present within the BSA, as the water flows too fast through the drainages and does not pond enough to support this species. Furthermore, there is little evidence of multi-week ponding even during wet years. Additionally, no known occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Lycaena hermes **Hermes copper butterfly**	US: CS CA: SA MSCP: –	Host plant (*Rhamnus crocea*) occurs in coastal sage scrub, chaparral, mixed evergreen forest, southern oak woodland, foothill woodland, and yellow pine forest. Found only in San Diego County and Baja California.	May through June	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Streptocephalus woottoni **Riverside fairy shrimp**	US: FE CA: SA MSCP: C	Warm-water vernal pools (i.e., large, deep pools that retain water into the warm season) with low to moderate dissolved solids, in annual grassland areas interspersed through chaparral or coastal sage scrub vegetation. Suitable habitat includes some artificially created or enhanced pools, such as some stock ponds, that have vernal pool like hydrology and vegetation. Known from areas within about 50 miles of the coast from Ventura County south to San Diego County and Baja California.	Seasonally following rains; typically January through April	**Not Expected.** Suitable habitat for this species was not present within the BSA, as the water flows too fast through the drainages and does not pond enough to support this species. Furthermore, there is little evidence of multi-week ponding even during wet years. Additionally, no known occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey.
Fish				
Eucyclogobius newberryi **Tidewater goby**	US: FE CA: SSC MSCP: –	Brackish water habitats along the California coast from Agua Hedionda lagoon (San Diego County) to the mouth of the Smith River (Del Norte County). Found in shallow lagoons and lower stream reaches.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Gila orcuttii **Arroyo chub**	US: – CA: SSC MSCP: –	Perennial streams or intermittent streams with permanent pools; slow water sections of streams with mud or sand substrates; spawning occurs in pools. Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita River systems; introduced in Santa Ynez, Santa Maria, Cuyama, and Mojave River systems and smaller coastal streams.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Oncorhynchus mykiss irideus **Southern steelhead - South/Central California**	US: FT CA: SA MSCP: –	Federal listing refers to runs in coastal basins from the Pjaro River south to, but not including, the Santa Maria River.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Amphibians				
Anaxyrus californicus **Arroyo toad**	US: FE CA: SSC MSCP: C	Washes and arroyos with open water; sand or gravel beds; for breeding, low flowing water and eddies/ pools with sparse overstory vegetation. Coastal and a few desert streams from Santa Barbara County to Baja California.	March through July	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Rana draytonii **California red-legged frog**	US: FT CA: SSC MSCP: C	Deep, quiet pools of streams, marshes, and occasionally ponds, with dense, shrubby vegetation at edges, usually below 4,000 feet. Foothills surrounding the Sacramento Valley and coastal streams from Marin County to northwestern Baja California; Believed to	December through April	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		be extirpated between Los Angeles County and the Mexican border. Below about 1,000 feet elevation.		survey or rare plant survey.
Spea hammondii **Western spadefoot**	US: – CA: SSC MSCP: –	Grasslands and occasionally hardwood woodlands; largely terrestrial but requires rain pools or other ponded water persisting at least three weeks for breeding; burrows in loose soils during dry season. Occurs in the Central Valley and adjacent foothills, the non-desert areas of southern California, and Baja California.	October through April (following onset of winter rains)	**Low.** Although marginally-suitable habitat (disturbed area with nonnative grasses; however, water likely does not persist for three weeks) for this species was present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Reptiles				
Anniella pulchra **California legless lizard**	US: – CA: SSC MSCP: –	Inhabits sandy or loose loamy soils with high moisture content under sparse vegetation from central California to northern Baja California.	Nearly year round, at least in southern areas	**Low.** Although marginally-suitable habitat (loamy soils in disturbed areas) for this species was present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Aspidoscelis hyperythra **Orange-throated whiptail**	US: – CA: WL MSCP: C	Prefers washes and other sandy areas with patches of brush and rocks, in chaparral, coastal sage scrub, juniper woodland, and oak woodland from sea level to 3,000 feet elevation. Perennial plants required. Occurs in Riverside, Orange, San Diego Counties west of the crest of the Peninsular Ranges, in extreme southern San Bernardino	March through July, with reduced activity August through October	**Low.** Although marginally suitable habitat (sandy soils with small, isolated patches of coastal sage scrub plant species) was present in the BSA and there is one documented occurrence of this species approximately 2 miles southwest of the BSA (1999), perennial scrub species were largely absent.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		County near Colton, and in Baja California.		This species was not observed during the biological survey or rare plant survey.
Aspidoscelis tigris stejnegeri **Coastal western whiptail**	US: – CA: SSC MSCP: –	Wide variety of habitats including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	April through August	**Low.** Although marginally-suitable habitat for this species was present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Charina trivirgata ssp. *roseofusca* **Rosy boa**	US: – CA: SA MSCP: –	In rocky areas in chaparral or scrub habitats or oak woodland; also in rocky riparian areas. Found in Los Angeles County, southwestern San Bernardino County, south through western Riverside County, and San Diego County into Baja California.	Nocturnal. Rarely active during day. Active between April and September	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Coleonyx variegatus abbotti **San Diego banded gecko**	US: – CA: SSC MSCP: –	Often associated with rocks. Coastal sage scrub and chaparral, most often on granite or rocky outcrops in these habitats. Interior Ventura County south.	Nocturnal April through October	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Crotalus ruber **Northern red diamond rattlesnake**	US: – CA: SSC MSCP: –	Desert scrub, thornscrub, open chaparral and woodland; occasional in grassland and cultivated areas. Prefers rocky areas and dense vegetation. Morongo Valley in San Bernardino and Riverside Counties to the west and south into Mexico.	Mid-spring through mid-fall	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
				survey or rare plant survey.
Diadophis punctatus similis **San Diego ringneck snake**	US: – CA: SA MSCP: –	Under cover of rocks, wood, bark, boards, and other surface debris in a variety of habitats. Prefers moist habitats of coastal San Diego County, northern Baja California and southwestern San Bernardino County.	Diurnal. Crepuscular and nocturnal during warmer periods.	**Not Expected.** The BSA is outside of the species' preferred range. Furthermore, suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Emys marmorata ssp. *pallida* **Southwestern pond turtle**	US: – CA: SSC MSCP: C	Inhabits permanent or nearly permanent water. Absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Requires basking sites such as partially submerged logs, rocks, or open mud banks.	Year-round with reduced activity November through March	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Phrynosoma blainvillii **Coast horned lizard**	US: – CA: SSC MSCP: C	Occurs in annual grassland, coastal sage scrub, chaparral, and woodland communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs in Siskiyou County, in the Central Valley and adjacent foothills below 4,000 feet elevation, in coastal areas of central California, and in non-desert areas of southern California below 6,000 feet elevation, and into Baja California.	April through July, with reduced activity August through October	**Low.** Although marginally-suitable habitat (disturbed areas with nonnative grasses and small, isolated patches of coastal sage scrub plant species) was present in the BSA, the last recorded occurrence of this species within 2 miles of the BSA is from 1931. This species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Plestiodon (Eumeces) skiltonianus interparietalis **Coronado skink**	US: – CA: WL MSCP: –	Occurs in variety of plant communities including coastal sage scrub, mesic chaparral, oak woodlands, pinyon-juniper, and riparian woodlands to pine forests. Found west of the deserts from Riverside County to Baja California.	Diurnal. Activity is bimodal; from early spring through early fall.	**Not Expected.** Although a known occurrence of this species was identified between 1.5 and 2 miles southeast of the BSA (2006), suitable habitat for this species was not present within the BSA. This species was not observed during the biological survey or rare plant survey.
Salvadora hexalepis virgultea **Coast patch-nosed snake**	US: – CA: SSC MSCP: –	Coastal chaparral, washes, sandy flats and rocky areas. Widely distributed throughout lowlands, up to 7,000 feet elevation, of Southern California from coast to the eastern border.	Active diurnally throughout most of the year	**Not Expected.** Although a known occurrence of this species was identified approximately 2 miles south of the BSA (2000), suitable habitat for this species was not present within the BSA. This species was not observed during the biological survey or rare plant survey.
Thamnophis hammondii **Two-striped garter snake**	US: – CA: SSC MSCP: –	Highly aquatic. Only in or near permanent sources of water. Streams with rocky beds supporting willows or other riparian vegetation. From Monterey County to northwest Baja California.	Diurnal Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Thamnophis sirtalis novum **South coast garter snake**	US: – CA: SSC MSCP: –	Highly aquatic. Preferably rocky streams with protected pools, marshes, vernal pools, and other shallow water bodies lacking large aquatic predators.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Birds				
Accipiter cooperii (nesting) **Cooper's hawk**	US: – CA: WL MSCP: C	Forages in a wide range of habitats, but primarily in forests and woodlands. These include natural areas as well as human-created habitats such as plantations and ornamental trees in urban landscapes. Usually nests in tall trees (20 to 60 feet) in extensive forested areas (generally woodlots of 4 to 8 hectares with canopy closure of greater than 60 percent). Occasionally nests in isolated trees in more open areas.	Year-round	**Moderate.** Although no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey, suitable nesting and foraging habitat was present within the BSA and this species was reported in the San Diego Bird Atlas square that includes the BSA.
Accipiter striatus (nesting) **Sharp-shinned hawk**	US: – CA: WL MSCP: –	Nests in woodland, coniferous/deciduous forest. Winter visitor and migrant to coastal Southern California. Forages over a variety of habitats.	Fall and winter; scarce in summer	**Moderate.** Although no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey, suitable nesting habitat was present within the BSA and this species was reported in the San Diego Bird Atlas square that includes the BSA.
Agelaius tricolor (nesting) **Tricolored blackbird**	US: – CA: SSC MSCP: C	Open country in western Oregon, California, and northwestern Baja California. Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs and forages in grassland and cropland habitats. Seeks cover for roosting in emergent wetland vegetation, especially cattails and tules, and also in trees and shrubs.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, this species was not reported in the San Diego Bird Atlas square that includes the BSA, and it was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Aimophila ruficeps canescens **Southern California rufous-crowned sparrow**	US: – CA: WL MSCP: C	Steep, rocky, coastal sage scrub, and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	Year-round, diurnal activity	**Not Expected.** Although a CNDDB occurrence of this species was identified approximately 2 miles southwest of the BSA and this species was reported in the San Diego Bird Atlas square that includes the BSA, suitable habitat for this species was not present within the BSA and this species was not observed during the biological survey or rare plant survey.
Ammodramus savannarum (nesting) **Grasshopper sparrow**	US: – CA: SSC MSCP: –	Grasslands, agricultural fields, prairie, old fields and open savanna. Uncommon and local summer resident on grassy slopes and mesas west of the deserts. Only rarely in migration and in winter. Coastal Southern California.	Coastal: Year-round; only casually in migration elsewhere	**Not Expected.** Although marginally-suitable habitat (disturbed area with nonnative grasses) for this species was present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Aquila chrysaetos (nesting & wintering) **Golden eagle**	US: – CA: CFP MSCP: C	Generally open country of the Temperate Zone worldwide. Nesting primarily in rugged mountainous country. Uncommon resident in Southern California.	Year-round diurnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, this species was not reported in the San Diego Bird Atlas square that includes the BSA, and it was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Ardea herodias (nesting colony) **Great blue heron**	US: – CA: SA MSCP: –	Usually nests in trees, but also on large bushes, poles, reed beds, and even on the ground. Frequents a wide range of wetland habitats at other times of year.	February to July at nesting sites; year round elsewhere	**Low.** Although suitable nesting habitat (trees) for this species was present within the BSA, it was not reported in the San Diego Bird Atlas square that includes the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Artemisiospiza belli belli **Bell's sage sparrow**	US: – CA: SA MSCP: C	Occupies chaparral and coastal sage scrub from west central California to northwestern Baja California.	Year-round, diurnal activity	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, this species was not reported in the San Diego Bird Atlas square that includes the BSA, and it was not observed during the biological survey or rare plant survey.
Asio flammeus (breeding) **Short-eared owl**	US: – CA: SSC MSCP: –	Open country, usually with tall grass, in scattered regions around the Northern Hemisphere. Primarily a rare winter visitor in southwestern California, but recorded at Mystic Lake in the San Jacinto Valley, Riverside County, in summer 1992, and Harper Dry Lake, San Bernardino County, summer 1993.	Winters in San Diego County	**Not Expected.** Suitable habitat for this species was not present within the BSA, no known occurrences of this species were identified within 2 miles of the BSA, this species was not reported in the San Diego Bird Atlas square that includes the BSA, and it was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Asio otus (nesting) **Long-eared owl**	US: – CA: SSC MSCP: –	Scarce and local in forests and woodlands throughout much of the Northern Hemisphere. Rare resident in coastal southern California. Nests and roosts in dense willow-riparian woodland and oak woodland, but forages over wider areas. Breeds from valley foothill hardwood up to ponderosa pine habitat.	Nocturnal Year-round	**Not Expected.** Although marginally-suitable habitat (trees) for this species was present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Athene cunicularia (burrow sites) **Burrowing owl**	US: – CA: SSC MSCP: C	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees, but may occur in areas where brush or tree cover is less than 30 percent.	Year-round	**Not Expected.** Although marginally suitable habitat (disturbed areas with nonnative grasses) for this species was present within the BSA, neither this species nor suitable burrows or sign were observed during the biological survey or rare plant survey. Furthermore, no CNDDB occurrences of this species were identified within 2 miles of the BSA and no San Diego Bird Atlas reports were identified in the square that includes the BSA.
Branta canadensis **Canada goose**	US: – CA: – MSCP: C	Breeds in Canada and northern United States. Only a migrant in California. Spends the winter in San Diego County, visiting habitats that combine fresh or brackish water with low grass or succulent leaves on which the birds graze. Most of the geese congregate in a few large flocks that frequent the same areas year after year.	October through April	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
				the biological survey or rare plant survey.
Buteo lineatus **Red-shouldered hawk**	US: – CA: – MSCP: –	Typically found in riparian forests or in oak woodland, and sometimes in eucalyptus groves.	Year-round	**Moderate.** No CNDDB occurrences of this species were identified within 2 miles of the BSA; however, this species was reported in the San Diego Bird Atlas square that includes the BSA. Although this species was not observed during the biological survey or rare plant survey, suitable nesting habitat (riparian trees) for this species was present within the BSA.
Buteo regalis (wintering) **Ferruginous hawk**	US: – CA: WL MSCP: C	Forages in open fields, grasslands and agricultural areas, sagebrush flats, desert scrub, fringes of pinyon-juniper habitats, and other open country in western North America. Requires large, open tracts of grasslands, sparse shrub, or desert habitats.	Mid-September through mid-April	**Low.** Although suitable foraging habitat (disturbed areas with nonnative grasses) for this species was present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Butorides virescens **Green heron**	US: – CA: – MSCP: –	Typically found in riparian woodland and marshes. Prefers to fish in ponds and channels bordered or shaded by trees.	More numerous in San Diego County in the summer, while still present in the winter.	**Not Expected.** Although this species was reported in the San Diego Bird Atlas square that includes the BSA, suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Campylorhynchus brunneicapillus sandiegensis **Coastal cactus wren**	US: – CA: SSC MSCP: C	Inhabits coastal sage scrub, nesting almost exclusively in thickets of cholla (*Opuntia prolifera*) and prickly pear (*Opuntia littoralis* and *Opuntia oricola*), typically below 500 feet elevation. Found in coastal areas of Orange County and San Diego Counties, and extreme northwestern Baja California, Mexico.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Cathartes aura **Turkey vulture**	US: – CA: – MSCP: –	Forage farmland, forest, and rangeland. Nest in rock crevices, caves, ledges, thickets, mammal burrows and hollow logs, fallen trees, abandoned hawk or heron nests, and abandoned buildings.	Year-round	**Moderate.** No CNDDB occurrences of this species were identified within 2 miles of the BSA; however, this species was reported in the San Diego Bird Atlas square that includes the BSA. Although this species was not observed during the biological survey or rare plant survey, suitable foraging habitat (disturbed areas with nonnative grasses) for this species was present within the BSA.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Charadrius montanus (wintering) **Mountain plover**	US: – CA: SSC MSCP: C	Forages in areas with flat topography and bare ground or short vegetation: short grasslands, freshly plowed fields, newly sprouting grain fields, grazed areas, and sometimes sod farms. Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba Counties southward. Also found in foothill valleys west of San Joaquin Valley, Imperial Valley, plowed fields of Los Angeles and western San Bernardino Counties, and along the central Colorado River Valley. Recent extralimital records exist for locations along the northern coast of California. Winters below 3,200 feet.	Winters (September through March) in California	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Circus cyaneus hudsonius (nesting) **Northern harrier**	US: – CA: SSC MSCP: C	Marshy habitats, grassland and other open country; uncommon in open desert and brushlands. Nests on the ground in open (treeless) wetland and upland areas, including cultivated cropland and dry grassland. Nests usually constructed in tall, dense clumps of vegetation. Found in the Temperate Zone worldwide.	Year-round	**Not Expected.** Although this species was reported in the San Diego Bird Atlas square that includes the BSA, suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Coccyzus americanus occidentalis **Western yellow-billed cuckoo**	US: FT CA: SE MSCP: –	Breeds and nests in extensive stands of dense cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America; winters in South America.	May through September	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Dendroica petechial brewsteri **Yellow warbler**	US: – CA: – MSCP: –	Breed in shrubby thickets and woods, particularly along watercourses and in wetlands. Common trees include willows, alders, and cottonwoods across North America and up to about 9,000 feet in the West. In winter they mainly occur in mangrove forests of Central and South America.	Winter in California	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Elanus leucurus (nesting) **White-tailed kite**	US: – CA: FP MSCP: –	Found in grasslands, open woodlands, savannas, marshes, and cultivated fields.	Year-round	**Not Expected.** Although this species was reported in the San Diego Bird Atlas square that includes the BSA and a CNDDB occurrence was identified approximately 2 miles southwest of the BSA (1984), suitable habitat for this species was not present within the BSA and this species was not observed during the biological survey or rare plant survey.

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Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Empidonax traillii extimus **Southwestern willow flycatcher**	US: FE CA: SE MSCP: C	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern U.S. and northwestern Mexico. Winters in Central and South America. Below 6,000 feet elevation.	May through September	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Eremophila alpestris actia **California horned lark**	US: – CA: WL MSCP: –	Sandy beaches, agricultural fields, grasslands, and open areas.		**Low.** Although this species was reported in the San Diego Bird Atlas square that includes the BSA and a CNDDB occurrence was identified approximately 2 miles southwest of the BSA (1999), suitable habitat for this species was not present within the BSA, and this species was not observed during the biological survey or rare plant survey or rare plant survey.
Falco columbarius (wintering) **Merlin**	US: – CA: SA MSCP: –	Open country; breeds in the Holarctic Region and winters south to the tropics. Rare fall migrant and winter visitor to southwestern California.	September through April	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Falco mexicanus (nesting) **Prairie falcon**	US: – CA: WL MSCP: –	Open country in much of North America. Nests in cliffs or rocky outcrops; forages in open arid valleys and agricultural fields. Rare in southwestern California.	Year-round diurnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Icteria virens (nesting) **Yellow-breasted chat**	US: – CA: SSC MSCP: –	Riparian thickets of willow, brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	Summer in California	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Lanius ludovicianus (nesting) **Loggerhead shrike**	US: – CA: SSC MSCP: –	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Inhabits open country with short vegetation, pastures, old orchards, cemeteries, golf courses, riparian areas, and open woodlands. Highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Found in open country in much of North America.	Year-round	**Low.** Although this species was reported in the San Diego Bird Atlas square that includes the BSA and marginally-suitable habitat (scattered shrubs and trees, fences, or other perches) for this species was present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA and this species was not observed during the biological survey or rare plant survey.
Larus californicus (nesting colony) **California gull**	US: – CA: WL MSCP: –	Breed on sparsely vegetated islands and levees in inland lakes and rivers. Forage in any open area where they can find food including garbage dumps, scrublands, pastures, orchards, meadows, and farms. In the winter they forage along the Pacific Coast and use mostly marine areas including mudflats, estuaries, deltas, and beaches.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Laterallus jamaicensis coturniculus **California black rail**	US: – CA: ST/CFP MSCP: –	Requires shallow water in salt marshes, freshwater marshes, wet meadows, or flooded grassy vegetation. Prefers areas of moist soil vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges, with scattered small pools. Known from coastal California, northwestern Baja California, the lower Imperial Valley, and the lower Colorado River of Arizona and California. Now extirpated from virtually all of coastal Southern California.	Year-round	**Not Expected.** Although a CNDDB occurrence of this species was identified between 1.5 and 2 miles north of the BSA, it is from 1938, this species was not reported in the San Diego Bird Atlas square that includes the BSA, suitable habitat for this species was not present within the BSA, and this species was not observed during the biological survey or rare plant survey.
Polioptila californica californica **Coastal California gnatcatcher**	US: FT CA: SSC MSCP: C	Inhabits coastal sage scrub in low-lying foothills and valleys in cismontane southwestern California and Baja California.	Year-round	**Not Expected.** Although multiple CNDDB occurrences were identified within 2 miles of the BSA (as close as 1 mile west) and this species was reported in the San Diego Bird Atlas square that includes the BSA, suitably-sized coastal sage scrub habitat for predictable use was not present in the BSA nor is there any immediately nearby. This species was not observed during the biological survey or rare plant survey.
Riparia riparia (nesting) **Bank swallow**	US: – CA: ST MSCP: –	Nesting habitat is vertical banks of fine textured soils, most commonly along streams and rivers. In Southern California, fairly common spring and fall transient in interior; very uncommon spring transient and rare fall transient along coast. Casual in winter.	Variable Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
				the biological survey or rare plant survey.
Sialia mexicana **Western bluebird**	US: – CA: – MSCP: C	Montane coniferous and oak woodlands in San Diego County's foothills and mountains.	Year-round	**Not Expected.** Although the San Diego Bird Atlas reports this species occurring in the square that includes the BSA, suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or the rare plant survey,
Toxostoma bendirei (breeding) **Bendire's thrasher**	US: – CA: SSC MSCP: –	Inhabits Joshua tree woodland with scattered desert shrubs such as creosote bush and sweet bush. Also occurs in the eastern Mojave in areas with plentiful cholla (*Cylindropuntia* spp.) (Garret and Dunn 1981). Common summer resident in Joshua Tree National Monument (Remsen 1978).	Rare winter migrant in San Diego County	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Tyto alba **Common barn owl**	US: – CA: – MSCP: –	Open habitats including grassland, chaparral, riparian, and other wetlands. Usually nests on ledges, crevices, or other sheltered areas of cliffs or man-made structures. Also nests in cavities in trees or snags.	Year-round	**Low.** Habitat on site is not ideal for this species. Furthermore, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Vireo bellii pusillus **Least Bell's vireo**	US: FE CA: SE MSCP: C	Riparian forests and willow thickets. The most critical structural component of least Bell's vireo habitat in California is a dense shrub layer 2 to 10 feet above ground. Nests from central California to northern Baja California. Winters in southern Baja California.	April through September	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, no San Diego Bird Atlas reports were identified in the square that includes the BSA, and this species was not observed during the biological survey or rare plant survey.
Mammals				
Antrozous pallidus **Pallid bat**	US: – CA: SSC MSCP: –	Day roosts in caves, crevices, rocky outcrops, tree hollows or crevices, mines and occasionally buildings, culverts, and bridges. Night roosts may be more open sites, such as porches and open buildings. Grasslands, shrublands, woodlands, and forest in western North America.	Year-round; nocturnal	**Low.** Although this species was not observed during the biological survey or rare plant survey, and no CNDDB occurrences of this species were identified within 2 miles of the BSA, marginally-suitable roosting habitat (trees) for this species was present within the BSA.
Bassariscus astutus **Ringtail**	US: – CA: – MSCP: –	Woody and rocky areas of the southwestern United States and most of Mexico.	Year-round; nocturnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Chaetodipus californicus femoralis **Dulzura pocket mouse**	US: – CA: SSC MSCP: –	Found in a variety of habitats including coastal sage scrub, chaparral and grassland in northern Baja California, San Diego and extreme southwestern and western Riverside Counties. Limit of range to northwest (at interface with *C. c. dispar*) unclear.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Chaetodipus fallax fallax **Northwestern San Diego pocket mouse**	US: – CA: SSC MSCP: –	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush, from Los Angeles County through southwestern San Bernardino, western Riverside, and San Diego Counties to northern Baja California.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Choeronycteris mexicana **Mexican long-tongued bat**	US: - CA: SSC MSCP: –	Occasionally found in San Diego County, which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Corynorhinus townsendii **Townsend's big-eared bat**	US: – CA: SSC MSCP: –	Requires caves, mines, tunnels, buildings, or other similar structures for roosting. May use buildings or bridges for roosting. Often uses use separate sites for night, day, hibernation, or maternity roosts. Ranges from southwestern Canada through the western United States to southern Mexico.	Year-round; nocturnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Euderma maculatum **Spotted bat**	US: – CA: SSC MSCP: –	Found in various communities including desert-scrub, pinyon-juniper woodland, ponderosa pine, mixed conifer forest, canyons, cliffs, riparian areas, fields, and open pasture at scattered localities in western North America from southern British Columbia to north-central Mexico. Roosts in cracks, crevices, and caves, usually on exposed cliff faces. Poorly known. Wanders widely and through varied habitats when foraging.	Year-round; nocturnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Eumops perotis californicus **Greater western mastiff bat**	US: – CA: SSC MSCP: –	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging.	Year-round; nocturnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Felis concolor **Mountain lion**	US: – CA: – MSCP: C	Largest range of any wild land animal in the Americas. Its range spans from northern Yukon in Canada to the southern Andes. Its wide distribution stems from its adaptability to virtually every habitat type; it is found in all forest types, as well as in lowland and mountainous deserts. The cougar prefers habitats that include precipitous canyons, escarpments, rim rocks, and dense brush, but can also live in open areas with little vegetation.	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Lasiurus blossevillii **Western red bat**	US: – CA: SSC MSCP: –	Roosts in the foliage of trees and shrubs, commonly in edge habitats along streams or open fields, and sometimes in orchards or urban areas. Often associated with riparian habitats, particularly those containing sycamores and cottonwoods.	Year-round; nocturnal	**Low.** Although marginally suitable habitat (trees and open fields) for this species was present within the BSA, the habitat is not optimal due to the absence of a consistent water source, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Lasiurus cinereus **Hoary bat**	US: – CA: SA MSCP: –	Forages over a wide range of habitats, but prefers open habitats with access to trees, for roosting, and water. Ranges throughout most of California.	Primarily the warmer months; leaves colder areas during winter	**Moderate.** Although this species was not observed during the biological survey or the rare plant survey, a CNDDB occurrence of this species was identified between 1.5 and 2 miles north of the BSA (1990) and trees within and adjacent to the BSA provide suitable roosting habitat for this species.
Lasiurus xanthinus **Western yellow bat**	US: – CA: SSC MSCP: –	Varied habitats, but usually near water; often associated with palm trees. Southwestern United States to southern Mexico.	Primarily the warmer months	**Moderate.** Although this species was not observed during the biological survey or the rare plant survey, a CNDDB occurrence of this species was identified between 1.5 and 2 miles north of the BSA (1998) and unmaintained Mexican fan palm trees within and adjacent to the BSA provide suitable roosting habitat for this species.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Lepus californicus bennettii **San Diego black-tailed jackrabbit**	US: – CA: SSC MSCP: –	Variety of habitats including herbaceous and desert scrub areas, early stages of open forest and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino, and Santa Rosa Mountain ranges.	Year-round, diurnal and crepuscular activity	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Myotis ciliolabrum **Western small-footed myotis**	US: – CA: SA MSCP: –	Occupies a wide variety of habitats, primarily relatively arid wooded and brushy uplands near water. Sea level to at least 8,900 feet elevation. Contra Costa County south to the Mexican border, west and east sides of the Sierra Nevada and in the deserts from Modoc to Kern and San Bernardino Counties.	Primarily the warmer months	**Not Expected.** Suitable roosting habitat for this species was not present within the BSA (insufficient water), no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Myotis yumanensis **Yuma myotis**	US: – CA: SA MSCP: –	Optimal habitats are open forests and woodlands with sources of water over which to feed. Common and widespread in California. Uncommon in the Mojave and Colorado Desert regions, except for mountains. Ranging generally from sea level to 8,000 feet. Roosts in buildings, mines, caves or crevices; occasionally in swallow nests and under bridges.	Primarily the warmer months	**Not Expected.** Suitable roosting habitat for this species was not present within the BSA (insufficient water), no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Neotoma lepida intermedia **San Diego desert woodrat**	US: – CA: SSC MSCP: –	Found in desert scrub and coastal sage scrub habitat, especially in association with cactus patches. Builds stick nests around cacti or on rocky crevices. Occurs along the Pacific slope from San Luis Obispo County to northwest Baja California.	Year-round, mainly nocturnal, occasionally crepuscular and diurnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Nyctinomops femorosaccus **Pocketed free-tailed bat**	US: – CA: SSC MSCP: –	Usually associated with cliffs, rock outcrops, or slopes. May roost in buildings (including roof tiles) or caves. Occurs from the southwestern United States to central Mexico.	Year-round; nocturnal	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Nyctinomops macrotis **Big free-tailed bat**	US: – CA: SSC MSCP: –	Inhabits rugged, rocky canyon country in southwestern United States. Found from northern South America and the Caribbean Islands northward to the western United States. In the southwestern U.S., populations appear to be scattered.	Probably year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Odocoileus hemionus **Southern mule deer**	US: – CA: – MSCP: C	Highly adaptable. Common in mountain forests, deserts, and brushlands. Known in the western Great Plains, in the Rocky Mountains, in the United States southwest, and on the west coast of North America	Year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Onychomys torridus ramona **Southern grasshopper mouse**	US: – CA: SSC MSCP: –	Sandy or gravelly valley floor habitats with friable soils in open and semi-open scrub, including coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs, preferring low to moderate shrub cover. More susceptible to small- and large-scale habitat loss and fragmentation than most other rodents, due to its low fecundity, low population density, and large home range size. Arid portions of southwestern California and northwestern Baja California.	Nocturnal, active year-round	**Not Expected.** Suitable habitat for this species was not present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.
Perognathus longimembris pacificus **Pacific pocket mouse**	US: FE CA: SSC MSCP: –	Historically occupied open habitats on sandy soils along the coast from Los Angeles to the Mexican border. Now known from only four sites in Orange and San Diego Counties.	April through September	**Not Expected.** Although marginally suitable habitat for this species was present within the BSA (open habitats on sandy soils), the species prefers coastal locations, no CNDDB occurrences of this species were identified within 2 miles of the BSA, and this species was not observed during the biological survey or rare plant survey.

Special-Status Species Summary Table

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Taxidea taxus **American badger**	US: – CA: SSC MSCP: C	Primary habitat requirements seem to be sufficient food and friable soils in relatively open uncultivated ground in grasslands, woodlands, and desert. Widely distributed in North America.	Year-round	**Low.** Although marginally-suitable habitat (friable soils) for this species was present within the BSA, no CNDDB occurrences of this species were identified within 2 miles of the BSA and neither this species nor appropriately-sized burrows were observed during the biological survey or rare plant survey.

STATUS ABBREVIATIONS

US: Federal Classifications

–	No applicable classification.
FE	Taxa federally-listed as Endangered.
FT	Taxa federally-listed as Threatened.
CS	Candidate Species
SC	Species of Concern

CA: State Classifications

–	No applicable classification.
SE	Taxa State-listed as Endangered.
ST	Taxa State-listed as Threatened.
FP	Fully-Protected Species
SSC	California Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.
WL	California Species of Special Concern Watch List.
SA	Special Animal. Refers to any other animal monitored by the Natural Diversity Data Base, regardless of its legal or protection status.
SP	Special Plant. Refers to any other plant monitored by the Natural Diversity Data Base, regardless of its legal or protection status.

California Rare Plant Rankings (CRPR)

–	No applicable classification.
1B	Rare, threatened, or endangered in California and elsewhere.
2B	Rare, threatened, or endangered in California, but more common elsewhere.
3	Review list: plants about which more information is needed.
4	Watch list: plants of limited distribution.

CRPR Extensions

0.1 Seriously endangered in California (greater than 80% of occurrences threatened/high degree and immediacy of threat).
0.2 Fairly endangered in California (20 to 80% occurrences threatened).
0.3 Not very threatened in California (less than 20% occurrences threatened)

California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.

County of San Diego Multiple Species Conservation Program (MSCP) Classifications

–	Species not covered by the MSCP.
C	Covered: Species for which take authorization is provided because long-term viability has been determined to be adequately maintained under the MSCP.

ATTACHMENT E:

JURISDICTIONAL DELINEATION REPORT

JURISDICTIONAL DELINEATION REPORT

GOOD SHEPHERD CATHOLIC CEMETERY PROJECT

CITIES OF OCEANSIDE AND VISTA

SAN DIEGO COUNTY, CALIFORNIA

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LSA Project No. DSD1701

LSA

October 2021

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A: COPY OF WETLAND DETERMINATION DATA FORMS
B: FUNCTION AND VALUES ANALYSIS

INTRODUCTION

This report presents the results of a jurisdictional delineation conducted by LSA. This report summarizes the results of fieldwork conducted to identify the limits of potential waters of the United States and waters of the State subject to the jurisdiction of the United States Army Corps of Engineers (Corps) and the Regional Water Quality Control Board (RWQCB) pursuant to Sections 404 and 401 of the Federal Clean Water Act (CWA), respectively; streambeds, water bodies, and associated habitat subject to California Department of Fish and Wildlife (CDFW) regulation pursuant to Section 1600 et seq. of the California Fish and Game Code; and Resource Protection Ordinance (RPO) Wetlands as defined by the San Diego County (County) Code of Regulatory Ordinances. LSA surveyed an approximately 24.75-acre Biological Study Area (BSA) (a 14.61-acre project site and a 100-foot County-required buffer) in an incorporated area of the County near the Cities of Oceanside and Vista, California. This report has been prepared for the purpose of identifying aquatic resource limits for submittal to the Corps, the RWQCB, and the CDFW as part of their review of applications for permit authorization.

This routine wetland and jurisdictional delineation was conducted under contract with The Diocese of San Diego. The findings and conclusions presented in this report, including the locations and extent of aquatic resources subject to regulatory jurisdiction, represent the professional opinion of LSA and should be considered preliminary until verified by representatives from the Corps, the RWQCB, the CDFW, and the County.

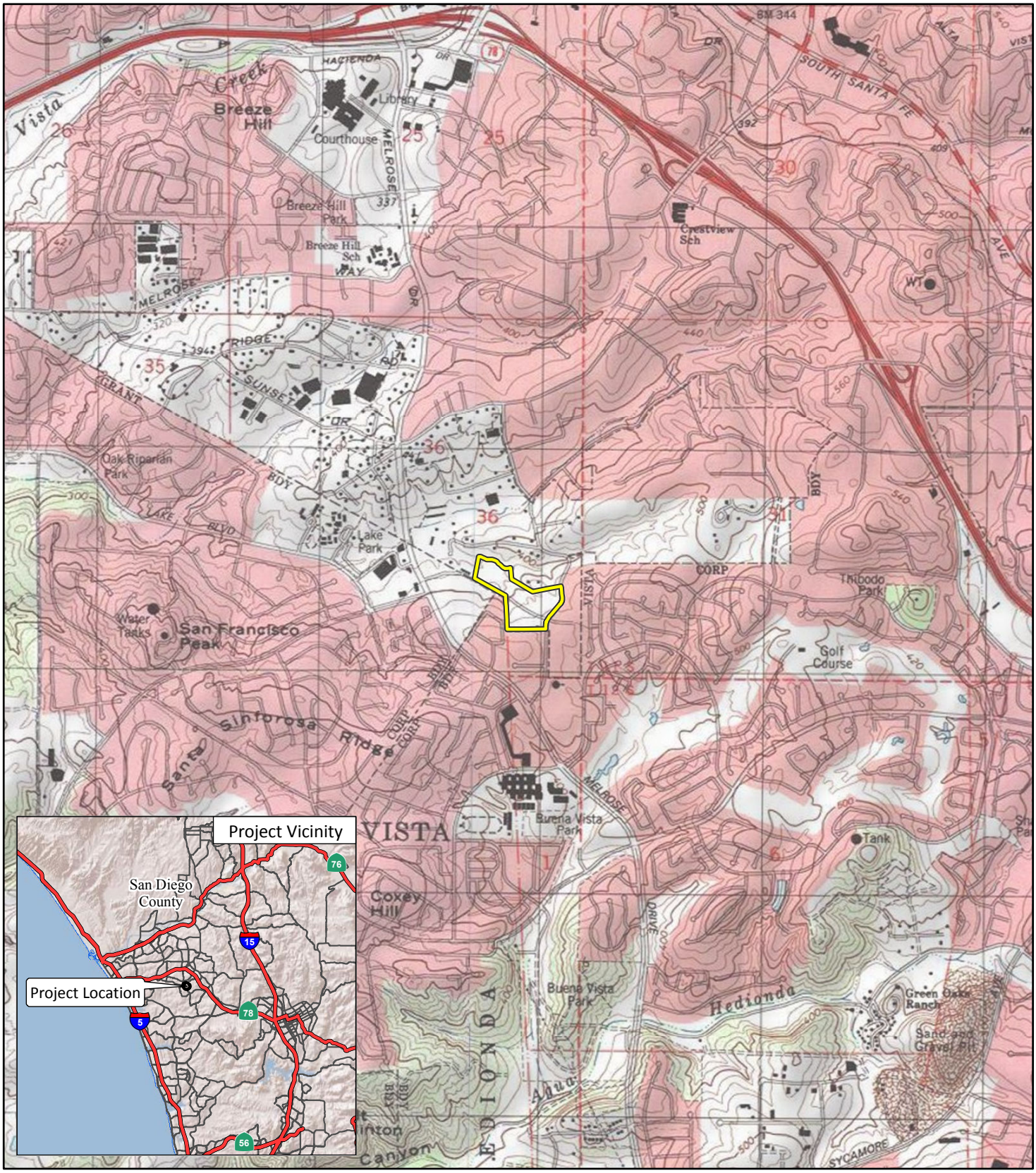
PROPOSED PROJECT

The Diocese proposes to construct a cemetery at the subject project site, which consists of the following four lots: Assessor's Parcel Number (APN) 169-210-02, APN 169-220-01, APN 169-220-02, and APN 169-220-03. The cemetery will be constructed in multiple phases over time based on funding. The existing house at 1505 Buena Vista Drive (APN 169-220-02) will remain and be used as an office. Other improvements include construction of a 2,176-square foot administrative office, 220-square foot gatehouse, landscaping, internal circulation system, and utility improvements. The remainder of the site will be reserved for grave sites.

SITE DESCRIPTION

The BSA is near the Cities of Oceanside and Vista, San Diego County, California. Specifically, the BSA is in an unincorporated area of Section 36, Township 11 South, and Range 4 West of the United States Geological Survey (USGS) *San Luis Rey* and *San Marcos, California* 7.5-minute topographic quadrangle maps (Figure 1).

The BSA consists of disturbed habitat (nonnative, weedy annual species and unvegetated areas occupied by clusters of unplanted nursery container plants) and developed land. Outside the project site, but within the County-required 100-foot buffer, there is nonnative riparian and Arundo-dominated riparian vegetation. Three ephemeral earthen drainage features occur in the northern half of the project site. The following soils are present within the project site according to the United States Department of Agriculture: Cieneba coarse sandy loam (15 to 30 percent slopes eroded), Bosanko clay (9 to 15 percent slopes), Cieneba coarse sandy loam (5 to 15 percent slopes eroded), Diablo clay (9 to 15 percent slopes), and Fallbrook sandy loam (15 to 30 percent slopes).



LSA

FIGURE 1

SOURCE: USGS 7.5' Quad - San Marcos (1983)

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Good Shepherd Catholic Cemetery Project

Project Location

The BSA slopes gently in a northeasterly direction and has an elevation range of approximately 360 to 460 feet above mean sea level.

REGULATORY BACKGROUND

United States Army Corps of Engineers

The Corps regulates discharges of dredged or fill material into waters of the United States (WOTUS). These waters include wetland and nonwetland bodies of water that meet specific criteria. Corps regulatory jurisdiction pursuant to Section 404 of the Federal Clean Water Act (CWA) is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in Corps regulations).

For several decades, the operable definition of waters of the U.S. was provided at 33 Code of Federal Regulations (CFR) 328.3, but implementation of this definition has been shaped by the courts and subsequent guidance over the years, most substantially by the 2001 Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178 (*SWANCC*) and the 2006 Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable. However, the involved Supreme Court Justices were not able to agree on a single, underlying standard which would govern future jurisdictional disputes. Instead, a four-Justice plurality opinion, authored by Justice Scalia, and an opinion by Justice Kennedy, proposed two alternative tests for evaluating jurisdictional waters:

1. Relative permanence and continuous surface connection
2. Significant nexus: a nexus exists when the feature (whether an adjacent wetland or tributary) significantly affects the chemical, physical, and biological integrity of other covered waters

Following the *Rapanos* decision, the lower courts immediately struggled to determine which "test" should be used, which led to inconsistency in CWA implementation across the states. On June 5, 2007, the Corps issued guidance regarding the *Rapanos* decision. After consideration of public comments and agencies' experience, revised guidance was issued on December 2, 2008. This guidance states that the Corps will assert jurisdiction over TNWs, wetlands adjacent to TNWs, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. Under the 2008 *Rapanos* Guidance, the Corps determined jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent and wetlands adjacent to nonnavigable tributaries that are not relatively permanent only after making a significant nexus finding. The Corps generally did not assert jurisdiction over swales or erosional features, or ditches excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. However, the Corps reserved the right to regulate these waters on a case-by-case basis.

Several recent attempts have been made to clarify the scope of WOTUS. Based, in part, on the *Rapanos* decision and the opinions authored by Justice Kennedy and Justice Scalia, new rules defining WOTUS were promulgated under the Obama and Trump administrations. The 2015 "Clean Water Rule" and the 2020 "Navigable Waters Protection Rule" set forth different definitions for WOTUS (ranging from relatively broad federal jurisdiction under the 2015 rule to relatively limited federal jurisdiction under the 2020 rule). Each of these new rules prompted series of legal challenges and court decisions. On August 30, 2021, the United States District Court for Arizona vacated the 2020 Navigable Waters Protection Rule, which reinstated federal wetland regulations and definitions originally adopted by the federal government in the 1980s. In light of this order, the Environmental Protection Agency (EPA) and Corps (collectively "agencies") have halted implementation of the 2020 Navigable Waters Protection Rule and are interpreting WOTUS consistent with the pre-2015 regulatory regime (and 2008 *Rapanos* Guidance) until further notice.

While litigation continues and the agencies, on June 9, 2021, announced plans for new WOTUS rulemaking, the current definition of WOTUS[1] is as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

[1] See: "Current Implementation of Waters of the United States." https://www.epa.gov/wotus/current-implementation-waters-united-states Accessed October 8, 2021.

> *WOTUS do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.*

Given the substantial changes in operable definitions that have occurred and may continue to occur considering recent regulatory revisions and court actions, it is not possible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the Corps. Therefore, this jurisdictional delineation focusses on identifying the boundaries of potentially jurisdictional water bodies, utilizing methods for determining the locations of the ordinary high water mark (OHWM) and wetland boundaries as described below. These methods for determining the boundaries of water bodies in general have not substantially changed over the years and are not likely to change with any revised regulations. This delineation can then be used in combination with a companion jurisdictional analysis to determine which of the identified water bodies are actually jurisdictional, based on the definition that is in effect at the time of a jurisdictional determination by the Corps.

The Corps typically considers any body of water displaying an OHWM for designation as WOTUS, subject to the applicable definition of WOTUS. Corps jurisdiction over nontidal waters of the U.S. extends laterally to the OHWM or beyond the OHWM to the limit of any contiguous wetlands, if present.

The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

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

Wetlands

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (*Regional Supplement*) (Corps 2008) and the *Corps of Engineers 1987 Wetland Delineation Manual* (*1987 Manual*) (Environmental Laboratory 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

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

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

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

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

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

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the 2016 National Wetland Plant List (Lichvar et al. 2016) published by the Corps. Each species on the list is rated according to a wetland indicator category, as shown in Table A.

Table A: Hydrophytic Vegetation

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

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

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

Hydric Soils

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

1. All Histels except Folistels and Histosols except Folists;
2. Soils that are frequently ponded for a long duration or very long duration[3] during the growing season; or
3. Soils that are frequently flooded for a long duration or very long duration during the growing season.

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

1 The hydric soils definition and criteria included in the *1987 Manual* are obsolete. Users of the 1987 Manual are directed to the United States Department of Agriculture (USDA) NRCS website for the most current information on hydric soils.

2 Current definition as of 1994 (*Federal Register,* July 13, 1994).

3 "Long duration" is defined as a single event lasting from 7 to 30 days; "very long duration" is defined as a single event that lasts longer than 30 days.

database, the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) created a Soil Data Access (SDA) Hydric Soils List that is updated annually.

The *Regional Supplement* has a number of field indicators that may be used to identify hydric soils. The NRCS (2017) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (Environmental Laboratory 1987). The wetland hydrology criterion is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (Corps 2008).

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

California Department of Fish and Wildlife

The CDFW, through provisions of the California Fish and Game Code (Sec. 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW. Also, the CDFW typically does not regulate estuaries below the mouth of a tributary river or stream.

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

Regional Water Quality Control Board

The Porter-Cologne Water Quality Control Act of the California Water Code (§ 13000 et seq.) established nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local and/or regional level. Their duties include preparing and updating water quality control plans and associated requirements, and issuing water quality certifications under Section 401 of the CWA. This Act grants ultimate authority to the State Water Resources Control Board (SWRCB) over state water rights and water quality policy. Under the Porter-Cologne Water Quality Control Act, the RWQCBs (or SWRCB for projects that cross multiple RWQCB jurisdictions) are responsible for issuing National Pollutant Discharge Elimination System permits for point-source discharges and waste discharge requirements for nonpoint-source discharges into jurisdictional waters of the State.

The definition of waters under the jurisdiction of the State of California is broad and includes any surface water or groundwater, including saline waters within the boundaries of the State. Waters that meet the definition of waters of the United States are also considered waters of the State, but the jurisdictional limits of waters of the State may extend beyond the limits of waters of the United States. Isolated or ephemeral waters that may not be subject to regulations under federal law are considered to be waters of the State and regulated accordingly. The SWRCB recently adopted a definition of wetlands that utilizes Corps criteria and methods, but includes as wetlands those areas that meet hydrology and soils criteria even when vegetation is absent. While there is no formal statewide guidance for the delineation of nonwetland waters of the State, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, and all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation. Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland waters of the State.

San Diego County Resource Protection Ordinance (RPO) Wetlands

The County restricts, to varying degrees, impacts to various natural resources including wetlands. According to Section 86.602 of the San Diego County Code of Regulatory Ordinances, a wetland is defined as land having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytic plant species;
- The substratum is predominantly undrained hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominantly non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

The following shall not be considered RPO wetlands:

- Lands that have attributes specified above solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Development Services determines that they have negligible biological function or value as wetlands, are small and geographically isolated from other wetland systems, are not vernal

pools, and do not have substantial or locally important populations of wetland-dependent sensitive species.

- Lands that have been degraded by past legal land disturbance activities, to the point that the Director of Planning and Development Services determines that they have negligible biological function or value as wetlands even if restored to the extent feasible and do not have substantial or locally important populations of wetland-dependent sensitive species.

METHODOLOGY

LSA Senior Biologist Jaime Morales performed the jurisdictional delineation fieldwork on November 16, 2018. Mr. Morales surveyed the BSA on foot and evaluated all areas of potential jurisdiction according to Corps, RWQCB, CDFW, and County criteria. Data were recorded directly on a field map containing a 2017 aerial photograph base at a scale of 1 inch = 100 feet provided by Hofman Planning and Engineering.

LSA evaluated areas supporting hydrology or species of plant life potentially indicative of wetlands according to routine wetland delineation procedures described in the *Regional Supplement*. Representative sample points were selected and examined in the field in those areas where wetland jurisdiction was in question or needed to be confirmed. At each sample point, the dominant and subdominant plant species were identified and their wetland indicator status (Lichvar et al. 2016) noted. When possible, a small sample pit (approximately 16 inches deep) was dug in order to examine soil characteristics and composition. Soil matrix colors were classified according to the Munsell Soil Color Charts (Munsell Color 2000). Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators, were recorded. General site characteristics were also noted. Standard data forms were completed for each sample point; copies of these data forms are included in Appendix A of this report.

RESULTS

The BSA contains three ephemeral drainage features potentially subject to regulation by the Corps, RWQCB, CDFW, and County. The following describes the features present in the BSA as they were observed during the jurisdictional delineation fieldwork. Figure 2 displays the locations of aquatic resources within the BSA. Figure 3 displays representative site photographs.

Functions and values for these drainage features were determined to have low significance in terms of resources. Appendix B describes and evaluates the functions and values of the features within the BSA.

LSA

LEGEND

- Project Boundary
- Biological Study Area*
- Parcel Lot Lines (with APNs)
- Sample Point

*Biological Study Area includes a County-required 100-foot buffer

Aquatic Resources

- Nonwetland Waters of the U.S. (0.36 Ac)
- Nonwetland Waters of the State/ CDFW Jurisdictional Streambed/Banks (0.43 Ac)
- Resource Protection Ordinance Wetland (0.12 Ac)

Note: Aquatic features are represented by cartographic lines. Please refer to the text for exact measurements.

N

0 100 200
FEET

SOURCE: Hofman (2017)

FIGURE 2

Good Shepherd Catholic Cemetery Project

Aquatic Resources Map

\\acorp04\CBDImages\DSD1701\GIS\AquaticResources_JD.mxd (10/9/2021)

Photograph 1: View of the southern end of Drainage Feature 1, facing west.

Photograph 2: View of Drainage Feature 1, facing north.

Photograph 3: View of the vegetated depression along Drainage Feature 2, facing northwest.

Photograph 4: View of Drainage Feature 3, facing northwest.

LSA

FIGURE 3

Good Shepherd Cemetery Project
Site Photographs

Photograph 5: View of area where Sample Point 1 was collected, facing west.

Photograph 6: View of Sample Point 2, facing north.

Photograph 7: View of Sample Point 3, facing northwest.

Photograph 8: View of Sample Point 4, facing west.

LSA

FIGURE 3
(Page 2 of 3)

Good Shepherd Cemetery Project
Site Photographs

Photograph 9: View of area where Sample Point 5 was collected, facing west.

Photograph 10: View of where Sample Point 6 was collected, facing north.

LSA

FIGURE 3

Good Shepherd Cemetery Project
Site Photographs

Feature 1

This feature consists of an ephemeral drainage vegetated predominantly by nonnative annual upland vegetation, namely short-pod mustard (*Hirschfeldia incana*; Wetland Indicator Status: Obligate Upland species [UPL]) and tocalote (*Centaurea melintensis*; Wetland Indicator Status: UPL) with a few sparsely-scattered hydrophytic plants, such as Gooding's black willow (*Salix gooddingii*; Wetland Indicator Status: Facultative Wetland species [FACW]) and curly dock (*Rumex crispus*; Wetland Indicator Status: Facultative species [FAC]). The feature begins along the southwestern edge of the property and conveys runoff flows from the adjacent Shadowridge Heights apartment complex in a northerly direction until it converges with Feature 2. Within the 100-foot County-required survey buffer, and within the Shadowridge Heights apartment complex property, a section of Feature 1 is vegetated by sweet gum (*Eucalyptus* sp.; Wetland Indicator Status: Obligate Upland species) trees and some scattered arroyo willow (*Salix lasiolepis*; Wetland Indicator Status: FACW), red willow (*Salix laevigata*; Wetland Indicator Status: FACW), and coast live oak (*Quercus agrifolia*; Wetland Indicator Status: UPL) trees and/or saplings; however, hydrophytic vegetation does not dominate this area. In the BSA, this feature displays an OHWM of varying width (0.5 to 3.5 feet) and 1- to 4-foot wide stream banks. LSA collected Sample Points 1 and 2 within the drainage to determine whether they, and areas they represented, met the criteria for wetland waters of the United States and wetland waters of the State. The area represented by Sample Point 1 was dominated by sweet gum, willow, and coast live oak trees and saplings, coyote brush (*Baccharis pilularis*; Wetland Indicator Status: UPL) shrubs, black mustard (*Brassica nigra*; Wetland Indicator Status: UPL), and Hottentot fig (*Carpobrotus edulis*; Wetland Indicator Status: UPL). Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 1 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soil displayed no hydric soils indicators. The area represented by Sample Point 2 was dominated by short-pod mustard and tocalote plants, Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 2 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soil displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology, Feature 1 is not considered wetland waters of the United States. However, because Feature 1 displays a visible OHWM and conveys flows to Feature 2, which has a direct connection to the Pacific Ocean (discussed below), this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, Feature 1 does not meet the criteria for RPO Wetland.

Feature 2

This feature consists of an ephemeral drainage that widens to a vegetated depression near the western end and then narrows again before exiting the project site and conveying flows into a dense patch of Arundo-dominated riparian vegetation. Feature 2 begins in the eastern half of the BSA and appears to convey flows from the adjacent nursery in a northwesterly direction. The drainage component of this feature is vegetated predominantly by nonnative annual upland vegetation (short-pod mustard and tocalote), while the depression includes nonnative upland species and curly dock. The western end of the feature (outside of the project property, but within the 100-foot

mapping buffer) is vegetated by Arundo-dominated riparian vegetation consisting of giant reed (*Arundo donax*; Wetland Indicator Status: FACW). In the BSA, this feature displays an OHWM of varying width (0.5 to 3.5 feet) and 0.5- to 4-foot wide stream banks. The vegetated depression varies in width (up to 20 feet wide) and displays defined banks. From the western edge of the BSA, Feature 2 continues in a northwesterly direction for approximately 1,200 feet to a concrete storm drain structure, which ultimately conveys flows to the Pacific Ocean, a traditional navigable water. LSA collected Sample Points 3 and 4 within the vegetated depression and Sample Point 5 within the Arundo-dominated riparian vegetation at the western end of Feature 2 to determine if these areas, and areas they represented, met the criteria for wetland waters of the United States. The area represented by Sample Point 3 was dominated by curly dock, short-pod mustard, and fascicled tarweed (*Deinandra fasciculata*; Wetland Indicator Status: Facultative Upland species [FACU]), Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 2 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix in the upper 4 inches and a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 12 inches. The soils displayed no hydric soils indicators. The area represented by Sample Point 4 was dominated by curly dock, short-pod mustard, and fascicled tarweed. Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 3 revealed dry sandy soil with a Munsell soil color of 10YR 4/3 throughout the matrix in the upper 6 inches and a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 14 inches. The soils displayed no hydric soils indicators. The area represented by Sample Point 4 was dominated by giant reed. No evidence of wetland hydrology indicators was observed. Analysis of the soils at Sample Point 5 revealed dry sandy soil with a Munsell soil color of 10YR 4/3 throughout the matrix in the upper 6 inches and a sandy clay soil with a Munsell soil color of 10YR 4/2 throughout the matrix in the next 8 inches. The soils displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation (except for the Arundo-dominated riparian vegetation, which is dominated by giant reed, a hydrophytic plant species), hydric soils, and wetland hydrology, Feature 2 is not considered a wetland water of the United States. However, because Feature 2 displays a visible OHWM and conveys flows to a concrete storm drain structure, which has a direct connection to the Pacific Ocean, this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, most of Feature 2 does not meet the criteria for RPO Wetland. However, the Arundo-dominated riparian vegetation at the western end of Feature 2 meets the criteria for RPO Wetland because the dominant species is a hydrophyte.

Feature 3

This feature consists of an ephemeral drainage vegetated predominantly by nonnative annual upland vegetation (short-pod mustard and tocalote). Nonnative riparian vegetation dominated by sweet gum trees provides a canopy over the eastern end of the drainage. The feature is in the northern quarter of the BSA and conveys flows from upstream sources (earthen and concrete ditches and runoff) through the BSA in a northwesterly direction before making a sharp southerly turn and converging into Feature 2. In the BSA, this feature displays an OHWM of varying width (0.5 to 4.5 feet) and 1- to 6-foot wide stream banks. LSA collected Sample Point 5 within the drainage feature to determine if it, and areas it represented, met the criteria for wetland waters of the United

States. The area represented by Sample Point 6 was dominated by short-pod mustard and tocalote. Evidence of drainage patterns (Secondary Indicator B10) was observed. Analysis of the soils at Sample Point 5 revealed dry sandy soil with a Munsell soil color of 10YR 3/3 throughout the matrix. The soils displayed no hydric soils indicators. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology, Feature 3 is not considered wetland waters of the United States. However, because Feature 3 displays a visible OHWM and conveys flows to a concrete storm drain structure after converging with Feature 2, which has a direction connection to the Pacific Ocean, this feature is considered nonwetland waters of the United States potentially subject to the jurisdiction of the Corps pursuant to the CWA. The streambed and banks associated with this feature are potentially subject to CDFW and RWQCB (nonwetland waters of the State) jurisdiction. Due to the absence of a predominance of hydrophytic vegetation, hydric soils, and a non-soil substratum, Feature 3 does not meet the criteria for RPO Wetland.

CONCLUSIONS

Potential Corps Jurisdiction

The ephemeral drainages within the BSA display visible OHWMs and have a direct connection to the Pacific Ocean. Therefore, they are considered nonwetland waters of the United States and potentially subject to Corps jurisdiction. Although an area at the western end of Feature 2 contains a predominance of hydrophytic vegetation, wetland hydrology and hydric soils are absent from the ephemeral drainages; therefore, these ephemeral drainages are not considered wetland waters of the United States. Table B displays the acreages of waters of the United States present within the BSA.

Table B: Potential Waters of the United States within the BSA

Feature	Linear Feet	Wetland Waters (acres)	Nonwetland Waters (acres)
1	474	0.00	0.03
2	1,019	0.00	0.31
3	674	0.00	0.03
Total	**2,167**	**0.00**	**0.37**

BSA = Biological Study Area

Potential RWQCB Jurisdiction

Features 1 through 3 are nonwetland waters of the State subject to the jurisdiction of the RWQCB. Table C displays the acreages of waters of the State within the BSA.

Table C: Potential Waters of the State within the BSA

Feature	Linear Feet	Wetland Waters (acres)	Nonwetland Waters (acres)
1	474	0.00	0.04
2	1,019	0.00	0.34
3	674	0.00	0.05
Total	**2,167**	**0.00**	**0.43**

BSA = Biological Study Area

Potential CDFW Jurisdiction

All of the areas satisfying the RWQCB jurisdictional criteria for waters of the State are also potentially subject to CDFW jurisdiction, pursuant to Section 1602 of the California Fish and Game Code. Additionally, associated riparian vegetation extending beyond stream banks is subject to CDFW jurisdiction. Table D displays the acreage of potential CDFW jurisdiction present within the BSA.

Table D: Potential CDFW Jurisdiction Within the BSA

Feature	Streambed/Banks and Riparian Vegetation (acres)
1	0.04
2	0.34
3	0.05
Total	**0.43**

CDFW = California Department of Fish and Wildlife
BSA = Biological Study Area

Potential San Diego County RPO Wetlands

Areas within the BSA containing a predominance of hydrophytic vegetation were mapped as County RPO Wetlands. Table E displays the total acreage of potential County RPO wetlands identified in the BSA.

Table E: Potential San Diego County RPO Wetlands within the BSA

Feature	Streambed/Banks (acres)
1	0.00
2	0.12
3	0.00
Total	**0.12**

RPO = Resource Protection Ordinance
BSA = Biological Study Area

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APPENDIX A

COPY OF WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shepherd Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: CA Sampling Point: 1
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): <5
Subregion (LRR): California Lat: 33.171589 Long: -117.248672 Datum: NAD83
Soil Map Unit Name: Diablo Clay, 9 to 15% slopes NWI classification: R4SBF
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Although some hydrophytes are present, there is not a predominance of them. Furthermore, the hydrology and soils are not indicative of wetland waters of U.S.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	30	Y	FACW
2. Eucalyptus sp.	30	Y	UPL
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis salicifolia	30	Y	FAC
2. Baccharis pilularis	20	Y	FACU
3. Quercus agrifolia	15	Y	UPL
4.			
5.			
	65	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Brassica nigra	40	Y	UPL
2. Carpobrotus edulis	30	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 28% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	30	x 3 =	90
FACU species	20	x 4 =	80
UPL species	115	x 5 =	575
Column Totals:	195 (A)		805 (B)

Prevalence Index = B/A = 4.13

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: Sample representative of area of Feature 1 South of the project boundary, but within the BSA. Much more wooded than the rest of Feature 1.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/3	100					Sandy	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shepherd Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: CA Sampling Point: 2
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): <5
Subregion (LRR): California Lat: 33.171976 Long: -117.248692 Datum: NAD83
Soil Map Unit Name: Bosanko clay, 9 to 15 % slopes NWI classification: R4SB7
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No ✓
Hydric Soil Present? Yes ____ No ✓
Wetland Hydrology Present? Yes ____ No ✓
Is the Sampled Area within a Wetland? Yes ____ No ✓

Remarks: This drainage feature consists of an ephemeral drainage vegetated by upland vegetation showing minimal hydrology. This feature receives flows from an adjacent apartment complex.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis pilularis	5	Y	FACU
2. Cortaderia selloana	5	Y	FACU
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Centaurea melitensis	20	Y	UPL
2. Hirschfeldia incana	40	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: Sample representative of ephemeral drainages on site. Same vegetation and conditions throughout.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
12	10YR 3/3	100%					Sandy	large particles of rock

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shephard Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: Ca Sampling Point: 3
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): <5
Subregion (LRR): California Lat: 33.172625 Long: -117.249077 Datum: NAD83
Soil Map Unit Name: Fallbrook sandy loam, 15-30% slopes NWI classification: R4SBF
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: This sample point was taken near the northern edge of a vegetated depression. Sample is representative of the vegetated depression.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Rumex crispus	30	Y	FAC
2. Hirschfeldia incana	20	Y	UPL
3. Deinandra fasciculata	20	Y	FACU
4. Grindelia hirsutula	5	N	FACW
5. Amaranthus albus	5	N	FACU
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	30	x 3 =	90
FACU species	25	x 4 =	100
UPL species	20	x 5 =	100
Column Totals:	80 (A)		300 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Sandy	
4-16	10YR 4/2	100					Sandy clay	no redox

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shepherd Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: CA Sampling Point: 4
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): <5
Subregion (LRR): California Lat: 33.172583 Long: -117.249124 Datum: NAD83
Soil Map Unit Name: Fallbrook sandy loam, 15-30% slopes NWI classification: R4SBZ
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No ✓
Hydric Soil Present? Yes ____ No ✓
Wetland Hydrology Present? Yes ____ No ✓

Is the Sampled Area within a Wetland? Yes ____ No ✓

Remarks: Sample point taken slightly south of SP2, but still within vegetated depression. SP3 slightly lower in elevation than SP2.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Rumex crispus	30	Y	FAC
2. Hirschfeldia incana	20	Y	UPL
3. Deinandra fasciculata	20	Y	FACU
4. Grindelia hirsutula	5	N	FACW
5. Amaranthus albus	3	N	FACU
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					Sandy	
6-20	10YR 4/3	100					Sandy clay	no redox

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shepherd Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: Ca Sampling Point: 5
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): <5
Subregion (LRR): California Lat: 33.173037 Long: -117.249828 Datum: NAD83
Soil Map Unit Name: Fallbrook sandy loam, 15-30% slopes NWI classification: R4SBF
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Hydrophytic vegetation (arundo) present at end of Feature 2, but no hydric soils or wetland hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Arundo donax	100	Y	FACW
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Arundo donax	100	Y	FACW
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: Very dense stand of giant reed [redacted] at western end of Feature 2.

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					Sandy	
6-14	10YR 4/2	100					Sandy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (Inches): _____

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Good Shepherd Cemetery City/County: San Diego County Sampling Date: 11/16/18
Applicant/Owner: Diocese of San Diego State: Ca Sampling Point: 6
Investigator(s): Jaime Morales Section, Township, Range: S36, T11S, R04W
Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): <3
Subregion (LRR): Lat: 33.173053 Long: -117.249114 Datum:
Soil Map Unit Name: Cieneba coarse sandy loam 15-30% slopes eroded NWI classification: R4SB7
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Representative sample of Feature 3, not including arundo-dominated riparian vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Hirschfeldia incana	25	Y	UPL
2. Centaurea melitensis	10	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 35	x 5 = 175
Column Totals: 35 (A)	175 (B)

Prevalence Index = B/A = 175/35 = 5

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
12	10YR 3/3	100%					Sandy	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

APPENDIX B

FUNCTIONS AND VALUES ANALYSIS

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

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

HYDROLOGIC REGIME

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

FLOOD STORAGE AND FLOOD FLOW MODIFICATION

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

SEDIMENT RETENTION

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

NUTRIENT RETENTION AND TRANSFORMATION

Nutrient cycling consists of two variables: uptake of nutrients by plants and detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive with regard to nutrients than upland habitats. The regular availability of

water associated with the wetland or stream may cause the growth of plants (nutrient uptake) and associated detritivores and generate nutrients that may be utilized by a variety of aquatic and terrestrial wildlife downstream.

TOXICANT TRAPPING

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

SOCIAL SIGNIFICANCE

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

WILDLIFE HABITAT

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

AQUATIC HABITAT

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

Table B-1: Functions and Values of Features Within the BSA

Feature	Hydrologic Regime	Flood Storage and Flood Flow Modification	Sediment Retention	Nutrient Retention and Transformation	Toxicant Trapping	Social Significance	Wildlife Habitat	Aquatic Habitat
1	Low	Low	Low	Low	Low	Low	Low	Low
2	Low	Low	Low	Low	Low	Low	Low	Low
3	Low	Low	Low	Low	Low	Low	Low	Low

ATTACHMENT F:

RARE PLANT SURVEY REPORT

LSA

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: August 7, 2019

TO: Diocese of San Diego, c/o Mario DeBlasio

FROM: Stan Spencer, LSA Associates, Inc.

SUBJECT: Results of a Special-Status Plant Survey on the Good Shepherd Catholic Cemetery Project Site (LSA Project No. DSD1701)

This memo provides the results of a survey for special-status plants by LSA for the above-referenced, approximately 15-acre project site, consisting of Assessor's Parcel Numbers 169-210-02, 169-210-03, 169-220-01, 169-220-02, and 169-220-03. The project site is located south of Fern Place, west of Buena Vista Drive, north of Wesley Way, and east of South Melrose Drive near the Cities of Oceanside and Vista, San Diego County, California.

The survey was conducted for thread-leaved brodiaea (*Brodiaea filifolia*), San Diego ambrosia (*Ambrosia pumila*), San Diego thorn-mint (*Acanthomintha ilicifolia*), San Diego button-celery (*Eryngium aristulatum* var*. parishii*), spreading navarretia (*Navarretia fossalis*), and other sensitive plant species potentially present in the project area or vicinity.

METHODS

The survey was conducted by LSA botanist Stan Spencer, PhD. The survey consisted of three site visits in spring of 2019, spanning the peak flowering season of the target species. Site visits were April 24 from 10:00 a.m. to 1:00 p.m., May 16 from 11:25 a.m. to 1:14 p.m., and June 5 from 8:15 to 10:15 a.m. Areas of potentially suitable habitat on the site were surveyed by walking transects separated by approximately 60 feet. The survey was floristic in nature and all plant species detected on the site during the survey were identified to the extent necessary to determine rarity and listing status.

RESULTS

Predominant vegetation in the survey area consists of disturbed habitat dominated by nonnative, annual species, including tocalote (*Centaurea melitensis*), short-pod mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), fennel (*Foeniculum vulgare*), Hottentot fig (*Carpobrotus edulis*), and garland daisy (*Glebionis coronaria*). The native annual species, fascicled tarweed (*Deinandra fasciculata*), is also dominant within this vegetation community. Ephemeral drainages and a depression in the northern portion of the site are also dominated by nonnative annual upland vegetation.

None of these target species or any other special-status plant species was observed during the survey. A list of all plant species identified during the survey is provided as Table A.

Attachment: Table A: Plant Species Observed

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

Table A: Plant Species Observed

Scientific Name	Common Name
EUDICOT FLOWERING PLANTS	
Aizoaceae	**Carpet weed family**
Carpobrotus edulis (nonnative species)	Hottentot-fig
Amaranthaceae	**Amaranth family**
Amaranthus albus (nonnative species)	White amaranth
Anacardiaceae	**Sumac family**
Schinus molle (nonnative species)	Peruvian peppertree
Apiaceae	**Carrot family**
Foeniculum vulgare (nonnative species)	Fennel
Asteraceae	**Sunflower family**
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Carduus pycnocephalus (nonnative species)	Italian Thistle
Centaurea melitensis (nonnative species)	Maltese star-thistle
Cynara cardunculus (nonnative species)	Artichoke thistle
Deinandra fasciculata	Fascicled tarweed
Erigeron bonariensis (nonnative species)	Flax-leaved horseweed
Erigeron canadensis	Canadian horseweed
Glebionis coronaria (nonnative species)	Garland chrysanthemum
Hedypnois cretica (nonnative species)	Crete weed
Helminthotheca echioides (nonnative species)	Bristly ox-tongue
Heterotheca grandiflora	Telegraph weed
Hypochaeris glabra (nonnative species)	Smooth cat's-ear
Isocoma menziesii var. *vernonioides*	Menzies' goldenbush
Logfia gallica (nonnative species)	Narrowleaf cottonrose
Matricaria discoidea	Disc mayweed
Osteospermum sp. (nonnative species)	Daisybush
Pseudognaphalium luteoalbum (nonnative species)	Jersey cudweed
Pseudognaphalium stramineum	Cottonbatting plant
Psilocarphus tenellus	Slender woollyheads
Pulicaria paludosa (nonnative species)	Spanish false fleabane
Sonchus asper (nonnative species)	Prickly sow thistle
Sonchus oleraceus (nonnative species)	Common sow thistle
Brassicaceae	**Mustard family**
Brassica nigra (nonnative species)	Black mustard
Hirschfeldia incana (nonnative species)	Shortpod mustard
Lepidium didymum (nonnative species)	Lesser wart-cress
Lepidium latifolium (nonnative species)	Broad-leaved peppergrass
Raphanus sativus (nonnative species)	Wild radish
Sisymbrium orientale (nonnative species)	Indian hedgemustard

Table A: Plant Species Observed

Scientific Name	Common Name
Caryophyllaceae	**Pink family**
Polycarpon tetraphyllum (nonnative species)	Fourleaf manyseed
Chenopodiaceae	**Saltbush family**
Dysphania ambrosioides (nonnative species)	Mexican tea
Dysphania pumilio (nonnative species)	Tasmania goosefoot
Salsola tragus (nonnative species)	Russian thistle
Convolvulaceae	**Morning-glory family**
Convolvulus althaeoides (nonnative species)	Bindweed
Crassulaceae	**Stonecrop family**
Crassula connata	Sand pygmyweed
Cucurbitaceae	**Gourd family**
Marah macrocarpus	Cucamonga manroot
Euphorbiaceae	**Spurge family**
Croton setigerus	Dove weed
Euphorbia maculata (nonnative species)	Spotted spurge
Euphorbia peplus (nonnative species)	Petty spurge
Fabaceae	**Pea family**
Acmispon glaber	Deerweed
Melilotus albus (nonnative species)	White sweetclover
Melilotus indicus (nonnative species)	Annual yellow sweetclover
Fagaceae	**Beech family**
Quercus agrifolia	Coast live oak
Gentianaceae	**Gentian family**
Zeltnera venusta	Canchalagua
Geraniaceae	**Geranium family**
Erodium botrys (nonnative species)	Longbeak stork's bill
Erodium cicutarium (nonnative species)	Redstem stork's bill
Lamiaceae	**Mint family**
Marrubium vulgare (nonnative species)	Horehound
Lythraceae	**Loosestrife family**
Lythrum hyssopifolia (nonnative species)	Hyssop loosestrife
Myrsinaceae	**Myrsine family**
Lysmachia arvensis (nonnative species)	Scarlet pimpernel
Myrtaceae	**Myrtle family**
Eucalyptus sp. (nonnative species)	Eucalyptus
Oleaceae	**Olive family**
Fraxinus sp.	Ash
Onagraceae	**Evening primrose family**
Camissonia strigulosa	Strigulose evening primrose
Camissoniopsis hirtella	Field suncup

Table A: Plant Species Observed

Scientific Name	Common Name
Camissoniopsis sp.	Suncup
Epilobium ciliatum	Green willow herb
Oenothera speciosa	Pinkladies
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Rumex crispus (nonnative species)	Curly dock
Portulacaeae	**Purslane family**
Portulaca oleracea (nonnative species)	Common purslane
Rosaceae	**Rose family**
Rubus ursinus	California blackberry
Salicaceae	**Willow family**
Salix gooddingii	Goodding's willow
Sapindaceae	**Soapberry family**
Cupaniopsis anacardioides (nonnative species)	Carrotwood
Scrophulariaceae	**Figwort family**
Myoporum parvifolium (nonnative species)	Slender myoporum
Solanaceae	**Nightshade family**
Nicotiana glauca (nonnative species)	Tree tobacco
Tropaeolaceae	**Nasturtium family**
Tropaeolum majus (nonnative species)	Garden nasturtium
Urticaceae	**Nettle Family**
Urtica urens (nonnative species)	Dwarf nettle
MONOCOTS FLOWERING PLANTS	
Arecaceae	**Palm family**
Chamaerops humilis (nonnative species)	Mediterranean fan palm
Washingtonia robusta (nonnative species)	Mexican fan palm
Asphodelaceae	**Aloe family**
Asphodelus fistulosus (nonnative species)	Onionweed
Cyperaceae	**Sedge family**
Cyperus eragrostis	Tall flatsedge
Iridaceae	**Iris family**
Sisyrinchium bellum	Blue-eyed grass
Poaceae	**Grass family**
Arundo donax (nonnative species)	Giant reed
Bromus catharticus (nonnative species)	Rescue grass
Bromus hordeaceus (nonnative species)	Soft chess
Bromus madritensis (nonnative species)	Foxtail chess
Cortaderia selloana (nonnative species)	Uruguayan pampas grass
Cynodon dactylon (nonnative species)	Bermuda grass
Ehrharta erecta (nonnative species)	Panic veldtgrass

Table A: Plant Species Observed

Scientific Name	Common Name
Festuca myuros (nonnative species)	Annual fescue
Pennisetum clandestinum (nonnative species)	Kikuyugrass
Pennisetum setaceum (nonnative species)	African fountain grass
Polypogon monspeliensis (nonnative species)	Annual rabbitsfoot grass