



Biological Technical Report  
for the Stone Creek  
Development Plan  
San Diego, California

Prepared for

CalMat Co., dba Vulcan Materials Company  
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A handwritten signature in black ink, appearing to read "Gerry Scheid".

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## 1.0 Summary of Findings

The approximately 293-acre Vulcan Materials Company Carroll Canyon Sand and Gravel Mine (project site), located in the community of Mira Mesa in the city of San Diego, is currently occupied by CalMat Co., aka Vulcan Materials Company. The site is currently utilized for active aggregate mining operations under Conditional Use Permit (CUP) and Reclamation Plan 10-315-2. This CUP/Reclamation Plan will be amended to extend mining activities for a period of 20 years following approval. These changes are consistent with the original mining footprint and reclamation objectives approved in 1981.

The proposed Stone Creek project (project) involves the Stone Creek Master Plan, Master Planned Development Permit (PDP), Vesting Tentative Map (VTM), and associated actions that identify future construction of the project. This biology report evaluates the biological conditions on-site, assesses impacts to federal and state jurisdictional wetlands from implementation of the 1981 Reclamation Plan, describes and analyzes conditions that will be established through the amended Reclamation Plan, then evaluates the impacts associated with the Stone Creek development plan, a mixed-use development.

The proposed Stone Creek Development Plan project would impact nearly the entire reclaimed mine site. All on-site impacts to uplands would occur to non-sensitive land cover types and all wetlands remaining after implementation of the CUP/Reclamation Amendment would be avoided. Off-site impacts would occur to disturbed land for the extension of Carroll Canyon Road and to southern mixed chaparral. These off-site impacts are not considered significant and do not require mitigation.

The Stone Creek Development Plan would create a mixed-use development as described in the Carroll Canyon Master Plan Element of the Mira Mesa Community Plan and further refined by the Stone Creek Master Plan. Stone Creek would be developed as five distinct neighborhoods including connections to parks, open space system, and Village Center. When fully implemented, the development would provide up to 4,445 residential units; approximately 135,000 square feet of business park use; approximately 415,000 square feet of light industrial uses; approximately 174,000 square feet of commercial/retail use; approximately 200,000 square feet of office space; up to 175 hotel rooms; and more than 104 acres of parks and open space, which includes public parks, pocket parks, connector parks, improved trails, the restored and enhanced creek corridor, and landscape slopes. The Village Center would provide a pedestrian focused mixed-use core where residential uses, lifestyle shops, and restaurants would create an urban center for the project.

## 2.0 Introduction

The Vulcan Materials Company Carroll Canyon Sand and Gravel Mine is an active sand and gravel mine surrounded by residential and commercial development. The Hansen mining operation exists to the southwest of the site. The Vulcan quarry is located in the community of



Mira Mesa in the City of San Diego (Figure 1). The site is within Carroll Canyon between Mira Mesa Boulevard and Miramar Road west of Interstate 15. It is transected by Camino Ruiz (Figure 2). The site is in Sections 1 of Township 15 South and Range 3 West of the U.S. Geological Survey (USGS) Del Mar quadrangle 7.5-minute topographic map and Section 6 of Range 2 West on the USGS Poway quadrangle 7.5-minute topographic map (see Figure 2; USGS 1996). The site location is also shown on a City of San Diego 800 map (Figure 3).

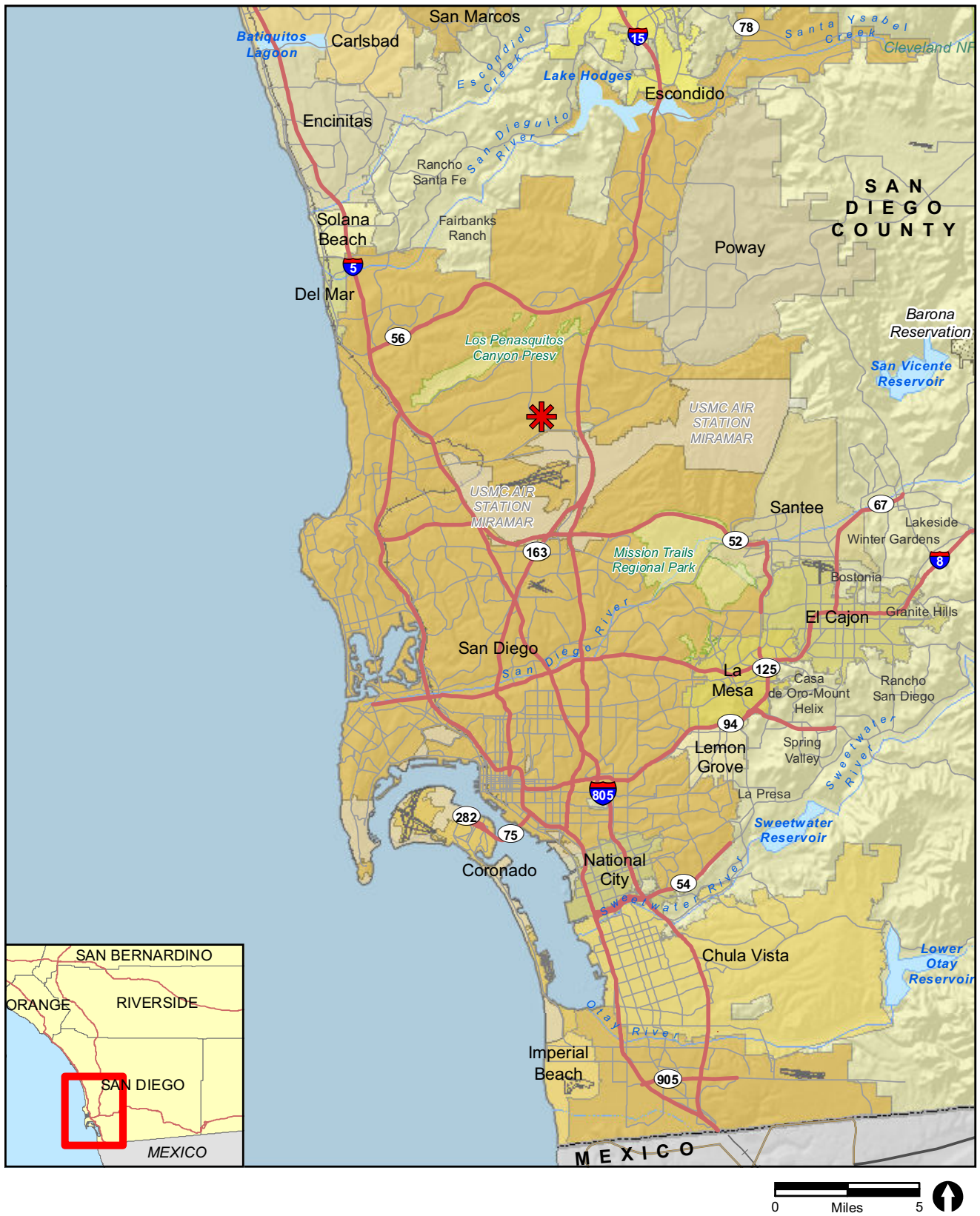
This report describes the existing biological resources prior to implementation of the 1981 CUP/Reclamation Plan and establishes the baseline condition following the implementation of that plan. The biological conditions anticipated upon implementation of the Reclamation Plan Amendment are then described and analyzed. Finally, this report describes proposed impacts and mitigation required for the Stone Creek Development Plan. The project application was deemed complete by the City of San Diego in 2007. Therefore, this biology technical report is based on the City's 2002 Biology Guidelines.

## **2.1 CUP/Reclamation Plan**

### **2.1.1 History**

Mining and processing of construction-grade sand and gravel began at the project site in the 1950s. The first permit was issued by the County of San Diego Board of Supervisors in 1957 as CUP 3726 for operation of a concrete and asphalt plant on approximately 340 acres. In 1971, the City of San Diego issued CUP 315-PC to allow for sand and gravel extraction together with related facilities. In the early 1970s, a portion of the project site was dedicated for right-of-way to construct improvements of both Black Mountain Road and Camino Ruiz. The current CUP (CUP 10-315-2) has been in effect on the project site since 1981. An extension of use is currently required to allow reclamation as extraction and processing continues until 2035.

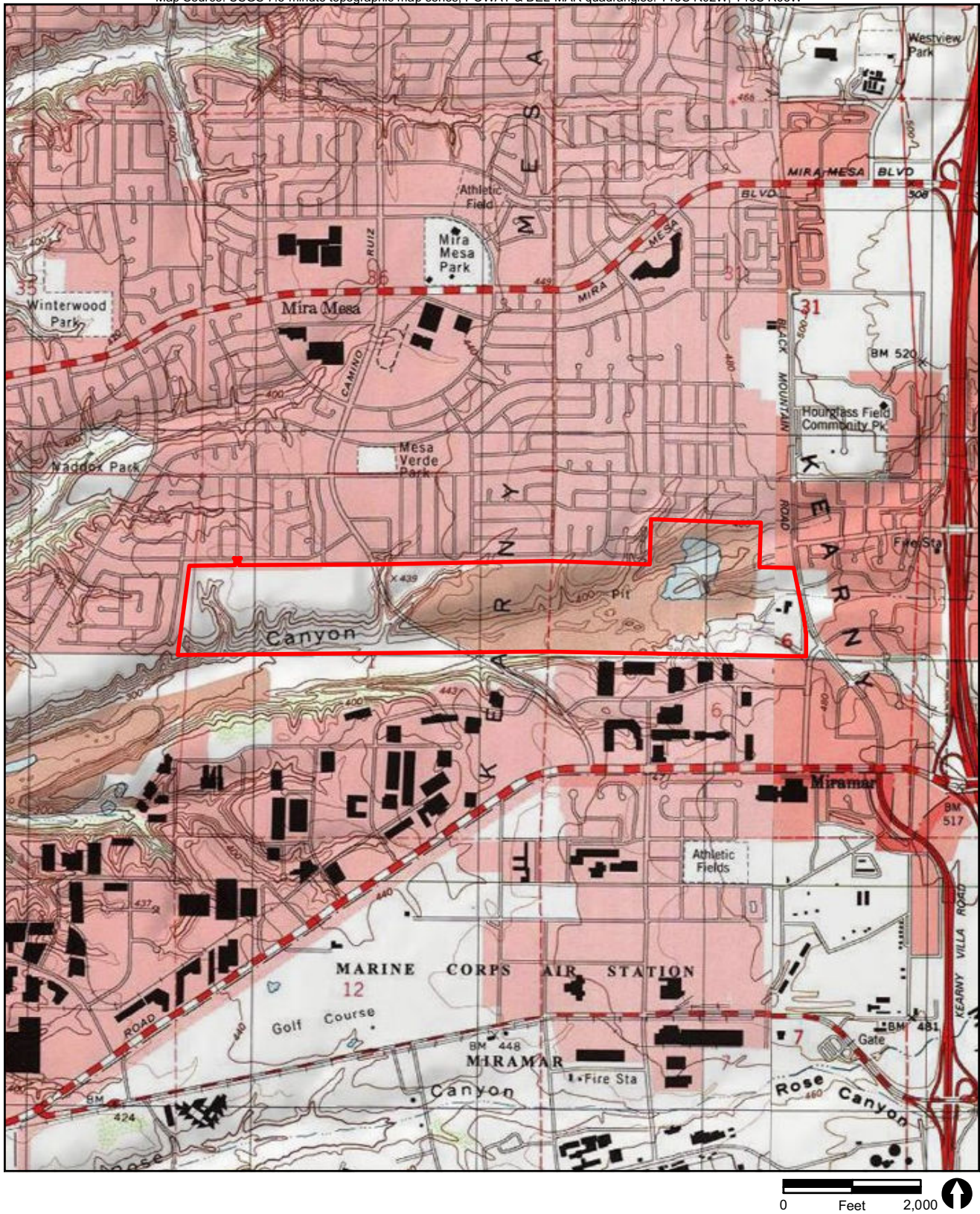
All impacts to uplands within the property boundary were approved under the existing 1981 CUP/Reclamation Plan for the active mine. In accordance with the original 1981 CUP/Reclamation Plan, impacts to jurisdictional drainages and the associated wetland vegetation communities were to be approved through future permits from the resource agencies (i.e., U.S. Army Corps of Engineers [USACE], Regional Water Quality Control Board [RWQCB], and California Department of Fish and Wildlife [CDFW]). Thus, this report includes quantification of the jurisdictional areas that exist within the project site and would be impacted by implementation of the 1981 CUP/Reclamation Plan.




 Project Location

FIGURE 1  
Regional Location





 Project Site Boundary





The existing 1981 CUP/Reclamation Plan authorizes the rehabilitation of the mined area in order to create a suitable condition for the stabilization of the soils on the site. The existing CUP requires the following:

- At the completion of the final slopes in any area, landscaping, with an irrigation system, shall be installed and be comprised of ornamental trees and shrubs for the purpose of screening adjacent development from the ongoing mining operation. The 2:1 slopes shall be hydroseeded and irrigated until established. The interior slopes and flat portions of the site would be hydroseeded with a seed mix as an erosion control measure. The landscape areas shall be permanently watered until the material is established. The irrigation system may be removed on approval of the Planning Director and the City Engineer.
- All finished cut slopes shall be undulating and variable, with no slopes steeper than a 2:1 ratio.
- The planting as approved on the 1981 CUP/Reclamation Plan shall be installed upon completion of the finished grades. The exhibit included in the 1981 CUP/Reclamation Plan also shows the alignment of Carroll Canyon Creek along the southern border of the property upon completion of finished grades (Figure 4).
- The Planning Department shall inspect the property on a yearly basis to ensure compliance with the landscaping requirements.

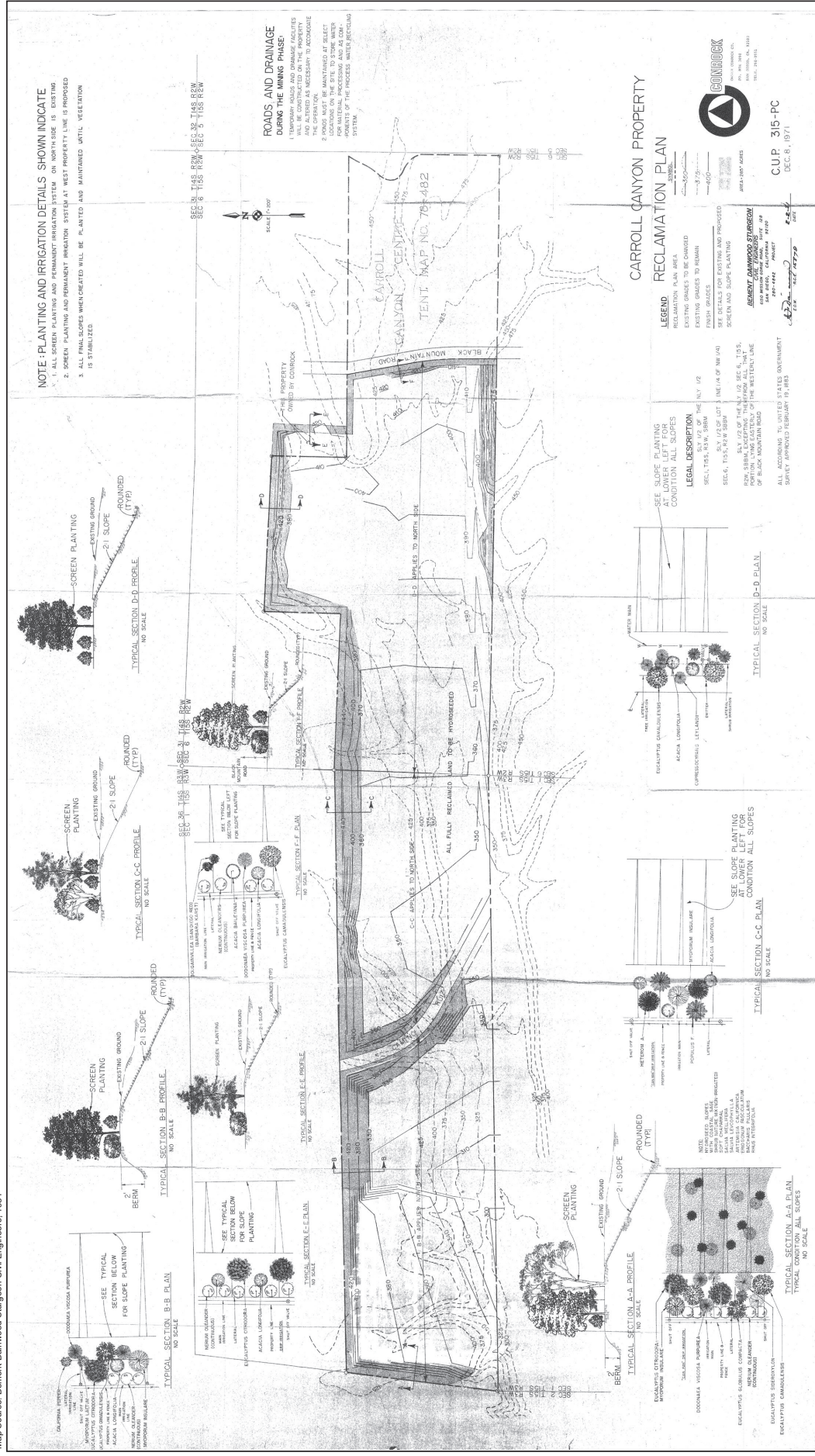
The implementation of the 1981 CUP/Reclamation Plan would establish the future baseline condition for analysis of the CUP/Reclamation Amendment and the Stone Creek Development Plan project.

## **2.2 Proposed Project**

### **2.2.1 CUP/Reclamation Plan Amendment**

Currently, the existing 1981 CUP/Reclamation Plan is being amended to reflect the grading elevations necessary to support the Stone Creek development project. The CUP/Reclamation Amendment will also include updated plans for realigning and restoring Carroll Canyon Creek. This amendment is necessary to update the 1981 CUP/Reclamation Plan to provide detailed descriptions of the proposed work associated with reclamation that were not previously provided in supporting documentation for the 1981 CUP/Reclamation Plan. Thus, the CUP/Reclamation Amendment will be in conformance with current SMARA standards.





The CUP/Reclamation Amendment does not constitute a change of use as defined by the permit issued in 1981 by the City of San Diego because mining uses have since continued, and proposed reclamation activities are consistent with those anticipated at the time of CUP issuance. Also, the total area of disturbance associated with the mine and reclamation will not be adjusted.

Thus, the CUP/Reclamation Amendment would not result in the application of current City ESL regulations on the activities associated with reclamation. Specifically, the streambed created by grading according to the 1981 CUP/Reclamation Plan (shown in Figure 4 along the southern boundary of the site) would not be considered a City wetland requiring impact analysis and mitigation when the creek is realigned and restored associated with the CUP/Reclamation Plan Amendment. The amendment would simply realign the creek to a more natural configuration in the middle of the property and would not affect the biological value of the site at the time of implementation.

It should be noted that implementation of the 1981 CUP/Reclamation Plan is essentially conceptual; it would result in a newly graded but unvegetated and biologically non-functional site. Thus, resulting grades originally intended to create “streambed” will be subsequently characterized as such, but also would not be analyzed as state or federal jurisdictional waters. Furthermore, as presented in Section 6.0 Project Impacts, no additional impacts from the CUP/Reclamation Plan Amendment are anticipated. However, for the purposes of this document, the conditions of the site following the implementation of the 1981 CUP/Reclamation Plan are presented in order to adequately disclose the potential impacts to biological resources associated with implementation of the proposed project and not considered in the development of the 1981 CUP/Reclamation Plan.

## **2.2.2 Implementation of CUP/Reclamation Amendment**

Reclamation would begin in the eastern portion of the site and proceed in a westerly direction. As areas are reclaimed, they would be landscaped in accordance with the proposed Reclamation Plan (see Figure 4). Plantings along the creek corridor focus on riparian species, while upland plant species are proposed for slope areas. The relatively level areas in the central portions of the site would also be hydroseeded for erosion control. Interim brush management consistent with the City’s Brush Management Regulations (LDC Section 142.0412) would be provided for adjacent, existing development until such a time as the Stone Creek VTM would be implemented.

The proposed Reclamation Plan would also construct storm water control devices to act as detention facilities for water quality and would realign Carroll Canyon Creek. As stated above, the approved 1981 CUP/Reclamation Plan shows Carroll Canyon Creek being realigned in a straight course along the southern boundary of the CUP. The proposed CUP/Reclamation Plan Amendment would restore/enhance Carroll Canyon Creek through the site in a manner that

generally reflects its current location while also providing the hydrology and hydraulics necessary to control stream flows.

The 1981 CUP/Reclamation Plan would include nearly the entire site. Reclamation grading would leave the eastern portion of the project site (east of Camino Ruiz) as a generally level interior portion, with mined slopes rimming the site consistent with the proposed Vested Tentative Map (VTM), with varying slope gradients from 2:1 to 4:1 and slope heights ranging from 0 feet to 81 feet. The area west of Camino Ruiz would have manufactured slopes ranging in heights from approximately 4 feet to approximately 112 feet. The grading changes contained in the VTM are required to adhere to current SMARA standards and to prepare the site to accommodate the Stone Creek Development Plan. As part of existing mining activities, asphalt and concrete plants are in operation in the eastern portion of the site and would continue to operate under the CUP/Reclamation Plan Amendment.

Federal and state jurisdictional waters and wetland habitats impacted by the mining and reclamation processes approved in 1981 would require mitigation to be determined through the permitting process with the responsible agencies. It is anticipated that this mitigation would be accomplished through the restoration associated with the realignment of Carroll Canyon Creek described in the CUP/Reclamation Plan Amendment. The restoration of Carroll Canyon Creek on the site would result in an enhanced creek corridor. As reclamation occurs, implementation of the creek recontouring and restoration of portions of the creek corridor would be initiated. The creek corridor restoration is summarized in Section 6.0 and described in greater detail in the Wetland Mitigation Plan (RECON 2019). Proposed restoration would be subject to approval by the resource agencies through the permitting process that authorizes the impacts to the on-site jurisdictional waters and wetlands.

## **2.3 Stone Creek Development Plan**

The Stone Creek Development Plan would create a mixed-use development as described in the Carroll Canyon Master Plan Element of the Mira Mesa Community Plan and Local Coastal Program Land Use Plan (City of San Diego 2001). Stone Creek would be developed as five distinct yet interconnected neighborhoods: (1) Village Center, (2) Westside Neighborhood, (3) Creekside Neighborhood, (4) Parkside Neighborhood, and (5) Eastside Neighborhood. These neighborhoods are further divided into smaller sub-neighborhoods. While each neighborhood within Stone Creek would have a personal identity, all would have a common thread that connects them to the parks, open space system, and the Village Center. In this manner, Stone Creek would integrate workplace uses, residential uses, recreation uses, and commercial uses, creating a mixed-use community. The project proposes a phased development of the project site to allow for continued extraction and processing activities over a 20-year period.



An integral feature of the project would be an enhanced riparian/creek corridor created through the implementation of the CUP/Reclamation Amendment. Integrated within Stone Creek Central Park and Westside Gardens, the enhanced Carroll Canyon Creek would stretch nearly the entire length of the southern portion of the project as a restored urban open space. A community trail system would extend within this corridor and connect throughout Stone Creek through a network of rim trails and project trails, providing both pedestrian and bikeway opportunities.

## **3.0 Methods and Survey Limitations**

### **3.1 General Survey of Existing Conditions**

RECON biologist Gerry Scheid conducted a survey of the project area on September 13, 2017, to verify the condition of the on-site biological resources and document any changes or additions to the biological resource information already collected. The survey was conducted between 10:00 A.M. and 2:00 P.M. under partly cloudy skies, light winds, and temperatures ranging from 75 degrees Fahrenheit to 80 degrees Fahrenheit. RECON biologists previously conducted surveys of the 293-acre project area on June 28, 2011 and on April 1, 2015.

Vegetation communities on the project site were mapped on a one-inch-equals-200-feet aerial photograph. All plant species observed on the project site were noted, and plants that could not be identified in the field were collected for identification using taxonomic keys.

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were noted. Bird species present in the region only during certain times of the year, such as fall migrants or summer residents, would not have been present during the survey. Since the survey was performed during the day, sign such as tracks, burrows, or scat indicated the presence of nocturnal animals. Floral nomenclature for common plants follows Hickman (1993), and vegetation communities follow Holland (1986) as modified by Oberbauer (1996). Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998) and Unitt (2004); for invertebrates, Mattoni (1990) and Opler and Wright (1999); for mammals, Baker et al. (2003) and Hall (1981); and for amphibians and reptiles, Crother (2001) and Crother et al. (2003).

### **3.2 Wetland Delineation of Existing Conditions**

RECON biologists Gerry Scheid and Erin McKinney surveyed the site on June 28 and July 11, 2011, following the guidelines set forth by USACE (1987, 2008) to delineate wetlands on the project site. Visual observations of vegetation types or hydrology were used to locate specific areas for evaluation. Test locations were chosen and field indicators were inspected to

determine whether wetland criteria were satisfied. Three criteria must be fulfilled in order to classify an area as a USACE jurisdictional wetland: (1) a predominance of hydrophytic vegetation, (2) the presence of wetland hydrology, and (3) the presence of hydric soils. Areas meeting all three of these parameters are designated as wetlands. The results of the wetland delineation are summarized in this biology technical report from the jurisdictional delineation report prepared by RECON (2011) for the project site.

## **4.0 Existing Conditions**

### **4.1 Topography, Soils, and Geology**

The project site is located in the community of Mira Mesa in the city of San Diego, California (see Figure 1). It is located west of Interstate State Route 15 between Miramar Road and Mira Mesa Boulevard (see Figure 2). As shown in the aerial photograph, mixed use residential and commercial development surrounds the site, with another gravel mining operation off-site to the southwest in Carroll Canyon (Figure 5).

Elevations range between 300 feet in the southwest corner to 460 feet above mean sea level in the northeast corner of the project site (USGS 1996). Land use adjacent to the project site is mixed use commercial and residential with the Hanson Aggregates mining operation to the southwest.

The most common geologic unit underlying the project site is Stadium Conglomerate, which is a mix of sand, gravel, and cobble-sized particles. This geologic unit can have Lindavista Formation, also a sand/gravel/cobble mix, overlying it in the upper 5 to 15 feet of the canyon at the tops of mined slopes and canyon walls (GEOCON 2006).

Six soil types are mapped on the project site: Redding gravelly loam, 2 to 9 percent slopes; Redding cobbly loam, 9 to 30 percent slopes; Redding cobbly loam, dissected, 15 to 30 percent slopes; riverwash; terrace escapements; and gravel pit. Each soil type is classified in accordance with the U.S. Department of Agriculture (USDA) characterizations of soil types in San Diego County (USDA 1973). These soils types are described below. However, since the site is actively mined, most of these topsoils have been removed. The soils that remain are mostly undocumented fill of various origins. The project would import fill material from a yet unidentified source and soil used in the proposed habitat restoration areas would need to be suitable for growing native plants. Soil analysis would be required to ensure that soils in the proposed mitigation areas are adequate to support native plant growth and soil amendments may be needed to correct any deficiencies identified.



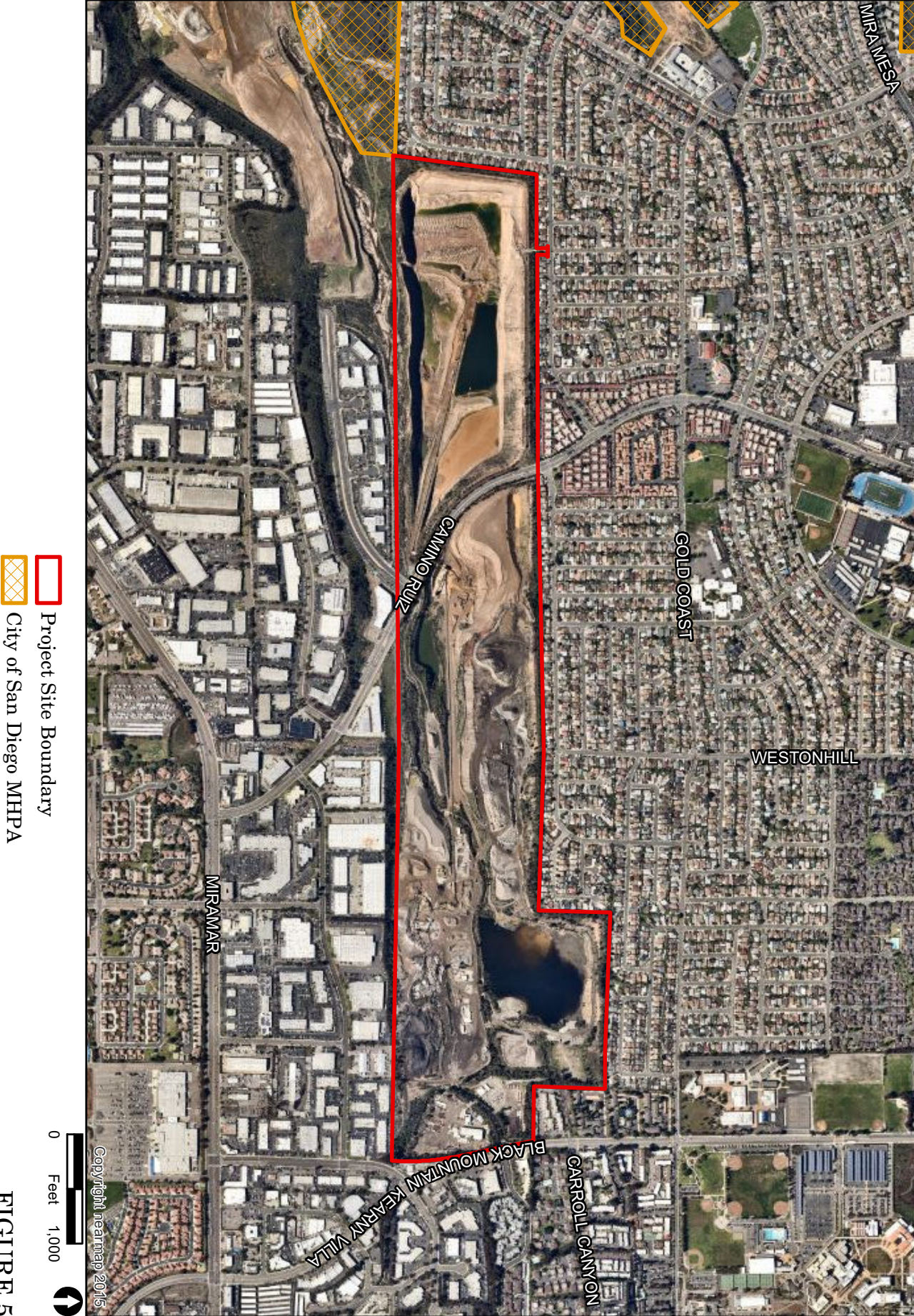


FIGURE 5

Project Location on Aerial Photograph



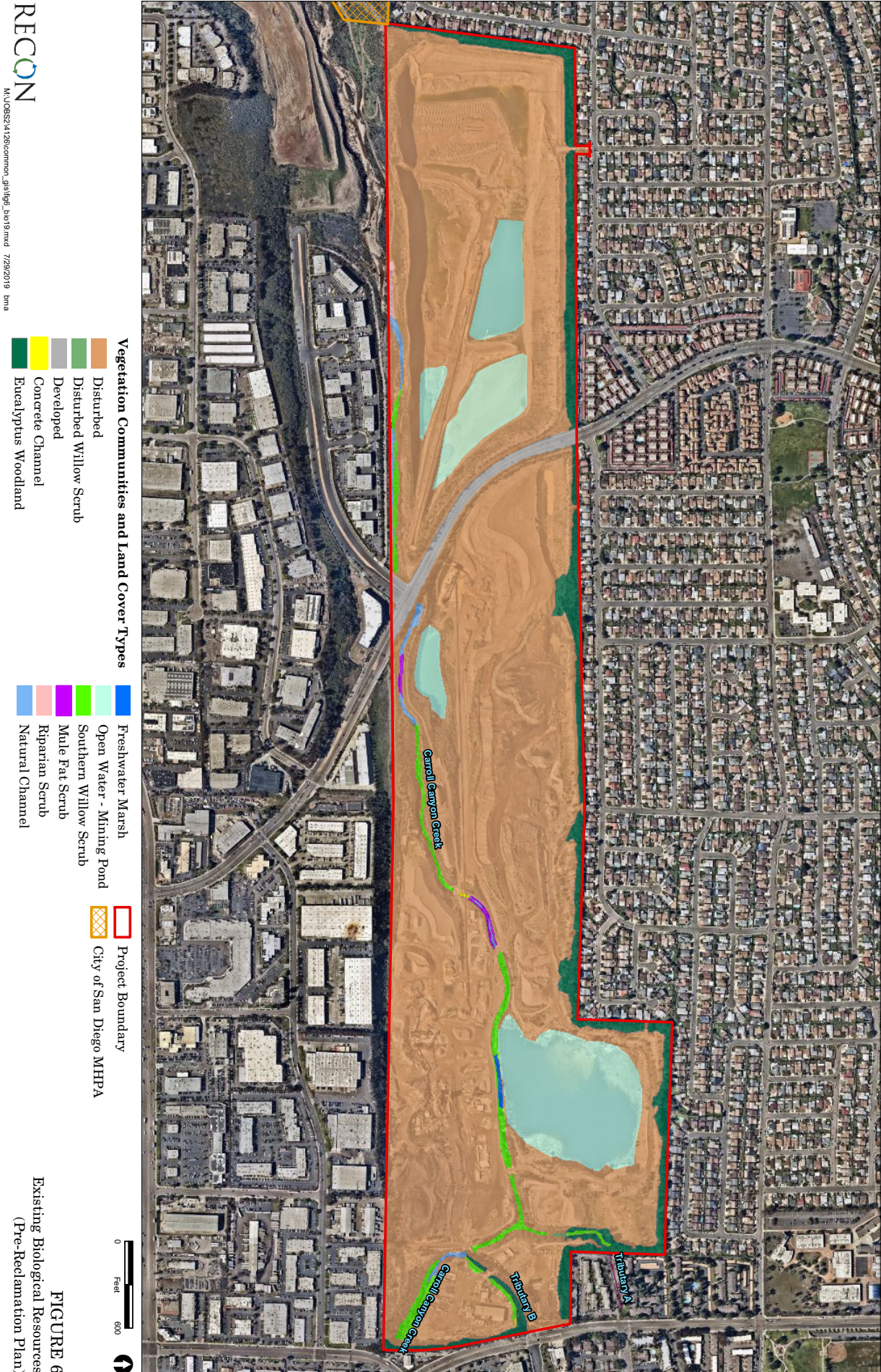
- **Redding gravelly loam, 2 to 9 percent slopes (RdC):** This soil type is found in undulating to gently rolling topography with mima mounds. Permeability is very slow, with the hardpan areas almost impervious. Runoff is medium to rapid, and erosion hazards are high.
- **Redding cobbly loam, 9 to 30 percent slopes (ReE):** This strongly sloping to moderately steep soil is 10 to 20 inches deep over a hardpan. Cobblestones make up 20 to 30 percent of the surface layer and 25 to 35 percent of the subsoil. Runoff is medium to rapid, and erosion hazard is moderate to high.
- **Redding cobbly loam, 15 to 30 percent slopes (RfF):** This moderately steep to steep soil is 10 to 18 inches deep over a hardpan. This landscape is characterized by many narrow V-shaped valley bottoms with steep side slopes. Cobblestones make up 20 to 30 percent of the surface layer and 25 to 35 percent of the subsoil. Runoff is medium to rapid, and erosion hazard is moderate to high.
- **Riverwash (Rm):** This soil type occurs in intermittent stream channels and typically consists of sand, gravel, or cobble. Riverwash soil may be devoid of vegetation in many places, or may contain sparse patches of shrubs and forbs. The soil drain is rapidly permeable and excessively drained.
- **Terrace Escarpments (TeF):** This soil type has steep formations on the nearly even fronts of terraces and alluvial fans. These landscapes occur between floodplains and the steep sides of drainages that are being entrenched into the level uplands. The soil on terrace escarpments is typically loamy or gravelly and four to 10 inches thick over soft marine parent material.
- **Gravel Pit:** This is the mined section of Vulcan Materials Company as USDA mapped it in 1973.

## 4.2 Botany

A total of 62 plant species were identified on the project site (Attachment 1). Of this total, 28 (45 percent) are species native to San Diego County and 34 (55 percent) are introduced species.

Six vegetation communities were identified on the project site: freshwater marsh, southern willow scrub, mule fat scrub, riparian scrub, disturbed wetland, and eucalyptus woodland. Five land cover types were also mapped on the survey area: open water (industrial mining ponds), natural flood channel, concrete channel, disturbed land, and developed. These designations are described below, summarized in Table 1, and illustrated in Figure 6.







**TABLE 1**  
**EXISTING VEGETATION COMMUNITIES AND LAND COVER TYPES**

Vegetation Community / Land Cover Type	City of San Diego Tier	Acreage
Eucalyptus woodland	Tier IV	17.10
Disturbed Land	Tier IV	232.76
Developed	Tier IV	4.09
Southern willow scrub	*	4.68
Mule fat scrub	*	0.28
Riparian scrub	*	0.36
Freshwater marsh	*	0.22
Natural flood channel	*	1.48
Disturbed southern willow scrub	*	0.17
Concrete channel	*	0.06
Open water (Mining ponds)	**	32.02
<b>TOTAL</b>		<b>293.22</b>

\*Wetlands do not have a Tier ranking, but are considered sensitive vegetation communities.

\*\*Open water associated with the mining ponds is not considered a wetland.

### 4.2.1 Open Water – Mining Ponds

Industrial mine ponds are constructed as plant processing water storage areas where silts are allowed to settle out and the water is then reused in the processing plant. Narrow patches of vegetation may temporarily grow along the edges of these ponds, but this vegetation is subject to change due to water levels that fluctuate, pond maintenance, and mining activities.

The many industrial mining siltation ponds on-site are mapped as open water. The term “open water” as referred to and mapped for this project includes only mining siltation ponds and does not refer to any natural open water habitat associated with Carroll Canyon Creek. Most of these ponds change in location based on the current mining operation and the direction of runoff water. The largest industrial siltation pond, located near the Vulcan mine main office, is currently stationary, but has changing water levels based on usage.

### 4.2.2 Freshwater Marsh

Freshwater marsh is located within a short segment of the Carroll Canyon Creek drainage course on the site (see Figure 6). This area has bulrush (*Schoenoplectus* sp.), water cress (*Rorippa nasturtium-aquaticum*), and cattail (*Typha latifolia*).

### 4.2.3 Natural Flood Channel

Natural flood channel is mapped as sections of the Carroll Canyon Creek drainage course on-site that lack significant vegetation. These areas have a cobble bottom and are mostly void of

vegetation, but may have a few scattered mule fat (*Baccharis salicifolia*), tamarisk (*Tamarisk rammosissima*), and pampas grass (*Cortaderia jubata*) individuals. The areas of natural flood channel at the east and west ends of the creek are relatively intact being wider than the narrower segments of the creek within the active mining portion of the site where the creek is confined by berms.

#### **4.2.4 Concrete Channel**

A short section of a small tributary drainage is concrete where it enters the site from a culvert under Black Mountain Road (see Figure 6, Tributary B).

#### **4.2.5 Southern Willow Scrub**

Southern willow scrub dominates the Carroll Canyon Creek and two tributary drainage courses on much of the site. This vegetation community is dominated by red willow (*Salix laevigata*), Gooding's black willow (*Salix gooddingii*), and arroyo willow (*Salix lasiolepis*). The quality of the southern willow scrub habitat is higher at the east and west segments of the creek where the creek channel is wider and less disturbed. The central segments of the creek and the tributaries are confined by berms and support much narrower patches of habitat that are subject to the edge effects of the adjacent mining operation; and therefore are considered lower quality habitat areas.

#### **4.2.6 Mule Fat Scrub and Riparian Scrub**

Mule fat scrub on-site occurs in one section of the Carroll Canyon Creek drainage course in the central portion of the site along the southern property boundary. This area is dominated by mule fat shrubs. A small area of riparian scrub grows on a floodplain terrace of Carroll Canyon Creek near the southwest border of the project site. This location is primarily vegetated with coyote bush (*Baccharis pulularis*) and California buckwheat (*Eriogonum fasciculatum*), with scattered individuals of mule fat shrubs.

#### **4.2.7 Disturbed Southern Willow Scrub**

A portion of the drainage channel that likely supported willow scrub habitat has been infested with non-native plant species that have displaced most of the native wetland plant species. The area is dominated by non-native species such as acacia (*Acacia* sp.), eucalyptus (*Eucalyptus* sp.), and pampas grass.

#### **4.2.8 Eucalyptus Woodland**

Eucalyptus woodland occurs along the perimeter of the site between the mining operation and the surrounding properties. This area was most likely planted to visually buffer the sight of the

mine from the neighboring properties. Within the eucalyptus woodland are a few remaining native plants, including California buckwheat, chamise (*Adenostoma fasciculatum*), black sage (*Salvia mellifera*), and lemonadeberry (*Rhus integrifolia*). Many other non-native plant species were observed here, including eucalyptus, tocolote (*Centaurea melitensis*), black mustard (*Brassica nigra*), and erodium (*Erodium* sp.).

#### **4.2.9 Disturbed Land**

The majority of the site is mapped as disturbed land. The disturbed land areas include all of the active mining operation as well as the adjacent slopes. Any vegetation that becomes established in these disturbed areas is subject to clearing at any time as the mining operation progresses.

#### **4.2.10 Developed**

The developed portion of the site includes the portion of Camino Ruiz within the project boundary.

### **4.3 Zoology**

The wildlife species observed on-site are typical of the habitat present. A complete list of the species detected is provided in Attachment 2. Sensitive species observed or potentially occurring are discussed in the Sensitive Biological Resources section.

#### **4.3.1 Amphibians**

Amphibians require moisture for at least a portion of their life cycle, with many requiring a permanent water source for habitat and reproduction. Terrestrial amphibians have adapted to more arid conditions and are not completely dependent on a perennial or standing source of water. These species avoid desiccation by burrowing beneath the soil or leaf litter during the day and during the dry season.

No amphibian species were observed during the survey. However, common amphibians, such as the Pacific treefrog (*Pseudacris regilla*), are likely to occur on this site in the wetter portions of Carroll Canyon Creek and perhaps briefly along the shores of the mining ponds when they contain water.

#### **4.3.2 Reptiles**

The diversity and abundance of reptile species vary with habitat type. Many reptiles are restricted to certain vegetation communities and soil types, although some of these species



would also forage in adjacent communities. Other species are more ubiquitous, using a variety of vegetation types for foraging and shelter.

The western fence lizard (*Sceloporus occidentalis*) was the only reptile observed on-site. It was observed using the southern willow scrub, eucalyptus woodland, and some of the disturbed land on-site.

### 4.3.3 Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities present. Riparian habitats typically have a high number of bird species because they provide protection and food throughout the dry summer months. Since this site is an active mine, the disturbance may limit the number of species using the site.

The birds detected are common within the urban areas with a relatively permanent source of water, including mallard (*Anas platyrhynchos platyrhynchos*), rudy duck (*Oxyura jamaicensis rubida*), killdeer (*Charadrius vociferus vociferus*), northern rough-wing swallow (*Stelgidopteryx serripennis*), black phoebe (*Sayornis nigricans semiatra*), common yellowthroat (*Geothlypis trichas*), and song sparrow (*Melospiza melodia*). Raptor species detected on-site include osprey (*Pandion haliaetus carolinensis*), red-shouldered hawk (*Buteo lineatus elegans*), and red-tailed hawk (*Buteo jamaicensis*). The majority of the bird species observed used the riparian scrub, freshwater marsh, and eucalyptus woodland habitats, but also foraged in the adjacent disturbed land. While ducks and osprey may occasionally use the mining siltation ponds to forage on-site, these ponds do not represent a habitat type that would support breeding activities or a major source of food/shelter due to the wide fluctuations in water levels and lack of significant native vegetation.

### 4.3.4 Mammals

Naturally vegetated areas provide cover and foraging opportunities for a variety of mammal species. Disturbed areas provide limited opportunities for mammals. Most mammal species are nocturnal and are difficult to detect during daytime surveys.

Since the site is an active mining operation, disturbance is high and mammal activity is expected to be low. Evidence of southern mule deer (*Odocoileus hemionus fuliginata*) and common raccoon (*Procyon lotor*) were found on-site. Coyotes (*Canis latrans*) are also expected to occur on-site. These mammal species likely use the southern willow scrub habitat and eucalyptus woodland on-site for cover when moving across the disturbed land of the mine.

## 4.4 Sensitive Biological Resources

### 4.4.1 Sensitivity Criteria

Local, state, and federal agencies regulate sensitive species and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of any proposed development on a property. All species listed by state or federal agencies as rare, threatened, endangered, or proposed for listing are considered to be sensitive biological resources. The habitat that supports a listed species is also a sensitive biological resource.

For purposes of this report, species will be considered sensitive if they are: (1) covered species or narrow endemic species under the City of San Diego Multi-Species Conservation Program (MSCP), (2) listed by state or federal agencies as threatened or endangered or are proposed for listing; (3) on California Rare Plant Rank 1B (considered endangered throughout its range) or California Rare Plant Rank 2 (considered endangered in California but more common elsewhere) of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (2007); or (4) considered rare, endangered, or threatened by the California Natural Diversity Database (CNDDDB; State of California 2012), the City of San Diego's biology guidelines (City of San Diego 2002), or local conservation organizations or specialists. Noteworthy plant species are considered to be those that are California Rare Plant Rank 3 (more information about the plant's distribution and rarity needed) and California Rare Plant Rank 4 (plants of limited distribution) of the CNPS *Inventory*. Sensitive vegetation communities are those identified by the CNDDDB (Holland 1986) or identified by the City of San Diego (2002).

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

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation;
2. Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation;
3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands (City of San Diego 2002).

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

#### 4.4.2 Sensitive Vegetation Communities

There are six sensitive vegetation communities on-site: freshwater marsh, southern willow scrub, mule fat scrub, disturbed wetland, natural flood channel, and riparian scrub. Freshwater marsh, southern willow scrub, disturbed wetland, natural flood channel, riparian scrub, and mule fat scrub are considered sensitive wetland habitats by CDFW, USACE, and the City of San Diego.

#### 4.4.3 Sensitive Plant Species

No sensitive plant species were observed during the survey. No sensitive plant species or narrow endemic plant species are expected to occur on the site due to the disturbed nature of the land. A list of sensitive plant species, including the narrow endemic species, with a potential to occur on-site or known to occur within the vicinity of the site is provided in Attachment 3; the sensitivity codes are explained in Attachment 4.

#### 4.4.4 Sensitive Wildlife

Five sensitive wildlife species were observed or detected on-site and are described below. Attachment 5 lists sensitive species on-site, are known to occur within two miles of the site according to CNDDDB records, or could potentially occur on-site based on the ranges and habitat requirements of the species.

##### 4.4.4.1 Observed

**Great blue heron (*Ardea herodias*).** Great blue herons and their nests are protected under the federal Migratory Bird Treaty Act. Great blue herons are distributed throughout the United States and Mexico. Peak abundance is in coastal estuaries, but this species occurs in a wide variety of aquatic habitats. Great blue herons usually nest in colonies of several hundred pairs (Butler 1992). A large, flat platform is constructed of sticks lined with finer twigs and vegetation placed in trees or shrubs 30 to 70 feet above the ground. Few great blue heron breeding colonies occur in San Diego County. From 1997 to 2001, 30 great blue heron nest sites were recorded in San Diego County. Great blue herons capture and feed on small fish, amphibians, invertebrates, reptiles, mammals, and birds. Great blue heron populations are at risk because of loss of habitat, specifically nesting habitat. Development of coastal lowlands and lagoons has decreased nesting sites and threatens the future success of the great blue heron (Unitt 2004).

A great blue heron was observed at the main mining siltation pond. No rookery site was observed, and this species is not expected to nest on-site.

**Osprey (*Pandion haliaetus carolinensis*).** The osprey is a CDFW species of special concern. This species ranges worldwide and is found along the coastline and around lakes of the coastal lowlands. Small numbers overwinter in San Diego County; they are most numerous in mid-September and November (Unitt 1984). Fewer are present in spring and summer during the

breeding season. Individuals will often take up residence at favored areas and remain there for several years. Ospreys nest on large platform nests of sticks lined with moss and grass in trees, cliffs, or human structures at a height of five to 200 feet high (Polite 1983). Breeding occurs from March through September. Their diet consists primarily of fish, but they will also prey on mammals, reptiles, amphibians, and invertebrates (Polite 1983). Ospreys forage by hovering over water, diving down, and catching fish in their talons. Severe reduction of the osprey's potential foraging habitat, as well as breeding failures due to the long-term effects of pesticides such as dichlorodiphenyltrichloroethane, have combined to greatly reduce the number of osprey present in San Diego County.

One osprey was observed trying to build a nest in the San Diego Gas & Electric power pole near the dock in the main mining siltation pond (see Figure 6). Though numerous attempts were made by the osprey, no nesting material was successfully installed on the power pole.

**Raptor species.** Two additional raptor species, red-shouldered hawk and red-tailed hawk, were observed on-site and have potential to nest in the tall trees in the eucalyptus woodland along the perimeter of the site. All active raptor nests are protected under the California Fish and Game Code Section 3503.5 (CDFW 1991).

**Southern mule deer (*Odocoileus hemionus fuliginata*).** The southern mule deer is an MSCP-covered species that ranges from western Canada south through the western United States. This species prefers habitats consisting of a mosaic of various-aged vegetation that provides woody cover, meadow and shrubby openings, and a water source. Mule deer primarily graze upon herbaceous plants, but will also browse on various shrubs and trees and dig out subterranean mushrooms. This species is threatened by loss or fragmentation of habitat, resource competition with range and wild animals, and overpopulation due to habitat loss and loss of natural predators (Zeiner et al. 1990). Southern mule deer were observed on-site.

#### **4.4.4.2 Not Observed**

There are no sensitive wildlife species with a moderate or high potential to occur on-site. This is due to the little remaining native habitat and the extensive disturbance from the active mining operation.

#### **4.4.5 Wildlife Movement Corridors**

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations. Wildlife movement corridors are considered sensitive by resource and conservation agencies.

The project site is part of a canyon and contains a portion of Carroll Canyon Creek. The site is currently being mined and is surrounded by development and mining. The Mira Mesa Community Plan identifies Carroll Canyon Creek as being a local wildlife corridor. Though small mammals and birds may continue to use this canyon as a local wildlife movement corridor, the project site does not currently function as a regional wildlife corridor for large mammals due to the high level of surrounding disturbance and active mining operation. The proposed enhanced creek corridor discussed in this report would comply with the Mira Mesa Community Plan requirement to provide a local wildlife corridor that connects to wildlife corridors to the west in Carroll Canyon.

#### 4.4.6 Jurisdictional Areas

All wetland areas are considered sensitive. Wetlands were observed on the site (Figures 7a and 7b). These wetlands are located along Carroll Canyon Creek and its tributaries on the property. Non-wetland waters and streambeds also occur on the property and are located along portions of Carroll Canyon Creek and a tributary drainage. A breakdown of how each jurisdiction applies to these jurisdictional waters is summarized below. The complete wetland delineation is provided under separate cover (RECON 2011). The USACE and CDFW will evaluate the completed wetland delineation during the permit review process to make a final jurisdictional determination with respect to Section 404 of the Clean Water Act and Section 1600–1607 of the Fish and Game Code. As described in Section 2.1, mining and related reclamation activities were permitted on the property in 1981 prior to the development of City wetlands regulations. Thus, wetlands existing on the property are not subject to City jurisdiction.

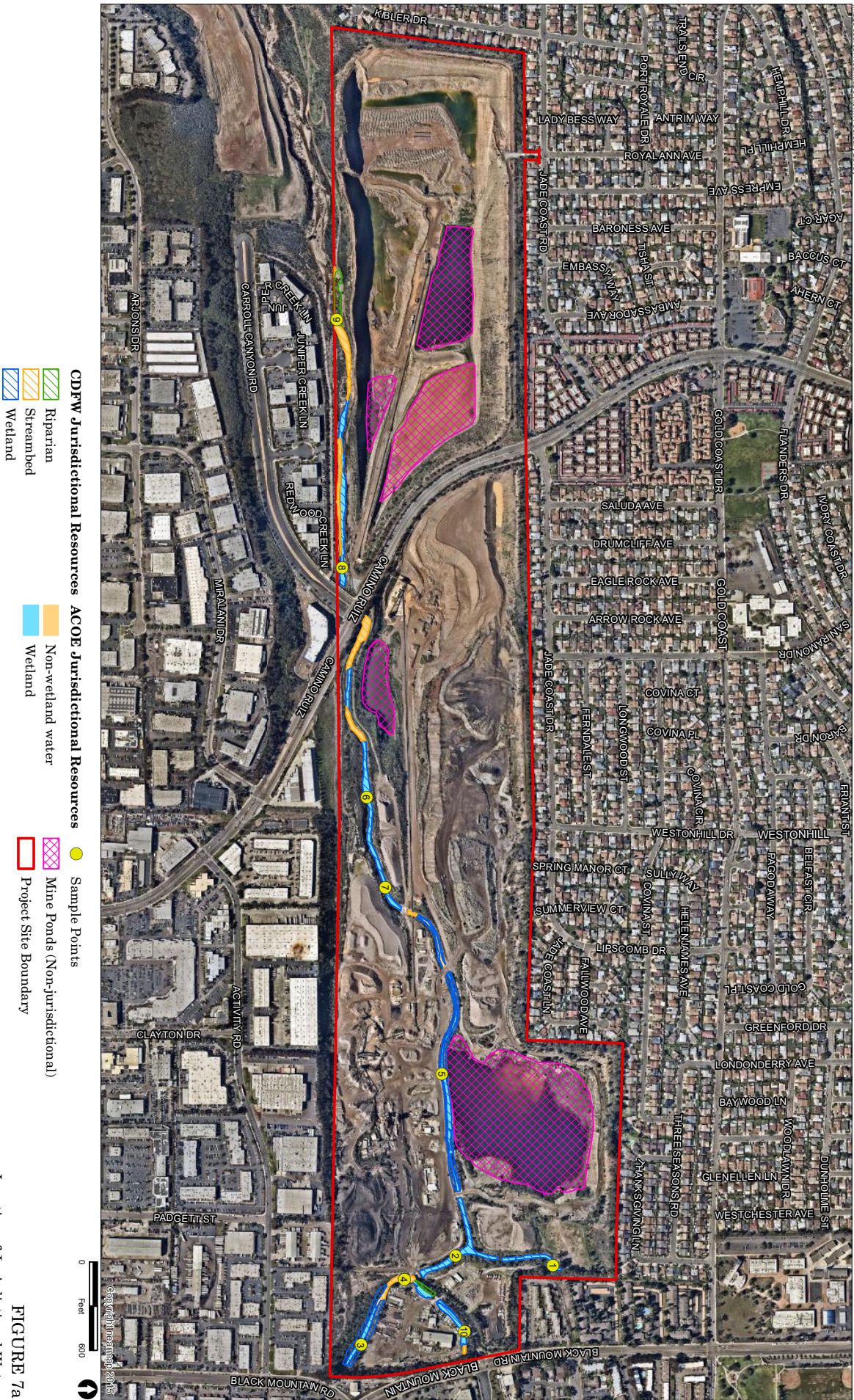
##### 4.4.6.1 USACE Jurisdictional Areas

All drainage courses on the site are ephemeral, exhibiting surface flow in times of high precipitation and subsiding to dry channels in drier times. Wetlands are supported along portions of Carroll Canyon Creek where the soils stay moist for prolonged periods of time. Non-wetland waters occur in portions of the creek where the channel bottoms are devoid of vegetation due to high flow velocities. A total of 5.35 acres of waters of the U.S. occur on the site, including 1.543 acres of non-wetland waters and 3.807 acres of wetland (see Figure 7a; Table 2).

**TABLE 2**  
**USACE WATERS OF THE U.S.**



Vegetation Type	Wetland (acres)	Non-wetland Water (acres)
Southern willow scrub	3.215	---
Mule fat scrub	0.283	---
Freshwater marsh	0.224	---
Disturbed southern willow scrub	0.085	---
Natural flood channel	---	1.481
Concrete channel	---	0.062
<b>TOTAL</b>	<b>3.807</b>	<b>1.543</b>





**FIGURE 7a**  
Location of Jurisdictional Waters  
(Pre-Reclamation Plan)



 City of San Diego Wetland  
 Project Site Boundary

RECON

**FIGURE 7b**  
Location of City of San Diego Wetlands  
(Pre-Reclamation Plan)



#### 4.4.6.2 CDFW Jurisdictional Areas

State wetlands are located on the property in the same locations as the USACE wetlands discussed in the previous section. Waters of the state or streambeds are in the same locations as the USACE non-wetland waters. In addition, riparian areas associated with Carroll Canyon Creek and the tributary drainages have been added to the CDFW jurisdiction, as their jurisdiction extends beyond the USACE ordinary high water mark and to the limits of the riparian canopy. A total of 7.27 acres of waters of the State occur on the property (see Figure 7a; Table 3).

**TABLE 3**  
**CDFW JURISDICTIONAL WATERS**

Vegetation Type	Wetland/Riparian (acres)	Streambed (acres)
Southern willow scrub	4.685	---
Mule fat scrub	0.283	---
Riparian scrub	0.363	---
Freshwater marsh	0.224	---
Disturbed southern willow scrub	0.171	---
Natural flood channel	---	1.481
Concrete channel	---	0.062
<b>TOTAL</b>	<b>5.726</b>	<b>1.543</b>

#### 4.4.6.3 Regional Water Quality Control Board Jurisdictional Areas

The Regional Water Quality Control Board (RWQCB) takes jurisdiction over all waters of the State and all waters of the United States as mandated by both the federal Clean Water Act and the California Porter-Cologne Water Quality Control Act. Therefore, RWQCB jurisdictional areas total 7.27 acres, which includes the areas under the jurisdiction of USACE and CDFW.

#### 4.4.6.4 Non-Jurisdictional Waters

The project site contains several industrial siltation ponds that were created in upland areas and are used as part of the operation of the mine. These ponds are man-made, and water levels are manipulated by the operation of the mine. Although some vegetation may become established along the edges of these ponds, the size and distribution of these vegetated areas varies as the water level in the ponds changes and mining activities progress.

### 4.5 Implementation of the 1981 CUP/Reclamation Plan

Implementation of the existing 1981 CUP/Reclamation Plan would require impacts to 5.25 acres of federal and state jurisdictional waters. It is anticipated impacts would be mitigated through



creation of 10.50 acres of federal and state jurisdictional waters. Thus, mitigation would be provided at a 2:1 ratio and would be completed through the implementation of the CUP/Reclamation Amendment. Impacts to wetlands and waters required to complete reclamation and associated restoration activities are summarized in Table 4. Methodology to be used in realigning and restoring Carroll Canyon Creek is described further in the wetland mitigation plan (Attachment 6).

**TABLE 4**  
**SUMMARY OF JURISDICTIONAL WATERS IMPACTS AND MITIGATION**  
**(acres)**

Jurisdictional Water Type	Resource Agency					
	USACE		RWQCB		CDFW	
	Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
<b>Wetland</b>						
Southern Willow Scrub	3.22	6.44	3.22	6.44	3.22	6.44
Mule Fat Scrub	0.28	0.56	0.28	0.56	0.28	0.56
Freshwater Marsh	0.22	0.44	0.22	0.44	0.22	0.44
Riparian Scrub	0.26	0.52	0.26	0.52	0.26	0.52
Disturbed Wetland	0.17	0.34	0.17	0.34	0.17	0.34
<b>Non-wetland (Streambed)</b>						
Natural Flood Channel	1.10	2.20	1.10	2.20	1.10	2.20
<b>TOTAL</b>	<b>5.25</b>	<b>10.5</b>	<b>5.25</b>	<b>10.5</b>	<b>5.25</b>	<b>10.5</b>

USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board;  
CDFW = California Department of Fish and Wildlife

Prior to any impacts to jurisdictional waters from implementation of the Reclamation Plan, permits from the resource agencies would be required. Specifically, a 404 permit from the USACE and a 401 State Water Quality certificate from the RWQCB pursuant to the Clean Water Act would be required. In addition, a 1602 Streambed Alteration Agreement from the CDFW is also required for impacts to streambeds and associated riparian habitat. Mitigation ratios and methodology would be finalized at that time.

Upon completion of mining and implementation of the 1981 CUP/Reclamation Plan, Carroll Canyon Creek would be aligned as shown on Figure 4. The remaining project site would consist of perimeter plantings on reclaimed/recontoured slopes with ornamental species to screen the property from adjacent developed areas. Flatter graded pads below these slopes would be hydroseeded to stabilize the soils and prevent excess sediment runoff. The biological resources on-site following implementation of the 1981 CUP/Reclamation plan are summarized in Table 5. The CUP/Reclamation Amendment and Stone Creek Development Plan would be analyzed against these baseline conditions.

**TABLE 5**  
**BASELINE BIOLOGICAL RESOURCES**

Vegetation Community / Land Cover Type	City of San Diego Tier	Acreage
Eucalyptus woodland	Tier IV	16.43
Ornamental Plantings	Tier IV	49.02
Hydroseeded Areas	Tier IV	215.17
Streambed	*	12.60
<b>TOTAL</b>		<b>293.22</b>

\*Wetlands do not have a Tier ranking, but are considered sensitive vegetation communities.

## 5.0 Regulatory Compliance: Stone Creek Development Plan – MSCP and MHPA Land Use Adjacency Guideline Compliance

The MSCP is designed to identify lands that would conserve habitat for federal and state endangered, threatened, or sensitive species, including the coastal California gnatcatcher. The MSCP is a plan and a process for the local issuance of permits under the federal and state Endangered Species Acts for impacts to threatened and endangered species. Also included in the MSCP are implementation strategies, preserve design, and management guidelines. The City of San Diego prepared a subarea plan to guide implementation of the MSCP Plan within its corporate boundaries. The City of San Diego adopted the MSCP Subarea Plan in March 1997 (City of San Diego 1997).

The assessment of the sensitivity of plant communities and species follows the guidelines presented in the MSCP (City of San Diego 1997) and the City's Land Development Code, Biology Guidelines (City of San Diego 2002). Multi-Habitat Planning Area (MHPA) lands are those that have been included within the City's MSCP Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. MHPA lands are considered by the City to be a sensitive biological resource.

Under the City's MSCP Subarea Plan, upland vegetation communities have been divided into four tiers of sensitivity. Upland vegetation communities classified as Tier I, Tier II, or Tier III are considered sensitive by the City. Tier IV vegetation communities are not considered sensitive.

A total of 85 sensitive plant and wildlife species are considered to be adequately protected within MHPA lands. These sensitive species are MSCP-covered species and are included in the Incidental Take Authorization issued to the City by federal and state governments as part of the City's MSCP Subarea Plan.

There are 13 plant species that are classified as “narrow endemic species” based on their limited distributions in the region. These narrow endemics are sensitive biological resources, and some are also listed species. The habitat that supports a narrow endemic species is also considered a sensitive biological resource.

The project site is not within an MHPA area. The site is adjacent to the MHPA only in the southwest corner of the property (see Figure 5). Project compliance with the following MHPA Land Use Adjacency Guidelines will avoid potential indirect effects on the adjacent MHPA in the southwest corner of the site.

**Drainage.** Drainage should be directed away from the MHPA or, if not possible, must not drain directly into the MHPA. Instead, runoff should flow into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA. The project has been designed so as to not drain directly into the MHPA. All drainage will be treated through proper water quality treatment best management practices prior discharge from the site.

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

The project has been designed so that all storm water runoff and drainage from the post-construction site will be treated through proper water quality treatment best management practices to remove any toxins prior to discharge from the site.

**Lighting.** Per the City of San Diego Municipal Code 142.0740, lighting of all developed areas within and adjacent to the MHPA should be limited to low-level lighting and shielded to minimize the amount of light entering the MHPA.

All project lighting adjacent to the MHPA in the southwest corner of the project shall be shielded and directed away from the MHPA.

**Noise.** During construction under either project, noise levels above 60 hourly equivalent A-weighted decibels (dB(A)  $L_{eq}$ ; or the ambient noise level if noise levels already exceed this threshold) at the edge of the adjacent MHPA land in the southwest corner of the project will need to be avoided during the breeding season of the coastal California gnatcatcher (March 1 – August 15). If construction is proposed during the breeding season of this species, U.S. Fish and Wildlife Service protocol surveys will be required in order to determine species presence/absence within the adjacent MHPA land. If the coastal California gnatcatcher is present in the adjacent MHPA, land noise attenuation measures will be required to work during the breeding season at this location.

**Brush Management.** All Brush Management Zone (BMZ) 1 areas must be included within the development footprint and outside the MHPA. BMZ 2 may be permitted within the MHPA (considered impact neutral) but cannot be used as mitigation.

There would be no formal BMZs required under the CUP/Reclamation Plan amendment; however, interim brush management consistent with the City of San Diego's Brush Management Regulations, 142.0412, would be provided for adjacent existing development until such time as the Stone Creek development is implemented. For the Stone Creek Development Plan, interim BMZs 1 and 2 are contained within the development footprint and outside the MHPA. No brush management shall be required for the Stone Creek Development at build-out due to the permanently irrigated condition.

**Invasives.** No invasive plant species shall be planted in or adjacent to the MHPA.

The planting pallets for the Stone Creek Development Plan and CUP/Reclamation Plan amendment do not include any invasive or non-native plant species adjacent to the MHPA. Additionally, according to City of San Diego standards for brush management, the BMZ 2 buffer along the site must only include native plants.

**Grading/Land Development.** All manufactured slopes must be included within the development footprint and outside the MHPA.

The proposed manufactured slopes for the Stone Creek Development Plan and CUP/Reclamation Plan amendment are within the development footprint and do not encroach into the MHPA.

**Barriers/Access.** New developments within or adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation. Access to the MHPA, if any, should be directed to minimize impacts and reduce impacts associated with domestic pet predation.

Adjacent to the MHPA, the project will contain steep slopes that slope away from the off-site MHPA lands, making access to the MHPA extremely difficult. Therefore, no additional barriers will be required to limit access at this location.

## 6.0 Project Impacts

The biological impacts of the Stone Creek Development Plan were assessed according to guidelines set forth in the Guidelines for Conducting Biology Surveys (City of San Diego 2002) and the California Environmental Quality Act Significance Determination Thresholds (City of San Diego 2011). Mitigation is required for impacts that are considered significant under City of San Diego and resource agency guidelines. Mitigation may be in the form of habitat avoidance/preservation, habitat replacement, payment of fees into a mitigation bank, or other appropriate measures.

## 6.1 Vegetation Communities

### 6.1.1 CUP/Reclamation Amendment

As described in Section 2.2.1, the CUP/Reclamation Plan Amendment would occur within the original project footprint; and the amended Reclamation Plan elements, including changed grading elevations and the realignment of Carroll Canyon Creek, and would be implemented entirely within areas previously impacted by the implementation of the 1981 CUP/Reclamation Plan. As a result, the proposed CUP/Reclamation Plan Amendment is not expected to result in additional impacts to biological resources beyond those originally associated with the 1981 CUP/Reclamation Plan (Table 6). No impacts to biological resources are anticipated from the CUP/Reclamation Amendment.

Following implementation of the CUP/Reclamation Plan Amendment, 212.59 acres of upland habitat will exist on-site. Carroll Canyon Creek would be aligned as shown in Figure 8 and restored with native wetland plant species to provide an enhanced creek corridor. Restored riparian habitat will be comprised of 10.5 acres of southern willow scrub. This restoration effort would be guided by the Wetland Mitigation Plan (RECON 2019). Hydroseeded areas would be comprised of a mixture of native plant species and ornamental plantings would comprise 49.02 acres, as implemented under the 1981 CUP/Reclamation Plan.

**TABLE 6**  
**PROJECT BASELINE AND ANTICIPATED ACREAGES FROM THE CUP/RECLAMATION**  
**AMENDMENT IMPLEMENTATION**  
(acres)

Vegetation Type	Baseline Conditions	CUP/Reclamation Amendment Impacts	Site Conditions After CUP/Reclamation Amendment Implementation
<b>Upland</b>			
Eucalyptus woodland (Tier IV)	16.43	---	16.43
Ornamental Plantings (Tier IV)	49.02	---	49.02
Hydroseeded Areas	215.17	---	212.59
Southern mixed chaparral (Tier III)	---	---	---
Disturbed Land (Tier IV)	---	---	---
<b>Wetland</b>			
Southern willow scrub (Preserved)	---	---	1.81
Southern willow scrub (Established)	---	---	10.50 <sup>1</sup>
Streambed	12.60	---	2.87 <sup>1</sup>
<b>TOTAL</b>	<b>293.22</b>	<b>---</b>	<b>293.22</b>

<sup>1</sup>Wetland habitats created through the implementation of the CUP/Reclamation Amendment.







## 6.1.2 Stone Creek Development Plan

While the CUP/Reclamation Amendment could be implemented without the subsequent Stone Creek project, the Stone Creek Development Plan would require prior or concurrent completion of the CUP/Reclamation Amendment. Consequently, the on-site area to be developed for the Stone Creek Development Plan would have been previously graded and hydroseeded or planted with non-natives for erosion control in accordance with the City's landscape guidelines. Native riparian restoration would have been installed. As shown in Figure 9, the riparian restoration areas summarized in Table 6 after implementation of the CUP/Reclamation Amendment would remain undisturbed. No additional on-site impacts to biological resources from the Stone Creek Development Plan are anticipated.

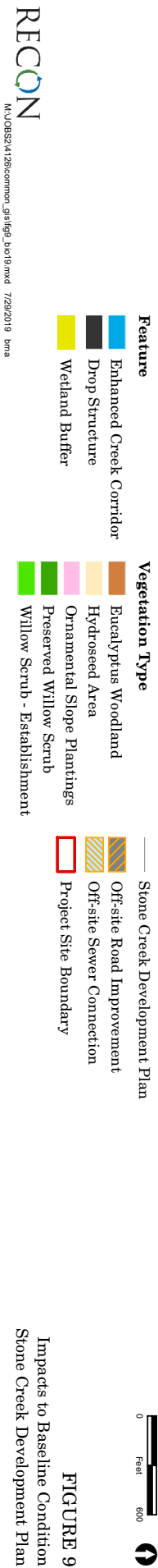
Off-site impacts to biological resources from the Stone Creek Development Plan would occur due to off-site improvements. The Stone Creek Development Plan would extend a sewer connection off-site to the south to connect into an existing sewer line in the bottom of Carroll Canyon. This off-site sewer connection would impact approximately 0.08 acre of southern mixed chaparral. This impact to southern mixed chaparral is not considered significant, as it does not exceed the 0.10-acre threshold under City regulations (City of San Diego 2011), and therefore no mitigation is required. The project would also extend Carroll Canyon Road off-site to the east, impacting approximately 1.1 acres of disturbed land. Impacts to disturbed land are not considered significant. The Stone Creek Development Plan project impacts are summarized in Table 7.

**TABLE 7**  
**PROJECT IMPACTS**  
**(acres)**

Vegetation Type <sup>1</sup>	Baseline Conditions	CUP/Reclamation Amendment	Stone Creek Development Plan On-site	Stone Creek Development Plan Off-site
<b>Upland</b>				
Eucalyptus woodland (Tier IV)	16.43	---	---	
Ornamental Plantings (Tier IV)	49.02	---	---	
Hydroseeded Areas	212.59	---	---	
Southern mixed chaparral (Tier III)	---	---	---	0.08
Disturbed Land (Tier IV)	---	---	---	1.1
<b>TOTAL</b>	<b>278.04</b>	<b>0.0</b>	<b>0.0</b>	<b>1.18</b>

<sup>1</sup>Impacts to riparian wetland areas would be avoided by the Stone Creek Development Plan project; therefore, this table shows only impacts to upland vegetation.





**FIGURE 9**  
Impacts to Baseline Condition  
Stone Creek Development Plan



## **6.2 Sensitive Biological Resources**

### **6.2.1 Multiple Species Conservation Program**

The project site is not within an MHPA area, and is adjacent to the MHPA only in the extreme southwest corner of the site. No direct impacts to the MHPA would occur under either project. Limited indirect impacts to the MHPA associated with lighting, drainage, landscaping, access, and noise may occur as a result of project activity in the extreme southwest corner of the project site. These indirect impacts can be reduced to a level below significance by compliance with the MHPA Land Use Adjacency Guidelines as discussed above in Section 5.0.

There are no specific MHPA Guidelines identified for this portion of the Northern Area of the MSCP Subarea Plan that encompasses the project area. Overall management policies and directives for the project area are contained in the Mira Mesa Community Plan, which addresses open space and sensitive resource policies for protection of open space and habitat areas. The community plan identifies Carroll Canyon Creek as a local wildlife corridor, and this corridor would remain under the Stone Creek Development Plan within the enhanced creek corridor.

### **6.2.2 Sensitive Plant Species**

No sensitive plant species were observed or are expected to occur on-site; therefore, no sensitive plant species are expected to be impacted by the project.

### **6.2.3 Sensitive Wildlife**

The project may displace general wildlife, and a few small mammals with low mobility may be impacted during construction; however, these impacts are expected to be minimal and are considered less than significant. Impacts to southern mule deer are not expected, since they would move out of the way of construction equipment.

Temporary indirect impacts during construction may include an increase in noise due to an increase in vehicular traffic, and an increase in litter and pollutants into adjacent wildlife habitat. The project site is surrounded by existing development which does not support sensitive wildlife species. These potential impacts are considered less than significant.

The large mining pond would be replaced with upland habitat during the implementation of the proposed CUP/Reclamation Plan Amendment; thus, usage of the site by the osprey and great blue heron would no longer be expected. Therefore, no significant impacts to these two species are anticipated. While mule deer may possibly use the site after implementation of the proposed CUP/Reclamation Plan Amendment, these animals are highly mobile and would avoid any direct impacts; therefore, no significant impacts to this species would occur.

Because implementation of the CUP/Reclamation Plan Amendment will involve the realignment and enhancement of Carroll Canyon Creek, it is plausible that when the Stone Creek Development Plan project begins, the site could support habitat that would be conducive to wildlife use and movement. Thus, pre-construction avian surveys would be required as a condition of the permit.

#### **6.2.4 Wildlife Movement Corridor**

The proposed Stone Creek Development Plan would not negatively affect local wildlife movement in the area. Impacts to the existing configuration of the local wildlife movement corridor along Carroll Canyon Creek are not considered significant. The project as designed will accommodate local wildlife movement associated with the realigned and enhanced creek corridor implemented under the CUP/Reclamation Amendment. This creek corridor will support native riparian vegetation for cover and habitat for wildlife, provide a native habitat link to Carroll Canyon Creek downstream of the project. As stated above, enhancement of the creek is expected to potentially improve wildlife movement previously restricted by intensive mining activities and a narrow creek configuration.

#### **6.2.5 Jurisdictional Wetland Areas**

The project would not impact any wetland habitats that are preserved or restored/enhanced under the proposed 1981 CUP/Reclamation Plan. As described previously, the implementation of that plan would create hydroseeded streambed, but the intent of the CUP/Reclamation Plan Amendment would be to realign the streambed to a more natural configuration and revegetate the creek corridor with native riparian species. Changes to the creek configuration would not result in additional impacts that have not been previously analyzed and mitigated.

Specifically, the wetland mitigation areas would be protected from potential indirect edge effects by wetland buffers, which provide horizontal and vertical separation from the adjacent land uses. The portion of the creek corridor adjacent to the population-based park areas would be protected from potential indirect edge effects through native landscaping used in the park areas and barriers, for example, fencing, plantings, and signage, that would deter encroachment into the creek itself. Buffers between the edge of the newly created wetlands of the enhanced creek corridor and the adjacent development would consist mainly of vegetated slopes varying in width between 30 feet and 250 feet.

Thus, the Stone Creek Development Plan project has provided wetland buffers to protect the functions and values of on-site wetlands and will ensure the health and protection of resources within the Carroll Canyon Creek corridor. No significant impacts to jurisdictional wetlands or waters are anticipated from the CUP/Reclamation Amendment or the Stone Creek Development Plan project.

### 6.2.5.1 Protection and Notice Element

The protection of those portions of the enhanced Carroll Canyon Creek corridor used to mitigate impacts to jurisdictional waters would be accomplished through the establishment of a Covenant of Easement (CE). The CE would establish the land use restrictions and allowable uses within the preserved areas covered. The CE would be the instrument for the protection of the Carroll Canyon Creek and associated mitigation areas in perpetuity.

### 6.2.5.2 Management Element

Management of the CE protecting the enhanced Carroll Canyon Creek corridor would be provided by a third-party entity such as the Homeowners Association or a non-profit Conservation Organization. The management entity chosen would be responsible for the long-term maintenance and management of the areas covered under the CE, and would establish the requirements for the management and monitoring reports. The long-term management of the CE would be funded by one of the following means: the establishment of an endowment or a Community Facilities District. The amount of the funding for the endowment would be established through the preparation of a Property Analysis Record or other similar method.

The management of the CE would conform to the general management directives outlined in the City's Subarea Plan (City of San Diego 1997) as described below.

**Public Access, Trails, and Recreation** – Any proposed public access, trails, or recreation would be confined primarily to established parks adjacent to the areas covered under the CE. Encroachment into areas covered by the CE would be discouraged by the placement of barriers and signage.

**Litter/Trash and Materials Storage** – The management entity for the CE would be responsible for the removal of litter/trash from the areas covered under the CE. The management entity would be responsible for the notification and enforcement of rules governing the re-current dumping of litter/trash and recover fees to reimburse the costs associated with the removal and disposal of debris, including the restoration of heavily damaged areas, if necessary.

**Adjacency Management Issues** – In addition to compliance with the MHPA Land Use Adjacency Guidelines, the management entity would be responsible to the control and removal of invasive plant species from the CE covered areas, and perform standard maintenance to ensure that flood waters are controlled adequately (e.g., keep culverts clear, remove accumulated debris that may cause flooding of adjacent lands, etc.).

## 7.0 Mitigation

No significant impacts to biological resources would occur from implementation of the proposed Stone Creek Development Plan project as all impacts would occur as part of implementing the 1981 CUP/Reclamation Plan and would be mitigated as part of agency permits issued for that



plan. Therefore, no mitigation beyond the standard City construction measures would be required.

## 7.1 Standard City Construction Measures

Standard construction measures include biological protections during construction, (includes monitoring, preconstruction meetings, and development of a Biological Condition Monitoring Exhibit, etc.) as described below.

The following would be made conditions of approval:

### Biological Resource Protection During Construction

#### I. Prior to Construction

- A. **Biologist Verification** – The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.
- B. **Preconstruction Meeting** – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** – The Qualified Biologist shall submit all required documentation to MMC verifying any special reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per the City's Biology Guidelines, MSCP, ESL Ordinance, project permit conditions; CEQA; endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **Biological Construction Mitigation/Monitoring Exhibit (BCME)** – The Qualified Biologist shall present a BCME, which includes the biological documents in "C" above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements, avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City Assistant Deputy Director (ADD)/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.
- E. **Avian Protection Requirements** – To avoid any direct impacts to any species identified as listed, candidate, sensitive, or special status in the MSCP, removal of habitat that

supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). For this project, sensitive bird species that may occur on the site to the includes Cooper's hawk. If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a preconstruction survey to determine the presence or absence of nesting for these three sensitive bird species on the proposed area of disturbance. The preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the preconstruction survey to the City's Development Services Department (DSD) for review and approval prior to initiating any construction activities. If nesting activities for any of the above-mentioned three sensitive bird species are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section or Resident Engineer, and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

- F. **Resource Delineation** – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. **Education** – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas).

## II. During Construction

- A. **Monitoring** – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the preconstruction surveys. In addition, the Qualified Biologist shall document field activity

via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to the MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

- B. **Subsequent Resource Identification** – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

### III. Post Construction Measures

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

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## **ATTACHMENTS**

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## **ATTACHMENT 1**

**ATTACHMENT 1**  
**PLANT SPECIES OBSERVED AT THE STONE CREEK PROJECT SITE**

Scientific Name	Common Name	Habitat	Origin
<i>Acacia</i> sp.	Acacia	Dist, Dev	I
<i>Adenostoma fasciculatum</i> Hook. & Arn.	Chamise	EW, SMC	N
<i>Airus rhombifolia</i> Nutt.	White alder	SWRF	N
<i>Archontophoenix cunninghamiana</i> Brenzel	King palm	Dist	I
<i>Artemisia californica</i> Less.	California sagebrush	Dist	N
<i>Arundo donax</i> L.	Giant reed	Dist	I
<i>Baccharis pilularis</i> DC.	Coyote bush	Dist, SMC	N
<i>Baccharis salicifolia</i> (Ruiz Lopez & Pavón) Pers.	Mule fat, seep-willow	FM, Dist, MFS	N
<i>Bougainvillea</i> sp.	Bougainvillea	Dev	I
<i>Brassica nigra</i> (L.) Koch.	Black mustard	Dist	I
<i>Bromus madriensis</i> L. ssp. <i>rubens</i> (L.) Husnot	Foxtail chess	Dist	I
<i>Carobrotus edulis</i> (L.) Bolus.	Hottentot fig	Dist, Dev	I
<i>Centaurea melitensis</i> L.	Tocolote, star-thistle	Dist	I
<i>Chamaesyce albomarginata</i> (Torrey & A. Gray) Small	Rattlesnake weed	Dist	N
<i>Chenopodium</i> sp.	Goosefoot	Dist	I
<i>Conyza canadensis</i> (L.) Cronq.	Horseweed	Dist	N
<i>Cortaderia jubata</i> (Lemoine) Stapf	Pampas grass	Dist.	I
<i>Crassula argentea</i> Brenzel	Jade plant	Dist	I
<i>Cynara cardunculus</i> L.	Cardoon	Dist	I
<i>Cyperus alternifolius</i> L.	Umbrella-plant	FM	I
<i>Datura wrightii</i> Regel	Jimson weed	Dist	N
<i>Encelia californica</i> Nutt.	Common encelia	Dist	N
<i>Eriodictyon crassifolium</i> Benth.	Felt-leaved yerba santa	Dist	N
<i>Eriogonum fasciculatum</i> Benth. var. <i>fasciculatum</i>	California buckwheat	Dist, SMC	N
<i>Erodium</i> sp.	Filaree, storksbill	Dist	I
<i>Eucalyptus</i> spp.	Eucalyptus	Dist, Dev, EU	I
<i>Europs</i> sp.	Yellow daisy bush	Dev	I
<i>Foeniculum vulgare</i> Mill.	Fennel	Dist	I
<i>Gazania</i> sp.	African daisy	Dev	I
<i>Gnaphalium bicolor</i> Bioletti	Bicolored cudweed	Dist	N
<i>Gnaphalium californicum</i> DC.	Green everlasting	Dist	N
<i>Hemizonia fasciculata</i> (DC.) Torrey & A. Gray	Golden tarplant	Dist	N
<i>Heteromeles arbutifolia</i> (Lindley) Roemer	Toyon, Christmas berry	Dist	N
<i>Iva hayesiana</i> A. Gray	San Diego marsh-elder	SWS	N
<i>Lantana</i> sp.	Lantana	Dev	I
<i>Lemna minuscula</i> Herter	Least duckweed	Dist, FM	N
<i>Lotus scoparius</i> (Nutt. in Torrey & A. Gray) Otteley var. <i>scoparius</i>	California broom	Dist	N
<i>Ludwigia pepioides</i> (Kunth) Raven	Yellow water primrose	SWS	N
<i>Malosma laurina</i> (Nutt.) Abrams	Laurel sumac	Dist, SMC	N
<i>Malva parviflora</i> L.	Cheeseweed, little mallow	Dist	I
<i>Marrubium vulgare</i> L.	Horehound	Dist	I

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**ATTACHMENT 1**  
**PLANT SPECIES OBSERVED AT THE STONE CREEK PROJECT SITE**  
(continued)

Scientific Name	Common Name	Habitat	Origin
<i>Meiliotus</i> sp.	Clover	Dist	I
<i>Neirium oleander</i> L.	Oleander	Dev	I
<i>Nicotiana glauca</i> Grah.	Tree tobacco	Dist	I
<i>Oxalis pes-caprae</i> L.	Bermuda buttercup	Dist	I
<i>Pennisetum setaceum</i> Forsskal	Fountain grass	Dist.	I
<i>Picris echinoides</i> L.	Bristly ox-tongue	Dist	I
<i>Pinus</i> sp.	Pine	Dev	I
<i>Platanus racemosa</i> Nutt.	Western sycamore	Dev, SWRF	N
<i>Quercus berberidifolia</i> Liebm.	Scrub oak	Dist	N
<i>Rhus integrifolia</i> (Nutt.) Brewer & Watson	Lemonadeberry	Dist	N
<i>Ricinus communis</i> L.	Castor bean	Dist	I
<i>Rorippa nasturtium-aquaticum</i> (L.) Hayek	Water cress	FM	I
<i>Salix gooddingii</i> C. Ball.	Goodding's black willow	FM, SWS, SWRF	N
<i>Salix laevigata</i> Bebb	Red willow	FM, SWS, SWRF	N
<i>Salix lasiolepis</i> Benth.	Arroyo willow	FM, SWS, SWRF	N
<i>Salsola tragus</i> L.	Russian thistle, tumbleweed	Dist	I
<i>Salvia mellifera</i> E. Greene	Black sage	EW, SMC	N
<i>Schinus molle</i> L.	Peruvian pepper tree	Dist	I
<i>Scirpus</i> sp.	Bulrush	FM	N
<i>Sonchus asper</i> (L.) Hill ssp. <i>asper</i>	Prickly sow thistle	Dist	I
<i>Stephanomeria virgata</i> (Benth.) ssp. <i>virgata</i>	Slender stephanomeria	Dist	N
<i>Toxicodendron diversilobum</i> (Torrey & A. Gray) E. Greene	Western poison oak	Dist, SWRF	N
<i>Tropaeolum majus</i> L.	Garden nasturtium	Dist	I
<i>Typna latifolia</i> L.	Broad-leaved cattail	FM, DW	N
<i>Washingtonia robusta</i> Wendl.	Washington palm	Dist, Dev	I
<i>Xanthium strumarium</i> L.	Cocklebur	Dist	N
<i>Yucca whipplei</i> Torrey	Our Lord's candle	Dist	N

HABITATS

Dev = Developed  
Dist = Disturbed  
DW = Disturbed wetland  
EW = Eucalyptus woodland  
FM = Freshwater marsh  
MFS = Mule fat scrub  
SMC = Southern mixed chaparral  
SWS = Southwestern willow scrub  
SWRF = Southern willow riparian forest

ORIGIN

N = Native  
I = Introduced species from outside locality

RECQN



## **ATTACHMENT 2**

## ATTACHMENT 2 WILDLIFE SPECIES OBSERVED OR DETECTED ON THE STONE CREEK PROJECT SITE

Common Name	Scientific Name	Occupied Habitat	Evidence of Occurrence
<u>Butterflies</u> (Nomenclature from Mattoni 1990 and Opler and Wright 1999)			
White	<i>Pieris</i> sp.	F	O
Sara orangeip	<i>Anthocaris sara</i>	F	O
Funereal duskywing	<i>Erymnis funerals</i>	F	O
<u>Reptiles</u> (Nomenclature from Crother 2001 and Crother et al. 2003)			
Western fence lizard	<i>Sceloporus occidentalis</i>	Dist., SWS, EW	O
<u>Birds</u> (Nomenclature from American Ornithologists' Union 1998 and Unitt 1984)			
Mallard	<i>Anas platyrhynchos platyrhynchos</i>	OW	O
Ruddy duck	<i>Oxyura jamaicensis rubida</i>	OW	O
Great blue heron	<i>Ardea herodias herodias</i>	OW	O
Osprey	<i>Pandion haliaetus carolinensis</i>	Dist., OW	O
Red-shouldered hawk	<i>Buteo lineatus elegans</i>	EW	O, V
Red-tailed hawk	<i>Buteo jamaicensis</i>	EW	O
American coot	<i>Fulica americana americana</i>	OW	O, V
Killdeer	<i>Charadrius vociferus vociferus</i>	Dist.	O, V
Gull	<i>Larus</i> sp.	F	O, V
Anna's hummingbird	<i>Calypte anna</i>	Dist., SWS	O, V
Black phoebe	<i>Sayornis nigricans semiatra</i>	Dist., SWS	O, V
American crow	<i>Corvus brachyrhynchos hesperis</i>	Dist.	O, V
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	Dist.	O, V
Bushtit	<i>Psaltirparus minimus minimus</i>	Dist., SWS	O, V
Bewick's wren	<i>Thyromanes bewickii</i>	Dist., SWS	O, V
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	EW	O, V
Common yellowthroat	<i>Geothlypis trichas</i>	EW, SWS	O, V
California towhee	<i>Pipilo crissalis</i>	Dist., SWS	O, V
Song sparrow	<i>Melospiza melodia</i>	Dist.	O, V
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Dist.	O, V
Red-winged blackbird	<i>Agelaius phoeniceus</i>	Dist., FWM	O, V
House finch	<i>Carpodacus mexicanus frontalis</i>	Dist., SWS	O, V
Lesser goldfinch	<i>Carduelis psaltria</i>	Dist., SWS	O, V
<u>Mammals</u> (Nomenclature from Jones et al. 1997 and Hall 1981)			
Coyote	<i>Canis Latrans</i>	Dist., SWS, EW	V
Common raccoon	<i>Procyon lotor</i>	Dist., SWS, EW	T
Southern mule deer	<i>Odocoileus hemionus fuliginata</i>	Dist., SWS, EW	T
<u>Habitats</u>			
Dist = Disturbed land			
F = Flying overhead			
EW = Eucalyptus woodland			
OW = Open water (mining, sediment ponds)			
SWS = southern willow scrub			
FWM = freshwater marsh			

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## **ATTACHMENT 3**

**ATTACHMENT 3**  
**SENSITIVE PLANT SPECIES OBSERVED (+) OR WITH THE POTENTIAL FOR OCCURRENCE ON THE STONE CREEK PROJECT SITE**

Species	State/Federal Status	CNPS List/Code	City of San Diego Status	Typical Habitat/Comments	Comments
<i>Acanthomintha ilicifolia</i> San Diego thormmint	CE/FT	1B/2-3-2	NE,MSCP	Chaparral, coastal sage scrub, valley and foothill grassland/ clay soils	Not expected to occur since clay soils are not present.
<i>Adolphia californica</i> California adolphia	-/-	2/1-2-1	-	Chaparral	Would have been observable during the survey.
<i>Agave shawii</i> Shaw's agave	-/-	2/3-3-1	NE,MSCP	Coastal sage scrub	Would have been observable during the survey.
<i>Ambrosia pumila</i> San Diego ambrosia	-/-	1B/3-2-2	NE,MSCP	Coastal sage scrub, valley and foothill grassland	Not expected to occur due to lack of suitable grassland habitat on-site.
<i>Aphanisma blitoides</i> Aphanisma	-/-	1B/2-2-2	NE,MSCP	Coastal bluff scrub, coastal sage scrub, alkaline areas	Not expected to occur on-site. This is out of range since it's not a coastal site.
<i>Baccharis vanessae</i> Encintas coyote bush	CE/FT	1B/2-3-3	NE,MSCP	Chaparral	Would have been observable during the survey.
<i>Brodiaea orcutii</i> Orcutt's brodiaea	-/-	1B/1-3-2	MSCP	Closed-cone coniferous forest, meadows, cismontane woodland, valley and foothill grassland, vernal pools	Low potential to occur since it is usually associated with vernal pool habitat not found on-site. This species is known to occur within one mile of the site (State of California 2006).
<i>Ceanothus cyaneus</i> Lakeside ceanothus	-/-	1B/3-2-2	MSCP	Closed-cone coniferous forest, chaparral	Would have been observable during the survey.
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus	-/-	2/1-2-1	MSCP	Chaparral	Would have been observable during the survey.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	-/-	1B/2-2-2	-	Clay soils; openings in chaparral and near vernal pools and montane meadows	Not expected to occur due to lack of clay soils.

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**ATTACHMENT 3**  
**SENSITIVE PLANT SPECIES OBSERVED (+) OR WITH THE POTENTIAL FOR OCCURRENCE ON THE STONE CREEK PROJECT SITE**  
(continued)

Species	State/Federal Status	CNPS List/Code	City of San Diego Status	Typical Habitat/Comments	Comments
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer holly	-/-	1B/2-2-2	-	Chaparral	Not observed; would have been observable during the survey.
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> (= <i>Dudleya brevifolia</i> ) Short-leaved dudleya	CE/-	1B/3-3-3	NE,MSCP	Chaparral, coastal sage scrub (Torrey sandstone)	Not expected to occur due to lack of Torrey sandstone soils.
<i>Dudleya variegata</i> Variegated dudleya	-/-	1B/1-2-2	NE,MSCP	Chaparral, coastal sage scrub	Not expected to occur due to lack of gravelly clay loam soils preferred by this species (Reiser 2001).
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button celery	CE/FE	1B/2-3-2	MSCP	Vernal pools, marshes	Not expected to occur due to lack of vernal pools. This species is known to occur within two miles (State of California 2005e).
<i>Ferocactus viridescens</i> Coast barrel cactus	-/-	2/1-3-1	MSCP	Chaparral, coastal sage scrub, valley and foothill grassland	Not observed and not expected to occur due to lack of suitable habitat. This species is known to occur within two miles (State of California 2005e).
<i>Hemizonia confugens</i> Otay tarplant	CE/FT	1B/3-3-2	NE,MSCP	Coastal sage scrub	Not expected to occur since the range of this species is southern San Diego County (Reiser 2001).
<i>Iva hayesiana</i> San Diego marsh elder	-/-	2/2-2-1	-	Riparian, playas	Not observed on-site; however, this species was observed off-site to the south of this property in a restored drainage. Would have been observable on-site during the survey.

RECQN

**ATTACHMENT 3**  
**SENSITIVE PLANT SPECIES OBSERVED (+) OR WITH THE POTENTIAL FOR OCCURRENCE ON THE STONE CREEK PROJECT SITE**  
(continued)

Species	State/Federal Status	CNPS List/Code	City of San Diego Status	Typical Habitat/Comments	Comments
<i>Monardella ilinoides</i> ssp. <i>virginica</i> Willow monardella	CE/FE	1B/2-3-2	MSCP	Riparian scrub	Not observed on-site, however, this species was observed off-site to the south of this property in a restored drainage. Would have been observable on-site during the survey.
<i>Mulla clevelandii</i> San Diego goldenstar	-/-	1B/2-2-2	MSCP	Valley and foothill grassland, vernal pools	Not expected to occur due to the lack of vernal pools.
<i>Navarretia fossalis</i> Prostrate navarretia	-/FT	1B/2-3-2	NE,MSCP	Vernal pools	Not expected to occur due to the lack of vernal pools.
<i>Opuntia parryi</i> (= <i>Opuntia parryi</i> var. <i>serpentina</i> ) Snake cholla	-/-	1B/3-3-2	NE,MSCP	Chaparral, coastal sage scrub	Would have been observable during the survey.
<i>Orcuttia californica</i> California Orcutt grass	CE/FE	1B/3-3-2	NE,MSCP	Vernal pools	Not expected to occur due to the lack of vernal pools.
<i>Pogogyne abramsii</i> San Diego mesa mint	CE/FE	1B/2-3-3	NE,MSCP	Vernal pools	Not expected to occur due to the lack of lack vernal pools.
<i>Pogogyne nudiuscula</i> Otay mesa mint	CE/FE	1B/3-3-2	NE,MSCP	Vernal pools	Not expected to occur due to the lack of vernal pools.
<i>Quercus dumosa</i> Nuttail's scrub oak	-/-	1B/2-3-2	-	Coastal chaparral	Not observed on-site; would have been observable during the survey.

NOTE: See Attachment 4 for explanation of sensitivity codes.

RECQN

## **ATTACHMENT 4**

**ATTACHMENT 4**  
**SENSITIVE PLANT SPECIES STATUS CODES**

**FEDERAL CANDIDATES AND LISTED PLANTS**

- FE = Federally endangered
- FT = Federally listed, threatened

**STATE LISTED PLANTS**

- CE = State listed, endangered

**CITY OF SAN DIEGO**

- MSCP = MSCP covered species
- NE = MSCP narrow endemic species

**CALIFORNIA NATIVE PLANT SOCIETY LISTS**

- 1B = Species rare, threatened, or endangered in California and elsewhere.  
These species are eligible for state listing.
- 2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
- 3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.
- 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.



## **ATTACHMENT 5**

**ATTACHMENT 5**  
**SENSITIVE WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR ON THE STONE CREEK PROJECT SITE**

Species	Status	Habitat/Comments	Occurrence
<u>Fairy Shrimp</u> (Nomenclature from Eriksen and Belk 1999)			
San Diego fairy shrimp <i>Branchinecta sandlegonensis</i>	FE, MSCP, *	Vernal pools.	Not expected to occur since the majority of the site is actively mined and vernal pools do not occur on-site. This species is known to occur within two miles (State of California 2006).
<u>Butterflies</u> (Nomenclature from Mattoni 1990 and Opler and Wright 1999)			
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE, MSCP (Chula Vista)	Open, dry areas in foothills, mesas, lake margins. Larval host plant <i>Plantago erecta</i> . Adult emergence mid-January through April.	Not expected to occur. No suitable habitat present. Site is outside of the 2005 USFWS Survey Area.
<u>Amphibians</u> (Nomenclature from Crother 2001 and Crother et al. 2003)			
Western spadefoot <i>Spea hammondi</i>	CSC, FSS, *	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	Not expected to occur since the majority of the site is actively mined. This species is known to occur within two miles (State of California 2006).
<u>Reptiles</u> (Nomenclature from Crother 2001 and Crother et al. 2003)			
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP, *	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	Low potential to occur in southern mixed chaparral on-site due to habitat fragmentation and disturbance from mining operation.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	*	Open, sparsely vegetated, often rocky areas within shrub or grassland habitats.	Low potential to occur in vegetated areas on-site due to disturbance from mining operation.
Coast horned lizard <i>Phrynosoma coronatum</i> (San Diego/blainvillii population)	CSC, FSS, MSCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	Low potential to occur in vegetated areas on-site due to marginal habitat and proximity to the mining operation.
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC, *	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	Low potential to occur on-site due to level of disturbance from mining operation.

**RECON**

**ATTACHMENT 5**  
**SENSITIVE WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR ON THE STONE CREEK PROJECT SITE**  
**(continued)**

Species	Status	Habitat/Comments	Occurrence
Southern Pacific pond turtle <i>Clemmys marmorata pallida</i>	MSCP, CSC, FSS, *	Ponds, small lakes, marshes, slow-moving, sometimes brackish water.	Not expected to occur in the desilting ponds on-site due to the artificial nature of the ponds and regular maintenance.
<u>Birds</u> (Nomenclature from American Ornithologists' Union 1998 and Unitt 1984)			
Great blue heron (rookery site) <i>Ardea herodias herodias</i>	*	Bays, lagoons, ponds, lakes. Non-breeding year-round visitor, some localized breeding.	Observed at the main desilting pond. No rookery site observed. Not expected to nest on-site.
Great egret (rookery site) <i>Ardea alba egretta</i>	*	Lagoons, bays, estuaries. Ponds and lakes in the coastal lowland. Winter visitor, uncommon in summer.	Potential to forage at main desilting pond. No rookery site observed. Not expected to nest on-site.
Snowy egret (rookery) <i>Egretta thula thula</i>	*	Lagoons, bays, estuaries. Ponds and lakes in the coastal lowland.	Potential to forage at main desilting pond. No rookery site observed. Not expected to nest on-site.
Black-crowned night heron (rookery site) <i>Nycticorax nycticorax hoactli</i>	FSS, *	Lagoons, estuaries, bayshores, ponds, and lakes. Often roost in trees. Year-round visitor. Localized breeding.	Potential to forage at main desilting pond. No rookery site observed. Not expected to nest on-site.
Osprey (nesting) <i>Pandion haliaetus carolinensis</i>	CSC, *	Coast, lowland lakes, rarely foothills and mountain lakes. Uncommon fall/winter resident, rare in spring and summer. Localized nesting; Scripps Ranch H.S., North Island NAS. Fish are the primary prey item.	Observed an osprey attempting to build a nest on a power pool near the main desilting pond. Though numerous attempts were made by the osprey to build a nest, all attempts were unsuccessful.
White-tailed kite (nesting) <i>Elanus leucurus</i>	CFP, *	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	Low potential to nest on-site due to the low density of trees near riparian areas. Low potential to forage on-site due to lack of native habitat that supports food items. Known to nest and forage within two miles of site (Clark pers. com., 2006).

**RECON**

**ATTACHMENT 5**  
**SENSITIVE WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR ON THE STONE CREEK PROJECT SITE**  
**(continued)**

Species	Status	Habitat/Comments	Occurrence
Northern harrier (nesting) <i>Circus cyaneus hudsonius</i>	CSC, MSCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	Low potential to forage over site due to lack of native habitat that supports food items. Not expected to nest on-site due to proximity to mining operation.
Cooper's hawk (nesting) <i>Accipiter cooperi</i>	CSC, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Year-round resident.	Potential to nest in eucalyptus and other mature trees on-site. Known to occur within two miles of site (Clark, pers. com., 2006).
Western snowy plover (coastal population) <i>Charadrius alexandrinus nivosus</i>	FT, CSC, MSCP	Sandy beaches, lagoon margins, tidal mud flats. Migrant and winter resident. Localized breeding.	Low potential for occurrence on the site due to lack of suitable habitat for foraging and breeding.
Western burrowing owl (burrow sites) <i>Athene cunicularia hypugaea</i>	CSC, MSCP	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	Low potential for occurrence on the site due to lack of suitable grassland or agricultural lands for foraging and breeding.
Vaux's swift <i>Chaetura vauxi</i>	CSC, *	All habitat types of San Diego County during migration.	Potential to use site during migration.
California horned lark <i>Eremophila alpestris actia</i>	CSC	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub. Common breeding resident, abundant migrant and winter visitor.	Low potential to occur on-site due to proximity to mining operation.
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC, BCC, *	Open foraging areas near scattered bushes and low trees; agriculture, desert wash/scrub, grassland. Fairly common resident.	Not expected to occur due to lack of native vegetation that supports food sources.
California thrasher <i>Toxostoma redivivum redivivum</i>	*	Chaparral, coastal sage scrub. Resident.	Low potential to occur in southern mixed chaparral on-site due to habitat fragmentation.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP, *	Coastal sage scrub, maritime succulent scrub. Resident.	Not expected to occur due to lack of habitat on-site and off-site along with the proximity to active mining operation. Known to occur within two miles (State of California 2006).

**RECON**



**ATTACHMENT 5**  
**SENSITIVE WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR ON THE STONE CREEK PROJECT SITE**  
**(continued)**

Species	Status	Habitat/Comments	Occurrence
Lawrence's goldfinch <i>Carduelis lawrencei</i>	BCC, *	Common migrant, rare summer resident.	Potential to occur on-site during migration.
Bell's sage sparrow <i>Amphispiza belli belli</i>	CSC, BCC, *	Chaparral, coastal sage scrub. Localized resident.	Not expected to occur due to the fragmentation of chaparral on-site.
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC, MSCP, *	Coastal sage scrub, chaparral, grassland; favors steep and rocky areas. Localized resident.	Not expected to occur due to fragmentation of chaparral on-site.
Tricolored blackbird <i>Agelaius tricolor</i>	CSC, FSS, MSCP, BCC, *	Freshwater marshes, agricultural areas, lakeshores, parks. Localized resident often seen among flocks of red-winged blackbirds.	Potential to occur in freshwater marsh areas on-site.
<u>Mammals</u> (Nomenclature from Jones et al. 1997 and Hall 1981)			
Pallid bat <i>Antrozous pallidus</i>	CSC, FSS, *	Many habitats: commonly open, dry areas. Roosts in shallow caves, mines, rock crevices, buildings, bridges, tree cavities. Colonial.	Potential to occur on-site and forage near water sources.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC, *	Open areas of scrub, grasslands, agricultural fields.	Not expected to occur due to disturbed nature of site and lack of suitable habitat.
Dulzura California pocket mouse <i>Chaetodipus californicus femoralis</i>	CSC, *	Brushy areas of coastal sage scrub, chamise-redshank & montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood—conifer & montane hardwood. Probably most attracted to interface of grassland and brush.	Not expected to occur due to disturbed nature of site and lack of suitable habitat.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	CSC, *	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	Not expected to occur due to disturbed nature of site and lack of suitable habitat.

RECON

**ATTACHMENT 5**  
**SENSITIVE WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR ON THE STONE CREEK PROJECT SITE**  
**(continued)**

Species	Status	Habitat/Comments	Occurrence
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC, *	Coastal sage scrub and chaparral.	Not expected to occur due to disturbed nature of site and lack of suitable habitat.
American badger <i>Taxidea taxus</i>	MSCP, *	Herbaceous, shrub, and open stages of most habitats with dry, friable soils.	Not expected to occur due to disturbed nature of site and lack of suitable habitat.
Mountain lion <i>Puma concolor</i>	MSCP	Riparian vegetation and brushy stages of various habitats with interspersions of irregular terrain, rocky outcrops, and tree/bush edges.	Not expected to occur due to disturbed nature of site and surrounding development.
Southern mule deer <i>Odocoileus hemionus fuliginata</i>	MSCP	Mosaic of vegetation with an interspersion of herbaceous openings, dense brush or tree thickets, riparian areas, and abundant edge.	Known to occur on-site.

**STATUS CODES**

Listed/Proposed

FE = Listed as endangered by the federal government

FSS = Federal (BLM and USFS) sensitive species

FT = Listed as threatened by the federal government

Other

BCC = U.S. Fish and Wildlife Service Birds of Conservation Concern species

CFP = California fully protected species

CSC = California Department of Fish and Game species of special concern

MSCP = Multiple Species Conservation Program covered species

\* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
- Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

**RECON**

## **ATTACHMENT 6**



Wetland Mitigation Plan  
for the Conditional Use  
Permit/Reclamation Plan  
San Diego, California

Prepared for

CalMat Co., dba Vulcan Materials Company  
Western Division  
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Prepared by

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June 10, 2019

A handwritten signature in blue ink, reading "Gerry Scheid".

Gerry Scheid, Senior Biologist



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# **1.0 Introduction**

## **1.1 Background—Purpose**

Impacts to wetland and non-wetland jurisdictional waters would occur during the remedial grading for the Conditional Use Permit/Reclamation Plan (CUP/Reclamation Plan) considered for the CalMat Co. (doing business as Vulcan Materials Company) sand/gravel mine in Carroll Canyon. Mitigation is required to meet the “no net loss” of federal and state jurisdictional waters and replace wetland functions and values lost. The establishment (creation) of 10.50 acres (SCDP) of southern willow scrub wetland habitat would serve to mitigate impacts to this sensitive biological resource. This mitigation plan proposes a 2:1 mitigation ratio based on City of San Diego guidelines. The mitigation plan provides an implementation strategy, performance standards, and five-year maintenance, monitoring, and reporting program to cover either project.

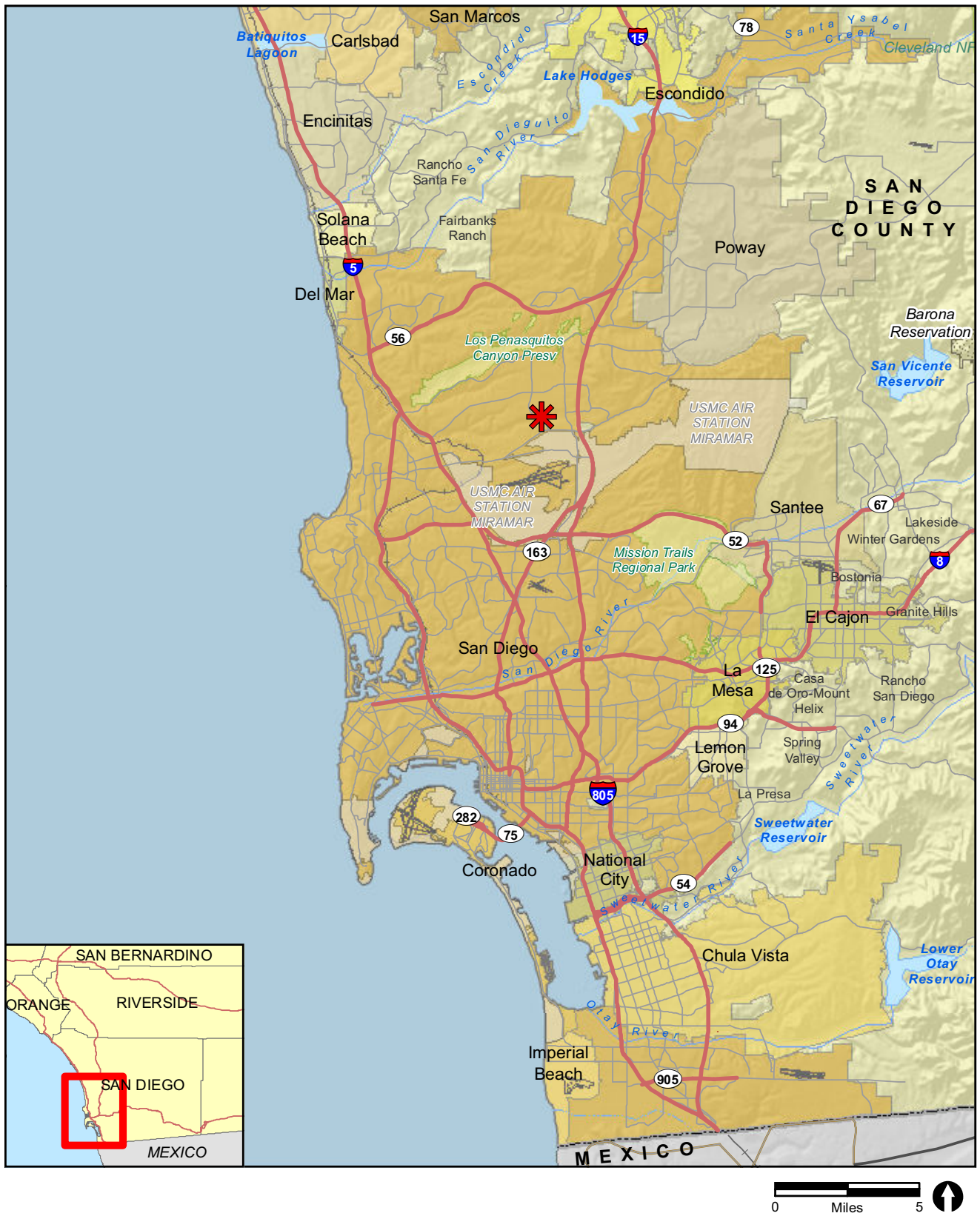
## **1.2 Project Location and Size**

The proposed wetland establishment mitigation sites detailed in this conceptual mitigation plan would occur as part of the on-site restoration of an enhanced Carroll Canyon Creek corridor under CUP/Reclamation Plan (Figures 1 and 2). The project would create southern willow scrub on-site at specific locations within the new creek corridor design.

## **1.3 Restoration Goals and Objectives**

The purpose of this mitigation project is to restore habitat functions and values for low-quality wetland and non-wetland waters that would be impacted by the project. At the completion of the mitigation activities, the newly established wetland areas will be able to sustain themselves in perpetuity without human involvement.

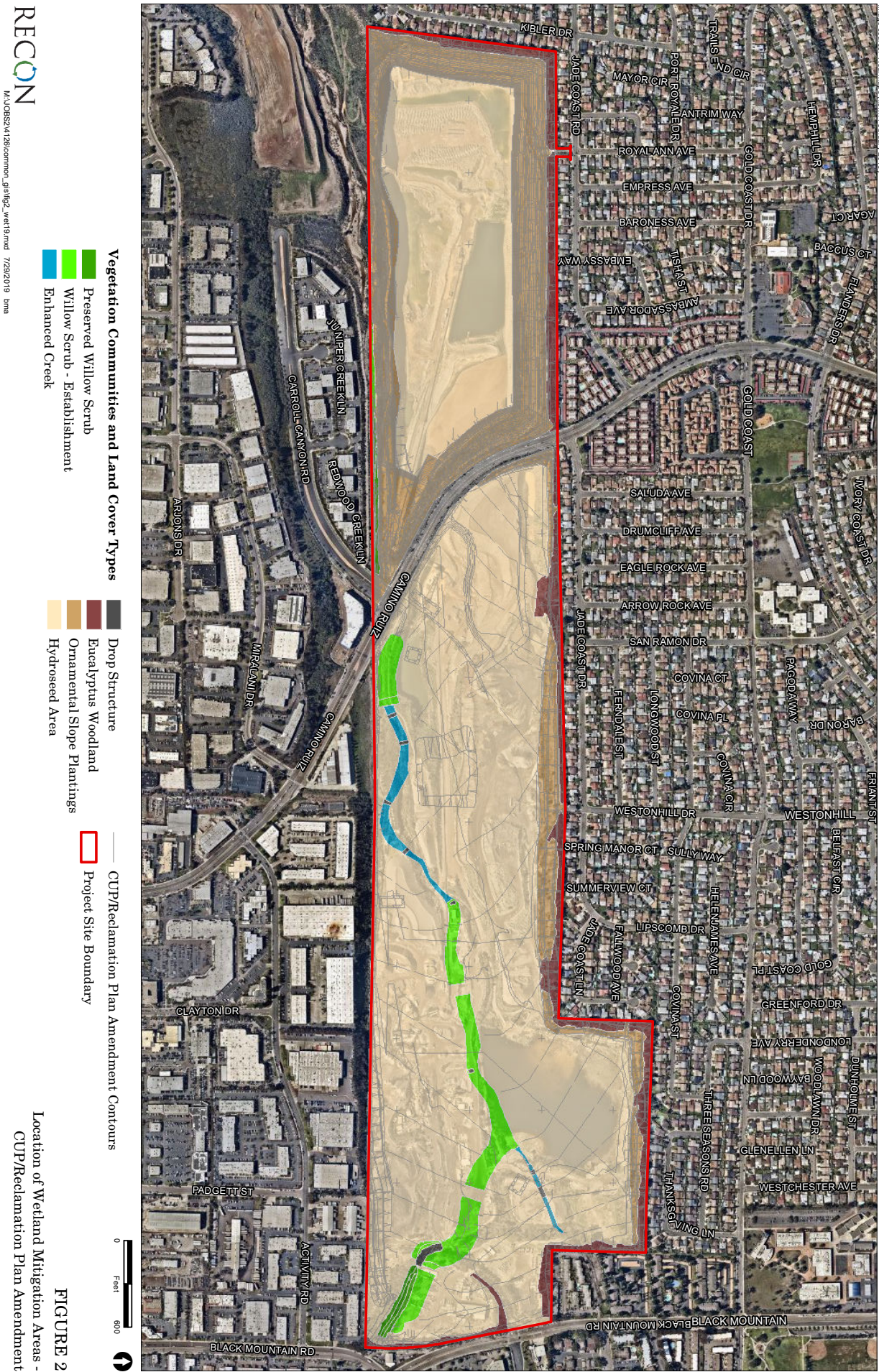
This plan provides a description of existing conditions, responsibilities of project participants, methods of site preparation, and a site maintenance and monitoring program. This plan also establishes performance standards for evaluating project success and addresses the process for implementation of remediation measures if they become necessary.



 Project Location

FIGURE 1  
Regional Location







## **2.0 Existing Conditions**

### **2.1 Environmental Setting of Impacted and Mitigation Areas**

The existing wetlands and non-wetland waters to be impacted include segments of Carroll Canyon Creek that support freshwater marsh, southern willow scrub, mule fat scrub, riparian scrub, and unvegetated channel. The proposed mitigation area will be on-site within the newly created Carroll Canyon Creek corridor.

### **2.2 Topography and Soils**

Elevations on the project site range from 300 feet above mean sea level to 460 feet above mean sea level. Six soil types are mapped in the survey area, which include Redding gravelly loam, 2 to 9 percent slopes; Redding cobbly loam, 9 to 30 percent slopes; Redding cobbly loam, dissected, and 15 to 30 percent slopes; riverwash; terrace escapements; and gravel pit (U.S. Department of Agriculture 1973).

### **2.3 Mitigation Site Characteristics**

The wetland mitigation areas will be created in areas of the newly designed creek corridor (see Figure 2). The mitigation areas to the east of Camino Ruiz would be created during the construction of the new creek channel to widen the channel bottom and create low terraces for planting of native wetland vegetation. The mitigation area to the west of Camino Ruiz would grade disturbed land adjacent to the existing creek channel to widen and create additional area for the establishment of native wetland vegetation.

The mitigation sites shall be replanted with native plants to restore southern willow scrub wetland. Once established, this plant community will replace the functions and values of the wetland habitat being impacted. The hydrology to support the wetland will come from natural drainage patterns that will convey seasonal rainfall down the new creek corridor.

The on-site wetland establishment mitigation and preservation of existing jurisdictional waters will meet the regulatory requirements for compensation of impacts to wetlands as authorized by the federal and state agencies. A “no net loss” of wetland area and functions and values will be achieved.

## **3.0 Mitigation Roles and Responsible Parties**

### **3.1 Project Proponent**

Vulcan Materials Company is the project proponent and shall be responsible for funding all aspects of the wetland mitigation plan, including site preparation, planting, maintenance and monitoring, and any required remedial actions. The project proponent will coordinate the activities of the various contractors with the restoration specialist. The project proponent is responsible for providing and managing any financial assurances and contingency funds that may be required to ensure success of this mitigation effort. A performance bond shall be posted to ensure funding is available in the event the mitigation site is not successful.

The project proponent shall manage project activities in the best interest of mitigation goals and will be solely responsible for the administration of project contracts. Decisions to stop work are the responsibility of the project proponent. The project proponent shall have sole authority in decisions to suspend payment or terminate contracts, including all phases of project installation, long-term maintenance, and biological monitoring. The project proponent may, in its sole discretion at any time, replace any of these parties if necessary.

### **3.2 Restoration Specialist**

The restoration specialist shall be an individual or team with a minimum of five years' experience in native habitat restoration. The restoration specialist shall be required to attend pre-restoration meetings, site preparation, planting, plant establishment, and project maintenance, and will monitor and report on project activities in accordance with the specifications of this plan. The restoration specialist shall consult with the project proponent on any activities that may be disruptive to the mitigation. The restoration specialist shall direct qualified subcontractors in execution of aspects of this plan, implement required long-term maintenance of the mitigation, and perform the required monitoring and reporting in accordance with the procedures established in this plan.

The restoration specialist shall be responsible for monitoring during site preparation, exotic and ornamental species removal, planting, and the maintenance period. The restoration specialist shall also conduct quantitative monitoring during each year of the five-year maintenance and monitoring period, according to the specifications of this plan. The restoration specialist shall prepare an as-built letter report and annual reports during the maintenance period.

Other responsibilities discussed below may be performed by the restoration specialist or by qualified subcontractors.

### **3.3 Irrigation Contractor**

The irrigation contractor shall work under the direction of the restoration specialist. The irrigation contractor should be experienced in providing water to remote locations and working within and around sensitive habitat. The irrigation contractor shall water plants in a way that minimizes erosion and runoff from the site while providing the plants with adequate water.

### **3.4 Nursery Supplier**

The native plant supplies shall originate from a qualified native plant nursery. The plant supplier must have at least three years' experience propagating native plants and be able to produce properly aged plants in containers ready for outplanting. Plants will be grown from seed or cuttings collected from within 10 miles of the project site or that originated from the same watershed. All container plants will be grown in native soil containing mycorrhizal fungi.

### **3.5 Maintenance Crew**

The maintenance crew shall represent a qualified company with at least three years' experience in implementing native plant restoration projects in wetland environments. The maintenance crew shall be responsible for completion of site preparation activities under the direction of the restoration specialist. The maintenance crew shall include a state-licensed qualified applicator that will direct herbicide applications. All crew members applying herbicide should receive pesticide safety training before applying herbicides.

## **4.0 Site Preparation**

The wetland establishment mitigation sites shall be constructed in phases . The timing of the phases will correspond with the, the cessation of mining activities in that portion of the site, and the subsequent grading of the new creek channel and banks as part of the CUP/Reclamation Plan. Implementation of each phase shall include three steps: site preparation, planting, and irrigation. All implementation work shall be conducted under the direction of the restoration specialist. The restoration project shall be implemented in compliance with sensitive biological resource requirements.

### **4.1 Site Preparation**

Site preparation for the wetland establishment mitigation areas in each phase shall include the grading needed to create that portion of the new creek channel design and associated portion of the wetland mitigation acreage requirement. The mitigation areas within each phase will be

within/adjacent to the newly designed creek channel. The resultant soils in these mitigation areas shall be tested for texture and nutrients to ensure the soils will support native plant species. Soil amendments may be required where soils textures are high in clay or nutrient poor and plant materials shall be inoculated with mychorizzea to promote healthy growth.

Herbicide applications compatible with use near aquatic resources may be necessary to ensure that problem weeds or unwanted vegetation are effectively treated prior to the installation of the native plant materials. The application of a pre-emergent treatment is recommended to limit the establishment of any residual weed seed bank remaining in the soils. The timing of project implementation and specific weeds present at that time will determine the best method for weed control/removal. This determination shall be made by the restoration specialist.

#### **4.1.1 Site Protection**

Silt fencing, straw wattles, and other appropriate best management practice options shall be installed around the mitigation sites where steep slopes and potential erosion could create sedimentation downstream until the native plants materials have become established. Additional site protection may be needed to control interim and long-term access to the mitigation areas. These site protection measures may involve the installation of signage stating the sensitive nature of the mitigation areas and/or the installation of barriers (e.g., fences, barrier plantings). The mitigation areas will also be protected through a covenant of easement with metes and bounds that restricts any future development of these areas.

#### **4.1.2 Weed Eradication and Clearing of Existing Vegetation**

The establishment mitigation sites occur within or adjacent to the proposed creek corridor. All vegetation will have been cleared when the site is prepared. Some weeds may invade the site, depending on the time between when the grading is complete and the area is planted. Any weeds that occur in the area to be replanted must be removed prior to plant installation.

### **4.2 Container Stock Planting**

The species recommended for container stock to be planted in the new wetland establishment areas are shown in Table 1. These species are similar to those occurring on the project site. The quantities of container stock of each species reflect the general abundance of plants in the nearby open space. The planting density recommended for the wetland mitigation area is 700 plants per acre. Container plants shall be acquired from a nursery that must specialize in producing high-quality native plant species for habitat restoration projects.

**TABLE 1**  
**WETLAND MITIGATION AREA CONTAINER PLANT PALETTE**

Species	Spacing on Center (feet)*	Size (gallons)	Number per Acre
<b>Trees</b>			
<i>Salix gooddingii</i> black willow	15	1	75
<i>Salix lasiolepis</i> red willow	15	1	75
<i>Platanus racemosa</i> western sycamore	30		30
<i>Populus fremontii</i> Fremont cottonwood	30		20
<b>Shrubs</b>			
<i>Baccharis salicifolia</i> mule fat	5	1	75
<i>Salix exigua</i> narrow-leaved willow	5	1	75
<i>Iva haysiana</i> San Diego marsh elder	10	1	50
<i>Pluchea sericia</i> aroweed	5		75
<i>Rosa californica</i> California rose	10		50
<i>Rubus ursinus</i> blackberry	10		50
<b>Herbaceous</b>			
<i>Leymus triticoides</i> beardless wild rye	5		100
<i>Oenothera elata</i> ssp. <i>hirsutissima</i> great marsh evening primrose	10		25
<b>TOTAL</b>			<b>700</b>

\*Spacing relates to similar growth form (i.e., tree, shrub, herbaceous).

The final plantings will depend on the availability of appropriately aged plants; the plant supplier should be provided with at least six months advance notice to grow the plants listed. Additional plants may be installed during the second growing season if adequate supplies are not available at time of initial planting.

The restoration specialist shall oversee the container plant layout in the field prior to planting. The restoration specialist shall use best professional judgment to determine appropriate spacing, neighboring species, and topographic location. Planting holes will be dug approximately 50 percent larger than the container when installed.



### **4.3 Timing**

Planting of native plant materials during each mitigation site preparation phase should be done during November through March. This time period is ideal for the establishment of wetland plant species, as the temperatures are cool and it coincides with the natural seasonal rains.

### **4.4 Irrigation**

Supplemental irrigation for each of the wetland establishment areas shall be provided by a temporary irrigation system at the direction of the restoration specialist, based on an evaluation of predicted seasonal rainfall patterns. All watering shall be carefully applied to minimize runoff and erosion within the site. Irrigation is intended to provide supplemental water during the 120-day plant establishment period (PEP) and for up to two years following planting for each specific mitigation area. The restoration specialist shall discontinue irrigation once the plants have become established. A watering schedule shall be provided by the restoration specialist and updated when necessary as weather conditions change.

The irrigation system shall be controlled by its own valves so that a particular mitigation site may be watered independently and according to its own watering schedule. The irrigation system will be temporary and shall be dismantled and removed from the mitigation areas once the plants have become established at a particular site. Prior to removing the irrigation system, the watering schedule shall be tapered off to harden plants to normal weather conditions.

## **5.0 Maintenance Program**

Maintenance is needed to maintain conditions favorable to establishment and growth of native plants. The maintenance program ensures that plant establishment, weed control, replanting, and erosion control are performed adequately. Maintenance measures shall be conducted throughout the mitigation areas and shall be coordinated by the restoration specialist. Maintenance consists of three phases: the 120-day PEP, a five-year maintenance period, and long-term maintenance.

All maintenance work for the 120-day PEP and five-year maintenance program for each phase of mitigation implementation shall be conducted under the direction of the restoration specialist. The maintenance activities shall be conducted in compliance with sensitive biological resource requirements. The long-term maintenance of the mitigation areas shall be the responsibility of a Master association, underlying land owner, or City/Agency approved land manager.

## 5.1 120-day Plant Establishment Period

A 120-day PEP shall commence upon planting of the native plant materials in each mitigation site as the phases are implemented. During this period, relatively intensive maintenance activities shall be conducted to aid in the establishment of the native plants under the direction of, and on a schedule determined by, the restoration specialist. The maintenance crew shall control emerging weed seedlings, replace dead native plants, repair erosion, and remove any trash from the mitigation site. The maintenance contractor shall also be responsible for maintaining the irrigation system.

If excessive damage from browsing of wildlife or domestic animals is detected, individual plants may be protected by installing a chicken wire fence around each plant. However, since browsing is a natural process, fencing will only be installed if browsing is expected to result in significant plant mortality.

The mitigation sites will be located within and adjacent to the newly created creek corridor. Access to the site by the general public will be difficult until the mining operation is complete and either the SCDP or CUPRP are implemented. Minimal fencing for site protection may be needed to keep mining operations outside of the mitigation sites. Additional fencing, barriers, and signage will be required once either of the two site plans is implemented. Any vandalism that does occur to the mitigation sites shall be repaired by the maintenance contractor upon approval of the project proponent and restoration specialist.

## 5.2 Five-year Maintenance Program

A five-year maintenance program shall be conducted to help achieve the final success criteria for each mitigation site when implemented. Weed control shall be the primary ongoing activity, with replanting of native plants and erosion control performed as needed under the direction of the restoration specialist. The recommended schedule for five-year maintenance is shown in Table 2.

**TABLE 2**  
**APPROXIMATE MAINTENANCE SCHEDULE**

Type/Task	Year 1	Year 2	Year 3	Year 4	Year 5
Site Maintenance	Monthly	Quarterly	Quarterly	Quarterly	Quarterly
Weed control	As needed	As needed	Quarterly	Semi-annually	Semi-annually
Replanting	Winter	Winter	As needed	As needed	As needed
Irrigation Maintenance	As needed	As needed	Remove	—	—

### **5.2.1 Weed Control**

Weed control will be an integral part of the maintenance program. Weeds shall be controlled through manual or chemical means. A glyphosate-based herbicide shall be applied in most cases, but selective herbicides may also be applied to control specific types of weeds. Weeding shall be performed by maintenance workers trained to distinguish weeds from native species to keep weed species from producing seeds and to control weed competition during establishment of the native plantings.

Weed control will be timed to prevent seed set by non-native species. During the first year after the PEP at a particular mitigation site, weeding shall be performed a minimum of three times. During the maintenance period for that mitigation site, weeding shall be done in late spring to control cool-season weeds, and in late summer to control warm-season weeds. More frequent weeding visits may be conducted at the recommendation of the restoration specialist if needed to control heavy infestations or persistent weed species.

### **5.2.2 Remedial Planting**

If the interim or final performance standards are not achieved for the respective monitoring year at a particular mitigation site, replanting of native species will be conducted when soil moisture is optimal as determined by the restoration specialist. Planting methods shall be as described for the PEP.

### **5.2.3 Erosion Control**

Erosion control and site repair shall be part of the continued routine maintenance of the wetland mitigation sites as they are implemented. Common erosion problems anticipated include formation of gullies and rills, and sheet erosion of bare soil areas. Repair typically includes redirection and dissipation of the water source, and re-contouring of the soil. Repaired areas shall be replanted with the appropriate native species. Maintenance or replacement of surrounding silt fence shall take place when needed. These tasks can be handled by the maintenance crew.

### **5.2.4 Trash and Debris Removal**

Trash and debris will be removed from the mitigation sites as needed. Trash consists of all man-made materials, equipment, or debris left within the mitigation areas that do not serve a function related to habitat restoration.

### **5.2.5 Irrigation Maintenance**

The temporary irrigation system installed at each of the mitigation sites will be checked regularly to repair, correct, or modify the irrigation system to ensure it functions properly. The maintenance crew will be responsible for any repair of the irrigation components.

## **5.3 Long-Term Maintenance**

The wetland mitigation sites will be protected under a covenant of easement. A long-term management plan for these areas shall involve maintenance of the wetland functions and values in perpetuity by the Master association, underlying land owner, or an approved land manager. The responsible party shall deter access to the wetland mitigation sites through the use of signage and/or barriers. They shall provide for the long-term removal of trash, repair of any vandalism, and control of invasive species. They shall also be responsible for the implementation of any remedial measures (e.g., planting of native wetland plants) to repair damage or loss due to any of the above-mentioned factors.

## **6.0 Biological Monitoring Program**

Monitoring is needed to identify and correct problems that may arise during the implementation of this wetland mitigation project, and to document mitigation success. Monitoring reports that discuss the progress of the wetland establishment effort shall be provided to the client and appropriate agencies for each mitigation site once implemented.

### **6.1 Site Preparation Monitoring**

During the site preparation step for each wetland mitigation site, the restoration specialist or qualified monitor shall be present. The monitor will be on-site during weed control, and shall evaluate the effectiveness of the weed control efforts approximately one week after completion of each control effort. The monitor shall determine whether and how many repeat control efforts are needed to eradicate noxious weeds from the site. The monitor shall record dates of all site preparation activities, problems encountered, alternative approaches used, and other information necessary to provide a complete and accurate account of the particular implementation phase of the mitigation project.

### **6.2 Implementation Monitoring**

The monitor shall oversee the container plant layout prior to planting each of the wetland mitigation sites to ensure that container plants are arranged in a natural manner. The monitor

shall be available on-site during planting to assist in making necessary modifications. The monitor shall record planting dates, problems encountered, alternative approaches used, and other information necessary to provide a complete and accurate account of the particular implementation phase of the mitigation project.

## **6.3 120-day Plant Establishment Monitoring**

The monitor shall visit the particular wetland mitigation site when implemented every two weeks during the 120-day PEP. During these qualitative monitoring visits, the monitor shall note container plant survival and growth, weeds present, erosion features, and other conditions affecting the ability of the planted species to become established on the particular mitigation site.

The monitor shall record these observations and communicate them to the maintenance crew, and shall direct the crew to take appropriate actions to optimize site conditions for that particular mitigation site. The monitor shall observe and record the effectiveness of these actions. At the end of the 120-day PEP for a particular mitigation site, the monitor shall make preliminary recommendations for any replanting of the site and communicate these recommendations to the project proponent and appropriate agencies.

The monitor shall submit a written report describing the site preparation, project implementation, and the 120-day PEP for each mitigation site when implemented to the City of San Diego and the project proponent within 45 days of the completion of the 120-day PEP for that mitigation site. The as-built report for each mitigation site will include site preparation dates, the species and quantities of container plants installed, survival of container plants after 120 days, photo-documentation of site conditions after 120 days, discussions of other aspects of site preparation, project implementation, plant establishment, and recommendations for remedial actions, if needed.

## **6.4 Five-year Monitoring Program**

### **6.4.1 Qualitative Monitoring**

Evaluation of plant health and identifying and correcting problems as they arise are necessary for ensuring successful vegetation establishment. At a minimum, qualitative monitoring shall be conducted once monthly for the first year, once quarterly in Years 2 and 3, and semi-annually in Years 4 and 5 for each mitigation site when implemented.

Qualitative monitoring shall involve the restoration specialist reviewing the particular mitigation site to assess survival and growth of the planted material, levels of weed competition, and erosion. The monitor shall also make visual assessments of percent cover by weeds and by



native plants. The monitor shall record and report findings and make recommendations for remedial actions, if needed, to the maintenance crew after each monitoring event for a particular mitigation site. If site conditions are such that additional remedial actions are required for that mitigation site beyond those envisioned in this plan, the monitor shall communicate recommendations for remediation to the project proponent.

General site conditions shall be photo-documented during the spring monitoring visit each year for each mitigation site when implemented. This photo-documentation will provide an overview of the site and will assist in documenting the development of the particular mitigation site throughout the course of the maintenance and monitoring period for that site.

## **6.4.2 Quantitative Monitoring**

Quantitative monitoring will be performed to measure development of vegetation at each mitigation site when implemented and to document that the site achieves the success criteria as defined by the performance standards. Quantitative monitoring will begin the second spring following implementation of mitigation activities at a particular site in order to allow time for the new vegetation within the mitigation site to become established. Annual quantitative monitoring shall be conducted in late spring in Years 2 through 5 for each mitigation site when implemented.

Quantitative sampling shall be carried out during the late spring or early summer for each mitigation site when implemented to ensure the best representation of species diversity. During quantitative sampling, counts of planted container stock survival shall be made to determine survival for that particular mitigation site.

## **6.4.3 Monitoring Schedule**

The biological monitoring period shall begin at the end of the 120-day PEP for each mitigation site when implemented and will last for five years or until the particular mitigation site has met the final performance standards, whichever happens first. A monitoring schedule is presented in Table 3. The monitoring program shall be conducted by the project biologist, as outlined below.

**TABLE 3**  
**APPROXIMATE MONITORING SCHEDULE**

Type/Task	PEP (3 Months)	Year 1	Years 2	Year 3	Year 4	Year 5
<b>Qualitative</b>						
Monitoring	Semi-weekly	Monthly	Quarterly	Quarterly	Semi-annually	Semi-annually
<b>Quantitative</b>						
Spring/fall veg. sampling	—	—	Annually	Annually	Annually	Annually
Reports	As-built	Annually	Annually	Annually	Annually	Annually

## 6.5 Performance Success Criteria

Each particular wetland mitigation site shall be considered successful when the final performance standards have been met, which may occur before the fifth year of maintenance and monitoring. Interim and final performance standards for achieving relative percent native plant cover, relative percent non-native plant cover, and survivorship are shown in Table 4.

**TABLE 4**  
**PERFORMANCE SUCCESS CRITERIA**

Year	Container Plant Survival*	Total Native Plant Canopy Cover (percent)	Non-native Cover (annual species)
1	80%	-	-
2	N/A	35	5%
3	N/A	50	5%
4	N/A	60	5%
5	N/A	80	5%

\*Survival based on initial planting quantities.

## 6.6 Reporting Program

The restoration monitor shall prepare annual reports describing qualitative and quantitative monitoring results for Years 1 through 5 for each wetland mitigation site when implemented. These reports shall summarize maintenance activities, discuss general site conditions and trends, include photo-documentation of site conditions, compare quantitative measures with success performance criteria, and make recommendations for remedial actions, if needed. The annual reports shall be submitted to the City of San Diego, the appropriate resource agencies, and the project proponent.

## **7.0 Schedule of Activities**

The implementation of this mitigation plan as it applies to each mitigation site shall be concurrent with the implementation of each of the four phases. The 120-day PEP and five-year maintenance and monitoring activity schedules for a particular wetland mitigation site are presented above in Tables 2 and 3, respectively. Long-term maintenance for the wetland mitigation and preservation areas shall be provided in perpetuity once the five-year maintenance program comes to an end.

## **8.0 Remediation Measures**

If a particular wetland mitigation site does not meet interim performance standards, the monitor shall propose remedial measures in the annual report for that site. Minor remedial measures, such as replanting, increased weeding frequency, or minor modifications to the sampling protocol, shall be implemented unless the project proponent or the City of San Diego objects within 30 days of receipt of the annual report.

If unforeseen circumstances require more extensive or costly measures to achieve project success at a particular mitigation site, the restoration specialist shall consult with the project proponent and the City of San Diego to develop contingency measures for that site. Contingency measures shall be funded by the project proponent and would require approval by the City of San Diego. After contingency measures have been implemented for a mitigation site, maintenance and monitoring shall continue according to the steps in this plan until the particular mitigation site meets the performance standards.

## **9.0 Completion of Mitigation Notification**

When the restoration specialist determines that the performance standards have been met for a particular mitigation site, the restoration specialist shall submit a final report and provide documentation of success for that mitigation site. The report shall be submitted and reviewed by the City of San Diego and U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. The restoration specialist shall organize a site visit to the particular mitigation site with the City of San Diego and above resource agencies within two months of notification. Following the site visit, the City of San Diego will provide a written determination of mitigation site success to the restoration specialist and the project proponent. Upon confirmation of mitigation site success, the project proponent shall be released from all mitigation maintenance and monitoring obligations for that site. If the particular mitigation site is determined to be unsuccessful, contingency measures shall be implemented and any financial assurances provided by the project proponent shall not be released until the mitigation site is deemed successful.

## 10.0 Reference Cited

U.S. Department of Agriculture Soil Conservation Service

1973 Soil Survey, San Diego Area, CA. Edited by Roy H. Bowman. Soil Conservation Service and Forest Service.