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4 March 2016

Ben Badiee
Badiee Development, Inc.
Post Office Box 3111
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BIOLOGICAL RESOURCES LETTER REPORT

Project Name: Harmony Grove Industrial Park

Dear Mr. Badiee,

I have prepared the following Biological Letter Report at your request and in anticipation of review by the City of Escondido. The project encompasses 5.24 acres (4.87 acres in APN 235-050-15 and 0.37 acres of the contiguous Rincon Del Diablo water easement) in the City of Escondido, which is proposed for improvement to accommodate two industrial buildings totaling approximately 91,000 square feet.

THE PROJECT SETTING

The project site is situated in the western portion of the City of Escondido, on Harmony Grove Road south of Enterprise Street. It is bordered on the east by Escondido Creek (Figures 1 and 2). The approximate USGS coordinates of the site are 33°06'N, 117°07'W (Escondido 7.5 minute series quadrangle, see Figure 3), as determined on-site by Global Positioning System (GPS) receiver. The property is situated within an area of development of similar sized industrial structures (See Figures 4 & 5 and the accompanying Biological Resources Map).

METHODS

To conduct an assessment of biological resources, I visited the project site on 19 January 2016. The conditions for observation were excellent, with no clouds, no impediments to visibility, temperatures in the high 70s, and a 3-10 knot northeast wind. The visit lasted from approximately 1015 to 1345. During my visit, I was able to examine the entire project site and adjacent areas on foot. My observations on-site were recorded as they were made, and form the basis of this report and the site Biological Resources Map. Animals were identified using scat, tracks, burrows, vocalizations, or direct observation with the aid of 10X42 Leica binoculars. Vegetation mapping was conducted in accordance with vegetation community definitions as described in Oberbauer, *et. al*. (2008). In addition, vegetation mapping on-site was aided by the use of a digital color satellite photograph. It should be noted that all vegetation community mapping is verified on the ground to the greatest degree possible in the absence of a systematic land survey. All vegetation areas and boundaries are estimates subject to final delineation by a professional land surveyor.

Sensitive Species and Habitats

Prior to a site visit, a variety of sources are reviewed to ascertain the possible occurrence of sensitive species at the project site. First, soil types (Bowman 1973) are checked to determine if the site contains soils known to support sensitive plant species. Records searches for the USGS quadrangle and surrounding quads are done of the California Natural Diversity Data Base (CNDDB) and California Native Plant Society (CNPS) On-Line Inventory of Rare and Endangered Plants. Any sensitive species known to occur in the vicinity are given special attention, and available natural history information is reviewed. Seasonal occurrence patterns (*e.g.,* annual plants, migratory birds) are factored into survey plans in the event that site visits are made during time periods when certain species are not present or conspicuous. Information sources include the Jepson Manual (2012), Rare Plants of San Diego (Reiser 1994), A Flora of San Diego County, California (Beauchamp 1986), San Diego Native Plants (Lightner 2011), U.S. Fish and Wildlife Service Recovery Plans for Threatened/Endangered Species, the San Diego County Bird Atlas (Unitt 2004), and numerous other references, publications, and on-line resources.

During site visits, all habitats are assessed for their suitability for occupation by any sensitive species with potential to occur.

RESULTS[1]

Based on soil conservation service maps (Bowman 1973), the soil type for the project site is Placentia sandy loam, thick surface, 2-9% slopes (PfC). It appears that there may have been some soil importation many decades ago. The project Soils Analysis may shed light on this.

Vegetation Communities

Three vegetation communities occur on the project site: Disturbed Habitat, Non-native Grassland and Eucalyptus Woodland. These habitat types are discussed below, shown on the accompanying Biological Resources Map, and are illustrated with photographs appended to this report.

Disturbed (Holland Code 11300 - 1.36 acres)

This area includes slabs and foundations from recently demolished building, driveways, ornamental landscaping, rubble piles, and bare ground. This area meets the definition for Disturbed as promulgated in the Multiple Habitat Conservation Program (MHCP), Volume 2, Appendix F.

[1] Scientific and common names for plant species are derived from The Jepson Manual, 2012; scientific and common names for birds from the A.O.U. Check-list of North American Birds, 1998.

Non-Native Grassland (Holland Code 42200 - 2.57 acres)

The Non-Native Grassland (NNG) occurs on the slopes and in the swale with several different species of annual grasses including wild oat (*Avena fatua*), bromes (*Bromus* spp.), ryegrass (*Lolium multiflorum*), and purple false-brome (*Brachpodium distachyon*).

Eucalyptus Woodland (Holland Code 79100 - 1.31 acres)

Scattered throughout the site are several stands of large, mature Murray Red Gum *Eucalyptus camaldulensis* and Blue Gum *E. globulus* trees.

Wildlife

During the site survey a variety of common resident bird species were observed. These included Anna's Hummingbird *Calypte anna*, Mourning Dove *Zenaida macroura*, and House Finch *Carpodacus mexicanus*, and other common resident and migratory species.

Southern Pocket Gophers *Thomomys bottae* and California Grounds Squirrel burrows were observed on the site, and other common mammal species found in ruderal habitats likely occur. The only reptile or amphibian observed was Western Fence lizards *Sceloporus occidentalis*. A complete list of Animal species detected is provided in Appendix B.

Sensitive Species

Given the extremely disturbed nature of the site the occurrence of any sensitive plant or animal species is highly unlikely. No sensitive plant or animal species were observed or considered as potentially occurring. Based on the CNDDB there are no records of threatened, endangered, or sensitive species reported from nearby Escondido Creek.

JURISDICTIONAL WETLANDS

A Routine Wetland Delineation was conducted on the site based on the *Corps of Engineers Wetland Delineation Manual* (Army Corps of Engineers 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2006). The delineation was conducted with a wide, nearly flat swale that transects the eastern portion of the site from north to south (See Appendix D for complete delineation results). Near the center of the swale one area was determined to be a wetland and therefore under the jurisdiction of the Army Corps. This area amounts to 76 square feet or 0.002 acres.

Wildlife Movement Corridors and Nursery Sites

A wildlife corridor can be defined as a linear landscape feature allowing animal movement between two larger patches of habitat. Connections between extensive areas of open space are integral to maintain regional biodiversity and population viability. In the absence of corridors, habitats become isolated islands surrounded by development. Fragmented habitats support significantly lower numbers of species and increase the likelihood of local extinction for select species when they are restricted to small isolated areas of habitat. Areas that serve as wildlife movement corridors are considered biologically sensitive.

Wildlife corridors can be defined in two categories: regional wildlife corridors and local corridors. Regional corridors link large sections of undeveloped land and serve to maintain genetic diversity among wide-ranging populations. Local corridors permit movement between smaller patches of habitat. These linkages effectively allow a series of small, connected patches to function as a larger block of habitat and perhaps result in the occurrence of higher species diversity or numbers of individuals than would otherwise occur in isolation. Target species for wildlife corridor assessment typically include species such as bobcat, mountain lion, and mule deer.

To assess the function and value of a particular site as a wildlife corridor, it is necessary to determine what areas of larger habitats it connects, and to examine the quality of the corridor as it passes through a variety of settings. High quality corridors connect extensive areas of native habitat, and are not degraded to the point where free movement of wildlife is significantly constrained. Typically, high quality corridors consist of an unbroken stretch of undisturbed native habitat.

The project site is bordered on the west by existing industrial buildings and on the north by a similar disturbed parcel (See Figure 5) and is not part of a wildlife corridor. Escondido Creek which borders the site on the east is the major wildlife Corridor in the vicinity. The creek will not be impacted by project implementation. Significant impacts to wildlife movement corridors by project implementation are not anticipated.

Large mammals, such as mule deer *Odocoileus hemionus* and mountain lion *Felis concolor* prefer large unfragmented natural areas that offer extensive adequate forage or hunting opportunities as well as the opportunity for movement across long distances. Because the project site is situated within a highly developed, essentially urbanized area, these opportunities are very limited. The project site is unsuitable for use by large mammal species because of its disturbed nature and surrounding land uses.

Native Wildlife Nursery Sites

Native Wildlife Nursery Sites, which are considered sensitive resources that require protection, are defined in the County of San Diego Guidelines for Determining Significance - Biological Resources as “sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies”. Features such as individual raptor or woodrat nests do not constitute places where wildlife *concentrate*, thus they do not meet this definition and are therefore not considered Native Wildlife Nursery Sites. No Native Wildlife Nursery Sites occur on or near the project site, and none will be impacted by project implementation.

PROJECT IMPACTS

The California Environmental Quality Act (CEQA) and the MHCP require that projects avoid or adequately mitigate for the loss of sensitive species and habitats. Such avoidance or mitigation enables city staff to make a finding of No Significant Impact and issue a Negative Declaration or Mitigated Negative Declaration for the proposed project. As indicated in the table below, the project will unavoidably impact sensitive habitats.

Table 1. Existing and Impacted Habitat On The Project Site

PLANT COMMUNITY	ACREAGE ON-SITE	IMPACTED ACREAGE	MITIGATION REQUIRED (RATIO)
Disturbed Habitat	1.36	N / A	0
Non-Native Grassland	2.57	2.57	1.28 (0.5:1)
Eucalyptus Woodland	1.31	N / A	0
Disturbed Wetland*	0.002	0.002	0.006 (3:1)
Total	5.24	2.57	1.286

* Due to the extremely small size of the wetland acreage and because it is situated within NNG, the Disturbed Wetland acreage is included within the NNG acreage calculation.

No off-site impacts will result from the implementation of this project.

CONCLUSIONS AND MITIGATION

Mitigation of unavoidable impacts to Non-Native Grassland will be accomplished by the purchase off-site of suitable habitat within a City approved mitigation bank (such as the Daley Ranch Conservation Bank). The City requires this habitat type to be mitigated at a 0.5:1 ratio. Thus, a total of 1.28 acres of mitigation credits will be obtained. Mitigation for impacts to Disturbed Wetland will be accomplished by the purchase off-site of suitable habitat within a City approved mitigation bank including 0.002 acres of wetland creation and 0.004 acres of wetland restoration or enhancement. Accordingly, the project is consistent with the MHCP.

Site grading or the removal of trees or other vegetation within 300 feet of any known migratory songbird nest or within 500 feet of a raptor nesting location shall not take place during the raptor and songbird breeding season, defined as the period from 1 January to 31 August of each year. This is required in order to ensure compliance with the federal Migratory Bird Treaty Act and various sections of the California Fish and Game Code, which prevent the “take” of eggs, nests, feathers, or other parts of most native bird species. Limiting activities to the non-breeding season will minimize chances for the incidental take of migratory songbirds or raptors.

Should it be necessary to conduct brushing, grading, or tree removal during the bird breeding season, a preconstruction nesting survey of all areas within 300 feet (for songbirds) and 500 feet (for raptors) of the proposed activity will be required. If a qualified Wildlife Biologist determines that no nesting activity is taking place, these activities may proceed as long as the initiation of the work begins no later than seven days from the date of the nest survey.

In order to prevent any potential adverse impacts to off-site resources, it is recommended that adequate measures (Best Management Practices) be taken during construction to prevent runoff from entering adjacent parcels. These measures should be sufficient to help reduce any possible indirect impacts of the proposed project to a level well below significant.

The mitigation as proposed is deemed to be adequate to reduce the overall impacts of the proposed project to a level below significant, as defined by the California Environmental Quality Act.

Thank you very much for the opportunity to conduct this work and prepare this report. Please contact me if I can provide any additional information or provide clarification.

Sincerely,

William T. Everett
Certified Biological Consultant

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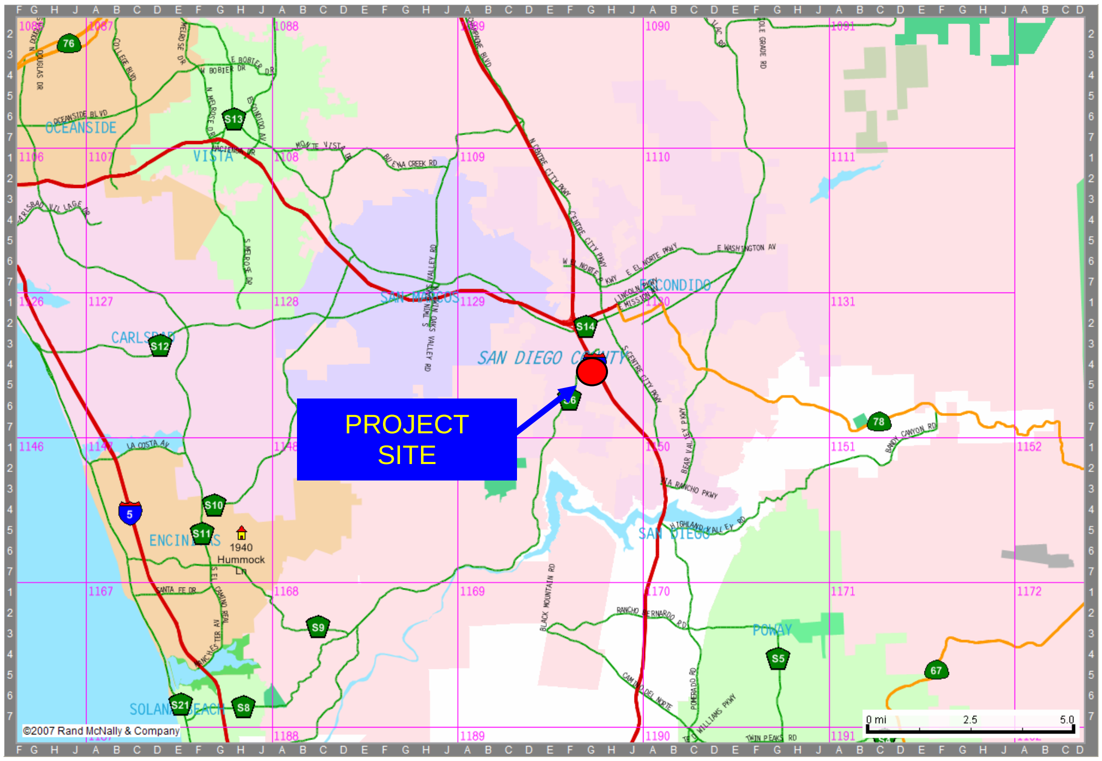

Figure 1. Location of project site in regional context. Thomas Bros. Map page #1129, E4.

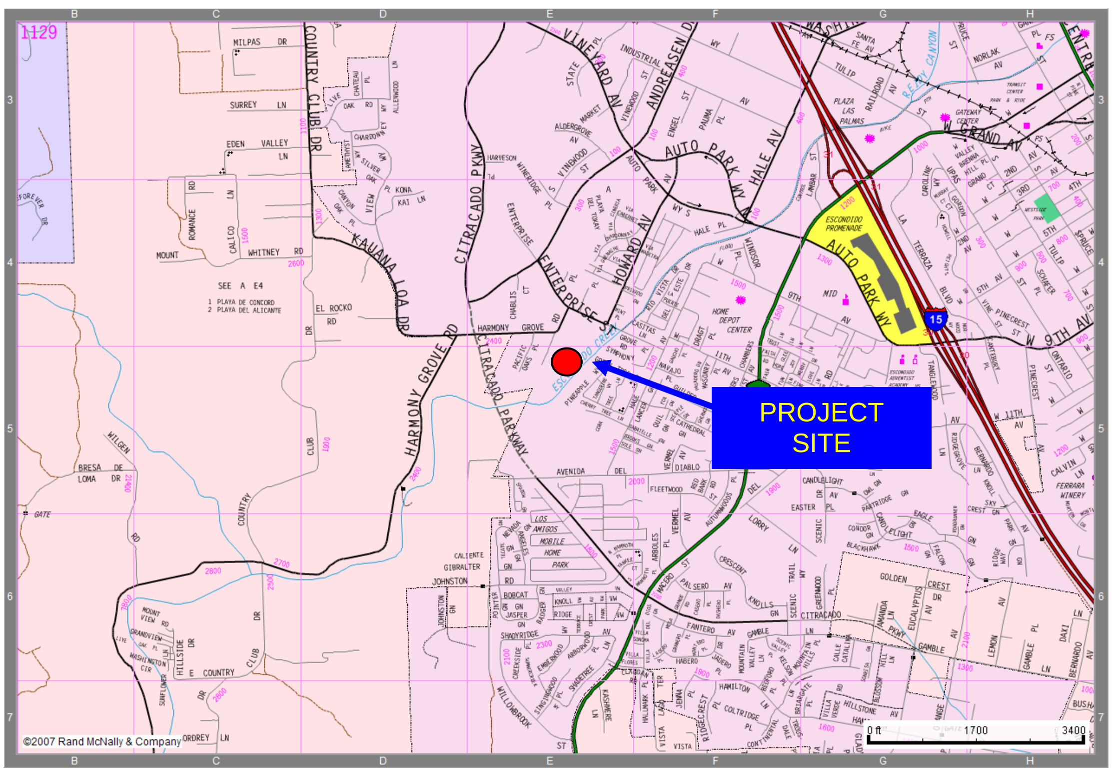

Figure 2. Detail location map of project site. Thomas Bros. Map page #1129, E4.

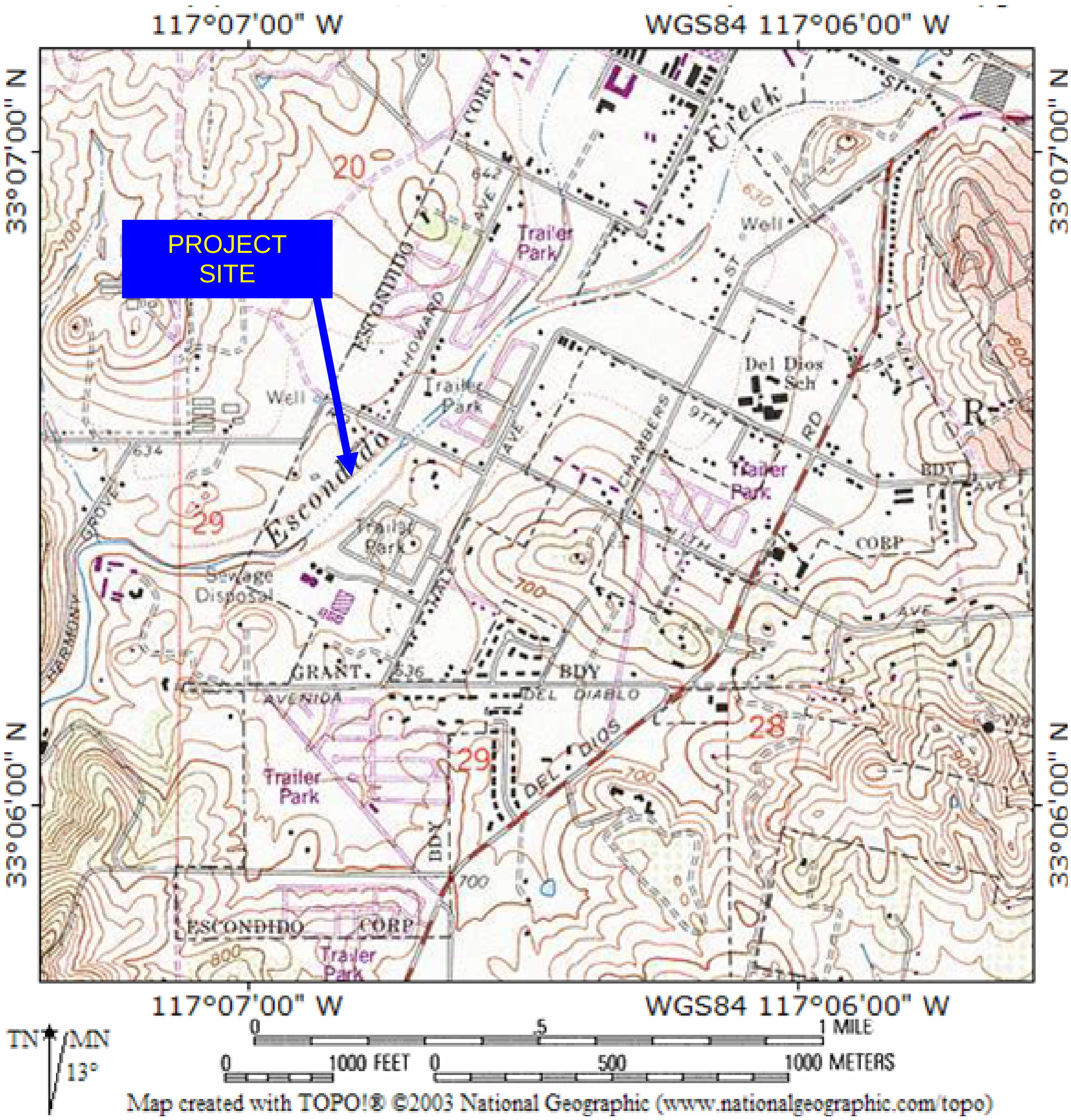

Figure 3. Topographical map showing project site location. Taken from USGS Escondido 7.5 minute series quadrangle.

Figure 4. Satellite photograph of project site showing parcel boundaries for project site (outlined in red). Top of photo is true north.

APPENDIX A

PLANT SPECIES OBSERVED ON THE SITE

Anacardiaceae - Sumac Family

* Schinus molle
Peruvian Pepper Tree

Arecaceae - Palm Family

Washingtonia robusta
• Mexican Fan Palm

Asteraceae (Compositae) - Sunflower Family

Baccharis salicifolia
Mule Fat
* Carduus pycnocephalus ssp. pycnocephalus
Italian Thistle
* Centaurea melitensis
Tocalote
* Conyza bonariensis
Conyza
Hazardia squarrosa
Saw-tooth Goldenbush
Gnaphalium californicum
California Everlasting
* Latuca seriola
Prickly Lettuce
* Silybum marianum
Milk Thistle

Boraginaceae - Borage Family

Heliotropium curvassicum
Salt Heliotrope

Brassicaceae (Cruciferae) - Mustard Family

* Hirschfeldia incana
Short-Pod Mustard
* Raphanus sativus
Wild Radish

Chenopodiaceae - Goosefoot Family

* Atriplex prostrate
Spearscale
* Salsola tragus
Russian Thistle

Fabaceae - Pea Family

* Melilotus indicus
Indian Sweet Clover

Geraniaceae - Geranium Family

* Erodium sp.
Filaree

Malvaceae - Mallow Family

* Malva parviflora
Cheezeweed

Myrtaceae - Myrtle Family

* Eucalyptus sp.
Eucalyptus

Oleaceae - Olive Family

* Olea europea
Olive Tree

Oxalidaceae - Oxalis Family

* Oxalis pes-caprae
Bermuda Buttercup

Platanaceae - Plane Tree Family

Platanus racemosa
Western sycamore

Poaceae (Gramineae) - Grass Family

* Avena fatua
Wild Oat

* Avena barbata
Wild Oat
Bromus carinatus var. carinatus
California brome
* Bromus diandrus
Ripgut Grass
* Bromus hordeaceus
Soft Chess
* Bromus madritensis ssp. rubens
Red Brome
* Cynodon dactylon
Bermuda Grass
* Festuca perennis
Rye Grass
* Polypogon monspeliensis
Rabbitfoot Grass

Polygonaceae - Buckwheat Family

Rumex crispus
Curley Dock

Salicaceae - Willow Family

Salix lasiolepis
Arroyo Willow

Saururaceae - Lizard's-tail Family

Anemopsis californica
Yerba Mansa

Solanaceae - Nightshade Family

Datura wrightii
Jimson Weed
* Nicotiana glauca
Tree Tobacco

Tamaricaceae - Tamarix Family

* Tamarix sp.
Tamarisk

Urticaceae - Nettle Family

Urtica dioica ssp. holosericea
Stinging Nettle

* = Non-Native Species

Note: This list contains plant species observed on the site and does not purport to be a complete list of species that occur on the site. Floral lists are compiled to assist in accurate plant community determination and as a by product of surveys for sensitive species.

APPENDIX B

WILDLIFE SPECIES OBSERVED OR DETECTED ON THE PROJECT SITE

BIRDS

American Kestrel	*Falco sparverius*
Mourning Dove	*Zenaida macroura*
Anna's Hummingbird	*Calypte anna*
Western Kingbird	*Tyrannus verticalis*
Nuttall's Woodpecker	*Picoides nuttallii*
Black Phoebe	*Sayornis nigricans*
House Finch	*Carpodacus mexicanus*
Western Scrub-Jay	*Aphelocoma californica*
Yellow-rumped Warbler	*Dendroica coronata*
American Crow	*Corvus brachyrhynchos*

MAMMALS

Botta's Pocket Gopher *Thomomys bottae*	Burrows
California Ground Squirrel *Spermophilus beecheyi*	Observed

AMPHIBIANS AND REPTILES

Western Fence Lizard
Sceloporus occidentalis

APPENDIX C

PHOTOGRAPHS OF THE PROJECT AREA

All photographs taken 2015 by W.T. Everett

Photograph 1. View of disturbed area in the western portion of the site.

Photograph 2. View of disturbed area in the western portion of the site and Non-Native Grassland in northwest corner of the site.

Photograph 3. Non-Native Grassland and Eucalyptus woodland along eastern boundary of the site.

Photograph 4. Rubble in the center of the site.

APPENDIX D - WETLAND DELINEATION

15 January 2015

Ben Badiee
Badiee Development, Inc.
Post Office Box 3111
La Jolla, CA 92038

Re: HARMONY GROVE WETLAND DELINEATION

The purpose of this delineation is to identify and delineate areas within your Harmony Grove property (APN 235-050-15) that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE), pursuant to Section 404 of the Clean Water Act. In addition, areas that qualify as wetlands under the jurisdiction of the California Department of Fish and Wildlife (CDFW) were also delineated. Escondido Creek is located southeast of the site, with a large berm between the property and the creek. The berm was constructed by the ACOE in the late 1960s. A small drainage was identified on the National Wetland Inventory Maps showing palustrine emergent marsh on the property that flowed from the north (where a newer subdivision is now) through the Harmony Grove. The site is now highly disturbed with nonnative grassland, eucalyptus trees, old buildings foundations, and some disturbed wetland. This report identifies the wetland delineation completed on all areas that could potentially have supported wetlands or non-vegetated waters of the U.S. within the property. All areas identified as ACOE jurisdiction will also fall under jurisdiction of the CDFW. Areas that only have one wetland characteristic of the three required for ACOE jurisdiction may also fall under jurisdiction of the CDFW Code 1602 (Streambed Alteration Agreement). Both jurisdictional areas are identified as appropriate.

The Harmony Grove project is the application for a grading permit to prepare for two industrial buildings in the western portion of the City of Escondido, San Diego County, California. The entire project site encompasses 4.87 acres. The site is adjacent to Escondido Creek, slightly south of the Harmony Grove Road bridge (Figures 1 and 2). The USGS topographical map (Figure 3) shows no indication of wetlands on the site. Figure 4 is a color satellite image of the site and adjacent properties.

Environmental Setting

The project site contains the foundations for a residence and several garages and outbuildings. Mature eucalyptus trees occur in the entire area under consideration. The site contains no native habitats and very few native plants. Examination of historical aerial images shows that the area in question was within the Escondido Creek floodplain until at least 1964. Sometime between 1964 and 1980 Escondido Creek was channelized and a large levee installed that borders the eastern site boundary. The channelized area of Escondido Creek now contains mature riparian woodland that appears suitable for occupation by sensitive wildlife species. A very shallow swale runs through the site from the northeast south along the eastern portion of the site. The source of water that periodically flows through the swale is a storm drain that crosses under Harmony Grove Road onto the property contiguous to the north. This stormwater then flows east along the south side of the contiguous property project site and outlets onto the site in the northeast corner of the parcel.

There are three vegetation communities onsite; nonnative grassland, eucalyptus woodland, and disturbed wetland. The eucalyptus woodland consists of scattered eucalyptus trees throughout the property. The nonnative grassland occurs on the slopes and in the swale with several different species of annual grasses including wild oat (*Avena fatua*), bromes (*Bromus* spp.), ryegrass (*Lolium multiflorum*), and purple false-brome (*Brachpodium distachyon*). Disturbed wetland onsite consisted of a small patch of tamarisk trees (Tamarix ramosissima) with Bermuda grass (*Cynodon dactylon*) and curly dock (*Rumex crispis*). Two different soil types are mapped onsite and were identified during the wetland delineation. The soil Series and Phases onsite are Placentia sandy loam and Grangeville fine sandy loam (U.S. Department of Agriculture 1973).

Methods

The topography of the site was reviewed and areas with potential hydrology were examined. Each area of potential jurisdiction was evaluated using the methodology in the *Corps of Engineers Wetland Delineation Manual* (Army Corps of Engineers 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2006). The routine determination for areas equal to or less than 5 acres was used. The methodology for determining jurisdictional wetlands requires that areas have indicators of hydrophytic vegetation, hydrology, and hydric soils. If no hydrophytic vegetation was present at a particular site, it was evaluated for evidence of an ordinary high water mark to determine non-wetland waters of the U.S. as defined by ACOE regulations. Sue Scatolini and Bill Everett performed field work on December 4, 2015. Soils information is from the Soil Survey, San Diego Area, California (U.S. Department of Agriculture 1973). Nomenclature for plants used in this report conforms to Hickman (1993). Areas that did not exhibit all three criteria needed for ACOE jurisdiction were evaluated to determine whether they exhibit characteristics of CDFG jurisdiction. Due to the timing of the delineation, annual grasses were not in flower. A biological report of the property by Vincent Scheidt in 2008 was used as a reference for the types of annual grasses that occurred onsite. The growth form and leaves of the most common grass in the swale appeared to by ryegrass. The other annual grasses observed by Scheidt were all upland species with the exception of rabbitfoot grass (*Polypogon monospeliensis*) which was flowering onsite and was observed at one of the sample locations.

Results

The ACOE regulates wetlands as defined in the Corps of Engineers Wetland Delineation Manual (US Army Corps of Engineers 1987) and waters of the U.S. as defined in the Regulatory Programs of the Corps of Engineers; Final Rule (Federal Register 1986). By ACOE definition, wetlands are “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” For non-tidal waters of the U.S. the extent of jurisdiction is defined as the ordinary high water mark, which is defined as: “the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation or presence of litter and debris.”

Seven areas were evaluated for ACOE jurisdiction onsite. The delineation forms are included in Attachment 1. Each area is described below with the determination of ACOE jurisdiction. Photographs of each point are attached. Figure 5 shows delineation sites.

1. Sample Point 1 was collected in the low area at the southwestern end of the property. This point was dominated by all upland plant species and there were no hydrological indicators. The soils within this plot were not hydric. This location was not considered wetland under ACOE jurisdiction or CDFG jurisdiction.

2. Sample Point 2 was collected a few yards upstream of sample point 1. This plot was dominated by ryegrass and spearscale, upland species, and a small amount of curly dock (*Rumex crispus*), a facultative wetland (FAC) species. The dominant species were not hydrophytic vegetation. The soils onsite did exhibit a depleted matrix and were considered hydric. There was a secondary indicator of a drainage pattern in the swale onsite; however, there were no other hydrology indicators onsite. This location is not an ACOE jurisdictional wetland and although it did have a hydric soil indicator, the lack of hydrology or hydrophytic vegetation precludes its viability as a CDFG wetland.

3. Sample Point 3 was collected upstream of point 2 where a low swale was observed. This location was dominated by Bermuda grass (facultative upland species) with some yerba mansa (*Anemopsis californica*), an obligate wetland species. The yerba mansa was dominant species and the prevalence index identified the area as having hydrophytic vegetation. Soils onsite were hydric. Only the low area was identified as having hydrology secondary indicators. Since hydrophytic vegetation and hydric soils were identified, this approximately 2 feet wide and 14 feet long swale would be considered an ACOE jurisdictional wetland.

4. Sample Point 4 was collected upstream of point 3 in an area with a few small tamarisk trees. This location had 66.7 percent hydrophytic vegetation including tamarisk and curly dock. Hydric soils were indicated by the depleted matrix. Hydrology was indicated by the drainage pattern in wetland and a biotic crust indicated by an algal mat. This location was identified as jurisdictional wetland for both ACOE and CDFW criteria. The area is approximately 4 feet by 12 feet.

5. Sample Point 5 was collected upstream of the disturbed wetland in Point 4. This location had some large eucalyptus trees with ryegrass, curly dock, and heliotrope in the understory. Hydrophytic vegetation was not indicated onsite. Concrete rubble was found in a restrictive layer approximately 8 inches below the ground surface. Hydric soils were identified in the upper 8 inches. Although the swale was considered a drainage pattern,

no other hydrology indicators were observed. This point did not exhibit any wetland indicators.

6. Sample Point 6 was collected upstream from sample point in the swale. The location was dominated by Bermuda grass with small Eucalyptus trees. Hydric soils were observed at this location. Only one secondary hydrology indicator was observed. Therefore, this location was not considered an ACOE or CDFW wetland.

7. Sample Point 7 was collected at the far northeastern edge of the property. This area was dominated by upland grasses and eucalyptus trees and had no hydrology, but did exhibit hydric soil indicators. This location was not considered an ACOE or CDFG wetland.

Conclusions

The swale onsite has disturbed weedy vegetation. Although the vegetation may have been disturbed over the years, construction of the berm along Escondido Creek and development to the north has probably affected the amount of water that flows into the swale. The weedy vegetation was not considered significantly disturbed. Only the small patch of disturbed wetlands with small tamarisk and another small swale with yerba mansa were considered ACOE wetland. A total of 76 square feet of ACOE jurisdictional wetland were identified onsite. The swale likely drains the property during rainfall events to the culvert through the berm of Escondido Creek just offsite downstream. The small palustrine emergent marsh mapped on the National Wetland Inventory in the 1980s has been constricted to two small patches of habitat in depressions along the base of the slope.

The findings of this delineation are nearly identical as those made when a wetland delineation on the site was conducted by my firm in 2010. That delineation identified 98 square feet of jurisdictional wetland in essentially the same locations as the 2015 delineation

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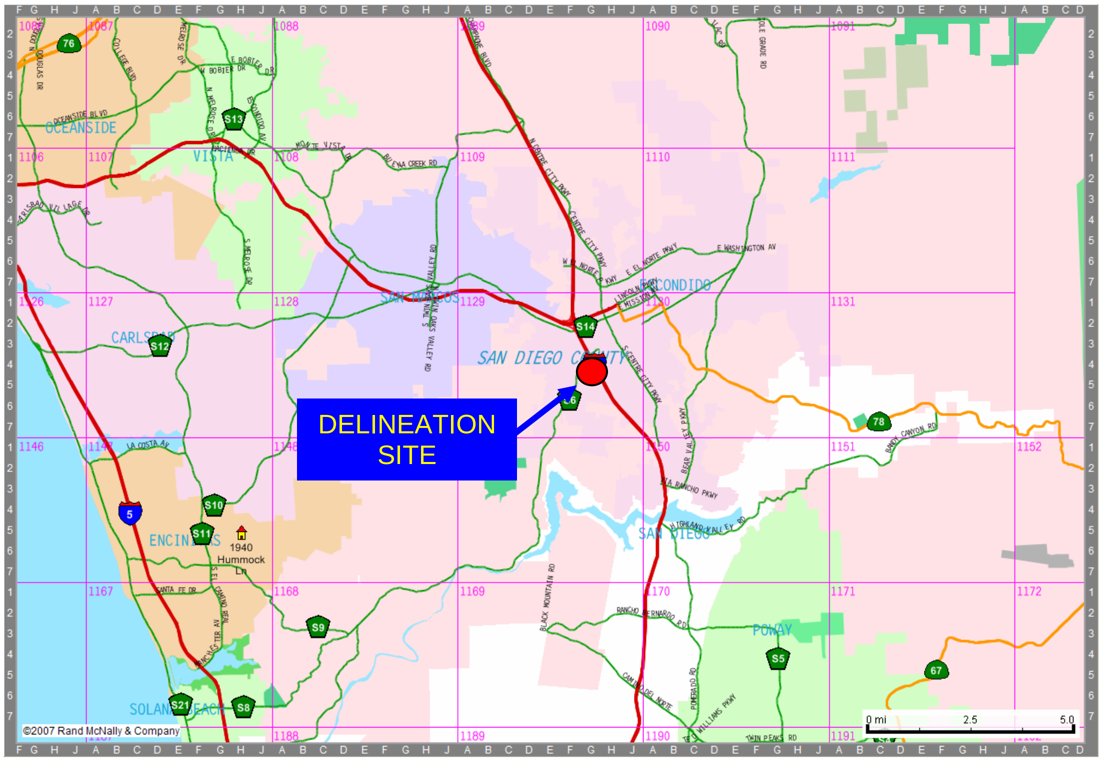

Figure 1. Location of delineation site in regional context. Thomas Bros. Map page #1129, E4.

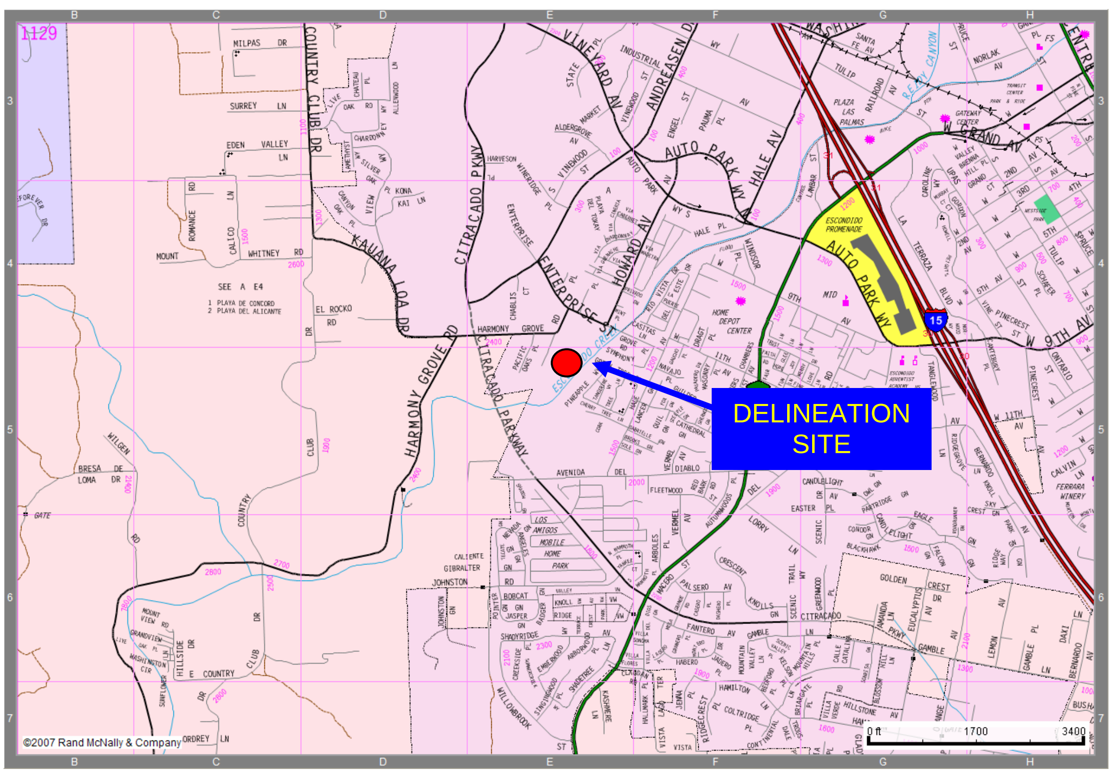

Figure 2. Detail location map of delineation site. Thomas Bros. Map page #1129, E4.

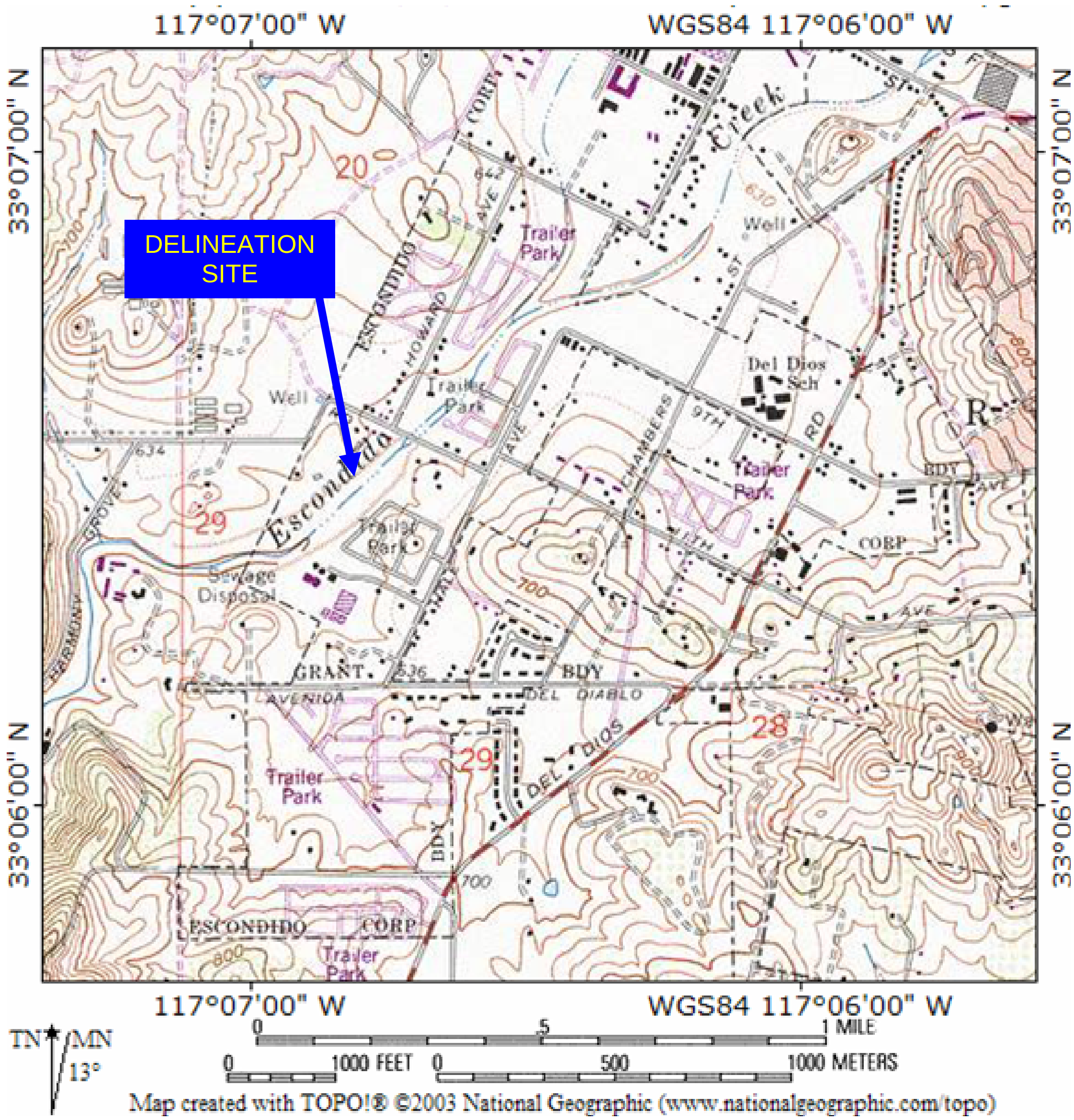

Figure 3. Topographical map showing delineation site location. Taken from USGS Escondido 7.5 minute series quadrangle.

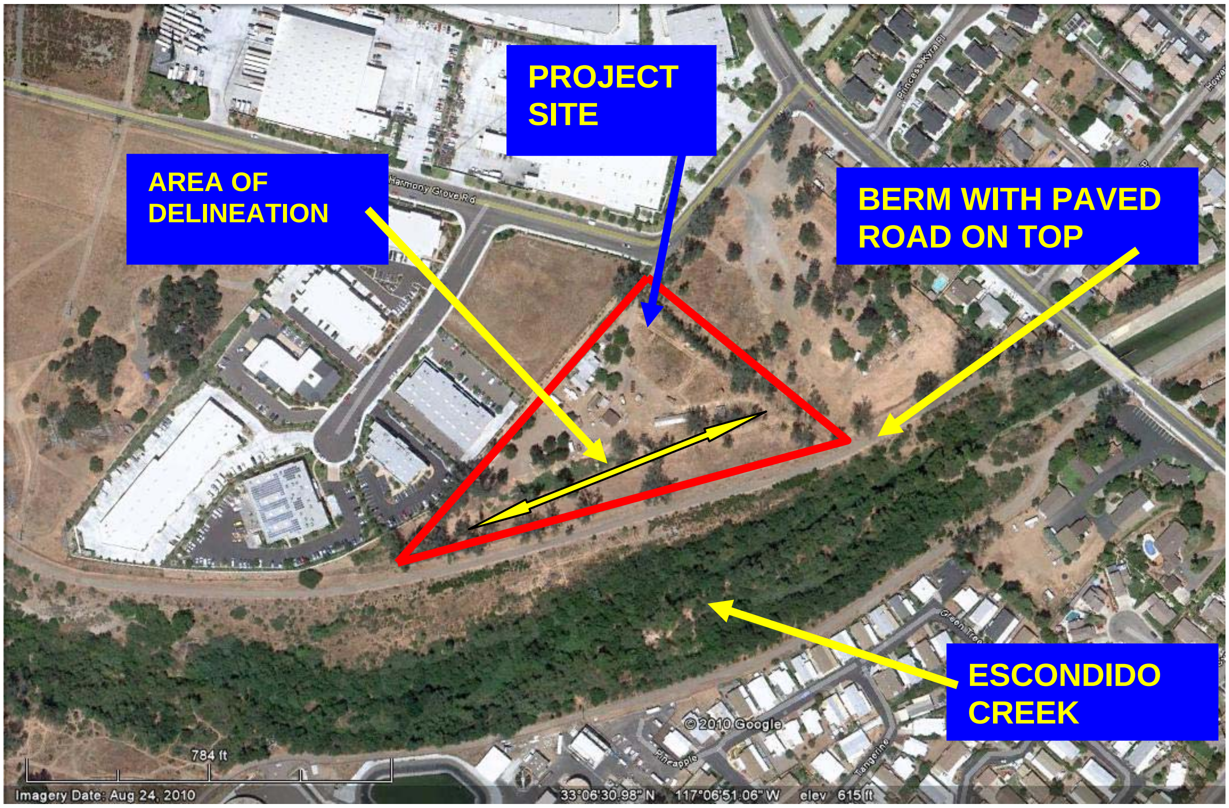

Figure 4. Close-up satellite photograph of delineation site (photograph by SANDAG/SanGIS 2010), showing parcel boundaries for delineation site (outlined in red). Top of photo is true north.

Figure 5. Locations of delineation sites and test pits.

Sample Point 1

Sample Point 2

Sample Point 3

Sample Point 4

Sample Point 5

Sample Point 6

Sample Point 7

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ CA State: ______ Sampling Point: ______

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 26.586 Long: 117° 6' 58.044 Datum: ______

Soil Map Unit Name: Grangeville fine sandy loam NWI classification: Palustrine Emergent Marsh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No X (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Sample point was collected at the base of a slope. The area was identified on the National wetland inventory maps as Palustrine emergent marsh; however, since that mapping a large berm was built between the site and Escondido Creek, and the adjacent property Where the drainage used to start from is now developed.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.	10	Y	UPL
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Avena fatua.	5	N	UPL
2. Festuca perennis	85	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ______ No X

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	90	10 YR 3/3	10	D	M	silty clay loam	uniform soil

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? Yes ______ **No** X

Remarks:

Soil is very uniform down to depth with only slightly lighter colors in 10% of the soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

__ Water Marks (B1) (**Riverine**)
__ Sediment Deposits (B2) (**Riverine**)
__ Drift Deposits (B3) (**Riverine**)
__ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Thin Muck Surface (C7)
__ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ______ **No** X

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

Remarks:

No hydrology indicators were present. The area is at the base of the slope, but had no drainage patterns or other indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ State: CA Sampling Point: 2

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 27.048 Long: 117° 6' 57.218 Datum: ______

Soil Map Unit Name: Grangeville fine sandy loam NWI classification: Palustrine Emergent Marsh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No X (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Sample point was collected in a shallow swale area at the base of a slope. The area was identified on the National wetland inventory maps as Palustrine emergent marsh; however, since that mapping a large berm was built between the site and Escondido Creek, and the adjacent property Where the drainage used to start from is now developed.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Rumex crispus	5	N	FAC
2. Atriplex prostrata	30	Y	FACW
3. Festuca perennis	55	Y	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	30	x 2 =	60
FAC species	5	x 3 =	15
FACU species		x 4 =	
UPL species	55	x 5 =	275
Column Totals:	90 (A)		350 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ______ No X

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					silty clay	
5-16	10YR 3/3	100					Coarse sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes X **No** ____

Remarks:

Soils near the surface were dark silty clay with a coarse sandy layer underlying it.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

__ Water Marks (B1) (**Riverine**)
__ Sediment Deposits (B2) (**Riverine**)
__ Drift Deposits (B3) (**Riverine**)
_x Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Thin Muck Surface (C7)
__ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ______

Water Table Present? Yes ____ No x Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ______

Wetland Hydrology Present? Yes ____ **No** X

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

Remarks:

There was a small drainage pattern of a swale in this location, but no other hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ State: CA Sampling Point: 3

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 27.877 Long: 117° 6' 5.927 Datum: ______

Soil Map Unit Name: Grangeville fine sandy loam NWI classification: Palustrine Emergent Marsh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes x No ______	**Is the Sampled Area within a Wetland?**	**Yes** X **No** ______
Hydric Soil Present?	Yes x No ______		
Wetland Hydrology Present? X	Yes ______ No ______		

Remarks:
Sample point was collected in a swale area at the base of a slope.
Where the drainage used to start from is now developed. Although there was no primary hydrology indicators ithis year, there was some standing water in 2010, the vegetation was hydrophytic and the soils were hydric. With several years of drought, it is likely this point would demonstrate hydrology if not for the drought.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Anemopsis californica	25	Y	OBL
2. Cynodon dactylon	50	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species		x 2 =
FAC species		x 3 =
FACU species	50	x 4 = 200
UPL species		x 5 =
Column Totals:	75 (A)	225 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ______

Remarks:

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/2	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes _X_ No ___

Remarks:

Soil is uniform with a depleted matrix.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- _X_ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No _X_ Depth (inches): ______

Water Table Present? Yes ___ No _X_ Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ___ No _X_ Depth (inches): ______

Wetland Hydrology Present? Yes _X_ **No** _X_

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

Remarks:

Small area with some Obligate wetland plants, there was no evidence at this time of hydrology exceot the low area. However, in 2010 this area was ponded and had standing water. Due to multiple years of drought, it is likely that this small 2 foot by 8 foot area (16 sq ft) does qualify as a wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ State: CA Sampling Point: 4

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 28.492 Long: 117° 6' 54.958 Datum: ______

Soil Map Unit Name: Grangeville fine sandy loam NWI classification: Palustrine Emergent Marsh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes x	No ______
Hydric Soil Present?	Yes x	No ______
Wetland Hydrology Present?	Yes X	No ______

Is the Sampled Area within a Wetland? Yes X No ______

Remarks:

Sample point was collected in a swale area at the base of a slope. The area was identified on the National wetland inventory maps as Palustrine emergent marsh; however, since that mapping a large berm was built between the site and Escondido Creek, and the adjacent property Where the drainage used to start from is now developed. Standing water approximately 2 inches deep

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Tamarix ramossissima	5	Y	FAC
2.			
3.			
4.			
5.			
Total Cover:	5		
Herb Stratum			
1. Cynodon dactylon	40	Y	FACU
2. Rumex crispis	10	Y	FAC
3. Heliotropium curvassicum	3	N	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover:	53		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 42 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ______

Remarks:

Small tamarisk in depression with some Rumex and mostly Bermuda grass.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- __ Water Marks (B1) (**Riverine**)
- __ Sediment Deposits (B2) (**Riverine**)
- __ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Thin Muck Surface (C7)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? Yes X **No** ___

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

Remarks:

Low area in middle of swale with algal mat .

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ State: CA Sampling Point: 5

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 29.290 Long: 117° 6' 53.774 Datum: ______

Soil Map Unit Name: Grangeville fine sandy loam NWI classification: Palustrine Emergent Marsh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ______ No X (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Sample point was collected in a swale area at the base of a slope. The area was identified on the National wetland inventory maps as Palustrine emergent marsh; however, since that mapping a large berm was built between the site and Escondido Creek, and the adjacent property Where the drainage used to start from is now developed.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.	15	Y	UPL
2.			
3.			
4.			
Total Cover:	15		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Festuca perennis	10	Y	UPL
2. Rumex crispus	12	Y	FAC
3. Polypogon monospeliensis	5	N	FACW
4. Heliotropium curvassicum	20	Y	FACU
5.			
6.			
7.			
8.			
Total Cover:	47		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 53 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ______ **No** X

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	90	10YR 3/3				sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ~~Concrete~~
Depth (inches): 8

Hydric Soil Present? Yes X **No** __

Remarks:
Shovel refusal at 8 inches due to buried concrete debris

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

__ Water Marks (B1) (**Riverine**)
__ Sediment Deposits (B2) (**Riverine**)
__ Drift Deposits (B3) (**Riverine**)
X Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Thin Muck Surface (C7)
__ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes __ No X Depth (inches): __
Water Table Present? Yes __ No X Depth (inches): __
Saturation Present? (includes capillary fringe) Yes __ No X Depth (inches): __

Wetland Hydrology Present? Yes __ **No** X

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

Remarks:
In a low area of swale, no other hydrologic indicators

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: Fidelity Mortgage State: CA Sampling Point: 6

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C (Cal-Med) Lat: 33°6' 30.464 Long: 117° 6' 50.861 Datum: ______

Soil Map Unit Name: Grangeville coarse sandy loam NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Sample point was collected approximately 150 feet downstream of point 7.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.	25	Y	UPL
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Cynodon dactylon	40	Y	UPL
2. ~~Urtica urens~~	~~1~~	~~N~~	~~UPL~~
3.			
4. Hirshfeldia incana	5	N	UPL
5.			
6.			
7.			
8.			
Total Cover:	46		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 54 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 6

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

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes X **No** ___

Remarks:

Depleted matrix top 6 inches chroma 2 or less

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

__ Water Marks (B1) (**Riverine**)
__ Sediment Deposits (B2) (**Riverine**)
__ Drift Deposits (B3) (**Riverine**)
_X Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Thin Muck Surface (C7)
__ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ **No** X

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

Remarks:

Only a small swale indicating the drainage pattern .

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Harmony Grove City/County: Escondido, San Diego Sampling Date: 12/4/15

Applicant/Owner: ______ State: CA Sampling Point: 7

Investigator(s): Sue Scatolini , Bill Everett Section, Township, Range: T 12S R 2W S 29

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C (Cal-Med) Lat: 33°6' 30.931 Long: 117° 6' 49.349 Datum: ______

Soil Map Unit Name: Placentia sandy loam NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ______	No X
Hydric Soil Present?	Yes ______	No X
Wetland Hydrology Present?	Yes ______	No X

Is the Sampled Area within a Wetland? Yes ______ No X

Remarks:
Sample point was collected in the low area tat the northeastern end of the property.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.	25	Y	UPL
2.			
3.			
4.			
Total Cover:	25		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Avena fatua	15	Y	UPL
2. Raphanus sativus	10	Y	UPL
3. L			
4.			
5.			
6.			
7.			
8.			
Total Cover:	46		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 54 % Cover of Biotic Crust ______

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

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

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ______ No X

Remarks:

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 3/2	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes X **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

__ Water Marks (B1) (**Riverine**)
__ Sediment Deposits (B2) (**Riverine**)
__ Drift Deposits (B3) (**Riverine**)
_X Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Thin Muck Surface (C7)
__ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ______

Water Table Present? Yes ____ No X Depth (inches): ______

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ______

Wetland Hydrology Present? Yes ____ **No** X

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

Remarks:

No hydrology indicators.

APPENDIX E

PREPARER QUALIFICATIONS

William T. Everett is a research, consulting, and conservation biologist with more than 40 years experience in the San Diego environment and around the world. He has logged more than 14,000 hours of field work, all detailed with field notes. In the 1970’s Bill apprenticed in the study of chaparral ecology under Frank Gander, the retired but renown premier California botanist of the 1930s and 40s. Although his specialty is ornithology, Bill has a long-standing interest in all endangered species management and conservation issues. As President then Conservation Chairman of the San Diego Chapter of the Audubon Society in the late 1970s, he gained a keen understanding of the conservation challenges facing a growing Southern California. He subsequently became one of the first Biological Consultants certified by the County of San Diego in the 1980s. Bill is a Fellow of the National Association of Environmental Professionals (NAEP) and subscribes to the NAEP Code of Ethics and Standards of Practice for Environmental Professionals.

Bill Everett has published numerous scientific articles and conducted research in Southern California, Alaska, Antarctica, Baja California, South America, and throughout the tropical Pacific Ocean. In 1977, in recognition of his accomplishments, he was appointed as a Research Associate of the Department of Birds and Mammals of the San Diego Natural History Museum, a position he holds to this day. In 1990 he was elected as a Research Fellow of the Zoological Society of San Diego, and in 1988 was appointed as the Senior Conservation Biologist of the Western Foundation of Vertebrate Zoology. The Royal Geographic Society of London elected Bill as a Fellow in 1996, following his election as a Fellow of the Explorers Club in 1990.

Hired as a biologist for the U.S. Fish and Wildlife Service in 1977, Bill conducted research on endangered Peregrine Falcons in Northern California at a time when their continued existence was questionable. His interest in threatened species led to publication by the Audubon Society in 1979 of his paper entitled “Threatened, Declining and Sensitive Bird Species in San Diego County’ f the decline of the Californ

Bey sections for the Draft and Final Environmental Impact Statements for Hawaii-based Pelagic Fisheries of the Western Tropical Pacific Ocean (2001), received a National Science Foundation major grant to lead an International Biocomplexity Survey and Expedition to Isla Guadalupe, Baja California, Mexico (2000), led the effort to save North America’s most endangered bird species, the San

Clemente Loggerhead Shrike (1991-1997), and currently heads up efforts to restore bird populations on Wake Atoll and Christmas Island in the central Pacific.

Bill holds a U.S. Fish and Wildlife Master Bird Banding Permit (#22378) with Endangered Species Authorization, and California Gnatcatcher Survey Authorization Permit # TE-788036. He received his Masters Degree from the University of San Diego in 1991, and completed a Doctoral Program in Evolutionary Biology at Harvard University in 1997.

Bill served as a member of the Conservation and Research Committee of the Zoological Society of San Diego since the committee was first established. In 1990, he founded the Endangered Species Recovery Council, an international coalition of scientists and conservationists dedicated to finding solutions to the problem of species extinctions. He continues as President of the organization.

In May 2002 Bill was honored in New York as a first recipient of the Explorers Club “Champions of Wildlife” award.

SUSAN R. SCATOLINI

SUMMARY OF QUALIFICATIONS

Ms. Scatolini has over twenty five years of experience in identifying plants and wildlife, monitoring, mitigation and assessing impacts in wetlands, freshwater and riparian habitats, and terrestrial habitats. Her responsibilities include conducting field surveys, plant species checklists, wildlife surveys, wetland delineations, data collection, ecological risk assessment, and wetland restoration. She has successfully completed numerous natural environmental studies, biological assessments, wetland delineations, and mitigation and monitoring plans for a variety of projects in a variety of habitats throughout southern California for Caltrans, District 11. In addition, for two years while in Hawaii, Ms. Scatolini was the Supervisor of the Biological Resources Group for Ogden Environmental and Energy. Her responsibilities included overseeing work load, priorities, peer review, and personnel issues of two biologists and two student interns. Ms. Scatolini was also Project Manager for two large multidisciplinary projects for the U.S. Navy on Midway Island coordinating large offsite field operations, chemical lab procurements, and a variety of specialty personnel including engineers, hydrogeologists, chemists, and marine and terrestrial biologists.

EDUCATION

M.S. Emphasis in Ecology, San Diego State University, 1989
B.A. Aquatic Biology (with honors), University of California, Santa Barbara, 1987

PROFESSIONAL REGISTRATIONS/AFFILIATIONS/CLEARANCES

CRAM Training in Riparian, Estuarine, and Vernal Pools
Wetland Training Institute - Basic Wetland Delineation Training

Romberg Tiburon Centers, SFSU - Advanced Wetland Delineation Methods
Arid West Supplement Wetland Delineation, Wetland Training Institute 2007
OSHA Hazardous Waste Operations and Emergency Response Training (§1910.120)
California Native Grasslands Association Course - Identifying and Appreciating the Native and Naturalized Grasses of California

RECOVERY PERMITS WITH THE US FISH AND WILDLIFE SERVICE

Coastal California gnatcatcher - *Polioptila californica californica*
Riverside Fairy Shrimp - *Streptocephalus wootoni*
San Diego Fairy Shrimp - *Branchinecta sandiegonensis*

EMPLOYMENT HISTORY

1987-1989	Graduate Assistantship with the Pacific Estuarine Research Laboratory
1989-1991	Full-time Student Biologist with the California Department of Transportation (Caltrans).
1991-2000	Senior Biologist with Ogden Environmental and Energy Services
2000-present	District Biologist with CALTRANS

PROFESSIONAL EXPERIENCE

Senior Biologist, Supervisor of Biological Group - Ogden Environmental and Energy, Honolulu, Hawaii. Senior biologist supervising two biologists and two student interns. Assigned and prioritized work, peer and technical reviews of documents, coordinated work between engineers, hydrogeologists, chemists, and biologists to identify hazardous materials to sensitive and endangered species, and resolved personnel issues including performance evalutions, determining raises, and adjusting work schedules to accommodate religious beliefs.

Interstate 5 North Coast Corridor Widening - Caltrans. Performed inventory and focused species surveys for 27 miles of the I-5 corridor from south of the 5/805 merge to Camp Pendleton. Inventory surveys for general plant and wildlife species, vegetation communities, and sensitive habitats were completed. Focused surveys for sensitive plant and wildlife species along the corridor were also completed. Wetland delineations along the 27 mile route were also completed and the wetland determination was approved by the U.S. Army Corps of Engineers. Participated in the NEPA/404 process to inform and get agreements on key issues concerning the project in advance. Also participated in restoration groups for large scale restoration of San Elijo and Buena Vista Lagoons as mitigation for the I-5 North Coast Corridor Project.

North Coast Corridor Resource Enhancement and Mitigation Program - Caltrans. Primary biologisy preparing the Resource Enhancement and Mitigation Program (REMP) a regional mitigation strategy for widening I-5 and double tracking the railroad between Los Angeles and San Diego (LOSSAN) in northern San Diego County. Required extensive negotiations with the California Coastal Commission, U.S. Army Corps of Engineers, NOAA Fisheries, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality

Control Board to get agreements on the mitigation package. Also preparing all Habitat Mitigation and Monitoring Plans, Long-term Management Plans, and assisting with installation of 5 major salt marsh and upland coastal sage scrub mitigation sites.

Interstate 8 Seismic Retrofit of Three East County Bridges, Sweetwater River, Pine Valley Creek, and La Posta Creek Bridges. Caltrans**.** Completed plant and wildlife inventories for general species, mapped vegetation communities and completed least Bell's vireo protocol surveys. Completed biological assessment for formal consultation with the US. Fish and Wildlife Service.

California Rapid Assessment Method (CRAM) Assessments - Caltrans. Have performed and assisted with numerous riparian and estuarine CRAM assessments along I-5 and at mitigation sites in Carmel Valley and Carlsbad.

Biological Mitigation Planning, Monitoring, and Completion. - Caltrans. Working closely with the entire Environmental Stewardship Group, we have had eight mitigation sites installed, monitored and signed off by regulatory agencies between 2007 and 2015. Have prepared the Habitat Mitigation and Monitoring Plans, all annual monitoring reports and worked with the resource agencies to ensure that requirements are met. Have formed a close working relationship with the agencies and landscape architects to enable completion of Caltrans' mitigation obligations.

State Route 76, Biological Assessment and Natural Environmental Study for Improvements of the Olive Hill Intersection – Caltrans. Performed field surveys and formal consultation with the U.S. Fish and Wildlife Service for impacts to the Coastal California gnatcatcher and the arroyo toad associated with constructing improvements to the intersection of Olive Hill Road and State Route 76.

NAS Midway Island, Base Realignment and Closure – U.S. Navy. Managed the project for Base Realignment and Closure of the Navy facilities on Midway Atoll. Completed the biological inventory on the atoll as well as ecological risk assessments of over 30 sites on the atoll. Base Realignment and Closure documents included historical review of buildings and monuments on Midway Island and coordinated discussions with the U.S. Navy and concerned groups who identified potential uses for the base once closed.

NAS Midway Island, Evaluation, Ecological Risk Assessments, and Cleanup – U.S. Navy. Assumed management of the multi-million dollar project to identify potential contamination sites, sample sites, complete ecological risk assessment, and recommend cleanup options for the U.S. Navy. Management of this project included reviewing cost proposals for chemical analysis and shipping, identified new inovative methods for completing sampling and analysis, and managed marine biologists, engineers, hydrogeologists, and biologists while coordinating with the U.S. Navy and U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, and other agencies to complete the needed studies and reports.

Scripp's Poway Parkway – City of Poway. Biology task manager for the environmental impact report for eleven alternative alignments for Scripps Poway Parkway. Responsibilities included vegetation mapping, plant species inventory, California gnatcatcher surveys, impact analysis, mitigation requirements, wetland delineations, and informal consultations with regulatory agencies. Negotiated mitigation requirements for impacts to wetlands, sensitive species, sensitive habitats, and oaks. Report preparation included both EIR sections and a biological technical report.

Cannon Road Extension - City of Carlsbad. Project manager for regulatory permit amendments, road construction monitoring, and wetland mitigation. Negotiate with regulatory agencies including U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish and Game, Regional Water Quality Control Board, and the California Coastal Commission for amendments to environmental permits and mitigation required for the road construction project. Have successfully negotiated continuing construction into the least Bell's vireo nesting season with noise monitoring, and changes to the wetland mitigation sites requested.

PRESENTATIONS

Rutherford, S.E. 1989. Detritus production and epibenthic communities in natural versus constructed salt marshes. Presented at San Diego State University, November.

Zedler, J.B., R. Langis, J. Cantilli, M. Zalejko, and S. Rutherford. 1989. Assessing the functioning of constructed salt marshes. Proceedings of the 1st Annual Conference of the Society for Ecological Restoration. January.

Scatolini, S., B. Hope, and D. Lees. 1995. Ecological risk assessment for protected migratory birds at Midway Atoll: A case study. Proceedings of the Society for Environmental Toxicology and Chemistry. November.

PUBLICATIONS

Hope, B., and S. Scatolini. 2005. DDT, DDD, and DDE in abiotic media and near-shore marine biota from Sand Island, Midway Atoll, North Pacific Ocean. *Bulletin of Environmental Contamination and Toxicology*, Vol 75, No. 3.

Hope, B., S. Scatolini, and E. Titus. 1998. Bioconcentration of chlorinated biphenyls biota from the North Pacific Ocean. *Chemosphere, Vol. 36, No. 6.*

Hope, B., S. Scatolini, E. Titus, and J. Cotter. 1997. Distribution patterns of Polychlorinated Biphenyl congeners in water, sediment, and biota from Midway Atoll (North Pacific Ocean). *Marine Pollution Bulletin* 34(7).

Scatolini, S.R. and J.B. Zedler. 1996. Epibenthic invertebrates of natural and constructed marshes of San Diego Bay. *Wetlands.*

Rutherford, S.E. 1989. Detritus production and epibenthic communities in natural versus constructed salt marshes. In. M.S.

Zedler, J.B., R. Langis, J. Cantilli, M. Zalejko, K. Swift, and S. Rutherford. 1988. Assessing the functions of mitigation marshes in southern California. Proceedings of the National Wetland Symposium: Urban Wetlands. June.