EcoSynthesis
SCIENTIFIC & REGULATORY SERVICES, INC.

El Dorado Apartments

Biological Resources Report and

Wetland Delineation

Prepared by:

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Prepared for:

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Date:

November 19, 2012

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1 SUMMARY

1.1 Site and Survey Details

Site name: El Dorado County Apartments

APN: 051-461-59

Location: Sections 19 and 30, T. 10 N, R. 11 E (USGS Placerville quadrangle); site is in Diamond Springs, about 0.3 mile east of Hwy 49, extending southward from Black Rice Road.

Prepared for: SCO Planning and Engineering, Inc.

Survey dates: August 30 and September 1, 2012

Report date: November 2, 2012

Biologist: Adrian Juncosa, Ph.D.

1.2 Summary of Results

The site is surrounded closely on most sides by high-density residential development (multi-family and single-family homes on parcels that are virtually completely covered by structures and actively maintained landscaping.

The majority of the acreage of the site is covered by Non-native Grassland, with small areas of Ponderosa Pine, Willow-Valley Oak Riparian, Interior Live Oak Woodland, Coyote Brush Scrub, and Mesic Meadow.

Most (but not all) of the riparian area and the small patches of Mesic Meadow meet the three mandatory wetland criteria (1987 Corps Manual) but are excluded from current federal jurisdiction under the Clean Water Act (that is, no federal permitting would be required for direct impact upon these areas).

No special-status species were observed on the site. Potential for occurrence of 29 species and natural communities that were found in nine-quadrangle CNDDB search was evaluated; habitat that is marginally suitable for three special-status plant species is present, but probably does not occur within the presently proposed project footprint.

There are several oak trees with diameters greater than 36 inches (two valley oak and one California black oak), within or adjoining the riparian vegetation.

2 INTRODUCTION

2.1 Site Location and Setting

The study site occupies approximately 10.7 acres in Sections 19 and 30, T. 10 N, R. 11 E (USGS Placerville quadrangle), in the unincorporated community of Diamond Springs. The elevation of the site varies from approximately 1700 to 1800 feet.

The regional setting of the study site is urbanized; it is immediately adjacent to densely developed areas on almost all sides. These include multi-family housing and single family parcels which are essentially completely developed (structures and maintained landscaping). This diminishes the general biological values of the site substantially and, in particular, makes it unsuitable for many special-status species that might otherwise be found in the project region. For example, many species that utilize wooded riparian habitats may visit, but would not breed within, small patches of this habitat type, such as the one that occurs within the study site.

The small size and high level of disturbance of the study area make the characterization of existing vegetation by recognized classification systems difficult and not perfectly accurate. Vegetation cover is categorized to the extent possible according to the Manual of California Vegetation, second edition (Keeler-Wolf et al., 2009; abbreviated MCV2 in this report), and the text provides equivalent habitat names used by the California Department of Fish and Game Wildlife Habitat Relationship (WHR) system.

In addition to existing development (two roads that transect the site), the study area supports the following biological communities, in order of coverage area:

- Non-native Grassland/Forb Vegetation (approximately 7.63 acres)
- Ponderosa Pine Woodland (0.61 ac.)
- Willow-Valley Oak Riparian Woodland (0.51 ac.)
- Interior Live Oak Woodland (0.15 ac.)
- Coyote Brush Scrub (0.07 ac.)
- Mesic Meadow (0.63 ac.)

The remaining 1.12 acre (approx.) of the parcel is already paved with asphalt (roads) or gravel shoulders.

3 METHODS

The site was surveyed by walking meandering transects emphasizing the less-extensive habitat types, special elements, and areas such as outcrops or areas of peculiar vegetation suggestive of serpentine or other soils that might support special-status plant species. The site was studied on August 30 and September 1, 2012.

All plant species present were identified by sight or by reference to The Jepson Manual, second edition (Baldwin et al., 2012). Birds were identified by sight and vocalizations. Identifications and nomenclature follows that used in Sibley (2000). No mammals were observed directly or by sign (scat, tracks, or characteristic burrows).

Wetland delineation followed the 1987 Corps of Engineers Manual for Wetlands Delineation and the 2010 Regional Supplement for Arid West, ver. 2.0 (most recent one). Additional details of delineation methods and results are provided in Appendix B.

A query of the California Natural Diversity Data Base (CNDDB) was run for the nine quadrangles centered on the project site.

3.1 Investigator Qualifications

The site was studied and this report written by Adrian M. Juncosa, Ph.D. (Botany; Duke University). Since 1988, he has completed over 150 biological site studies (including general biology, rare plant surveys, and certain wildlife studies), impact analyses, mitigation, and monitoring projects in central and northern California, with particular expertise in the foothills and montane Sierra Nevada, where he has lived since 1995. As principal biologist of EcoSynthesis Scientific & Regulatory Services, he is listed by several California counties and other jurisdictions as a pre-approved biological consultant for the preparation of biological studies.

4 RESULTS

Figure 1 (separate sheet) provides a map of habitat types on site. Appendix A includes a list of plants and vertebrates that were observed. Text and data sheets for the wetland delineation is included in Appendix B.

4.1 Upland Habitats

As stated in the Introduction, the site is small and its vegetation (and even topography) is highly altered from the original plant communities, such that the most commonly used systems for categorizing vegetation and habitat have no applicable community types for some of the area of the study site, and it is often difficult to determine which of several ecologically similar community definitions may be applicable. To the extent possible, the most nearly applicable community types from MCV2 are used, and deviations are noted in the text. The WHR habitat type that is most similar is also noted in each case.

4.1.1 NON-NATIVE GRASSLAND/FORB

There is no MCV2 community type that is applicable to most of the grassland and non-native forb (weed) vegetation on the site. It is functionally somewhat similar to Annual Brome Grasslands (and a portion of the site conforms perfectly to this type), except that the heavy soil disturbance and weed dominance in much of the herbaceous vegetation means that native plant species diversity (and important element for certain special-status species) is probably very low or entirely absent over large areas. The area would best be categorized as Annual Grassland according to the WHR classification rules.

The dominant species in the non-native vegetation include not only non-native annual grasses, but also a substantial component (often a preponderance) of annual and perennial non-native weeds such as yellow star-thistle (*Centaurea solstitialis*) and Klamath weed (*Hypericum perforatum*). The dominant grass in the part of the site north of Deuce Drive is medusa-head grass (*Elymus [Taeniatherum] caput-medusae*). In the area between Deuce Drive and Service Drive, which has been heavily graded for unknown reasons, soft chess (*Bromus hordeaceus*) is dominant or co-dominant with medusa-head grass. A portion of the northwest corner of the site is dominated by a non-native perennial, tall wheat grass (*Elymus ponticus*), which was presumably planted for soil stabilization.

The area is heavily disturbed and almost certainly represents chaparral and/or woodland habitats that were converted to grassland. In the area between Deuce Drive and Black Rice Road, this may have been for the purpose of creating pasture land for livestock, but in the area between Deuce and Service Drive, the topography was substantially graded, seemingly for building purposes.

As a consequence of the major degree of soil disturbance, and possibly due to overly heavy grazing pressure, the great majority of the grassland areas of the site are vegetated almost exclusively by weedy vegetation, including species regarded as noxious weeds. Specifically, the highly invasive and ecologically damaging species tall whitetop (*Lepidium latifolium*) occurs both at the drainage inlet on the south side of Service Drive and along (within) the western boundary of the site between Service Drive and Deuce Drive. The extent of the weed dominance make it

reasonable to infer even from the late season site surveys that the grasslands are unlikely to support any special-status native grassland plant species.

4.1.2 PONDEROSA PINE WOODLAND

This woodland type occurs toward the southern end of the site and probably once covered much of the rest of the site. It corresponds reasonably well to the WHR Montane Hardwood-Conifer type. The tallest trees are mostly ponderosa pine (*Pinus ponderosa*), mixed with various oak (*Quercus*) species and some foothill pines (*P. sabiniana*). Understory is variably shrubby (manzanita, ceanothus, coyote brush) and grassy (various non-native species).

4.1.3 INTERIOR LIVE OAK WOODLAND

This corresponds to WHR Montane Hardwood habitat type and is present in the form of one black oak tree and as one very small patch in the northeast corner of the site, an area of less than 0.2 acre in which three different native oak species are found (valley oak, black oak, and interior live oak [*Q. lobata, kelloggii,* and *wislizenii*, respectively]). In an area this small, it is not readily apparent which is the correct individual oak dominant, so it cannot be confidently assigned to one of the MCV2 oak woodland types (which are named for the single dominant species, e.g., California black oak forest).

4.1.4 COYOTE BRUSH SCRUB

A small patch of shrub-dominated habitat with small rock outcrops occurs in the middle of the Annual Grassland, representing a fragment of the former woodland or shrubland that existed over this whole portion of the site. The existing vegetation is dominated by coyote brush (*Baccharis pilularis*), accompanied by a few individuals of more typical chaparral species (e.g. whiteleaf manzanita, *Arctostaphylos viscida*).

4.2 Wetlands/Riparian Areas

4.2.1 WILLOW-VALLEY OAK RIPARIAN

A fragment of riparian habitat less than 400 feet long extends between Deuce Drive and Black Rice Road. Other non-contiguous riparian fragments are present both south of Deuce Drive (an area of about 0.1 acre closely surrounded by apartment buildings) and several hundred feet to the north of Black Rice Road.

The woody riparian vegetation within the site is such a small area and is of such mixed composition that assignment to one of the several MCV2 types that might be applicable is not possible. The dominant species in terms of cover is probably arroyo willow (*Salix lasiolepis*), but the MCV2 community type for this species is a shrubland alliance and the habitat in question is largely a tree-dominated one. The most notable tree species are several large valley oaks and Fremont's cottonwoods (*Populus fremontii*) at the north end, but neither of these species predominates throughout. Overall, the tree component corresponds well with the typical expression of Valley

Foothill Riparian habitat type as described by WHR. The understory, where present, is almost exclusively Armenian blackberry (*Rubus armeniacus*); a portion of the riparian corridor is comprised entirely of this species with no tree overstory.

The riparian area exhibits many signs of frequent human use (trash, disturbed vegetation, and so on). The values of riparian habitats for the many common and special status species that utilize them are greatly diminished both by fragmentation and by human disturbance.

Most of the tree-dominated part of the riparian habitat meets the three wetland criteria, but most of the blackberry vegetation does not (Armenian blackberry is not a hydrophyte so most of the area does not meet the vegetation criterion). A narrow central strip of the blackberry certainly lies within the high water line when runoff flows through the site during winter storms.

4.2.2 MESIC MEADOWS

Several patches of graminoid dominated wetlands occur within the site. Their total area is small (0.63 acre), and MCV2 community types do not exist for all of these, so they are combined together. Study of these areas, which marginally meet all three of the mandatory wetland criteria, suggests that surface water occurs rarely or only relatively briefly; they are hydrologically supported by saturation near and, in one portion, occasionally at the surface. (Vicinity of data point S-2 where obligate wetland indicators are present but not dominant.) Thus, they lack many of the wetland values that are typically provided by wetlands in lowland California (e.g., habitat for special-status species and waterfowl). The patches of meadow adjoining the riparian habitat are dominated by field sedge (*Carex praegracilis*) and Baltic rush (*Juncus balticus [arcticus* in Flora North America*]*). Those in the southern part of the site are a mixture of several rush species and non-native facultative grasses such as velvet grass (*Holcus lanatus*).

4.3 Significant Individual Oak Trees

Three oaks with diameter at breast height (dbh) of 36 inches or more are found on site, all of them within or adjoining the Valley Foothill Riparian habitat. Two are valley oaks and the other is a California black oak. In addition, there are two large oaks at the extreme northeast corner of the site. One is a valley oak that is very close to 36 inches dbh, and the other is a black oak that has multiple cavities of sizes that are highly desirable to cavity nesting birds of various species.

4.4 Special-status Species

The study site lies in the Placerville quadrangle. Table 1 provides the list of species that result from a CNDDB query for the nine quadrangles centered on Placerville, with notes on regulatory status (if any) and presence/absence of suitable habitat. This section of the report provides additional discussion about some of those species. It is important to recognize that the CNDDB tracks many species that have no regulatory status, many of which are not especially rare (state and global rarity ranks of 4 and 5, which designate the most common species). The data base also includes U.S. Forest Service sensitive species which are considered in forest management decisions but are often not subject to significant impacts in urbanized settings where most trees (in particular, the

larger ones) are retained. Also, the CNDDB tracks California Native Plant Society (CNPS) list 3 and 4 plant species, although the CNPS Inventory itself notes that only list 1 and 2 species (rare or endangered either everywhere or possibly common elsewhere but rare in California) automatically merit consideration in CEQA review (list 3 and 4 species on a case by case basis). Thus, a large number of species that are tracked by the CNDDB do not meet the CEQA guideline 15380 standard of species that are endangered or threatened but may not be listed as such. The actual biology of the species in question should be considered in any project impact analysis.

4.4.1 WILDLIFE

The results in Table 1 show that the site does not provide suitable habitat for any special-status wildlife species.

4.4.2 PLANTS

It is possible but unlikely that suitable habitat for three special-status plant species is found within the site. Nissenan manzanita is generally found in much more rocky settings than the site, which includes two soil types consisting of very deep fine sandy loam, with no lithic or paralithic contact within 6 feet of the surface. Most occurrence record note that it occurs in association with other typical foothill chaparral species, only one of which (whiteleaf manzanita) was found at all on the site, as scattered individuals.

Pleasant Valley mariposa lily grows in vegetation similar to the small (0.5-acre) patch of oak-pine woodland at the southern tip of the site, but is noted as occurring specifically on Josephine silt loam; soils on the site are Diamond Springs very fine sandy loam and (in the aforementioned patch of oak-pine vegetation), Placer Diggings comprised of a similar appearing fine sandy loam with some cobbles. Diamond Springs loam is similar to Josephine loam in being very strongly acid and derived from volcanic material, but differs in having a shallower depth to paralithic contact (25 to 40 inches vs. 40 to 60 inches for Josephine). Thus, the soil type is not exactly right but is generally similar. That said, edaphically specialized rare plants such as Pleasant Valley mariposa lily are usually rare precisely because they are limited to very specific soils types and do not grow on a variety of soils of generally similar texture, so the potential for occurrence of this species is judged to be unlikely.

Finally, Brandegee's clarkia almost always grows on steep grassy slopes throughout the central/northern Sierra Nevada foothills. However, the CNDDB records one occurrence (four individuals) in the Placerville quadrangle near riparian woodland. The level of ongoing human disturbance and heavily weed-dominated character of the grassland vegetation near the riparian area within the study site makes it unlikely that Brandegee's clarkia would be found, but the possibility cannot be eliminated.

Dubious pea is no longer regarded as a distinct scientific entity; it has been merged with the common, widespread *Lathyrus sulphureus* (Baldwin et al., 2012). Therefore, there is no possibility of occurrence of dubious pea, because it no longer exists as a distinct organism.

Table 1. Special-status species recorded by CNDDB in the nine USGS quadrangles centered on the Cj Bmp_bm study site9 animals are listed roughly according to phylogenetic relationships; plants are listed alphabetically by scientific name. See text for additional information on species for which suitable habitat is present. Many species tracked by CNDDB have no regulatory status, and/or are not very rare either statewide or globally (ranks G4 or 5 and S4 or 5), and/or have status applicable only within federal lands (e.g., U.S. Forest Service sensitive species), and do not necessarily meet the threatened/endangered criteria applicable under CEQA guideline 15380.
Status definitions (Federal status/State status/California Native Plant Society [CNPS] list):

E or T, listed as endangered or threatened under state or federal Endangered Species Act;

C, candidate for listing as endangered or threatened;

SC, species of special concern (California DFG);

List 1B, considered rare, threatened or endangered by CNPS and normally regarded by DFG as meriting consideration under CEQA Guideline 15380; List 2, rare, threatened, or endangered in California but more common elsewhere; effects on List 3 (insufficient information) and List 4 (watch list) species are not considered to be significant except on a case-by-case basis.

Species	Status (US/Ca./ CNPS)	Microhabitat/Occurrence	Suitable Habitat Present?	Other Information
MAMMALS				
Pacific fisher *Martes pennanti*	C/-	Extensive dense forest and other woody habitats in northern Sierra foothills and southern Sierra Nevada.	No	Area of project is no longer within geographic range (Zielinski, 1995).
Silver-haired bat *Lasionycteris noctivagans*	-	Roosts in buildings, tree cavities, under bark, and in rock crevices or caves; coastal, montane.	No	One of the most widely distributed bats in U.S. Requires access to water.
Yuma myotis *Myotis yumanensis*	-	Roosts in cliffs, rock crevices, buildings, mines, and caves.	No	Forages over water.
BIRDS				
Bank swallow *Riparia riparia*	-/T	Excavates nesting cavities in dirt banks of large rivers.	No	
Great egret *Ardea alba*	-	Large wetlands with prolonged surface saturation and shallow ponded water.	No	
Great gray owl *Strix nebulosa*	-/E	High-canopy coverage forest with large snag(s) for nesting, near meadows for hunting.	No	Intolerant of nearby human presence.

Northern goshawk *Accipiter gentilis*	-/SC	High-canopy-cover coniferous forest, remote from human disturbance.	No	Site is below species elevational range and does not contain suitable forest.
Tricolored blackbird *Agelaius tricolor*	-/SC	Large areas of tall emergent wetland vegetation and blackberries.	No	Area of blackberry vegetation on site is much too small.
REPTILES, AMPHIBIANS				
Coast horned lizard *Phrynosoma blainvillii*	-/SC	Scattered shrubby or other open woody habitat with sandy, friable soils and abundant native ants.	No	Soils on site are disturbed and compact, do not support notable populations of native ants; isolated small patch of habitat surrounded by development.
Foothill yellow-legged frog *Rana boylii*	-/SC	Small tributaries with perennial or near-perennial flow and coarse sand/gravel/cobble substrate.	No	
Western pond turtle *Emys marmorata*	-/SC	Ponds with suitable shores or in-water elements for basking and nearby sandy soils for nesting.	No	
INVERTEBRATES				
Cosumnes spring stonefly *Cosumnoperla hypocrena*	-	One known occurrence: long-seasonal stream with spring water and rock substrate.	No	Only locality is North Fork of Cosumnes River.
Galile's cave harvestman *Banksula galilei*	-	Alabaster Cave (only known occurrence is type collection, described in 1900).	No	Site is believed to be destroyed; species is likely extirpated at only known site.
Tight coin (Yates's snail) *Ammonitella yatesii*	-	Limestone caves, outcrops, talus; moist setting.	No	
Vernal pool andrenid bee *Andrena subapasta*	-	Grassland near vernal pools. Utilizes *Arenaria, Triphysaria eriantha, Lasthenia* spp. for food.	No	Grassland on site has very poor native plant diversity; food plants not seen.
PLANTS				
Jepson's onion *Allium jepsonii*	-/-/1B	Open serpentine or volcanic tableland.	No	
Nissenan manzanita *Arctostaphylos nissenana*	-/-/1B	Chaparral and woodland on open rocky ridges.	Unlikely	All manzanita plants seen on site were *A. viscida.*
Pleasant Valley mariposa lily *Calochortus clavatus var. avius*	-/-/1B	Open oak-pine forest, Josephine silt loam.	Unlikely	Potentially suitable habitat in far southern end of site.
Stebbins's morning-glory *Calystegia stebbinsii*	E/E/1B	Specialized soils (serpentine/gabbroic).	No	

Pine Hill ceanothus *Ceanothus roderickii*	E/R/1B	Specialized soils (serpentine/gabbroic).	No	
Red Hills soaproot *Chlorogalum grandiflorum*	-/-/1B	Usually but not exclusively on specialized soils (serpentine/gabbroic).	No	
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeeae*	-/-/1B	Steep grassy slopes (usually >30 percent); one Placerville occurrence near riparian woodland.	Unlikely	Disturbed and highly weed-dominated grassland is marginally or not suitable.
Pine Hill flannelbush *Fremontodendron decumbens*	E/R/1B	Specialized soils (serpentine/gabbroic).	No	
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	E/R/1B	Specialized soils (serpentine/gabbroic).	No	
Bisbee Peak rush-rose *Helianthemum suffrutescens*	-/-/3	Specialized soils (serpentine/gabbroic; Ione clay).	No	
Parry's horkelia *Horkelia parryi*	-/-/1B	Clay, specifically Ione formation.	No	
Dubious pea *Lathyrus sulphureus* var. *argillaceus*	-/-/3	Lower montane woodland	Yes	No longer regarded as a separate taxon.
Layne's ragwort *Packera layneae*	T/R/1B	Specialized soils (serpentine/gabbroic).	No	
Oval-leaved viburnum *Viburnum ellipticum*	-/-/2	Chaparral, pine forest on north slopes or in major river canyons.	No	
El Dorado County mule ears *Wyethia reticulata*	-/-/1B	Chaparral or woodland on clay, gabbroic soils.	No	
NATURAL COMMUNITIES				
Central Valley Drainage Hardhead/Squawfish Stream	n.a.		No	No perennial streams within site.
Central Valley Drainage Resident Rainbow Trout Stream	n.a.		No	No perennial streams within site.
Sacramento-San Joaquin Foothill/Valley Ephemeral Stream	n.a.		No	No longer conforms to this natural community type due to watershed alterations.

5 IMPACT ASSESSMENT AND MITIGATION

5.1 Project Description

The project is a multi-family development similar to surrounding development both in character and in the proximity of new construction to existing biological resources as identified in this report.

5.2 Potential Impacts

Depending on the exact location and details of structures and paved surfaces, the following types of biological resource impacts could result from construction and landscaping within the project area:

1. Direct (fill) or indirect impacts on wetland or riparian habitats, tributaries, or the pond.
2. Loss of individual large or biologically significant oak trees.
3. Possible loss of individuals of Nissenan manzanita, Pleasant Valley mariposa lily, or Brandegee's clarkia (unlikely, and probably less than significant even if any of these plants were found).

Impacts 1 and 2 are potentially significant, but the third potential impact is considered to be less than significant for the following reasons:

- Occurrence of any of the species is unlikely, as explained in Section 4.1.4;
- Surrounding development and small size of the project site reduce the biological value, to the species as a whole, of any possible occurrence; and
- The number of affected individuals, if any, would be very small, therefore not meeting the current CEQA guideline language of a "substantial" effect on population of a rare, threatened, or endangered species.

Mitigation measures for the two potentially significant impacts are provided and discussed below. Impacts upon nesting birds generally do not fall into the categories of impact questions provided in the current CEQA environmental checklist form, nor would such impacts trigger mandatory findings of significance, unless the species in question were candidate, listed, or other of other special status. Accordingly, this subject is treated below under Other Applicable Regulations.

5.2.1 RECOMMENDED MITIGATION MEASURES

Site all facilities so that no fill of wetlands or water bodies occurs, and include measures to protect water quality from runoff from urban surfaces, and to prevent lighting from illuminating the woody riparian vegetation.

It is our understanding that the proposed project design avoids any excavation or fills within wetlands. Runoff from impervious surfaces should be routed so that it does not flow directly into wetlands or riparian areas, but instead is treated and/or infiltrated in the buffer zone between construction and the wetland edges. In the case of runoff treatment solely by means of unimproved vegetated filter areas (that is, surface left as it currently is), the buffer zone width would need to be at least 50 feet or more, given the compacted nature of the existing soils. However, with the installation of infiltration trenches or if runoff were collected and routed to treatment basins or vaults, the buffer zone width could be much narrower.

Although the woody riparian vegetation area is very small and fragmented from other riparian habitat off site, there is a theoretical possibility that riparian-associated birds might nest within it. In this case, value of the riparian area for nesting would be preserved (such as it is) by designing building and other lighting so that it does not directly illuminate the woody vegetation.

Preserve all oak trees larger than 36 inches dbh, and any other large trees with evident nesting cavities, and design facilities so that damage to their root systems is sufficiently minimized to ensure long-term survival, and so that the riparian area and surrounding upland buffer area is not irrigated.

Examples abound in the central valley and Sierra Nevada foothills of large, vigorous oak trees standing within a short distance of long-time rural roads, the construction of which entails shallow excavation to place the aggregate road bed. Thus, trees that are affected on only one side can survive and thrive after some minimal disturbance within the canopy dripline.

5.3 Other Applicable Regulations

California Fish and Game Code (FGC)

Various sections of the FGC prohibit take of protected species. Fully protected species are included in the CNDDB and are properly treated as special-status species in CEQA analysis. Such species do not occur on the study site, therefore these sections are not applicable to the project.

Section 3503.5 prohibits take or possession of raptors, owls, or the destruction of eggs or occupied nests during the nesting season. Although a targeted raptor nest survey was not included in the biological inventory, no large stick nests were observed. Measures that could be taken to preclude potential impacts on raptor nests are the same as for nesting birds generally and are discussed below.

Migratory Bird Treaty Act

Loss of limited numbers of common species of plants or animals is not a significant impact under current CEQA guidelines pertaining to biological resources. However, the MBTA and FGC §3513 prohibit take of migratory birds, which is defined to include destruction of active nests (presumed to contain eggs or nestlings). Compliance with the MBTA requires that no grading, brush clearing (mechanized or otherwise), or tree removal occur during the nesting season without a nesting bird survey that confirms that no occupied nests are present, or contingent mitigation actions if nests are present. In the case of tall coniferous trees, it is not scientifically possible to ensure that small bird nests high in the canopy can be found by a survey carried out from the ground. Thus, in coniferous habitat with trees >24 inches dbh (and maybe smaller than that, depending upon species), removal must occur outside the nesting season.

In the western Sierra Nevada foothills, the nesting season for raptors and owls extends from sometime in the late winter (possibly as early as December in the case of great horned owl) through mid-August. Smaller migratory birds begin nesting in March or more usually April and continue to occupy nests until as late as August 15 (in the case of some species that raise two broods per year; depends upon habitat in question). Thus, tree removal and initial grading should

preferably occur between August 15 and October 15 (nominal end of the grading season for water quality reasons).

If vegetation removal (tree removal or brush mastication) or ground surface disturbance (any form of grading) are to occur between March 1 and August 15, nesting bird surveys are usually prescribed to occur not less than 14 days nor more than 30 days prior to potentially nest-destroying activities. There is no resource-protection reason for surveys not to occur as little as 7 days prior to the activities. Nesting surveys for small birds are only fully effective if carried out between dawn and 11 AM; many species become inactive during mid-day.

Survey work should cover all habitat within 100 feet of vegetation removal or ground disturbance. In the event of discovery of active nests, temporary non-disturbance zones should be the same width as the survey buffer (100 feet), and a revisit by the biologist, with confirmed observations of fledglings in the nest vicinity, would be required prior to vegetation removal or soil disturbance, unless this were to be delayed past August 15.

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Appendix A.

Species Observed on El Dorado Apartments Site

Appendix A. Species observed on the project site.

Plant species are listed first, by major groups, then alphabetically by family. Nomenclature is according to Baldwin et al. (2012). Only one vertebrate (acorn woodpecker) was observed during site studies, which were directed primarily at vegetation and wetlands.

Scientific Name	Common Name	Notes
GYMNOSPERMS	CONIFERS	
Cupressaceae	**Cypress Family**	
Calocedrus decurrens	incense cedar	Planted.
Pinaceae	**Pine Family**	
Pinus ponderosa	ponderosa pine	
Pinus sabiniana	foothill pine	
ANGIOSPERMS-DICOTYLEDONS	FLOWERING PLANTS	
Apiaceae (Umbelliferae)	**Carrot Family**	
Daucus carota	wild carrot	
Sanicula crassicaulis	sanicle	
Torilis arvensis	hedge-parsley	
Asteraceae (Compositae)	**Sunflower Family**	
Baccharis pilularis	coyote bush	
Centaurea solstitialis	yellow star-thistle	
Centromadia fitchii	spikeweed	
Cichorium intybus	chicory	
Cirsium vulgare	common thistle	
Hypochaeris radicata	cat's-ear	
Lactuca serriola	prickly (wild) lettuce	
Leontodon saxatilis	hairy hawkbit	
Madia elegans ssp. *vernalis*	common madia	
Tragopogon dubius	salsify, goatsbeard	
Wyethia bolanderi	mule's-ears	
Brassicaceae (Cruciferae)	**Mustard Family**	
Lepidium latifolium	tall whitetop	Noxious weed, present in at least two parts of site.
Ericaceae	**Heath Family**	
Arctostaphylos viscida	whiteleaf manzanita	
Euphorbiaceae	**Spurge Family**	
Eremocarpus setigeris	dove weed	

Fabaceae	**Legume Family**	
Acmispon americanus var. *americanus*	lotus	Formerly *Lotus purshianus.*
Lupinus sp.	lupine	Annual; probably *L. nanus.*
Trifolium hirtum	rose clover	
Vicia sp.	vetch	
Fagaceae	**Oak Family**	
Quercus douglasii	blue oak	
Quercus kelloggii	California black oak	
Quercus lobata	valley oak	
Quercus wislizenii	interior live oak	
Hypericaceae	**St. John's Wort Family**	
Hypericum perforatum	Klamath weed	
Lamiaceae (Labiatae)	**Mint Family**	
Marrubium vulgare	horehound	
Onagraceae	**Evening Primrose Family**	
Epilobium brachycarpum	willow-herb	
Epilobium ciliatum/glaberrimum	willow-herb	
Epilobium glaberrimum		
Papaveraceae	**Poppy Family**	
Eschscholtzia lobbii	Lobb's poppy	
Plantaginaceae	**Plantain Family**	
Plantago lanceolata	common plantain	
Polygonaceae	**Buckwheat Family**	
Persicaria punctatum	water smartweed	
Rumex acetosella	sheep sorrel	
Rumex crispus	curly dock	
Rhamnaceae	**Buckthorn Family**	
Ceanothus cuneatus	wedgeleaf ceanothus	
Rhamnus tomentella	hoary coffeeberry	
Rosaceae	**Rose Family**	
Rubus armeniacus	Armenian blackberry	
Salicaceae	**Willow Family**	
Populus fremontii	Fremont cottonwood	
Salix exigua	coyote willow	
Salix lasiolepis	arroyo willow	

Scrophulariaceae	**Figwort Family**
Verbascum blattaria	moth mullein
Verbascum thapsus	woolly mullein
Verbenaceae	**Vervain Family**
Verbena sp.	vervain

ANGIOSPERMS-MONOCOTYLEDONS

Cyperaceae	**Sedge Family**
Carex praegracilis	clustered field sedge
Cyperus eragrostis	umbrella sedge
Scirpus cernuus	nodding bulrush
Juncaceae	**Rush Family**
Juncus balticus	Baltic rush
Juncus effusus	soft rush
Juncus tenuis	rush
Juncus xiphioides	iris-leaved rush
Poaceae	**Grass Family**
Aira caryophyllea	silver hair grass
Avena sp.	wild oats
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Cynodon dactylon	Bermuda grass
Cynosurus echinata	dog-tail grass
Dactylis glomerata	orchard grass
Elymus (Taeniatherum) caput-medusae	medusa-head grass
Elymus glaucus	blue wild-rye
Holcus lanatus	velvet grass
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Lolium perenne	perennial rye grass
Muhlenbergia rigens	deer grass
Paspalum dilatatum	dallis grass
Phalaris aquatica	Harding grass
Typhaceae	**Cattail Family**
Typha latifolia	broad-leaved cattail

AVES	BIRDS
Melanerpes formicivorus	acorn woodpecker

Appendix B.

Wetland Delineation for

El Dorado Apartments Site

1 METHODS

1.1 Background Information

Preliminary wetland mapping was obtained from the US Fish and Wildlife Service National Wetlands Inventory (NWI) via the on-line Wetlands Mapper application (USFWS, 2009; included NWI figure was downloaded in 2012). Information on soils was obtained from the Web Soil Survey on-line application (NRCS, 2009).

1.2 Field Methods

Field work was carried out according to the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and Regional Supplement for the Arid West Region (ERDC, 2010). Field work occurred on August 30 and September 1, 2012.

1.2.1 VEGETATION

Plant species were identified almost entirely on sight or, as necessary, by microscopic examination of specimens, according to keys and nomenclature of The Jepson Manual, 2nd edition (Baldwin et al., 2012). The generic names of many plants that are on the national wetland plant list (see below) are different from the ones that are now found in The Jepson Manual and the Flora of North America North of Mexico. Scientific names provided in this report include generic equivalence in such cases.

Estimates of plant cover were made visually, aided by cover percentage diagrams provided in CNPS (2007).

Wetland indicator status assignments were made according to current National Wetland Plant List (version 2.4.0; Lichvar and Kartesz, 2009). This delineation report uses the shorthand found in the National List, as follows:

OBL	obligate (almost always found within wetlands)
FACW	facultative-wetland (generally, but not always, found within wetlands)
FAC	facultative (found equally within and outside wetlands)
FACU	facultative-upland (generally not, but may be, found within wetlands)
UPL	upland (rarely found within wetlands)

1.2.2 SOILS

Soils were studied by means of test pits excavated by hand to depths of 7 to 12 inches, shallower pits being limited by cemented soil layers or by high proportion (>70 percent) of rocks encountered at the bottom of the pits. Determination of the presence/absence of hydric soils field indicators was made on the basis of NRCS (2006) and ERDC (2010).

1.2.3 HYDROLOGY

Field work took place in the dry season, and neither surface water nor near-surface saturation was observed at any data points. The presence of wetland hydrology field indicators, if any, was determined according to the descriptions in the Regional Supplement.

1.2.4 BOUNDARIES

The limits of delineated wetlands were determined at the point where the prevalence of vegetation changed from hydrophytic (dominated by FAC or wetter species, or with prevalence index of 3.0 or less) to non-hydrophytic (with 50 percent or fewer of the dominant species FAC or wetter, or with prevalence index of >3.0).

Boundaries of non-wetland surface waters were mapped at the ordinary high water mark (OHWM) subject to the difficulty of accessing the channel in an area of very dense Armenian blackberries. In this section, the channel boundary was mapped at the OHWM or closest point to the centerline that could be accessed, whichever came first when approaching from the upland side. The resulting mapping of the channel limits is certainly somewhat wider than the actual channel is.

1.2.5 SURVEY TECHNOLOGY

Boundaries were flagged and subsequently mapped by conventional land surveying methods using a total station.

2 RESULTS

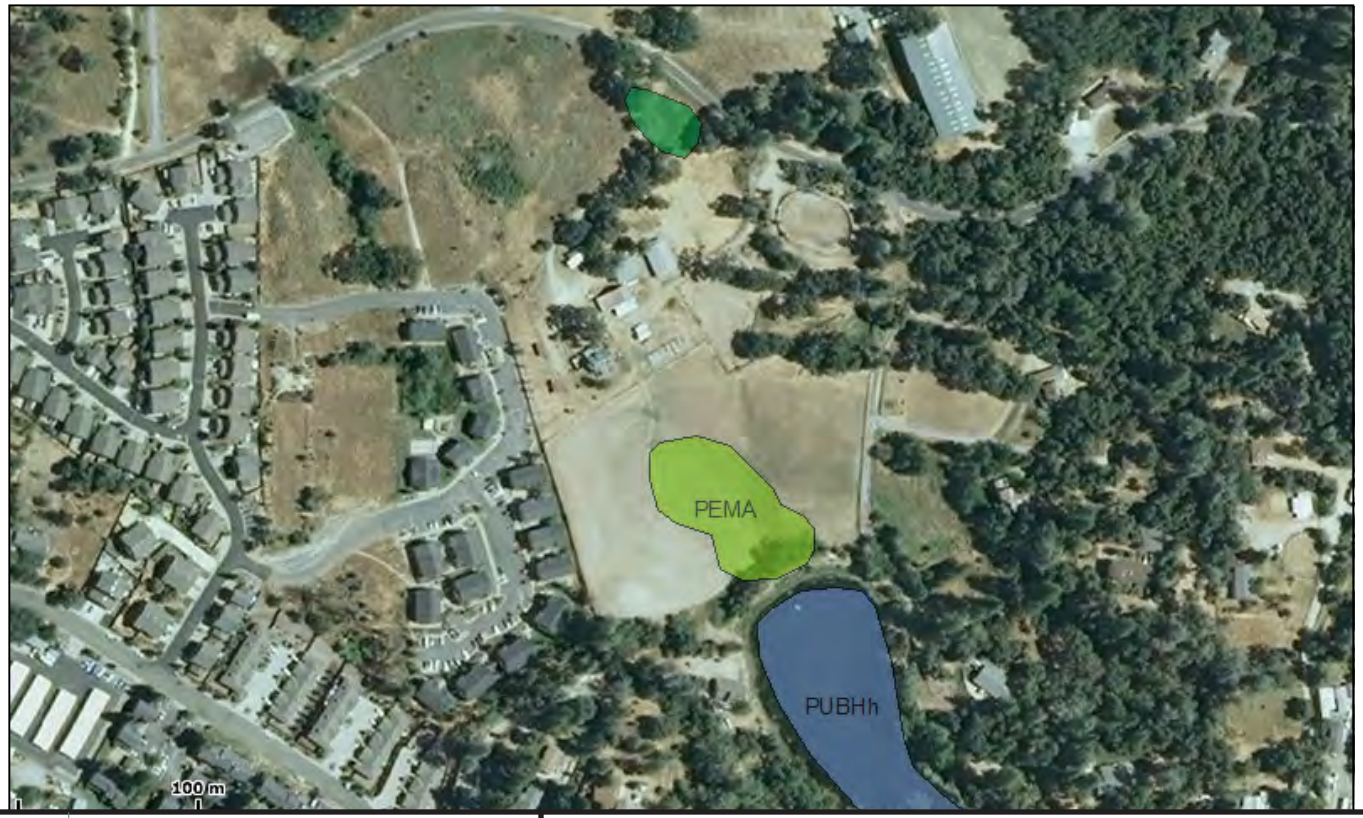
The delineation mapping is provided in Figure 1 of the main report (separate unbound sheet) to which this delineation is an appendix. The NWI mapping is provided in Figure 2 (below), followed by specific information pertaining to each of the mandatory wetland criteria (vegetation, soils, and hydrology), and the overall findings (wetland types that were encountered). Wetland determination data forms are included in section 4 of this appendix.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Diamond Springs (portion)

Nov 15, 2012



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

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El Dorado Apartments Wetland Delineation

Figure 2. National Wetlands Inventory Map

2.1 Wetland Criteria

2.1.1 VEGETATION

Plant species that were observed in the delineated wetlands and nearby upland data points are listed below. At all wetland data points, prevalence of hydrophytic vegetation was determined by the presence of >50 percent wetland dominants; no areas met the prevalence index test but not the dominant species test.

Table 1. Plant species observed at wetland determination data points and within wetlands or other waters. Status is from 2012 National Wetland Plant List, Arid West Region. Plants not listed in that source were assigned UPL status.

Scientific Name	Common Name	Wetland Status	Comments
Bromus hordeaceus	soft chess	FACU	
Carex praegracilis	field sedge	FACW	
Cynosurus echinata	dog-tail grass	UPL	
Cyperus eragrostis	umbrella sedge	FACW	
Epilobium ciliatum/glaberrimum	willow-herb	FACW	Both species are same status.
Festuca (Lolium) perenne	Italian rye-grass	FAC	
Holcus lanatus	velvet grass	FAC	
Hordeum marinum	Mediterranean barley	FAC	
Juncus arcticus (balticus)	arctic (Baltic) rush	FACW	
Juncus effusus	soft rush	FACW	
Juncus tenuis	slender rush	FACW	
Juncus xiphioides	iris-leaved rush	OBL	
Persicaria (Polygonum) punctata	smartweed	OBL	
Populus fremontii	Fremont cottonwood	-	Not listed; should be FAC(W).
Quercus lobata	Valley oak	FACU	
Rubus armeniacus	Armenian blackberry	FACU	
Rumex crispus	curly dock	FAC	
Salix lasiolepis	arroyo willow	FACW	
Scirpus cernuus	nodding bulrush	OBL	
Verbena sp.	vervain		Likely species are FACW.

2.1.2 SOILS

Results from Soil Survey

The following soil map units occur within the project area:

Diamond Springs very fine sandy loam, 3 to 9 and 9 to15 percent slopes

Placer diggings

None of the soil series are hydric or are noted as having hydric inclusions.

Diamond Springs soils are very strongly acid fine-textured loams derived from volcanic parent material, classified as Typic Haploxerults (in brief, relatively dry soils that are extremely highly weathered [Ultisols]). The A horizon is very fine sandy loam, B horizon materials are clay or sandy clay loam, and there is a paralithic contact with weathered rock at 25 to 40 inches depth. The soils are well drained with moderate to moderately slow permeability. The weathered rock is presumably not highly compact, because the soil characteristics as stated on Web Soil Survey include that the depth to a water-restricting layer is greater than 200 cm (about 6.6 feet). This characteristic and the stated moderate permeability of the soil suggest that occurrence of seasonal ponding would not be expected in most topographic settings.

Placer diggings are disturbed soils resulting from hydraulic mining in the past. They are variably loamy (in the present case, relatively fine textured) and are characterized by presence of cobbles.

Field Observations

Six data points were fully characterized, and several additional shallow soils pits were excavated to confirm the wider applicability of the findings at those data points. Data points within wetlands had clear hydric field indicators such as redoximophic features with appropriate chroma (2 or lower). No organic soils or epipedons were encountered. Points in nearby uplands exhibited moderately high chroma soils (wet chroma usually 3) without redoximorphic features. Soils at one near-channel data point had much higher rock content at shallow depths than is expressed in the soil series descriptions, making excavation of that test pit impossible below a depth of seven inches. However, sufficient hydric soils indicators were observed throughout the (shallow) pit to determine that the soils were indeed hydric.

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El Dorado Apartments Wetland Delineation

Figure 3. Soils Map

Scale approximately 1:2050.

2.2 Types of Wetlands and Waters Observed

More than one naming system is needed to achieve the multiple purposes of this report and appendix. Within the study site, the following types of features exist:

- Areas that meet the three mandatory wetland criteria;
- An intermittent or ephemeral channel which in some areas lies within three-parameter wetland and in some others passes through non-wetland riparian vegetation (specifically, Armenian blackberry);
- An area of riparian and meadow vegetation that meets the three criteria;
- Additional area of woody riparian vegetation that does not meet the three wetland criteria.

The following types of wetland and intermittent tributary areas were encountered:

Name Used in This Report	Area (Acres)	Manual of California Vegetation Second Edition	Cowardin System, Class, and Type
Willow-Oak Riparian		*Salix lasiolepis* shrubland with *Populus fremontii* and *Quercus lobata* trees.	Palustrine - Scrub/Shrub Wetland - Broad-leaved Deciduous
Mesic Meadow		*Juncus arcticus* var. *balticus* alliance (some patches dominated by *Carex praegracilis*, others mixed with *Holcus lanatus* and other rushes; this is most similar MCV2 type)	Palustrine - Emergent Wetland - Persistent
(Tributary, within Willow-Oak Riparian)		*Rubus armeniacus* semi-natural stands	Riverine - Intermittent Streambed - Cobble/Gravel

2.3 Jurisdictional Status

2.3.1 FEDERAL CLEAN WATER ACT

Regulatory Background

Summarized briefly, current legal interpretation of the Clean Water Act specifies that the following categories of surface water features (including wetlands) are jurisdictional waters of the U.S.:

- navigable waters that are interstate or flow to territorial seas;
- tributaries thereof that are perennial or reasonably permanent (3+ months of flow);

- tributaries that otherwise have a significant nexus with water quality of a navigable interstate water or tributary; and
- wetlands that directly abut or are hydrologically adjacent to other jurisdictional features (occasionally flow into or are within 100 feet).

Isolated wetlands or other waters are excluded from Clean Water Act jurisdiction by virtue of the "SWANCC" decision of the U.S. Supreme Court decided on January 9, 2001 (Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers et al.). In practice, wetlands or other waters located more than 100 feet from jurisdictional waters, and not periodically connected to the latter during periods of high flow, are generally treated as isolated.

A subsequent Supreme Court decision ("Rapanos" decision of June 19, 2006; Rapanos et ux., et al. v. United States) resulted in the creation of a regulatory distinction between tributaries that flow only briefly or have no significant nexus with the water quality of the downstream jurisdictional receiving water, and those that are "reasonably permanent" (flow for about three or more months annually) or otherwise have significant nexus with water quality of the jurisdictional water downstream. Only the latter fall under federal jurisdiction.

Site Observations

The Mesic Meadow areas in the southernmost part of the site lie within 100 feet of a drainage inlet south of Service Drive, which we can reasonably assume flows ultimately into some downslope tributary. Thus, despite their appearance on the map, they are probably not isolated wetlands.

However, the fact that there is no evident channel between the wetlands and the drainage inlet indicates that surface flow, if any, has a very short duration (much less than three months). Therefore, the surface waters and underground flow are not reasonably permanent, and these areas are excluded from federal jurisdiction.

Similarly, the minimal and discontinuous nature of the channel that lies within the riparian area strongly suggests that surface flow throughout its length occurs only briefly during the rainy season. Accordingly, this area as well is excluded from federal jurisdiction.

Permitting

Since there are no waters of the U.S. on site, and no fills are proposed within the delineation wetlands and channel, no Clean Water Act permitting is required for any project actions.

2.3.2 STATE OF CALIFORNIA

The Porter-Cologne Water Quality Control Act (Chapter 2, Definitions, §13050) defines waters of the State of California as including all surface and ground waters within the state. Analogously with the Clean Water Act definitions, wetlands of all kinds are considered to be surface waters. In practice, wetlands that are waters of the State are delineated using the Corps delineation methodology (1987 Manual and regional supplements), but isolated and non-RPWs are not excluded. Accordingly, all of the wetlands shown in Figure 1 of this report would be waters of the State.

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4 WETLAND DETERMINATION DATA FORMS

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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**			Sampling Date: **August 30, 2012**
Applicant/Owner:			Sampling Point Number: **N-1**
City/County: **El Dorado County (Diamond Springs)**		State: **CA**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **S19,30 T10N, R11E**	Lat: **38.69722** Long: **120.80669**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **Outer fringe of riparian area along lower part of small valley.**			Landform: **valley**
Soil Map Unit: **Diamond Springs very fine sandy loam**		NWI classification:	Local relief: **lower slope** / Slope (%): **2**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ■ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

This point characterizes sedge/rush dominated meadow patch adjacent to woody riparian vegetation (and similar patch on other side of channel). Area was studied in dry season when hydrology is not normally present.

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
*Herb Stratum (Plot size: **400 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Juncus balticus	**50**	**Y**	**FACW**
Carex praegracilis	**30**	**Y**	**FACW**
Persicaria (Polygonum) punctatum	**15**	**N**	**OBL**
Holcus lanatus	**2**	**N**	**FAC**
Total cover	**97**		
Percent (%) bare ground in Herb Stratum	**3**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ■ **Yes** ☐ **No**

Sampling Point Number: **N-1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-3	**7.5YR 2.5/2**	**100**					**F/MedSaL**	**Aggregated**
3-12	**10YR 4.5/2**	**70**	**7.5YR 4/6 to**	**30**	**C**	**M, PL**	**SaCL**	**Somewhat stony**
			5YR 3/6					

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches)**:**

Hydric soil present? ■ **Yes** ☐ **No**

Remarks:

Increasingly rocky below (as might be expected near a channel), but overall texture fits Diamond Springs reasonably well.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	☐ Yes ■ No	Depth (inches):	
Water Table Present?	☐ Yes ■ No	Depth (inches):	**Wetland hydrology present?** ■ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ■ No	Depth (inches):	

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

Remarks:

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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**			Sampling Date: **August 30, 2012**
Applicant/Owner:			Sampling Point Number: **N-2**
City/County: **El Dorado County (Diamond Springs)**		State: **CA**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **S19,30 T10N, R11E**	Lat: **38.69725** Long: **120.80660**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **Upland-appearing grassland adjacent to woody riparian area.**			Landform: **hillside**
Soil Map Unit: **Diamond Springs very fine sandy loam**		NWI classification:	Local relief: **lower slope** / Slope (%): **5**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ■ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

This point characterizes upland adjacent to woody riparian vegetation. Area was studied in dry season when hydrology is not normally present.

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
*Herb Stratum (Plot size: **1000 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Hypericum perfoliatum	**30**	**Y**	**FACU**
Elymus (Taeniatherum) caput-medusae	**25**	**Y**	**UPL**
Centarea solstitialis	**20**	**Y**	**UPL**
Bromus hordeaceus	**5**	**N**	**FACU**
Total cover	**80**		
Percent (%) bare ground in Herb Stratum	**20**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

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

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ☐ Yes ■ No

Remarks:

No hydrophytic species present.

Sampling Point Number: **N-2**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-4	**10YR 4/3**	**100**					**SaL**	
4-11	**10YR 4.5/4**	**100**					**SaCL**	

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches):

Hydric soil present? ☐ Yes ■ No

Remarks:

No field indicators of hydric soils.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	☐ Yes ■ No	Depth (inches):	
Water Table Present?	☐ Yes ■ No	Depth (inches):	**Wetland hydrology present?** ☐ Yes ■ No
Saturation Present? (includes capillary fringe)	☐ Yes ■ No	Depth (inches):	

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

Remarks:

No field indicators of wetland hydrology.

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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**		Sampling Date: **August 30, 2012**	
Applicant/Owner:		Sampling Point Number: **N-3**	
City/County: **El Dorado County (Diamond Springs)**	State: **CA**	Investigator(s): **Adrian Juncosa**	
Section, Township, Range: **S19,30 T10N, R11E** Lat: **38.69729** Long: **120.80680**	Datum: **NAD 83**	Subregion (LRR): **C**	
Sampling Point Location: **Woody riparian area along lower part of small valley.**		Landform: **valley**	
Soil Map Unit: **Diamond Springs very fine sandy loam**	NWI classification:	Local relief: **concave**	Slope (%): **2**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?		
Are "Normal Circumstances" present? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

This point characterizes willow riparian vegetation. Area was studied in dry season when hydrology is not normally present.

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**70**	**Y**	**FACW**
Total cover			
*Herb Stratum (Plot size: **400 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Persicaria (Polygonum) punctatum	**2**	**Y**	**OBL**
Epilobium ciliatum/glaberrimum	**tr**	**N**	**FACW**
Total cover	**2**		
Percent (%) bare ground in Herb Stratum	**98**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ■ **Yes** ☐ **No**

Remarks:

Moderately dense tall shrub/low tree canopy cover suppresses herbaceous stratum (also possible effect from very dry spring season). Woody canopy is probably much more dense earlier in the growing season.

Sampling Point Number: **N-3**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-2	**7.5YR 2.5/2**	**100**					**SaL**	
2-12	**10YR 4/2**	**75**	**5YR 4/6**	**25**	**C**	**M, PL**	**SaCL**	**Stony**

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches):

Hydric soil present? ■ **Yes** ☐ **No**

Remarks:

Increasingly rocky below (as might be expected near a channel), but overall texture fits Diamond Springs reasonably well.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	☐ Yes ■ No	Depth (inches):	
Water Table Present?	☐ Yes ■ No	Depth (inches):	**Wetland hydrology present?** ■ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ■ No	Depth (inches):	

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

Remarks:

Eco Synthesis
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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**		Sampling Date: **September 1, 2012**	
Applicant/Owner:		Sampling Point Number: **S-1**	
City/County: **El Dorado County (Diamond Springs)**	State: **CA**	Investigator(s): **Adrian Juncosa**	
Section, Township, Range: **S19,30 T10N, R11E** Lat: **38.69722** Long: **120.80669**	Datum: **NAD 83**	Subregion (LRR): **C**	
Sampling Point Location: **Excavated area south of Service Dr.**		Landform: **disturbed area**	
Soil Map Unit: **Placer Diggings**	NWI classification:	Local relief: **concave**	Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?		
Are "Normal Circumstances" present? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

Excavated slight depression in generally disturbed area. Area was studied in dry season when hydrology is not normally present.

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
*Herb Stratum (Plot size: **60 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Hordeum marinum	**40**	**Y**	**FAC**
Juncus balticus	**30**	**Y**	**FACW**
Bromus hordeaceus	**10**	**N**	**FACU**
Total cover	**80**		
Percent (%) bare ground in Herb Stratum	**20**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ■ **Yes** ☐ **No**

Sampling Point Number: **S-1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-7	**10YR 4/2**	**95**	**5YR 5/6**	**5**	**C**	**M, PL**	**LCoSa**	
7-11	**5Y 4/3**	**100**					**Cemented CoSa**	**With many stones**

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches)**:**

Hydric soil present? ■ **Yes** ☐ **No**

Remarks:

Perhaps lower horizons exposed by excavation, or redistributed soil/weathered rock from placer mining. Sufficient thickness of redox features to meet hydric indicator.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	☐ Yes ■ No	Depth (inches):	
Water Table Present?	☐ Yes ■ No	Depth (inches):	**Wetland hydrology present?** ■ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ■ No	Depth (inches):	

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

Remarks:

Shallow topographic depression.

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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**		Sampling Date: **September 1, 2012**	
Applicant/Owner:		Sampling Point Number: **S-2**	
City/County: **El Dorado County (Diamond Springs)**	State: **CA**	Investigator(s): **Adrian Juncosa**	
Section, Township, Range: **S19,30 T10N, R11E** Lat: **38.69722** Long: **120.80692**	Datum: **NAD 83**	Subregion (LRR): **C**	
Sampling Point Location: **Excavated area south of Service Dr.**		Landform: **disturbed area**	
Soil Map Unit: **Placer Diggings**	NWI classification:	Local relief: **concave**	Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?		
Are "Normal Circumstances" present? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

Area of FAC to OBL herbaceous vegetation surrounded by Rubus armeniacus (FACU) and upland trees (e.g., Pinus ponderosa).

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
*Herb Stratum (Plot size: **1000 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Holcus lanatus	**20**	**Y**	**FAC**
Juncus balticus	**20**	**Y**	**FACW**
Juncus tenuis	**16**	**Y**	**FACW**
Scirpus cernuus	**8**	**N**	**OBL**
Juncus xiphioides (sterile: see Remarks)	**10**	**N**	**OBL**
Juncus effusus	**2**	**N**	**FACW**
Epilobium ciliatum/glaberrimum	**2**	**N**	**FACW**
Salix (probably lasiolepis)	**tr**	**N**	**FACW**
Populus fremontii	**tr**	**N**	**-**
Rumex crispus	**tr**	**N**	**FAC**
Cyperus eragrostis	**tr**	**N**	**FACW**
Total cover	**78**		
Percent (%) bare ground in Herb Stratum	**22**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ■ **Yes** ☐ **No**

Remarks:

Salix and Populus present only as one tiny seedling each (size of a herbaceous plant).

Sampling Point Number: **S-2**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-2	**10YR 2/2**	**95**	**tiny but bright**	**5**	**C**	**PL**	**LSa**	**Dense Juncus root mat**
2-6	**10YR 5/2**	**70**	**5YR 5/8**	**30**	**C**	**M**	**LCoSa**	
6-10	**no intact sample**						**LCoSa**	**Stones >70% by volume**

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches)**:**

Hydric soil present? ■ **Yes** ☐ **No**

Remarks:

High content of stones below 6 inches seems to fit with mapped soil type (Placer Diggings). Sufficient thickness of hydric indicators within soil above to meet requirements of indicator S5.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland hydrology present? ■ **Yes** ☐ **No**

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

Remarks:

Shallow topographic depression.

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES INC

WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **El Dorado Apartments**		Sampling Date: **September 1, 2012**	
Applicant/Owner:		Sampling Point Number: **S-3**	
City/County: **El Dorado County (Diamond Springs)**	State: **CA**	Investigator(s): **Adrian Juncosa**	
Section, Township, Range: **S19,30 T10N, R11E** Lat: **38.69718** Long: **120.80683**	Datum: **NAD 83**	Subregion (LRR): **C**	
Sampling Point Location: **Excavated area south of Service Dr.**		Landform: **disturbed area**	
Soil Map Unit: **Placer Diggings**	NWI classification:	Local relief: **concave**	Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology significantly disturbed?		
Are "Normal Circumstances" present? ■ Yes ☐ No	Are ☐ Vegetation , ☐ Soil , or ■ Hydrology naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	■ Yes ☐ No	Sampled area within a wetland?	■ Yes ☐ No
Hydric soil present?	■ Yes ☐ No	Sampled area within other water of state?	☐ Yes ■ No
Wetland hydrology present?	■ Yes ☐ No		

Remarks:

Drier portion of stand described at data point S-2, but still dominated by Juncus spp. Area studied in dry season when hydrology is not normally present.

VEGETATION

Tree Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
Sapling/Shrub Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
Total cover			
*Herb Stratum (Plot size: **400 sf**)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Juncus tenuis	**30**	**Y**	**FACW**
Juncus balticus	**20**	**Y**	**FACW**
Juncus xiphioides (sterile)	**15**	**N**	**OBL**
Holcus lanatus	**10**	**N**	**OBL**
Lolium (Festuca) perenne	**5**	**N**	**FAC**
Bromus hordeaceus	**5**	**N**	**FACU**
Cynosurus echinata	**2**	**N**	**UPL**
Total cover	**92**		
Percent (%) bare ground in Herb Stratum	**8**		
Percent (%) cover of biotic crust	**0**		
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **2** (A)

Total number of dominant species across all strata: **2** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

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 in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

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

Hydrophytic vegetation present? ■ **Yes** ☐ **No**

Sampling Point Number: **S-3**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-1	**10YR 3/3**	**100**					**LSa**	
1-7	**10YR 7/2**	**80**	**10YR 5/8**	**20**	**C**	**M**	**LCoSa**	
7	**Dense stones**							

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

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

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

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

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

Restrictive Layer (if present):

Type: **none encountered**

Depth (inches)**:**

Hydric soil present? ■ **Yes** ☐ **No**

Remarks:

High content of stones below 6 inches seems to fit with mapped soil type (Placer Diggings). Sufficient thickness of hydric indicators within soil above to meet requirements of indicators S5 and S6. May be redistributed soils, or lower horizon exposed by excavation for unknown purpose.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
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- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ■ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	☐ Yes ■ No	Depth (inches):	
Water Table Present?	☐ Yes ■ No	Depth (inches):	**Wetland hydrology present?** ■ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ■ No	Depth (inches):	

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

Remarks:

Shallow topographic depression.