REVISED BIOLOGICAL ASSESSMENT OF PROPOSED MONTECITO COUNTRY CLUB AND GOLF COURSE RENOVATION, SANTA BARBARA, CALIFORNIA

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EXHIBIT G

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Revised Biological Assessment of
Proposed Montecito Country Club and Golf Course Renovation,
Santa Barbara, California

1.0 Executive Summary. This report updates earlier versions of Biological Assessment submitted to the City of Santa Barbara Planning Department (Hunt & Associates Biological Consulting Services, 2008a,b). The present report responds to comments received from City Planning Department (13 January 2009 and 25 March 2009 letters), U.S. Army Corps of Engineers (as a result of 15 October 2008 and 3 February 2009 site visits), and California Department of Fish and Game staff (as a result of 3 February 2009 site visit), presents a detailed description and analysis of key project elements, and highlights the significant benefits the proposed project accrues to biological resources.

1.1 Findings:

- The project area has been a golf course for over 90 years and is bordered on the west, north, and east by residential development and on the south by major transportation corridors. As such, the project area is a highly disturbed and intensively managed, anthropogenic environment embedded in an urban context.
- The property contains small acreages of highly disturbed State (California Department of Fish and Game-CDFG) and Federal (U.S. Army Corps of Engineers-ACOE) jurisdictional wetlands, including three highly-disturbed and modified seasonal drainages that convey surface flows to Andree Clark Bird Refuge, an off-site brackish wetland, and two low-lying areas in the southwestern quadrant of the property. The latter wetlands also are hydrologically connected to the Bird Refuge, but only during storm events when these low-lying areas flood. These latter wetland areas are atypical and likely result from anthropogenic activities.
- The three on-site seasonal drainages are thoroughly infested with invasive, non-native vegetation and in need of habitat restoration.
- No Federal- or State-listed (threatened or endangered) plants or animals are known to occur in the project area. Special-status species found in the project area to date include: monarch butterfly and Cooper's hawk. Raptorial birds, such as turkey vulture, American kestrel, red-tailed hawk, red-shouldered hawk, great horned owl, and barn owl frequent the project area but nesting has not been observed to date.
- The proposed project is consistent with wetland restoration goals of the Coastal Act and ACOE and CDFG regulations and can reasonably be classified as a "habitat restoration project" for permitting purposes.

1.2 Potential Project-Related Impacts: Project-related impacts to biological resources are limited and involve two project elements: re-improvements to existing seasonal drainages and wetlands on-site and tree removal/relocation. Each of the project-related

impacts identified below are considered Class II or Class III impacts and can be feasibly mitigated to less than significant levels:

- Proposed tree removal during golf course re-design could affect species that may use these trees for roosting and nesting, such as: monarch butterflies, raptors, and passerine birds. For example, acorn woodpeckers inhabit trees and palms around the existing clubhouse and Fairways 16-18 and could lose nests or food sources by the proposed tree removal.
- Soil conditions in the northwestern portion of the project area (upper western drainage) are suitable for silvery legless lizards, a special-status reptile known from the Santa Barbara area. This species could be negatively affected by grading for this portion of the project area.
- The small number of mature coast live oaks targeted for relocation could die, thereby reducing oak tree numbers on-site.
- The proposed course ponds could be potential sites for introducing non-native aquatic plants and wildlife (fish, amphibians, turtles).
- The proposed course ponds could become "attractive nuisances" for wildlife.

1.3 Project Benefits. The proposed project includes a number of design features that significantly increase the size and quality of on-site wetland, riparian, and upland habitats on-site. These beneficial impacts are summarized in Table 1 and discussed in more detail in Tables 4 and 5. The proposed project has been designed to meet U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC) criteria as a "restoration project".

Table 1. Project Benefits.

Project Element	Benefits to Biological Resources
Create de-silting basin at upper end of western drainage	Basin will capture sediment and pollutants transported in surface runoff from off-site hardscapes and improve water quality of runoff entering the western drainage, western pond, and, ultimately, the Andree Clark Bird Refuge. Basin will require periodic maintenance to remove accumulated sediment but is designed so that maintenance does not impact wetland vegetation. Basin location at upper end of western drainage will improve water quality throughout western drainage and western pond and minimize the need for sediment removal in the western pond.
Restore and revegetate existing, exposed reaches of western drainage; remove debris and fill from channel; create defined channel, and; replace non-native plants with native vegetation	Habitat restoration will remove existing debris (logs, concrete, asphalt) from stream channel, improve channel definition, remove non-native vegetation, and restore riparian corridor with native trees and shrubs; water quality will be improved by reducing or eliminating bank erosion and channel scour.
Create stream channel along current buried reach of western drainage	Stream channel will be planted with wetland and upland species to increase wildlife habitat values. Restoration will significantly improve the amount and quality of on-site riparian habitats for plants and wildlife; recirculating pond water through created stream channel will help maintain water quality in the created western pond without the need for chemicals; stream will meander and have several small "falls" that will maximize habitat areas and aerate water; habitat restoration buffer strips along both sides of stream channel varies from 10 feet to 50 feet in width; surface runoff from fairways will drain into expanded upland habitat areas prior to entering stream channel.
	Biological functions of the pond will include: nutrient cycling, water quality maintenance, and habitat for aquatic and wetland plant and animals. Pond liner

Create western pond at lower end of western drainage	will be covered with 18-24 inches of soil to provide substrate for native vegetation and nutrient cycling. Pond margins will be planted with native aquatic plants and salt grass; this vegetation will intercept surface runoff during storm events, which will improve water quality prior to runoff entering Andree Clark Bird Refuge. Pond will create freshwater marsh habitat on-site (which currently does not occur here) and will significantly improve quality and size of existing wetlands in this area and provide high-quality wetland and aquatic habitat for plants and wildlife.
Create de-silting basin in upper end of the middle (aka eastern) drainage	Basin will capture sediment and pollutants transported in surface runoff from off-site hardscapes and improve water quality of runoff entering the western drainage, western pond, and, ultimately, the Andree Clark Bird Refuge. Basin will require periodic maintenance to remove accumulated sediment but is designed so that maintenance does not impact wetland vegetation. Basin location at upper end of western drainage will improve water quality throughout eastern (middle) drainage and eastern pond and will minimize need for sediment removal maintenance in eastern pond..
Restore and revegetate existing, exposed reaches of middle drainage; replace non-native plants and turf grass with native vegetation; create a defined channel	Habitat restoration will replace existing turf grass swale with a defined stream channel, remove non-native vegetation, and restore riparian corridor with native trees and shrubs; water quality will be improved by recirculatiing pond water through created stream channel; feature will reduce need for chemical use in eastern pond.
Create eastern pond at lower end of middle drainage	Biological functions of the pond will include: nutrient cycling, water quality maintenance, and habitat for aquatic and wetland plants and animals. Pond liner will be covered with 18-24 inches of soil to provide substrate for native vegetation and nutrient cycling. Pond margins will be planted with native aquatic plants and salt grass; this vegetation will intercept surface runoff during storm events, which will improve water quality prior to runoff entering Andree Clark Bird Refuge. Pond will create freshwater marsh habitat on-site (which currently does not occur here) and will significantly improve quality and size of existing wetlands in this area and provide high-quality wetland and aquatic habitat for plants and wildlife.
Restore and revegetate portion of eastern drainage upstream (north) of Summit Road bridge	Habitat restoration will significantly improve riparian habitat along this reach.
Tree Planting	Tree planting on the landscaped portions of the golf course will result in a 15% increase in tree canopy cover over existing conditions
Wetland Restoration	The acreage and quality of on-site wetlands will significantly increase because the project creates two permanent ponds and restores reaches of two drainages to biological function.
Operation and maintenance of ponds	Ponds and de-silting basins will be designed to minimize disturbance and impacts to plants and wildlife; pond maintenance will include minimal use of chemicals to maintain water quality (surface runoff from turf grass will pass through "roughs" designed to function as bioswales prior to entering drainage channels, aeration of stream and pond water, nutrient cycling capability of stream and pond); re-designed course will use minimum amount of fertilizer/herbicides on turf grass
Consistency with the ACOE, CDFG, and CCC (California Coastal Act) as a "restoration project" in the Coastal Zone	Project is consistent with Coastal Act policies and ACOE and CDFG regulations (see detailed discussion in Table 4).

2.0 Project Description

Montecito Country Club and Golf Course is located northwest of the corner of Hot Springs Road and Old Coast Highway in the City of Santa Barbara. The property consists of twelve separate parcels covering approximately 117 acres (Figure 1). Access to the property is via Summit Road, west of Hot Springs Road. The Coastal Zone boundary runs east to west, bisecting the property, and the property is zoned A-2 (One Family Residence Zone) with a General Plan Designation as "Open Space".

Montecito Country Club and Golf Course was established in 1916. Bertram Goodhue designed the clubhouse in 1917 and George Washington Smith remodeled the interior in

1921. Additional alterations to the clubhouse were made in 1956-57, 1962, and 1971. In 1996, the clubhouse was enlarged and new pool cabana, tennis pavilion, additional parking, and a new maintenance building were constructed. The following structures currently exist on the property:

- 44,960 square foot clubhouse;
- 12,510 square foot car barn;
- 1,213 square foot pool cabana;
- 618 square foot tennis pavilion;
- 3,389 square foot maintenance building;
- Two comfort station buildings totaling 306 square feet;
- 203 parking spaces and 198 overflow parking space area;
- Four tennis courts and one swimming pool;
- One existing residence located at 1024 Summit Road, with guesthouse and garages totaling approximately 11,813 square feet.

In addition to providing an 18-hole golf course, pro shop, and related golf amenities, the Montecito Country Club offers tennis, swimming, dining, a banquet hall, fitness center, lockers, and meeting room facilities for its members and guests.

The primary goal of the proposed project is to create a "Jack Nicklaus Signature Golf Course". The current golf course layout is, in part, a forced design caused by course property lost during development of Highway 101 in the 1950s. The new course will be re-configured and slightly lengthened in order to take advantage of natural terrain features and views. The proposed project seeks to significantly improve the golfing experience through an enhanced golf course setting, which includes an environmentally sensitive re-design that corrects inadequate site drainage and creates two sediment control basins and two ponded wetland features, restores habitat values to two on-site drainages, and restores historic elements and functionality of the clubhouse (Figure 2). A number of trees will be removed, relocated, or planted as a result of re-designing the course. In almost all instances, existing mature trees that have to be removed to accommodate re-design will be relocated elsewhere on the course.[1]

The Conditional Use Permit (CUP) approved by the City of Santa Barbara Planning Commission on September 5, 1996, placed restrictions on the use of the property and limited club membership to 680 members. Parking is currently provided via 203 surface parking spaces and 198 overflow parking spaces. The project will maximize on-site parking, as required by the approved CUP, in order to accommodate the 680-membership limit. Club membership, non-golf events, and golf course maintenance services will remain at current levels.

Earthwork during course re-design will be balanced in order to eliminate short-term traffic impacts caused by construction-related truck trips. The project will not create long-term impacts because membership limits and golf course operations will remain unchanged from their existing conditions. The maintenance building, presently located in the northwestern corner of the property, will be relocated to a more central location,

which will improve efficiency of operations and reduce noise impacts currently experienced by neighbors adjacent to this portion of the property.

The project will not require a Transfer of Development Rights (TDR) because adequate square footage exists on-site to accommodate the proposed project. The overall net increase in square footage is estimated at less than 500 square feet.

Fencing that was installed around the southern, western, and northern perimeter of the property in 1974 will be removed and replaced with a black, vinyl-coated chain link fence, an aesthetic improvement for the public. A setback modification is necessary where the existing fence encroaches within the front setback along Old Coast Highway.

There are three seasonal drainages on-site. From a biological perspective, perhaps the most significant improvements to the existing course will be restoration/reconfiguration of the western and middle drainages, which will provide significant opportunities for wetland and riparian habitat restoration on-site (Figures 3 and 6):

Western De-Silting Basin. A de-silting basin will be constructed in the channel of the western drainage in the vicinity of the existing maintenance building (Figures 3 and 4). The basin will capture and hold sediment- and pollutant-laden water that currently runs off streets, sidewalks, and other hardscapes in residential areas north and northwest of the golf course before it enters the downstream portion of the western drainage and the western water feature (western pond). Accumulated sediment and other debris will be removed via an equipment access ramp in the southwestern corner of the basin. The de-silting basin will temporarily retain a maximum of 0.36 acre-feet of runoff, with a maximum depth of four feet and an area of approximately 6,000 square feet (0.14 acres) (Figure 4). The margins of the basin (except the access path) will be planted with low-growing, native, aquatic and wetland vegetation.

Western Drainage Channel. An unrestricted overflow pipe in the southeastern corner of the de-silting basin will convey storm water into the western drainage channel after it has reached a depth of four feet in the basin. The existing exposed reaches of the western drainage below the de-silting basin will have logs, concrete, and asphalt debris removed, the channel will be reconstructed and lined with rocks, and non-native vegetation will be removed. Native riparian and upland vegetation will be planted along the bed, banks, and upland portions of this area. The existing buried reach of this drainage, i.e., the reach conveyed beneath the 4th, 5th, 7th, and 8th fairways of the golf course from a 24-inch culvert southward to a culvert on the north side of Old Coast Highway, will be "daylighted" to create a natural, meandering stream channel (Figures 3, 5a, 5b, and 6). This "daylighted" reach will be approximately 275 feet long. Figures 3 and 6 (see Plan Sheets L8 and L9) show plan, profile, and cross-section views of the created stream channel. The created channel will be approximately 10-15 feet wide and will follow a meandering path. The channel will be unlined except for a 5-foot wide low-flow channel, which will contain the recirculating portion of the stream. A liner is necessary along the recirculating channel to prevent percolation and channel scour. The channel will be lined with stones and will contain two or three "falls" (areas of localized

steepness adjacent to "roughs") in order to maximize aeration of stream flows. The channel and banks will be planted with native vegetation to filter and treat stream flows. A riparian habitat buffer will be created along the stream channel that will range from 5 feet wide adjacent to the fairways up to 50 feet wide adjacent to the "roughs". This riparian habitat buffer will be planted with native shrubs and trees (Figures 5a,b). The fairways will be graded so that surface runoff is filtered through the wider ("rough") portions of the riparian buffer. Cart paths will cross the channel via span crossings.

Western Pond. The created stream channel will enter a large pond to be created along the southern edge of the property in an area that currently experiences seasonal flooding caused by poor drainage (Figure 3). The pond will cover an area of approximately 18,000 square feet (0.41 acres), with a maximum depth of 8-10 feet. The pond will be lined in order to minimize water loss due to percolation and to prevent intrusion of brackish groundwater from the shallow water table in this area. The plastic liner will be covered with approximately 18-24 inches of soil to provide substrate for native vegetation and nutrient cycling. Figure 6 (see full-size Plan Sheet for details) shows a typical profile of the pond, showing that the nearshore areas will include a "shelf" approximately 5 feet wide that will be planted with native aquatic vegetation. The shoreline of the pond will be planted with native wetland vegetation and the perimeter of the pond will be a "rough" area to be planted with saltgrass as transitional vegetation to turf grass on the adjacent fairway (Figures 5a, 5b, and 6). The pond will be completely encircled by the saltgrass and native aquatic wetland vegetation buffer.

Middle De-Silting Basin. Currently, storm water flows southeastward into a drainage swale, enters a 24-inch culvert at the northern golf course property boundary, then flows beneath the 16th and 18th fairways where it is conveyed for a distance of approximately 400 feet to the northern edge of Summit Road. From this point, flows "daylight" into a drainage channel and swale that extends southward across the 11th, 12th, 13th, and 15th fairways to a drop structure and culvert located along the northern edge of Old Coast Highway near the intersection of Hot Springs Road. The proposed course re-design largely retains this configuration. A de-silting basin will be constructed in the channel of the middle drainage at the north-central property boundary (Figures 3 and 7). This basin will capture and hold sediment- and pollutant-laden water that currently runs off streets, sidewalks, and other hardscapes in residential areas north of the golf course, as well as contributive portions of the course proper, before entering the downstream portion of the middle drainage and the proposed eastern water feature (eastern pond). Accumulated sediment and other debris will be removed via an equipment access point located in the southeastern corner of the basin (Figure 7). The basin will temporarily retain a maximum of 0.45 acre-feet of runoff, with a maximum depth of five feet and an area of approximately 6,500 square feet (0.15 acres) (Figure 7). The margins of the basin (except the access path) will be planted with low-growing, native, aquatic and wetland vegetation.

Middle Drainage Channel. If storm flows reach a maximum depth of five feet, an unrestricted overflow pipe in the southeastern portion of this de-silting basin will convey additional flows through a 36-inch diameter pipe beneath the 16th and 18th fairways to its

"daylight" point about 600 feet downslope. From this "daylight" point downstream, the existing channel will be reconstructed, lined with rocks, non-native vegetation will be removed, and native vegetation will be planted to create a natural, meandering stream channel (Figures 3, 5a, 5b, and 6). This restored reach will be approximately 750 feet long. Figure 6 shows plan, profile, and cross-section views of the proposed stream channel (see full-size Plan Sheets for details). The created channel will be approximately 10-15 feet wide and will follow a meandering path. The channel will be unlined except for a 5-foot wide low-flow channel, which will contain the recirculating portion of the stream. A liner is necessary along the recirculating channel to prevent percolation and channel scour. The channel will be lined with stones and will contain one or more "falls" (areas of localized steepness adjacent to "roughs") in order to maximize aeration of stream flows. The channel and banks will be planted with native vegetation to filter and treat stream flows. A riparian habitat buffer will be created along the stream channel that will range from 5 feet wide adjacent to the fairways up to 50 feet wide adjacent to the "roughs". This riparian habitat buffer will be planted with native shrubs and trees (Figures 5a,b; see full-size Plan Sheets for details). The fairways will be graded so that surface runoff is filtered through the wider ("rough") portions of the riparian buffer. Cart paths will cross the channel via span crossings, not culverts.

Eastern Pond. Water from the middle (eastern) channel will enter a pond that will be constructed near the southern edge of the property (Figures 3, 5a, and 5b). Water from the eastern pond will be re-circulated through the lowermost 150-foot long segment of the channel to create a "live" stream. The eastern pond will cover an area of approximately 3,750 square feet (0.09 acres), with a maximum depth of 8 feet. The pond will be lined in order to minimize water loss due to percolation and to prevent intrusion of brackish groundwater from the shallow water table in this area. The plastic liner will be covered with approximately 18-24 inches of soil to provide substrate for native vegetation and nutrient cycling. Figure 6 (see full-size Plan Sheets for details) shows a typical profile of the pond, showing that the nearshore areas will include a "shelf" approximately 5 feet wide that will be planted with native aquatic vegetation. The shoreline of the pond will be planted with native wetland vegetation and the perimeter of the pond will be a "rough" area to be planted with saltgrass as transitional vegetation to turf grass on the adjacent fairway (Figures 5a, 5b, and 6—see Plan Sheets). The pond will be encircled by the saltgrass and native aquatic wetland vegetation buffer.

Eastern Drainage. This drainage is not part of the proposed course re-design project, however, an approximately 300-foot long reach of this drainage, extending from the northeastern property boundary southward to Summit Road, presents an opportunity for additional riparian and upland habitat restoration (Figure 3). Non-native vegetation will be removed and replaced with native, locally-occurring trees and shrubs.

Grading in "Riparian-Associated" Habitats. Exposed reaches of the western, middle, and eastern drainages support woodland habitats that are dominated by eucalyptus and other ornamental tree species, and a few individuals of native trees, such as coast live oak and western sycamore. These highly disturbed "riparian-associated" woodlands will remain largely undisturbed by grading for the proposed project, except in

the western drainage where two additional tees and fairways will be created. Cut-and-fill during re-configuration of the golf course will be balanced on-site and mostly occurs on existing fairways (Figure 8).

Tree Removal, Relocation, and Planting. In order to accommodate a new golf course design, some of the existing trees will have to be removed or relocated. Additional trees will be planted. The following paragraphs describe changes to a portion of the on-site trees, as proposed in the Tree Protection Plan (McPherson, 2009). McPherson (2009) identified, measured, and evaluated the health of the approximately 1,214 trees and large woody shrubs, representing 75 species that currently exist on the property. These species are listed in Appendix 2. About 26% (n = 325) of the total number of trees and shrubs found on the property are native to California. Six of the 10 species native to California are locally native (Appendix 2).

Non-native, ornamental trees and shrubs comprise 87% of the species and 74% of the 1,214 trees and shrubs found on the property (Table 2). There are ten native tree species currently on-site. Some of these may be original to the site, but most have been planted. Many of the ornamental species currently on-site are invasive (e.g., *Eucalyptus*, *Acacia*, *Pittosporum*, *Myoporum*, *Schinus*, etc.), while other non-invasive species, such as *Phoenix, Cupressus, Araucaria, Pinus*, etc., provide food and shelter for wildlife.

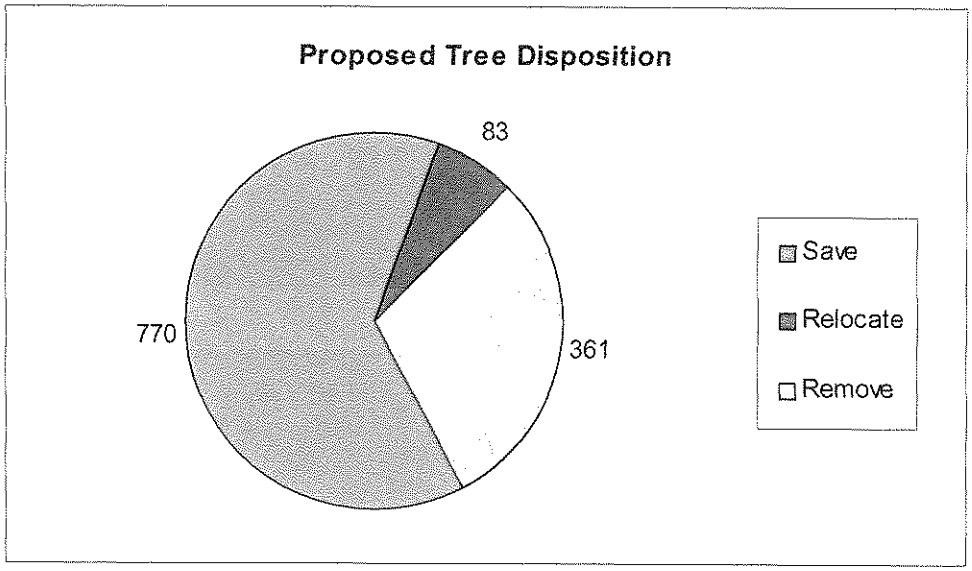
Table 2. Disposition of Existing and Proposed Trees.

Species	Existing Total On-Site	Number Proposed for Removal	Number Proposed for Relocation	Number to Be Saved	Number to be Planted
Coast live oak[a] (*Quercus agrifolia*)	76	10*	8	58	51
Island oak[b] (*Quercus tomentella*)	---	---	---	---	30
Southern live oak[c] (*Quercus virginiana*)	---	---	---	---	29
Cork oak[d] (*Quercus suber*)	---	---	---	---	20
Monterey cypress[e] (*Cupressus macrocarpa*)	89	12	8	69	44
Monterey pine[e] (*Pinus radiata*)	109	37	0	72	0
Torrey pine[f] (*Pinus torreyana*)	38	12	4	22	0
Coast redwood[g] (*Sequoia sempervirens*)	2	1	0	1	0
Western sycamore[e] (*Platanus racemosa*)	3	0	3	0	32
Holly-leaf cherry[e] (*Prunus ilicifolia*)	3	1	0	2	0
Laurel sumac[e] (*Malosma laurina*)	1	0	0	1	0
Lemonadeberry[e] (*Rhus integrifolia*)	1	0	0	1	0
Toyon[e] (*Heteromeles arbutifolia*)	3	0	0	3	0
Ornamental species	889	288	60	541	216
Total	**1,214**	**361**	**83**	**770**	**422**

a – native to mainland Santa Barbara Region
b - native to Channel Islands
c – native to SE United States
d – native to Mediterranean Region
e – native to Monterey County
f – native to San Diego County
g – native to coastal north-central and northern California
* only 4 trees are in excess of 3 inches diameter at breast height

Figure 9 summarizes the disposition of existing trees (McPherson, 2009). Approximately 63% (n = 770) of the existing trees on-site will be saved, 30% (n = 361) will be removed, and 7% (n = 83) of the trees will be relocated. Four of the 10 coast live oaks slated for removal are larger than 3 inches dbh, the City and County standard for mitigation. Eight coast live oaks, mostly small to medium-sized trees (3-18 inch dbh), will be relocated. About 12 Monterey cypress trees will be removed and most of these trees are medium-sized to very large trees (Table 2).

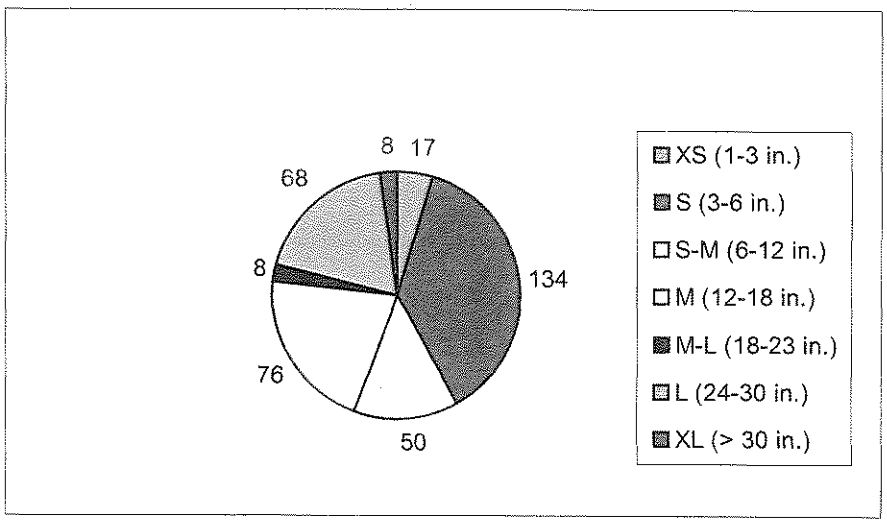
Figure 9. Proposed Disposition of Existing Trees.



The 770 trees that will remain in place and the 83 trees that will be relocated will be supplemented with 422 new trees (16 species—two species native to the Santa Barbara mainland region; 14 species are non-native) (Table 2; McPherson, 2009). This will bring the total number of trees on-site after project completion to 1,275 trees and will increase tree canopy cover on the golf course by approximately 14% over existing conditions.

Figure 10 categorizes the size of the 361 trees to be removed. About 80% (n = 288) of these trees are ornamental species, i.e., not native to the United States (Table 2). Overall, about 56% (n = 201) of the 361 trees to be removed were classified by McPherson (2009) as small (XS to S-M); about 21% (n = 76) of the trees to be removed are large or very large (L to XL).

Figure 10. Sizes of Trees Proposed for Removal (dbh).



3.0 Methods. The biological context within which the proposed project exists was characterized for this analysis by reviewing local and regional literature sources that overlap the project area (e.g., EIR/EISs, biological evaluations, technical studies, etc.), and locality records of special-status plants and wildlife found in the California Natural Diversity Data Base (CNDDB) for the Goleta, Santa Barbara, Montecito, Carpinteria, and Little Pine Mountain USGS topographic quadrangles managed by the California Department of Fish and Game (CNDDB, 2008), the California Native Plant Society (CNPS, 2008), and the Santa Barbara Museum of Natural History. Known or potentially-occurring special-status species are presented in Appendices 1, 3, and 4 of this document.

A number of site visits were made to the golf course between February 2006 and February 2009 in order to characterize existing biological resources and to evaluate potential impacts from proposed golf course re-design to those resources (Table 3).

Table 3. Purpose and Timing of Site Visits for Biological Resource Evaluations.

Purpose of Site Visit	Date	Observer
Special-status Plants	10 February 2006 15 May 2006 9 June 2006 17 July 2006	Rachel Tierney
Wetland Delineation and Evaluation	10 February 2006 9 June 2006 17 July 2006 15 October 2008 3 February 2009	Rachel Tierney Matthew Vandersande (ACOE) Natasha Lohmus (CDFG)
General Wildlife	15 May 2006 21 June 2006 18 July 2006 22 September 2006 14 March 2008 17 November 2008	Lawrence E. Hunt
Roosting/Nesting	15 May 2006 21 June 2006	Lawrence E. Hunt

Birds	14 March 2008 10 April 2008 17 November 2008	
California Red-Legged Frog	10 and 23 February 2006 4 and 10 April 2006 15 May 2006 14 March 2008	Lawrence E. Hunt
Monarch Butterfly	15 May 2006 22 September 2006 14 March 2008 29 October 2008 17 November 2008	Lawrence E. Hunt

Wetland Delineation. Rachel Tierney conducted wetland delineations according to U.S. Army Corps of Engineers (ACOE) standards in order to make an initial determination of ACOE jurisdictional "waters" (Table 5). Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged and fill materials into "navigable waters of the United States", including streams and their tributaries, oceans, lakes, and adjacent wetlands. The ACOE controls regulated activities through a permit review process. For streams and rivers, the area falling under federal jurisdiction of "waters" (not including wetlands) is restricted to the "ordinary high water mark (OHWM)". The term "ordinary high water mark" refers to that line on the shore established by the fluctuations of water and indicated by physical characteristics, such as: a clear, natural line on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of leaf litter/stick litter and other debris, or other appropriate means that consider the characteristics of the surrounding areas. If these surrounding areas are potentially wetlands, a formal systematic method that considers vegetation, soils, and hydrology is used to determine the actual wetland/upland boundary (delineation). Typically, the area under investigation is examined first for changes in vegetation that could indicate a potential upland/wetland boundary then the site is divided into sections, or polygons, based on these vegetation differences. Representative observation points are chosen that appear to best represent the vegetation found in each polygon. At each point, a data form is completed (Appendix 6). Three types of information are collected for the data forms: a) a list of the dominant plant species and their wetland indicator "status", b) a description of soil characteristics showing the presence or absence of field indicators of hydric soils, and; c) evidence of wetland surface hydrology. Information provided by Reed (1988) is used to classify and assign a rank to each dominant species present at the site in order to determine if vegetation can be classified as "hydrophytic vegetation". This list includes most, but not all, species that can occur in and around wetlands and assigns each species to a category that indicates the estimated probability of the species being found in a wetland:

- Obligate wetland (**OBL**): > 99% probability of occurring in a wetland;
- Facultative wetland (**FACW**): 67% to 99% probability of occurring in a wetland;
- Facultative (**FAC**): 34% to 66% probability of occurring in wetlands (i.e., equal chance of occurring in wetlands or non-wetlands);
- Facultative Upland (**FACU**): 1% to 33% probability of occurring in wetlands;
- Obligate Upland (**UPL**): > 99% probability of occurring in uplands.

Hydrophytic vegetation is indicated when more than 50% of the dominant species are OBL, FACW, or FAC. However, a positive indication of "hydrophytic vegetation" alone does not necessarily indicate a wetland. Three criteria must be met for an area to be classified as a wetland under Federal (U.S. Army Corps of Engineers) guidelines (hydric soil conditions, surface hydrology, *and* vegetation), but only one criteria (soils, surface hydrology, *or* vegetation) is needed for an area to be classified as a wetland under State (California Department of Fish and Game) guidelines.

The results of the wetland delineations for the golf course are described in following sections of this document and field data sheets are included in Appendix 6. The locations of soil test pits dug as part of the delineation are shown on Figure 11.

Wildlife and Habitat Evaluations. Lawrence E. Hunt conducted focused surveys for California red-legged frogs (*Rana aurora draytonii*) (CRLF) and other aquatic-associated wildlife using survey protocols established by the U.S. Fish and Wildlife Service. These surveys were conducted in February, March, and April 2006. Additional observations of habitat conditions for CRLF in the three on-site drainages were made in March 2008, as comparison with 2006 habitat conditions. The results of the CRLF surveys are described in the text of this document; field data sheets are included in Appendix 5. Hunt also evaluated habitat conditions for non-regulated wildlife on several occasions (Table 3). Monarch butterflies, raptors (hawks, falcons, eagles, owls, vultures), certain hole-nesting birds (woodpeckers, swallows, etc.), and certain species of bats use trees, including palm trees, for temporary, seasonal, or long-term roosting and/or nesting activities. Surveys of on-site tree use by these species did not follow standard local (City/County) or State guidelines because of the extended time intervals involved in permitting this project and the dynamic nature of tree use by birds. Instead, repeated focused surveys of on-site and adjacent trees were made over a period of two years to assess bird and butterfly use of on-site trees (Table 3).

4.0 Existing Conditions

4.1 Overview of Project Area. The Montecito Country Club and Golf Course was developed in 1916. The property includes portions of the coastal terrace and the southern foothills of the Santa Ynez Mountains. Surface elevations in the project area range from about seven feet above sea level in the southwestern portions of the property to approximately 200 feet above sea level in the north-central portions of the property. Urban development has eliminated most plant and wildlife habitats within and around the golf course; patches of habitat that remain are highly fragmented and severely disturbed (Figure 1). The project area is bordered on the south by Old Coast Highway, which parallels Highway 101, Hot Springs Road on the east, and residential development on the west and north (Figures 1 and 11).

The coastal plain in this area supported an extensive coastal estuary that extended westward and northward approximately to the present-day corner of Anapamu and Milpas streets, and included extensive brackish marsh, freshwater marsh, and riparian habitats. Urban development of the City of Santa Barbara and development of

transportation corridors, including construction of the Union Pacific RR right-of-way (formerly Southern Pacific RR) in the latter part of the 19th century, the Coast Highway in the early part of the 20th century, and Highway 101 in the 1950s, eliminated or significantly modified most of these brackish and freshwater wetlands. A remnant of the estuary remains today (Andree Clark Bird Refuge) and its northern boundary is determined by the Union Pacific RR berm.

Most of the project area is covered by golf course, consisting of extensive areas of intensively groomed turf grass tees, fairways, and greens separated by clumps or windrows of mature native and non-native trees, and small areas of hedgerows. Paved golf cart tracks transect the golf course. The clubhouse, parking lots, tennis courts, pro shop, and related structures are clustered in the north-central portion of the property. Five homes on separate lots are situated in the eastern portions of the property, along the southern edge of Golf Road (= westward extension of Summit Road). Groundskeepers' facilities and equipment barns are located in the northwestern corner of the property, adjacent to the seasonal "western" drainage (Figure 11).

4.2 On-Site Drainages. Three unnamed, seasonal drainages drain the golf course and adjacent residential areas into Andree Clark Bird Refuge. For the purposes of this document, they are called the "western", "middle", and "eastern" drainages (Figure 11). Only a short (approximately 300 feet long) reach of the latter drainage is on the golf course proper; the remainder of the drainage parallels the golf course between the eastern property line and Hot Springs Road (Figure 3). The banks of the western drainage are shallow, generally less than two feet high, and sloping. The banks of the middle and eastern drainages are steep, and nearly vertical in many places. The beds of all three drainages are generally less than three feet wide and bed substrates in all of the drainages include a large amount of imported debris (concrete, asphalt, rocks), as well as silt, sand, gravel, cobble, and exposed sandstone bedrock. Intermittent surface water is present in the western drainage for a few weeks following storm events, but surface water disappears from the middle and eastern drainages within days after storm events.

The western, middle, and northern reaches of the eastern drainage will be affected by the roposed project. Most of the eastern drainage lies off-site, and the small reach of the drainage that does occur on the golf course will not be affected by the proposed project. The western, middle, and eastern drainages are depicted on USGS topographic maps as "blue-line" drainages (see map in Appendix 5).

The western and middle drainages have been highly modified during construction of the golf course. They currently flow underground for most of their lengths. Portions of the western and middle drainages are under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) pursuant to the Clean Water Act, Section 404, and the California Department of Fish and Game (CDFG), Section 1600. Activities within the area of jurisdiction of these agencies would require a 404 permit from ACOE (with 401 certification from the Regional Water Quality Control Board) and a 1600 permit from the CDFG. The Coastal Zone boundary extends northward to include the southern half of the

project area. Consequently, project activities that affect on-site wetlands and potentially could impact off-site coastal wetlands must be consistent with Coastal Act regulations.

The upper watershed of the western drainage includes the residential area upslope of the project area. On-site, the channel is above-ground for about half of its length; when it contacts the 4th, 5th, 7th, and 8th fairways of the golf course, it flows southward through an underground culvert and "daylights" at a storm drain culvert located on the north side of Old Coast Highway. This drain continues beneath this road, Highway 101 and the UPRR berm to Andree Clark Bird Refuge. The bed, banks, and adjacent riparian corridor of the above-ground reach of the western drainage is highly disturbed and constricted by residential and golf course development, use of tree stumps, soil, stones, concrete, asphalt, and other debris as erosion control measures in the channel, and a generally high level of disturbance. Attempts to control head-cutting and lateral erosion of the channel and banks with concrete rubble and native stones have been ineffective.

The middle drainage also is highly disturbed. Surface runoff from residential development north of the course is conveyed to the northern golf course property boundary by a drainage swale where it enters a 24-inch culvert then flows beneath the 16th and 18th fairways for a distance of approximately 400 feet to the northern edge of Summit Road. From this point, flows "daylight" into an exposed drainage channel and swale southward across the 11th, 12th, 13th, and 15th fairways to a drop structure and culvert located along the northern edge of Old Coast Highway near the intersection of Hot Springs Road. Storm water from this drainage channel eventually enters the Andree Clark Bird Refuge. The bed and banks of the exposed reaches of this drainage appear natural, but have been channelized or graded to accommodate the golf course.

The short reach of the eastern drainage that lies in the northeastern corner of the golf course property also is highly disturbed by residential and golf course activities. The bed and banks appear natural but have been channelized and graded in the past. This drainage flows above ground across the northeastern corner of the course then continues above-ground between the eastern property line and Hot Springs Road. It enters a culvert on the north side of Old Coast Highway just west of the intersection of Hot Springs Road and eventually flows into the Andree Clark Bird Refuge.

Inadequate drainage in the vicinity of the southeastern portion of Fairway 7, near the point where the western drainage (which is contained in a buried culvert) leaves the golf course, causes surface flows during storm events to temporarily pond along the southwestern border of the golf course adjacent to Old Coast Highway in the winter. Surface runoff from Old Coast Highway and high tides that coincide with winter storm events exacerbate this problem because this portion of the course and the roadway drain into Andree Clark Bird Refuge via the same culvert located along the north side of Old Coast Highway. Ponding here persists for a few days to a few weeks, depending on the intensity, duration, and timing of storm events. Figure 12 and the wetland delineation field data sheets in Appendix 6 contained detailed information on soils and surface hydrology in this portion of the golf course.

4.3 Wetlands

4.3.1 Wetland Delineation. The wetland delineation conducted by Rachel Tierney in 2006 (Tierney and Hunt, 2006), included the exposed reaches of the western and middle drainages that support seasonal surface hydrology, and an "isolated", seasonally flooded area along the southeastern portion of Fairway 7 (see above) that was not considered to be an "adjacent wetland" to the western drainage (Figure 12). This area, located along the southern property line in the southwestern portion of the golf course, was treated as an *atypical situation* during the wetland delineation because it was thought due to chronic alteration of the vegetation and documentation by the project engineers (Penfield and Smith) that the dominant source of the seasonal flooding here is due to inadequate drainage through existing storm water culverts. Tierney did not classify this site as a "jurisdictional wetland" in 2006. The following findings are reproduced here from the discussion in Tierney and Hunt (2006) and Hunt & Associates Biological Consulting Services (2008a,b):

Findings: Western, Middle, and Eastern Drainages. Above-ground reaches of the western, middle, and eastern drainages represent "Waters of the United States" and are regulated by the U.S. Army Corps of Engineers. These intermittent to ephemeral drainages collect storm water runoff from residential streets and seasonal runoff from small pockets of undeveloped areas within their respective watersheds. Varying lengths of the southern reaches of each of the three drainages are conveyed underground through culverts in the project area (Figure 12). In the middle and eastern drainages, the Ordinary High Water Mark (OHWM), which is the limit of the ACOE jurisdiction under the Clean Water Act, was clearly determined by averaging several observation points. The western drainage is highly disturbed and the channel has apparently been moved from its original location, however, the OHWM was also discernible.

> *Initial Determination:* The above-ground reaches of the western, middle, and eastern drainages, measured within the OHWM from bank-to-bank, represent ACOE jurisdictional "Waters of the United States" under the Clean Water Act.

Findings: Ponding in Southeastern Portion of Fairway 7 Along Old Coast Highway. A low point along the southern boundary of the existing golf course adjacent to Old Coast Highway pond water for several days to a few weeks following winter storms, depending on the duration, timing, and intensity of storm events.

> *Initial Determination:* This is an atypical (i.e., altered by human activity), historically problematic area and is a challenge to classify under federal wetland guidelines and policy (see additional discussion in following section).

Delineation Results for Vegetation: Vegetation in this area is altered, consisting of mainly turf grass with small patches (5-15 square feet) of an introduced annual--brass buttons (*Cotula coronopifolia*) during wet months, a diminutive perennial--large-flowered sand spurry (*Spergularia macrotheca* var. *macrotheca*) during the dry months, and bare ground at any time of the year. The hydrophytic vegetation criterion is passed

in the areas containing brass buttons (FACW+), sand spurry (FAC+), and in the lowest depression adjacent to the culvert outlet pipe that was not officially "observed", but contained obligate wetland species, such as *Juncus* and *Scirpus*. This area is part of the project area and will be modified and restored during creation of the western pond.

Delineation Results for Soils: Soils offer a window into the historic hydrologic regime and an indication of current conditions. Eleven (11) observation pits were dug near the lowest points of the known ponded area and also well outside of the current flooded zone (Figure 12). All observation points sampled contained a layer of very dark (7.5YR 2/0 to 10YR 2/1) hydric soil (Munsell Soil Color Chart, 1988), located from four (4) inches to eight (8) inches below present (altered?) ground surface elevation. *This layer was present in the two samples located well outside of the known ponded zone and far from any patches of the two hydrophytic plant species (Observation Points # 8 and #9 on inset 3b on Figure 12).*

The presence of this hydric layer can be attributed to the historic hydrologic regime dating back before the turn of the century. Until the 1880s the area now occupied by the Andree Clark Bird Refuge was a salt marsh/lagoon and was seasonally connected to tidal action when outflows from Sycamore Creek breached the sandbar at the mouth of the lagoon (Penfield & Smith, 1985). Construction of the Union Pacific Railroad berm in the late 19th century resulted in re-routing Sycamore Creek, which isolated the area from its major freshwater source and from the area now occupied by the Montecito Golf Course. Distinct, and assumed to be present-day, redoximorphic (redox) features were apparent in the samples taken at or below 10 feet above sea level. These soils contain horizons with bright mottling (reduction around living roots and soil pores), which were missing in samples taken above the 9.5 to 10-foot elevation line, although all samples contained the dark horizon. The redox features were found in both sandy soil layers and in lighter-colored loamy horizons. Appendix 6 (ACOE Section 404 Permit Application) contains a full description of each of the soil profiles.

Delineation Results for Hydrology: The extent of ponding changes each year, depending on seasonal flows, regional runoff, and downstream maintenance of culvert outlets (see discussion below). As water subsides, golf course maintenance crews quickly clean up any accumulated drift lines or sediment deposits. Thus, although ponding occurs, the field indicators of wetland hydrology cannot be used to determine the boundaries of this feature. The length of time ponding occurs, based on personal observation, is well over two (2) weeks per year, 50% of the time.

Conclusions: Although hydrophytic vegetation, hydric soils, and wetland hydrology are present within a limited portion of the ponded area shown in Figure 12, i.e., the area below 9.5 to 10 feet above mean sea level, the wetland delineation conducted in 2006 concluded that this area was **not** "adjacent wetlands" under the Clean Water Act because:

- The area under question is not adjacent to the current stream course. The area of ponding is the lowest (elevation) point of the Montecito Golf Course and of the adjacent Old Coast Highway. The western drainage,

which flows through a buried culvert, outfalls at the southern edge of the ponded area to a culvert located in the north roadway berm of Old Coast Highway (Figure 12). Flows from the western drainage are conveyed beneath Old Coast Highway to the Andree Clark Bird Refuge via this and other culvert. The western drainage outfall is not included in the ponded area under investigation.

- The present-day source of ponded water is sheet flow from the golf course, street runoff from Old Coast Highway (that enters the site from the same culvert that drains the area), back-up flows from several storm water culverts that join across Old Coast Highway, and, if storm events coincide with high tides, poor drainage in Andree Clark Bird Refuge (Figure 12). The project engineers have found that at this juncture surface flows from both the western drainage and the "ponded area" are conveyed under Old Coast Highway, then flow through to an open, and often vegetated "V" ditch that eventually empties into Andree Clark Bird Refuge. During periods of high flows, this V-ditch acts as the bottleneck, allowing water to back up into the lowest point, which at this location is the culvert that hydrologically connects back to the "ponded area". If the culvert at the juncture across Old Coast Highway could adequately convey storm flows, or if the surface elevations of this low-lying portion of the golf course were corrected, the seasonal flooding and the "ponded area" would cease to exist.
- After Sycamore Creek was constricted and re-aligned by the railroad berm, the marsh began to dry out during the summer and was used as a horse racetrack (California State Coastal Conservancy, 1986). In 1920, the area was dammed to create a permanent reservoir (later named the Andree Clark Bird Refuge). A weir located at the culvert beneath at Cabrillo Boulevard prevents regular seawater intrusion and forms the present-day Bird Refuge lake. Storm water runoff enters this water body from the Santa Barbara Zoo and adjacent streets. There are no other natural (above-ground) tributaries to this water body. A terminal lagoon that forms on the ocean side of the weir is subject to regular tidal influence (California State Coastal Conservancy, 1986). Although the salt marsh that originally occurred here probably included portions of the existing Montecito Golf Course, the various alterations that eliminated much of this coastal wetland occurred well over 100 years ago.

4.3.2 ACOE Permitting. The Federal Clean Water Act of 1977, Section 404, regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's "waters", including rivers, wetlands, and sloughs. The U.S. Army Corps of Engineers is the Federal agency responsible for enforcing the Clean Water Act and they require a permit for any activity that results in the deposition or dredging of fill material within the "Ordinary High Water Mark" of "Waters of the United States". Additionally, the ACOE, along with the State Regional Water Quality Control Board, is responsible for enforcing the Federal Rivers and Harbors Act, which requires a Section 401 certification of the project.

A representative of the U.S. Army Corps of Engineers Ventura Field Office (Matthew Vandersande, Wetland Scientist), visited the site on 15 October 2008 with Lawrence Hunt (Hunt & Associates Biological Consulting Services) and Steve Welton (Suzanne Elledge Planning and Permitting Services) to evaluate the status of wetlands in the proposed project area. The exposed portions of the western and middle drainages and the "atypical situation" formed by a seasonally-flooded area along the southeastern side of Fairway 7 were evaluated. The ACOE representative agreed that the latter site is problematic, but concluded that the area would probably be classified as an ACOE jurisdictional wetland if ACOE conducted a "post-Rapanos"-type of Jurisdictional Determination (JD). He also concluded that the proposed project could likely be permitted by ACOE under a Nationwide 27 Permit as a "wetland restoration project" because of:

- the severity of anthropogenic alterations to surface hydrology and vegetation in the western and middle drainages, as well as the wetland area southeast of Fairway 7, and;
- the significant increase in the size and habitat quality of wetlands that will be created as a result of the proposed project.

Consequently, the applicant has been advised by ACOE that the most efficient permitting pathway for this project will be to assume that wetlands are present in all of the areas discussed in the 2006 wetland delineation performed (western and middle drainages and the area southeast of Fairway 7), thus avoiding a lengthy Jurisdictional Determination process by ACOE. Creating freshwater ponds at the bottom of the western and middle drainages and restoring these drainages will fully mitigate losses to "adjacent wetlands". The applicant will submit a Nationwide 27 permit application to ACOE to permit the proposed project as wetland restoration. The applicant also will submit a 401 certification application to the Regional Water Quality Control Board (S. Welton, electronic communication with M. Vandersande, 30 October 2008).

4.3.3 CDFG Permitting. The western and middle drainages and the "ponded area" in the southeastern portions of Fairway 7 along the southern property boundary meet the single criterion rule for wetlands under California Department of Fish and Game regulations (soils, vegetation, *or* hydrology) and are considered wetlands by the State. Fish and Game Code Sections 1600-1603 regulate activities that will "substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of a natural watercourse" that supports wildlife resources. Their jurisdiction includes watercourses that have a surface or subsurface flow that supports or has supported riparian vegetation. Any project that would impact a river, stream, or lake requires a Streambed Alteration Agreement, which implements a number of mitigation measures to protect biological resources.

CDFG considers the part of the proposed project under their jurisdiction to be consistent with classifying the project as wetland restoration (Natasha Lohmus (CDFG), electronic communications with Lawrence E. Hunt, 7 November 2008 and site visit, 3 February

2009). The applicant will apply for a 1603 Streambed Alteration Agreement and, in order to facilitate the permitting process, has agreed to incorporate all of the standard permit conditions that go with this permit into the Project Description for the project. CDFG then issues a letter of concurrence stating that the application is the formal permit, thus by-passing the need for CEQA analysis from their office.

4.3.4 Coastal Act Consistency. The Coastal Zone boundary extends northward from the mean high tide line to include the southern half of the project area. Development projects in the Coastal Zone are subject to California Coastal Commission policies. Project activities that affect on-site wetlands identified in the previous discussion must conform to Coastal Act Sections designed to protect marine resources (Section 30230), biological productivity and water quality (Section 30231), regulate diking, filling or dredging operations (Section 30233c), regulate development in aquatic regions such as rivers and streams (Section 30236). Section 30411(b) of the California Coastal Act establishes the California Department of Fish and Game (CDFG) as the lead agency charged with the study and identification of degraded wetlands, and provides general guidelines for classifying a wetland as degraded. CDFG makes this determination by examining the subject area to determine if the system has been adversely impacted by previous alterations, resulting in a degraded condition when compared to remaining unaltered areas. Natasha Lohmus, CDFG Environmental Scientist, visited the project area on 3 February 2009 and concurred with the ACOE wetland scientist and the project biologist that wetland and riparian habitats in the project area, both within and outside the Coastal Zone boundary, have been highly degraded and altered by anthropogenic activities.

Coastal wetlands (e.g., riparian areas, salt marsh, and freshwater marsh) are generally considered Environmentally Sensitive Habitat Areas because they provide critical habitat to threatened or endangered species, or because of their uniqueness relative to the surrounding landscape. Section 30240 of the California Coastal Act provides additional regulatory oversight of wetlands in certain situations, stating:

> *"Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas."*
>
> *"Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat recreation areas."*

In their analysis of Coastal Act Sections 30230, 30231 and 30233, the Coastal Commission also cites the following:

> "In 1993 the Wilson administration released the *California Wetlands Conservation Policy* (Executive Order W-59-93). The Executive Order declared that all agencies of the State are to conduct their activities in accordance with three comprehensive objectives: a) to ensure no overall net loss and a long-term

net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property; b) to reduce procedural complexity in the administration of State and Federal wetland conservation programs, and; c) to encourage partnerships to make restoration, landowner incentive programs, and cooperative planning efforts the primary focus of wetlands conservation."

In addition to the on-site determinations of wetland habitat quality made by representatives of the ACOE and CDFG, Section 30411(b) of the California Coastal Act requires that an analysis of wetland habitat quality also consider a number of criteria (Table 4). The California Coastal Commission (CCC) has adopted the *Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas* (CCC, 1981—Appendix A). These guidelines were developed to assist the CCC, local government, and the public in applying regulations of the Coastal Act and in certifying local coastal plans (LCPs). These guidelines discuss conditions for permitting development in these areas, and provide information pertaining to the maintenance and restoration of wetlands, such as:

"In contrast to enhancement projects, the restoration of a former wetland can result in a net increase in both wetland acreage and function. Restoration of a former wetland is by no means foolproof, but may have a reasonable chance of re-establishing fundamental wetland characteristics such as the proper elevation or hydrology. However, having no guarantee the restoration project will achieve the stated goals in the specified time frame is a major concern regarding wetland restoration. *To provide a higher probability of success, the restoration project should be located adjacent to a functioning wetland.* Isolated restoration sites will probably have a lower chance of sustaining maximum function and values, due to isolation from seed sources, and limitations on the migration and dispersion of wetland animals. Established connections among wetlands can be critically important in the event of local catastrophes, which can result in localized extinction without inputs from other wetlands."

"However, incorporating an existing wetland ecosystem (no matter how disturbed) into the mitigation plan can dramatically improve the chances of a successful project over creating new, isolated wetlands. An existing wetland will serve as a reservoir of biota that can colonize restored areas and ensure long-term survival of the wetland. Since most new wetlands are isolated, they will not have this reservoir to draw from, and it will be difficult for the wetland to attain the level of diversity and function of a self-sustaining wetland ecosystem."

Additional wetland restoration recommendations cited by the Coastal Commission on their website include:

- *Establish and maintain buffer areas around wetlands in order to protect* the wetland from the direct effects of nearby disturbance (both acute and chronic);
- *Revegetation*;

- *Minimize sedimentation* through the use *of* sediment basins and/or maintenance dredging programs to control the build-up of sediments, upstream sediment controls, including prohibition of grading during the rainy season, stabilization of slopes prior to the rainy season, and protection or restoration of native vegetation on steep slopes and stream banks.

Project elements in the Coastal Zone that affect coastal wetlands, specifically, improvements to the western and middle drainages and construction of the western and eastern ponds, can only proceed if the project qualifies as a "restoration project" and is consistent with CCC policies.

Table 4 provides an analysis of the consistency of classifying these project elements as restoration efforts under the Coastal Act. Tables 5 and 6 present acreage estimates for proposed and potential habitat restoration components.

Table 4. Consistency Analysis to Classify Proposed Project as "Habitat Restoration" in Coastal Zone.

California Coastal Act Criterion for Wetland Restoration	Proposed Project Action in Seasonally Flooded Area	Proposed Project Action in Drainages	Net Result
Amount and elevation of filled areas	None	None	None
Number and location of dikes and other artificial impediments to tidal action and freshwater flow and the ease of removing them to allow tidal action to resume	None	Existing culverted reach of western drainage will be "daylighted" and restored to biologically functional stream channel	Restoration of stream channel and significant improvement in quality of riparian and upland habitat (see below)
Degree of topographic alterations to the wetland and associated areas, no net loss of wetlands, and long-term net gain in wetland size, quality, and permanence	Existing highly degraded ACOE and CDFG jurisdictional wetland areas will be excavated to a depth of 10 ft bgs and replaced with a freshwater pond; pond will be revegetated with a combination of native aquatic and wetland vegetation	"Daylighted" channel in western drainage and improved channel in middle drainage will be restored using native wetland and riparian trees and shrubs	- Not including open water, the western pond will increase size of on-site wetland habitat in coastal zone from 15 sq. ft. to 15,000 sq. ft. (1000:1 restoration ratio) - Not including open water, the eastern pond will increase wetland habitat from 0 sq. ft. to 4,875 sq. ft. (4,875:1 restoration ratio) - Riparian and wetland habitat restoration in western and eastern drainages = 15,625 sq. ft. and 12,500 sq. ft., respectively, of currently non-existent habitat - The wetland areas will be located within a functioning golf course, so the property owner has an incentive to maintain the effectiveness of the restoration, as exhibited

			by previous successful restorations (Rancho San Marcos golf course) by the same applicant.
Water quality, sedimentation, revegetation, and buffer zones	Western and Eastern ponds will be maintained with reclaimed water for conservation purposes; water will be isolated from brackish groundwater by plastic liner capped with 18-24 inches of soil; surface runoff from adjacent fairways and "roughs" will be filtered through fringing shoreline and adjacent vegetation prior to entering pond; de-silting basin in upper on-site watershed will capture sediment before it enters pond; restored stream channel will treat surface runoff before it enters pond; pond level will be lowered prior to pond maintenance to ensure that pond sediments disturbed by maintenance activities do not enter storm drain system	De-silting basins to be created in upper on-site watersheds of western and eastern drainages will capture sediment before it enters drainage channels; restored and revegetated drainage channels will capture and treat surface runoff; runoff from adjacent fairways will flow into "roughs" (bioswales) before entering drainage channels; banks and upper slopes of western and middle drainages will be restored with native tree and understory species to limit or prevent soil erosion; 5-foot to 50-foot variable width buffer zone will be created along both sides of western and middle drainages to separate golf zones from native habitats	Significant improvement in water quality (sediment and urban pollutants carried by storm drain system) into Andree Clark Bird Refuge compared to existing conditions
Substrate quality	Western and Eastern pond liners will be covered with 18-24 inches of soil to provide substrate for nutrient cycling and native plant restoration	Re-circulating flow portions of western and middle drainages will be lined to prevent percolation of stream flows; liner will be covered with gravel and stones to retain biological function; remainder of stream channel will be unlined to preserve biological function and nutrient cycling	Significant increase in nutrient cycling capability of drainages and ponds over existing conditions
Degree of encroachment from adjacent urban land uses	Project area is surrounded by urban development and transportation corridors	Project area is surrounded by urban development and transportation corridors	Proposed project will significantly improve type and quality of native habitats on-site over existing conditions
Comparison of historical environmental conditions with current conditions, including changes in both the physical and biological environment	No on-site aquatic or freshwater marsh currently in project area	Existing drainages are seasonal and have been highly modified by urban development	Site formerly may have supported coastal freshwater marsh in southern portions, oak-sycamore riparian woodland along drainage corridors, and coastal sage scrub/herbaceous grassland on exposed slopes. These habitats were eliminated or significantly modified over 100 years ago as a result of increasing urban development. Proposed project will restore freshwater marsh habitat on-site, restore drainage channels to biological function, and restore oak-sycamore woodland along drainage riparian

			corridors.
Consideration of current altered wetland conditions and their current contribution to coastal wetland wildlife resources with relation to potential restoration measures	Existing wetlands in southern portion of project area are seasonal, very small, are highly modified, and have low biological function; proposed project will create two permanent ponds fringed with freshwater marsh vegetation of high biological value; ponds will treat surface runoff before it leaves site	Existing drainage channels are highly disturbed and transport sediment and urban pollutants to off-site wetland areas (Andree Clark Bird Refuge); proposed project will restore plant and wildlife habitat values to drainage corridors and treat urban runoff on-site, de-silting basins will remove sediment prior to entering channels and ponds	Significant improvements to water quality leaving site and entering Andree Clark Bird Refuge, significant increase in size and quality of aquatic, wetland, and riparian habitats on-site
Proximity to existing wetlands	Created ponds will be hydrologically connected to Andree Clark Bird Refuge, a regionally important coastal wetland, during overflow conditions (storm events). Ponds will be located less than 1,000 feet from Refuge and will probably be colonized by plants and birds that currently use Refuge	Western and middle drainages are seasonally connected to Andree Clark Bird Refuge; restored drainages will be connected to created ponds; proximity to Bird Refuge will likely attract birds to restored habitats	The proposed project is located in close proximity to the Andrea Clarke Bird Refuge and thus will benefit from its proximity The proposed project currently contains wetland features such as brackish groundwater some wetland soil characteristics that will make restoration more feasible (e.g., expansion of salt grass habitat as transitional feature between turf grass and freshwater marsh vegetation)
Chemical cycling capabilities of the wetland including water quality enhancement, nutrient accumulation, nutrient recycling, etc.	Western and Eastern pond liners will be covered with 18-24 inches of soil to provide substrate for nutrient cycling and native plant restoration	Re-circulating flow portions of western and middle drainages will be lined to prevent percolation of stream flows; liner will be covered with gravel and stones to retain biological function; remainder of stream channel will be unlined to preserve biological function and nutrient cycling	Pond will mimic natural conditions because of 18-24-inch layer of sediment placed over liner and revegetation of nearshore, shoreline, and banks of pond with native aguatic and wetland vegetation

*** (also see Tables 5 and 6 for specific acreages of proposed and potential restoration)**

The proposed project elements within the Coastal Zone that deal with creation of two freshwater ponds and restoration of the western and middle drainages are consistent with coastal wetland restoration goals of the California Coastal Act (Policies 30411(b), 30230, 30231, 30233(c), 30236, and 30240), and with determinations made by the ACOE and CDFG. *Therefore, the proposed project can reasonably be classified as a "Habitat Restoration Project" for permitting purposes by these regulatory agencies.*

4.4 Riparian Habitats. The bed and banks of each of the three on-site drainages are thoroughly infested with a dense growth of invasive, non-native trees, shrubs, and ground cover. This vegetation can hardly be called a "riparian corridor" in the standard meaning of the term because of the degree to which these features have been modified by residential and golf course development. Many of the trees used to landscape the golf

course have also been planted along or have invaded these drainages. Detailed information on the species, location, and condition of trees along the drainages is found in McPherson (2009). The approximate location of "riparian-associated woodlands" in relation to proposed grading and soil disturbance for the project are shown in Figure 8.

The western drainage "riparian corridor" is dominated by blue gum eucalyptus (*Eucalyptus globulus*), secondarily by other ornamental tree species, including black wattle (*Acacia mearnsii*), black acacia (*Acacia melanoxylon*), shamel ash (*Fraxinus uhdei*), pine-leaf paperbark (*Melaleuca ericifolia*), Victorian box (*Pittosporum undulatum*), myoporum (*Myoporum laetum*), California pepper (*Schinus molle*), European olive (*Olea europaea*), and other species (McPherson, 2009). Native Californian trees, shrubs, and forbs are sparse and completely dominated by non-native ornamentals, but include: western sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), toyon (*Heteromeles arbutifolia*), holly-leaved cherry (*Prunus ilicifolia*), arroyo willow (*Salix lasiolepis*), poison oak (*Toxicodendron diversilobum*), coyote bush (*Baccharis pilularis*), common monkey flower (*Mimulus guttatus*), and Monterey pine (*Pinus radiata*). The ground cover throughout this area is composed almost entirely of invasive, non-native species, including: jade plant (*Crassula ovata*), prickly ox-tongue (*Picris echioides*), sweet fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), Hottentot fig (*Carpobrotus edulis*), ice plant (*Mesembryanthemum* sp.), cape ivy (*Delairea odorata*), Indian periwinkle (*Vinca* sp.), mustards (*Brassica* spp.), non-native annual grasses (*Bromus* spp.), thistles (*Carduus* and *Centaurea* spp.), nasturtium (*Tropaeolum majus*), periwinkle (*Vinca* sp.). The dominant trees ("riparian corridor") associated with the middle drainage also is composed primarily of invasive, non-native species: black wattle (dominant), blue gum, Victorian box, silver wattle (*Acacia, dealbata*), European olive, California pepper, myoporum, as well as 5-6 mature coast live oaks (McPherson, 2009). Ground cover along this feature is mostly composed of nasturtium (*Tropaeolum majus*) and poison hemlock (*Conium maculatum*). The eastern drainage in the northeastern corner of the golf course has a relatively well-defined riparian corridor that contains about two dozen medium to large coast live oaks, as well as an assortment of non-native trees, including Monterey cypress (*Cupressus macrocarpa*), Monterey pine, sugar gum eucalyptus (*Eucalyptus cladocalyx*), Victorian box, black wattle, silver wattle, long-leafed acacia (*Acacia longifolia*), pine-leaf paperbark, pink pottlebrush (*Melaleuca nesophila*), oleander (*Nerium oleander*), Aleppo pine (*Pinus halepinus*), and Australian tea tree (*Leptospermum laevigatum*) (McPherson, 2009). There also are small clumps of arroyo willow and mule-fat (*Baccharis salicifolia*) associated with this drainage. Ground cover is sparse, owing to the dense tree canopy, but contains as assemblage of non-native, annual grasses (primarily bromes), but also rye grass (*Lolium* sp.) and turf grasses.

4.5 Ornamental Landscaping. In addition to extensive areas of turf grass, the golf course tee, fairways, and associated structures have been landscaped with a few species of California native trees and a wide variety of ornamental trees, shrubs, and hedges, including (in alphabetical order by genus): black wattle (*Acacia mearnsii*), silver wattle (*Acacia dealbata*), strawberry tree (*Arbutus unedo)*, Monterey cypress (*Cupressus macrocarpa*), Arizona cypress (*Cupressus arizonicus*), Leyland cypress (*Cupressus*

leylandii), blue gum eucalyptus (*Eucalyptus globulus*), lemon-scented eucalyptus (*Eucalyptus citriodora*), red-gum eucalyptus (*Eucalyptus camaldulensis*), ironbark eucalyptus (*Eucalyptus sideroxylon*), red-flowering gum (*Eucalyptus ficifolia*), laurel fig (*Ficus microcarpa*), silk oak (*Grevillea robusta*), jacaranda (*Jacaranda mimosifolia*), crepe myrtle (*Lagerstroemia indica*), sweet gum (*Liquidamber styraciflua*), glossy privet (*Ligustrum lucidum*), New Zealand Christmas tree (*Metrosideros excelsa*), myoporum (*Myoporum laetum*), oleander (*Nerium oleander*), European olive (*Olea europaea*), Canary Island palm (*Phoenix canariensis*), Italian stone pine (*Pinus pinea*), Aleppo pine (*Pinus halepinus*), Monterey pine (*Pinus radiata*), Torrey pine (*Pinus torreyana*), Austrian black pine (*Pinus nigra*), Canary Island pine (*Pinus canariensis*), Victorian box (*Pittosporum undulatum*), western sycamore (*Platanus racemosa*), cork oak (*Quercus suber*), coast live oak (*Quercus agrifolia*), Brazilian pepper (*Schinus terebinthifolius*), coast redwood (*Sequoia sempervirens*), queen palm (*Syagrus romanzoffianum*), eugenia (*Syzygium paniculatum*), and others. Detailed information on the species, location, and condition of trees on the golf course property, including the three drainages, can be found in the Tree Planting Plan prepared by McPherson (2009).

4.6 Special-Status Plants. Appendix 1 lists sensitive plant species found in the Santa Barbara region, as compiled from a California Native Plant Society (CNPS) search of nine quadrangles centered on the Montecito Country Club and Golf Course. No special-status plant species, including locally-sensitive species protected by City and County guidelines, were found in the project area during site visits for this document and none are expected to occur there.

4.7 Non-Regulated Wildlife. The mature trees and shrubs on the golf course and along the existing drainages provide roosting, nesting, and foraging habitat for a number of bird species, including raptors (hawks, owls, vultures). Federal and State laws protect active roosts and nests of raptors as well as non-raptorial resident and migratory birds. Particular trees and palms on the course and around the clubhouse are frequented by several pairs of acorn woodpeckers. Palms, blue gum eucalyptus, and other trees on-site may provide roosting habitat for several species of bats that could inhabit the site, including two species protected the CDFG regulations. The golf course provides a highly modified environment for wildlife within an urban/suburban context because, in addition to the near-complete loss or alteration of natural habitats over 90 years ago when the golf course was created, the noise and increased human activity associated with daily operation and maintenance of the course limits use of the site to wildlife species that can deal with chronic anthropogenic disturbance. The course is bordered by major transportation corridors on the south that separate it from the Andree Clark Bird Refuge and associated wetland habitats, and by low- to medium-density residential and commercial development on the west, north, and east that separate the course from scrub and woodland habitats in the foothills of the Santa Ynez Mountains. The "riparian corridors" along the three on-site drainages, although less intensively managed, are nonetheless, highly disturbed and composed mostly of non-native vegetation. On-site trees support one or more pairs of acorn woodpeckers, which create and maintain hole nests in several trees and mature palms on the property, particularly around the clubhouse and along Fairways 16-18. Raptors, including Cooper's hawk, red-tailed hawk, red-

shouldered hawk, turkey vulture, and northern harrier, forage and roost on the property (Appendix 4).

Volant wildlife, such as flying insects, birds, and bats, move around and through the wildland/urban interface and can rather easily reach the project area from more extensive open spaces, but ground-dwelling wildlife is limited to species that have adapted to living with humans (e.g., striped skunk, Virginia opossum, coyote, pocket gopher, etc.). Non-regulated wildlife observed on and around the golf course during site visits for this document included the following generalist species: Pacific treefrog (*Pseudacris regilla*), western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo striatus*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), Botta's pocket gopher (*Thomomys bottae*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*). A complete list of vertebrates observed or expected to occur within and immediately adjacent to the golf course is presented in Appendix 4.

4.8 Special-Status Wildlife. The following special-status wildlife species were found on-site during site visits for this document: monarch butterfly (*Danaus plexippus*) and Cooper's hawk (*Accipiter cooperi*). These species are regulated as California Species of Special Concern by the California Department of Fish and Game (CDFG, 2008).

Monarch butterfly. The large number of eucalyptus trees on the golf course, particularly in association with the three on-site drainages, attracts transient monarch butterflies in the fall and early winter (L. Hunt, pers. observ., 2006, 2008). Up to 30 monarch butterflies were observed at one time in November 2008 flying at mid-canopy and canopy heights among blue gum eucalyptus trees in the western drainage, but no aggregations were observed. The project area is not historically or currently known to support autumnal or over-wintering aggregations of monarch butterflies (Calvert, 1991; Meade, 1999). The nearest extant roost is a formerly large, now much diminished, over-wintering site located on the Music Academy of the West property, approximately 0.6 air miles southeast of the Montecito Country Club clubhouse. This roost supported several thousand butterflies until the early 1980s but has since been destroyed by tree removal and this site now functions as a very small autumnal roost visited by only a few dozen butterflies each year (CNDDB, 2008).

California red-legged frog. Because California red-legged frogs (*Rana aurora draytonii*) are known from many coastal streams along the south side of the Santa Ynez Mountains, and probably formerly occurred in brackish and freshwater wetlands in the area before these habitats were greatly diminished in extent and quality, focused surveys for CRLF were conducted in the three on-site drainages. The focused surveys found that hydrologic conditions in the on-site and off-site reaches of the three drainages are not supportive of CRLF breeding or larval metamorphosis. CRLF require ponded or slowly flowing water that is two to three feet deep and that persists for at least four to five months between January and August in order to breed and complete larval metamorphosis. The hydroperiod of surface water in the on-site drainages is much too

short for this species to complete its life cycle. The Andree Clark Bird Refuge contains suitable plant cover and water depth but the water is too saline to allow CRLF, particularly larvae and metamorphs, to survive there. Even if the Bird Refuge supported CRLF, the UPRR tracks, Highway 101, and Old Coast Highway, represent impermeable barriers to CRLF dispersal from the Bird Refuge to the project area. The nearest extant CRLF population occurs in San Ysidro Creek, approximately 2.2 air miles east of the project site (CNDDB, 2008). There are no other viable aquatic habitats in the vicinity of the project area from which CRLF could disperse onto the project area. The field surveys concluded that CRLF do not occur in the project area and the proposed project has no potential for affecting them.

Silvery Legless Lizard. Legless lizards (*Anniella pulchra*) are regulated as a California Species of Special Concern by the California Department of Fish and Game (CDFG, 2008). There are several records of legless lizards in the Santa Barbara region: these are concentrated in the Hope Ranch, Santa Barbara Mesa, More Mesa, and Mission Canyon areas (CNDDB, 2008). Each of these localities contain loose, sandy soils derived from ancient beach deposits (beach sands or sand dunes) or weathering of uplifted marine sandstones. The Mission Canyon locality is approximately four air miles west of the project area. Soils in the northwestern portions of the property are suitable for this species (Shipman, 1980) and, if present on-site, it would most likely be found in undisturbed areas and along the interface between landscaped and non-landscaped areas in this part of the property.

Raptorial Birds. The large number of mature trees and palms on the golf course provides suitable foraging, nesting, and roosting habitat for a number of raptorial birds (hawks, owls, falcons, vultures) that are regulated by State and Federal statutes. Field surveys conducted for this document noted on several occasions that Cooper's hawks, red-tailed hawks, red-shouldered hawks, barn owls, and turkey vultures occasionally used on-site trees as perches from which to forage. These or other raptor species may use on-site trees as temporary, nighttime roosts. No long-term roosts or raptor nests were observed on-site during surveys for this document.

Passerine Birds. The subject property provides foraging and, in some cases, roosting and nesting habitat for a variety of birds because of the open space, expansive lawns, proximity to Andree Clark Bird Refuge, windrows, hedges, large numbers of trees, and relatively benign human activity found there. Additionally, the golf course is located within the Pacific Flyway, a regionally significant avian migratory corridor. These factors contribute to the high diversity of resident and migratory bird species that occur on and around the property. Several species of passerines were observed nesting in trees on the golf course in 2006 and 2008. These species included: acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), cliff swallow (*Petrochelidon pyrrhonota*), and Bewick's wren (*Thryomanes bewickii*), and European starlings (*Sturnus vulgaris*). It is likely that several other species nest here. The latter species is introduced from Europe and is considered a pest species because it competes with native woodpeckers and other hole-nesting birds for nest sites. One or more pairs of acorn woodpeckers have created and maintain hole nests in several trees and mature

palms on the property, particularly around the clubhouse and along Fairways 16-18. State and federal laws protect migratory birds (e.g., Federal Migratory Bird Treaty protects nests and individual birds).

Mammals. The project area provides foraging habitat for species that have adapted to urban and suburban environments, including coyote, striped skunk, Virginia opossum, and raccoon. The large number of mature trees on-site and the proximity of the project area to aquatic habitats (e.g., Andree Clark Bird Refuge and nearby freshwater drainages such as Sycamore Canyon Creek), indicates that the project area may be inhabited by several species of bats. Big brown bats (*Eptesicus fuscus*) and Brazilian free-tailed bats (*Tadarida brasiliensis*) were observed foraging over course fairways and among trees in the on-site drainages during surveys for this document in April and November 2008. No roosts of any bat species have been observed to date on-site, although acoustic surveys for bats were not conducted as part of the surveys for this document. The project area could support other species of bats, including three species that are residents or seasonal visitors to the south coast of Santa Barbara County and that are classified as California Species of Special Concern by the California Department of Fish and Game: Yuma myotis (*Myotis yumanensis*), red bat (*Lasiurus borealis*), and pallid bat (*Antrozous pallidus*).

5.0 Impact Assessment and Mitigation Recommendations

5.1 Special-Status Plants. The proposed project will not result in any impacts to special-status plants.

5.2 Special-Status Plant Communities

Wetlands. Construction of the proposed western pond and improvements to the lower reaches of the western and middle drainages will result in temporary and permanent impacts coastal wetlands that are considered "Waters of the U.S." (ACOE), "State Waters" (CDFG), and "Coastal Wetlands" (California Coastal Act). *Given the existing size and condition of on-site wetlands and the nature of the proposed project, this is considered to be a beneficial impact and the project can reasonably be classified as "habitat restoration" under ACOE, CDFG, and CCC determinations (Class IV).*

Mitigation. The western pond and the western and middle drainages will be constructed and maintained to restore and improve the biological productivity of on-site coastal wetlands and improve the quality of surface flows leaving the project area and entering Andree Clark Bird Refuge compared to existing conditions. Temporary and permanent disturbance impacts to on-site wetlands and net restoration benefits to these wetlands as a result of implementing the proposed project are summarized in Table 5.

Table 5. Impacts and Restoration Benefits of Proposed Project to On-site Wetlands.

Project Component	Existing Conditions	Temporary Disturbance Impacts	Permanent Disturbance Impacts	Proposed Project	Net Restoration Benefit
Western Drainage Above-Ground Channel	*Existing, degraded bed of channel:* 2,200 ft^2 (550 linear feet x 4 ft avg width)	1,400 ft^2 (2,200 ft^2 minus 800 ft^2 de-silting basin disturbance)	800 ft^2 of existing channel	*Create de-silting basin:* 5,500 ft^2 footprint *Vegetate shoreline of de-silting basin with native wetland vegetation:* 2,400 ft^2 (240 ft long x 10 ft wide) *Restore bed and banks of stream:* 1,400 ft^2 (downstream of detention basin)	**1.7:1** **(3,800 ft^2 restored vs 2,200 ft^2 existing)**
Western Drainage Culverted Reach	*Buried reach:* 625 feet long	625 linear feet	None	*"Daylight" buried channel and vegetate created channel with oak-sycamore riparian woodland vegetation:* 15,625 ft^2 (625 ft long x 25 ft wide)	**Significant compared to existing conditions**
Western Pond	*Seasonally "ponded area" (State and Federal wetland):* 15 ft^2	Loss of 15 ft^2 of FAC and FACW+ wetland vegetation	None	*Create pond and vegetate with native wetland plants along shoreline:* 15,000 ft^2 (1,000 ft long x 15 ft wide)	**1,000:1**
Middle Drainage De-Silting Basin	*Off-site culverts convey water to culvert buried beneath fairways 16 and 18 (approx. 500 ft long); current configuration to remain buried; create de-silting basin at northern property boundary*	None	None	*Create de-silting basin:* 5,000 ft^2 footprint *Vegetate shoreline of de-silting basin with native wetland vegetation:* 2,800 ft^2 (280 ft long x 10 ft wide)	**7,800:1**
Middle Drainage Above-Ground Channel	*Above-ground channel: 6,250 ft^2 (250 ft long x 25 ft wide)*	6,250 ft^2	None	*Remove non-native vegetation from existing channel; remove turf grass swale and create channel; vegetate with native oak-sycamore riparian species:* 12,500 ft^2 (500 ft long x 25 ft wide)	**2:1**
Eastern Pond	*Turf grass, drop structure to off-site*	None	None	*Create pond and vegetate with native*	**4,875:1**

	culvert			*wetland plants along shoreline:* 4,875 ft^2 (325 ft x 15 ft wide)	

Oak-Sycamore Riparian Woodland. Oak-sycamore riparian woodland historically occurred along portions of the western, middle, and eastern drainages. This plant community is considered sensitive by the California Department of Fish and Game (Holland, 1986). Remnants of this plant community remain on-site in isolated portions of the western, middle, and eastern drainages and are now represented only by single, widely separated trees. These habitat patches are highly degraded by human activities and the trees must compete for water and space with a wide variety of invasive, non-native trees, shrubs, and ground cover species that infest these drainages. The proposed project will plant live oaks and western sycamore trees with native wetland and upland understory plants, along the restored reaches of the western and middle drainages. This will significantly increase the size and quality of oak-sycamore riparian woodland on-site (Tables 1, 4, 5, and 6) and *represents a significant net benefit (Class IV impact).*

Mitigation: Where feasible, restoration areas should be enlarged to accommodate more landscape and habitat setback area. Two on-site areas present valuable opportunities to restore upland and riparian habitat: the upper on-site watershed of the western drainage and the on-site reach of the eastern drainage (Table 5 and Appendix 7).

Table 6. Habitat Restoration Opportunities (see also Appendix 7).

Project Component	Existing Conditions	Temporary Disturbance Impacts	Permanent Disturbance Impacts	Restoration Opportunity	Net Restoration Benefit
Upper Watershed of Western Drainage	Eucalyptus woodland: 137,500 ft^2 (550 ft long x 250 ft wide)*	107,500 ft^2	Nos. 2 and 3 tees and fairways: 30,000ft^2	Remove and control non-native vegetation; (leave mature eucalyptus trees); restore to oak-sycamore riparian woodland: 107,500 ft^2	100%
On-Site Reach of Eastern Drainage	Degraded oak-sycamore woodland: 15,000 sq. ft	15,000 ft^2 (300 ft long x 50 ft wide)	None	Remove and control non-native vegetation; restore to oak-sycamore woodland and other native species: 15,000 ft^2 (300 ft long x 50 ft wide)	100%

5.3 Special-Status Wildlife. The proposed project has the potential to affect the following special-status wildlife species during tree removal/relocation and grading activities:

Monarch Butterflies—Tree Removal/Relocation

Impact: Existing groves of trees on the golf course and trees along the riparian corridors, especially those in the upper reaches of the western and eastern drainages on-site, do not support large, overwintering aggregations of monarchs, but may provide autumnal (short-term) roosts for small numbers of butterflies. Tree removal, relocation, and trimming during project implementation could affect individuals or small numbers of butterflies. *This is considered a potentially significant, yet mitigable (Class II).*

Mitigation: Tree removal/relocation/trimming activities should not occur between 1 October and 1 February. If work must occur during this time, a qualified biologist should survey any tree slated for removal, relocation, or trimming no more than one week prior to removal (also see other restrictions on tree cutting in sections dealing with potential impacts to birds and bats). Trees containing aggregations of more than 10 butterflies should be protected from disturbance until butterflies have left the area. A 150-foot radius temporary buffer should be established around these aggregation trees. A qualified biologist should periodically monitor the site to verify that butterflies have left the area before tree cutting proceeds.

Mitigation: Tree removal should <u>not</u> be phased; it should occur in as short a time as possible within the confines of the construction "windows" described in Table 7, in order to reduce the time during which butterflies could be affected.

Reptiles—Grading

Impact: The northwestern portions of the project area contain soils suitable for legless lizards (Shipman, 1980), which are known to occur within four miles of the project area. Legless lizards are a California Species of Special Concern. Demolition of the maintenance building and grading for the project improvements in this area could kill legless lizards that have a moderate potential for occurring in loose, sandy soils in this area. *This is considered a significant, yet mitigable (Class II) impact.*

Mitigation: A qualified biologist should be present to monitor initial site demolition and initial grading (down to a depth of six inches) in the northwestern portions of the site in order to capture and relocate to suitable adjacent habitat any legless lizards exposed by these activities.

Impact: The subject property represents the largest parcel of open space in this area. Although subject to long-term human activities, the intensity, type, and nature of human activities on-site is much less than surrounding residential areas. As such, the property, particularly semi-landscaped area and native vegetation around the periphery of the property and along the existing drainages, may function as a refugium for non-regulated

lizard and snake species relative to the surrounding residential and urban environment. Grading around the western, northern, and eastern periphery of the project site, including the western, middle, and eastern drainages, could kill or injure numbers of non-regulated lizards and snakes. *This is considered a significant, yet mitigable (Class II) impact.*

Mitigation: A qualified biologist should monitor initial site grading (down to a depth of six inches) along the northern and northwestern portions of the golf course, including the western, middle, and eastern drainages, to capture and relocate to suitable adjacent habitat any lizards or snakes uncovered by this construction.

Birds—Tree Removal/Relocation

Impact: The Tree Protection Plan proposes to remove 361 trees and to relocate at least 83 others (Figures 9 and 10; Table 2), which includes approximately 35% of the total number of trees currently on-site. McPherson (2009) classified about 42% of the trees proposed for removal as very small (n = 17 trees) or small (n = 134 trees). These small trees are probably not used by birds as nest sites. The other 210 trees to be removed range from medium to large trees and are capable of supporting bird and bat roosts. The trees to be relocated are mostly large to very large and include mature Canary Island palms and queen palms near the clubhouse. Passerine and raptorial birds use medium and large trees on-site as foraging habitat, roosts, and, in some cases, nest sites. Woodpeckers, particularly one or more pairs of acorn woodpeckers, frequent and may nest in the Canary Island palms around the clubhouse and in mature Monterey cypress trees and coast live oak trees planted along Fairways 16-18. Removal/relocation of mature palms, as well as other medium- and large-sized trees that contain permanent roosts and active nests could kill birds, eliminate active and potential nest sites, or otherwise disturb nesting activity. *This is considered a significant, yet mitigable (Class II).*

Mitigation: Tree removal, relocation, and trimming activities should be prohibited during the nesting season (1 March – 1 July). If these activities must occur during this time, then a qualified biologist should conduct a survey of the property no more than one week prior to the activity to identify active nests and nest holes. The biologist should map the location of all active and inactive woodpecker nest holes in trees on the property. A 300-foot radius no-disturbance buffer should be established around trees containing active nests and this buffer should be maintained until the biologist has verified that young have fledged the nest. Tree removal should not be phased and should occur in as short a time as possible within the confines of the mitigation "window" described above, in order to reduce the time during which birds could be affected.

Mitigation: Focused raptor surveys that follow City, County, and State protocols, should be conducted prior no more than two months prior to project initiation. These surveys typically require a minimum of five surveys spaced at least one week apart, conducted between 1 March and 15 June. Active raptor nest trees should be flagged for avoidance and a 300-foot tree removal buffer should be established around the tree(s) until a qualified biologist verifies that young have fledged the nest.

Mitigation: A qualified biologist should work closely with the tree removal/trimming contractor to inspect all trees slated for removal, relocation, or trimming at any time of year prior to such activity to ensure that birds will not be injured or killed during such activities.

Mitigation: Trees containing active woodpecker nest holes should be preserved *in situ* wherever possible. Trimming of such trees during course re-design should be delayed until the nesting season has passed (1 March-1 July). A qualified biologist should closely monitor trimming of trees that contain active woodpecker nest holes. If trees containing active woodpecker nest holes must be removed or relocated, then the biologist should consult with the California Department of Fish and Game prior to such removal as to the most appropriate course of action.

Mitigation: Nest boxes for bluebirds and American kestrels and nesting structures for cliff swallows should be installed at sites selected by a qualified biologist around the property. The latter species could be very effective biological control agents for a diversity of insects, including mosquitoes, which may breed in the proposed water features (ponds), thereby reducing the need for chemical controls.

Mitigation: Trees proposed to be planted on the course should focus on native, locally-occurring species that are well-adapted for the project area, such as western sycamore and coast live oak. A qualified biologist should review the proposed planting palette for the golf course to evaluate the use of landscape trees. Non-native ornamental species should be replaced with native trees.

Bats—Tree Removal

Impact: Many existing trees on the course contain holes created by birds (e.g., woodpeckers) or decay that could be used by one or more species of bats as temporary roosts. The proposed project involves removal, relocation, and trimming of dozens of mature trees on the golf course, which could injure or kill bats, including several California Species of Special Concern and Federal Species of Concern that are known from the region and could occur on the property (Appendix 2), e.g. at least 27 Monterey cypress, ranging in size from medium to very large, will be removed (Table 2). *This is considered a significant, yet mitigable (Class II).*

Mitigation: A qualified biologist should map the location of all active and inactive woodpecker nest holes and decay holes on the property prior to any removal, relocation, or trimming of trees.

Mitigation: Tree removal should not be phased and should occur in as short a time as possible within the confines of the mitigation "window" described in Table 7 in order to reduce the time during which bats could be affected.

Mitigation: A qualified biologist should work closely with the tree removal/trimming contractor to inspect all trees slated for removal, relocation, or trimming at any time of year prior to such activity to ensure that bats will not be injured or killed during such activities.

Mitigation: Trees slated for removal or relocation that contain woodpecker nest holes, decay holes, or other suitable bat roost sites should be surveyed by a qualified biologist using a fibre-optic endoscope to examine the holes and assess occupancy by bats.

Mitigation: Bat boxes (artificial roosts) should be installed at locations selected by a qualified biologist throughout the course. Attracting and maintaining small colonies of bats on-site could be a significant biological control agent for mosquitoes and other insects that breed in the water features (ponds) to be created on the course. This will reduce the need for chemical controls.

Mitigation: Tree removal could negatively impact wildlife that use targeted trees for nesting or roosting. Construction "windows" are seasonal restrictions on construction activities and are designed to protect roosting, nesting, and/or rearing of young by these species. Table 7 lists special-status species that occur on-site and recommended construction "windows".

Table 7. Construction "Windows" for Species Protection During Tree Removal/Relocation.

Resource	Prohibition	Construction "Window" (*)	Mitigation
Monarch butterflies	California Department of Fish and Game statutes prohibit disturbance of overwintering roosts	1 February to 1 October	Qualified biologist should conduct survey of potential autumnal or overwintering habitat; if butterflies are roosting, then establish 150-foot buffer around clusters until butterflies disperse
Raptor and Passerine bird nests	California Department of Fish and Game and Federal Migratory Bird Treat Act statutes prohibit disturbance of active raptor nests; construction activity must not occur within 500 feet of active nests until young have fledged	1 July to 1 March	Qualified biologist should conduct raptor nest survey no more than two weeks prior to the start of tree removal; establish 300-foot to 500-foot buffer around active nests and monitor nests to document fledging; buffer zone around active nests can be adjusted downward if qualified biologist approves
Bats	California Department of Fish and Game statutes prohibit disturbance of seasonal roosts, particularly when young are present	1 July to 1 April	Qualified biologist should conduct acoustical survey of project area no more than two weeks prior to tree removal to determine if bat roosts occur in or near trees to be removed or relocated; if bat roosts are present, consult with CDFG on how to proceed

*** Construction "windows" are months when construction can occur with few or no impacts to resource, after biologist has conducted reconnaissance-level survey of project area;**

construction can occur at other times of the year if a qualified biologist documents species or nests are not present.

5.4 Loss of Individual Coast Live Oak Trees

Impact: The proposed project will remove four coast live oaks in excess of three inches in diameter and to relocate eight others (Table 2; McPherson, 2009). The proposed Tree Planting Plan calls for planting at least 51 coast live oaks, 30 island oaks (*Quercus tomentella*) [native to the Channel Islands], 29 southern live oaks (*Q. virginiana*) [native to the SE United States], and 20 cork oaks (*Q. suber*), [native to the Mediterranean Region]. These other live oak species, although non-native to the Santa Barbara mainland region, provide food and shelter for native wildlife and are suitable substitutes for coast live oaks (L. Hunt, pers. observ.). Relocating mature coast live oak trees is not expected to result in mortality, according to local landscaping firms experienced in moving these trees (e.g., Jimenez Landscaping; Bill Brunsky (Girven Assoc.), pers. comm.). *Removing coast live oaks and potential mortality of relocated oaks is a significant, yet mitigable impact (Class II).*

Mitigation: City, County, and State regulations require a 10:1 replacement planting to mitigate removal of individual coast live oaks in excess of three inches dbh. The project will plant 11 more coast live oak trees than required. Seventy-nine individuals of other oak species also will be planted. Coast live oaks should be five-gallon or larger trees obtained from locally collected acorns and grown in a local native plant nursery (e.g., SB Natives (805-698-4994), Matilija Nursery (805-523-8604), or Growing Solutions (805-452-7561). Planted coast live oaks should have a minimum survivorship of 80% after three years post-planting. Relocated coast live oaks should show no mortality after three years post-relocation; if 100% survivorship is not met, dead oaks shall be replaced at a 10:1 ratio, as above.

5.5 Introduction of Non-Native Wildlife

Impact: The two ponds proposed for construction in the southern portion of the property could promote the introduction of a number of predatory, non-native animals, including bullfrogs, goldfish, African clawed frogs, non-native turtles, large-mouth bass, mosquitofish, etc. Once established, these species could spread into adjacent water bodies, such as Sycamore Canyon Creek and the Andree Clark Bird Refuge. *This is considered a potentially significant, mitigable impact (Class II).*

Mitigation: Non-native aquatic species should not be placed in these water bodies. Prior to operation, a qualified biologist should meet with the course operations manager to discuss the use of native biological control agents for mosquitoes or other noxious insects. The course operations manager should work closely with the biologist to ensure that non-native predatory species are not introduced into these water bodies.

Mitigation: If maintenance includes periodic draining of the two ponds, a qualified biologist should salvage native fish and other animals in these features until they can be

placed back into the restored water feature. The biologist should train course maintenance personnel so that they can take over the salvage operation in the future.

5.6 Introduction of Non-Native Plants

Impact: The proposed improvements to the existing course will significantly improve habitat conditions for wildlife in and around the western, middle, and eastern drainages. The addition of two water features in the southern portions of the golf course will provide valuable aquatic habitat for wildlife, especially birds. However, landscaping plants, consisting of non-native species and including aquatic plants, could escape the designated areas and invade off-site aquatic and riparian areas, including Sycamore Canyon Creek and the Andree Clark Bird Refuge. *This is considered a significant, yet mitigable, impact (Class II).*

Mitigation: A qualified biologist familiar with invasive, non-native plants should review the planting palettes for all areas, including landscaping around the clubhouse, fairways, and other areas. Non-native plants that have a moderate to high probability for spreading to unintended areas should be replaced with non-invasive species or native species. The biologist should work closely with the landscape architect to ensure that all landscaping avoids the use of invasive plant species. Planting area palettes within and around the western, middle, and eastern drainages, and the two water features, should consist of 90% to 100% native, locally-occurring species.

Mitigation: The trees to be planted on the course should focus on using native, locally-occurring species that are well-adapted for the project area, such as western sycamore and coast live oak. A qualified biologist should review the proposed planting palette for the golf course to evaluate the use of landscape trees. Non-native ornamental species should be replaced with native trees.

Mitigation: Remove invasive tree species from western, middle, and eastern drainages, as per recommendations of Habitat Restoration and Revegetation Plan included in Appendix 7. All trees proposed for planting should be native, locally-occurring species. Candidate species are: coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia*), arroyo willow (*Salix lasiolepis*), California walnut (*Juglans californica*), black cottonwood (*Populus trichocarpa* var. *balsamifera*).

5.7 Operations and Maintenance Activities

Controls on Wildlife Use of Site

Impact: The two freshwater ponds will provide food sources and cover for wildlife, particularly birds, because of its close proximity to Andree Clark Bird Refuge. The presence of certain bird species could conflict with normal operation of use of the course, necessitating implementation of control measures. Depending on the control measures utilized, this could be a significant impact to migratory and resident birds that are protected by the Federal Migratory Bird Treaty Act as well as State Fish and Game

regulations. *This is considered to be a Class II impact that can be mitigated to less than significant levels.*

Mitigation: Shoreline and buffer vegetation surrounding the ponds should be composed of plants that provide food for herbivorous bird species, such as coots, duck, geese, and other migratory and resident species, in order to passively limit their use of fairways, greens, and other course features as foraging habitat. Control methods used to reduce wildlife encroachment onto the course, if necessary, should be limited to methods that do not cause mortality, such as the use of trained dogs to discourage birds from foraging in certain areas.

Mitigation: The golf course maintenance manager should develop a plan for managing wildlife encroachment issues, to be submitted with the permit to CDFG. A qualified biologist and the CDFG representative should review this plan as part of the permitting process.

Water Quality in Created Ponds

Impact: Normal operation and maintenance of the two created ponds at the southern end of the western and middle drainages, which could involve the use of herbicides, water clarifiers, and other chemicals, as well as maintenance activities, such as sediment removal, could harm aquatic vegetation and wildlife, particularly aquatic birds. *This is considered a potentially significant impact that can be feasibly mitigated (Class II).*

Mitigation: Water quality in the ponds should be maintained using "green" methods, such as aerators, in order to minimize or avoid the use of chemicals. Pond water will be re-circulated to the western and middle drainage channels to increase aeration and avoid the need for chemical maintenance of water quality. The shorelines of the ponds will be planted with native wetland vegetation that will require little or no maintenance, and the nearshore areas will be designed so that invasive aquatic vegetation, such as bulrushes (*Scirpus* sp.) and cattails (*Typha* sp.) do not overrun the ponds and require chronic chemical and/or mechanical control. Additionally, de-silting basins that will be constructed at the upper ends of the western and middle drainages are designed to intercept and capture sediment and other water-borne pollutants before they reach the stream channels or the created ponds at the south end of the property, thus avoiding the need for regular dredging of these habitat features.

Off-Site Water Quality

Impact: The western pond will be excavated to a depth of 10-12 feet below ground surface (bgs), which will intercept the current groundwater table that currently is approximately 3 feet bgs (based on direct observations made on 3 February 2009 in vicinity of proposed western pond). This groundwater is brackish (Geremy Salts, Penfield & Smith, pers. comm.). De-watering the excavation pit into existing storm drains could result in off-site water quality impacts, particularly to Andree Clark Bird Refuge.

Mitigation: Excavation of the water features for the golf course should be completed in stages so that groundwater can be adequately contained in either Baker tanks or in an adjacent pit, and allowed to de-silt on-site before it is pumped into the storm drain and enters Andree Clark Bird Refuge.

Impact: Grading and other soil disturbance associated with construction of the proposed project could significantly degrade on-site and off-site aquatic resources, specifically, the regionally important aquatic habitats found in the Andree Clark Bird Refuge through increased sedimentation to the on-site drainages, which empty into the Bird Refuge. The de-silting basins proposed for the upper portions of the western and middle drainages, in conjunction with habitat restoration of the bed and banks of the existing and created above-ground reaches of these drainages should minmize or avoid sedimentation of the created water features (ponds) and, ultimately, Andree Clark Bird Refuge. *This is considered an adverse, but not significant, impact (Class III).*

Mitigation: The contractor shall implement all applicable Best Management Practices (BMPs) when working near or within the bed or banks of the three on-site drainages to ensure that sediment is not transported downstream. The contractor shall implement all applicable BMPs around storm drains, concrete clean-out areas, etc. to ensure that sediment and/or pollutants are not transported off-site. Additional permit conditions shall be applied by permitting agencies (ACOE, CDFG, RWQCB, City of Santa Barbara).

Impact: The two desilting/detention basins and the two water features proposed for the western and middle drainages will require periodic maintenance to remove accumulated sediment. The use of equipment and work crews to conduct this work could result in discharge of sediment into the western and middle drainages and off-site via culverts into Andree Clark Bird Refuge and on-site and off-site impacts to native vegetation and wildlife. *This is considered a potentially significant impact that can be feasibly mitigated (Class II).*

Mitigation: The two desilting/detention basins have been designed with an access point to facilitate sediment removal. These basins will be routinely maintained to minimize or avoid sediment flows downstream. Equipment and crews should not have to enter the water bodies to remove accumulated sediment or perform routine maintenance activities. The maintenance staff should implement all applicable BMPs to contain sediment in the de-silting basins and not allow sediment to be transported downstream during clean-out operations.

O/M Impacts to Existing Wetlands and Riparian Habitats

Impact: Existing wetland and riparian habitats on-site are small, fragmented, and highly degraded. The proposed project will result in temporary impacts to these habitats and associated wildlife because of noise, soil disturbance, tree removal/relocation, grading, and increased human presence during construction. Mitigation measures suggested elsewhere (biological monitoring, focused surveys, BMPs, etc.) will adequately mitigate

these impacts. *These impacts are considered adverse, temporary, and not significant (Class III).*

Mitigation: The proposed project will result in significant net benefits to wetland plants and wildlife because of several habitat restoration features of the project description. In all cases, existing wetland habitat loss is mitigated at greater than a 1:1 ratio, usually much more (Tables 4 and 5). *This is considered a beneficial (Class IV) impact.*

5.8 Residual and Cumulative Impacts

No residual impacts to individual plant an/or animals are anticipated if the proposed mitigation measures are implemented. Implementing the proposed Habitat Restoration Plan and Hydrology/Drainage Plan will result in significant improvements in wetland and riparian habitat quality for wildlife in the project area compared to existing conditions. Because this project produces a net benefit, any impact to cumulative effects also would be beneficial.

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APPENDIX 1. Special-Status Plants

Appendix 1: Inventory of Rare and Endangered Plants Known from Santa Barbara Region

scientific	family	life form	Blooming [1]	communities	elevation	CNPS
Arctostaphylos refugioensis	Ericaceae	perennial evergreen shrub	Dec-Mar(May) .	•Chaparral (sandstone)	300 - 820 meters	List 1B.2
Atriplex coulteri	Chenopodiaceae	perennial herb	Mar-Oct	•Coastal bluff scrub •Coastal dunes •Coastal scrub •Valley and foothill grassland alkaline or clay	3 - 460 meters	List 1B.2
Atriplex serenana var. davidsonii	Chenopodiaceae	annual herb	Apr-Oct	•Coastal bluff scrub •Coastal scrub/alkaline	10 - 200 meters	List 1B.2
Baccharis plummerae ssp. plummerae	Asteraceae	Woody shrub	May-Oct	Coastal sage scrub Chaparral Riparian scrub	5-425 meters	List 4
Calochortus weedii var. vestus	Liliaceae	perennial bulbiferous herb	Jun-Aug	•Chaparral •Cismontane woodland •Riparian woodland/often serpentinite	275 - 900 meters	List 1B.2
Calystegia sepium ssp. binghamiae	Convolvulaceae	perennial rhizomatous herb	Apr-May	•Marshes and swamps(coastal)	0 - 20 meters	List 1A
Centromadia parryi ssp. australis	Asteraceae	annual herb	May-Nov	•Marshes and swamps (margins) •Valley and foothill grassland (vernally mesic) •Vernal pools	0 - 425 meters	List 1B.1
Chorizanthe polygonoides var. longispina	Polygonaceae	annual herb	Apr-Jul	•Chaparral •Coastal scrub •Meadows and seeps (Medws) •Valley and foothill grassland often clay	30 - 1450 meters	List 1B.2

[1] **Months in parentheses are uncommon.**

Delphinium umbraculorum	Ranunculaceae	perennial herb	Apr-Jun	•Cismontane woodland (CmWld)	400 - 1600 meters	List 1B.3
Fritillaria ojaiensis	Liliaceae	perennial bulbiferous herb	Mar-May	•Broadleafed upland forest(mesic) •Chaparral •Lower montane coniferous forest/rocky	300 - 670 meters	List 1B.2
Hordeum intercedens	Poaceae	annual herb	Mar-Jun	•Coastal dunes •Coastal scrub •Valley and foothill grassland)(saline flats and depressions) •Vernal pools	5 - 1000 meters	List 3.2
Horkelia cuneata ssp. puberula	Rosaceae	perennial herb	Feb-Jul (Sep) [1]	•Chaparral •Cismontane woodland •Coastal scrub sandy or gravelly	70 - 810 meters	List 1B.1
Lasthenia conjugens	Asteraceae	annual herb	Mar-Jun	•Cismontane woodland •Playas (alkaline) •Valley and foothill grassland •Vernal pools (mesic)	0 - 470 meters	List 1B.1
Lasthenia glabrata ssp. coulteri	Asteraceae	annual herb	Feb-Jun	•Marshes and swamps (coastal salt) •Playas •Vernal pools	1 - 1220 meters	List 1B.1
Lonicera subspicata var. subspicata	Caprifoliaceae	perennial evergreen shrub	May-Aug (Dec-Feb)[1]	•Chaparral •Cismontane woodland •Coastal scrub	35 - 1000 meters	List 1B.2
Malacothrix saxatilis var. arachnoidea	Asteraceae	perennial rhizomatous herb	(Mar) [1] Jun-Dec	•Chaparral(rocky)	25 - 335 meters	List 1B.2
Micropus amphibolus	Asteraceae	annual herb	Mar-May	•Broadleafed upland forest) •Chaparral •Cismontane woodland •Valley and foothill grassland (VFGrs)/rocky	45 - 825 meters	List 3.2
Monolopia congdonii	Asteraceae	annual herb	Feb-May	•Chenopod scrub •Valley and foothill grassland(sandy)	60 - 800 meters	List 1B.2
Quercus dumosa	Fagaceae	perennial evergreen shrub	Feb-Apr	•Closed-cone coniferous forest •Chaparral •Coastal scrub sandy, clay loam	15 - 400 meters	List 1B.1
Ribes amarum	Grossulariaceae	perennial	Mar-Apr	•Chaparral	150 -	List 3

scientific	family	life form	Blooming [1]	communities	elevation	CNPS
var. hoffmannii		deciduous shrub			1190 meters	
Scrophularia atrata	Scrophulariaceae	perennial herb	Mar-Jul	•Closed-cone coniferous forest •Chaparral •Coastal dunes •Coastal scrub •Riparian scrub	10 - 500 meters	List 1B.2
Suaeda esteroa	Chenopodiaceae	perennial herb	May-Oct (Jan)[1]	•Marshes and swamps (coastal salt)	0 - 5 meters	List 1B.2
Thelypteris puberula var. sonorensis	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	•Meadows and seeps (Medws)(seeps and streams)	50 - 610 meters	List 2.2
Thermopsis macrophylla	Fabaceae	perennial rhizomatous herb	Apr-Jun	•Chaparral (sandy, granitic disturbed areas)	425 - 1400 meters	List 1B.3

- CNPS Listings and Rank

Threat Code extensions and their meanings:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

1 **Months in parentheses are uncommon**

APPENDIX 2. Tree Species Found on Montecito Country Club and Golf Course Property

Appendix 2. Tree Species Found on Montecito Country Club and Golf Course. In November-December 2008, McPherson (2009) identified, measured, and evaluated the health of approximately 1,214 individual trees and large woody shrubs that currently exist in the project area. These trees represent approximately 75 species, including seven species of trees and three species of shrubs that are native to California (these are bolded in the list below). Six of the native species are "locally native", i.e., native to the Santa Barbara region (bolded with an asterisk):

Acacia baileyana
Acacia dealbata
Acacia longifolia
Acacia mearnsii
Acacia melanoxylon
Acacia sp.
Albizia lophantha
Annona cherimola
Araucaria heterophylla
Arbutus unedo Marina
Callistemon citrinus
Cassia sp.
Cedrus deodara
Citrus sp.
Cupressus arizonicus
Cupressus leylandii
Cupressus macrocarpa
Cupressus sempervirens
Eriobotrya japonica
Eucalyptus camaldulensis
Eucalyptus citriodora
Eucalyptus cladocalyx
Eucalyptus ficifolia
Eucalyptus globulus
Eucalyptus globulus compactus
Eucalyptus maculata
Eucalyptus sideroxylon
Eucalyptus sp.
Ficus microcarpa var. nitida
Ficus macrophylla
Fraxinus uhdei
Grevillea robusta
Heteromeles arbutifolia(*)
Jacaranda mimosifolia
Juglans regia
Juniperus chinensis torulosa
Juniperus sp.
Lagerstroemia indica
Leptospermum laevigatum
Ligustrum lucidum
Liquidambar styraciflua
Malosma laurina(*)
Melaleuca ericifolia
Melaleuca nesophila
Melaleuca quinquinervia
Melaleuca sp.
Metrosideros excelsa
Myoporum laetum
Nerium oleander
Nicotiana glauca
Olea europea
Phoenix canariensis
Pinus canariensis
Pinus halapensis
Pinus nigra
Pinus pinea
Pinus radiata
Pinus torreyana
Pittosporum undulatum
Platanus racemosa(*)
Podocarpus macrophyllus
Populus nigra italica
Prunus ilicifolia(*)
Prunus persica
Quercus agrifolia(*)
Quercus suber
Rhus integrifolia(*)
Schinus molle
Schinus terebinthifolius
Sequoia sempervirens
Strelitzia nicolai
Syagrus romanzoffianum
Syzygium paniculatum
Ulmus parvifolia
x *Cuprocyparis leylandii* (hybrid)

APPENDIX 3. Special-Status Wildlife

Appendix 3. Known or Expected Special-Status Wildlife Species, Project-related Impacts, and Recommended Mitigation Measures

SPECIES AND STATUS	HABITAT AND POSSIBLE IMPACTS	MITIGATION
REPTILES		
Silvery Legless Lizard (*Anniella pulchra pulchra*) **Status**: Federal Species of Concern; CDFG Species of Special Concern	Distributed in leaf litter under oak woodlands and shrublands, typically in sandy soils. Known from sandstone-derived soils approximately in Mission Canyon (Hunt, pers. observ.). Soils on-site do not appear suitable for this species. Grading could injure or kill lizards.	Qualified biologist present during initial site grading in areas near interface of landscaped vs. non-landscaped area
BIRDS		
Cooper's Hawk (*Accipiter cooperi*) **Status:** CDFG Species of Special Concern (nesting sites)	Observed in project area; may nest in project area.	Raptor nest and roost site surveys; timing of tree trimming and/or removal; avoidance of nest trees
Sharp-shinned Hawk (*Accipiter striatus*) **Status**: CDFG Species of Special Concern (nesting sites)	Expected to forage and possibly roost in project area during the fall and winter months.	Raptor nest and roost site surveys; timing of tree trimming and/or removal; avoidance of roost trees
Northern harrier (*Circus cyaneus*) **Status:** CDFG Species of Special Concern	Fall and winter species; may forage over golf course from roosts around Bird Refuge	None
Yellow Warbler (*Dendroica petechia*) **Status**: Of Local Concern	During migration, yellow warblers are expected to forage in brushy and wooded habitats. May nest in scrub on site. **Impact: Potentially significant**	Breeding bird surveys; seasonal limits on construction
Loggerhead shrike (*Lanius ludovicianus*) **Status:** CDFG Species of Special Concern	Resident species in scrub and oak woodland habitats; may occasionally forage in peripheral areas in upper portions of project area; not likely to nest in project area	Breeding bird surveys; seasonal limits on construction
California horned lark (*Eremophila alpestris actia*) **Status:** CDFG Species of Special Concern	Winter transient in grasslands and open scrub habitats; may visit golf course to forage	None
California thrasher (*Toxostoma californicus*) **Status:** Federal Species of Concern	Resident species in scrub and oak woodland habitats; may occasionally forage in peripheral areas in upper portions of project area; not likely to nest in project area	None
Lark sparrow (*Chondestes grammacus*) **Status:** Federal Species of Concern	Resident species in grassland and open scrub habitats; may occasionally forage in peripheral areas in upper portions of project area; not likely to nest in project area	None
MAMMALS		
Yuma myotis (*Myotis yumanensis*) **Status:** Federal Species of Concern; CDFG Species of Special Concern	Expected to forage in project area and may roost in trees in project area	Bat surveys; avoid roost trees; seasonal timing of construction
Red bat (*Lasiurus borealis*) **Status:** CDFG Species of Special Concern	Winter migrant to South Coast; may forage and roost in project area	Bat surveys, avoid roost trees; seasonal timing of construction

APPENDIX 4. Observed and Expected Wildlife Species

Appendix 4. Vertebrates Observed or Expected to Occur On the Montecito Country Club and Golf Course Project Area. Observed species were found during field surveys for this document. This list does not include a number of uncommon and unusual migratory birds that are routinely observed in Montecito and along the nearby coastline. One or more of these species could occur on the project area as transients. Expected species are from Lehman (1994).

Common Name	Scientific Name	Regulatory Status (blank if non-regulated, but see key)	Observed (O) or Expected (E)
AMPHIBIANS			
Black-bellied slender salamander	*Batrachoseps nigriventris*		E
Western toad	*Bufo boreas*		E
Pacific treefrog	*Hyla regilla*		O
REPTILES			
Western fence lizard	*Sceloporus occidentalis*		O
Southern alligator lizard	*Gerrhonotus multicarinatus*		E
BIRDS			
Green heron	*Butorides virescens*		E
Snowy egret	*Egretta thula*		E
Great egret	*Ardea alba*		E
Great blue heron	*Ardea herodias*		O
Canada goose	*Branta canadensis*		E
Mallard	*Anas platyrhynchos*		O
Turkey vulture	*Cathartes aura*		O
Northern harrier	*Circus cyaneus*	CSC	E
Red-shouldered hawk	*Buteo lineatus*		O
Red-tailed hawk	*Buteo jamaicensis*		O
Cooper's hawk	*Accipiter cooperi*	CSC	O
American kestrel	*Falco sparverius*		O
California quail	*Callipepla californica*		O
American coot	*Fulica americana*		O
Killdeer	*Charadrius vociferus*		O
Ring-billed gull	*Larus delawarensis*		O
California gull	*Larus californicus*		E
Band-tailed pigeon	*Columba fasciata*		O
Rock dove	*Columba livia*		O
Mourning dove	*Zenaida macroura*		O
Barn owl	*Tyto alba*		O
Great horned owl	*Bubo virginianus*		O
Western screech owl	*Otus kennicottii*		E
White-throated swift	*Aeronautes saxatalis*		E
Anna's hummingbird	*Calypte anna*		O
Allen's hummingbird	*Selasphorus sasin*		E
Northern flicker	*Colaptes auratus*		O
Downy woodpecker	*Picoides pubescens*		O
Hairy woodpecker	*Picoides villosus*		E
Nuttall's woodpecker	*Picoides nuttallii*		E
Acorn woodpecker	*Melanerpes formicivorus*		O
Black phoebe	*Sayornis nigricans*		O
Say's phoebe	*Sayornis saya*		O
Ash-throated flycatcher	*Myiarchus cinerascens*		E
Western kingbird	*Tyrannus verticalis*		O
Loggerhead shrike	*Lanus ludovicianus*	CSC	E
Western scrub-jay	*Aphelocoma californica*		O
American crow	*Corvus brachyrhynchos*		O

California horned lark	*Eremophila alpestris actia*	CSC	E
Tree swallow	*Tachycineta bicolor*		E
Violet-green swallow	*Tachycineta thalassina*		E
Cliff swallow	*Petrochelidon pyrrhonota*		O
Northern rough-winged swallow	*Stelgidopteryx serripennis*		O
Barn swallow	*Hirundo rustica*		O
Wrentit	*Chamaea fasciata*		O
Oak titmouse	*Baeolophus inornatus*		O
Bushtit	*Psaltriparus minimus*		O
Winter wren	*Troglodytes troglodytes*		E
Bewick's wren	*Thryomanes bewickii*		O
House wren	*Troglodytes aedon*		O
Blue-gray gnatcatcher	*Polioptila caerulea*		E
Western bluebird	*Sialia mexicana*		E
Mountain bluebird	*Sialia currucoides*		E
American robin	*Turdus migratorius*		O
Northern mockingbird	*Mimus polyglottos*		O
California thrasher	*Toxostoma redivivum*	FSC	E
European starling	*Sturnus vulgaris*		O
Cedar waxwing	*Bombycilla cedrorum*		O
Phainopepla	*Phainopepla nitens*		E
Yellow-rumped warbler	*Dendroica coronata*		O
Yellow warbler	*Dendroica petechia*	CSC	E
Wilson's warbler	*Wilsonia pusilla*		E
Common yellowthroat	*Geothlypis trichas*		E
Western tanager	*Piranga ludoviciana*		O
California towhee	*Pipilo crissalis*		O
Spotted towhee	*Pipilo maculatus*		O
Chipping sparrow	*Spizella passerina*		E
Lark sparrow	*Chondestes grammacus*	FSC	E
Grasshopper sparrow	*Ammodramus savanarum*		E
Song sparrow	*Melospiza melodia*		O
White-crowned sparrow	*Zonotrichia leucophrys*		O
Golden-crowned sparrow	*Zonotrichia atricapilla*		E
Black-headed grosbeak	*Pheucticus melanocephalus*		O
Western meadowlark	*Sturnella neglecta*		E
Red-winged blackbird	*Agelaius phoeniceus*		O
Great-tailed grackle	*Quiscalus mexicanus*		O
Brewer's blackbird	*Euphagus cyanocephalus*		O
Bullock's oriole	*Icterus bullockii*		O
House finch	*Carpodacus mexicanus*		O
American goldfinch	*Carduelis tristis*		E
Lesser goldfinch	*Carduelis psaltria*		E
House sparrow	*Passer domesticus*		O
MAMMALS			
Common opossum	*Didelphis marsupialis*		O
Ornate shrew	*Sorex ornatus*		E
Broad-handed mole	*Scapanus latimanus*		O
Yuma myotis	*Myotis yumanensis*	CSC	E
Big brown bat	*Eptesicus fuscus*		O
California myotis	*Myotis californicus*		O
Red bat	*Lasiurus borealis*	CSC	E
Hoary bat	*Lasiurus noctivagans*		E
Western pipistrelle	*Pipistrellus hesperus*		E
Mexican freetail bat	*Tadarida brasiliensis*		E
Brush rabbit	*Sylvilagus bachmani*		E
California ground squirrel	*Spermophilus beecheyi*		E
Botta's pocket gopher	*Thomomys bottae*		O
Deer mouse	*Peromyscus maniculatus*		E
Dusky-footed woodrat	*Neotoma macrotis*		O
California meadow vole	*Microtus californicus*		E
House mouse	*Mus musculus*		E
Norway rat	*Rattus norvegicus*		E

Grey fox	*Urocyon cinereoargenteus*		E
Coyote	*Canis latrans*		E
Raccoon	*Procyon lotor*		O
Long-tailed weasel	*Mustela frenata*		O
Striped skunk	*Mephitis mephitis*		O
Bobcat	*Felis rufus*		O
Domestic cat	*Felis cattus*		O

Key:

CSC = California Species of Special Concern (California Department of Fish and Game)
FSC = Federal Species of Concern (former Candidate Category 2 species; U.S. Fish and Wildlife Service

Note: Although migratory and resident birds do not have specific regulatory status with the California Department of Fish and Game and/or U.S. Fish and Wildlife Service, all are protected under the Federal Migratory Bird Treaty Act. California Department of Fish and Game Code protects roosting bats, regardless of species.

APPENDIX 5. Results of Habitat Evaluation for California Red-Legged Frog (2006)

Appendix 5. Field Data Sheets for California Red-legged Frog (CRLF) Surveys and Site Photographs of Existing Habitat Conditions.

Surveyor: Lawrence E. Hunt

Location: California, Santa Barbara Co., Montecito, Montecito County Club, northwest of intersection of Old Coast Highway x Hot Springs Road.

Survey Dates and Times: Habitat evaluations and daytime surveys were conducted; nighttime surveys were not conducted because of the low potential for occurrence.

- 10 February 2006 (Western and Middle Drainages - afternoon)
- 23 February 2006 (Eastern Drainage – afternoon and early evening)
- 4 April 2006 (Western and Middle Drainages – morning and early afternoon)
- 10 April 2006 (Western and Eastern Drainages - afternoon)
- 15 May 2006 (Middle and Eastern Drainages - afternoon)

Survey Results and Conclusions: No CRLF were found and CRLF do not inhabit the project area because:

- No CRLF egg masses, larvae, metamorphs, or adults were found in any of the drainages on the project site during the surveys for this document.
- CRLF were probably historically present in this area because extensive freshwater marsh formerly occurred along the margins of the Andree Clark Bird Refuge and riparian habitats were supported by a series of watercourses that drain foothills in this region, including Sycamore Canyon Creek and probably at least two of the on-site drainages (western and eastern drainages).
- These habitats have been mostly eliminated and the extant remnants are small, degraded, and isolated from one another.
- It is highly unlikely that CRLF, if present in say, the Andree Clark Bird Refuge, could disperse onto the project site because the surrounding areas are urbanized and several transportation corridors (UPRR tracks, Highway 101, Old Coast Highway) separate this freshwater/brackish habitat from the project area.
- The drainages that traverse the Country Club (western, middle, and eastern drainages) cannot support this species because suitable aquatic habitat is not present. Each of the drainages remains dry for most of the year, conveying surface flows only for a brief (1-3 week) period following storm events. None of the drainages contain pond habitat in which CRLF could lay eggs and support larval development.
- Adjacent upland habitat is unsuitable for CRLF, as it is composed of heavily managed lawn grass (golf course).

Site Photographs: see following pages

Photo 1. Eastern Drainage, looking east at riparian corridor. Golf course is in foreground. This is the typical transition from the golf course to the middle and eastern drainages. Riparian corridor composed mostly of non-native trees and shrubs, with a few coast live oaks. 10 April 2006.

Photo 2. Eastern Drainage. Typical condition of bed and banks—note dry condition of streambed. Coast live oak in upper left; other trees and vegetation is non-native. 10 April 2006.

Photo 3. Middle Drainage, south of Golf Road. Note dense ground cover of mostly non-native, invasive vegetation. Riparian canopy is composed mostly of non-native species. 15 May 2006.

Photo 4. Middle Drainage, south of Golf Road. Shallow surface water present in foreground (less than six inches deep). Note narrow streambed and condition of banks. 15 May 2006.

Photo 5. Western Drainage, adjacent to maintenance access pathway. This is the only pool found in the Western Drainage, following storm flows. Pool is about 10 feet x 6 feet x 15 inches deep. Drainage is conveyed through underground culverts downstream of this point. 4 April 2006.

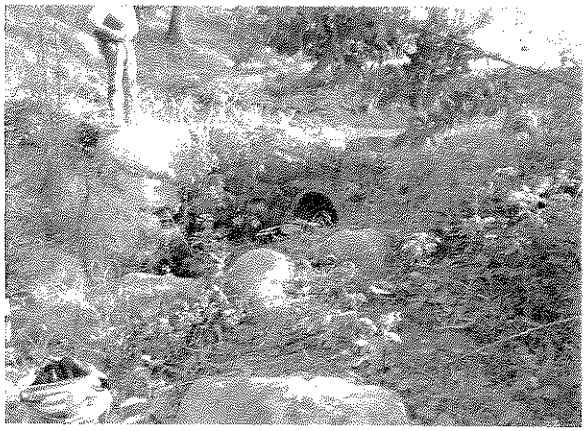

Photo 6. Western Drainage, taken at pool located at southern terminus of surface flow. 11 February 2006.

Photo 7. Western Drainage, looking NW as it enters golf course property from a residential area to the north. 11 February 2006.

Photo 8: Western Drainage, looking SW at middle portion of aboveground reach showing channel modified from original course. Existing flows would be relocated as part of the project habitat restoration. 11 February 2006.

APPENDIX 6. Results of Wetland Delineation (Tierney, 2006)

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC Applicant/Owner: TWHR Investigator: R. Tierney	Date: 6/9/06 County: SD State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: OP #15 Eastern Drainage

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2. Cattle feet		
3. w/ Nest.		NI
4. Ryegrass		
5. Ryegrass		
6. Ryegrass		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10. CHO - scattered on upper bank		
11. w/ Eucs		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations: dry

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
✓ Water Marks
___ Drift Lines
✓ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: "Waters of the US" per ol. +

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Montecito Country Club & Golf Course Date: 2/10/06
Applicant/Owner: Fye Warner Hotel & Resorts County: Santa Barbara
Investigator: Rachel Tierney State: CA

Do Normal Circumstances exist on the site? Yes No
Is the site significantly disturbed (Atypical Situation)? Yes No
Is the area a potential Problem Area? Yes No
(If needed, explain on reverse.)

Community ID: Western Pressey
Transect ID:
Plot ID: OP #1

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Bromus diandrus	ground	NI
2. Raphanus sativus	"	NI
3.		
4. upslope: Rhus integrifolia		
5. Planted - Sycamore / Plane		
6. Canary Is. Palm		
7. Vinca		
8. Nasturtium		
Castor Bean		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Channel is ± 3-4' wide ditch that carries ephemeral flows. Highly disturbed, not the original location. About 1-2 ft deep.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
✓ Other
___ No Recorded Data Available

Field Observations: None

Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
✓ Water Marks
___ Drift Lines
✓ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Ephemeral, runs 1-2 days following each storm. Info from personal ob. and from GC greens manager

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC
Applicant/Owner: TW+R
Investigator: Rachel Tierney

Date: 2/10/96
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID: Western Drainage
Transect ID:
Plot ID: OP # 2

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Ulmus	Ground	NI
2. Brassica nigra	"	NI
3. Bromus diandrus	"	NI
4. Marrubium sp.	"	NI
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): Ø

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
✓ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
✓ Water Marks
___ Drift Lines
✓ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: See OP # 1

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MGC + GC
Applicant/Owner: TWHR
Investigator: Rachel Tierney

Date: 7/19/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: "Ponded Areas"
Transect ID:
Plot ID: OP # 3

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Turf grass	ground	NI
2.		
3. Cotula coronata		FACW+
4. Spergularia macrotheca		FAC+
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 75%

Remarks: Disturbed (golf course). Mostly turf grass w/ scattered patches of Cotula (FACW+) and Spergularia macrotheca (FAC+). OP's were taken based on slight changes in elevation - not changes in vegetation → see text

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
✓ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____ (in.)
Depth to Free Water in Pit: _____ (in.)
Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators: None see discussion
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: See OP # 1 for data source.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC
Applicant/Owner: TW HR
Investigator: Rachel Tierney

Date: 7/19/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: Ponded Area
Transect ID:
Plot ID: OP # 4

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Turf grass		NI
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

Remarks: Area w/ mostly turf grass.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
X Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: See

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: NCC & GC
Applicant/Owner: TLHR
Investigator: Rachel Tierney

Date: 7/19/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: "Dendal Area"
Transect ID:
Plot ID: DP # 5

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Turf grass		NI
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).

Remarks: Disturbed (golf course). Area of turf grass only

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC
Applicant/Owner: TWHR
Investigator: Rachel Tierney

Date: 7/19/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: "Flooded Area"
Transect ID:
Plot ID: OP #6

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2.		
3.		
4. See OP #3		
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 2

Remarks: mowed ac - mostly turf grass

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

none

Remarks: See OP #3

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC & GC
Applicant/Owner: JWHR
Investigator: Rachel Tierney

Date: 7/17/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (YES) No
(If needed, explain on reverse.)

Community ID: "Ponded Area"
Transect ID:
Plot ID: OP #7

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2. Turf grass		NI
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0

Remarks: Far from ponding

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Far from ponding. - see Fig 3.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC LPC Applicant/Owner: CWHR Investigator: Rachel Tierney	Date: 7/19/06 County: Santa Barbara State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? (Yes) No Is the area a potential Problem Area? (Yes) No (If needed, explain on reverse.)	Community ID: Pond 2 Area #2 Transect ID: Plot ID: Op # 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1.			9.		
2.			10.		
3. Tule spp.		NI	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). ✓

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Far from ponding - see Figure 3

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + OC
Applicant/Owner: JWTR
Investigator: Rachel Tierney

Date: 7/17/96
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: w Ponded Area
Transect ID:
Plot ID: OP # 9

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Mostly Turf		NL
2. See OP #3		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 ?

Remarks: managed GC

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
✓ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: near ponded area. Area changes each year.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC & GC
Applicant/Owner: TWHR
Investigator: Rachel Tierney

Date: 7/17/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: "Hooded Oaks"
Transect ID:
Plot ID: OP #10

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2. Thelypteris		FACW
3. Sand Aquatic		FACW
4.		
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). (2)

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Know to prod each year following rains

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Montecatto Golf Course
Applicant/Owner: TWHR
Investigator: Rachel Tierney

Date: 6/9/06
County: SB
State: CT

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

"Ponded" Community ID: Turfgrass
Transect ID: along OCFT
Plot ID: OPZ11

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Brassbuttons	(ground)	FACW+
2.		
3. (patches within managed golf		
4. course)		
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100% in small seasonal patches.

Remarks: Atypical / Problem area - see general notes.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC
Applicant/Owner: IWAR
Investigator: Rachel Tierney

Date: 6/9/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: Ponded Area 9
Transect ID:
Plot ID: OP #12

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Brass buttons		FACW+
2. Tall grass		NI
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 250%

Remarks: Managed GC

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: _____(in.)
Depth to Free Water in Pit: _____(in.)
Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators: None managed GC
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: See OP #3

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: HCE + GC
Applicant/Owner: TWRH
Investigator: Rachel Tierney

Date: 7/17/06
County: Santa Barbara
State: CA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? (Yes) No
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: Border Area
Transect ID:
Plot ID: OP # 13

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Bromus Diandrus (Ruttonii)	grnd	FACU*
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL (FACW or FAC (excluding FAC-). 100%

Remarks: OP is at lowest point adjacent to outfall to storm drain.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
__✓__ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Known to pond.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC LGC Applicant/Owner: TW Ph 2 Investigator: R. Tierney	Date: 6/9/06 County: Santa Barbara State: CA
Do Normal Circumstances exist on the site? Yes No Is the site significantly disturbed (Atypical Situation)? Yes No Is the area a potential Problem Area? Yes No (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: OP #14 Middle Drainage

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2. Nasturtium		
3. Bare ground – Cobble bed		
4. NNG.		WI
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 9%

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

___ No Recorded Data Available dry.

Field Observations:

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ✓ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: Waters of the US.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: MCC + GC Applicant/Owner: TWHR Investigator: R. Tierney	Date: 6/9/06 County: SD State: CA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: Transect ID: Plot ID: OP #15 Eastern Drainage

VEGETATION

Dominant Plant Species	Stratum	Indicator
1.		
2. Cobble Bed		
3. w/ Mod.		NI
4. Riparian		
5. Riparian		
6. Riparian		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10. CHO - scattered on upper bank		
11. w/ Euc		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). (0)

Remarks:

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations: dry

Depth of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
✓ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: "Waters of the US" per ol. +

APPENDIX 7. Habitat Restoration and Revegetation Plan for On-Site Drainages and Ponds

PRELIMINARY HABITAT RESTORATION AND REVEGETATION PLAN FOR MONTECITO COUNTRY CLUB AND GOLF COURSE RENOVATION PROJECT, SANTA BARBARA, CALIFORNIA

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25 February 2009

PRELIMINARY HABITAT RESTORATION AND REVEGETATION PLAN FOR MONTECITO COUNTRY CLUB AND GOLF COURSE RENOVATION PROJECT, SANTA BARBARA, CALIFORNIA

Introduction. This Preliminary Habitat Restoration and Revegetation Plan (Plan) is an adjunct to the Revised Biological Assessment prepared by Hunt & Associates, dated 25 February 2009, for a proposed golf course renovation project on the Montecito Country Club and Golf Course in Santa Barbara. The reader is directed to Section 2.0, 4.0, and 5.0 of this Biological Assessment for a detailed project description, an evaluation of existing conditions in the project area, and an impact and mitigation assessment.

The Biological Assessment identified three drainages (western, middle, and eastern) and associated sites that are considered "wetlands" under State (California Department of Fish and Game and Regional Water Quality Control Board) and Federal (U.S. Army Corps of Engineers) regulations. The southern portions of these drainages are in the Coastal Zone. These drainages, their "riparian corridors", and associated wetlands, are severely disturbed as a result of long-term golf course operations (90+ years) and because the project site is embedded in an urban environment. These drainage features and wetland sites will be modified during implementation of the proposed project, resulting in a significant increase in the size and quality of aquatic and riparian habitats on-site.

Restoration and Revegetation Plan. The three on-site drainages currently support highly degraded remnants of oak-sycamore woodland and are thoroughly infested with a wide variety of invasive, non-native species. The created wetland sites are currently covered with turf grass and are part of the golf course fairways and roughs. The following discussion presents methods of restoring these native habitats.

Size and Location of Restoration Areas. This Plan restores oak-sycamore riparian woodland and wetland vegetation to portions of the western, middle, and eastern drainages. The Plan also directs proposed restoration efforts in features that will be created as a result of golf course renovation as well as along the existing, degraded bed, banks, and "riparian corridors" of the western, middle, and eastern drainages. The approximate restoration areas are taken from Tables 5 and 6 in the Biological Assessment:

Table 1. Type, Size, and Location of Proposed Restoration/Revegetation Sites*.

Drainage	Proposed Restoration	Location	Approximate Restoration Area (square feet)	Type of Restoration
	Revegetate shoreline of newly created de-silting basin	Vicinity of Tees 2 and 3 at upper end of western drainage	2,400	Wetland

Western	Restore and revegetate exposed reach of the western drainage	Vicinity of Tees 2 and 3 at upper end of western drainage downstream to northern edge of Fairway 4	107,500	Riparian/Upland
	Revegetate created western drainage creek channel	Across Fairways 2-5, 7, and 8	15,625	Riparian/Upland
	Revegetate shoreline and nearshore portions of newly created western water feature (western pond)	Southern edge of Fairway 7	15,000	Wetland
Middle	Revegetate shoreline of newly created de-silting basin	Northern edge of Fairway 16	2,800	Wetland
	Restore and revegetate existing exposed bed and banks of drainage, including turf grass swale	Summit Road culvert southward across 11-13 and 15	12,500	Riparian/Upland
	Revegetate shoreline of newly created eastern water feature (eastern pond)	Southern edge of Fairway 11	4,875	Wetland
Eastern	Restore and revegetate approximate 300-foot long reach of existing channel and "riparian corridor"	Northern property boundary southward to Summit Road culvert	15,000	Riparian/Upland
Approximate Total Wetland and "Adjacent Wetland" Restoration Area				**25,075 ft^2**
Approximate Total Riparian/Upland Restoration Area				**150,625 ft^2**
Total Potential Restoration Area				**175,700 ft^2**

*** Sizes of restoration areas presented in this table do not match those presented in Figures 5a and 5b of the Biological Assessment and on Plan Sheets because these project plans focus on those areas within or immediately adjacent to golf course tees and fairways. The actual total size of potential restoration areas on-site is closer to that estimated in this table.**

Restoration Goals and Approach. The revegetation sites will be restored to a mosaic of native riparian canopy trees with an understory of native shrubs. Bank protection and erosion control using native plantings to stabilize and revegetate the creek banks also are key components of this Plan.

This restoration and revegetation plan will mitigate loss of existing, degraded on-site wetland and riparian habitats at a minimum ratio of 1.7:1, typically much higher (see Table 4 in Biological Assessment), by achieving three main goals:

- Replace non-native vegetation in the existing bed, banks, and riparian corridor of the western, middle, and eastern drainages with native, locally-occurring and self-sustaining vegetation in a manner that is consistent with golf course operations and play.

- Create de-silting basins and water features (ponds) in the western and middle drainages and plant with native wetland vegetation.
- Create stream channels in currently buried or swale reaches of the western and middle drainages and plant native riparian trees and shrubs.

Specific Restoration Actions:

- *Maintain adequate development buffers from top of bank.* The City of Santa Barbara requires a minimum 25-foot development setback from the top of bank or edge of riparian canopy whichever is greater, in order to limit or prevent anthropogenic sources of disturbance from negatively affecting the banks, bed, riparian canopy, water quality, and general habitat conditions for wildlife. The proposed project includes a variable-width riparian buffer that ranges from 5 feet to 50 feet in width.

- *Control non-native vegetation.* Removing and controlling non-native vegetation is the single most important criterion for success in any habitat restoration plan. Because non-native species typically are poor competitors for light and space, they flourish where soil or canopy disturbance allows them to gain a "foothold". Once established, non-native vegetation displaces native plant species upon which wildlife depend for food and cover. Controlling non-native vegetation requires a two-pronged approach: a) physical removal, and; b) replacing non-natives with native species in order to prevent subsequent re-infestation. Non-native vegetation is controlled using both mechanical (hand-pulling and hand tools) and chemical methods (systemic herbicide application). The preferred schedule for controlling non-native vegetation is:

  Early Spring, late Spring, and early Fall: sweep through restoration sites employing mechanical (hand or hand-held machine) methods and chemical (herbicide) methods to treat non-native vegetation (Table 2). A qualified biologist should initially supervise this activity to ensure that only non-native vegetation is being treated. Repeat weed eradication efforts twice each year for three years: late Spring and late summer/early Fall.

  After initial weed treatment: Install temporary drip irrigation system for native restoration plantings (to be removed at end of restoration monitoring in 3-5 years post-planting);

  1st Year – Late Fall/early Winter: Plant native ground cover, shrubs, and trees and hydroseed (if necessary), just prior to onset of winter rains (see discussion below);

  2nd and 3rd Years: Weed entire restoration area in early Spring, late Spring, and early Fall. Mechanical control methods will

probably have to be used exclusively because of increased density of native plants.

Years 4 and 5: Qualified biologist determines if performance criteria for restoration have been achieved (Table 3), remediation actions taken, as necessary.

Mechanical (hand and hand-held tool/machine) control methods work well in physically removing and reducing the starting biomass of non-native vegetation. Mechanical control methods will be used as necessary to remove certain species of non-native vegetation. After mechanical control, chemical control may be the only way to remove re-sprouts of certain non-native species that reproduce vegetatively from rhizomes, stolons, or stem fragments, such as cape ivy, giant reed, sweet fennel, greater periwinkle, etc (see Table 2 for specific recommendations). A combination of mechanical and chemical methods will be used in this Plan.

Chemical control involves the use of systemic foliar herbicides whose active ingredient, glyphosate, is translocated throughout the plant and disrupts photosynthesis. Typically, a surfactant is added to the herbicide to counteract hydrophobic waxes and oils created by the plant and made the product adhere to the leaves and stems of the target plants. Roundup (Monsanto Corporation product) can only be used away from surface water (> 25 feet) because of this toxic surfactant. Its aquatic counterpart, Rodeo, can be used around water.

Table 2. Control methods for non-native plant species found in project area.

Common Name	Scientific Name	Control Method	Timing
jade plant	*Crassula ovata*	Hand removal of all parts of plant; follow-up with chemical control on resprouts	Early Spring; Late Summer
Algerian or English ivy	*Hedera canariensis* or *Hedera helix*	Mechanical/chemical: sparse infestation—remove plants and rhizomes by hand; with dense infestation, use string trimmer and pruning shears to cut stems and remove leaves, then immediately (< 3 minutes) apply Roundup (with surfactant) sprayed or swabbed directly on cut stems	Early Spring
blue gum	*Eucalyptus globulus*	Mechanical/chemical: cut pole trees (< 6 inches in diameter dbh) at ground level with chain saw and immediately (< 3 minutes) apply Roundup (with surfactant); if stump-sprouting occurs, drill several ¼-inch diameter holes several inches into stump and immediately pour full-strength Roundup (with surfactant) into holes. Leave larger trees to die naturally and leave dead tree in place if it does not present a safety hazard. If trees fall naturally, cut stump and implement same measures to stumps to prevent stump-sprouting. The trunks should be left on the ground to decay naturally. Mature trees that are dead or dying or in danger of falling (**see Tree Disposition Plan by Landscape Design Services (2008) and arborists' report (McPherson, 2008)**, will be removed; stumps will be retained to prevent bank destabilization and erosion; trees removed will be replaced with coast live oak and western sycamore trees; as other eucalyptus trees decline in this area, they will be removed and replaced with native trees.	Early Fall
bristly ox-	*Picris*	See control methods for Italian thistle.	Spring

tongue	*echioides*		
bull mallow	*Malva nicaaensis*	See control methods for Italian thistle.	Spring
cape ivy	*Delairea odorata* [=*Senecio mikanioides*]	Mechanical/chemical: hand-pull above ground parts of plants from trees and ground and place material in plastic bags for appropriate off-site disposal. Do not mulch or chip this material as plant readily spreads from stems with nodes. Use three-pronged rake to tease roots from leaf litter and dispose as above. Repeat treatment at four- to eight-week intervals to treat re-sprouts. Chemical: Roundup (with surfactant) can be used to treat sparse re-sprouts. Spraying dense infestations of cape ivy will likely kill native plants beneath infestation.	Late Spring and Early Fall
castor bean	*Ricinus communis*	Mechanical/chemical: Seedlings and small saplings can be hand-pulled if ground is moist but care must be used to remove entire taproot. Cut large plants with chain saw at ground level and immediately (<3 minutes) flood cut stump with Roundup (with surfactant). If large plants have set seed or are close to setting seed, clip and bag seed heads for appropriate off-site disposal.	Spring and Fall
English plantain	*Plantago lanceolata*	See control methods for Italian thistle.	Spring
fountain grass	*Pennisetum setaceum* or *Pennisetum villosum*	Mechanical: small infestations can be removed by uprooting or cutting with string trimmer. Use pick or mattock to uproot large plants with basal diameter over six inches. Inflorescences, if present, should be cut by hand and placed in plastic bags for appropriate off-site disposal. Hand removal may have to be repeated several times each year. Chemical: Probably the best and simplest method of control. If seed heads are present, remove these by hand and place in plastic bag for appropriate off-site disposal, then spray plant with Roundup (with surfactant).	
garden nasturtium	*Tropaeolum majus*	See control methods for cape ivy.	Spring
giant reed	*Arundo donax*	Mechanical: Hand-pull new plants less than six feed in height, but care must be taken to remove entire rhizome. This is most effective in sandy, moist soils. Small plants can also be dug up. Chemical: The most effective control method is chemical, especially in concert with mechanical control. Use machete to cut stems, then immediately (<3 minutes) Roundup or Rodeo to cut stems. Cut material must be carefully removed from area and disposed of properly because plants can sprout from stem nodes. With dense infestations, cut clumps, apply herbicide, then return three weeks later and spray any emerging foliage. Repeat as necessary until clumps are dead.	Late Spring and Early Fall
ice plant	*Carpobrotus edulis*	Mechanical: Sparse infestation and individual plants should be removed by hand-pulling taking care to remove all live shoot segments to prevent re-sprouting. Repeat in three to six months to remove new plants. If sensitive vegetation or insects are present, large mats also can be covered with black plastic sheeting for three months in summer, using sun's heat to kill ice plant, then hand-pull re-sprouts in three to six months. Leave dead mats of plants in place to prevent soil erosion. Chemical: Apply Roundup as foliar spray; re-treat in three months if parts are still living and leave mats to die in place to prevent soil erosion.	Any time of year
Italian thistle	*Carduus pycnocephalus*	Chemical: Apply Roundup to foliage of young plants in spring before flowering and seed set; repeat treatment following spring if infestation is dense in order to deplete soil seed bank. If infestation is sparse, hand-pull or dig seedlings in spring while soil is moist, taking care to remove entire tap root.	Spring
myoporum	*Myoporum laetum*	Mechanical/chemical: seedlings can be hand-pulled but ground must be moist in order to remove plant and entire tap root or plant will re-sprout with vigor. Cut trees and shrubs at ground level with chain saw and immediately apply Roundup (with surfactant) to cut stump. If stump-sprouting occurs, drill several ¼-inch diameter holes several inches into stump and immediately (<3 minutes) pour full-strength Roundup (with surfactant) into holes. Repeat as necessary until stumps are dead.	Early Fall
New Zealand spinach	*Tetragonia tetragonioides*	See control methods for cape ivy and ice plant.	Any time of year

greater periwinkle	*Vinca major*	See control methods for cape ivy.	Spring
Pigweed	*Chenopodium album*	See control methods for Italian thistle.	Spring
sweet fennel	*Foeniculum vulgare*	See control methods for Italian thistle.	Early Spring
wild radish	*Raphanus sativus*	See control methods for Italian thistle.	Early Spring
mustard	*Brassica* sp. or *Hirschfeldia* sp.	See control methods for Italian thistle.	Early Spring

- *Revegetation.* The planting palette for the revegetation phase of this Plan is subdivided into two tiers: shrubs, and trees and consists of locally-occurring species that have been selected for their wildlife, aesthetic, and historic cultural value. The planting palette described on Figures 5a and 5b of the Biological Assessment and Plan Sheets presents the ground cover, shrub, and one of the tree species that will be used in this Plan.

  - *Shrubs.* The shrub palette for the pond margins and the drainages is listed in Figures 5a and 5b of the Biological Assessment and on the full-size Plan Sheets. Shrubs should be collected from naturally-occurring, local sources and grown in one- or five-gallon containers at a local native plant nursery until ready for planting. Candidate nurseries are: SB Natives in Santa Barbara (729-3855) and Growing Solutions in Isla Vista (452-7561). Shrubs will be planted in late fall just prior to the onset of winter rains and drip-irrigated until self-sufficient (minimum three years post-planting). The planting holes for shrubs will be lined with chicken wire to prevent gopher predation. Counts of each species are unknown at this time, but shrubs will generally be planted on 18" to 72" centers, depending on the species. A final count will be based on size calculations of specific revegetation areas following removal of non-native vegetation.

  - *Trees.* The planting palette described in Figures 5a and 5b of the Biological Assessment and on the full-size Plan Sheets presents the ground cover, shrub, and one of the tree species that will be used along the drainages. In addition to western sycamore (*Platanus racemosa*), the tree species palette in the exposed reaches of the western, middle, and eastern drainages will be supplemented with coast live oak (*Quercus agrifolia*), while alder (*Alnus rhombifolia*), and black cottonwood (*Populus balsamifera* var. *trichocarpa*). The golf course reaches of the western and middle drainages will be sparsely planted with trees to allow for golf course play, probably a combination of western sycamore and coast live oak. Trees will be grown from seeds or cuttings taken from naturally-occurring, local populations and grown at a native plant nursery until suitable for planting as a five-gallon or larger plants. Candidate nurseries are: SB Natives in Santa Barbara (729-3855) and Growing Solutions in Isla Vista (452-7561). Trees should be

planted in late fall just prior to the onset of the winter rainy season and maintained on drip-irrigation until self-sufficient (minimum three years post-planting). The planting holes for trees will be lined with chicken wire to prevent gopher predation. Counts of each species are unknown at this time, but trees will generally be planted on 72" or greater centers, depending on the species. A final count will be based on size calculations of specific revegetation areas following removal of non-native vegetation.

- *Monitoring.* Monitoring project-specific goals is critical to the success of the Plan because it provides a mechanism for detecting and correcting problems. Plan goals are determined by how closely specific performance criteria have been met at the end of three growing seasons (Table 3). These criteria involve quantitative measures of growth, survivorship, and vigor of planted stock, ground cover and species richness of native and non-native plants throughout the Plan area, and self-sufficiency of the planted stock with regards to supplemental watering. Three years is typically the minimum amount of time required by the California Department of Fish and Game and the City of Santa Barbara to evaluate performance criteria, unless the planted stock exceeds thresholds before three years. Monitoring continues and necessary remedies are implemented until the thresholds have been met, for up to five years post-planting. A qualified biologist will monitor the Plan area once/month for the first six months, then once every other month for the next six months, then four times/year for Years 2 and 3. Baseline information on plant species richness, percent ground cover, and other parameters will be measured in the restoration sites before and after the initial weed control effort. Subsequent monitoring data will be compared to baseline data to evaluate the progress of the restoration effort. Sample monitoring forms are provided in Appendix 2.

Table 3. Minimum performance criteria for this Restoration and Revegetation Plan. The goal is to exceed these standards.

Revegetation Actions	Maintenance Measures	Timing	Minimum Performance Threshold	Remedy if Minimum Performance Goal Is Not Met
Non-native plant removal and control	See Table 2	See Table 2; monitoring to continue until native plant dominance is documented	Non-native plants comprise <5% of total plant ground cover in revegetation areas	Additional chemical and/or mechanical treatment, as per recommendations of monitoring biologist
Revegetation	Plant native trees, shrubs, and ground cover in restoration area; trees and shrubs should be self-sufficient regarding water after	Following initial control of non-native vegetation; planting should preferably occur in early winter at start of rainy season; revegetation	Trees: Overall 85% survival at end of three yr monitoring period; 75% at end of five yrs; all surviving plants should be in good to excellent	Replant trees and shrubs, as necessary, to meet minimum performance standards

	3 yrs post-planting	effort will be monitored for minimum of 3 years and maximum of 5 years, depending on success of plantings	vigor and at least six feet tall will full complement of species; no supplemental irrigation required Shrubs: 85% survival of container stock; all plants show good to excellent vigor with full complement of species; no supplemental irrigation required Ground Cover: minimum 75% ground cover of seeded stock on flats with full complement of species; 50-75% on slopes up to 45 degrees, and 25% ground cover on steeper slopes, with no weeds and no need for supplemental irrigation. Vertical slopes, especially rocky slopes are difficult to revegetate and success will depend on qualitative as well as quantitative assessment of native plant cover	Continue drip irrigation and/or hand-watering, if necessary Re-plant with additional container plants or seed, as necessary, per recommendations of monitoring biologist
Soil Erosion	Bare soil should be covered with jute to reduce soil erosion on slopes	Successful revegetation of site will likely satisfy future need for erosion control; situation will be monitored during plant monitoring	No soil erosion, although vertical creek banks damaged by storm flows may require natural bank protection (e.g., willow wattles)	Mulch, jute, willow wattles, or other erosion control measures, as necessary until erosion is controlled and bare soil is covered with vegetation, leaf litter, or other layer

The monitoring biologist will make recommendations to the landscape contractor regarding problems and remedies and will supervise implementation of these corrections. Standardized data sheets and photographs will be used to record the performance criteria during each monitoring session and a brief letter will be submitted to the property owner, the City of Santa Barbara, and the California Department of Fish and Game each year.

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