4.9 Biological Resources

MBA prepared an updated Biological Resources Assessment (BRA) for the Draft REIR, which is summarized within this section. In preparation of the BRA, MBA reviewed past biological resources documentation which was prepared for the previous EIR, including the *Updated Biological Surveys for September Ranch, Monterey County, CA* (Zander Associates 2002), *Supplemental Forestry Report of August 2002 to the Forestry Management Plan for September Ranch, prepared by Hugh Smith, dated May 10, 1995* (Staub 2002), *Final Environmental Impact Report Volume 2 - Supplemental Information in Response to Additional Public Comments* (Denise Duffy and Associates 1998), *September Ranch in Carmel Valley, Monterey County, CA - Smith's Blue Butterfly Survey in 2001* (Entomological Consulting Services 2001), *September Ranch in Carmel Valley, CA - Smith's Blue Butterfly Survey in 1996* (Entomological Consulting Services 1996), *September Ranch in Carmel Valley, CA - Smith's Blue Butterfly in 1995* (Entomological Consulting Services 1995), *Forest Management Plan for Residential Subdivision* (Smith 1995), *Morgens Property Special Status Plants Assessment* (Mori 1995a), *Morgens Property Biotic Assessment Carmel Valley, California* (Mori 1995b), *Biological Resource Assessment, Morgens Property, Carmel Valley, California* (Zander Associates 1995), *Morgens Ranch Biological Survey* (WESCO 1981), and comments from the USFWS (USFWS 1997), CDFG (CDFG 2003E), the Monterey Pine Forest Watch (Smith 2003) and the California Native Plant Society Monterey Bay Chapter (Matthews 2003)**.**

In addition plant surveys were conducted in February 1981 (WESCO 1981), November 1992 and January 1995 (Mori 1995a), March 1995 (Mori 1995b), April 1995, May 1995, and June 1995 (Zander 1995), April 2001, May 2001, and August 2001 (Zander 2002) April and May 2005 (Zander 2005). Appendix A of Appendix H of this REIR contains the special status plant table, which provides a synopsis of when the surveys were conducted and the findings of those surveys.

4.9.1 Environmental Setting

Existing Conditions

The study area is located within the North Coast Bioregion (Welsh 1994). This bioregion is located within the northern California coastal region and extends north as far as Mendocino County and south as far as Monterey County. Habitats within this bioregion are typical of a Mediterranean climate and include both mesic (moist) habitats, such as redwood forest, and xeric habitats, such as coastal scrub. The Monterey area is defined by the Pacific Ocean and the Santa Lucia coastal mountain range and has an annual winter precipitation average of 17.23 inches (Western Regional Climate Center 2003).

Located approximately 2.5 miles east of the Pacific Ocean, and 11 miles north of Los Padres National Forest, the September Ranch Subdivision project study area is located within the Carmel Valley, north of Saddle Mountain. The roughly rectangular-shaped study area is located within the central portion of the Seaside 7.5-minute topographic quadrangle, within Township 15S and Range 1E. The study area is located on the southern border of Jacks Peak County Park, and east of Roach Canyon, approximately 0.35 miles north of the Carmel River.

The 1,673-acre biological resources study area ranges in elevation from 70 to 976 feet above sea level. The south-facing hillsides support six ephemeral drainages that lack defined beds or banks and have no visible scouring marks (Denise Duffy and Associates 1997). No hydrophytic vegetation was observed within the drainages and the overhead canopy consists of coast live oak forest.

Included in the 891-acre project area are approximately 24.2 acres occupied by an existing equestrian center and adjacent horse pastures. For several decades, cattle-grazing has been conducted within the proposed project area.

Vegetation Communities

The 891-acre project area supports a variety of vegetation communities, including native Monterey pine forest/mixed oak woodland, native and non-native grasslands, and coastal scrub. A small area of the western portion of the site supports riparian habitat. Following is a discussion of the native plant communities/habitat types found on the project site as described in the studies and site visits referenced previously. Exhibit 4.9-1 identifies where these native plant communities/habitat types occur on the site. In addition, Table 4.9-1 presents the acreage of each of the vegetation communities within the 891 acres proposed for development.

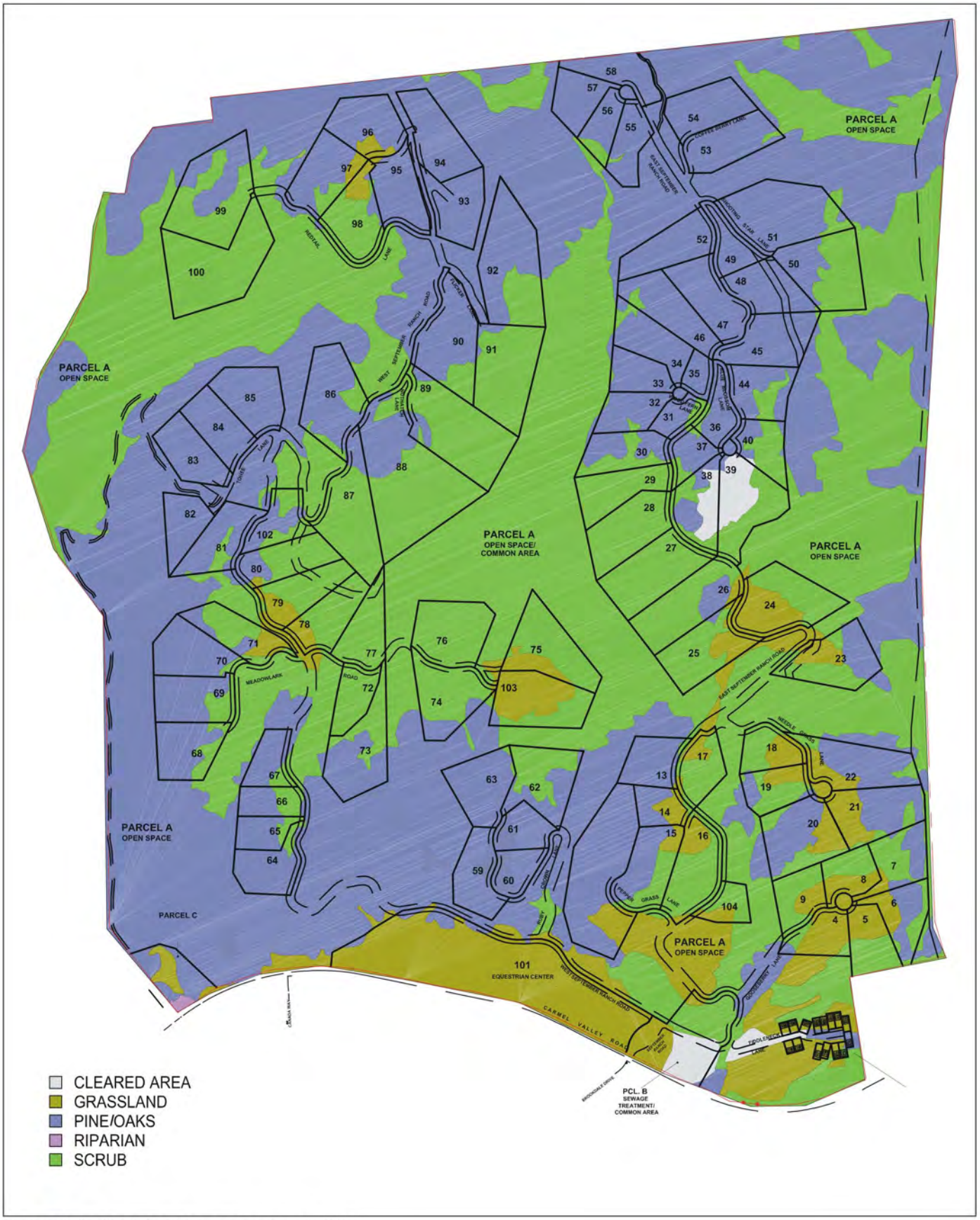
Table 4.9-1: Acreages of Vegetation Communities within the Project Area

Vegetation Community	Acreage
Monterey Pine/Coast Live Oak Forest	426.00
Coastal Scrub	378.00
Grassland	62.00
Willow Riparian Scrub	0.77
Equestrian Center	24.23
Total Acreage	**891.00**
Source: Whitson Engineers, September 2003.	

Monterey Pine/Coast Live Oak Forest

Monterey pine/coast live oak forest covers 426 acres (47 percent) of the project site as illustrated in Exhibit 4.9-1. The Monterey pine (*Pinus radiata*) and coast live oak (*Quercus agrifolia*) vary in relative abundance and cover, with the oaks dominant along the lower southern slopes and the pines dominant on the higher ridges to the north (Denise Duffy and Associates 1998). The southern slopes support the largest oaks on the property. The pine/oak forest understory is generally open and consists of grasses such as leafy bentgrass (*Agrostis diegoensis*) and western wildrye (*Elymus glaucus*), as well as scattered shrubs, including poison oak (*Toxicodendron diversilobum*), bush monkey flower (*Diplacus aurantiacus*), goldenbush (*Hazardia squarrosa*), and redberry (*Rhamnus crocea*). Stands of the invasive French broom (*Genista monspessulana*) comprise the understory primarily on the southern half of the project site.

Although Monterey pines are widely planted throughout the region, there are three native stands of the species remaining on the California coast at Point Año Nuevo, (Santa Cruz and San Mateo counties) in Cambria (San Luis Obispo County) and on the Monterey Peninsula (Monterey County).



Source: Michael Brandman Associates, January 2004.

NORTH

Michael Brandman Associates

Exhibit 4.9-1
Vegetation Map

Coastal Sage Scrub

Coastal sage scrub covers approximately 380 acres of the project site; as illustrated in Exhibit 4.9-1, this habitat type is found on the steep, exposed, arid slopes of the site. The dominant plant species include California sage (*Artemisia californica*), coyote brush (*Baccharis pilularis*), bush monkey flower (*Diplacus aurantiacus*), black sage (*Salvia mellifera*), goldenbush (*Hazardia squarrosa*), and redberry (*Rhamnus crocea*). On the western portion of the project site where the canyons are more mesic, the scrub vegetation is very dense and tall and consists of poison oak (*Toxicodendron) diversilobum*) and coffee bean (*Rhamnus californicus).* Blue blossom (*Ceanothus thyrsiflorus*), cream bush (*Holodiscus discolor*) and California blackberry (*Rubus ursinus*) are also present on the western portion of the project site.

Grasslands

Grasslands encompass approximately 62 acres of the property and account for most of the plant diversity on the site; over 240 different species, of both native and non-native grasslands were identified during the November 1994 and March 1995 surveys (Zander Associates 1995). Non-native annual grassland is generally found in open areas in valleys and foothills throughout coastal and interior California (Holland 1986). It typically occurs on soils consisting of fine-textured loams or clays that are somewhat poorly drained. This vegetation type is dominated by non-native annual grasses and weedy annual and perennial forbs, primarily of Mediterranean origin, that have replaced native perennial grasslands as a result of human disturbance. Scattered native wildflower species representing remnants of the original vegetation may also be common if an area is grazed. Within the project area, both non-native and native grasslands occur.

Non-Native Grasslands. Non-native grasslands are annual grasslands that support introduced species such as ripgut brome (*Bromus diandrus*), red brome (*B. rubens*), soft chess (*B. hordeaceus*), and Mediterranean barley (*Hordeum hystrix*).

Native Grasslands. Native grasslands are perennial grasslands that support purple needlegrass (*Nasella pulchra*), small-flowered needlegrass (*Nasella lepida*), pine bluegrass (*Poa secudna*), and California oatgrass (*Danthonia californica*). Some of the grassland areas on the site have a higher diversity of native grasses and flowering herbs than previously reported. The native flowering herbs identified include: Johnny jump-up (*Viola pedunculata*), suncups (*Camissonia ovata*), shooting star (*Dodecatheon clevelandii*), checkerbloom (*Sidalcea malvaeflora*), blue-eyed grass (*Sisyrinchium bellum*), buttercup (*Ranunculus californicus*), owl's clover (*Castilleja* spp.), clover (*Trifolium* spp.), California poppy (*Eschscholzis californica*), Mariposa lily (*Calochortus luteus*), sky lupine (*Lupinus nanus*), and blue dicks (*Dichelostemma capitatum*).

Willow Riparian

Riparian vegetation is generally absent from major drainages on the project site. The drainages on the site are ephemeral, lack defined beds or banks, and do not exhibit observable scour. The survey conducted in January 1995, a very wet year, confirmed that these drainages do not appear to convey significant storm flows and do not support hydrophytic (moisture-tolerant) vegetation. A narrow strip of riparian vegetation (approximately 0.7 acres) consisting primarily of willow (*Salix* sp.) was observed at the base of Roach Canyon along Carmel Valley Road. Because the grade of Carmel Valley Road is higher than the bed of Roach Canyon, surface and/or subsurface flows may drain to

the culverts beneath Carmel Valley Road thereby providing sufficient moisture to allow for the establishment of these willows. However, no pooling or ponding of water was observed in this area during the January 1995 survey. Other plant species observed with the willow include poison oak, creek gooseberry, mugwort (*Artemisia douglasiana*), greater periwinkle (*Vinca major*), and hedge-nettle (*Stachys albens*).

Wildlife Habitats

Several wildlife habitats, which include vegetation communities and anthropogenic structures, occur within the 1,673-acre study area; however, the descriptions below pertain only to those habitats that are within the 891-acre project area.

Monterey Pine/Mixed Oak Woodland

Monterey pine and oak woodlands are important habitats for many bird and animal species since they provide a valuable food source (acorns), as well as potential sources of shelter (tree cavities, fallen woody debris). Woody debris from oak and pine trees contribute to the structural complexity of the forest floor and allow for development of micro-climates suitable for amphibians and reptiles. Important understory plants in woodlands include poison oak, redberry, brittle-leaf manzanita (*Arctostaphylos tomentosa*), and creeping snowberry (*Symphoricarpos mollis*), which provide seasonal food sources for birds and mammals. Pines provide nuts for a variety of birds and small mammals as well and because the trees are short-lived, the older representative animal species of Monterey pine dominated forests include hairy woodpecker (*Picoides villosus*), Stellar's jay (*Cyanositta stellen*), brown creeper (*Certhia americana*), pygmy nuthatch (*Sitta pygmaea*), and pine siskin (*Carduelis pinus*).

Representative animal species of oak dominated forests include arboreal salamander (*Aneides lugubris*), southern alligator lizard (*Gerrhonotus multicarinatus*), common kingsnake (*Lampropeltis getulus*), western screech owl (*Otus kennicottii*), scrub jay (*Aphelocoma corulescens*), Virginia opossum (*Didelphis virginianus*), dusky footed woodrat (*Neotoma fucipes*), Merriam's chipmunk, western gray squirrel (*Sciurus griseus*), and black-tailed deer.

Coastal Sage Scrub

The coastal sage scrub is relatively dense throughout the project site in the more open or disturbed areas associated with the trail/road cuts or rock outcrops. The thick scrub provides valuable cover and nesting habitat for animal species, with the more open areas providing valuable foraging habitat. Rock outcrops and talus (e.g., slope formed from rock debris) found within this community provide valuable denning, cover, and roosting habitat as well. Animal species common to this habitat include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*), California whipsnake (*Masticophis lateralis*), blue-gray gnatcatcher (*Potopfila caerulea*), wrentit (*Chamae fasciata*), Bewick's wren (*Thryomanes bewickii*), brush rabbit (*Sylvilagus bachmanii*), California mouse (*Peromyscus californicus*), and gray fox (*Urocyon cinereoargentus*). Pines provide nuts for a variety of birds and small mammals as well and because the trees are short-lived, the older senescent trees provide an important resource for woodpeckers, which prefer to excavate in dead or dying trees.

Grassland

Grassland habitat, including the non-native grasslands present onsite, attracts reptiles, such as northern alligator lizard (*Gerrhonotus multicarinatus*), and western fence lizard (*Sceloporus occidentalis*), which feed on invertebrates found beneath debris in the vegetation community. This habitat also attracts avian seed-eating and insect-eating species of birds and mammals. California quail (*Lophortyx californicus*), mourning dove (*Zenaidura macroura*), and meadowlark (*Sturnella neglecta*) are a few seedeaters that nest and forage in grasslands. Insect-eaters such as scrub jays (*Aphelocoma coerulescens*), barn swallows (*Hirundo rustica*), and mockingbirds (*Mimus polyglottus*) use the habitat for foraging only. Grasslands are important foraging grounds for aerial and ground foraging insect-eating bat species such as myotis (*Myotis* spp.) and pallid bat (*Antrozous pallidus*). A large number of other mammal species such as California vole (*Microtus californicus*), deer mouse (*Peromyscus maniculatus*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), and black-tailed jackrabbit (*Lepus californicus*) also forage and nest within grasslands. Small rodents attract raptors (birds of prey) such as owls that hunt at night, as well as day-hunting raptors such as red-tailed hawks (*Buteo jamaicensis*), and white-shouldered kites (*Elanus leucurus*), among others. Mammals that have habituated to the presence of human habitation, such as raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*), frequently use the site, as was evidenced by the presence of scat.

Willow Riparian

The wildlife value of riparian habitats is generally considered high due to the presence of shrubs and trees that provide cover for animals in an area adjacent to a water source. Animal species that are common to riparian habitats include song sparrow (*Melospiza melodia*), Wilson's warbler (*Wilsonia pusilla*), and ornate shrew (*Sorex omatus*). The riparian habitat on the project site has moderate wildlife value due to its limited distribution and coverage, lack of surface water, and close proximity to Carmel Valley Road.

Structures

Bird species including passerines, such as black phoebe (*Sayornis nigricans*), and raptors, such as American kestrel (*Falco sparverius*), may use onsite anthropogenic structures such as the horse barn and residential house. These bird species have adapted to disturbances associated with human settlements and will nest and forage in close proximity to humans. In general, the nesting season for both passerines and raptors typically begins at the end of February and may last to mid-August. Several bat species, including Mexican free-tailed bat (*Tadarida braziliensis mexicana*) and pallid bat (*Antrozous pallidus*), could potentially use the barn structure for day or night roosting, or as a hibernaculum.

Wildlife Movement Corridors

Wildlife movement includes migration (i.e., usually one way per season), inter-population movement (e.g., long-term genetic flow) and small travel pathways (e.g., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations.

These linkages among habitat types can extend for miles between primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement among populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations comprising a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, which occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors, and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Potentially low frequency genetic flow may lead to complete isolation, and if pressures are strong, potential extinction (McCullough 1996; Whittaker 1998).

The open space available within the 1,673-acre study area provides a movement corridor for a variety of common wildlife species, such as raccoons, opossums, and skunks, within the local vicinity of the project area, as evidenced by various scat observed. The value of the movement corridor from the open habitats in the north, such as the Jacks Peak County Park area, and in the south, such as the Carmel River, is reduced by the existence of development immediately surrounding the Carmel River. Larger species, such as deer, would use the study area as a movement corridor and would not be impeded by the residential development. On the other hand, small species such as amphibians would find it difficult to move onto the site from the Carmel River due to the residential development and the debris-blocked culverts going under Highway 84.

Special Status Natural Communities and Species

Communities and species are designated as having special status due to their overall rarity, endangerment, restricted distribution, and/or unique habitat requirements. In general, special status is a combination of these factors. The Federal Endangered Species Act (FESA), enacted by Congress in 1973, outlines the procedures whereby species are listed as endangered or threatened and established a program for the conservation of such species and the habitats in which they occur. Many individual states have enacted their own listing procedures to provide for the protection of additional locally sensitive biological resources. The California Endangered Species Act (CESA) of 1984 amends the California Fish and Game Code to protect species deemed to be locally endangered.

Special Status Natural Communities

Special status natural communities are those that are considered rare, based on limited distribution in the region, but may or may not support special status plant or wildlife species. Special status natural communities may also receive regulatory protection (e.g., Section 404 of the Clean Water Act and/or the California Department of Fish and Game (CDFG) Section 1600 et seq. of the California Fish and Game Code). In addition, the California Natural Diversity Data Base (CNDDB) designated a number of communities as rare; these communities, such as coastal terrace prairie, are given the highest inventory priority (Holland 1986, CDFG 1999). Within the project site, two communities are classified as rare, the Monterey pine forest and the costal terrace prairie.

Monterey Pine/Coast Live Oak Forest. Monterey pine forest is dominated by Monterey pine (*Pinus radiata*) with continuous or intermittent canopies reaching 30 meters. Coast live oak (*Quercus agrifolia*) is usually the next most abundant species. This community typically occurs on well-drained sandy soils within the limits of the summer marine fog zone up to 980 feet in elevation. This

community intergrades with other coastal closed-cone coniferous types (Holland 1986), such as upland redwood forest or Monterey cypress forest and bishop pine forest. Three natural areas of Monterey pine occur in the state, at Año Nuevo in San Mateo and Santa Cruz counties, Cambria in San Luis Obispo County, and along the Monterey Peninsula. There is a high level of variation in species composition among these three areas (Sawyer and Keeler-Wolf 1995). It is hypothesized that there is a link between certain marine terrace conditions and the domination of Monterey pine that is typically a secondary species in other communities (Sawyer and Keeler-Wolf 1995).

Due to the limited distribution of native stands, the California Native Plant Society (CNPS) has designated native Monterey pines as sensitive plants (list 1B) which are considered rare by the Natural Diversity Data Base. Several threats have been identified that imperil these stands. The CNPS cites genetic contamination, development, and fragmentation as the key threats to these remaining native stands. Another threat is pine pitch canker (*Fusarium circinatum*), a fungal pathogen, that enters the tree through a wound caused mechanically, such as hail, wind stress, and various animals, including insects feeding (University of California Berkeley 2003). Monterey pine (*Pinus radiata*) is highly susceptible to this disease. The spores are spread by wind and rain splash, also by insects such as bark beetles. The fungus can grow and persist in soil and may sometimes act as a root infecting pathogen. It is also found in seeds and on seed coats. The fungus is able to survive for more than 12 months in logs, in resin impregnated tissues.

Within the project site, the majority of native Monterey pines occur at elevations greater than 300-feet above sea level. A total of 34.90 acres of Monterey pine/oak woodland forest have potential to be impacted through loss of individuals caused by road construction, installation of utilities and creation of building pads (Whitson Engineers 2003). The loss of individuals may increase the potential spread of pine pitch canker throughout the forest.

A supplemental forestry report, prepared in 2002, analyzed the presence and potential for pitch canker disease to occur onsite (Staub 2002). The Monterey pines evaluated within the 891-acre study area revealed only 7 individuals with visible symptoms (Staub 2002). All trees with symptoms were located in the lower portion of the property (below 250 feet), a finding that is consistent with research stating that pitch canker disease severity is highest at sea level (Staub 2002). For example, Jacks Peak County Park, located higher than 600 feet above sea level, has almost no trees with pitch canker symptoms as of the end of 2004.

Coastal Terrace Prairie. Coastal terrace prairie, considered rare by the CNPS, is typically comprised of dense, tall grassland, typically dominated by both sod- and tussock-forming native perennial grasses. It is naturally patchy in occurrence and variable in composition reflecting differences in slope aspect, soil texture, and moisture availability. This vegetation community occurs on sandy loam soils of marine terraces near the coast and is restricted to cooler, more mesic sites within the zone of fog incursion. Although the coastal terrace prairie consists of many of the same native species that comprise valley/foothill needlegrass grassland, annual species are less important in community structure. It is distributed from Santa Cruz County to Oregon (Holland 1986) and its range closely matches that of northern coastal scrub (Holland and Keil 1990), with which it is generally associated. Coastal terrace prairie similarly has a long history of human disturbance and continues to be threatened by including intensive livestock grazing, the introduction of invasive exotic species, changes in the fire regime, and development.

Within the 891-acre September Ranch Subdivision project area, 17.92 acres of grasslands, including native terrace prairie and non-native grasslands, have potential to be impacted by construction of roads, installation of utilities and creation of building pads.

Special Status Plant Species

Special status plant species include those listed as Endangered, Threatened, Rare or Candidates for listing by the USFWS (2003), the CDFG (2003a) and the CNPS (Skinner and Pavlik 1999). The CNPS listing is sanctioned by the CDFG and serves essentially as their list of "candidate" plant species. The CDFG also compiled a list of "Special Plants" (CDFG 2003a) that include California Special Concern species. These designations are given to those plant species whose vegetation communities are seriously threatened and those wildlife species whose breeding populations are in serious decline. Although these species may be abundant elsewhere, they are considered to be at some risk of extinction in California. Although Special Concern species are afforded no official legal status under FESA or CESA, they may receive special consideration during the planning stages of certain development projects and adverse impacts may be deemed significant under the California Environmental Quality Act (CEQA).

Based on a review of the California Natural Diversity Data Base (CNDDB 2003), and general knowledge of the flora of Monterey County, a total of 23 special status plant species were determined to have at least some potential for occurring in the project region. Focused surveys were conducted for eight species during their appropriate survey periods.

Below is a description of those species reported within the Seaside and Monterey topographic quadrangles, or within habitats present onsite, and their potential for occurrence in the September Ranch Subdivision project area.

Federal and State Threatened and Endangered Species. It was initially determined that eight special status plant species had the potential to occur on the site, including Monterey pine (*Pinus radiata*), Hickman's onion (*Allium hickmani*), CNPS list 1B Gairdner's yampah (*Perideridia gairdnen*), CNPS list 4 Yadon's piperia (*Piperia yadoni*), federally endangered and CNPS List 1B Santa Cruz clover (*Trifolium buckwestorium*), CNPS list 1B Pacific Grove clover (*Trifolium polydon*), California rare and CNPS List 1B small-leaved lomatium (*Lomatium parvifolium*), and CNPS list 4 Adder's tongue (*Ophioglossum californicum*), (Denise Duffy and Associates 1998). Another federally-listed species addressed in this Draft REIR is the Monterey spineflower (*Chorizanthe pungens* var. *pungens*), a federally threatened and CNPS list 1B. Please refer to Appendix A of Appendix H of this REIR for a list of special status plant species and their survey dates.

Surveys were conducted in 1995 to determine the presence or absence of Yadon's piperia, Gairdner's yampah, and Hickman's onion (Denise Duffy and Associates 1998). Since the project site is occasionally grazed, surveys were conducted in March before the blooming period of these species but when characteristic vegetative parts would have been identifiable. Neither Yadon's piperia nor Hickman's onion were observed during the survey and it was concluded that neither would be expected to occur on the project site based on habitat characteristics. The small-leaved lomatium (*Lomatium parviflorum*) and Adders tongue (*Ophioglossum californicum*) were observed onsite (Denise Duffy and Associates 1998).

Survey results in March 1995 were negative for Gairdner's yampah, Santa Cruz clover, and Pacific Grove clover; subsequent surveys were conducted in April 1995, also with negative results (Denise Duffy and Associates 1998). Surveys conducted in May 1995 revealed some very limited Pacific Grove clover and although surveys conducted in May and August of 2001 revealed no occurrences of this species, surveys conducted in 2005 confirmed the presence of Pacific Grove clover in the eastern portion of the project site between lots 18-22 in the approximate location the species was observed in 1995.

A reconnaissance-level assessment of Yadon's piperia was conducted throughout its range in the late/winter/spring months in 1996. Approximately 65 individuals of the species were reported on old road cuts in the Monterey pine forest/chaparral ecotone on the slopes below Jacks Peak. While the record of this location is not specific, the observation of Yadon's piperia on the slopes of Jacks Peak in the vicinity of the September Ranch Subdivision project site is not surprising given the general trend of increased numbers of Yadon's piperia observed due to a greater number of survey efforts.

The USFWS comments on the September Ranch EIR included a note that Yadon's piperia has been reported on or near the project site (USFWS 1997). This reference may be addressing the Yadon's piperia surveys conducted by Mr. David Allen in 1995 and 1996. Surveys were conducted throughout its known distribution and the species was found at a site in the vicinity of Jacks Peak; however, the precise location was not recorded. A September Ranch project survey in 1995 did not detect any individual plants within the project area. In addition, during the focuses surveys conducted in April 2005 a small colony of unidentifiable species of piperia was observed onsite, a later survey in May 2005 determined that the species was Michael's piperia and not Yadon's piperia.

A total of five special status plant species have been observed on the project site: small-leaved lomatium, California Adders tongue, Pacific Grove clover, Michael's piperia and Monterey pine. Although focused surveys were conducted for the remaining 5 species, Hickman's onion, Gairdner's yampah, Yadon's piperia, Santa Cruz clover, and Monterey clover, none of these species were observed. Repeated surveys by qualified botanists covering a representative area over a range of times and conditions on September Ranch has provided a level of effort that is required for a CEQA analysis and is sufficient to allow for the following conclusions:

1. The federally-listed plants identified above, specifically the Monterey clover and Yadon's piperia, were not found onsite during the surveys and therefore, none would be impacted by the project;
2. One population of Pacific Grove clover (CDFG Rare) is located onsite;
3. Native Monterey pine forest is present onsite and approximately 34.9 acres of Monterey forest/oak woodland will be impacted by the September Ranch Subdivision project;
4. California Adders tongue and small-leaved lomatium (CNPS List 1B) have been found on site.
5. Michael's piperia (CNPS List 1B) has been located on site.

An additional species that has the potential to occur onsite is the Monterey spineflower (*Chorizanthe pungens* var. *pungens*), federally-listed Threatened in 1994, and a CNPS List 1B species. This spineflower occurs in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at an elevation range of 3-450 meters. The blooming period for this annual herb is between April and June. This species was not observed during any

surveys, including the focused surveys conducted in 2005 by Zander Associates during the optimum blooming period.

Other Special Status Plant Species. Several plant species were identified as potentially occurring onsite since the publication of the Final EIR. These species include Hooker's manzanita (*Arctostaphylos hookeri* ssp. *hookeri*), Monterey manzanita (*Arctostaphylos montereyensis*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Hutchinson's larkspur (*Delphinium hutchinsoniae*), Eastwood goldenbush (*Ericameria fasciculate*), and Kellog's horkelia (*Horkelia cuneata* ssp. *sericea*) (CDFG 2003E).

Hooker's manzanita (*Arctostaphylos hookeri* ssp. *hookeri*), a CNPS List 1B species, occurs in various and somewhat xeric communities, such as closed-cone coniferous forest, chaparral, cismontane woodland and coastal scrub on sandy soils at an elevation range between 85-300 meters. The blooming period for this evergreen shrub is between January and June. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005. .

Monterey manzanita (*Arctostaphylos montereyensis*), a CNPS list 1B species, occurs in maritime chaparral, cismontane woodland, and coastal scrub communities on sandy soils at an elevation range of 30-730 meters. The blooming period for this evergreen shrub is between February and March. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005

Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), a federal Species of Concern and CNPS List 1B species, occurs in valley/foothill grasslands and alkaline soils. This perennial herb blooms June through November. This species was assessed (Zander Associates 2002) for occurrence but no focused surveys were conducted. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005

Hutchinson's larkspur (*Delphinium hutchinsoniae*), a CNPS List 1B species, occurs in broadleaf upland forests, chaparral, coastal prairie and coastal scrub communities. This perennial herb blooms in March and June. This species was assessed for occurrence (WESCO 1981) but no focused surveys were conducted. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005

Eastwood goldenbush (*Ericameria fasciculate*), a CNPS List 1B species, occurs in closed-cone coniferous forest, maritime chaparral, coastal dunes and coastal scrub communities on sandy soils in openings of the scrub at an elevation range of 30-275 meters. The blooming period for this evergreen shrub is between July and October. No surveys for this species have been conducted to date. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005

Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*), a CNPS List 1B species, occurs in closed-cone coniferous forest, maritime chaparral and coastal scrub communities on sandy or gravelly soils in openings of the scrub at an elevation range of 10-200 meters. This perennial herb blooms between April and September. No surveys for this species have been conducted to date. Zander and Associates did not observe this species during the focused field surveys conducted for this species in 2005

Special Status Wildlife Species

Special status animal species include those listed by NOAA Fisheries, the United States Fish and Wildlife Service (USFWS 2003) and the CDFG (2003b, 2003d). The USFWS and NOAA Fisheries officially list species as either Threatened, Endangered, or as candidates for listing. Additional species receive federal protection under the Bald Eagle Protection Act (e.g., bald eagle, golden eagle) and the Migratory Bird Treaty Act (MBTA). In addition, many other species are considered by the CDFG to be species of special concern; these are listed in Remsen (1978), Williams (1986), and Jennings and Hayes (1994). Although such species are afforded no official legal status, they may receive special consideration during the planning stages of certain development projects. The CDFG further classifies some species under the following categories: "fully protected," "protected fur-bearer," "protected amphibian," and "protected reptile." The designation "protected" indicates that a species may not be taken or possessed except under special permit from the CDFG, "fully protected" indicates that a species can be taken for scientific purposes by permit only.

A total of 32 special status animal species have been recorded in the region and/or may be present within the project area. Of the 32 special status animal species, eight avian species are considered to have a low potential to occur on the site, based on existing habitats. Please refer to Appendix B of Appendix H of this REIR for a list of special status animal species and their potential for occurrence.

Based on an assessment of habitat types within the project site and review of CNDDB records, Mori (1995b) identified 10 sensitive wildlife species with potential to occur in the site vicinity. These species include; Smith's blue butterfly (*Euphilotes enoptes smithii*), golden eagle (*Aquila chrysaetos*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), white-tailed kite (*Elanus leucurus*), purple martin (*Progne subis*), pallid bat (*Antrozous pallidus*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*M. thysanodes*), long-legged myotis (*M. volans*), and Yuma myotis (*M. yumanensis*). In addition to these species, the Monterey dusky footed woodrat (*Neotoma fuscipes luciana*) could occur within the Monterey pine/coast live oak woodland on the site.

Federally Threatened and Endangered Animal Species. The following is a discussion of species that have the potential to occur onsite and/or are species that are prominent in today's regulatory environment, such as the California red-legged frog. This document does not address impacts to species that may occur in the region, if no habitat for the species occurs onsite.

Smith's Blue Butterfly (*Euphilotes enoptes smithi*). A federally Endangered species, historically ranging along the coast from Monterey Bay south through Big Sur to an area near Point Gorda, and occurring in scattered populations in association with coastal dune, coastal scrub, chaparral, and grassland habitats (Scott 1986). They spend their entire lives in association with two buckwheat plants *(Eriogonum parviflorum* and *E. nudum*). The larval plant is *E. parviflorum* and the adult host plant is *E. nudum* (Arnold 1996). Emerging in late summer and early autumn, the adults mate and lay eggs on the flowers of these host plants. The eggs hatch shortly thereafter and the larvae begin to feed on the plant flowers. Following several weeks of feeding and development, the larvae molt to a pupal stage, beginning a ten month period of transformation. The following year, as the *Eriogonum* again flower, the new adults emerge.

Individuals of dune buckwheat, a significant food source for the Smith's blue butterfly, were found within the developable portions of the project site and were mapped during the March 1995 survey. Scattered plants of the dune buckwheat host plant were observed on the project site primarily along

an existing road cut on the eastern half of the project. Additionally, dune buckwheat plants mainly occurred along the existing access roads as single plants or small clumps of individuals. One population of buckwheat at the northwest comer of the site was located in an area away from the access road.

Approximately 28 locations of *E. parviflorum* were mapped onsite in 1995 (Entomological Consulting Services 1996). In 2001, these sites were reduced to 16 locations (Entomological Consulting Services 2001). These locations occur on Redtail Lane, Black Sage Lane, Meadowlark Road, West September Ranch Road, East September Ranch Road, and in parcels 98, 95, 73, 40, 39, 26, 27, 20, and 9. However, three years of surveys conducted over a 7-year period revealed no adults or larvae onsite (Entomological Consulting Services 2001).

South/Central Coast steelhead (*Oncorhynchus mykiss irideus*). Ecologically Significant Unit, federally listed Endangered, encompasses coastal populations of winter steelhead from three tributaries to Monterey Bay (Pajaro, Salinas, and Carmel rivers) in the small streams of the Big Sur Coast and small intermittent streams of San Luis Obispo County, south to Point Conception (Moyle 2002). Winter steelhead adults enter streams from the ocean when rains have increased the stream flows (Moyle 2002). Spawning typically occurs in tributaries to mainstream rivers, after which they return to the ocean. A key characteristic of all breeding streams is cool temperatures, typically between 0º Celsius (winter) and 26º-27º C (summer) (Moyle 2002). Higher temperatures may reduce oxygen to levels that are not population sustaining. Different size classes require different microhabitats that are defined by depth, water velocity, substrate, and cover (Moyle 2002). For example, fry typically concentrate in areas with low velocity and shallow depths (<1.5 feet), juveniles occur in faster and deeper (1.5- to 3-foot) areas with more cover.

This species is known to occur in the Carmel River (CDFG 2003E). According to the National Marine Fisheries Service's (NMFS) technical report, *Instream Flow Needs for Steelhead in the Carmel River* (2002), the amount of water available for flow is greater than 10,000 AF in an average water year. Dry years occur twenty percent of the time and water flow is then less than 1,000 AF on average. The area of the Carmel River potentially affected by the proposed project is the lowermost three miles of the Carmel River, which consist of a confined, sand-bottomed channel with essentially no steelhead rearing or spawning habitat (Entrix, 2006). The reach is primarily a migration corridor for adult and juvenile steelhead that typically occurs from November through May (*Id.*). There are no suitable tributaries that could be used as migratory corridors between the project site and the Carmel River. The baseline condition of this portion of the River is generally dry during summer months (Kennedy Jenks, 2005-06; *see* NMFS (2002)).

The proposed project would result in a baseline plus proposed project water supply demand of 57.21 AFY from the SRA (see Section 4.3, Water Supply and Availability of this Draft REIR), which could theoretically affect steelhead populations if the project were to result in reduced flows within the Carmel River during sensitive times of the year, and particularly during the November through May adult and juvenile steelhead migration period. As noted in Chapter 4.3 and the Hydrogeologic Report, such reduced flow would only occur if reduced spillover from the SRA to the CVA in turn reduced groundwater levels in the Carmel River Aquifer and that, in turn, resulted in reduced outflow from the CVA to the Carmel River; any such reduction would potentially affect only the lowermost three miles of the Carmel River. Reduced flows in these locations could be significant if the reduction in flow was appreciable enough to prevent or interfere with steelhead and their life stages

including, particularly, migration/passage, in a manner that substantially reduced their number or restricted their range. (Compare 14 Cal. Code Regs. § 15065(a)(1); *id.* § 15065(c).)

Chapter 4.3 and the Hydrogeologic Report describe the potential for reduced recharge from the SRA into the CVA, and thence reduced flow in the Carmel River. This analysis incorporates various conservative assumptions for purposes of determining project impact, including, among other things: (1) assumption of the *maximum* possible reduction in recharge from the SRA to the CVA, which does not occur every year or even most years; and (2) assumption of a 1:1 impact from that reduced recharge to the Carmel River itself. This 1:1 relationship is extremely conservative because, among other things: (a) there is a distance of approximately 800 feet between the location of potential reduced recharge and the Carmel River with (b) numerous pumping and recharge activities in between that likely eclipse the potential impact of any reduced SRA to CVA recharge.

As demonstrated in this Draft REIR and reprinted in the Table 4.9-2 and Table 4.9-3 below, the range of maximum potential Carmel River flow reductions in dry (below normal precipitation) years is -0.022 to -0.033 cubic feet per second (cfs), and in normal precipitation years from -0.002 to -0.034 cfs.

Table 4.9-2: Maximum Potential Spill Over of Water From SRA to CVA (cfs) for Below Normal Precipitation

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Case 1a: Below Normal Precipitation WITH September Ranch	0.00	-0.019	-0.061	-0.178	-0.359	-0.224	-0.0009	0.0000	0.0000	0.0000	0.0000	0.0000
Case 1b: Below Normal Precipitation WITHOUT September Ranch	0.00	-0.052	-0.094	-0.211	-0.392	-0.257	-0.034	-0.024	0.00	0.00	0.00	0.00
Difference (Case 1a minus Case 1b)	**0.00**	**-0.033**	**-0.033**	**-0.033**	**-0.033**	**-0.033**	**-0.033**	**-0.024**	0.00	0.00	0.00	0.00
WY 1987 Monthly Mean Flow in the Carmel River (cfs)	0	0	0	0	0	36.11	60.88	18.42	0	0	0	0

Table 4.9-3: Maximum Potential Spill Over of Water From SRA to CVA (cfs) for Normal Precipitation WY 1996

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Case 2a: Normal Precipitation WITH September Ranch	0.00	0.00	-0.910	-0.790	-1.434	-0.365	-0.214	-0.323	0.00	0.00	0.00	0.00
Case 2b: Normal Precipitation WITHOUT September Ranch	0.00	-0.018	-0.943	-0.823	-1.465	-0.399	-0.247	-0.356	0.00	0.00	0.00	-0.002
Difference (Case 2a minus Case 2b)	0.00	-0.018	-0.033	-0.033	-0.031	-0.034	-0.033	-0.033	-0.0033	0.00	0.00	-0.002
WY 1996 Monthly Mean Flow in the Carmel River (cfs)	3.698	5.81	24.74	87.06	569.31	345.45	135.40	58.32	17.08	6.50	0.05	0.00

The analysis demonstrates that any reduced exchange from the SRA to the CVA will likely have essentially imperceptible impacts, if any, on flows in the Carmel River. This is true even during summer months of peak water usage; according to USGS stream flow gage No. 11143250 immediately downstream of the proposed project, baseline flows in the lower portion of the River are non-existent during this time. (See DREIR Hydrogeologic Report for detailed description of gages). In this portion of the Carmel River, flows are typically high in the wintertime (sometimes in excess of 500 cfs) and then taper to zero flow in the summer months. During the wet season, the maximum potential reduction of flow of up to 0.034 cfs to the CVA thence Carmel River cannot be discerned in the flow of the Carmel River because the river flows are so high. When the Carmel River is dry, the water table is below the channel bottom and the reduction of flow of up to 0.034 cfs also cannot be discerned in the River. At any time of the year, the maximum potential reduction of up to 0.034 cfs is so small that it cannot accurately be measured with the River. (See Hydrogeologic Report). Given the essentially imperceptible nature of the maximum potential reduction of 0.034 cfs within the Carmel River, the Draft REIR concludes that even under the most conservative assumptions, the proposed project will not result in appreciable (or measurable) reductions of flow in the Carmel River, and will not reduce the number or restrict the range of steelhead in the Carmel River, or otherwise have any impact on steelhead in the Carmel River.

Consulting biologists Entrix, Inc. have concurred that even rounding up the maximum potential reduction in flow to 0.04 cfs, such reduction would be essentially imperceivable during steelhead migration months of November through May. Entrix also concurred that based upon: 1) the location of the project and the habitat in the potentially affected reach of the Carmel River; 2) the timing of the potential impact relative to steelhead life-stage periodicity in the Carmel River and primarily in the potentially affected reach, and 3) the essentially imperceivable magnitude of the project's expected influence on flow in the reach, the proposed project would have no impact on steelhead or other fishery resources in the Carmel River (Entrix, 2006).

In preparing the above analysis, the NMFS technical report, *Instream Flow Needs for Steelhead in the Carmel River* (2002) was reviewed and the recommendations therein considered. The NMFS Report was primarily prepared to provide guidance to decision-makers considering approval of large off-stream storage projects that would result in appreciable reductions in Carmel River flow (NMFS Report, p. 2), which is not proposed here. Moreover, the NMFS Report does not incorporate the CEQA standard for baseline or significance into its analysis or focus on the geographic reach relevant to the proposed project. For all of the foregoing reasons the Report has limited relevance for purposes of this DREIR. In any case, there is no data provided in the NMFS Report that would support a conclusion that a maximum potential reduction in flows of 0.034 cfs would result in any adverse impact (much less a significant impact) to steelhead in the relevant portion of the Carmel River.

As described in Chapter 4.5 of the DREIR, the proposed project may create environmental benefits for the steelhead if tertiary treated wastewater flows generated by the project are used by the Carmel Area Wastewater District to augment freshwater flow to the Carmel Valley Lagoon. This potential benefit is noted for informational purposes but was not relied upon for the above assessment of potential impacts to steelhead.

California red-legged frog (*Rana aurora draytonii*). A federally listed Threatened species and California Special Concern species, and a Fully Protected Species under Fish and Game Code 5050. It breeds primarily in ponds, but will also breed in slow moving streams, or deep pools in intermittent streams. Inhabited ponds are typically permanent, at least 2 feet (0.6 meters) in depth, and contain emergent and shoreline vegetation. Sufficient pond depth and shoreline cover are both critical, because they provide frogs with a means of escape from predators (Stebbins 1985, CDFG 1988, Tatarian, in preparation). Additionally, emergent vegetation is necessary for the deposition of eggs. The breeding period for California red-legged frogs (CRF) begins during heavy rains, from early to late winter, usually November through early May. Larvae mature in 11 to 20 weeks. Non-breeding CRF have been found in both aquatic and upland habitats.

This species is known to occur in the Carmel River (CDFG 2003E). Based on the development between the Carmel River and the September Ranch Subdivision project site, no suitable movement corridors occur between the river and the project site. No suitable breeding habitat occurs onsite.

As described in detail above, the maximum quantities of reduced flow in the Carmel River that may potentially result from the proposed project is up to 0.034 cfs. This DREIR and consulting biologists concur that such quantities are so small that they may be impossible to measure, and at all times of the year would be essentially imperceivable in the relevant portion of the Carmel River. Moreover, as described above and in Chapter 4.3 and the Hydrogeologic Report, such reduction in flow may rarely occur, if at all, as episodes of reduced recharge will not occur in every year and, if they do occur, any impact would be attenuated. This attenuation is in part due to the distance between the Carmel River and the location at which the SRA and CVA are sometimes hydrologically connected, and in part due to many intervening factors include pumping by others. Given the foregoing factors as well as the lack of suitable habitat for red-legged frogs in the area potentially affected by the project, this DREIR concludes the proposed project would not adversely impact the red-legged frog.

As noted in Section 4.3, Water Supply, in zero flow seasons the reduced recharge would be felt, if at all, in the water table as opposed to surface flow; the maximum potential reduction in water table has been calculated to be less than one millimeter and thus would not affect riparian resources

Other Special Status Animal Species

California spotted owl (*Strix occidentalis occidentalis*). A federal and State species of concern, occurs in conifer forests and oak woodlands, is confined to California, primarily in the Sierra Nevada, and the south Coast, Transverse and Peninsular ranges (Verner et al. 1992; Tietje 1993). This species may also occur in the denser riparian/hardwood forests, especially in the foothills bordering the eastern portion of the Central Valley (Verner et al. 1992). Nesting sites occur in pre-existing cavities or on natural platforms, such as mistletoe, and are predominantly found in oak woodlands that are in or near riparian areas within steep sided canyons, at elevations from 800 to 6,000 feet. Nest trees typically have a diameter at breast height (dbh) of 45 inches in Sierra conifer forests (Verner et al. 1992). Foraging habitat seems to be in areas of 50 percent canopy and nesting areas occur in canopies of 70 percent. Dominant nesting tree species are blue oak, interior live oak, California bay, California buckeye, grey pine and California sycamores that often exceed 20 inches in diameter. Only two or three species make up the diet, including northern flying squirrels, dusky-footed woodrats, bushy-tail woodrats, and rabbits (Verner et al. 1992).

The closest reported nesting area is Los Padres National Forest, located approximately 11 miles southwest of the study area. No sightings have been reported in Jacks Peak County Park. The potential for occurrence is low, based on the elevation of the site.

Long-eared owl (*Asio otus*). A California species of concern, nests in coniferous and mixed coniferous-deciduous forests, near water. Nests are usually abandoned nests of other species, such as crows, and are placed in the tree between 30-40 feet in height. This species feeds primarily on rodents, although small birds will be taken opportunistically.

No reported sightings occur within or adjacent to the study area. There is a moderate potential for this species to nest onsite.

Golden eagle (*Aquila chrysaetos*). The golden eagle is a Species of Special Concern as designated and the focus is on protecting the species' nesting habitat. Golden eagles require expansive areas of open space, such as grasslands and open wooded habitats for foraging, and nest in nearby woodlands or cliffs. Nests are commonly built at sites with a good view of the surrounding landscape, such as on cliffs, in secluded trees, and other high vantage points. Golden eagles are very sensitive to disturbance at nesting sites. The golden eagle is regularly sighted along the foothills of the eastern Salinas Valley, Elkhorn Slough, around Lake San Antonio, and in the Ventana Wilderness of the Los Padres National Forest (Mori 1995). A golden eagle nest was recorded approximately 0.5 miles north of the Canada Woods parcel located east of the project site (BioSystems 1991).

No golden eagles were observed on the project site by Mori during the November 1994 surveys; however, the Monterey pine/coast live oak forest on the project site may provide suitable nesting habitat for this species.

Sharp-shinned hawk (*Accipiter striatus*). The sharp-shinned hawk is also a Species of Special Concern whose nesting habitat is of primary concern. This species typically nests in coniferous

forests of mountainous regions and usually builds its nest in dense pole-sized stands that are cool, moist and near open foraging areas. Sharp-shinned hawks commonly prey on small perching birds but are also known to eat small mammals and reptiles (CDFG 1990). Sharp-shinned hawks are locally distributed and are rare breeders in the forested mountainous regions of Monterey County (Roberson 1985).

Mori observed one sharp-shinned hawk foraging on the project site during the November 1994 surveys. Although likely an uncommon visitor during migration and in winter, there is the possibility the species may nest on the site in the more secluded, moist stands of Monterey pine/coast live oak forest.

Cooper's hawk (*Accipiter cooperi*). Protection of nesting habitat for the Cooper's hawk, a Species of Special Concern, is also of primary concern to CDFG. Cooper's hawks are typically found in oak woodlands and coniferous forests located near water. They prey primarily on small birds but will also consume small mammals, reptiles, and amphibians. According to Roberson (1985), many more Cooper's hawks migrate through Monterey County than breed. The highest occurrence of nesting sites in the County occurs in the Carmel Valley watershed where heavily wooded canyons provide secure nesting habitat.

No Cooper's hawks were observed on the project site during the surveys conducted in November 1994 and January 1995 by Mori. However, the Monterey pine/coast live oak forest on the project site provides suitable nesting habitat for this species.

Purple martin (*Progne subis*). The purple martin is a Species of Special Concern (nesting habitat protected). Purple martins are swallows that were once widespread in Monterey County but have declined due to the introduction of the European starling (Roberson 1985). The species generally nests in large trees, usually dead, with holes dug by woodpeckers. Migrating purple martins are found in a variety of habitats, including grasslands and marshes. In Monterey County, this species is a locally uncommon resident however it is known to regularly breed in the Big Sur region of the Los Padres National Forest. The purple martin has also been observed nesting under the Highway 1 Bridge at Tone Canyon.

No purple martins were observed on the project site by Mori during the November 1994 and January 1995 surveys. However, there is a potential the species could nest in dead pines or oaks located on the site that contain woodpecker holes.

White-tailed kite (*Elanus leucurus*). The white-tailed kite is considered a "fully protected species" by CDFG meaning that it cannot be taken or possessed at any time. White-tailed kites are typically found in oak savanna and agricultural habitats with occasional trees. The species feeds primarily on voles and nests in trees near foraging habitat. White-tailed kites are fairly common in open country along the coast and inland in the Salinas and Carmel valleys. The nesting season runs from January through July.

No white-tailed kites have been observed on the project site but there is potential nesting habitat for the species in the Monterey pine/coast live oak woodland forest stands adjacent to open grasslands.

Passerines Several species of passerines (perching birds) may occur onsite in the Monterey pine/oak woodland forest, including hairy woodpecker, Stellar's jay, brown creeper, and pygmy nuthatch.

Other species, such as the blue-gray gnatcatcher, wrentit, Bewick's wren, may potentially use the coastal sage scrub for nesting. The breeding season typically occurs between March 1 and July 31.

Pallid bat (*Antrozous pallidus*). The pallid bat, a Species of Special Concern, is commonly found in a variety of habitats in lowland areas. The pallid bat is not considered a migratory species although it will move locally on a seasonal basis. Pallid bats use buildings, rock crevices, caves, mines, and hollow trees for day and night roosts (CDFG 1986). Feeding bats and males roost singly. Maternity roosts are colonial and are maintained from spring through summer. Once the young bats have fledged, the adults leave the maternity roosts. Pallid bats commonly glean moths from leaves and forage on the ground for insects, most notably Jerusalem crickets. Pallid bats are known to occur on Rancho San Carlos, which is within the vicinity of the project site.

No specific surveys for bats have been conducted on the project site. Potential roost sites for the pallid bat may occur in the lower forest stand where large cavity-bearing oaks and snags exist.

Myotis bats. Several bat species of the genus Myotis that could occur on the project site are federal Species of Concern. The small-footed myotis (*Myotis ciliolabrum*) occur in a variety of habitats in relatively arid uplands and forages in open forests and brushy areas. The fringed myotis (*Myotis thysanodes*), are commonly found in valley foothill hardwood forests and forages primarily in open areas. The long-legged myotis (*Myotis volans*) are found in woodlands and forests and typically forages over chaparral and coastal scrub. The Yuma myotis (*Myotis yumanensis*) prefers open woodlands and grasslands near water. These four species of myotis bats are known to occur on Rancho San Carlos (Habitat Restoration Group et al. 1991).

Other tree roosting bat species that are federal Species of Concern include long-eared bat (*Myotis evotis*) and Yuma myotis *(Myotis yumanensis*) which may roost in the large trees present within the Monterey pine/coast live oak forest, with some species, such as the fringed myotis, being heavily dependent on tall conifer snags in early decay stages for day roosts (Weller and Zabel 2002). For this analysis, red bat (*Lasiurus blossevillii*), another tree roosting species, is also considered in this analysis, as it is currently under evaluation by the CDFG.

No site specific surveys for myotis bats were conducted. However, Mori concluded that suitable roosting habitat for the different Myotis species is present on the site.

Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*). A California Special Concern species, the Monterey dusky footed woodrat is restricted to Monterey County and northern San Luis Obispo County. The Monterey dusky-footed woodrat uses habitats with moderate to dense cover and abundant dead wood for nest construction. This nocturnal species is active year round, and forages on fungi, flowers, grasses, and acorns supplementing their diet. Breeding occurs from December to September with a peak in mid-spring (Zeiner et al. 1990).

Although no signs of dusky-footed woodrats have been reported for the project site, the species could use the Monterey pine/coast live oak woodland forest located within the site.

4.9.2 Project Impacts

Impact Analysis and Mitigation Measures

Standards of Significance

The September Ranch Subdivision project is considered to have a significant impact upon biological resources if it will:

- Substantially adversely affect any special status, rare, threatened or endangered species of animal or plant or the habitats of the species;
- Substantially adversely affect high quality or undisturbed biological communities, vegetation associations, and habitats that are restricted on a regional basis or serve as a wildlife corridor or buffer;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species;
- Substantially adversely affect biological resources of scientific interest because they are at their physical or geographical limits or represent an unusual variation in a population or community; or
- Substantially adversely affect habitats that are key to maintenance of localized plant and animal populations, even if these habitats are not biologically significant on a regional scale.

Potentially Significant (Biological Resources Impact 1) - Habitat Disturbance during Site Improvements, Clearing, and Grading: Initial site improvements will be limited to clearing and grading. However, because of the placement of lots, limitations on building envelopes, and use of existing road alignments, less than 80 acres (approximately 9 percent) of the vegetation and wildlife habitat on the project site (exclusive of existing disturbed or developed areas) will be directly lost or disturbed as a result of the project. Approximately 795 acres out of 891 acres of the site will remain relatively undisturbed as either common or private open space. An additional 24.2 acres that comprise the equestrian center will be retained as is under existing conditions. Furthermore, removal of trees and other native vegetation within the building envelopes themselves will be limited to comply with Monterey County regulations and will require County approval prior to issuance of individual building permits or roads and other infrastructure while subsequent residential development of the site will affect lands within the designated building envelopes. For purposes of assessment it was assumed that habitat values within the building envelope of each lot will be lost as a result of project buildout. In all, a total of 71.37 acres of native vegetation communities, including Monterey pine forest, coastal scrub, and grasslands, will be impacted from development within the September Ranch Subdivision project area.

Table 4.9-4: Impacted Vegetation Communities

Vegetation Community	Total Acreage	Impacted Acreage
Monterey Pine/Coast Live Oak Forest	426.00	34.90
Coastal scrub	378.00	18.55
Grassland	62.00	17.92
Willow Riparian Scrub	0.77	NA
Total	**866.77[1]**	**71.37**

[1] This acreage total does not include the 24.2 acre equestrian center, which is to be retained onsite.
Source: MBA, January 2004.

Mitigation Measure

4.9-1: The project applicant shall submit a Tentative Map that is consistent with the recommendations outlined in the Forest Management Plan, the Open Space Management Plan, and the Grassland Habitat Management Plan and will include the following:

- Defines development envelopes for each residential lot to minimize vegetation removal;
- The identification of potential areas for building envelopes prior to the tentative map. The tentative map shall show the appropriate placement of the buildings with respect to the current conditions (i.e., slope, vegetation areas). All building envelopes shall require plant surveys that shall be conducted at the appropriate time (individual blooming periods are shown in the biological report in Appendix H of this REIR);
- Prohibits planting/introduction of nonnative invasive plant species (such as acacia, French or Scotch broom, and pampas grass) within any portion of proposed lots, and prohibit planting/introduction of any nonnative species outside the development envelope;
- Development of landscape guidelines that encourage the use of native species indigenous to the area as ornamentals and prevent the use of invasive exotics;
- Limits the use of fencing to designated development envelopes, and prohibit fencing of parcel boundaries in order to maintain areas for wildlife movement;
- Restricts direct disturbance or removal of native vegetation to designated development envelopes, as planned, through project covenants, codes and restrictions (CC&Rs), through dedication of a conservation or open space easement, or other similar method (The project applicant currently proposes dedication of scenic easements over all portions of the site outside designated development envelopes).
- Establishes lot restrictions and common open space regulations that limit uses and prescribe management responsibilities in private and common open space areas beyond the building and development envelopes identified in the final map.

- Defines the conservation (scenic) easements dedicated to an entity acceptable to the County of Monterey. These conservation easements are legally binding use restrictions recorded on privately owned land that can provide a high degree of protection to certain areas on the property while allowing the rest of the land to be developed and used at the owner's discretion. Conservation easements to the benefit of the County of Monterey should be recorded with the sale of the lot and should run with the land regardless of the number of times the land is sold. Such easements should be set aside for as much of the private open space on the property as is feasible to guarantee the long-term preservation of the site's overall biological resource values. Examples of the types of restrictions that should be considered in these conservation easements include the following:
  - Relinquishment of all development rights within the easement area;
  - Maintenance of natural habitat;
  - Pesticide use restrictions;
  - Only compatible public recreation uses allowed within easement lands, not uses that cause disturbance to native vegetation and wildlife;
  - Restricted trails for pedestrians, hikers and cyclists within easement lands;
  - No vehicles of any kind allowed in easement lands except for those required by the habitat/open space manager in performance of habitat monitoring or maintenance activities;
  - No alteration of land including grading, disking, compacting, soil removal or dumping shall be allowed unless the work is for the purpose of habitat management/restoration and authorized by the habitat/open space manager;
  - No removal of flora or fauna from the easement area including mowing or weed whacking unless authorized by the habitat/open space manager;
  - Limitations/restrictions will be placed on construction of permanent or temporary facilities (e.g., picnic tables or portable toilets) within the easement areas in accordance with the goals of the open space management program;
  - Leash laws within the easement areas must be enforced; and
  - Right of inspection of the easement area by the easement holder and habitat/open space manager.

Implementation of the mitigation measure will reduce site improvements, clearing, and grading impacts to less than significant.

Monitoring Action

Prior to the issuance of building permits, the project applicant shall submit the Tentative Map that is consistent with the Forest Management Plan, the Open Space Management Plan, and the Grassland Habitat Management Plan, CCRs, and above easements to the Monterey County Planning and Building Inspection Department for review and approval.

Potentially Significant (Biological Resources Impact 2) - Impacts to Monterey pine/coast live oak forest: Approximately 34.90 acres of Monterey pine/coast live oak forest habitat will be directly impacted from construction, roads, utilities, and building pads. Approximately six percent of the coast live oak trees (890 out of a conservatively estimated 15,200 trees) and approximately four percent of the Monterey pines (2,692 out of a conservative estimate of 66,540 trees) that occur onsite

will be removed as a result of full project development. In addition, pine trees not slated for removal may suffer mechanical damage during site preparation and future home construction from tree removal, soil disturbance, and compaction. If branches or trunks are damaged during removal of other pines, pine pitch canker may enter the tree through a wound.

Mitigation Measures

4.9-2: The project applicant shall submit a Forest Mitigation and Monitoring Plan, which will identify permanently dedicated open space 3 times the acreage of Monterey pine/coast live oak forest (3-to-1 ratio) that will be developed.

4.9-3: To reduce the loss of individual trees, all coast live oak trees and Monterey pine trees 6" or larger shall be replaced on a 1:1 basis by planting or transplanting trees in areas of suitable soil as determined appropriate by a professional forester. The following is recommended:

- A tree replacement plan shall be prepared by a qualified professional forester, arborist, or horticulturist, and will be subject to review and approval by the County Planning & Building Inspection Department, that includes the following:
  - Identify tree planting areas with suitable soils that will also fulfill project landscape plans and visual screening objectives, as feasible.
  - Identify monitoring requirements, such as a site inspection at the end of the first winter after planting to confirm numbers, species of replacement, and locations of plantings. Annual inspections over five years shall confirm the objective of the plan, such as the survivability of the plantings, and the percentage of healthy trees.
  - At least 70 percent of the plantings shall be established/surviving by five years or monitoring (and replacement) shall continue until compliance is achieved.
  - The location and species of all required replacement trees planted shall be mapped so they can be monitored for over the five year period. The monitoring period shall be extended for individual trees that die or are in poor health and must be replaced.
  - Transplanting of onsite native seedlings within construction areas and protection of those occurring near construction areas to maintain natural diversity and adaptation.
  - All replacement trees shall be of local genetic stock.
  - Use of Monterey pines grown from seed collected in locations bordering the tree clusters from which the trees were removed. Replanting should avoid open spaces where currently there are no trees unless there is evidence of soil deep enough and of good enough quality to support the plantings.
  - All replacement pines shall be transplanted or grown from seeds collected from asymptomatic trees, found within 500 feet in elevation of the planting site. Overabundant direct seeding of open pollinated pine seed or 4:1 planting of open pollinated seedlings is recommended for a portion of the pine replacement trees with thinning to appropriate spacing after 3 years under the direction of a professional arborist.

- Most replacement shall be of a small size (cell or one gallon) as studies have shown that small trees more readily adapt to a site and grow larger over the mid-to long-term.
- Provide an adaptive management scenario if the success criteria are not being met.
- Require that tree removal of native oaks and pines 6" or larger for future lot construction be subject to County approval and appropriate tree replacement. A tree protection plan detailing tree removal and replacement and protection measures for retained trees shall be required for each lot where trees 6" or larger will be removed. The plan shall be considered a site specific amendment to the Forest Management Plan for the project, which applies to all lots..

4.9-4: Pines adjacent to ones slated for removal shall be protected individually with orange construction fencing placed around their dripline. Pines not slated for removal shall bit be damaged. To avoid mechanical damage to pines not slated for removal, the following measures are recommended:

- Minimizing impacts to retained tress by individually cutting adjacent removal trees;
- Minimize mechanical tree damage such as skinning of the trunks, partial pushovers, etc. during construction or harvesting operations. Tree damage from recent logging activities favors all kinds of bark beetles;
- Build barricades around trees to prevent mechanical damage by equipment in yard and landscape environments. Try to minimize root damage by keeping trenching and digging to a minimum;
- During landscaping operations, maintain final soil level around tree trunks and roots at the same height as it was before construction;
- Direct all drainage from developed areas away from low or flat areas near trees to prevent saturation of soils at the base of trees; and
- Require protection of oak and Monterey pine trees located outside designated development envelopes unless proven to be diseased or unhealthy as determined by a qualified arborist.

Implementation of the mitigation measures will reduce Monterey pine/coast live oak forest impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall submit a Forest Mitigation and Monitoring Plan prepared by a qualified professional, and subject to review and approval by the Monterey County Planning and Building Inspection Department. In addition, the applicant shall submit periodic reports (dates to be negotiated by the Monterey County Planning and Building Inspection Department and the applicant) prepared by a qualified professional to the Monterey County Planning and Building Inspection Department outlining implementation and success of the Forest Management Plan.

Potentially Significant (Biological Resources Impact 3) - Fragmentation of the Monterey pine forest will increase the potential for pitch canker and other diseases: Research indicates that pitch canker symptoms decrease in frequency and severity at lower elevations and as the distance from the coast increases (Staub 2002). September Ranch, located 3 miles inland, supports pines that are growing at and above 30 feet above mean sea level in elevation. Thus, due to the geographic location of the native stands of Monterey pines, the threat of pitch canker is lessened (Staub 2002). Nevertheless, there is the potential that placing development (roads, utilities, fences, and clearings around homes) within the Monterey pine forest may fragment the forest and increase the vulnerability of the forest to pitch canker and other diseases. Mortality from pitch canker is highest in areas that have been penetrated by roads and where trees have been removed. The susceptible nature of Monterey pines to pitch canker fungus makes the pines within the project area at risk for the disease. Native insects, such as bark beetles and twig beetles can also spread spores of the fungus. Long-distance spread of the virus can occur from transportation of infected logs, nursery stock, seeds, or soil.

Mitigation Measure

4.9-5: There is no proven method available that will prevent pitch canker from infecting susceptible trees. To prevent the spread of the fungus into the pines within the project site, some actions can be taken to slow down the spread of the fungus, including the following:

- Minimize removal or severe pruning of trees during periods of peak beetle activity, particularly during maximum growth during the spring. Remove or chip trees and debris promptly and in accordance with handling guidelines of the Oak Mortality Task Force and Agricultural Commissioner for oaks and the Pitch Canker Task Force for pines;
- Debark recently killed trees and branches if they are hazardous and/or are judged to be a significant threat of spreading disease or insect manifestation. This can be achieved with timely chipping and removal of diseased or insect infested tree material from nearby susceptible trees. In addition, all trees proposed for removal shall be removed carefully so as not to injure (including breaking nearby branches, cutting trunks, etc.) adjacent trees not slated for removal. There are some Monterey pines that are resistant to the pathogen and these trees should be used as a seed-base for replanting.
- Encourage healthy growth of trees. Susceptibility to beetle attack increases with poor health or damage due to breakage, wounding, or soil compaction..

Implementation of the mitigation measure will reduce impacts on Monterey pine forest fragmentation to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall submit a Forest Mitigation and Monitoring Plan prepared by a qualified professional, subject to review and approval by the Monterey County Planning and Building Inspection Department. In addition, the applicant shall submit

periodic reports (dates to be negotiated by the Monterey County Planning and Building Inspection Department and the applicant) prepared by a qualified professional to the Monterey County Planning and Building Inspection Department outlining implementation and success of the Forest Management Plan

Potentially Significant (Biological Resources Impact 4) - Disturbance of Oak Trees: Oak trees not slated for removal may suffer mechanical damage during site preparation and future home construction from soil disturbance and compaction, including grading and filling, as well as introduction of landscaping and irrigation. If excavation occurs within the dripline or if soil underneath the oak is compacted due to grading and/or use of heavy equipment, death may occur through damage of very fine roots near the surface.

Mitigation Measure

4.9-6: Submit final Forest Management Plan subject to review and approval by the County Planning & Building Inspection Department that includes the following:

- Avoid grading, filling, and all construction activity within the dripline of oak trees, where possible. Any construction or activity within the dripline of oak trees shall be reviewed and approved by a qualified forester or arborist with their recommendations for protection as appropriate;
- Develop CC&Rs that shall include oak tree protection as outlined in the Forest Management Plan on individual lots as part of future home construction, as well as guidelines for appropriate landscaping management to protect remaining oaks. Wherever possible, future homes should be sited outside of the dripline of any oak; and
- Direct all drainage from developed areas away from low or flat areas near trees to prevent saturation of soils at the base of trees.

Implementation of the mitigation measure will reduce oak tree disturbance impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall submit a Forest Mitigation and Monitoring Plan prepared by a qualified professional, subject to review and approval by the Monterey County Planning and Building Inspection Department. In addition, the applicant shall submit periodic reports (dates to be negotiated by the Monterey County Planning and Building Inspection Department and the applicant) prepared by a qualified professional to the Monterey County Planning and Building Inspection Department outlining implementation and success of the Forest Management Plan

Potentially Significant (Biological Resources Impact 5) - Removal of Coastal Sage Scrub: Approximately 18.55 acres of coastal sage scrub will be removed during construction of infrastructure improvements and construction of houses. In the context of the overall acreage of this habitat type retained on the property (approximately 359.45 acres out of a total of 378 acres) and its relative sensitivity, this acreage reduction is a low impact.

Mitigation Measure

4.9-7: Clear definition of the development envelope for each lot in the coastal scrub areas, restrictions of the remainder of the lots, and implementation of the Tentative Map (Mitigation Measure 4.9-1) that details the general open space management measures and conservation easement designations on lots should reduce some of the impacts to coastal sage scrub. In addition, to reduce the impacts to coastal sage scrub, the following mitigation measures are recommended:

Submit final Open Space Management Plan subject that includes the following:

- Protection and enhancement for the long-term viability of the habitat types onsite and the plant and animal species they support;
- Incorporation into project documents that are passed on to homeowners. The plan should include, but not be limited to, the following:
  - Limiting native vegetation removal and other disturbances in areas not specifically designated for buildings and other facilities to minimize losses to coastal sage scrub and grassland areas with high concentrations of native species as well as Monterey pine, coast live oak forest;
  - Protection of sensitive plant species identified herein (and in subsequent studies) through design, setbacks, salvage and relocation, and other means wherever feasible; and
  - Designation of trails and other directed access to/through common open space areas to reduce inadvertent habitat degradation.

Implementation of the mitigation measure will reduce coastal sage scrub impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall submit an Open Space Management Plan, subject to review and approval by the Monterey County Planning and Building Inspection Department.

Potentially Significant (Biological Resources Impact 6) - Removal of Grasslands: Approximately 18 acres of the grasslands on the site lie within the project's building envelopes or roads and approximately 44 acres of this habitat type will remain as managed open space. Two large grassland areas near the project entrance were identified as areas supporting a high diversity and abundance of native wildflowers and grasses will be preserved as open space and should be actively managed to maintain existing values and enhance dominance by native plant species. Other grassland areas with a good representation of native species and high native plant diversity occur where lots and access roads are proposed. Native grasslands, in particular, coastal terrace prairie occur on the lower slopes of the study area.

Mitigation Measures

4.9-8: Submit a final Grassland Management Program that addresses the following:

- Preservation, enhancement, and restoration of native grasslands on the site. Including:
  - Clear definition of the building footprint for each lot in the grasslands areas, restrictions on the remainder of the lot; and
  - Description of the implementation of an active grassland management program for both the lots and the common open space areas.
  - Light rotational, seasonally-timed grazing and/or appropriately timed mowing to reduce the cover of non-native annual grasses;
  - Preclude soil disturbance through cultivation;
  - Preclude the use of herbicides unless applied directly to invasive, non-native species;
  - Address the removal of Monterey pine seedlings in the native grasslands (either through mowing or chipping);
  - Address restoration in areas dominated by invasive species like French broom; and
  - Consider the possible use of fire management on both the common open space and private open space grassland areas.

4.9-9: To reduce the acreage impacts to coastal terrace prairie, pre-construction surveys shall be conducted that identify areas with high concentrations of native species (areas with over 50 percent native grassland species). Native grassland acreage shall be replaced at a 1:1 ratio.

Implementation of the mitigation measure will reduce grassland removal impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall submit a Grassland Management Program, subject to review and approval by the County Planning and Building Inspection Department.

Potentially Significant (Biological Resources Impact 7) - Removal of Special Status Plant Species: Special status plant species may be impacted from the development of roadways and buildings. A total of five special status plant species have been observed on the project site: small-leaved lomatium, California Adders tongue, Pacific Grove clover, Michael's piperia, and Monterey pine and according to the CNPS an additional fourteen have the potential to occur onsite: Small-leaved lomatium; Congdon's tarplant; Eastwoods's goldenbrush; Santa Cruz tarplant; Carmel Valley malacothrix; Fransiscan manzanita; Contra Costa manzanita; Monterey manzanita; Hickman's onion; Fragrant fritillary; Carmel Valley beach mallow; California adder's-tongue; Monterey spineflower; and Hutchinson's larkspur (see Appendix A of Appendix H of this Draft REIR). However, six of these species were not observed during 2005 focused surveys: Hooker's manzanita; Monterey manzanita, Congdon's tarplant, Hutchinson's larkspur, Eastwood's goldenbrush.

Additionally during the 2005 focused surveys conducted by Zander Associates, a relatively limited population of Pacific Grove clover was identified near Lots 18-22. This population was accurately mapped using GIS and after consultation with Whitson Engineers it was determined that impacts to this species could be avoided through minor road realignment in the area of the Pacific Grove clover.

Mitigation Measures

4.9-10: To reduce the potential "take" of individuals the following are recommended:

- Prior to construction of roadways or individual houses, a botanical survey shall be conducted during the appropriate blooming period for each species. If no individuals are observed no further action is required.

  If individuals are found a report shall be prepared, as explained in the Monterey County General Plan Policy 3.3, detailing the habitats affected by the project, the species potentially affected by the project, and the appropriate mitigation measures to reduce the "take" of individuals. Informal consultation with CDGF/USFWS may be required. CDFG/USFWS may require further actions.

- If individuals are found a report shall be prepared, as explained in the Monterey County G.P. Policy ER 3.3, detailing the habitats affected by the project, the species potentially affected and appropriate mitigation measures to reduce "take" of individuals. Informal consultation with the USFWS will be required if Monterey spineflower are found. Mitigation may include but not be limited to avoidance of populations, restoration, maintenance, and enhancement and obtaining an Incidental Take Permit from the USFWS and notification with the CDFG.

Implementation of the mitigation measure would reduce removal of special status species plants impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall prepare and submit a botanical survey, subject to review and approval by the Monterey County Planning and Building Inspection Department.

4.9-11: The project applicant shall submit to the Monterey County Planning and Building Inspection Department a Tentative Map that identifies the roadway realignments in the area of Lots 18-22 that avoid the identified population of Pacific Grove clover.

Monitoring Action

Prior to the issuance of grading permits, the project applicant shall prepare and submit the Tentative Map that is subject to review and approval by the Monterey County Planning and Building Inspection Department.

Potentially Significant (Biological Resources Impact 8) - Removal of Nesting Habitat: The September Ranch Subdivision project would result in the removal of nesting habitat for raptors, such as the California spotted-owl and Cooper's hawk, especially in the Monterey pine/coast live oak

forest. The project could result in the removal of potential passerine nesting habitat in the non-native grasslands. Specifically, the rate of erosion on the hillside could be increased and the nesting availability for passerines and raptors could be reduced as a result of the removal of coast live oak trees and Monterey pines (with a dbh greater than 6 inches) for roadwork and residential lots, inclusionary housing, and detention ponds. Disturbance during the nesting season may result in the potential nest abandonment and mortality of the young.

Mitigation Measures

In addition to Mitigation Measure 4.9-3, which addresses the loss of the individual trees, and thus the loss of nesting habitat, the following mitigation measures are recommended:

4.9-12: To avoid a take and/or further evaluate the presence or absence of raptors, the following is recommended:

- Removal should be conducted outside the nesting season, which occurs between February 1 and August 15. If grading before March 1 is infeasible and groundbreaking must occur within the breeding season, a pre-construction nesting raptor survey should be performed by a qualified biologist. If no nesting birds are observed, no further action is required and grading may occur within one week of the survey to prevent "take" of individual birds that may have begun nesting after the survey. If birds are observed onsite after February 1 it will be assumed that they are nesting onsite or adjacent to the site. If nesting birds are observed, ground breaking will have to be delayed until after the young have fledged, as determined by bird surveys conducted by a qualified biologist, or after the nesting season.
- The CDFG Central Coast Regional office does allow grading/or tree removal to occur if nesting birds are observed onsite, providing that a 100- to 500-foot buffer zone is created around the observed nest. Because nests may occur in the middle of the grading area, this method is not advised.

4.9-13: To avoid a take and/or further evaluate the presence or absence of passerines, the following is recommended:

- Grading within the grasslands shall be conducted outside the nesting season, which occurs between approximately February 1 and August 15. If grading before February 1 is infeasible and groundbreaking must occur within the breeding season, a qualified biologist should perform a pre-construction nesting bird survey of the grasslands. If no nesting birds are observed, no further action is required and grading may occur within one week of the survey to prevent "take" of individual birds that may have begun nesting after the survey. If birds are observed onsite after February 1 it will be assumed that they are nesting onsite or adjacent to the site. If nesting birds are observed, ground breaking will have to be delayed until after the young have fledged, as determined by bird surveys conducted by a qualified biologist, or after the nesting season.
- The CDFG Central Coast Regional office does allow grading to occur if nesting birds are observed onsite, providing that a 75- 100-foot buffer zone is created

around the observed nest. Because nests may occur in the middle of the grading area, this method is not advised.

Implementation of the mitigation measure will reduce removal of nesting habitat impacts to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the applicant shall provide the Monterey County Planning and Building Inspection Department with written verification that nesting birds will not be disturbed and that a preconstruction survey has been performed and grading will occur in accordance with CDFG regulations.

Potentially Significant (Biological Resources Impact 9) - Removal of Bat Habitat: Several bat species have potential to occur onsite in the medium (12-19 inches in diameter) and large (>20 inches) diameter Monterey pine and coast live oak trees that are slated for removal.

Mitigation Measure

4.9-14: To avoid "take" and/or further evaluate presence or absence of roosting bats, the following measures are recommended:

- Snags shall not be removed without first being surveyed by a qualified bat biologist, 2-4 weeks prior to planned tree removal to determine whether bats are roosting inside the trees. If no roosting is observed, the snag shall be removed within 1 week following surveys. If bat roosting activity is observed, limbs not containing cavities, as identified by the bat biologist, shall be removed first, and the remainder of the tree removed the following day. The disturbance caused by limb removal, followed by a one night interval, will allow bats to abandon the roost.
- Remove large trees (>24" diameter at breast height [dbh]), or trees with cavities, between September 1 and October 30. This time period is after young are volant (flying), but before expected onset of torpor (winter inactivity). Smaller trees may be removed at any time.
- If trees larger than 24" dbh, or trees with cavities must be removed outside this time period, night emergence surveys should be conducted by a qualified bat biologist, 2-4 weeks prior to planned tree removal to determine whether bats are roosting inside the trees. If no roosting is observed, the tree should be removed within 1 week following surveys. If bat roosting activity is observed, limbs not containing cavities, as identified by the bat biologist, shall be removed first, and the remainder of the tree removed the following day. The disturbance caused by limb removal, followed by a one night interval, will allow bats to abandon the roost.

Implementation of these mitigation measures will reduce the project-related impacts to roosting bats to less than significant.

Monitoring Action

Prior to the issuance of grading permits, the applicant shall submit a Forest Management Plan that outlines how construction activity will not disturb roosting/nesting bats and that will be subject to the review and approval by the Monterey County Planning and Building Inspection Department.

Consistency with Relevant Policies

The following Carmel Valley Master Plan (CVMP) policies apply to the proposed project:

CVMP Policy 7.1.1.1: Areas of biological significance shall be identified and preserved as open space. These include but are not limited to the redwood community of Robinson Canyon and the riparian community and redwood community of Garzas Creek. When a parcel cannot be developed because of this policy, a low density, clustered development may be approved. However, the development shall occupy those portions of the land not biologically significant or on portions of the land adjoining existing vertical forms, whether on-site or off-site and either natural or man-made, so that the development will not diminish the quality of such parcels or upset the natural functioning of the ecosystem in which the parcel is located. If this policy precludes development (but no subdivision) may be allowed provided impacts on the resource are minimized.

CVMP Policy 7.1.1.2: Areas of critical habitat for rare and endangered species as identified by either federal or state law and areas of biological significance should be identified and preserved as open space.

CVMP Policy 7.1.1.3: Development shall be sited to protect riparian vegetation, minimizing erosion, and preserve the visual aspects of the river. Therefore development shall not occur within a riparian corridor. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank or the face of the adjacent bluffs, whichever is less. Density may be transferred from this area to other areas of the parcel.

CVMP Policy 7.2.1.2: In new development, the potential for impact on rare and endangered species shall be assessed by County staff and appropriate mitigation of identified impacts shall be required in accord with policies 11.1.1.1 and 11.1.1.2. Existing vegetation shall be protected and only plants similar in habitat, form, and water requirements to native vegetation common to the Valley shall be used as the predominant additional or replacement landscaping material. The existing native vegetation should be maintained as much as possible throughout the Valley.

CVMP Policy 7.2.1.3: Plant materials shall be used to integrate the man-made and natural environments, to screen or soften the visual impact of new developments, and to provide diversity in developed areas.

CVMP Policy 7.2.2.1: Botanically appropriate species shall be used for required landscaping and erosion control.

CVMP Policy 7.2.2.2: The pamphlet entitled *The Look of the Monterey Peninsula Landscape* should be consulted for guidance in selection of plant species for landscaping of development projects. The publication is available at the Monterey County Planning Department and the Water Management District Office.

CVMP Policy 7.2.2.3: Weedy species such as pampas grass and genista shall not be planted in the Valley. Such species shall not be used in required landscaping and wherever they currently occur, they shall not be removed when the required landscaping is implemented.

CVMP Policy 7.2.2.5: The County shall discourage the removal of healthy, native oak, mandrone, and redwood trees in the Carmel Valley Master Plan Area. A permit shall be required for the removal of any of these trees with a trunk diameter in excess of six inches, measured two feet above ground level. Where feasible, trees removed will be replaced by nursery grown trees of the same species and not less than one gallon in size. A minimum fine, equivalent to the retail value of the wood removed shall be imposed for each violation.

CVMP Policy 7.2.2.6: Valley oaks should be used in landscaping planting plans on flood plain terraces.

CVMP Policy 9.1.2.2: Open space areas should include a diversity of habitats with special protection given areas where one habitat grades into another (these ecotones are ecologically important zones) and areas used by wildlife for access routes to water or feeding grounds.

CVMP Policy 111.1.1.1: Whenever a development proposal is received and is in or adjacent to a rare or endangered plant community as identified in 11.1.1.2, the County shall require the applicant to provide a botanical report prepared by a botanist from the County list of approved consultants. The report shall include a description of the habitat to be affected by the project, including area, species, rare or endangered status, if applicable, and suggestions for mitigation of project impacts. If any cases where rare or endangered species as defined by either State or Federal legislation is found on-site, no development shall proceed until an Incidental Taking Permit or exclusion is obtained in accordance with Federal Endangered Species Act and the State Department of Fish and Game is notified of the existence of the rare and endangered species (whether on federal list, State list, or both) pursuant to Fish and Game Code Chapter 10 Section 1913c.

CVMP Policy 11.1.1.2: The County Planning Department shall maintain records of the known locations of all rare or endangered plant species. Reports shall be on file and locations shall be noted on resources base maps. These maps shall be updated continuously as project applicant reports are received and from time to time as other agencies such as Fish and Game or the California Native Plant Society may make additional location reports available.

Consistency Analysis: A Biological Resources Assessment and a Forest Management Plan were prepared for the 1998 Final EIR for the September Ranch Subdivision. In addition, for the Draft REIR, field reconnaissance was conducted and a Biological Resources Assessment was prepared to document any changes in the biological environment since the previous project reports were prepared. The previous reports prepared for the 1998 Final EIR and the updated reports prepared for this Draft REIR identified areas with sensitive plant and/or animal species and habitats. Where feasible, mitigation has been recommended to reduce impacts to biological resources. Moreover, approximately 793 acres of the 891-acre project site are to remain as open space and no development is proposed within areas of known rare or endangered species.

The project applicant is required to prepare a Forest Management Plan, Open Space Management Plan, and a Grassland Habitat Management Plan, all of which are subject to review and approval by the Monterey County Planning and Building Inspection Department. The recommendations of these

plans shall be incorporated into the Tentative Map (Mitigation Measure 4.9-1). Additionally, as outlined in Mitigation Measure 4.9-1, these plans would be designed to protect vegetation within each building envelope. Additionally, in accordance with the plans, potential areas or building envelopes where surveys shall be undertaken will be identified. Surveys and any associated mitigation will be conducted prior to building approval. Where tree removal would occur, replacement of lost acreage will be at a 3:1 ratio. Consistent with the CVMP, no development is proposed within riparian habitat. Houses on each lot shall be placed outside the natural community and conservation easements shall be placed over the vegetation community. To ensure further consistency, landscape plantings shall be restricted to native plant species adapted to summer fog incursion zone to prevent the further spread of non-native species into native grasslands.