

**APPENDIX E-1**

**ADMINISTRATIVE SUBSEQUENT EIR  
UPPER ROAD LAND DIVISION  
BIOLOGY CHAPTER  
MARCH 2006**

ADMINISTRATIVE DRAFT  
**SUBSEQUENT**  
**ENVIRONMENTAL IMPACT REPORT**  
**UPPER ROAD LAND DIVISION**

A PROJECT INVOLVING THE  
CREATION OF A THREE-LOT SUBDIVISION  
IN ROSS, CA

March 28, 2006

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# TABLE OF CONTENTS

	PAGE
I. Introduction	vii
II. Summary	S-1
III. Project Description	1
A. Location and Access	1
B. Existing Site Characteristics	1
1. Topography	1
2. Drainage	6
3. Natural Features	6
4. Existing Developed Features	7
C. Surrounding Land Uses and Urban Context	7
D. Project Sponsor	8
E. Project Objectives	8
F. The Proposed Subdivision	9
G. Proposed Roads	11
H. Proposed Grading	16
I. Drainage and Utilities	18
J. The Residences	19
K. Landscaping	20
IV. Relationship with Plans	23
A. Town of Ross General Plan	23
1. Community Development Goals, Policies and Implementing Actions	23
2. Natural Environment Goals, Policies and Implementing Actions	27
3. Health and Safety Goals, Policies and Implementing Actions	32
B. Town of Ross Zoning	34
1. Zoning District	34
2. Special Hazard (:H) District	37
3. Hillside Lot Regulations	38

4. Design Review	40
5. Demolition of Structures	41
V. Environmental Setting, Impacts and Mitigation	42
A. Aesthetics	42
1. Setting	42
2. Criteria of Significance	45
3. Impacts	46
4. Mitigation Measures	60
B. Air Quality	62
1. Setting	62
2. Criteria of Significance	67
3. Impacts	68
4. Mitigation Measures	68
C. Biology	70
1. Setting	70
2. Criteria of Significance	79
3. Impacts	80
4. Mitigation Measures	85
D. Geology and Soils	93
1. Setting	93
2. Criteria of Significance	102
3. Impacts	102
4. Mitigation Measures	114
E. Hazards and Hazardous Materials	120
1. Setting	120
2. Criteria of Significance	121
3. Impacts	212
4. Mitigation Measures	127
F. Hydrology and Water Quality	132
1. Setting	132
2. Criteria of Significance	134
3. Impacts	134
4. Mitigation Measures	137

G. Land Use and Planning	149
1. Setting	140
2. Criteria of Significance	143
3. Impacts	143
4. Mitigation Measures	148
H. Noise	152
1. Setting	152
2. Criteria of Significance	160
3. Impacts	162
4. Mitigation Measures	166
I. Traffic and Transportation	168
1. Setting	168
2. Criteria of Significance	169
3. Impacts	170
4. Mitigation Measures	174
VI. Alternatives	177
A. Alternatives Previously Considered	177
B. Alternatives Considered in this SEIR	179
C. No-Project Alternative	180
D. Reduced Grading Alternative	181
E. Three Unit Clustered Development Alternative	188
F. Single Family Residence Alternative	193
G. Environmentally Superior Alternative	197
VII. Other CEQA Considerations	198
A. Unavoidable Adverse Environmental Effects	198
B. Cumulative Impacts	201
C Growth Inducing Effects	203
D. Impacts Found Not To be Significant	203
VIII. EIR Authors and Persons Consulted	204
A. EIR Authors	204
B. Persons Consulted	205

C. References	205
Appendix A: Species Lists	211

## LIST OF FIGURES

	PAGE
1. Regional Location	2
2. Topographic Map/Site Location	3
3. Street Map Map	4
4. Aerial Photo with Topography	5
5. Subdivision Map - Proposed Parcels	10
6. Preliminary Development Plan	12
7. Road Profiles	15
8. Greenbelt Line Boundaries - General Plan and Site Plan Comparison	31
9. Baywood Avenue Views	49
10. Goodhill Road Views	51
11. Jordan Avenue Views	53
12. Regional Fault Zones	94
13. Generalized Geologic Map	96
14. Slope Stability Zones	97
15. Applicant's Slope Stability Map	99
16. Areas of Major Cuts and Fills	104
17. Reinterpreted Slope Stability Map	105
18. Alternative Access Road Alignment	150
19. Comparison of 1009 and 2002 Noise Levels at the Site	160
20. Reduced Grading Alternative	183
21. Reduced Grading Alternative - Road Profiles	184
22. Clustered Alternative Concept	190

# LIST OF TABLES

	PAGE
S-1 Proposed Parcels	S-2
S-2 Summary of Impacts, Mitigation Measures and Level of Significance	S-4
1. Proposed Parcels	11
2. Preliminary Cut and Fill Volumes and Area of Excavation	17
3. Tree Inventory	21
4. Applicable Zoning Classifications	34
5. R1:B-10A Zoning Requirements	35
6. Major Criteria Pollutants	64
7. Federal and State Ambient Air Quality Standards	66
8. Air Quality Monitoring Data for San Rafael, 2003-2005	67
6. Interpreted Geologic Conditions	100
7. Wildland Fire Risk and Hazardous Severity Assessment	126
8. Comparison of Parcels, Residence Sizes and FAR in Project Vicinity	145
9. Definitions of Acoustical Terms	153
10. Typical Sound Levels Measured in the Environment and Industry	155
14. Typical Ranges of $L_{eq}$ Levels at 50 Feet for Construction Sites	164
15. Construction Equipment Noise Level Ranges	165
17. Design Standards for Low-Volume Residential Streets	171
18. Grading Comparison – Project vs. Alternative D	182

## C. BIOLOGY

### 1. SETTING

#### A. BACKGROUND AND METHODS

Biological resources were identified through the review and compilation of existing information, conduct of a field reconnaissance survey, and detailed surveys of the site and surrounding area. The 1990 Draft EIR on the Monte Bello Subdivision<sup>1</sup> provides information on resources occurring on the site approximately 16 years ago. Updated tree inventories and removal reports were prepared for the applicant by a certified arborist in 2001<sup>2</sup> and again in 2003<sup>3</sup> and 2004.<sup>4</sup> Other references provided information on general resources in the area and the distribution and habitat requirements of special-status species which have been reported from or are suspected to occur in the Ross vicinity, including: records on occurrences of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDDB) of the Department of Fish and Game (CDFG); the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California<sup>5</sup>; and the CDFG's list of special animals and plants<sup>6</sup>.

An initial field reconnaissance of the site was conducted on 20 November 2002 by the same biologist who prepared the *Biological Resources* section of the 1990 Draft EIR. During the

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<sup>1</sup> EDAW, *Monte Bello Subdivision Draft Environmental Impact Report*, December 1990.

<sup>2</sup> Arborlogic, *Revised Tree Removal Report for the Monte Bello at Upper Road*, 31 October 2001.

<sup>3</sup> Arborlogic, *Amended Tree Removal Report for Upper Road Subdivision*, 24 November 2003.

<sup>4</sup> Arborlogic, *Amended Tree Inventory Report for Upper Road Subdivision*, 10 August 2004 and *Amended Tree Removal Report for Upper Road Subdivision*, 10 August 2004.

<sup>5</sup> California Native Plant Society, *Inventory of Rare and Endangered Plants of California*, Special Publication No. 1 (6th Edition), 2001.

<sup>6</sup> California Department of Fish and Game, 2001, *Natural Diversity Data Base, Special Animals and Special Plants*.



reconnaissance, walking transects were made across portions of the site proposed for access and residential improvements. The reconnaissance survey served to confirm biological features, determine changes in conditions on the site since 1990, and review the updated tree survey in relation to proposed improvements. This initial field reconnaissance was followed by systematic surveys for special-status plant species and detailed surveys for the federally-threatened northern spotted owl. Surveys for special-status plant species were conducted by a qualified botanist on April 7, May 7 and 21 July 21, 2003. Inspections focused on portions of the site where development, grading and tree removal is proposed. The surveys for northern spotted owl involved five night surveys and four daytime surveys completed by Point Reyes Bird Observatory (PRBO) between 27 March and 17 July 2003.

The following provides a description of vegetation and wildlife habitat, potential for occurrence of special-status species, and possible jurisdictional waters on the site, together with an assessment of potential impacts of the project and identification of measures recommended to mitigate significant adverse effects on sensitive resources.

## B. VEGETATION

Vegetation on the site is composed primarily of oak-bay woodland, with redwood forest in the draws on the lower elevations and small areas of open grassland and scrub at the upper elevations of the site. Sparse riparian vegetation consisting primarily of elk clover (*Aralia californica*) and bigleaf maple (*Acer macrophyllum*), occurs along the two drainages on the site. French broom (*Genista monspessulana*) and Scotch broom (*Cytisus scoparius*), both introduced and highly invasive plant species, have spread throughout most of the site, forming dense thickets where they haven't been cut back by the applicant. Several large rock outcrops occur along the spur ridge at the western edge of the site.

The composition of the woodland varies with slope and exposure, and has been severely affected by Sudden Oak Death (SOD). Woodland tree species on the site consist of coast live oak (*Quercus agrifolia*), black oak (*Q. kelloggii*), California bay (*Umbellularia californica*), madrone (*Arbutus menziesii*), Douglas fir (*Pseudotsuga menziesii*), valley oak (*Q. lobata*), and bigleaf maple. The understory is now dominated by thickets of broom, together with native species such as honeysuckle (*Lonicera* sp.), California huckleberry (*Vaccinium ovatum*), poison oak (*Toxicodendron diversilobum*), western sword fern (*Polystichum munitum*), and California hazelnut (*Corylus*

*cornuta*). Redwood (*Sequoia sempervirens*) forms the dominant cover on the lower slopes of the site along Swan and Frog Creeks, with limited understory due to the intense shade. The redwood trees on the site have resprouted after timber harvest in the past.

Trees in the woodland and forest vary in age, size, condition and distribution. Considerable tree loss was observed during the November 2002 field reconnaissance, presumably from the effects of SOD. This included live oaks either completely dead or showing signs of severe decline, as well as many mature black oaks which had fallen due to trunk decay and the strong winds earlier that month. A number of species are being affected by SOD, including tanoaks (*Lithocarpus densiflorus*), coast live oaks, black oaks, and madrone which are dying in large numbers, and California buckeye, California bay, huckleberry, and rhododendron are suspected to be hosts or potential carriers of the fungus suspected to cause mortality, *Phytophthora ramorum*. This fungus and several beetle species are consistently associated with the dying trees. The disease is contributing to significant changes in vegetative cover over large parts of coastal California, including Marin County, altering habitat for woodland-dependent species and exacerbating hazardous fire conditions where wildlands interface with developed areas.

The updated tree survey in 2001 mapped all trees with trunk diameters of eight inches or more on proposed Lot 1, trees within the vicinity of the proposed building envelopes on Lots 2 and 3, and trees in the vicinity of the proposed water tank and access road alignment. A total of 2,022 trees with trunk diameters of eight inches or more measured at 4.5 feet above grade were identified and mapped within the limits of the survey area in the 2001 inventory. Of this total, 828 were California bay, 555 coast live oak, 236 madrone, 193 redwood, 63 valley oak, 49 black oak, 17 Douglas-fir, 6 bigleaf maple, and 75 were snags of dead oaks. The number of snags and downed trees has most likely increased since the tree survey was conducted in 2001, although no analysis to confirm this was conducted during the November 2002 reconnaissance.

The most recent tree inventory from 2004 reflects changes in conditions on the site and additional mapping in the vicinity of the new driveway to the proposed building envelope on Parcel 2. The 2004 inventory estimates that there are approximately 4,000 trees on the site, and provides data on 2,187 trees, both live and dead or dying trees. Of this revised total, 914 were California bay, 599 coast live oak, 258 madrone, 193 redwood, 67 valley oak, 51 black oak, 17 Douglas-fir, 6 bigleaf maple, 4 toyon, and 2 buckeye. Of the 2,187 trees evaluated in the inventory, approximately 356 or 17 percent were dead or showed signs of SOD.

Scrub and grassland vegetation occurs along the spur ridge at the western edge of the site, continuing as an open oak savanna on the MMWD lands further west. Scrub vegetation occurs on the steep east facing slopes, composed of bush monkeyflower (*Mimulus aurantiacus*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and poison oak. Native and introduced grasses and forbs occur in the grassland and savanna, and extend into the understory of the woodland on the site, dominated by wild oat (*Avena* sp.), brome (*Bromus* sp.), quaking grass (*Briza minor*), California fescue (*Festuca californica*), Idaho fescue (*Festuca idahoensis*), purple needlegrass (*Nasella pulchra*), dogtail (*Cynosurus echinatus*), brodiaea (*Brodiaea* sp.), iris (*Iris* sp.), filaree (*Erodium* sp.), vetch (*Vicia* sp.) soap plant (*Chlorogalum* sp.), and California poppy (*Eschscholzia californica*).

### C. WILDLIFE HABITAT

The large size of the site, proximity to other undeveloped property and open space, presence of surface water, and varied vegetative cover contribute to the wildlife habitat value of the property. The dramatic loss of trees due to SOD and the spread of broom are changing the habitat value, and in many ways limiting opportunities for many species of wildlife. Broom creates dense thickets which outcompete native groundcover species and limit foraging opportunities for birds and mammals. This is particularly true as the broom spreads from the relatively sparse understory of the woodland into the surrounding grasslands.

Wildlife that occur on, or frequent the site are commonly associated with woodland, forest, scrub and grassland habitats. Trees in the woodland and forest provide nesting and perching substrate and foraging opportunities for numerous bird species, such as chestnut-backed chickadee, plain titmouse, Hutton vireo, Wilson warbler, and orange-crowned kinglet. The trees produce seed crops in the fall, particularly oaks, which are consumed by insects, birds, and mammals, and provide an important source of food through the fall and winter months for species such as black-tailed deer, western grey squirrel, band-tailed pigeon, scrub and Steller's jays, and woodpeckers. Other wildlife commonly associated with the dense woodland and forest habitat include: dusky-footed woodrat, deer mouse, ringneck snake, California newt, ensatina, and California slender salamander. The large rock outcrops provide sunning areas for reptiles such as western fence lizard and alligator lizard, as well as protective cover for woodrats. The small extent of grassland which extend onto the adjacent MMWD lands provide

habitat for numerous animal species including California vole, pocket gopher, jackrabbit, and gopher snake. No evidence of active raptor nests were observed in the woodland and forest cover within 300 feet of the proposed residences and access roads, both during the field reconnaissance in 2002 and the subsequent detailed surveys for northern spotted owl conducted in 2003.

### Special-Status Species

Special-status species<sup>1</sup> are plants and animals that are legally protected under the State and/or federal Endangered Species Acts<sup>2</sup> or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the Endangered Species Acts often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take"<sup>3</sup> of these species.

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<sup>1</sup>Special-status species include: designated rare, threatened, or endangered and candidate species for listing by the CDFG; designated threatened or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS); species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those plant species identified on lists 1A, 1B and 2 in the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California*; and possibly other species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on list 3 in the CNPS *Inventory* or identified as animal "California Special Concern" (CSC) species by the CDFG.

<sup>2</sup>The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

<sup>3</sup>"Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFG also considers the loss of listed species habitat as take, although this policy lacks statutory authority and case law support under the CESA.

Two sections of FESA contain provisions that allow or permit "incidental take." Section 10(a) provides a method by which a state or private action which may result in take may be permitted. The applicant must provide the USFWS

A habitat suitability analysis was conducted during the November 2002 field reconnaissance to determine the potential for occurrence of special-status plant and animal species. The records maintained by the CNDDDB of the CDFG were reviewed to determine the known occurrences of special-status species in the Ross vicinity. Several general occurrences of special-status plant species extend over the site and surrounding lands, including: Santa Cruz tarplant (*Holocarpha macradenia*), Tamalpais lessingia (*Lessingia micradenia* var. *micradenia*), north coast semaphore grass (*Pleuropogon hooverianus*), and Napa false indigo (*Amorpha californica* var. *napensis*). Several animal species are known to occur in the Marin County area, including northern spotted owl, California red-legged frog, steelhead trout, and other raptors. Due to the absence of specific habitat types necessary to support other species of concern (such as vernal pools, ultramorphic soils, riparian corridors and aquatic habitat, or specific cover types), and absence of any indications of presence (such as nest or dens), the occurrence of special-status species on the site is considered unlikely. Below is a discussion of northern spotted owl and other raptors, California red-legged frog, steelhead, and special-status plant species, and the potential for occurrence of these species on the site.

### Special-Status Plant Species

Several historic occurrences of special-status plant species have been recorded from the Ross vicinity, including Santa Cruz tarplant, Tamalpais lessingia, north coast semaphore grass, and Napa false indigo. Most of these collections were made 50 or more years ago, and are not specific in their locational descriptions. The status of these species varies, with all considered rare by the CNPS (list 1B), Santa Cruz tarplant federally-listed as threatened and State-listed as endangered, and north coast semaphore grass State-listed as threatened. Marginally suitable habitat for these and other special-status plant species such as the State and federally-listed endangered white-rayed pentachaeta (*Pentachaeta bellidiflora*) occurs on the site, but no evidence of any special-status plant species were observed during the surveys in 1990 and 2002. However, the timing of the field work did not extend through the flowering period of the plant

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with an acceptable conservation plan and publish notification for a permit in the Federal Register. Section 7 pertains to a federal agency that proposes to conduct an action that may result in take, requiring consultation with USFWS and possible issuance of a jeopardy decision. Under the CESA, take can be permitted under Section 2081 of the Fish and Game Code. The applicant must enter into a habitat management agreement with the CDFG, which defines the permitted activities and provides adequate mitigation.

species of concern which is generally necessary to provide a conclusive determination on presence or absence. Systematic surveys were therefore conducted during the flowering period in the spring and summer of 2003 to provide a conclusive determination on absence of any special-status plant species on the site. The surveys focused on the portion of the site proposed for development, and all species encountered were identified to the degree necessary to determine possible rarity, and a list of species encountered on the site was prepared. No special-status plant species were encountered during the detailed surveys, and none are suspected to occur on the site.

### Northern Spotted Owl

Spotted owl is recognized as a CSC species by the CDFG, and the northern subspecies (*Strix occidentalis caurina*) was listed as threatened by the U.S. Fish and Wildlife Service (USFWS) in 1990. Spotted owl is sensitive to habitat destruction and fragmentation, and significant loss or modification to existing habitat may be considered a "take" under FESA.

Spotted owl is widely distributed in forested regions from southern British Columbia through Washington, Oregon, and northwestern California, with the southern edge of their breeding territory reaching into Marin County where at least 50 pairs are believed to occur. In the southern portion of their range, suitable breeding habitat for spotted owl consists of coniferous forest, mixed evergreen forest, and oak woodland. The owls roost in dense, multi-layered canopy during the day, and forage at night. Large blocks of from 100 to over 600 acres of mature forest with permanent water and suitable nesting trees and snags are required for successful reproduction. The owls usually nest in tree or snag cavities, the broken top of large trees, and less frequently in large clumps of mistletoe, an abandoned raptor or raven nest, or other locations. Prey consists primarily of small mammals, including woodrats, mice, and voles.<sup>1</sup>

According to the CNDDDB records, the closest known occurrence of spotted owl is from the north slope of Mount Tamalpais, approximately 1 mile to the south, with other occurrences

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<sup>1</sup>California Department of Fish and Game, *California's Wildlife, Volume II, Birds*, California Statewide Wildlife Habitat Relationship System, 1990.

## Biology

further south toward Mill Valley and further west on the northwest slopes of Mount Tamalpais. Survey protocols have been developed by the USFWS<sup>1</sup> to determine presence of the owl, consisting of six visits stretched over either one or two years. Annual surveys have been conducted for spotted owl in Marin County by the Point Reyes Bird Observatory since 1997, focusing on the potential for occurrence on parkland and watershed lands. Detailed surveys have generally not extended onto private lands along the south fringe of Ross Valley. The structure of the woodland on the site, including the dense thickets of broom spreading through the understory, limits the likelihood that it is used by spotted owl for foraging, and no evidence of any raptor nests were observed during the November 2002 field reconnaissance.

Detailed surveys for northern spotted owl were conducted on the site and vicinity by PRBO in 2003. These surveys followed protocol developed by the USFWS, which include playing a recorded spotted owl call from points established on the site and surrounding lands. No owl responded to call surveys on conducted on 27 March 2003, but a male northern spotted owl responded to calls from the hillside southeast of the parking lot of the Lagunitas Country Club on 17 April 2003. A male northern spotted owl again responded to call surveys on 22 May 2003 from the hillside southeast of the Lagunitas Country Club on the east side of Ross Creek. Both a male and female northern spotted owl responded to call surveys on 16 July 2003 near the center of the site. A daytime inspection was conducted on 17 July 2003 and a female northern spotted owl was observed on the hillside south of the Lagunitas Country Club. The surveyors believe that the activity center for the pair of owls encountered was located on the hillside south of the Lagunitas Country Club based on the presence of whitewash, pellets, and molted feathers in that area. The playing of taped owl calls from the site is suspected to have drawn the pair from their activity center, across the Ross Creek valley, and onto the site when they were encountered on 16 July 2003. No substantial whitewash was found and no evidence of nesting or roosting was encountered on the site during the surveys.

### California red-legged frog

This subspecies frog (*Rana aurora draytonii*) is listed by the USFWS as threatened and is

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<sup>1</sup> USFWS, *Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted*, revised 17 March 1992.

## Biology

recognized as a CSC species by the CDFG. It inhabits ponds, marshes, and streams that typically support riparian vegetation, but can also be found near seeps and in ephemeral streams with pools. This subspecies requires still or slow-moving water during the breeding season, where it deposits large egg masses, usually attached to submerged or emergent vegetation. Adult frogs are capable of dispersing long distances from aquatic habitat, and may utilize ephemeral water sources during the wet season. They may take refuge in small mammal burrows, beneath leaf litter, or in other moist areas during periods of inactivity or whenever it is necessary to avoid desiccation. The CNDDDB records do not indicate any historical occurrences for this species from Ross Creek watershed, and the drainages on the site do not provide suitable habitat for this species due to the lack of pools and protective cover.

## Steelhead

Steelhead trout (*Oncorhynchus mykiss*) is listed as threatened under the federal ESA and was recently listed as endangered by the CDFG, and is known from a number of drainages in Marin County. Like other anadromous species, it spawns in coastal streams and rivers, where eggs hatch and young fish grow until they migrate to the ocean. Timber harvest activities, overgrazing, gravel mining operations, channel modifications and removal of riparian vegetation, flood control and hydroelectric facilities, and secondary water quality degradation have all contributed to a decline of this and other anadromous species. County records indicate this species is known to occur in Ross Creek. However, the drainages on the site in the vicinity of proposed improvements are unsuitable due to their ephemeral nature and lack of pool habitat.

## Raptors

In addition to northern spotted owl, several other species of raptors may pass through or forage in the vicinity, including American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), and great-horned owl (*Bubo virginianus*). No active nests were observed during the field reconnaissance in the vicinity of proposed improvements or during the detailed surveys for northern spotted owl. Nests of raptors are protected under the federal Migratory Bird Treaty Act and the Fish and Game Code of California. There is a remote potential that one



or more new nests could be established in the vicinity of proposed residences in the future, prior to construction.

## Wetlands

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration and purification functions. The CDFG, U.S. Army Corps of Engineers (Corps), and Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to river banks, lakes, stream channels and other wetland features.<sup>1</sup>

A preliminary wetland assessment was conducted as part of the November 2002 field reconnaissance. Potential jurisdictional waters are limited to the unvegetated "other waters" of the Swan Creek and Frog Creek drainages, which would be subject to the regulations of the Corps, CDFG, and possibly the Regional Water Quality Control Board (RWQCB). Swan Creek has a width of 4 feet and Frog Creek has a width of approximately 2 feet near the proposed crossing locations. No wetland vegetation occurs along either of these drainages in the vicinity of proposed crossings.

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<sup>1</sup>Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States without a permit, including wetlands and unvegetated "other waters of the U.S.". The Corps uses three mandatory technical criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) to determine whether an area is a jurisdictional wetland. All three of the identified technical criteria must be met for an area to be identified as a wetland under Corps jurisdiction, unless the area has been modified by human activity. Jurisdictional authority of the CDFG over wetland areas is established under Section 1600-1607 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the Department, incorporating necessary mitigation, and obtaining a Streambed Alteration agreement. The RWQCB is responsible for upholding state water quality standards pursuant to Section 401 of the Clean Water Act and for regulating wetlands under the Porter-Cologne Act.

## 2. CRITERIA OF SIGNIFICANCE

Criteria have been established in determining the significance of potential impacts on biological resources. The CEQA Guidelines identify potentially significant environmental effects on biological resources to include:

- a substantial adverse effect, either directly or through habitat modifications, on any special-status species;
- a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## 3. IMPACTS

### A. SPECIAL-STATUS SPECIES

The proposed project is not expected to have any significant adverse impacts on special-status species, but protective measures would be necessary to ensure absence of any populations or

## Biology

essential habitat on the site, and to prevent any disturbance to sensitive habitat on surrounding lands. No special-status plant species are believed to occur on the site and no impacts on populations of these species are anticipated. Development could contribute to sedimentation in Swan and Frog Creeks, which in turn could affect the aquatic habitat of Ross Creek, including habitat for steelhead trout. Adequate sedimentation and erosion control measures would be necessary to protect the fishery resources of the downgradient drainage system. There is a remote potential that new raptor nests could be established within the limits or immediately adjacent to proposed improvements before construction is initiated, resulting in destruction or abandonment of a nest in active use. Restrictions on the timing of tree removal and construction in the woodland habitat would serve to avoid potential disturbance to nesting raptors and other bird species protected under the Migratory Bird Treaty Act. The Migratory Bird Treaty Act serves to protect nests of most bird species when they are in active use, but not after young have fledged or nest is abandoned if breeding is unsuccessful.

The USFWS typically considers any development that results in a loss of forest habitat in Marin County to be a potential take adversely affecting northern spotted owl unless protocol surveys are conducted which demonstrate absence of the species within 0.25 miles. Proposed development on the site would generally be located in areas of open woodland, scrub, and grassland, not forest habitat. However, the redwood forest on the lower slopes of the site does provide suitable habitat for spotted owl and proposed development would be located within 0.25 miles of this habitat. In Marin County, the USFWS recommends that "Limited Operating Periods" (LOP) be used to avoid incidental take of spotted owl during the nesting season where protocol surveys have not been conducted and suitable habitat occurs within 0.25 miles. The LOP would restrict major tree removal, grading, or other exterior construction generating substantial noise or other disturbance during the nesting season from February 1 through July 31. Adhering to the LOP guidelines of the USFWS would serve to avoid possible incidental take as a result of construction activities on the site. This includes the possible activity center of the pair of northern spotted owl observed on the forested slopes south of the Lagunitas Country Club, located just about 0.25 miles from the proposed development area on the site.

### **B. LOSS OF SENSITIVE NATURAL COMMUNITIES**

No sensitive natural communities would be affected by proposed development. Project implementation would affect approximately 7.6 acres of woodland and scrub habitat, but this habitat is dominated by coast live oak, California bay, and madrone and is not considered to

have a high inventory priority by the CNDDDB. New crossings over Swan and Frog Creeks would be installed as part of the project, but neither creek segment supports riparian vegetation.

### C. WETLANDS

Potential impacts on jurisdictional waters would include a new bridge crossing over approximately 60 feet of Swan Creek, two drainage outfalls into Swan Creek, and installation of a 60-foot culvert at the access road crossing over Frog Creek. A total estimated 440 square feet of unvegetated jurisdictional "other waters" would be modified by grading, riprap, or culvert installation. No jurisdictional wetlands would be affected, but modifications to the drainage channels would require authorization from the Corps, CDFG, and the RWQCB. Best Management Practices defined as part of the required Stormwater Pollution Prevention Plan (See V. E, *Hydrology and Water Quality*) would serve to control potential direct and indirect impacts of sedimentation into Swan Creek, Frog Creek, and downgradient Ross Creek.

### D. WILDLIFE HABITAT

The proposed project would extend residential development into woodland habitat, replacing approximately 7.6 acres with roadways and structures. Although detailed plans for individual residences have not yet been prepared, additional habitat would be developed with pools, patios, lawns and landscaping. The proposed Vesting Tentative Map does not indicate any fencing on the property, but it could potentially be proposed in conjunction with future development of the individual residences. Unless adequate restrictions are defined as part of the project, improvements could include additional thinning of the woodland, planting of extensive ornamental landscaping with non-native, and possibly invasive plant species, and possibly installation of exclusionary fencing to preclude access by deer and other wildlife. These modifications would extend the effects of proposed development well beyond the roadway and building footprint and could have significant impacts on wildlife habitat and movement opportunities. If constructed at the perimeter of the designated building envelopes, the exclusionary fencing would prevent movement of deer and other larger wildlife along the Swan and Frog Creek channels traversing the site. Drainage channels tend to serve as important movement corridors for wildlife, and should be protected from obstruction and

extensive modification.

Grading activities associated with the project would create suitable conditions for the spread of French and Scotch broom, which tend to prefer disturbed slopes and areas of sparse groundcover. Broom would continue to spread on the site unless aggressively removed and controlled. Its spread would further limit habitat values for native wildlife and would contribute to the fire hazard posed by dense understory vegetation.

#### E. CONFLICT WITH LOCAL POLICIES AND ORDINANCES

A review of the conformance of the project to policies in the Ross General Plan pertaining to biological and natural resources is provided in Chapter IV, *Relationship to Plans*. It includes an analysis of the project's conformance with applicable Goals, Policies and Implementing Actions in the Natural Environment Chapter of the General Plan.

The Town's Ordinance No. 568, Planting, Alteration, Removal or Maintenance of Trees, was adopted to provide for the protection, regulation, and management of tree resources. A permit is required to remove any "significant" or "protected" tree. A significant tree is defined as any tree having a single trunk diameter greater than 12 inches, and a protected tree is any tree having a trunk diameter greater than 8 inches located within 25 feet of the front or side yard property lines, or within 40 feet of the rear yard property line. The ordinance specifies that, where feasible, three new trees are to be planted to replace every tree proposed for removal on property zoned R-1:B-10A. Where planting of on-site replacement trees is not feasible, the applicant may instead make an in lieu payment to the Town for provision of off-site replacement trees at the 3:1 ratio.

As indicated in the updated 2004 tree removal report, proposed improvements would require the removal of 794 live trees and 231 trees that are dead, fallen, hazardous or diseased to accommodate construction of the access road, driveways, and building footprints. This represents a substantial increase in the estimated 421 live and dead trees proposed for removal under the previous plans in 2001.<sup>1</sup> This approximately 50 percent increase in the estimated number of trees to be removed is due largely to the goal of balancing cut and fills on the site,

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<sup>1</sup> The 2001 plans are presented in Chapter VI, as the *Reduced Grading Alternative*.

and the expanded building envelope sizes. As with the earlier proposals, there are no specific restrictions on tree removal and management over the remainder of the site, and additional tree removal or thinning may also occur around each residence for fire safety clearance, to accommodate landscape improvements, improve views, and other considerations of the future property owners. The total number of trees to be removed represents approximately 47 percent of the 2,187 trees evaluated in the 2004 tree inventory, and approximately 27 percent of the estimated 4,000 trees on the site. This direct loss of trees and associated woodland habitat would be a significant adverse impact of the project.

Trees not directly removed by grading or other improvements may be damaged or adversely affected during construction or as a result of long-term changes to drainage patterns, irrigation, exposure and other factors. Mature oaks and other trees are sensitive to changes in canopy structure, drainage patterns, soil compaction, trenching, landscape irrigation, and other modifications within the root zone. Considerable care is necessary to protect trees in the vicinity of grading, building and roadway construction, and landscape improvements. Wounding of trunks and major roots during construction is a common problem, which results in the invasion of harmful organisms and can contribute to structural decay of the tree. Root loss, and a reduction in potential rooting area, often contributes to long-term tree decline.

The revised Preliminary Landscape Plan shows the location of trees to be removed and indicates that all trees are to be replaced at a 1:1 mitigation ratio.<sup>1</sup> The plans state that the applicant would like the opportunity to replace some of the trees with other native species to "allow for greater species diversity at the site". The Preliminary Landscape Plan show the approximate location of replacement trees, and also indicates that plantings would be 15 gallon sized consisting of oak, bay laurel, Douglas-fir, coast redwood, madrone, and toyon species.<sup>2</sup> The Landscape Plan emphasizes replacements plantings with species susceptible to SOD or that would create dense shade and conditions that preclude establishment of understory species. These include dense plantings of bay laurel (345 total trees), madrone (92 trees) and unspecified "oaks" (339 species).

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<sup>1</sup>ICSW/Stuber-Stroeh, Upper Road Land Division, Preliminary Landscape Plan Replacement Trees, Sheets 11 and 12, 8/10/04.

<sup>2</sup>op. cit.; Sheets 11 and 12.

Several aspects of the proposed tree replacement are inconsistent with Town Ordinance No. 568 or are problematic. First, the Town ordinance calls for a 3:1 replacement ratio, not 1:1 as indicated in the Preliminary Landscape Plan. Tree replacement must be balanced with the need to minimize hazardous fire conditions and provide a defensible space around structure, which limits the available replacement planting area on the site. Given the effects of SOD on the site, it seems inappropriate to replace trees to be removed with like-species which are susceptible to decline and death from SOD, as suggested in the Preliminary Landscape Plan. Species severely effected by SOD include: coast live oak, black oak, madrone, and tanbark oak. Conditions created by dense stands of California bay, which is also a know host for SOD, tend to have limited habitat value due to the shade and allelopathic effects of this species, so use of this species in replacement plantings should be discouraged or greatly limited. The proposed arrangement of replacement plantings in the Landscape Plan are also too densely spaced to allow for mature development, generally clustered on 10-foot centers and spread throughout the site rather than on the graded slopes such as the entrance roadway and fill slopes below the building pad on Lots 2 and 3. Valley oak and redwood may be appropriate species for replacement plantings, the redwood at lower elevations and draws and the valley oak in the open upper elevations of the site. By coincidence, the number of valley oaks proposed for removal as a result of development would be proportionally higher than estimates for all of the species combined (73 percent for valley oak removed rather than an estimate of 47 percent for all species combined in the inventory of live and dead trees).

#### **F. CONFLICT WITH HABITAT CONSERVATION PLANS**

The proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved conservation plan. No such conservation plans have been adopted encompassing the project vicinity, and no impact is therefore anticipated.

### **4. MITIGATION MEASURES**

#### **A. SPECIAL-STATUS SPECIES**

### Avoidance of Nesting Raptors

**Measure BIO-1.** Tree removal, grading, and building foundation and framing shall preferably be restricted outside the nesting season of northern spotted owl and other raptors (February 1 through July 31) to prevent any possible disturbance and inadvertent take if nests occur in the vicinity. Any active raptor nests in the vicinity of proposed tree removal and grading shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling grading and tree removal during the non-nesting period (August through January), or if this is not feasible, by conducting a pre-construction survey for raptor nests. Interior construction on framed structures shall not be subject to these restrictions as construction noise and disturbance would be controlled by the building shell. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following:

- If grading is scheduled during the active nesting period (February through July), a qualified wildlife biologist shall conduct a pre-construction raptor survey no more than 30 days prior to initiation of grading to provide confirmation on presence or absence of active nests in the vicinity. This shall include both a day time visual survey for all raptors and a night-time survey for nesting owls.
- If active raptor nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the CDFG and USFWS, and implemented to prevent abandonment of the active nest. At minimum, grading and tree removal in the vicinity of the nest shall be deferred until the young birds have fledged. A nest-setback zone of at least 500 feet shall be established within which all construction-related disturbance shall be prohibited. The perimeter of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.
- If permanent avoidance of an on-site nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either a) not begun egg-laying and incubation, or b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date.



- A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the Town prior to initiation of grading in the nest-setback zone.

#### **Protection of Aquatic Habitat from Sedimentation**

**Measure BIO-2:** Erosion control measures shall be implemented as part of a Stormwater Pollution Prevention Plan using Best Management Practices to prevent any sedimentation in Swan and Frog Creeks, and the sensitive habitat Ross Creek provides special-status fish and other aquatic wildlife.

#### **B. SENSITIVE NATURAL COMMUNITIES**

No mitigation is required.

#### **C. WETLANDS**

##### **Coordination with Jurisdictional Agencies.**

**Measure BIO-3.** The proposed project shall be designed to minimize disturbance to the jurisdictional waters of Swan and Frog Creeks to the maximum extent feasible. If complete avoidance is not feasible, the proposed improvements shall be coordinated with representatives of the Corps, CDFG, and RWQCB, and any required authorization obtained prior to any modification of jurisdictional waters. Additional conditions may be required by jurisdictional agencies to protect sensitive wetland resources and provide appropriate mitigation. These include restrictions on construction activities during the low flow summer months, restrictions or prohibition on placement of fill within the active channel, and implementation of adequate erosion and sedimentation control measures.

#### **D. WILDLIFE HABITAT AND MOVEMENT CORRIDORS**

##### **Obstruction of Wildlife Movement Opportunities**

**Measure BIO-4:** Use of any exclusionary fencing that would obstruct movement by terrestrial wildlife species shall be restricted to within 100 feet of the footprint of the proposed residences. Any exclusionary fencing shall be restricted at least 100 feet from the top of bank to Swan Creek and at least 50 feet from the top of bank to Frog Creek. Exclusionary fencing is any fencing designed to exclude wildlife and contains one or more of the following conditions: lowest horizontal is within 1.5 feet of ground OR highest horizontal is over 6 feet OR top or bottom wire is barbed OR distance between top wires is less than 10 inches.

### **Permanent Habitat Protection**

**Measure BIO-5:** A conservation easement or development restriction shall be established over the undeveloped western and southern portions of the site to permanently protect and manage the remaining woodland, forest and grassland habitat. The conservation easement or development restriction shall generally extend west and southwest of the proposed building footprint on Lot 2 and east and south of the proposed building footprint on Lot 3. The easement shall be prepared in consultation with the Town and shall define any maintenance responsibilities of the applicant and future property owners.

### **Vegetation Management Plan**

**Measure BIO-6.** A detailed Landscape and Vegetation Management Plan shall be prepared by a qualified landscape architect in consultation with a plant ecologist or certified arborist experienced in management of native species. The plan shall: 1) provide for re-establishment of native vegetation on graded slopes around the fringe of proposed improvements; 2) provide details on tree protection measures and native plantings required as replacement mitigation; 3) identify unsuitable species which should not be used in landscaping; 4) control the establishment and spread of introduced broom; and 5) specify long-term management provisions to ensure re-establishment of tree replacement and landscape improvements. Aspects of the plan shall include the following:

- Emphasize the use of native plant species in landscaping and revegetation, particularly at the fringe of proposed structures and grading. Graded slopes shall outside of the improved building envelope area shall be revegetated with a variety

## Biology

of native grasses, groundcovers, shrubs, and trees common to the site. Replacement plantings shall consider the effects of SOD on plant species selection, with use of cost live oak, black oak, tanbark oak, madrone, and California bay discouraged, and use of valley oak and redwood encouraged.

- Restrict non-native ornamental species used in landscape plantings to the immediate vicinity of the proposed residences. Use of non-native, invasive species which may spread into adjacent undeveloped areas shall be prohibited in landscaping plans. Unsuitable species include: blue gum eucalyptus (*Eucalyptus globulus*), acacia (*Acacia* spp.), pampus grass (*Cortaderia selloana*), broom, gorse (*Ulex europaeus*), bamboo (*Bambusa* spp.), giant reed (*Arundo donax*), English ivy (*Hedera helix*), German ivy (*Senecio milanioides*), and periwinkle (*Vinca* sp.).
- Provide for protection of healthy protected and significant trees from direct construction-related impacts and long-term effects associated with landscaping, such as changes resulting from irrigation and creation of impervious surfaces, to the maximum extent practicable.
- Identify acceptable grading and excavation procedures, incorporating fencing and flagging of trees in the vicinity of proposed improvements, with provisions for contractor responsibility in protecting and repairing damage to individual trees to be retained.
- Specify that trees shall be thinned and pruned rather than removed in preparing landscape plans and improving views from individual residences, with complete removal permitted only as necessary to accommodate structure and other improvements, or to reduce the fire hazard associated with dense vegetation.
- Monitor graded slopes and areas disturbed as part of the project to prevent establishment and spread of French and Scotch broom. The removal and monitoring program shall include annual late winter removal of any rooted plants and seedlings when soils are saturated and cutting back of any remaining flowering plants in the spring before seed begins to set in late April.

- Include provisions for maintenance of landscaping and revegetation of graded slopes shall be specified as part of the plan, with short-term irrigation provided to ensure successful establishment, and replacement plantings and seeding provided over a minimum of 5 years to ensure re-establishment of cover.

## E. CONFLICT WITH LOCAL POLICIES AND ORDINANCES

### Tree Preservation Program

**Measure BIO-7:** Detailed guidelines shall be prepared by a certified arborist to control possible damage to trees to be preserved. The guidelines shall be incorporated into the recommended Landscape and Vegetation Management Plan. Standards contained in the preservation guidelines shall include the following:

- Grade changes within 1.5 times the width of the tree dripline shall be avoided and any encroachment closer than one-third the distance from the dripline to the trunk shall be prohibited or monitored by the arborist. Restrictions on the limits of grading, adjustments to the final grade of cut and fill slopes, and use of retaining walls shall all be used to protect individual trees worthy of preservation.
- Temporary fencing shall be provided along the outermost edge of the dripline of each tree or group of trees to be retained in the vicinity of grading to avoid compaction of the root zone and mechanical damage to trunks and limbs.
- Paving within the tree dripline shall be prohibit or stringently minimize by using porous materials such as gravel, loose boulders, cobbles, wood chips, or bark mulch where hardscape improvements are necessary for access in the vicinity of trees.
- Trenching within the tree dripline shall be prohibit, with any required utility line within the dripline installed by boring or drilling through the soil.
- The amount of landscape irrigation within the tree dripline shall be minimize by prohibiting turf or any landscaping with high water requirements and limiting

permanent irrigation improvements to bubbler, drip, or subterranean systems.

- Storage of construction equipment, materials, and stockpiled soils shall be prohibited within the tree dripline.

### **Tree Replacement Program**

**Measure BIO-8:** A tree replacement program shall be prepared to provide for replacement of significant and protected trees removed as a result of proposed development. The tree replacement program shall be incorporated as a component of the Landscape and Vegetation Management Plan, and implemented as part of site revegetation and landscaping. The program shall be prepared by a certified arborist in consultation with the Town, and shall meet the intent of Ordinance No. 568. The tree replacement program shall utilize native tree species appropriate to the site, consider spacing requirements of mature trees and include tree plantings on graded slopes, and provide short-term irrigation and maintenance to ensure their establishment. Where a 3:1 replacement ratio can not be successfully achieved on the site because of proposed residential use, fire safety restrictions around structures and roadways, and the long-term health of the woodlands, the applicant shall be required to pay a pro-rated in-lieu fee for the portion of required replacement plantings not met on-site.

### **F. CONFLICT WITH HABITAT CONSERVATION PLANS**

No mitigation is required.

**APPENDIX A**  
**PLANT SPECIES ON PROJECT SITE**



**Plant Species Observed at Upper Road Site, Ross  
April 7, May 7, and July 21, 2003**

<u>Species</u>	<u>Common Name</u>
<i>Acer macrophyllum</i>	Big leaf maple
<i>Adiantum jordanii</i>	Maidenhair fern
<i>Aesculus californica</i>	California buckeye
<i>Agrostis pallens</i>	Leafy bentgrass
<i>Agrostis stolonifera</i>	Creeping bentgrass
<i>Aira caryophylla</i>	Hairgrass
<i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Aralia californica</i>	Elk clover
<i>Arbutus menziesii</i>	Pacific madrone
<i>Artemisia californica</i>	California sagebrush
<i>Aster radulinus</i>	Broad-leaved aster
<i>Avena barbata</i>	Slender wild oats
<i>Avena fatua</i>	Wild oats
<i>Baccharis pilularis</i>	Coyote Brush
<i>Brachypodium distachyon</i>	False-brome
<i>Briza maxima</i>	Rattlesnake grass
<i>Briza minor</i>	Rattlesnake grass
<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome
<i>Bromus catharticus</i>	Rescue grass
<i>Bromus diandrus</i>	Ripgut grass
<i>Bromus hordeaceus</i>	Soft chess
<i>Bromus laevipes</i>	Woodland brome
<i>Bromus sterilis</i>	Sterile brome
<i>Calystegia purpurata</i> ssp. <i>purpurata</i>	Western morning glory
<i>Cardamine californica</i>	Milkmaids
<i>Cardamine oligosperma</i>	Bittercress
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Carex globosa</i>	Round-fruited sedge
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap plant
<i>Cirsium vulgare</i>	Bull thistle
<i>Cistus creticus</i>	Rock-rose
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Cortaderia jubata</i>	Pampas grass
<i>Corylus cornuta</i> var. <i>californica</i>	Hazelnut
<i>Corylus cornuta</i> var. <i>californica</i>	Hazelnut
<i>Cotoneaster</i> sp.	Cotoneaster
<i>Crepis</i> sp.	Hawkweed
<i>Cynoglossum grande</i>	Hound's tongue
<i>Cynosurus echinatus</i>	Dog-tail grass



<i>Cytisus scoparius</i>	Scotch broom
<i>Dichelostemma congestum</i>	Ookow
<i>Disporum hookeri</i>	Oregon fairy bells
<i>Dryopteris arguta</i>	Wood fern
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	Blue wildrye
<i>Epipactis helleborine</i>	Helleborine
<i>Erigeron karvinskianus</i>	Mexican daisy
<i>Euphorbia crenulata</i>	Chinese caps
<i>Festuca arundinacea</i>	Reed fescue
<i>Festuca californica</i>	California fescue
<i>Festuca idahoensis</i>	Idaho fescue
<i>Filago gallica</i>	Narrow-leaved filago
<i>Fragaria vesca</i>	Wood strawberry
<i>Galium aparine</i>	Common bedstraw
<i>Galium californicum</i> ssp. <i>californicum</i>	California bedstraw
<i>Galium porrigens</i> var. <i>porrigens</i>	Climbing bedstraw
<i>Galium triflorum</i>	Sweet-scented bedstraw
<i>Gastridium ventricosum</i>	Nitgrass
<i>Genista monspessulana</i>	French broom
<i>Geranium dissectum</i>	Cut-leaf geranium
<i>Geranium molle</i>	Dove-footed geranium
<i>Githopsis specularioides</i>	Bluecup
<i>Gnaphalium californicum</i>	California everlasting
<i>Gnaphalium</i> sp.	Cudweed
<i>Grindelia camporum</i>	Gumplant
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	Hayfield tarweed
<i>Heteromeles arbutifolia</i>	Toyon
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley
<i>Hypochaeris glabra</i>	Smooth cat's ear/false dandelion
<i>Hypochaeris radicata</i>	Hairy cat's ear/false dandelion
<i>Iris douglasiana</i>	Douglas' iris
<i>Iris</i> sp.	Iris
<i>Juncus patens</i>	Common rush
<i>Kniphofia uvaria</i>	Red-hot poker
<i>Lathyrus vestitus</i>	Pacific pea
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Lonicera hispidula</i> var. <i>vacillans</i>	California honeysuckle
<i>Lotus micranthus</i>	Least trefoil
<i>Lotus wrangelianus</i>	Common trefoil
<i>Luzula comosa</i>	Wood rush
<i>Madia gracilis</i>	Slender tarweed
<i>Madia madioides</i>	Woodland madia
<i>Madia sativa</i>	Coast tarweed
<i>Marah fabaceus</i>	Wild cucumber

<i>Medicago arabica</i>	Spotted burclover
<i>Medicago polymorpha</i>	Burr clover
<i>Melica californica</i>	California melic grass
<i>Melica geyeri</i> var. <i>aristulata</i>	Geyer's onion-grass
<i>Melica imperfecta</i>	Small-flowered melic grass
<i>Melica torreyana</i>	Torrey's melic grass
<i>Mimulus aurantiacus</i>	Sticky monkeyflower
<i>Myosotis latifolia</i>	Forget-me-not
<i>Nassella pulchra</i>	Purple needlegrass
<i>Nemophila heterophylla</i>	Variable-leaved nemophila
<i>Nemophila pedunculata</i>	Meadow nemophila
<i>Osmorhiza chilensis</i>	Sweet cicely
<i>Oxalis pes-caprae</i>	Bermuda buttercups
<i>Pentagramma triangularis</i> ssp. <i>triangularis</i>	Goldback fern
<i>Perideridia kelloggii</i>	Yampah
<i>Phacelia distans</i>	Fern phacelia
<i>Piperia</i> sp.	Rein orchid
<i>Poa annua</i>	Annual bluegrass
<i>Polycarpon tetraphyllum</i>	Four-leaved allseed
<i>Polygala californica</i>	California milkwort
<i>Polypodium calirhiza</i>	Polypody fern
<i>Polystichum munitum</i>	Sword fern
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont's cottonwood
<i>Pseudotsuga menziesii</i> ssp. <i>menziesii</i>	Douglas fir
<i>Pyracantha</i> sp.	Firethorn
<i>Quercus agrifolia</i>	Coast live oak
<i>Quercus kelloggii</i>	Black oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus x morehus</i>	Oracle oak
<i>Ranunculus californicus</i>	California buttercup
<i>Ranunculus parviflorus</i>	Small-flowered buttercup
<i>Rhamnus californica</i>	Coffeeberry
<i>Rosa gymnocarpa</i>	Wood rose
<i>Sambucus mexicana</i>	Blue elderberry
<i>Sanicula bipinnatifida</i>	Purple sanicle
<i>Sanicula crassicaulis</i>	Pacific sanicle
<i>Satureja douglasii</i>	Yerba buena
<i>Sequoia sempervirens</i>	Coast redwood
<i>Sherardia arvensis</i>	Field madder
<i>Silybum marianum</i>	Milk thistle
<i>Sisymbrium officinale</i>	Hedge mustard
<i>Sisyrinchium bellum</i>	Blue-eyed grass
<i>Solanum americanum</i>	Small-flowered nightshade
<i>Soliva sessilis</i>	Soliva

<i>Sonchus asper</i>	Prickly sow-thistle
<i>Sonchus oleraceus</i>	Sow-thistle
<i>Spartium junceum</i>	Spanish broom
<i>Stachys ajugoides</i> var. <i>rigida</i>	Woodmint/hedge-nettle
<i>Stellaria media</i>	Common chickweed
<i>Symphoricarpos albus</i> ssp. <i>laevigatus</i>	Snowberry
<i>Symphoricarpos mollis</i>	Creeping snowberry
<i>Torilis arvensis</i>	Hedge parsley
<i>Toxicodendron diversilobum</i>	Poison oak
<i>Trifolium bifidum</i> var. <i>bifidum</i>	Notch-leaved clover
<i>Trifolium ciliolatum</i>	Tree clover
<i>Trifolium gracilentum</i> var. <i>gracilentum</i>	Pin-point clover
<i>Trifolium microcephalum</i>	Small-headed clover
<i>Trifolium microdon</i>	Thimble clover
<i>Trifolium</i> sp.	Clover
<i>Trifolium willdenovii</i>	Tomcat clover
<i>Trisetum canescens</i>	Tall trisetum
<i>Umbellularia californica</i>	California bay tree
<i>Uropappus lindleyi</i>	Silver puffs
<i>Veronica arvensis</i>	Corn speedwell
<i>Vicia americana</i> var. <i>americana</i>	American vetch
<i>Vicia sativa</i> ssp. <i>nigra</i>	Common vetch
<i>Vicia sativa</i> ssp. <i>sativa</i>	Spring vetch
<i>Vicia villosa</i> ssp. <i>varia</i>	Winter vetch
<i>Vulpia microstachys</i> var. <i>pauciflora</i>	Pacific fescue
<i>Vulpia myuros</i> var. <i>hirsuta</i>	Zorro grass
<i>Vulpia myuros</i> var. <i>myuros</i>	Zorro grass