

**APPENDIX B**  
**FISHER PROPERTY**  
**BOTANICAL ASSESSMENT AND SURVEY**  
**POINT ARENA, CALIFORNIA**

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**1.0 Introduction**

Denise and Andy Fisher are proposing to construct a single unit residential home on their 24.25 acre parcel located at 43400 Hathaway Crossing near the city of Point Arena, Mendocino County.

The Behren's silverspot butterfly (*Zerene behrensii*) is a federally listed endangered species whose range is restricted to the Coast Ranges from Pt. Arena to Cape Mendocino. U.S. Fish and Wildlife Service has requested a botanical survey to be conducted on the Fisher property to determine the presence or absence of host plants to the butterfly. Western dog violet (*Viola adunca*) is the primary larval food plant of the butterfly. It is an associate of coastal terrace prairie, a habitat that has been significantly reduced and degraded by development and grazing.

In addition to botanical surveys for butterfly host plants, state regulations regarding the protection of rare and endangered plants require surveys to establish the presence or absence of rare, threatened, or endangered plants in the proposed project area.

To comply with federal and state regulations regarding the protection of rare and endangered plant species, the Fisher's have contracted Prunuske Chatham, Inc. (PCI) to conduct a plant survey and habitat assessment to establish the presence or absence of host plants for the butterfly and rare, threatened, or endangered plants in the project area.

**2.0 Site Description**

The proposed project is located in a large subdivision east of Highway 1, northeast of the City of Point Arena, Mendocino County (See Vicinity Map,

Figure 1). The proposed residential unit will be constructed in an area of Northern coastal scrub, near Hathaway Crossing.

The primary plant communities occurring on the parcel are: Northern coastal scrub, willow riparian forest, closed-cone coniferous forest, and seasonal wetland. Areas of grassland are intermixed within the northern coastal scrub community.

### **3.0 Rare Threatened and Endangered Plants**

Special-status species are taxa listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NOAA Fisheries), or California Department of Fish and Game (CDFG); taxa designated as candidates for listing; or any species of concern or local concern by USFWS, NOAA Fisheries, and/or CDFG. In addition, the California Native Plant Society (CNPS) has compiled a list of plant species that are considered rare, threatened, or endangered. Consideration of these plants must be included during project evaluation in order to comply with the California Environmental Quality Act (CEQA) Guidelines concerning special-status species.

The most recent data available from the CDFG Natural Diversity Data Base (CNDDDB) were obtained for the Point Arena quadrangle and reviewed to determine potentially occurring rare, threatened, or endangered plant species within the project area (CDFG 2004). The CNDDDB reports occurrences of special-status species that have been entered into the database and does not generally include inventories of more common animals or plants. The absence of a species from the database does not necessarily mean that they do not occur in the area, only that no sightings have been reported. The CNPS Inventory of Rare and Endangered Vascular Plants of California, 6th Edition (Tibor 2001) was also reviewed for potentially-occurring special-status plants.

CNDDDB and CNPS records indicate that the following 28 special-status plants could potentially occur at the project site. These species include pink sand verbena (*Abronia umbellate* ssp. *breviflora*), Blasedale's bentgrass (*Agrostis blasdelei*), Bolander's reed grass (*Calamagrostis bolanderi*), coastal bluff morning glory (*Calystegia pupurata* ssp. *saxicola*), swamp harebell (*Campanula californica*), California sedge (*Carex californica*), Lyngbye's sedge (*Carex lyngbyei*), deceiving

sedge (*Carex saliniformis*), Humboldt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*), Mendocino coast paint brush (*Castilleja mendocinensis*), pygmy cypress (*Cupressus goveniana* ssp. *pigmaea*), supple daisy (*Erigeron supplex*), chocolate fritillary (*Fritillaria roderickii*), American manna grass (*Glyceria grandis*), pacific gilia (*Gilia capitata* ssp. *pacifica*), short-leaved evax (*Herpervax sparsiflora* var. *brevifolia*), thin-lobed horkelia (*Horkelia tenuiloba*), Contra Costa goldfields (*Lasthenia conjugens*), Baker's goldfields (*Lasthenia macrantha* ssp. *bakeri*), perennial goldfields (*Lasthenia macrantha* ssp. *macrantha*), coast lily (*Lilium maritimum*), purple-stemmed checkerbloom (*Sidalcea malviflora* ssp. *purpurea*), and maple-leaved checkerbloom (*Sidalcea malachroides*).

Status and life history characteristics for these species are described below (Tibor 2001), along with the observed presence of suitable habitat and potential for occurrence of special-status plant species.

In addition to special-status species, CNDDDB records also show potential occurrences of special-status plant communities. These records indicate the potential occurrence of five special status natural plant communities within the project area: Northern coastal bluff scrub, Coastal terrace prairie, Northern coastal salt marsh, Coastal brackish marsh, and Coastal and valley freshwater marsh.

#### 4.0 Special-status Plants

No special-status plants nor plant communities were observed during the field survey. A description of plant species considered during this evaluation follows:

**Pink sand verbena (*Abronia umbellata* ssp. *breviflora*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.

*Life form:* Perennial herb

*Habitat:* Coastal dunes and coastal strand

*Blooms:* June-October

Suitable habitat (listed above) for pink sand verbena is not present at the project site. Likelihood of occurrence of this species is low.

**Blasdale's bent grass (*Agrostis blasdalei*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Rhizomatous herb
- Habitat:* Coastal dunes, coastal scrub, coastal prairie
- Blooms:* May-July

Suitable habitat (coastal scrub) for Blasdale's bent grass is present at the project site, however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Bolander's reed grass (*Calamagrostis bolanderi*)**

- Status:* Considered by CNPS to have limited distribution. Eligible for placement on a watch list.
- Life form:* Rhizomatous herb
- Habitat:* Bogs and fens, closed-cone coniferous forest, coastal scrub, meadows and seeps, broadleaved upland forest, North Coast coniferous forest (mesic), marshes and swamps
- Blooms:* May-August

Suitable habitat (listed above) for Bolander's reed grass is present at the project site; however, impacts to this habitat are not anticipated as construction activities are not currently proposed within mesic (wet) areas of the property. In addition, this species was not observed during the survey. Likelihood of occurrence is low.

**Coastal bluff morning glory (*Calystegia pupurata ssp. saxicola*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Perennial herb
- Habitat:* Coastal dunes, coastal scrub
- Blooms:* May-August

Suitable habitat (coastal scrub) for coastal bluff morning glory is present at the project site, however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Swamp harebell (*Campanula californica*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Rhizomatous herb
- Habitat:* Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, freshwater marsh, North Coast coniferous forest (mesic).
- Blooms:* June-October

Suitable habitat (listed above) for swamp harebell is present at the project site; however, impacts to this habitat are not anticipated as construction activities are not currently proposed within mesic (wet) areas of the property. In addition, this species was not observed during the survey.

**California sedge (*Carex californica*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Rhizomatous herb
- Habitat:* Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, marshes and swamps
- Blooms:* May-August

Suitable habitat (listed above) for California sedge is present at the project site; however, impacts to this habitat are not anticipated as construction activities are not currently proposed within mesic (wet) areas of the property. In addition, this species was not observed during the survey. Likelihood of occurrence is low.

**Lyngbye's sedge (*Carex lyngbyei*)**

- Status:* CNPS List 2: Considered by CNPS to be rare, threatened, or endangered in California, more common elsewhere.
- Life form:* Rhizomatous herb
- Habitat:* Marshes and swamps (brackish or freshwater).
- Blooms:* May-August

Suitable habitat (freshwater and brackish marshes) for Lyngbye's sedge is not present at the project site. Likelihood of occurrence of this species is low.

**Deceiving sedge (*Carex saliniformis*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Rhizomatous herb
- Habitat:* Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps
- Blooms:* June

Suitable habitat (listed above) for deceiving sedge is present at the project site; however, impacts to this habitat are not anticipated as construction activities are not currently proposed within mesic (wet) areas of the property. In addition, this species was not observed during the survey.

**Humbolt Bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Annual herb hemiparasitic
- Habitat:* Coastal saltmarsh
- Blooms:* April-August

Suitable habitat (coastal saltmarsh) for Humbolt Bay owl's clover is not present at the project site. In addition, this species was not observed during the survey. Likelihood of occurrence is low.

**Mendocino coast paint brush (*Castilleja mendocninensis*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Annual herb hemiparasitic
- Habitat:* Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal prairie, coastal scrub
- Blooms:* April-August

Suitable habitat (listed above) for Mendocino coast paint brush is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Pygmy cypress (*Cupressus goveniana* ssp. *pigmaea*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.  
*Life form:* Evergreen tree  
*Habitat:* Closed-cone coniferous forest

Suitable habitat (closed-cone coniferous forest) for Pygmy cypress is present at the project site; however, the podzol soils associated with this species do not occur. This evergreen species was not observed during the field survey. Likelihood of occurrence is low.

**Supple daisy (*Erigeron supplex*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.  
*Life form:* Perennial herb  
*Habitat:* Coastal bluff scrub, coastal prairie  
*Blooms:* May-July

Suitable habitat (listed above) for supple daisy is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Chocolate fritillary (*Fritillaria roderickii*)**

*Status:* State listed as endangered. Considered by CNPS to be rare, threatened, or endangered in California or elsewhere.  
*Life form:* Bulbiferous herb  
*Habitat:* Coastal bluff scrub, coastal prairie, valley and foothill grassland  
*Blooms:* March-May

Suitable habitat (listed above) for chocolate fritillary is marginally present in the mixed grassland areas at the project site; however, this species was not observed during the field survey which occurred during the typical blooming and/or fruiting period for this species. Likelihood of occurrence is low.

**American manna grass (*Glyceria grandis*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California and more common elsewhere.  
*Life form:* Rhizomatous herb  
*Habitat:* Meadows, ditches, streams  
*Blooms:* June-August

Suitable habitat (listed above) for American manna grass is present project site; however, impacts to these habitats are not anticipated as construction activities are not currently proposed in the mesic (wet) areas of the property. In addition, this species was not observed during the survey. Likelihood of occurrence is low.

**Pacific gilia (*Gilia capitata ssp. pacifica*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.  
*Life form:* Annual herb  
*Habitat:* Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland  
*Blooms:* May-August

Suitable habitat (listed above) for pacific gilia is marginally present in the mixed grassland areas at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Short-leaved evax (*Hesperevax sparsiflora var. brevifolia*)**

*Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere and more common elsewhere.  
*Life form:* Annual herb  
*Habitat:* Coastal bluff scrub, coastal dunes  
*Blooms:* March-June

Suitable habitat (listed above) for short-leaved evax is not present at the project site; Likelihood of occurrence of this species is low.

**Thin-lobed horkelia (*Horkelia tenuiloba*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Perennial herb
- Habitat:* Broadleaved upland forest, chaparral, valley and foothill grassland
- Blooms:* May-July

Suitable habitat (listed above) for thin-lobed horkelia is marginally present in the mixed grassland areas at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Contra Costa goldfields (*Lasthenia conjugens*)**

- Status:* Federally listed as endangered. Considered by CNPS to be rare, threatened, or endangered in California or elsewhere.
- Life form:* Annual herb
- Habitat:* Valley and foothill grassland, vernal pools, cismontane woodland (mesic)
- Blooms:* March-June

Suitable mesic habitat for Contra Costa goldfields such as vernal pools or mesic swales in grassland or woodland is not present at the project site. This species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Baker's goldfields (*Lasthenia macrantha* ssp. *bakeri*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Perennial herb
- Habitat:* Closed-cone coniferous forest, coastal scrub (mesic)
- Blooms:* April-October

Suitable habitat (listed above) for Baker's goldfields is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Perennial goldfields (*Lasthenia macrantha* ssp. *macrantha*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Perennial herb
- Habitat:* Coastal bluff scrub, coastal dunes, coastal scrub
- Blooms:* January-November

Suitable habitat (listed above) for perennial goldfields is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Coast lily (*Lilium maritimum*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California and elsewhere. Eligible for state listing.
- Life form:* Bulbiferous herb
- Habitat:* Closed-cone coniferous forest, coastal prairie, coastal scrub, broadleaved upland forest, North coast coniferous forest
- Blooms:* May-August

Suitable habitat (listed above) for coast lily is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Purple-stemmed checkerbloom (*Sidalcea malviflora* ssp. *purpurea*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Rhizomatous herb
- Habitat:* Broadleaved upland forest, coastal prairie
- Blooms:* May

Suitable habitat (listed above) for purple-stemmed checkerbloom is not present at the project site. This species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**Maple-leaved checkerbloom (*Sidalcea malachroides*)**

- Status:* Considered by CNPS to be rare, threatened, or endangered in California or elsewhere. Eligible for state listing.
- Life form:* Perennial herb
- Habitat:* Broadleaved upland forest, coastal prairie, coastal scrub, North coast coniferous forest
- Blooms:* April-August

Suitable habitat (listed above) for maple-leaved checkerbloom is present at the project site; however, this species was not observed during the field survey which occurred during the typical blooming period for this species. Likelihood of occurrence is low.

**4.0 Field Survey Methodology**

The field survey was conducted at the project site on April 26, 2004, during the time of the year when plants are typically in bloom to ensure proper identification of plant species. The survey focused on areas in the vicinity of the proposed building site and through the areas currently considered for development for an additional access road, along with mesic and riparian areas.

Plants were identified according to the nomenclature used in *The Jepson Manual* (Hickman, 1993). Plants were keyed using *The Jepson Manual* (Hickman, 1993). Plants were identified to the extent necessary to determine rarity. A species list is included as an appendix to this report (see Appendix A).

An aerial photo of the project area was used in the field for vegetation mapping. Primary plant communities and drainages occurring in the vicinity of the proposed project were mapped. In addition, any observed locations of potential Behren's silverspot butterfly host plants were mapped (see Figure 2).

**5.0 Existing Plant Communities**

**5.1 Northern coastal scrub**

The south and southwest-facing slopes of the property are primarily northern coastal scrub habitat. Dominant shrubs are coyote bush (*Baccharis pilularis*)

and coffeeberry (*Rhamnus californicus*). In wetter areas, located at the southern tip of the property, cow parsnip (*Heuracleum lanatum*), California blackberry (*Rubus ursinus*), and blue rush (*Juncus patens*) are common understory plants.

Grassy areas are intermixed within the coastal scrub habitat. Drier areas support native bunch grasses such as Idaho fescue (*Festuca idahoensis*) while wetter areas are dominated by the non-native sweet vernal grass (*Anthoxanthum odoratum*).

## **5.2 Willow riparian forest**

Two riparian areas occur on the property. The largest is located in a drainage that bisects the property along its lower elevation. It is characterized by a dense tree canopy dominated by willows (*Salix lasiolepis* and *S. scouleriana*) with an understory of stinging nettle (*Urtica dioica*), and salmon berry (*Rubus spectabilis*).

## **5.7 Closed-cone coniferous forest**

On the upper slopes of the property, along the northeastern boundary, closed-cone coniferous forest occurs. Douglas fir (*Pseudotsuga menziesii* ssp. *menziesii*) dominates the tree canopy with wax myrtle (*Myrica californica*) and coffeeberry as common understory shrubs/trees. Monterey cypress (*Cupressus macrocarpa*) also occurs. In the more open areas, coyote bush dominates the shrub layer.

## **5.9 Seasonal wetland**

Downslope of the closed-cone coniferous forest is a large seep area with water-loving plants that are commonly associated with seasonal wetlands. These include horsetail (*Equisetum* sp.), California blackberry (*Rubus ursinus*), pacific rush (*Juncus effusus*), and paniced bulrush (*Scirpus microcarpus*).

## **6.0 Survey Results**

A total of 117 plant species were identified. These included 84 native plants (72%) and 33 non-natives (28%) (see Appendix A).

### **6.1 Special status plant species**

No special-status plant species nor communities were identified within the project area.

### **6.2 Silverspot butterfly host plants**

A single population (approximately 20-30 plants) of western dog violet was observed on the property during the plant survey. The location, which is on a west-facing slope in a moist section of northern coastal scrub habitat, was mapped in the field (See Figure 2).

## **7.0 Project Impacts and Recommendations**

Impacts to special-status plants or sensitive habitats are not anticipated by activities associated with the proposed project. All building and driveway construction activities are proposed outside of sensitive habitats such as seasonal wetland or riparian woodland and do not appear to present a significant potential for sediment delivery due to erosion. In the event that the applicants modify their proposed project, a 100 ft. buffer area is recommended from the centerline of the drainage bisecting the property to protect the willow riparian forest. If the use of heavy equipment is required near sensitive habitats, then a visual indication of the limits of the buffer zone (ie. a temporary fence) is recommended.

Impacts to the population of western dog violet can and should be avoided by maintaining a buffer area of at least 50 feet around the plants. Any current or future activities that can cause disturbance to the existing conditions should occur outside this area.

## **8.0 References**

California Department of Fish and Game. 2002 California Natural Diversity Database, Rarefind Program. Sacramento, CA.

Entomological Consulting Services, Ltd. 1999. *Report on Habitat Assessment for Endangered Butterflies at Arena Cove*. Pleasant Hill, CA.

Hickman, James C. Ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, CA.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program. California Department of Fish and Game. Sacramento, CA.

Skinner, M.W. and B.M. Pavlik, eds. 1994. *Inventory of Rare and Endangered Vascular Plants of California*. Special Publication No. 1 (fifth edition). California Native Plant Society. Sacramento, CA.

Tibor, David P. 2001. *California Native Plant Society's Inventory of Rare and Endangered Plants of California*. Sixth Edition. California Native Plant Society, Sacramento, CA.

U.S. Department of Agriculture. 1973. *Mendocino County SCS Soil Survey, California*. Washington, D.C.: U.S. Department of Agriculture.

U.S. Geological Survey. 1978. *Point Arena 7.5 Minute Quadrangle, California*, Topographic Map, 1:24,000 scale. U.S. Dept. of the Interior. Rolla, MO.

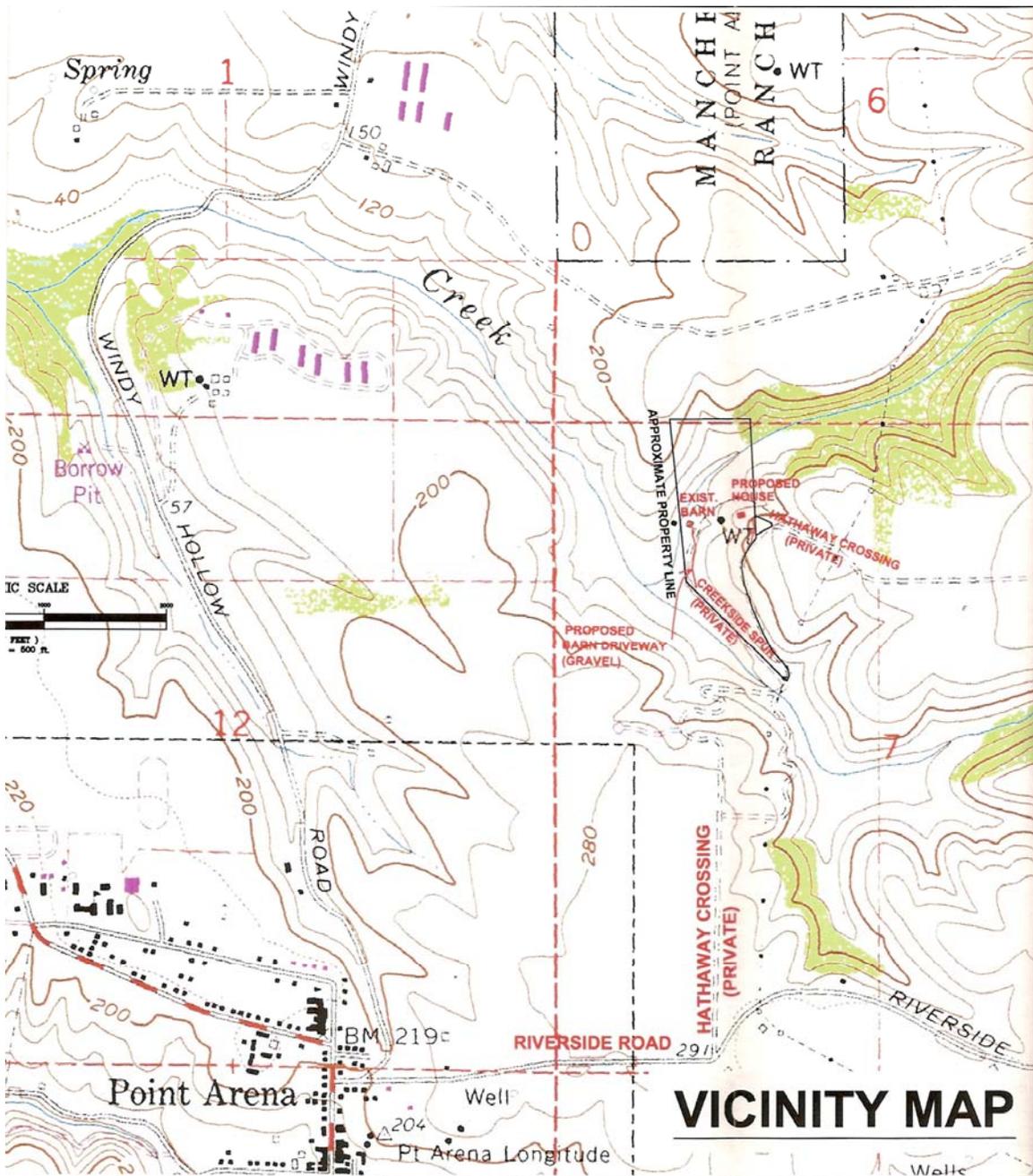
#### Plant List

| Family                           | Species  | Common Name        | Native |
|----------------------------------|--|--------------------|--------|
| <b>FERNS &amp; FERN ALLIES</b>   |  |                    |        |
| DRYOPTERIDEACEAE                 | <i>Athyrium filix-femina</i>                             | lady fern          | yes    |
|                                  | <i>Polystichum munitum</i>                               | western sword fern | yes    |
| EQUISETACEAE                     | <i>Equisetum</i> sp.                                     | horsetail          | yes    |
| PTERIDIACEAE                     | <i>Pentagramma triangularis</i> ssp. <i>triangularis</i> | goldback fern      | yes    |
|                                  | <i>Pteridium aquilinum</i> var. <i>pubescens</i>         | bracken fern       | yes    |
| <b>GYMNOSPERMS</b>               |  |                    |        |
| CUPRESSACEAE                     | <i>Cupressus macrocarpa</i>                              | Monterey cypress   | yes    |
| PINACEAE                         | <i>Pinus muricata</i>                                    | Bishop pine        | yes    |
|                                  | <i>Psuedotsuga menziesii</i> var. <i>menziesii</i>       | Douglas fir        | yes    |
| TAXODIACEAE                      | <i>Sequoia sempervirens</i>                              | coast redwood      | yes    |
| <b>ANGIOSPERMS/<br/>MONOCOTS</b> |  |                    |        |
| CYPERACEAE                       | <i>Carex obnupta</i>                                     | sedge              | yes    |
|                                  | <i>Cyperus eragrostis</i>                                | umbrella sedge     | yes    |
|                                  | <i>Carex gracilior</i>                                   | sedge              | yes    |

| Family        | Species  | Common Name          | Native |
|---------------|--|----------------------|--------|
|               | <i>Eleocharis macrostachya</i>                           | spikerush            | yes    |
|               | <i>Scirpus microcarpus</i>                               | panicled bulrush     | yes    |
| IRIDACEAE     | <i>Iris douglasiana</i>                                  | Douglas iris         | yes    |
| JUNCACEAE     | <i>Juncus bufonius</i> var. <i>bufonius</i>              | toad rush            | yes    |
|               | <i>Junus bolanderi</i>                                   | rush                 | yes    |
|               | <i>Juncus effuses</i>                                    | pacific rush         | yes    |
|               | <i>Juncus patens</i>                                     | blue rush            | yes    |
|               | <i>Luzula comosa</i>                                     | hairy wood rush      | yes    |
| LILIACEAE     | <i>Brodiaea</i> sp.                                      | brodiaea             | yes    |
|               | <i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i> | soap plant           | yes    |
|               | <i>Disporum smithii</i>                                  | disporum             | yes    |
|               | <i>Smilacina racemosa</i>                                | false solomon's seal | yes    |
|               | <i>Sisyrinchium bellum</i>                               | blue-eyed grass      | yes    |
|               | <i>Zigadenis fremontii</i>                               | death camas          | yes    |
| POACEAE       | <i>Anthoxanthum odoratum</i>                             | sweet vernal grass   | no     |
|               | <i>Avena fatua</i>                                       | wild oats            | no     |
|               | <i>Briza maxima</i>                                      | quaking grass        | no     |
|               | <i>Briza minor</i>                                       | little quaking grass | no     |
|               | <i>Bromus carinatus</i>                                  | California brome     | yes    |
|               | <i>Bromus diandrus</i>                                   | ripgut brome         | no     |
|               | <i>Bromus hordeaceus</i>                                 | soft chess brome     | no     |
|               | <i>Elymus glaucus</i>                                    | blue wildrye         | yes    |
|               | <i>Calamagrostis nutkeansis</i>                          | pacific reed grass   | yes    |
|               | <i>Festuca idahoensis</i>                                | blue fescue          | yes    |
|               | <i>Holcus lanatus</i>                                    | velvet grass         | no     |
|               | <i>Hordeum marinum</i> ssp. <i>gussoneanum</i>           | mediterranean barley | no     |
|               | <i>Hordeum murinum</i> ssp. <i>leporinum</i>             | barley               | no     |
|               | <i>Lolium multiflorum</i>                                | Italian ryegrass     | no     |
|               | <i>Nassella pulchra</i>                                  | purple needle grass  | yes    |
|               | <i>Vulpia myuros</i>                                     | rat tail grass       | no     |
| <b>DICOTS</b> |  |                      |        |
| ANACARDIACEAE | <i>Toxicodendron diversilobum</i>                        | western poison oak   | yes    |
| APIACEAE      | <i>Conium maculatum</i>                                  | poison hemlock       | no     |
|               | <i>Heracleum lanatum</i>                                 | cow parsnip          | yes    |
|               | <i>Oenanthe sarmentosa</i>                               | water hemlock        | yes    |
|               | <i>Sanicula crassicaulis</i>                             | pacific sanicle      | yes    |
|               | <i>Scandix pecten-veneris</i>                            | venus needle         | no     |
| ARACEAE       | <i>Lysichiton americanum</i>                             | yellow skunk cabbage | yes    |
| ASTERACEAE    | <i>Achillea milleformis</i>                              | yarrow               | yes    |
|               | <i>Artemesia douglasiana</i>                             | mugwort              | yes    |

| Family           | Species   | Common Name            | Native |
|------------------|---|------------------------|--------|
|                  | <i>Baccharis pilularis</i>                      | coyote brush           | yes    |
|                  | <i>Cirsium occidentale</i>                      | cobwebby thistle       | yes    |
|                  | <i>Cirsium vulgare</i>                          | bull thistle           | no     |
|                  | <i>Hypochaeris glabra</i>                       | smooth cat's ear       | no     |
|                  | <i>Hypochaeris radicata</i>                     | rough cat's ear        | no     |
|                  | <i>Silybum marianum</i>                         | milk thistle           | no     |
|                  | <i>Sonchus asper</i>                            | prickly sow ear        | no     |
|                  | <i>Wyethia angustifolia</i>                     | mules ears             | yes    |
| BETULACEAE       | <i>Alnus rubra</i>                              | red alder              | yes    |
|                  | <i>Corylus cornuta</i> var. <i>californica</i>  | hazelnut               | yes    |
| BORAGINACEAE     | <i>Myosotis latifolia</i>                       | forget-me-not          | no     |
| BRASSICACEAE     | <i>Cardamine californica</i>                    | milk maids             | yes    |
| CAPRIFOLIACEAE   | <i>Lonicera hispidula</i> var. <i>vacillans</i> | honeysuckle            | yes    |
|                  | <i>Lonicera involucrata</i>                     | twinberry              | yes    |
|                  | <i>Sambucus racemosa</i>                        | red elderberry         | yes    |
|                  | <i>Symphoricarpos mollis</i>                    | trailing snowberry     | yes    |
| CARYOPHYLLACEAE  | <i>Anagalis arvensis</i>                        | scarlet pimpernil      | no     |
|                  | <i>Cerastium glomeratum</i>                     | rough mouse ears       | no     |
|                  | <i>Stellaria media</i>                          | common chickweed       | no     |
| CONVOLVULACEAE   | <i>Convolvulus arvensis</i>                     | bindweed               | no     |
| CUCURBITACEAE    | <i>Marah oreganos</i>                           | coast manroot          | yes    |
| ERICACEAE        | <i>Arbutus menziesii</i> Pursh                  | Pacific madrone        | yes    |
|                  | <i>Gaultheria shallon</i>                       | gaultheria             | yes    |
|                  | <i>Vaccinium ovatum</i>                         | California huckleberry | yes    |
| FABACEAE         | <i>Lathyrus vestitus</i>                        | wild sweet pea         | yes    |
|                  | <i>Lotus corniculatus</i>                       | bird's foot trefoil    | no     |
|                  | <i>Lotus formosissimus</i>                      | lotus                  | yes    |
|                  | <i>Lotus humistratus</i>                        | lotus                  | no     |
|                  | <i>Lupinus bicolor</i>                          | miniature lupine       | yes    |
|                  | <i>Medicago polymorpha</i>                      | burclover              | no     |
|                  | <i>Trifolium fucatum</i>                        | clover                 | yes    |
|                  | <i>Trifolium willdenovii</i>                    | clover                 | yes    |
|                  | <i>Vicia sativa</i>                             | vetch                  | no     |
| GARRYACEAE       | <i>Garrya elliptica</i>                         | silk-tassel bush       | yes    |
| GERANIACEAE      | <i>Erodium mochatum</i>                         | filaree                | no     |
|                  | <i>Geranium dissectum</i>                       | geranium               | no     |
| GROSSULARIACEAE  | <i>Ribes sanguineum</i> var. <i>glutinosum</i>  | red-flowering current  | yes    |
| HIPPOCASTANACEAE | <i>Aesculus californica</i>                     | California buckeye     | yes    |
| HYDROPHYLACEAE   | <i>Nemophila</i> sp.                            | nemophila              | yes    |
| LAMIACEAE        | <i>Satureja douglasii</i>                       | yerba buena            | yes    |
|                  | <i>Stachys ajugoides</i> var. <i>rigida</i>     | rigid hedge nettle     | yes    |

| Family          | Species   | Common Name           | Native |
|-----------------|---|-----------------------|--------|
| LINACEAE        | <i>Linum bienne</i>                                 | flax                  | no     |
| MYRICACEAE      | <i>Myrica californica</i>                           | wax myrtle            | yes    |
| PAPAVERACEAE    | <i>Eschscholzia californica</i>                     | California poppy      | yes    |
| PHILADELPHACEAE | <i>Whipplea modesta</i>                             | modesty               | yes    |
| PLANTAGINACEAE  | <i>Plantago erecta</i>                              | dwarf plantain        | yes    |
|                 | <i>Plantago lanceolatum</i>                         | English plantain      | no     |
| POLYGALACEAE    | <i>Polygala californica</i>                         | California milkwort   | yes    |
| POLYGONACEAE    | <i>Rumex acetosella</i>                             | sheep sorrel          | no     |
|                 | <i>Rumex crispus</i>                                | curly dock            | no     |
| PORTULACACEAE   | <i>Clatonia perfoliata</i> ssp. <i>perfoliata</i>   | miner's lettuce       | yes    |
| RANUNCULACEAE   | <i>Ranunculus californicus</i>                      | buttercup             | yes    |
| RHAMNACEAE      | <i>Rhamnus californicus</i>                         | coffee berry `        | yes    |
| ROSACEAE        | <i>Fragaria vesca</i>                               | wood strawberry       | yes    |
|                 | <i>Rosa californica</i>                             | California rose       | yes    |
|                 | <i>Rubus ursinus</i>                                | California blackberry | yes    |
|                 | <i>Rubus parviflorus</i>                            | thimbleberry          | yes    |
|                 | <i>Rubus spectabilis</i>                            | salmon berry          | yes    |
| RUBIACEAE       | <i>Galium aparine</i>                               | goose grass           | yes    |
|                 | <i>Galium californicum</i> ssp. <i>californicum</i> | California bedstraw   | yes    |
| SALICACEAE      | <i>Salix lasiolepis</i>                             | arroyo willow         | yes    |
|                 | <i>Salix lucida</i> ssp. <i>lasiandra</i>           | shining willow        | yes    |
|                 | <i>Salix scouleriana</i>                            | Scouler's willow      | yes    |
| SAXIFRAGACEAE   | <i>Heuchera micrantha</i>                           | alumroot              | yes    |
| URTICACEAE      | <i>Urtica dioica</i>                                | stinging nettle       | yes    |
| VIOLACEAE       | <i>Viola adunca</i>                                 | western dog violet    | yes    |



# VICINITY MAP

|                     |                       |           |      |    |  |
|---------------------|-----------------------|-----------|------|----|--|
| , INC.<br>5465<br>) | DATE : March 30, 2004 | REVISIONS | DATE | BY | <b>PREPARED FOR:</b><br>Denise and Andy Fisher<br>43400 Hathaway Crossing<br>Point Arena, CA 95468 |
|                     | SCALE : 1" = 500'     |           |      |    |  |
|                     | CHECKED BY: DPF       |           |      |    |  |
|                     | DRAFTED BY: EA        |           |      |    |  |

