# Appendix S1

Plant list for the Jack & Laura Dangermond Preserve as of September 2021. Rarity is designated by the California Rare Plant Rank. FE = Federal Endangered, FT = Federal Threatened, SE = State Endangered, ST = State Threatened, FP = Fully Protected, SC = State Candidate, SSC = California Species of Special Concern. (K. Easterday, The Nature Conservancy, personal communication, September 19, 2021)

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| Scientific Name | Common Name | Family | Provenance | Rarity |
| *Abronia maritima* | Sticky sand verbena | Nyctaginaceae | native | 4.2 |
| *Abronia umbellata* var. *umbellata* | Beach sand verbena | Nyctaginaceae | native | - |
| *Acacia longifolia* | Golden wattle | Fabaceae | non-native | - |
| *Acacia saligna* | Orange wattle | Fabaceae | non-native | - |
| *Acer negundo* | Boxelder | Sapindaceae | native | - |
| *Achillea millefolium* | Yarrow | Asteraceae | native | - |
| *Achyrachaena mollis* | Blow wives | Asteraceae | native | - |
| *Acmispon americanus* var. *americanus* | Spanish lotus | Fabaceae | native | - |
| *Acmispon brachycarpus* | hill lotus, foothill deer vetch | Fabaceae | native | - |
| *Acmispon glaber* var. *glaber* | Deerweed | Fabaceae | native | - |
| *Acmispon junceus* var. *junceus* | Rush lotus | Fabaceae | native | - |
| *Acmispon maritimus* var. *maritimus* | Coastal lotus | Fabaceae | native | - |
| *Acmispon micranthus* | Small flowered lotus | Fabaceae | native | - |
| *Acmispon strigosus* | Strigose lotus | Fabaceae | native | - |
| *Acmispon wrangelianus* | Chilean trefoil | Fabaceae | native | - |
| *Acourtia microcephala* | Sacapellote | Asteraceae | native | - |
| *Adenostoma fasciculatum* var. *fasciculatum* | Chamise | Rosaceae | native | - |
| *Adiantum aleuticum* | Five finger maidenhair | Pteridaceae | native | - |
| *Adiantum jordanii* | California maidenhair fern | Pteridaceae | native | - |
| *Agoseris grandiflora* var. *grandiflora* | Giant mountain dandelion | Asteraceae | native | - |
| *Agoseris heterophylla* var. *cryptopleura* | Mountain dandelion | Asteraceae | native | - |
| *Agrostis pallens* | San Diego bent grass | Poaceae | native | - |
| *Agrostis stolonifera* | Redtop | Poaceae | non-native (invasive) | - |
| *Aira caryophyllea* | Shiver grass, Silver hairgrass | Poaceae | non-native | - |
| *Albizia lophantha* | Stink bean | Fabaceae | non-native (invasive) | - |
| *Aloe maculata* | - | Asphodelaceae | non-native | - |
| *Amaranthus blitoides* | Prostrate pigweed | Amaranthaceae | native | - |
| *Amaryllis belladonna* | Naked lady | Amaryllidaceae | non-native | - |
| *Amblyopappus pusillus* | Pineapple weed, Dwarf coastweed | Asteraceae | native | - |
| *Ambrosia chamissonis* | Silver beachweed | Asteraceae | native | - |
| *Ambrosia psilostachya* | Ragweed | Asteraceae | native | - |
| *Amsinckia intermedia* | Common fiddleneck | Boraginaceae | native | - |
| *Amsinckia menziesii* | Fiddleneck | Boraginaceae | native | - |
| *Amsinckia spectabilis* | seaside fiddleneck | Boraginaceae | native | - |
| *Anthemis cotula* | Dog fennel | Asteraceae | non-native (invasive) | - |
| *Anthriscus caucalis* | Bur chevril | Apiaceae | non-native | - |
| *Antirrhinum multiflorum* | Sticky snapdragon | Plantaginaceae | native | - |
| *Antirrhinum nuttallianum* subsp. *subsessile* | Nuttall's snapdragon | Plantaginaceae | native | - |
| *Aphanes occidentalis* | Western lady's mantle | Rosaceae | native | - |
| *Aphyllon tuberosum* | Chaparral broomrape | Orobanchaceae | native | - |
| *Apiastrum angustifolium* | Wild celery | Apiaceae | native | - |
| *Arbutus menziesii* | Madrono | Ericaceae | native | - |
| *Arctostaphylos glandulosa* subsp. *cushingiana* | Cushing manzanita | Ericaceae | native | - |
| *Arctostaphylos glandulosa* subsp. *glandulosa* | Eastwood manzanita | Ericaceae | native | - |
| *Arctostaphylos purissima* | La purisima manzanita | Ericaceae | native | 1B.1 |
| *Artemisia californica* | Coastal sage brush | Asteraceae | native | - |
| *Artemisia douglasiana* | California mugwort | Asteraceae | native | - |
| *Artemisia dracunculus* | Tarragon | Asteraceae | native | - |
| *Arundo donax* | Giant reed | Poaceae | non-native (invasive) | - |
| *Asclepias fascicularis* | Milkweed | Apocynaceae | native | - |
| *Astragalus curtipes* | South coast milk vetch | Fabaceae | native | - |
| *Astragalus didymocarpus* var. *didymocarpus* | Common dwarf milkvetch | Fabaceae | native | - |
| *Astragalus nuttallii* var. *nuttallii* | Ocean bluff milk vetch | Fabaceae | native | 4.2 |
| *Astragalus nuttallii* var. *virgatus* | San francisco rattleweed | Fabaceae | native | - |
| *Astragalus trichopodus* var. *phoxus* | Santa barbara milk vetch | Fabaceae | native | - |
| *Atriplex lentiformis* | Big saltbush | Chenopodiaceae | native | - |
| *Atriplex leucophylla* | Sea scale | Chenopodiaceae | native | - |
| *Atriplex nummularia* | Bluegreen saltbush | Chenopodiaceae | non-native | - |
| *Atriplex prostrata* | Fat-hen | Chenopodiaceae | non-native | - |
| *Atriplex semibaccata* | Australian saltbush | Chenopodiaceae | non-native (invasive) | - |
| *Atriplex suberecta* | Peregrine saltbush | Chenopodiaceae | non-native | - |
| *Avena barbata* | Slim oat | Poaceae | non-native (invasive) | - |
| *Avena fatua* | Wildoats | Poaceae | non-native (invasive) | - |
| *Avena sativa* | Wild oat | Poaceae | non-native | - |
| *Azolla filiculoides* | Mosquito fern | Azollaceae | native | - |
| *Baccharis glutinosa* | Salt Marsh baccharis | Asteraceae | native | - |
| *Baccharis pilularis* var. *pilularis* | Coyote brush | Asteraceae | native | - |
| *Baccharis salicifolia* | Mule fat | Asteraceae | native | - |
| *Berberis pinnata* subsp. *pinnata* | Barberry | Berberidaceae | native | - |
| *Berula erecta* | Cut leaved water parsnip | Apiaceae | native | - |
| *Blitum californicum (Chenopodium californicum)* | Soaproot | Chenopodiaceae | native | - |
| *Bloomeria crocea* var. *crocea* | Common goldenstar | Themidaceae | native | - |
| *Bolboschoenus maritimus* subsp. *paludosus* | Saltmarsh bulrush | Cyperaceae | native | - |
| *Bougainvillea spectabilis* | Great bougainvilea | Nyctaginaceae | non-native | - |
| *Bowlesia incana* | Bowlesia | Apiaceae | native | - |
| *Brachypodium hybridum* | Purple false brome | Poaceae | non-native (invasive) | - |
| *Brassica nigra* | Black mustard | Brassicaceae | non-native (invasive) | - |
| *Brickellia californica* | California brickellia | Asteraceae | native | - |
| *Briza minor* | Little rattlesnake grass | Poaceae | non-native | - |
| *Brodiaea jolonensis* | Jolon brodiaea | Themidaceae | native | - |
| *Brodiaea terrestris* | Dwarf brodiaea | Themidaceae | native | - |
| *Bromus arizonicus* | Arizona brome | Poaceae | native | - |
| *Bromus carinatus* var. *carinatus* | California brome | Poaceae | native | - |
| *Bromus diandrus* | Ripgut brome | Poaceae | non-native (invasive) | - |
| *Bromus hordeaceus* | Soft chess | Poaceae | non-native (invasive) | - |
| *Bromus laevipes* | Narrow flowered brome | Poaceae | native | - |
| *Bromus madritensis* subsp. *madritensis* | Foxtail chess | Poaceae | non-native | - |
| *Bromus madritensis* subsp. *rubens* | Foxtail brome | Poaceae | non-native (invasive) | - |
| *Bromus sitchensis* | Sitka brome | Poaceae | native | - |
| *Cakile maritima* | Sea rocket | Brassicaceae | non-native (invasive) | - |
| *Calamagrostis rubescens* | Pine grass, Pinegrass | Poaceae | native | - |
| *Calandrinia menziesii [ciliata]* | Red maids | Montiaceae | native | - |
| *Callitriche marginata* | Winged water starwort | Plantaginaceae | native | - |
| *Calochortus albus* | White fairy lantern | Liliaceae | native | - |
| *Calochortus fimbriatus* | Late-flowered mariposa lily | Liliaceae | native | 1B.3 |
| *Calystegia macrostegia* subsp. *cyclostegia* | Coast morning glory | Convolvulaceae | native | - |
| *Calystegia macrostegia* subsp. *intermedia* | South coast morning glory | Convolvulaceae | native | - |
| *Calystegia purpurata* subsp. *purpurata* | Smooth western morning glory | Convolvulaceae | native | - |
| *Camissoniopsis cheiranthifolia* subsp. *cheiranthifolia* | Beach evening-primrose | Onagraceae | native | - |
| *Camissoniopsis micrantha* | Spencer primrose | Onagraceae | native | - |
| *Campsis radicans* | Trumpet creeper | Bignoniaceae | non-native | - |
| *Capsella bursa-pastoris* | Shepherd's purse | Brassicaceae | non-native | - |
| *Cardamine californica* | Bitter cress | Brassicaceae | native | - |
| *Cardionema ramosissimum* | Sand mat | Caryophyllaceae | native | - |
| *Carduus pycnocephalus* | Italian thistle | Asteraceae | non-native | - |
| *Carduus tenuiflorus* | Slender flowered thistle | Asteraceae | non-native (invasive) | - |
| *Carex barbarae* | Valley sedge | Cyperaceae | native | - |
| *Carex globosa* | Round fruit sedge | Cyperaceae | native | - |
| *Carex pansa* | Sand dune sedge | Cyperaceae | native | - |
| *Carex sp. 1* | Carex | Cyperaceae | native | - |
| *Carex sp. 2* | Carex | Cyperaceae | native | - |
| *Carex tumulicola* | Split awn sedge | Cyperaceae | native | - |
| *Carpobrotus chilensis* | Sea fig | Aizoaceae | non-native (invasive) | - |
| *Carpobrotus edulis* | Iceplant | Aizoaceae | non-native (invasive) | - |
| *Carthamus lanatus* | Woolly distaff thistle | Asteraceae | non-native (invasive) | - |
| *Castilleja affinis* subsp. *affinis* | Wight's indian paint brush | Orobanchaceae | native | - |
| *Castilleja attenuata* | Narrow leaved owl's clover | Orobanchaceae | native | - |
| *Castilleja exserta* subsp. *exserta* | Purple owl's clover | Orobanchaceae | native | - |
| *Castilleja exserta* subsp. *latifolia* | Purple owl's clover | Orobanchaceae | native | - |
| *Castilleja foliolosa* | Texas paintbrush | Orobanchaceae | native | - |
| *Ceanothus crassifolius* var. *planus* | Hoary leaved ceanothus | Rhamnaceae | native | - |
| *Ceanothus cuneatus* var. *cuneatus* | Buck brush | Rhamnaceae | native | - |
| *Ceanothus thyrsiflorus* var. *thyrsiflorus* | Blue blossom | Rhamnaceae | native | - |
| *Cenchrus cladenstinus (Pennisetum clendsestinum)* | Kikuyu grass | Poaceae | non-native (invasive) | - |
| *Cenchrus longisetues (Pennisetum villosum)* | Feathertop | Poaceae | non-native (invasive) | - |
| *Cenchrus setaceus (Pennisetum setaceum)* | Fountaingrass | Poaceae | non-native (invasive) | - |
| *Centaurea melitensis* | Tocalote | Asteraceae | non-native (invasive) | - |
| *Centaurea solstitialis* | Yellow starthistle | Asteraceae | non-native (invasive) | - |
| *Cerastium glomeratum* | Large mouse ears | Caryophyllaceae | non-native | - |
| *Cercocarpus betuloides* var. *betuloides* | Birch leaf mountain mahogany | Rosaceae | native | - |
| *Chenopodium berlandieri* var. *sinuatum* | Pitseed goosefoot | Chenopodiaceae | native | - |
| *Chlorogalum pomeridianum* var. *pomeridianum* | common soaproot | Agavaceae | native | - |
| *Chorizanthe diffusa* | Diffuse spineflower | Polygonaceae | native | - |
| *Chorizanthe staticoides* | Turkish rugging | Polygonaceae | native | - |
| *Cirsium occidentale* var. *occidentale* | Cobweb thistle | Asteraceae | native | - |
| *Cirsium rhothophilum* | Surf thistle | Asteraceae | native | ST, 1B.2 |
| *Cirsium vulgare* | Bullthistle | Asteraceae | non-native (invasive) | - |
| *Clarkia dudleyana* | Dudley's clarkia | Onagraceae | native | - |
| *Clarkia purpurea* subsp. *quadrivulnera* | Purple clarkia | Onagraceae | native | - |
| *Clarkia unguiculata* | Woodland clarkia | Onagraceae | native | - |
| *Claytonia parviflora* | Narrow leaved miner's lettuce | Montiaceae | native | - |
| *Claytonia perfoliata* subsp. *mexicana* | Southern miner's lettuce | Montiaceae | native | - |
| *Claytonia perfoliata* subsp. *perfoliata* | Claytonia, Miner's lettuce | Montiaceae | native | - |
| *Clematis ligusticifolia* | Creek clematis | Ranunculaceae | native | - |
| *Clinopodium douglasii* | Yerba buena | Lamiaceae | native | - |
| *Collinsia heterophylla* var. *heterophylla* | Purple chinese houses | Plantaginaceae | native | - |
| *Comarostaphylis diversifolia* subsp. *planifolia* | Flat leaf summer holly | Ericaceae | native | - |
| *Conium maculatum* | Poison hemlock | Apiaceae | non-native (invasive) | - |
| *Convolvulus arvensis* | Field bindweed | Convolvulaceae | non-native (invasive) | - |
| *Cordylanthus rigidus* subsp. *rigidus* | Rigid bird's beak | Orobanchaceae | native | - |
| *Corethrogyne filaginifolia* | Common sandaster | Asteraceae | native | - |
| *Cornus sericea* subsp. *occidentalis* | Western dogwood | Cornaceae | native | - |
| *Cortaderia jubata* | Andean pampas grass | Poaceae | non-native (invasive) | - |
| *Cotoneaster lacteus* | Milkflower cotoneaster | Rosaceae | non-native (invasive) | - |
| *Cotula australis* | Brass buttons | Asteraceae | non-native | - |
| *Cotula coronopifolia* | Brass buttons | Asteraceae | non-native (invasive) | - |
| *Crassula connata* | Sand pygmy weed | Crassulaceae | native | - |
| *Cressa truxillensis* | Alkali weed | Convolvulaceae | native | - |
| *Crocanthemum scoparium* | Bisbee peak rushrose, Broom rush-rose | Cistaceae | native | - |
| *Croton californicus* | Desert croton | Euphorbiaceae | native | - |
| *Croton setiger* | Turkey-mullein | Euphorbiaceae | native | - |
| *Cryptantha clevelandii* var. *florosa* | Coastal cryptantha | Boraginaceae | native | - |
| *Cryptantha intermedia* var. *intermedia* | Common cryptanth | Boraginaceae | native | - |
| *Cryptantha muricata* var. *jonesii* | Jones' cryptantha | Boraginaceae | native | - |
| *Cucurbita foetidissima* | Missouri gourd | Cucurbitaceae | native | - |
| *Cuscuta californica* var. *californica* | Short flowered dodder | Convolvulaceae | native | - |
| *Cuscuta occidentalis* | California dodder | Convolvulaceae | native | - |
| *Cuscuta pacifica* var. *papillata* | Mendocino dodder | Convolvulaceae | native | 1B.2 |
| *Cuscuta subinclusa* | Canyon dodder | Convolvulaceae | native | - |
| *Cynodon dactylon* | Bermuda grass | Poaceae | non-native (invasive) | - |
| *Cynosurus echinatus* | Dogtail grass | Poaceae | non-native (invasive) | - |
| *Cyperus eragrostis* | Tall cyperus | Cyperaceae | native | - |
| *Dactylis glomerata* | Orchardgrass | Poaceae | non-native (invasive) | - |
| *Datura wrightii* | Jimsonweed | Solanaceae | native | - |
| *Daucus pusillus* | Wild carrot | Apiaceae | native | - |
| *Deinandra fasciculata* | Clustered tarweed | Asteraceae | native | - |
| *Deinandra increscens* subsp. *increscens* | Grassland tarweed | Asteraceae | native | - |
| *Deinandra increscens* subsp. *villosa* | Gaviota tarplant | Asteraceae | native | FE, SE, 1B.1 |
| *Delphinium parryi* subsp. *parryi* | San bernardino larkspur | Ranunculaceae | native | - |
| *Delphinium umbraculorum* | Umbrella larkspur | Ranunculaceae | native | 1B.3 |
| *Dendromecon rigida* | Bush poppy | Papaveraceae | native | - |
| *Descurainia pinnata* subsp. *brachycarpa* | Western tansymustard | Brassicaceae | native | - |
| *Dichelostemma capitatum* subsp. *capitatum* | Wild hyacinth | Themidaceae | native | - |
| *Dichondra occidentalis* | Western dichondra | Convolvulaceae | native | 4.2 |
| *Diospyros virginiana* | Persimmon | Ebenaceae | non-native | - |
| *Diplacus aurantiacus* var. *x lompocensis* | Vandenberg monkeyflower | Phrymaceae | native | ~~-~~ |
| *Dipsacus sativus* | Indian teasel | Dipsacaceae | non-native (invasive) | - |
| *Distichlis spicata* | Salt grass | Poaceae | native | - |
| *Drosanthemum floribundum* | Ice plant | Aizoaceae | non-native | - |
| *Drymocallis glandulosa* var. *wrangeliana* | Sticky cinquefoil | Rosaceae | native | - |
| *Dryopteris arguta* | Wood fern | Dryopteridaceae | native | - |
| *Dudleya caespitosa* | Sand lettuce | Crassulaceae | native | - |
| *Dudleya lanceolata* | Southern california dudleya | Crassulaceae | native | - |
| *Echium candicans* | Pride of madeira | Boraginaceae | non-native (invasive) | - |
| *Ehrharta calycina* | Perennial veldt grass | Poaceae | non-native (invasive) | - |
| *Elatine brachyspermum* | Short-seed waterwort | Elatinaceae | native | - |
| *Eleocharis parishii* | Parish's spike rush | Cyperaceae | native | - |
| *Elymus condensatus* | Giant wild rye | Poaceae | native | - |
| *Elymus glaucus* subsp. *glaucus* | Blue wild rye | Poaceae | native | - |
| *Elymus pacificus* | Pacific wild rye | Poaceae | native | - |
| *Elymus triticoides* | Beardless wild rye | Poaceae | native | - |
| *Elymus xgouldii [Leymus xmultiflorus]* | Many flowered wild rye | Poaceae | native | - |
| *Emmenanthe penduliflora* var. *penduliflora* | Whispering bells | Boraginaceae | native | - |
| *Encelia californica* | Bush sunflower | Asteraceae | native | - |
| *Epilobium brachycarpum* | Willow herb | Onagraceae | native | - |
| *Epilobium canum* subsp. *canum* | California fuchsia | Onagraceae | native | - |
| *Epilobium ciliatum* subsp. *ciliatum* | Willow herb | Onagraceae | native | - |
| *Equisetum arvense* | Common horsetail | Equisetaceae | native | - |
| *Equisetum hyemale* subsp. *affine* | Giant scouring rush | Equisetaceae | native | - |
| *Eragrostis curvula* | Weeping lovegrass | Poaceae | non-native | - |
| *Ericameria ericoides* | Mock heather | Asteraceae | native | - |
| *Erigeron canadensis* | Canada horseweed | Asteraceae | native | - |
| *Erigeron foliosus* var. *foliosus* | Thread stemmed fleabane | Asteraceae | native | - |
| *Erigeron philadelphicus* var. *philadelphicus* | Philadelphia fleabane | Asteraceae | native | - |
| *Eriodictyon capitatum* | Lompoc yerba santa | Boraginaceae | native | FE, SR, 1B.2 |
| *Eriogonum elongatum* var. *elongatum* | Long stemmed buckwheat | Polygonaceae | native | - |
| *Eriogonum fasciculatum* | California buckwheat | Polygonaceae | native | - |
| *Eriogonum parvifolium* | Sea cliff buckwheat | Polygonaceae | native | - |
| *Eriogonum roseum* | Wand buckwheat | Polygonaceae | native | - |
| *Eriophyllum confertiflorum* var. *confertiflorum* | Golden yarrow | Asteraceae | native | - |
| *Eriophyllum staechadifolium* | Lizard tail | Asteraceae | native | - |
| *Erodium botrys* | Big heron bill | Geraniaceae | non-native (invasive) | - |
| *Erodium brachycarpum* | White stemmed filaree | Geraniaceae | non-native (invasive) | - |
| *Erodium cicutarium* | Coastal heron's bill | Geraniaceae | non-native (invasive) | - |
| *Erodium moschatum* | Whitestem filaree | Geraniaceae | non-native (invasive) | - |
| *Eryngium vaseyi* var. *vaseyi* | Coyote thistle | Apiaceae | native | - |
| *Erysimum suffrutescens* | Suffrutescent wallflower | Brassicaceae | native | 4.2 |
| *Erythranthe cardinale* | Cardinal monkey flower | Phrymaceae | native | - |
| *Erythranthe floribunda* | Many flowered monkey flower | Phrymaceae | native | - |
| *Erythranthe guttata* | Yellow monkey flower | Phrymaceae | native | - |
| *Eschscholzia californica* | California poppy | Papaveraceae | native | - |
| *Eucalyptus citriodora* | Lemon scented gum | Myrtaceae | non-native | - |
| *Eucalyptus conferruminata* | Spider gum, bushy yate | Myrtaceae | non-native | - |
| *Eucalyptus globulus* | Blue gum | Myrtaceae | non-native (invasive) | - |
| *Eucalyptus tereticornis* | Forest red gum | Myrtaceae | non-native | - |
| *Eucalyptus viminalis* | Manna gum | Myrtaceae | non-native | - |
| *Eucrypta chrysanthemifolia* var. *chrysanthemifolia* | Common eucrypta | Boraginaceae | native | - |
| *Euphorbia serpyllifolia* subsp. *serpyllifolia* | - | Euphorbiaceae | native | - |
| *Extriplex californica* | California orach | Chenopodiaceae | native | - |
| *Festuca arundinacea* | Alta fescue, Reed fescue, Tall fescue | Poaceae | non-native | - |
| *Festuca bromoides* | Brome fescue | Poaceae | non-native | - |
| *Festuca microstachys* | Small fescue | Poaceae | native | - |
| *Festuca myuros* | Rattail sixweeks grass | Poaceae | non-native (invasive) | - |
| *Festuca octoflora* | Sixweeks grass | Poaceae | native | - |
| *Festuca perennis* | Italian rye grass | Poaceae | non-native | - |
| *Festuca rubra* | Red fescue | Poaceae | native | - |
| *Festuca temulenta* | Darnel, tares | Poaceae | non-native | - |
| *Foeniculum vulgare* | Fennel | Apiaceae | non-native (invasive) | - |
| *Fragaria vesca* | Wild strawberry | Rosaceae | native | - |
| *Frangula californica* subsp. *californica* | California coffeeberry | Rhamnaceae | native | - |
| *Frangula californica* subsp. *tomentella* | Hoary coffeeberry | Rhamnaceae | native | - |
| *Frankenia salina* | Yerba reuma, alkali heath | Frankeniaceae | native | - |
| *Fritillaria biflora* var. *biflora* | Chocolate lily | Liliaceae | native | - |
| *Galium angustifolium* subsp. *angustifolium* | Narrow leaved bedstraw | Rubiaceae | native | - |
| *Galium aparine* | Cleavers | Rubiaceae | native | - |
| *Galium californicum* subsp. *flaccidum* | California bedstraw | Rubiaceae | native | - |
| *Galium porrigens* var. *porrigens* | Graceful bedstraw | Rubiaceae | native | - |
| *Gamochaeta ustulata* | Featherweed | Asteraceae | native | - |
| *Gastridium phleoides* | Nit grass | Poaceae | non-native | - |
| *Gaultheria shallon* | Salal | Ericaceae | native | - |
| *Geranium dissectum* | Wild geranium | Geraniaceae | non-native (invasive) | - |
| *Geranium molle* | Crane's bill geranium | Geraniaceae | non-native (invasive) | - |
| *Gilia achilleifolia* subsp. *achilleifolia* | California gilia | Polemoniaceae | native | - |
| *Gilia achilleifolia* subsp. *multicaulis* | Many stemmed gilia | Polemoniaceae | native | - |
| *Gnaphalium palustre* | Lowland cudweed | Asteraceae | native | - |
| *Grindelia camporum* | Gumweed | Asteraceae | native | - |
| *Grindelia stricta* subsp. *platyphylla* | Gumplant, Gumweed, Oregon gumweed, Pacific gum plant | Asteraceae | native | - |
| *Hakea drupacea* | Sweet hakea | Proteaceae | non-native | - |
| *Hazardia squarrosa* var. *squarrosa* | Saw toothed goldenbush | Asteraceae | native | - |
| *Hedera helix* | English ivy | Araliaceae | non-native (invasive) | - |
| *Hedypnois rhagadioloides* | Crete weed | Asteraceae | non-native | - |
| *Helenium puberulum* | Sneezeweed | Asteraceae | native | - |
| *Heliotropium curassavicum* var. *oculatum* | Seaside heliotrope | Boraginaceae | native | - |
| *Helminthotheca echioides* | Bristly ox-tongue | Asteraceae | non-native (invasive) | - |
| *Hesperocyparis macrocarpa* | Monterey cypress | Cupressaceae | native | 1B.2 |
| *Heteromeles arbutifolia* | Toyon | Rosaceae | native | - |
| *Heterotheca grandiflora* | Telegraph weed | Asteraceae | native | - |
| *Heterotheca sessiliflora* subsp. *sessiliflora* | False goldenaster | Asteraceae | native | 1B.1 |
| *Hieracium argutum* | Hawkweed | Asteraceae | native | - |
| *Hirschfeldia incana* | Mustard | Brassicaceae | non-native (invasive) | - |
| *Holodiscus discolor* var. *discolor* | Oceanspray | Rosaceae | native | - |
| *Hordeum brachyantherum* | Meadow barley | Poaceae | native | - |
| *Hordeum brachyantherum* subsp. *brachyantherum* | Meadow barley | Poaceae | native | - |
| *Hordeum marinum* subsp. *gussoneanum* | Barley | Poaceae | non-native (invasive) | - |
| *Hordeum murinum* subsp. *glaucum* | Foxtail | Poaceae | non-native (invasive) | - |
| *Hordeum murinum* subsp. *leporinum* | Farmer's foxtail | Poaceae | non-native (invasive) | - |
| *Hordeum murinum* subsp. *murinum* | Wall barley | Poaceae | non-native (invasive) | - |
| *Horkelia cuneata* var. *cuneata* | Wedge leaved horkelia | Rosaceae | native | - |
| *Horkelia cuneata* var. *puberula* | Mesa horkelia | Rosaceae | native | 1B.1 |
| *Horkelia cuneata* var. *sericea* | Kellogg's horkelia | Rosaceae | native | 1B.1 |
| *Hydrocotyle verticillata* | Whorled marsh pennywort | Araliaceae | native | - |
| *Hypochaeris glabra* | Smooth cats ear | Asteraceae | non-native (invasive) | - |
| *Hypochaeris radicata* | Hairy cats ear | Asteraceae | non-native (invasive) | - |
| *Isocoma menziesii* var. *sedoides* | Menzies' goldenbush, Prostrate coastal goldenbush, White flowered dune goldenbush | Asteraceae | native | - |
| *Isocoma menziesii* var. *vernonioides* | Green leaved dune goldenbush | Asteraceae | native | - |
| *Isolepis cernua* | Low bulrush | Cyperaceae | native | - |
| *Juglans californica* | Southern california black walnut | Juglandaceae | native | 4.2 |
| *Juglans regia* | English walnut | Juglandaceae | non-native | - |
| *Juncus breweri* | Brewer's rush | Juncaceae | native | - |
| *Juncus bufonius* subsp. *bufonius* | toad rush | Juncaceae | native | - |
| *Juncus ensifolius* | Sword leaved rush | Juncaceae | native | - |
| *Juncus hesperius* | Coast or bog rush | Juncaceae | native | - |
| *Juncus mexicanus* | Mexican rush | Juncaceae | native | - |
| *Juncus patens* | Rush | Juncaceae | native | - |
| *Juncus phaeocephalus* var. *phaeocephalus* | Brown headed rush | Juncaceae | native | - |
| *Juncus xiphioides* | Iris leaved rush | Juncaceae | native | - |
| *Keckiella cordifolia* | Heart leaved keckiella | Plantaginaceae | native | - |
| *Koeleria gerardii [K. phleoides]* | annual june grass | Poaceae | non-native | - |
| *Lactuca saligna* | Willow lettuce | Asteraceae | non-native | - |
| *Lactuca serriola* | Prickly lettuce | Asteraceae | non-native (invasive) | - |
| *Lamarckia aurea* | Goldentop | Poaceae | non-native | - |
| *Lastarriaea coriacea* | Leather spineflower | Polygonaceae | native | - |
| *Lasthenia gracilis* | Needle goldfields | Asteraceae | native | - |
| *Lathyrus vestitus* var. *vestitus* | Hillside pea | Fabaceae | native | - |
| *Layia platyglossa* | Tidy tips | Asteraceae | native | - |
| *Lemna minor* | Smaller duckweed | Araceae | native | - |
| *Lemna minuta* | Least duckweed | Araceae | native | - |
| *Leontodon saxatilis* var. *longirostris [L. taraxicoides* subsp. *l]* | Hawkbit | Asteraceae | non-native | - |
| *Lepidium chalepense* | Lens-podded hoary cress | Brassicaceae | non-native | - |
| *Lepidium latifolium* | Perennial pepperweed | Brassicaceae | non-native (invasive) | - |
| *Lepidium nitidum* | Shining pepper grass | Brassicaceae | native | - |
| *Lepidium oblongum* | Veiny pepper grass | Brassicaceae | native | - |
| *Lepidium strictum* | Peppergrass, Prostrate pepper grass, Upright pepperweed | Brassicaceae | native | - |
| *Leptosiphon sp.* | - | Polemoniaceae | native | - |
| *Leptosyne gigantea* | Giant coreopsis | Asteraceae | native | - |
| *Lilium humboldtii* subsp. *ocellatum* | Humboldt lilly | Liliaceae | native | 4.2 |
| *Linanthus californicus* | Prickly phlox | Polemoniaceae | native | - |
| *Logfia filaginoides* | California cottonrose | Asteraceae | native | - |
| *Logfia gallica* | Narrowleaf cottonrose | Asteraceae | non-native | - |
| *Lomatium utriculatum* | Hog fennel | Apiaceae | native | - |
| *Lonicera hispidula* | Pink honeysuckle | Caprifoliaceae | native | - |
| *Lonicera japonica* | Japanese honeysuckle | Caprifoliaceae | non-native | - |
| *Lotus corniculatus* | Bird's foot trefoil | Fabaceae | non-native (invasive) | - |
| *Ludwigia sp.* | - | Onagraceae | - | - |
| *Lupinus albifrons* var. *douglasii* | Douglas' silver bush lupine | Fabaceae | native | - |
| *Lupinus arboreus* | Coastal bush lupine | Fabaceae | native | - |
| *Lupinus bicolor* | Lupine | Fabaceae | native | - |
| *Lupinus concinnus* | Bajada lupine, Elegant lupine, Scarlet lupine | Fabaceae | native | - |
| *Lupinus hirsutissimus* | Stinging lupine | Fabaceae | native | - |
| *Lupinus longifolius* | Long leaf bush lupine | Fabaceae | native | - |
| *Lupinus microcarpus* var. *densiflorus* | Chick lupine | Fabaceae | native | - |
| *Lupinus nanus* | Valley sky lupine | Fabaceae | native | - |
| *Lupinus succulentus* | Arroyo lupine | Fabaceae | native | - |
| *Lupinus truncatus* | Blunt leaved lupine | Fabaceae | native | - |
| *Luzula subsessilis* | Pacific woodrush | Juncaceae | native | - |
| *Lycopersicon esculentum* | Tomato | Solanaceae | non-native | - |
| *Lysimachia arvensis* | Scarlet pimpernel | Myrsinaceae | non-native | - |
| *Lythrum hyssopifolia* | Hyssop loosestrife | Lythraceae | non-native | - |
| *Madia exigua* | Small tarweed | Asteraceae | native | - |
| *Madia gracilis* | Gumweed | Asteraceae | native | - |
| *Madia sativa* | Coastal tarweed | Asteraceae | native | - |
| *Malacothrix saxatilis* var. *saxatilis* | Cliff aster | Asteraceae | native | 4.2 |
| *Malacothrix sp.* |  |  |  |  |
| *Malva nicaeensis* | Bull mallow | Malvaceae | non-native | - |
| *Malva parviflora* | Cheeseweed | Malvaceae | non-native | - |
| *Malva pseudolavatera* | Cretan mallow | Malvaceae | non-native | - |
| *Malvella leprosa* | Alkali mallow | Malvaceae | native | - |
| *Marah fabacea* | California man-root | Cucurbitaceae | native | - |
| *Marah macrocarpa* | Chilicothe | Cucurbitaceae | native | - |
| *Marrubium vulgare* | White horehound | Lamiaceae | non-native (invasive) | - |
| *Matricaria discoidea* | Pineapple weed | Asteraceae | native | - |
| *Medicago polymorpha* | California burclover | Fabaceae | non-native (invasive) | - |
| *Melica imperfecta* | Coast range melic | Poaceae | native | - |
| *Melica torreyana* | Torrey's melica | Poaceae | native | - |
| *Melilotus albus* | White sweetclover | Fabaceae | non-native (invasive) | - |
| *Melilotus indicus* | Annual yellow sweetclover | Fabaceae | non-native | - |
| *Mentzelia micrantha* | Small flowered stickleaf | Loasaceae | native | - |
| *Mesembryanthemum crystallinum* | Crystalline ice plant | Aizoaceae | non-native (invasive) | - |
| *Micropus californicus* var. *californicus* | Slender cottonweed | Asteraceae | native | - |
| *Microseris douglasii* subsp. *tenella* | Short scaled microseris | Asteraceae | native | - |
| *Mirabilis laevis* var. *crassifolia* | California four o'clock | Nyctaginaceae | native | - |
| *Monardella villosa* subsp. *obispoensis* | San luis obispo coyote mint | Lamiaceae | native | - |
| *Morella californica* | California wax myrtle | Myricaceae | native | - |
| *Mucronea californica* | California spineflower | Polygonaceae | native | 4.2 |
| *Myoporum laetum* | Ngaio tree | Scrophulariaceae | non-native (invasive) | - |
| *Nasturtium officinale* | Watercress | Brassicaceae | native | - |
| *Navarretia atractyloides* | Holly leaf navarretia | Polemoniaceae | native | - |
| *Navarretia hamata (intermediate between parrilova and hamata)* | Hooked navarretia, Hooked pincushionplant | Polemoniaceae | native | - |
| *Nemophila menziesii* var. *menziesii* | Baby blue eyes | Boraginaceae | native | - |
| *Nerium oleander* | Oleander | Apocynaceae | non-native (invasive) | - |
| *Nicotiana glauca* | Tree tobacco | Solanaceae | non-native (invasive) | - |
| *Notholithocarpus densiflorus* var. *densiflorus* | Tanoak | Fagaceae | native | - |
| *Oemleria cerasiformis* | Oso berry | Rosaceae | native | - |
| *Olea europaea* | Olive | Oleaceae | non-native (invasive) | - |
| *Opuntia ficus-indica* | Tuna | Cactaceae | non-native | - |
| *Orobanche californica* subsp. *grandis* | California broomrape | Orobanchaceae | native | - |
| *Osmorhiza brachypoda* | California sweet cicely | Apiaceae | native | - |
| *Oxalis corniculata* | Creeping wood sorrel | Oxalidaceae | non-native (invasive) | - |
| *Oxalis pes-caprae* | Bermuda buttercup | Oxalidaceae | non-native (invasive) | - |
| *Oxalis pilosa* | Hairy wood sorrel | Oxalidaceae | native | - |
| *Paeonia californica* | California peony | Paeoniaceae | native | - |
| *Pancratium maritimum* | Sea daffodil | Amaryllidaceae | non-native | - |
| *Papaver heterophyllum* | Wind poppy | Papaveraceae | native | - |
| *Parapholis incurva* | Sickle grass | Poaceae | non-native | - |
| *Pedicularis densiflora* | Indian warrior | Orobanchaceae | native | - |
| *Pellaea andromedifolia* | Coffee fern | Pteridaceae | native | - |
| *Pentagramma triangularis* subsp. *triangularis* | Gold back fern | Pteridaceae | native | - |
| *Persicaria amphibia* | Water smartweed | Polygonaceae | native | - |
| *Phacelia hubbyi* | Hubby's phacelia | Boraginaceae | native | 4.2 |
| *Phacelia imbricata* subsp. *imbricata* | Imbricate phacelia | Boraginaceae | native | - |
| *Phacelia ramosissima* | Branching phacelia | Boraginaceae | native | - |
| *Phacelia tanacetifolia* | Tansy leafed phacelia | Boraginaceae | native | - |
| *Phacelia viscida* subsp. *viscida* | Sticky phacelia | Boraginaceae | native | - |
| *Phalaris aquatica* | Harding grass | Poaceae | non-native (invasive) | - |
| *Phalaris minor?* | Mediterranean canarygrass | Poaceae | non-native | - |
| *Phalaris paradoxa* | Hood canarygrass | Poaceae | non-native | - |
| *Phoenix canariensis* | Canary island date palm | Arecaceae | non-native (invasive) | - |
| *Pholistoma auritum* var. *auritum* | Blue fiesta flower | Boraginaceae | native | - |
| *Phoradendron leucarpum* var. *macrophyllum* | Big leaf mistletoe | Visaceae | native | - |
| *Phoradendron leucarpum* var. *tomentosum* | mistletoe | Visaceae | native | - |
| *Phyla nodiflora* | Common lippia | Verbenaceae | native | - |
| *Phyllospadix scouleri* | Scouler's surfgrass | Zosteraceae | native | - |
| *Pickeringia montana* var. *montana* | Chaparral pea | Fabaceae | native | - |
| *Pinus coulteri* | Coulter pine | Pinaceae | native | - |
| *Pinus halepensis* | Aleppo pine | Pinaceae | non-native | - |
| *Pinus muricata* | Bishop pine | Pinaceae | native | - |
| *Pinus pinea* | Italian stone pine | Pinaceae | non-native | - |
| *Pinus radiata* | Monterey pine | Pinaceae | native | 1B.1 |
| *Piperia sp.* | Rein Orchid | Orchidaceae | native | - |
| *Plagiobothrys arizonicus* | Arizona popcorn flower | Boraginaceae | native | - |
| *Plagiobothrys bracteatus* | Bracted allocarya | Boraginaceae | native | - |
| *Plagiobothrys canescens* var. *catalinensis* | Catalina popcornflower | Boraginaceae | native | - |
| *Plagiobothrys nothofulvus* | Rusty haired popcorn flower | Boraginaceae | native | - |
| *Plagiobothrys undulatus* | Coast allocarya | Boraginaceae | native | - |
| *Plantago coronopus* | Cut leaf plantain | Plantaginaceae | non-native (invasive) | - |
| *Plantago erecta* | California plantain | Plantaginaceae | native | - |
| *Plantago lanceolata* | Ribwort | Plantaginaceae | non-native (invasive) | - |
| *Plantago major* | Common plantain | Plantaginaceae | non-native | - |
| *Platanus racemosa* | California sycamore | Platanaceae | native | - |
| *Platystemon californicus* | Cream cups | Papaveraceae | native | - |
| *Poa annua* | Annual blue grass | Poaceae | non-native | - |
| *Poa secunda* | Pine bluegrass | Poaceae | native | - |
| *Polycarpon tetraphyllum* var. *tetraphyllum* | Four leaved allseed | Caryophyllaceae | non-native | - |
| *Polygonum aviculare* subsp. *depressum* | Prostrate knotweed | Polygonaceae | non-native | - |
| *Polypodium californicum* | California polypody | Polypodiaceae | native | - |
| *Polypogon monspeliensis* | Annual beard grass | Poaceae | non-native (invasive) | - |
| *Polypogon viridis* | Water beard grass | Poaceae | non-native | - |
| *Polystichum munitum* | Western sword fern | Dryopteridaceae | native | - |
| *Populus trichocarpa* | Black cottonwood | Salicaceae | native | - |
| *Primula clevelandii* var. *insularis [Dodecatheon clevelandii* subsp. *insulare]* | Padre's shooting star | Primulaceae | native | - |
| *Prunus ilicifolia* subsp. *ilicifolia* | Holly leaf cherry | Rosaceae | native | - |
| *Pseudognaphalium bioletti* | Two-color rabbit tobacco | Asteraceae | native | - |
| *Pseudognaphalium californicum* | Ladies' tobacco | Asteraceae | native | - |
| *Pseudognaphalium luteoalbum* | Jersey cudweed | Asteraceae | non-native | - |
| *Pseudognaphalium stramineum* | Cottonbatting plant | Asteraceae | native | - |
| *Psilocarphus tenellus* | Slender woolly heads | Asteraceae | native | - |
| *Pteridium aquilinum* var. *pubescens* | Western bracken fern | Dennstaedtiaceae | native | - |
| *Pterostegia drymarioides* | Fairy mist | Polygonaceae | native | - |
| *Quercus agrifolia* var. *agrifolia* | Coast live oak | Fagaceae | native | - |
| *Quercus wislizeni* var. *frutescens* | Live oak | Fagaceae | native | - |
| *Rafinesquia californica* | California chicory | Asteraceae | native | - |
| *Ranunculus californicus* var. *californicus* | Common buttercup | Ranunculaceae | native | - |
| *Raphanus sativus* | Jointed charlock | Brassicaceae | non-native (invasive) | - |
| *Rhamnus crocea* | Redberry | Rhamnaceae | native | - |
| *Rhamnus ilicifolia* | Evergreen buckthorn | Rhamnaceae | native | - |
| *Rhus integrifolia* | Lemonade berry | Anacardiaceae | native | - |
| *Ribes amarum* var. *hoffmannii* | Hoffmann's bitter gooseberry | Grossulariaceae | native | 3 |
| *Ribes malvaceum* var. *malvaceum* | Chaparral currant | Grossulariaceae | native | - |
| *Ribes malvaceum* var. *viridifolium* | Chaparral currant | Grossulariaceae | native | - |
| *Ribes menziesii* var. *menziesii* | Canyon gooseberry | Grossulariaceae | native | - |
| *Ribes sanguineum* var. *glutinosum* | Flowering currant | Grossulariaceae | native | - |
| *Ribes speciosum* | Fuchsia flowered gooseberry | Grossulariaceae | native | - |
| *Rosa californica* | California wild rose | Rosaceae | native | - |
| *Rosmarinus officinalis* | Rosemary | Lamiaceae | non-native | - |
| *Rubus armeniacus* | Himalayan blackberry | Rosaceae | non-native (invasive) | - |
| *Rubus leucodermis* | White bark raspberry | Rosaceae | native | - |
| *Rubus parviflorus* | Thimbleberry | Rosaceae | native | - |
| *Rubus ursinus* | California blackberry | Rosaceae | native | - |
| *Rumex acetosella* | Sheep sorrel | Polygonaceae | non-native (invasive) | - |
| *Rumex conglomeratus* | Green dock | Polygonaceae | non-native | - |
| *Rumex crassus* | Willow leaved dock | Polygonaceae | native | - |
| *Rumex crispus* | Curly dock | Polygonaceae | non-native (invasive) | - |
| *Rumex pulcher* | Fiddleleaf dock | Polygonaceae | non-native | - |
| *Rumex salicifolius* | Willow leaved dock | Polygonaceae | native | - |
| *Ruppia cirrhosa* | Ditch grass | Ruppiaceae | native | - |
| *Ruppia sp.* | Ditch grass | Ruppiaceae | native | - |
| *Salicornia pacifica* | Pickleweed | Chenopodiaceae | native | - |
| *Salix laevigata* | Polished willow | Salicaceae | native | - |
| *Salix lasiolepis* | Arroyo willow | Salicaceae | native | - |
| *Salsola australis* | Russian thistle | Chenopodiaceae | non-native | - |
| *Salsola tragus* | Russian thistle | Chenopodiaceae | non-native (invasive) | - |
| *Salvia leucophylla* | Purple sage | Lamiaceae | native | - |
| *Salvia mellifera* | Black sage | Lamiaceae | native | - |
| *Salvia spathacea* | Hummingbird sage | Lamiaceae | native | - |
| *Sambucus nigra* subsp. *caerulea* | Blue elderberry | Adoxaceae | native | - |
| *Sanicula arguta* | Sharp toothed snakeroot | Apiaceae | native | - |
| *Sanicula crassicaulis* | Pacific sanicle | Apiaceae | native | - |
| *Scandix pecten-veneris* | Shepherd's needle | Apiaceae | non-native | - |
| *Schinus molle* | Peruvian pepper tree | Anacardiaceae | non-native (invasive) | - |
| *Schismus barbatus* | Old han schismus | Poaceae | non-native (invasive) | - |
| *Schoenoplectus americanus* | Chairmaker's bulrush | Cyperaceae | native | - |
| *Schoenoplectus californicus* | California bulrush | Cyperaceae | native | - |
| *Scirpus microcarpus* | Mountain bog bulrush | Cyperaceae | native | - |
| *Scrophularia atrata* | Black flowered figwort | Scrophulariaceae | native | 1B.2 |
| *Scrophularia californica* | California bee plant | Scrophulariaceae | native | - |
| *Selaginella bigelovii* | Bigelow's moss fern | Selaginellaceae | native | - |
| *Senecio blochmaniae* | Dune ragwort | Asteraceae | native | 4.2 |
| *Senecio californicus* | California butterweed | Asteraceae | native | - |
| *Senecio glomeratus* | Cutleaf burnweed | Asteraceae | non-native | - |
| *Senecio vulgaris* | Common groundsel | Asteraceae | non-native | - |
| *Sidalcea malviflora* subsp. *laciniata* | Laciniate checker mallow | Malvaceae | native | - |
| *Silene gallica* | Common catchfly | Caryophyllaceae | non-native | - |
| *Silene laciniata* | Cardinal catchfly | Caryophyllaceae | native | - |
| *Silybum marianum* | Milk thistle | Asteraceae | non-native (invasive) | - |
| *Sisymbrium officinale* | Hedge mustard | Brassicaceae | non-native | - |
| *Sisyrinchium bellum* | Blue eyed grass | Iridaceae | native | - |
| *Solanum douglasii* | Douglas' nightshade | Solanaceae | native | - |
| *Solanum umbellifereum* var. *xanti?* | Nightshade | Solanaceae | native | - |
| *Solidago spathulata* | Dune goldenrod | Asteraceae | native | - |
| *Solidago velutina* subsp. *californica* | California goldenrod | Asteraceae | native | - |
| *Soliva sessilis* | South american soliva | Asteraceae | non-native | - |
| *Sonchus asper* subsp. *asper* | Sow thistle | Asteraceae | non-native (invasive) | - |
| *Sonchus oleraceus* | Sow thistle | Asteraceae | non-native | - |
| *Sorghum halepense* | Johnsongrass | Poaceae | non-native (invasive) | - |
| *Sparganium eurycarpum* var. *greenei* | Bur reed | Typhaceae | native | - |
| *Spergula arvensis* | Corn spurry | Caryophyllaceae | non-native | - |
| *Spergularia bocconi* | Boccone's sand spurry | Caryophyllaceae | non-native | - |
| *Spergularia macrotheca* var. *macrotheca* | Sticky sand spurry | Caryophyllaceae | native | - |
| *Spergularia marina* | Salt sand spurry | Caryophyllaceae | native | - |
| *Spergularia rubra* | Purple sand spurry | Caryophyllaceae | non-native | - |
| *Spergularia villosa* | Hairy sand spurrey, Hairy sandspurry, Villous sand spurry | Caryophyllaceae | non-native | - |
| *Stachys bullata* | Southern hedge nettle | Lamiaceae | native | - |
| *Stebbinsoseris heterocarpa* | Grassland stebbinsoseris | Asteraceae | native | - |
| *Stellaria media* | Chickweed | Caryophyllaceae | non-native | - |
| *Stellaria pallida* | Lesser chickweed, Pale starwort | Caryophyllaceae | non-native | - |
| *Stephanomeria exigua* var. *coronaria* | Milk aster | Asteraceae | native | - |
| *Stipa cernua* | Nodding needle grass | Poaceae | native | - |
| *Stipa lepida* | Foothill needle grass | Poaceae | native | - |
| *Stipa miliacea* var. *miliacea* | Smilo grass | Poaceae | non-native | - |
| *Stipa pulchra* | Purple needle grass | Poaceae | native | - |
| *Stylocline gnaphaloides* | Everlasting nest straw, Everlasting stylocine, Mountain neststraw | Asteraceae | native | - |
| *Suaeda taxifolia* | Seablite | Chenopodiaceae | native | 4.2 |
| *Symphoricarpos albus* var. *laevigatus* | Snowberry | Caprifoliaceae | native | - |
| *Symphoricarpos mollis* | Snowberry | Caprifoliaceae | native | - |
| *Symphyotrichum lanceolatum* var. *hesperium [Aster lanceolatus* var. *hesperius]* | Western lance leaf aster | Asteraceae | native | - |
| *Tamarix sp.* | Tamarisk | Tamaricaceae | non-native (invasive) | - |
| *Taraxacum officinale* | Red seeded dandelion | Asteraceae | non-native (invasive) | - |
| *Tauschia arguta* | Southern tauschia | Apiaceae | native | - |
| *Tetragonia tetragonioides* | New Zealand spinach | Aizoaceae | non-native | - |
| *Thalictrum fendleri* subsp. *fendleri* | Fendler's meadow rue | Ranunculaceae | native | - |
| *Thysanocarpus laciniatus* | Narrow leaved lacepod | Brassicaceae | native | - |
| *Torilis arvensis* | Field hedge parsley | Apiaceae | non-native (invasive) | - |
| *Torilis nodosa* | Wild parsley | Apiaceae | non-native | - |
| *Toxicodendron diversilobum* | Poison oak | Anacardiaceae | native | - |
| *Toxicoscordion fremontii* | Fremont's star lily | Melanthiaceae | native | - |
| *Tragopogon porrifolius* | Salsify | Asteraceae | non-native | - |
| *Tribulus terrestris* | Puncture vine | Zygophyllaceae | non-native (invasive) | - |
| *Trichostema lanatum* | Woolly bluecurls | Lamiaceae | native | - |
| *Trichostema lanceolatum* | Vinegarweed | Lamiaceae | native | - |
| *Trifolium ciliolatum* | Tree clover | Fabaceae | native | - |
| *Trifolium depauperatum* var. *truncatum* | Dwarf sack clover | Fabaceae | native | - |
| *Trifolium dubium* | Shamrock | Fabaceae | non-native | - |
| *Trifolium fragiferum* | Strawberry clover | Fabaceae | non-native | - |
| *Trifolium gracilentum* | Pin point clover | Fabaceae | native | - |
| *Trifolium hirtum* | Rose clover | Fabaceae | non-native (invasive) | - |
| *Trifolium subterraneum* | Subterranean clover | Fabaceae | non-native | - |
| *Trifolium willdenovii* | Tomcat clover | Fabaceae | native | - |
| *Triphysaria pusilla* | Little owl's clover | Orobanchaceae | native | - |
| *Triteleia laxa* | Ithuriel's spear | Themidaceae | native | - |
| *Triticum aestivum* | Common wheat | Poaceae | non-native | - |
| *Tropaeolum majus* | Garden nasturtium | Tropaeolaceae | non-native (invasive) | - |
| *Typha angustifolia* | Narrow leaf cattail | Typhaceae | non-native | - |
| *Uropappus lindleyi* | Silver puffs | Asteraceae | native | - |
| *Urtica dioica* subsp. *holosericea* | Stinging nettle | Urticaceae | native | - |
| *Urtica urens* | Annual stinging nettle | Urticaceae | non-native | - |
| *Vaccinium ovatum* | Evergreen huckleberry | Ericaceae | native | - |
| *Venegasia carpesioides* | Canyon sunflower | Asteraceae | native | - |
| *Verbena lasiostachys* var. *lasiostachys* | Vervain | Verbenaceae | native | - |
| *Verbena lasiostachys* var. *scabrida* | Robust vervain | Verbenaceae | native | - |
| *Veronica anagallis-aquatica* | Water speedwell | Plantaginaceae | non-native | - |
| *Vicia americana* subsp. *americana* | American vetch | Fabaceae | native | - |
| *Vicia gigantea* | Giant vetch | Fabaceae | native | - |
| *Vicia hassei* | Hasse's vetch | Fabaceae | native | - |
| *Vicia sativa* subsp. *sativa* | Common vetch | Fabaceae | non-native | - |
| *Vicia villosa* subsp. *varia* | Smooth vetch | Fabaceae | non-native | - |
| *Vinca major* | Vinca | Apocynaceae | non-native (invasive) | - |
| *Viola pedunculata* | California golden violet | Violaceae | native | - |
| *Vitis vinifera* | Cultivated grape | Vitaceae | non-native | - |
| *Woodwardia fimbriata* | Western chain fern | Blechnaceae | native | - |
| *Xanthium spinosum* | Spiny cocklebur | Asteraceae | native | - |
| *Xanthium strumarium* | Cocklebur | Asteraceae | native | - |
| *Zeltnera davyi* | Davy's centaury | Gentianaceae | native | - |

Appendix S2

Data sources used for mapping and analyses.

| Data Name | Type | Time Period | Analysis | Source(s) |
| --- | --- | --- | --- | --- |
| Preserve boundary | Shapefile | 2017 | N/A | The Nature Conservancy (proprietary) |
| Aerial photos | Image | 1938  1978  2012 | Habitat change over time | Fairchild Aerial Surveys (1938)  Pacific Aerial Surveys (1978)  USDA-FSA-APFO (2012) |
| Historic vegetation - VTM Map | Image | 1931 | Habitat change over time | Kelly et al. 2016  Thorne and Le 2016 |
| Current vegetation - FRAP Map | Image | 2015 | Habitat change over time | California Department of Forestry and Fire Protection 2015 |
| Wildfire, Prescribed Burns | Shapefile | 1981–2017 | Habitat transition rates in burned vs. unburned areas | California Department of Forestry and Fire Protection 2017 |

Appendix S3

Aerial photography sources used for historical vegetation analysis.

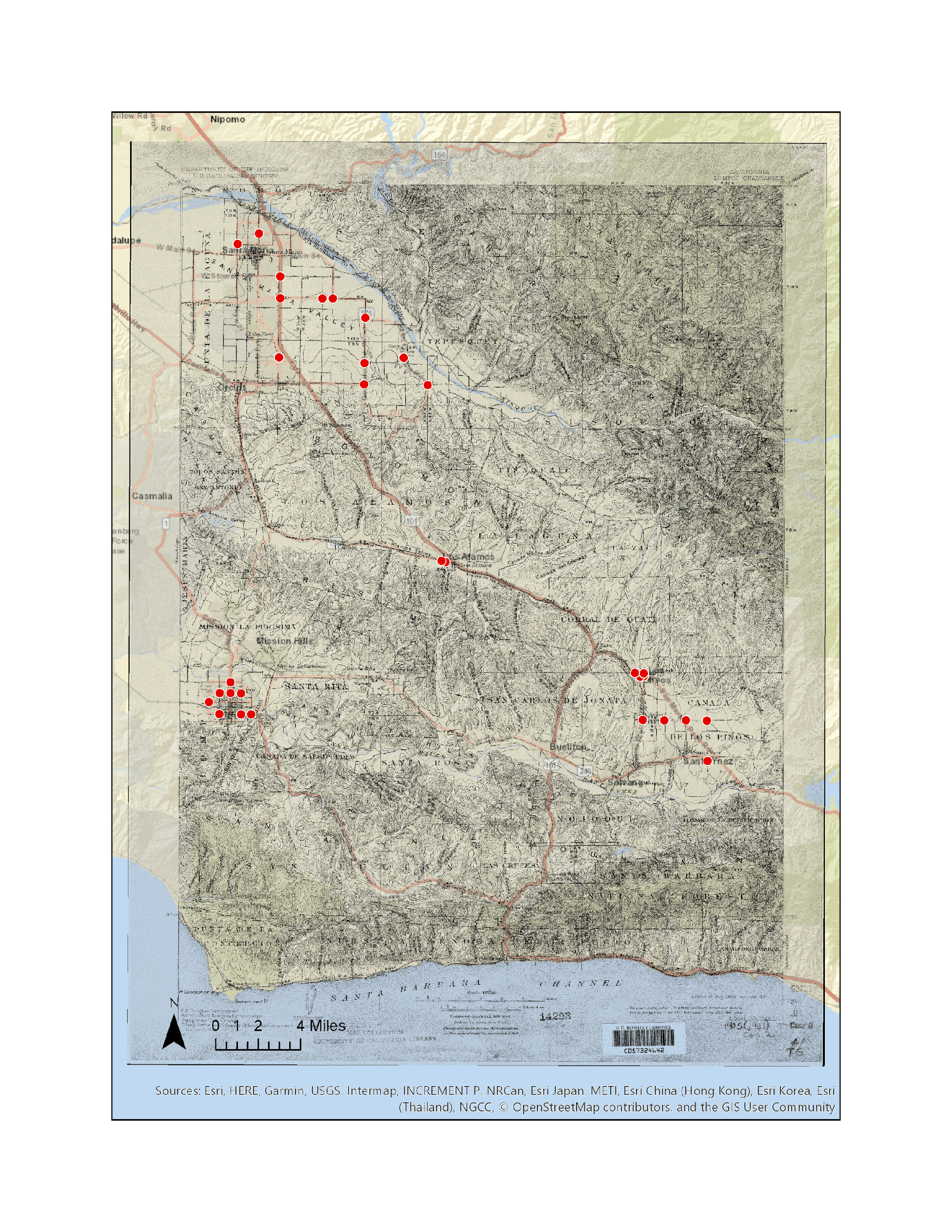
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Flight Date | Number of Photos | Type of Photo | Manually Georeferenced for Study? | Average Root-Mean Square Error (if applicable) | Data Source |
| January 1938 | 11 | Black and White | Yes | 59 meters | Fairchild Aerial Surveys (1938) |
| January 1978 | 5 | False Color/Color Infrared | Yes | 48 meters | Pacific Aerial Surveys (1978) |
| May 2012 | 10 | Four-band Color | No | N/A | USDA-FSA-APFO (2012) |

Appendix S4

Guidelines for visual interpretation of three dominant habitat types at the Dangermond Preserve. Areas displayed represent the best example of habitat type and do not necessarily correspond to the same area between years.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Habitat | | 1938 | | 2012 | |
| Woodland | Dark gray circular points with gaps between points  https://lh5.googleusercontent.com/XDy2pjf3CQFzlAaiGvlTqbPdzAoyUPiC3j5MkdFd4LzJcfmwTnGXvvKZAnZWTOnr7eu2iBmC7gotaW0gXQo3XN5l9khAy7qzht3sWqWTCQj725s6IE__Go3rl47odO-fnC-k3Zwb | | Dark green circular points with gaps between points  https://lh3.googleusercontent.com/fbSmtkwojDghI_kQB1QyOKcxJUCbU68bnS7gW0Dh7aAlAMHCNtdlttvuV3DdfDlC4hvr1x_bYaNkTGnSEcXoSD1zG0ZR-23yNDh1yT5DN_8Ci0i4HMSVRovn0cP-OBHYzYG4p7kO | |
| Shrubland (includes scrub and chaparral) | Dark to light gray patches with no gaps between vegetation; appears more textured than grassland  https://lh6.googleusercontent.com/coBTHV0AViRh5yq1nOy8CmDWVWkiTJnIp_lCml7BhTIgmBJMSmmn7lBR6HvIhMWb4YSoTnM_Fp8KGxJauJAxt-RUIAJaYvVEPcMxy3J6IBd5lgcF5EEYxPp2KfQ0fCa4xmnt3LUihttps://lh4.googleusercontent.com/ponuIpgcr6WBG7_FFEQxuIKE9FwHKTaU8e76J6rVRehMj6A9ew2SkSaAhVgYvyUrIR95yOWYalurYEJP-3Nz2c2VErfp1XRO-9628EhWDpsPf38kkpR1wWN-69Hjad9jhJ_m9qfn | | Dense, medium green or purple/gray patches with no gaps; appears more textured than grassland  https://lh5.googleusercontent.com/hc5TZ71vbvV6hgemsKjr1vHltMyvUgOYym1Ef4FmHLSPJTrZ6ChKzYm_gq59p0OvQZcWtMIDK-KnxAriLmZOcXhGEzZ4JFCbJdWSNR7rDd_stTEhYmrWsdGuDxvf5OFSlZ1zyapGhttps://lh6.googleusercontent.com/rYYduI0VFLYh1tAD0jgN04_Nr882VMUQ_uL5lt_4vRAW-C9UPGUob9y47IwanFgLMH66OkqWkBpulLDDd2F917kVNHXW13kSwXyFzxK3XurzR2Q4r6FTHX0Bmkdi1ciG3zLTGWAh | |
| Grassland | Light gray land with no points or patches https://lh6.googleusercontent.com/OjOHu0-tQKUQR5XuRv6vV5QMOqjOYRvKPFCiVgE5wHHvmrP6Tu4z3LDCtyPciR5KN8pBtWpSFw2HtejoruCxiESWSrUoO-5zz6yEk325JP72BeReDgSMLAje2otimwKAxw4mD1Zp | | Typically brown land with no discernible points/patches  https://lh3.googleusercontent.com/MESKFxiwvVavgtcneVM5msuYsBb5gg1V0dx9lb-qLcAd1qyMtqu6Dou0V0F5bzRhDnJ24kks-kPhcwAu6-9fJm5C0Qy3N9aUcGD8R6uOOO_-EF-4rVmivDt5AZkxPzx0oXDcY8wv | |

Appendix S5

Map alignment methodology. In an effort to quantify and reduce map error, 31 ground control points were taken from the 2015 US Census Bureau, Department of Commerce Primary and Secondary Roads. Points were compared to intersections from the historic base map resulting in a root mean square (RMS) error of 172.04 meters. The base map was then shifted 45 meters east and 150 meters north to align with the coastline. A comparison of intersections for the shifted base map and modern roads revealed a substantially smaller RMS error of 56.72 meters. All layers were projected to California Teale Albers, NAD83 for the Lompoc Quad Topographic base map alignment. Red points in map on the left indicate locations used to calculate the RMS error for the original and shifted base maps. Stacked maps show the location of the base topographic map before (top) and after (bottom) shifting. Note: alignment of the shifted base map (bottom) is improved with respect to modern roadways.

Appendix S6



Wieslander Vegetation Type Map (VTM) layer alignment. Another step taken to reduce map error was aligning the habitat polygon layer to the base topographic layer. To accomplish this, the polygon layer was shifted 95 meters east. The polygon layer was then shifted the same distance at the base topographic map (45 meters east and 150 meters north) to align with modern topography. Original alignment of the habitat polygon layer to the base topographic map. Alignment was improved by shifting the map 95 meters east.

Appendix S7

Transition rates of all observed combinations of dominant habitat types in the aerial photograph analysis. Transitions are covered between all three time ranges: 1938-1978, 1978-2012, and 1938-2012. Habitat transitions that were not observed in our study are marked with a dash. Transition rates between two habitat types, X and Y, are calculated as the number of sample points that transitioned from X-type in Year A to Y-type in Year B, divided by the total number of X-type points in Year A. Then the rates were annualized to facilitate comparisons between time periods of different lengths.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Habitat Type | | 1938–1978 | | | | 1978–2012 | | | | 1938–2012 | | | |
| From | To | Starting Number of Sample Points | Number of Points that Transitioned | Transition Rate | Annualized Transition Rate | Starting Number of Sample Points | Number of Points that Transitioned | Transition Rate | Annualized Transition Rate | Starting Number of Sample Points | Number of Points that Transitioned | Transition Rate | Annualized Transition Rate |
| Grassland | Grassland | 174 | 126 | 72% | 3.17% | 145 | 92 | 63% | 2.92% | 174 | 109 | 63% | 1.32% |
| Shrubland | 174 | 27 | 16% | 0.42% | 145 | 47 | 32% | 1.15% | 174 | 55 | 32% | 0.51% |
| Woodland | 174 | 9 | 5% | 0.13% | 145 | 5 | 3% | 0.10% | 174 | 9 | 5% | 0.07% |
| Tie | 174 | 4 | 2% | 0.06% | 145 | 1 | 1% | 0.02% | 174 | 1 | 1% | 0.01% |
| Other | 174 | 8 | 5% | 0.12% | - | - | - | - | - | - | - | - |
| Shrubland | Grassland | 70 | 14 | 20% | 0.56% | 78 | 11 | 14% | 0.45% | 70 | 5 | 7% | 0.10% |
| Shrubland | 70 | 42 | 60% | 2.26% | 78 | 57 | 73% | 3.79% | 70 | 55 | 79% | 2.06% |
| Woodland | 70 | 10 | 14% | 0.38% | 78 | 9 | 12% | 0.36% | 70 | 10 | 14% | 0.21% |
| Tie | 70 | 4 | 6% | 0.15% | 78 | 1 | 1% | 0.04% | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - | - | - | - |
| Woodland | Grassland | 83 | 3 | 4% | 0.09% | 94 | 6 | 6% | 0.19% | 83 | 4 | 5% | 0.07% |
| Shrubland | 83 | 5 | 6% | 0.16% | 94 | 6 | 6% | 0.19% | 83 | 4 | 5% | 0.07% |
| Woodland | 83 | 73 | 88% | 5.15% | 94 | 82 | 87% | 5.87% | 83 | 75 | 90% | 3.11% |
| Tie | 83 | 2 | 2% | 0.06% | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - | - | - | - |
| Tie | Grassland | - | - | - | - | 11 | 4 | 36% | 1.32% | - | - | - | - |
| Shrubland | 6 | 4 | 67% | 2.71% | 11 | 4 | 36% | 1.32% | 6 | 1 | 17% | 0.25% |
| Woodland | 6 | 2 | 33% | 1.01% | 11 | 2 | 18% | 0.59% | 6 | 4 | 67% | 1.47% |
| Tie | - | - | - | - | - | - | - | - | 6 | 1 | 17% | 0.25% |
| Other | - | - | - | - | 11 | 1 | 9% | 0.28% | - | - | - | - |
| Other | Grassland | 7 | 2 | 29% | 0.84% | 12 | 7 | 58% | 2.54% | 7 | 2 | 29% | 0.45% |
| Shrubland | - | - | - | - | 12 | 3 | 25% | 0.84% | 7 | 2 | 29% | 0.45% |
| Woodland | - | - | - | - | - | - | - | - | - | - | - | - |
| Tie | 7 | 1 | 14% | 0.38% | - | - | - | - | - | - | - | - |
| Other | 7 | 4 | 57% | 2.10% | 12 | 2 | 17% | 0.53% | 7 | 3 | 43% | 0.75% |

Appendix S8

Transition rates between habitat types in the aerial photograph analysis overlaid with FRAP fire data from 1978 to 2012. Sample points were divided into two categories: points that had not burned since 1981 (unburned) and points that had burned at least once since 1981 (burned), according to the FRAP records. Habitat transitions that were not observed in our study are marked with a dash. Transition rates between two habitat types, X and Y, are calculated as the number of sample points that transitioned from X-type in 1978 to Y-type in 2012, divided by the total number of X-type points in 1978. Then the rates were annualized to facilitate comparisons between time periods of different lengths.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Habitat Type | | Unburned | | | | Burned | | | | |
| From | To | Starting Number of Sample Points | Number of Points that Transitioned | Transition Rate | Annualized Transition Rate | | Starting Number of Sample Points | Number of Points that Transitioned | Transition Rate | Annualized Transition Rate |
| Grassland | Grassland | 112 | 77 | 69% | 3.36% | | 33 | 15 | 45% | 1.77% |
| Shrubland | 112 | 31 | 28% | 0.95% | | 33 | 16 | 48% | 1.93% |
| Woodland | 112 | 3 | 3% | 0.08% | | 33 | 2 | 6% | 0.18% |
| Tie | 112 | 1 | 1% | 0.03% | | - | - | - | - |
| Other | - | - | - | - | | - | - | - | - |
| Shrubland | Grassland | 36 | 7 | 19% | 0.63% | | 42 | 4 | 10% | 0.29% |
| Shrubland | 36 | 23 | 64% | 2.95% | | 42 | 34 | 81% | 4.76% |
| Woodland | 36 | 6 | 17% | 0.53% | | 42 | 3 | 7% | 0.22% |
| Tie | - | - | - | - | | 42 | 1 | 2% | 0.07% |
| Other | - | - | - | - | | - | - | - | - |
| Woodland | Grassland | 59 | 5 | 8% | 0.26% | | 35 | 1 | 3% | 0.09% |
| Shrubland | 59 | 4 | 7% | 0.21% | | 35 | 2 | 6% | 0.17% |
| Woodland | 59 | 50 | 85% | 5.38% | | 35 | 32 | 91% | 6.97% |
| Tie | - | - | - | - | | - | - | - | - |
| Other | - | - | - | - | | - | - | - | - |
| Tie | Grassland | 7 | 4 | 57% | 2.46% | | - | - | - | - |
| Shrubland | 7 | 1 | 14% | 0.45% | | 4 | 3 | 75% | 4.00% |
| Woodland | 7 | 1 | 14% | 0.45% | | 4 | 1 | 25% | 0.84% |
| Tie | - | - | - | - | | - | - | - | - |
| Other | 7 | 1 | 14% | 0.45% | | - | - | - | - |
| Other | Grassland | 12 | 7 | 58% | 2.54% | | - | - | - | - |
| Shrubland | 12 | 3 | 25% | 0.84% | | - | - | - | - |
| Woodland | - | - | - | - | | - | - | - | - |
| Tie | - | - | - | - | | - | - | - | - |
| Other | 12 | 2 | 17% | 0.53% | | - | - | - | - |

Appendix S9

Transition rates between habitat types in the vegetation map analysis. Raster cells were divided into two categories: cells that had not burned since 1981 (unburned) and cells that had burned at least once since 1981 (burned), according to the FRAP records. Transition rates between two habitat types, X and Y, are calculated as the number of raster cells that transitioned from X-type in 1931 to Y-type in 2015, divided by the total number of X-type points in 1931. Then the rates were annualized to facilitate comparisons between time periods of different lengths.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Habitat Type | | 1931-2015 (All) | | | | 1931-2015 (Unburned) | | | | 1931-2015 (Burned) | | | |
| From | To | Starting Number of Raster Cells | Number of Raster Cells that Transitioned | Transition Rate (%) | Annualized Transition Rate (%) | Starting Number of Raster Cells | Number of Raster Cells that Transitioned | Transition Rate (%) | Annualized Transition Rate (%) | Starting Number of Raster Cells | Number of Raster Cells that Transitioned | Transition Rate (%) | Annualized Transition Rate (%) |
| Grassland | Shrubland | 13772 | 3911 | 28.40% | 0.40% | 10917 | 2632 | 24.11% | 0.33% | 2855 | 1279 | 44.80% | 0.70% |
| Woodland | 13772 | 1655 | 12.02% | 0.15% | 10917 | 1386 | 12.70% | 0.16% | 2855 | 269 | 9.42% | 0.12% |
| Shrubland | Grassland | 6670 | 1471 | 22.05% | 0.30% | 3299 | 734 | 22.25% | 0.30% | 3371 | 737 | 21.86% | 0.29% |
| Woodland | 6670 | 1721 | 25.80% | 0.35% | 3299 | 1117 | 33.86% | 0.49% | 3371 | 604 | 17.92% | 0.23% |
| Woodland | Grassland | 7188 | 759 | 10.56% | 0.13% | 4056 | 560 | 13.81% | 0.18% | 3132 | 199 | 6.35% | 0.08% |
| Shrubland | 7188 | 1411 | 19.63% | 0.26% | 4056 | 595 | 14.67% | 0.19% | 3132 | 816 | 26.05% | 0.36% |

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