

Appendix J. Botanical Surveys within the ESL



Vascular and non-vascular plants observed during botanical surveys conducted within the Environmental Study Limits (ESL)

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
Trees (9)					
	<i>Alnus rubra</i>	red alder	Betulaceae	yes	x
	<i>Chamaecyparis</i> sp. (ornamental)	cedar	Cupressaceae	no	x
	<i>Frangula purshiana</i> ssp. <i>purshiana</i>	California cascara	Rhamnaceae	yes	x
	<i>Malus</i> sp.	apple	Rosaceae	no	x
	<i>Notholithocarpus densiflorus</i> var. <i>densiflorus</i>	tree tanbark	Fagaceae	yes	x
	<i>Picea sitchensis</i>	Sitka spruce	Pinaceae	yes	x
	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas-fir	Pinaceae	yes	x
	<i>Sequoia sempervirens</i>	coast redwood	Cupressaceae	yes	x
	<i>Tsuga heterophylla</i>	western hemlock	Pinaceae	yes	x
Shrubs (34)					
	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	upright coyote-brush	Asteraceae	yes	x
	<i>Berberis nervosa</i>	Cascade barberry	Berberidaceae	yes	x
	<i>Chaenomeles</i> sp.	quince	Rosaceae	no	x
	<i>Cotoneaster</i> sp.	cotoneaster	Rosaceae	no	x
	<i>Crataegus monogyna</i>	one-seeded hawthorn	Rosaceae	no	x
	<i>Diplacus (Mimulus) aurantiacus</i>	orange bush monkeyflower	Phrymaceae	yes	x
	<i>Escallonia rubra</i>	red claws	Grossulariaceae	no	x

¹ The number of taxa recorded for each habit is indicated in parentheses.

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Fuchsia magellanica</i>	hardy fuchsia	Onagraceae	no	x
	<i>Fuchsia</i> sp.	fuchsia	Onagraceae	no	x
	<i>Gaultheria shallon</i>	salal	Ericaceae	yes	x
	<i>Hedera helix</i>	English ivy	Araliaceae	no	x
	<i>Holodiscus discolor</i>	creambush ocean-spray	Rosaceae	yes	x
	<i>Ligustrum</i> sp.	privet	Oleaceae	no	x
	<i>Lonicera etrusca</i>	Etruscan honeysuckle	Caprifoliaceae	no	x
	<i>Lonicera hispidula</i>	California pink honeysuckle	Caprifoliaceae	yes	x
	<i>Lonicera involucrata</i> var. <i>ledbourii</i>	twinberry	Caprifoliaceae	yes	x
	<i>Menziesia ferruginea</i>	false azalea	Ericaceae	yes	x
	<i>Prunus laurocerasus</i>	laurel cherry	Rosaceae	no	x
	<i>Rhododendron macrophyllum</i>	Pacific rhododendron	Ericaceae	yes	x
	<i>Ribes menziesii</i> var. <i>menziesii</i>	Menzies's gooseberry	Grossulariaceae	yes	x
	<i>Ribes roezlii</i> var. <i>cruentum</i>	Coast Ranges gooseberry	Grossulariaceae	yes	x
	<i>Rosa nutkana</i> spp. <i>nutkana</i>	Nootka rose	Rosaceae	yes	x
	<i>Rosa</i> sp. (cultivar)	rose	Rosaceae	no	x
	<i>Rubus armeniacus</i>	Himalayan blackberry	Rosaceae	no	x
	<i>Rubus laciniatus</i>	cut-leaved blackberry	Rosaceae	no	x
	<i>Rubus leucodermis</i>	white-stemmed blackberry	Rosaceae	yes	x
	<i>Rubus parviflorus</i>	thimbleberry	Rosaceae	yes	x
	<i>Rubus spectabilis</i>	salmonberry	Rosaceae	yes	x
	<i>Rubus ursinus</i>	California blackberry	Rosaceae	yes	x
	<i>Salix scouleriana</i>	Scouler's willow	Salicaceae	yes	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Sambucus racemosa</i> var. <i>racemosa</i>	red elderberry	Adoxaceae	yes	x
	<i>Toxicodendron diversilobum</i>	Pacific poison oak	Anacardiaceae	yes	x
	<i>Vaccinium ovatum</i>	evergreen huckleberry	Ericaceae	yes	x
	<i>Vaccinium parvifolium</i>	California red huckleberry	Ericaceae	yes	x
Herbs (127)					
	<i>Achillea millefolium</i>	yarrow	Asteraceae	yes	x
	<i>Acmispon americanus</i> var. <i>americanus</i>	American bird's-foot-trefoil	Fabaceae	yes	x
	<i>Acmispon parviflorus</i>	small-flowered lotus	Fabaceae	yes	x
	<i>Actaea rubra</i>	baneberry	Rosaceae	yes	x
	<i>Angelica hendersonii</i>	Henderson's angelica	Apiaceae	yes	x
	<i>Anisocarpus madioides</i>	forest madia	Asteraceae	yes	x
	<i>Aquilegia formosa</i>	western crimson columbine	Ranunculaceae	yes	x
	<i>Asarum caudatum</i>	western wild ginger	Aristolochiaceae	yes	x
	<i>Asyneuma prenanthoides</i>	western hare-bell	Campanulaceae	yes	x
	<i>Barbarea orthoceras</i>	American yellow-rocket	Brassicaceae	yes	x
	<i>Bellis perennis</i>	English daisy	Asteraceae	no	x
	<i>Brassica nigra</i>	black mustard	Brassicaceae	no	x
	<i>Brassica rapa</i>	field mustard	Brassicaceae	no	x
	<i>Cardamine breweri</i>	Brewer's bitter-cress	Brassicaceae	yes	x
	<i>Cardamine californica</i>	milkmaids	Brassicaceae	yes	x
	<i>Cardamine oligosperma</i>	little bittercress	Brassicaceae	yes	x
	<i>Centaureum erythraea</i>	European centaury	Gentianaceae	no	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Chrysosplenium glechomifolium</i>	Pacific golden-saxifrage	Saxifragaceae	yes	x
	<i>Cirsium brevistylum</i>	short-styled thistle	Asteraceae	yes	x
	<i>Cirsium vulgare</i>	bull thistle	Asteraceae	no	x
	<i>Claytonia sibirica</i>	candy flower	Montiaceae	yes	x
	<i>Conium maculatum</i>	poison hemlock	Apiaceae	no	x
	<i>Crocosmia x. crocosmiifolia</i>	garden montbretia	Iridaceae	no	x
	<i>Daucus carota</i>	Queen Anne's lace	Apiaceae	no	x
	<i>Delairea odorata</i>	common Cape-ivy	Asteraceae	no	x
	<i>Delphinium trolliifolium</i>	cow-poison larkspur	Papaveraceae	yes	x
	<i>Dicentra formosa</i>	western bleeding heart	Papaveraceae	yes	x
	<i>Digitalis purpurea</i>	common foxglove	Plantaginaceae	no	x
	<i>Epilobium ciliatum</i>	ciliate willowherb	Onagraceae	yes	x
	<i>Eriophyllum lanatum</i>	common woolly-sunflower	Asteraceae	yes	x
	<i>Erythranthe (Mimulus) dentata</i>	coast monkeyflower	Phrymaceae	yes	x
	<i>Erythranthe (Mimulus) guttata</i>	seep-spring monkeyflower	Phrymaceae	yes	x
	<i>Erythranthe (Mimulus) moschata</i>	musk monkeyflower	Phrymaceae	yes	x
	<i>Euchiton gymnocephalus</i>	creeping cudweed	Asteraceae	no	x
	<i>Galium aparine</i>	bedstraw	Rubiaceae	yes	x
	<i>Galium</i> sp.	bedstraw	Rubiaceae	unk	x
	<i>Galium triflorum</i>	three-flowered bedstraw	Rubiaceae	yes	x
	<i>Gamochaeta ustulata</i>	Pacific cudweed	Asteraceae	yes	x
	<i>Geranium dissectum</i>	cutleaf crane's-bill	Geraniaceae	no	x
	<i>Geum macrophyllum</i> var. <i>macrophyllum</i>	large-leaved avens	Rosaceae	yes	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Helminthotheca echioides</i>	bristly ox-tongue	Asteraceae	no	x
	<i>Heracleum maximum</i>	cow parsnip	Apiaceae	yes	x
	<i>Hieracium albiflorum</i>	white-flowered hawkweed	Asteraceae	yes	x
	<i>Hypericum cf. calycinum</i>	Aaron's beard	Hypericaceae	no	x
	<i>Hypericum perforatum</i>	Klamath weed	Hypericaceae	no	x
	<i>Hypochaeris radicata</i>	rough cat's-ear	Asteraceae	no	x
	<i>Iris douglasiana</i>	Douglas iris	Iridaceae	yes	x
	<i>Lamium purpureum</i>	purple henbit	Lamiaceae	no	x
	<i>Lathyrus vestitus</i> var. <i>vestitus</i>	woodland pea	Fabaceae	yes	x
	<i>Leontodon saxatilis</i>	hairy hawkbit	Asteraceae	no	x
	<i>Leucanthemum vulgare</i>	ox-eye daisy	Asteraceae	no	x
	<i>Lilium columbianum</i>	Columbia lily	Liliaceae	yes	x
	<i>Linum bienne</i>	flax	Linaceae	no	x
	<i>Listera cordata</i>	heart-leaved twayblade	Orchidaceae	yes	x
	<i>Lotus corniculatus</i>	broadleaf birdsfoot trefoil	Fabaceae	no	x
	<i>Lupinus rivularis</i>	riverbank lupine	Fabaceae	yes	x
	<i>Lupinus</i> sp.	lupine	Fabaceae	yes	x
	<i>Lysimachia (Anagallis) arvensis</i>	scarlet pimpernel	Myrsinaceae	no	x
	<i>Lysimachia (Trientalis) latifolia</i>	Pacific starflower	Myrsinaceae	yes	x
	<i>Madia sativa</i>	coast tarweed	Asteraceae	yes	x
	<i>Maianthemum dilatatum</i>	two-leaved false-Solomon's-seal	Ruscaceae	yes	x
	<i>Maianthemum stellatum</i>	starry false lily-of-the-valley	Ruscaceae	yes	x
	<i>Marah oregana</i>	coast man-root	Cucurbitaceae	yes	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Matricaria discoidea</i>	pineapple weed	Asteraceae	no	x
	<i>Medicago polymorpha</i>	bur-clover	Fabaceae	no	x
	<i>Mentha pulegium</i>	pennyroyal	Lamiaceae	no	x
	<i>Mentha cf. spicata</i>	pennyroyal	Lamiaceae	no	x
	<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	Saxifragaceae	yes	x
	<i>Navarretia squarrosa</i>	skunkweed	Polemoniaceae	yes	x
	<i>Narcissus sp.</i>	daffodil	Amaryllidaceae	no	x
	<i>Nemophila parviflora</i> var. <i>parviflora</i>	woodland nemophila	Boraginaceae	yes	x
	<i>Oenanthe sarmentosa</i>	Pacific water-parsley	Apiaceae	yes	x
	<i>Osmorhiza purpurea</i>	purple sweet cicely	Apiaceae	yes	x
	<i>Oxalis oregana</i>	redwood sorrel	Oxalidaceae	yes	x
	<i>Oxalis suksdorfii</i>	Suksdorf's wood-sorrel	Oxalidaceae	yes	x
	<i>Petasites frigidus</i> var. <i>palmatius</i>	western colt's foot	Asteraceae	yes	x
	<i>Plantago lanceolata</i>	English plantain	Plantaginaceae	no	x
	<i>Plantago major</i>	greater plantain	Plantaginaceae	no	x
	<i>Polygonum sp.</i>	knotweed	Polygonaceae	unk	x
	<i>Prosartes smithii</i>	Smith's fairy bells	Liliaceae	yes	x
	<i>Prunella vulgaris</i> var. <i>lanceolata</i>	common selfheal	Lamiaceae	yes	x
	<i>Prunella vulgaris</i> var. <i>vulgaris</i>	selfheal	Lamiaceae	no	x
	<i>Ranunculus occidentalis</i>	western buttercup	Ranunculaceae	yes	x
	<i>Ranunculus parviflorus</i>	few-flowered buttercup	Ranunculaceae	no	x
	<i>Ranunculus repens</i>	common creeping buttercup	Ranunculaceae	no	x
	<i>Raphanus raphanistrum</i>	wild radish	Brassicaceae	no	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Raphanus sativus</i>	charlock	Brassicaceae	no	x
	<i>Rorippa curvisiliqua</i>	western cress	Brassicaceae	yes	x
	<i>Rumex acetosella</i>	sheep sorrel	Polygonaceae	no	x
	<i>Rumex conglomeratus</i>	clustered dock	Polygonaceae	no	x
	<i>Rumex crispus</i>	curly dock	Polygonaceae	no	x
	<i>Rumex obtusifolius</i>	broad-leaved dock	Polygonaceae	no	x
	<i>Rumex</i> sp.	dock	Polygonaceae	unk	x
	<i>Sagina procumbens</i>	matted pearlwort	Caryophyllaceae	no	x
	<i>Sanicula crassicaulis</i>	Pacific sanicle	Apiaceae	yes	x
	<i>Scrophularia californica</i>	California bee plant	Scrophulariaceae	yes	x
	<i>Senecio glomeratus</i>	cut-leaf coast burnweed	Asteraceae	no	x
	<i>Senecio jacobaea</i>	tansy ragwort	Asteraceae	no	x
	<i>Senecio minimus</i>	coastal burnweed	Asteraceae	no	x
	<i>Senecio vulgaris</i>	garden groundsel	Asteraceae	no	x
	<i>Sisymbrium officinale</i>	hedge mustard	Brassicaceae	no	x
	<i>Solanum</i> sp.	nightshade	Solanaceae	?	x
	<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sow-thistle	Asteraceae	no	x
	<i>Sonchus oleraceus</i>	common sow-thistle	Asteraceae	no	x
	<i>Stachys chamissonis</i>	giant coastal hedge-nettle	Lamiaceae	yes	x
	<i>Stachys mexicana</i>	Mexican hedge-nettle	Lamiaceae	yes	x
	<i>Stachys</i> sp.	hedge-nettle	Lamiaceae	yes	x
	<i>Stellaria crispa</i>	curled starwort	Caryophyllaceae	yes	x
	<i>Stellaria media</i>	common chickweed	Caryophyllaceae	no	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Streptopus amplexifolius</i> var. <i>americanus</i>	clasping-leaved twisted stalk	Liliaceae	yes	x
	<i>Symphotrichum chilense</i>	Pacific aster	Asteraceae	yes	x
	<i>Tellima grandiflora</i>	fringe cups	Saxifragaceae	yes	x
	<i>Tolmiea diplomenziesii</i>	pig-a-back plant	Saxifragaceae	yes	x
	<i>Tradescantia</i> sp.	tradescantia	Commelinaceae	no	x
	<i>Trifolium repens</i>	white clover	Fabaceae	no	x
	<i>Trifolium</i> sp.	clover	Fabaceae	unk	x
	<i>Trillium angustipetalum</i>	narrow-petaled trillium	Melanthiaceae	yes	x
	<i>Trillium ovatum</i> ssp. <i>ovatum</i>	Western wake robin	Melanthiaceae	yes	x
	<i>Urtica dioica</i> ssp. <i>holosericea</i>	hoary nettle	Urticaceae	yes	x
	<i>Veronica</i> sp.	veronica	Plantaginaceae	unk	x
	<i>Veronica serpyllifolia</i> ssp. <i>humifusa</i>	bright-blue speedwell	Plantaginaceae	yes	x
	<i>Vicia gigantea</i>	giant vetch	Fabaceae	yes	x
	<i>Vicia sativa</i>	common vetch	Fabaceae	no	x
	<i>Vinca major</i>	greater periwinkle	Apocynaceae	no	x
	<i>Viola sempervirens</i>	redwood violet	Violaceae	yes	x
	<i>Whipplea modesta</i>	modesty, yerba de selva	Philadelphaceae	yes	x
Graminoids (45)					
	<i>Agrostis</i> sp.	bentgrass	Poaceae	unk	x
	<i>Agrostis capillaris</i>	colonial bentgrass	Poaceae	no	x
	<i>Agrostis</i> cf. <i>gigantea</i>	redtop	Poaceae	no	x
	<i>Agrostis hallii</i>	Hall's bentgrass	Poaceae	yes	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Agrostis stolonifera</i>	creeping bentgrass	Poaceae	no	x
	<i>Aira caryophylla</i>	European silver hairgrass	Poaceae	no	x
	<i>Anthoxanthum odoratum</i>	sweet vernal grass	Poaceae	no	x
	<i>Briza maxima</i>	rattlesnake grass	Poaceae	no	x
	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	Poaceae	yes	x
	<i>Bromus hordeaceus</i>	soft-chess brome	Poaceae	no	x
	<i>Bromus vulgaris</i>	narrow-flowered brome	Poaceae	yes	x
	<i>Calamagrostis nutkaensis</i>	Pacific reed-grass	Poaceae	yes	x
	<i>Carex hendersonii</i>	Henderson's sedge	Cyperaceae	yes	x
	<i>Carex leptopoda</i>	taper fruit short scale sedge	Cyperaceae	yes	x
	<i>Carex obnupta</i>	slough sedge	Cyperaceae	yes	x
	<i>Carex rossii</i>	Ross' sedge	Cyperaceae	yes	x
	<i>Cortaderia jubata</i>	jubata grass	Poaceae	no	x
	<i>Cynodon dactylon</i>	Bermuda grass	Poaceae	no	x
	<i>Cynosurus echinatus</i>	hedgehog dogstail grass	Poaceae	no	x
	<i>Dactylis glomerata</i>	orchard grass	Poaceae	no	x
	<i>Deschampsia elongata</i>	elongated hair-grass	Poaceae	yes	x
	<i>Ehrharta erecta</i>	panic veldt grass	Poaceae	no	x
	<i>Eleocharis macrostachya</i>	long-stem spikerush	Cyperaceae	yes	x
	<i>Elymus glaucus</i>	blue wildrye	Poaceae	yes	x
	<i>Festuca arundinacea</i>	tall fescue	Poaceae	no	x
	<i>Festuca myuros</i>	rat-tailed fescue	Poaceae	no	x
	<i>Festuca perennis</i>	perennial rye-grass	Poaceae	no	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Festuca rubra</i>	red fescue	Poaceae	yes	x
	<i>Festuca</i> sp.	fescue	Poaceae	unk	x
	<i>Glyceria elata</i>	western tall manna-grass	Poaceae	yes	x
	<i>Holcus lanatus</i>	velvet grass	Poaceae	no	x
	<i>Hordeum vulgare</i>	barley	Poaceae	no	x
	<i>Juncus bufonius</i>	toad rush	Juncaceae	yes	x
	<i>Juncus effusus</i>	soft rush	Juncaceae	yes	x
	<i>Juncus</i> sp.	rush	Juncaceae	yes	x
	<i>Luzula comosa</i>	hairy wood rush	Juncaceae	yes	x
	<i>Luzula parviflora</i>	small-flowered wood rush	Juncaceae	yes	x
	<i>Melica</i> sp.	melic	Poaceae	yes	x
	<i>Phalaris arundinacea</i>	reed canary-grass	Poaceae	no	x
	<i>Pleuropogon refractus</i>	nodding semaphore grass	Poaceae	yes	x
	<i>Poa annua</i>	annual bluegrass	Poaceae	no	x
	<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky bluegrass	Poaceae	no	x
	<i>Scirpus microcarpus</i>	small-fruited bulrush	Cyperaceae	yes	x
	<i>Trisetum cernuum</i>	nodding trisetum	Poaceae	yes	x
Ferns and Fern Allies (8)					
	<i>Athyrium filix-femina</i>	soft athyrium (i.e., lady fern)	Dryopteridaceae	yes	x
	<i>Blechnum spicant</i>	deer fern	Blechnaceae	yes	x
	<i>Equisetum arvense</i>	common horsetail	Equisetaceae	yes	x
	<i>Equisetum telmateia</i> ssp. <i>braunii</i>	giant horsetail	Equisetaceae	yes	x

Habit ¹	Scientific Name	Common Name	Family	Native?	Present in LCG Phase 2B Geotech ESL
	<i>Polypodium glycyrrhiza</i>	sweet-licorice fern	Polypodiaceae	yes	x
	<i>Polypodium scolieri</i>	leather-leaved polypody	Polypodiaceae	yes	x
	<i>Polystichum munitum</i>	sword fern	Dryopteridaceae	yes	x
	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern	Dennstaedtiaceae	yes	x
Lichens (7)					
	<i>Cladonia</i> sp.	cladonia	Cladoniaceae	yes	x
	<i>Hypogymnia imshaugii</i>	Imshaug's tube lichen	Parmeliaceae	yes	x
	<i>Parmelia</i> sp.	parmelia	Parmeliaceae	yes	x
	<i>Sphaerophorus globosus</i>	globe ball lichen	Sphaerophoraceae	yes	x
	<i>Usnea</i> cf. <i>cornuta</i>	usnea	Parmeliaceae	yes	x
	<i>Usnea</i> cf. <i>filipendula</i>	fishbone beard lichen	Parmeliaceae	yes	x
	<i>Usnea longissima</i>	Methusela's beard lichen	Parmeliaceae	yes	x
Bryophytes (8)					
	<i>Conocephalum conicum</i>	snakeskin liverwort	Conocephalaceae	yes	x
	<i>Fissidens crispus</i>	pocket moss	Fissidentaceae	yes	x
	<i>Frullania nisquallensis</i>	hanging millipede liverwort	Jubulaceae	yes	x
	<i>Kindbergia oregana</i>	Oregon beaked moss	Brachytheciaceae	yes	x
	<i>Isoetecium myosuroides</i>	icicle moss	Brachytheciaceae	yes	x
	<i>Neckera</i> cf. <i>douglasii</i>	Douglas neckera moss	Neckeraceae	yes	x
	<i>Polytrichum</i> sp.	polytrichum	Polytrichaceae	yes	x
	<i>Porella navicularis</i>	tree ruffle liverwort	Porellaceae	yes	x



Appendix K. Invasive Plant Species Identified in the ESL



Scientific Name	Common Name	CDFA	Cal-IPC
<i>Agrostis stolonifera</i>	creeping bent	–	Limited
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	–	Limited
<i>Brassica nigra</i>	black mustard	–	Moderate
<i>Brassica rapa</i>	field mustard	–	Limited
<i>Briza maxima</i>	quaking grass	–	Limited
<i>Bromus hordeaceus</i>	soft-chess brome	–	Limited
<i>Cirsium vulgare</i>	bull thistle	B	Moderate
<i>Conium maculatum</i>	poison hemlock	–	Moderate
<i>Cortaderia jubata</i>	jubata grass	B	High
<i>Cynodon dactylon</i>	Bermuda grass	–	Moderate
<i>Cynosurus echinatus</i>	hedgehog dogstail grass	–	Moderate
<i>Dactylis glomerata</i>	orchard grass	–	Limited
<i>Ehrharta erecta</i>	panic veldt grass	–	Moderate
<i>Cotoneaster</i> sp.	cotoneaster	–	Moderate
<i>Crataegus monogyna</i>	English hawthorn	–	Limited
<i>Crocsmia x crocosmiiflora</i>	garden montbretia	–	Limited
<i>Dactylis glomerata</i>	orchard grass	–	Limited
<i>Delairea odorata</i>	common Cape-ivy	B	High
<i>Digitalis purpurea</i>	foxglove	–	Limited
<i>Festuca arundinacea</i>	tall fescue	–	Moderate
<i>Festuca myuros</i>	rattail sixweeks grass	–	Moderate
<i>Festuca perennis</i>	Italian rye grass	–	Moderate
<i>Geranium dissectum</i>	cut-leaved geranium	–	Limited
<i>Hedera helix</i>	English ivy	–	High
<i>Helminthotheca echioides</i>	bristly ox-tongue	–	Limited
<i>Holcus lanatus</i>	velvet grass	–	Moderate
<i>Hypericum perforatum</i>	Klamath weed	C	Limited
<i>Hypochaeris radicata</i>	rough cat's ear	–	Moderate
<i>Leucanthemum vulgare</i>	ox-eye daisy	–	Moderate
<i>Ligustrum</i> sp.	privet	–	(<i>L. lucidum</i> is Limited)
<i>Medicago polymorpha</i>	bur-clover	–	Limited
<i>Mentha pulegium</i>	pennyroyal	–	Moderate
<i>Plantago lanceolata</i>	English plantain	–	Limited
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky bluegrass	–	Limited
<i>Ranunculus repens</i>	common creeping buttercup	–	Limited
<i>Raphinus sativus</i>	wild radish	–	Limited
<i>Rumex acetosella</i>	sheep sorrel	–	Moderate
<i>Rumex crispus</i>	curly dock	–	Limited
<i>Rubus armeniacus</i>	Himalayan blackberry	–	High
<i>Senecio glomeratus</i>	cut-leaf coast burnweed	–	Moderate
<i>Senecio jacobaea</i>	tansy ragwort	B	Limited
<i>Vinca major</i>	greater periwinkle	–	Moderate

Note: The California Department of Food and Agriculture (CDFA) and California Invasive Plant Council (Cal-IPC) lists assign ratings that reflect the CDFA and Cal-IPC views of the statewide importance of the pest, likelihood that eradication or control efforts would be successful, and present distribution of the pest in the state. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances. The Cal-IPC species list is more inclusive than the CDFA list.

CDFA categories are defined as follows:

- B: Known economic importance subject to: eradication, containment, control or other holding action at the discretion of the individual county agricultural commissioner.
- C: A pest of known economic or environmental detriment and, if present in California, it is usually widespread. There is no state enforced action other than providing for pest cleanliness.

Cal-IPC categories are defined as follows:

- High: Species with severe ecological impacts, high rates of dispersal and establishment, and usually widely distributed.
- Moderate: Species with substantial and apparent ecological impacts, moderate to high rates of dispersal, establishment dependent on disturbance, and limited to widespread distribution.
- Limited: Species with minor ecological impacts, low to moderate rates of invasion, limited distribution, and locally persistent and problematic.

Appendix L. Sensitive Natural Community Impacts



Land Cover Type	Acres within ESL	Total Acres of Temporary Impact ¹	Land Ownership ² (Acres of Impact)	Project Component	Description of Work
Redwood Forest (late-seral)	13.45	0.35	DNCRSP (0.35)	Boreholes B-28*, B-29*, B-30A*, B-30B*	Undergrowth trimming to 6-inches above the ground; clearing of <6-inch dbh redwoods at B-30B; 2 by 2 feet of excavation for up to eight platform legs at each location.
				Seismic Lines SL 14, SL 16, SL 17, SL 18 SL 21	Undergrowth trimming.
				Foot Access (Foot paths)	Undergrowth trimming.
Redwood Forest (secondary)	4.35	0.30	GDRC (0.30)	Boreholes B-16, B-36, B-40	Undergrowth trimming.
				Seismic Lines SL 18, SL 21, SL 22, SL 23	Undergrowth trimming.
				Vehicle Access	Brushing, limbing, small tree removal, and grading of 24 inches or less.
Redwood Forest (logged)	1.44	0.10	GDRC (0.10)	Seismic Line SL 20	Undergrowth trimming.
				Borehole B-35*	Undergrowth trimming to 6-inches above the ground; limbing for helicopter access; 2 by 2 feet of excavation for up to eight platform legs.
Coastal Brambles	3.54	0.25	DNCRSP (0.11)	Boreholes B-28*, B-29*, B-30A*	Undergrowth trimming to 6-inches above the ground; 2 by 2 feet of excavation for up to eight platform legs at each location.
				Seismic Lines SL 11, SL 12, SL 14, SL 15	Undergrowth trimming.
			RNP (0.06)	Borehole B-25*	Undergrowth trimming to 6-inches above the ground; 2 by 2 feet of excavation for up to eight platform legs at each location.
			GDRC (0.02)	Seismic Line SL 23	Undergrowth trimming.
				Vehicle Access	Brushing and grading up to 24 inches or less along existing logging roads. Placement of pinned stabilization fabric and rock.
			ROW (0.06)	Seismic Line SL 15	Undergrowth trimming.
Borehole B-34A*	Undergrowth trimming to 6-inches above the ground; removal of up to one mature alder; 2 by 2 feet of excavation for up to eight platform legs at each location.				
Red Alder Forest ³	24.07	0.37	DNCRSP (0.10)	Borehole B-34B*	Undergrowth trimming to 6-inches above the ground; removal of up to one mature alder; 2 by 2 feet of excavation for up to eight platform legs.
				Seismic Lines SL 11, SL 12, SL 13, SL 15	Undergrowth trimming.
				Foot Access (foot paths)	Undergrowth trimming.
			RNP (0.20)	Boreholes B-19*, B-20*, B-26	Undergrowth trimming to 6-inches above the ground; 2 by 2 feet of excavation for up to eight platform legs; Undergrowth trimming only at B-26.
				Seismic Lines SL 9, SL 10, SL 11, SL 23	Undergrowth trimming.
			ROW (0.07)	Boreholes B-22*, B-34B*	Undergrowth trimming to 6-inches above the ground; removal of up to one mature alder at B-34B; 2 by 2 feet of excavation for up to eight platform legs.
Seismic Line SL 11	Undergrowth trimming.				
Total	46.85⁴	1.37			

*Helicopter boring location

¹ Acres of temporary impacts were calculated based on the following:

Bore holes: Impact areas estimated conservatively as 50 by 50 feet.

Seismic Lines: Impacts areas estimated to be 4 feet wide for foot access and to lay out equipment.

Foot paths: Impacts areas estimated to be 4 feet wide for foot access.

Vehicle Access: Impact areas estimated for a 6-foot-wide drill rig.

² DNCRSP = Del Norte Coast Redwoods State Park; GDRC = Green Diamond Resource Company; RNP = Redwood National Park; ROW = Caltrans' right of way

³ Not all areas of this community are considered sensitive by CDFW.

⁴ There will be no impacts to the 0.67 acre of Sitka spruce natural community that exists within the Environmental Study Limit.