

EXHIBIT A
East Fork Mill Creek Instream and Floodplain Habitat Improvement Project
SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Improve spawning and rearing habitat for Chinook and coho salmon, and steelhead and cutthroat trout by increasing habitat diversity, reducing fine sediment and improving riparian canopy in selected sections of East Fork Mill Creek, four unnamed tributaries to East Fork Mill Creek and Bummer Lake Creek, tributary to the Smith River in Del Norte County. The objective is to improve the quality and quantity of salmonid habitat placing large wood structures instream to increase pool habitat, provide holding habitat for migrating salmonids, and sort and collect spawning gravels.
2. The Grantee will conduct work along selected sections of Bummer Lake Creek and four unnamed tributaries to East Fork Mill Creek, and East Fork Mill Creek beginning at the confluence with West Branch Mill Creek and mainstem Mill Creek. The upstream end of the East Fork Mill Creek project site is located in Township 16 North, Range 01 East, Section 2 of the Childs Hill 7.5 Minute U.S.G.S. Quadrangle. The downstream end of the project site is located in Township 15 North, Range 01 East, Section 31 of the Childs Hill 7.5 Minute U.S.G.S. Quadrangle. The locations of the project boundaries are approximately 41.725 north latitude, 124.032 west longitude at the upstream end, and 41.734 north latitude, 124.100 west longitude at the downstream end. The unnamed tributaries and Bummer Lake Creek begin at the confluence with East Fork Mill Creek. The upstream ends of the unnamed tributaries beginning closest to the confluence with the West Branch Mill Creek are as follows: 41.725 north latitude, 124.093 west longitude; 41.742 north latitude, 124.083 west longitude; 41.709 north latitude, 124.074 west longitude; Bummer Lake 41.741, 124.045; 41.719, 124.051 as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.
3. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.
4. Work will consist of the following:
 - A field reconnaissance and office based analysis will be conducted to identify site locations based on geomorphic characteristics. Preliminary site designs will be produced in the field and will include type, quantity and size of wood needed and a map and description of site access and preferred and alternative construction techniques.
 - The DFG Grant Manager will evaluate proposed treatments and approve, modify, or delete specific sites or designs.
 - Whole trees will be generated from road segments that have been funded and permitted for deconstruction. The trees, with roots attached, will be excavated, transported sorted and stockpiled close to where they will be installed.
 - Habitat improvements will be accomplished by installing instream habitat structures at 40 sites including approximately 250 pieces of large wood. Excavators and/or helicopters will be used to strategically place the logs at designated locations within the project reach. Care will be taken to maximize habitat complexity at each site by incorporating multiple pieces of wood large enough in size to avoid or minimize hard pinning.

- Minimum wood length will be 1.5 times the bankfull width of the stream.
 - Heavy equipment will be used to excavate two levee and road fills which are impairing floodplain function. Approximately 350 cubic yards of fill will be removed and end-hauled to an approved disposal location. Mulching of disturbed surfaces will occur to maximize erosion control and native trees will be planted at a ratio of two trees planted to every tree removed during construction
 - Conifer trees will be planted within the constructed wood jams to improve jam stability and increase future conifer recruitment.
 - The Grantee will conduct repeat (before, during and after) topographic surveys of pertinent (treatment and control) channel reaches. Benchmarks for longitudinal profiles and cross sections will be marked with rebar and referenced to a UTM coordinate system. All topographic surveys will be conducted according to DFG protocols using an electronic total station and data collector. Repeat monitoring photographs and video will be obtained from established photo-points. Repeat geomorphic mapping of treatment and control sites will also be conducted to complement the other effectiveness monitoring efforts. These data will be analyzed and reported using Carlson, ESRI GIS, and other Microsoft based software.
5. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings, after a period of three years. Site rehabilitation and erosion control, (mulching and seeding) can occur any time during construction but will need to be completed prior to October 15. The standard for success for seeding and mulching is 80% ground coverage after a period of three years.
 6. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.
 7. The Grantee shall notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other aquatic species from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
 - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
 - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
 - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
 - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
 - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
 8. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al. and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.

9. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.
10. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:
 - Implementation start and end dates
 - Percentage of the project completed in total to date
 - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG grant manager upon request)
 - Project start and end dates for work to be implemented the following season

The annual report will also include, on a site by site basis:

- Stream length treated in feet (count one side only)
 - Length of aquatic habitat disturbed (feet)
 - Number of instream structures installed/modified
 - Area of each structure installed within bankfull width (length x width)
 - Length of instream habitat treated excluding bank stabilization
 - Upslope area treated (sq ft) (landslides, bank stabilization)
 - Amount of riparian area treated per site in acres
 - Number of trees planted
11. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:
 - Grant number
 - Project name
 - Geographic area (e.g., watershed name)
 - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
 - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
 - Project start and end dates and the number of person hours expended
 - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
 - Expected benefits to anadromous salmonids from the project
 - Results of the topographic surveys and large wood monitoring activities
 - Pre and post project photographs
 - Maps depicting topographic surveys and restoration efforts
 - A summary of tree planting activities
 - Specific project access
 - Complete as built project description
 - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HI)
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
 - Design spec achieved
 - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Instream Habitat Projects (HI)

- Description of instream treatments used, including site locations referenced to an established landmark, number of treatment sites, and any modifications to site/treatment design.
- Type of materials used for channel structure placement, select from: individual logs (unanchored); logs fastened together (logjam); rocks/boulders (unanchored); rocks/boulders (fastened or anchored); stumps with roots attached (root wads); weirs; gabions; deflectors/barbs; or other engineered structures
- Miles of stream treated with channel structure placement
- Number of instream pools created by structure placement
- Number of structures placed in channel.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Number of acres treated.
- Number of miles of road decommissioned or upgraded (e.g., treated).
- Number of cubic yards of sediment saved from entering the stream.

Riparian Habitat Projects (HR, HS)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.

13. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the East Fork Mill Creek Instream and Floodplain Habitat Improvement Project.

Exhibit C
East Fork Mill Creek Instream and Floodplain Habitat Improvement Project
Project Location Map
T15N, R1E S2, 3, 4, 5, 6, 7, 8, 9; T16N, R1E S32, 33, 34 Crescent City, Sister Rocks,
Hiouchi and Childs Hill Quads
Del Norte County

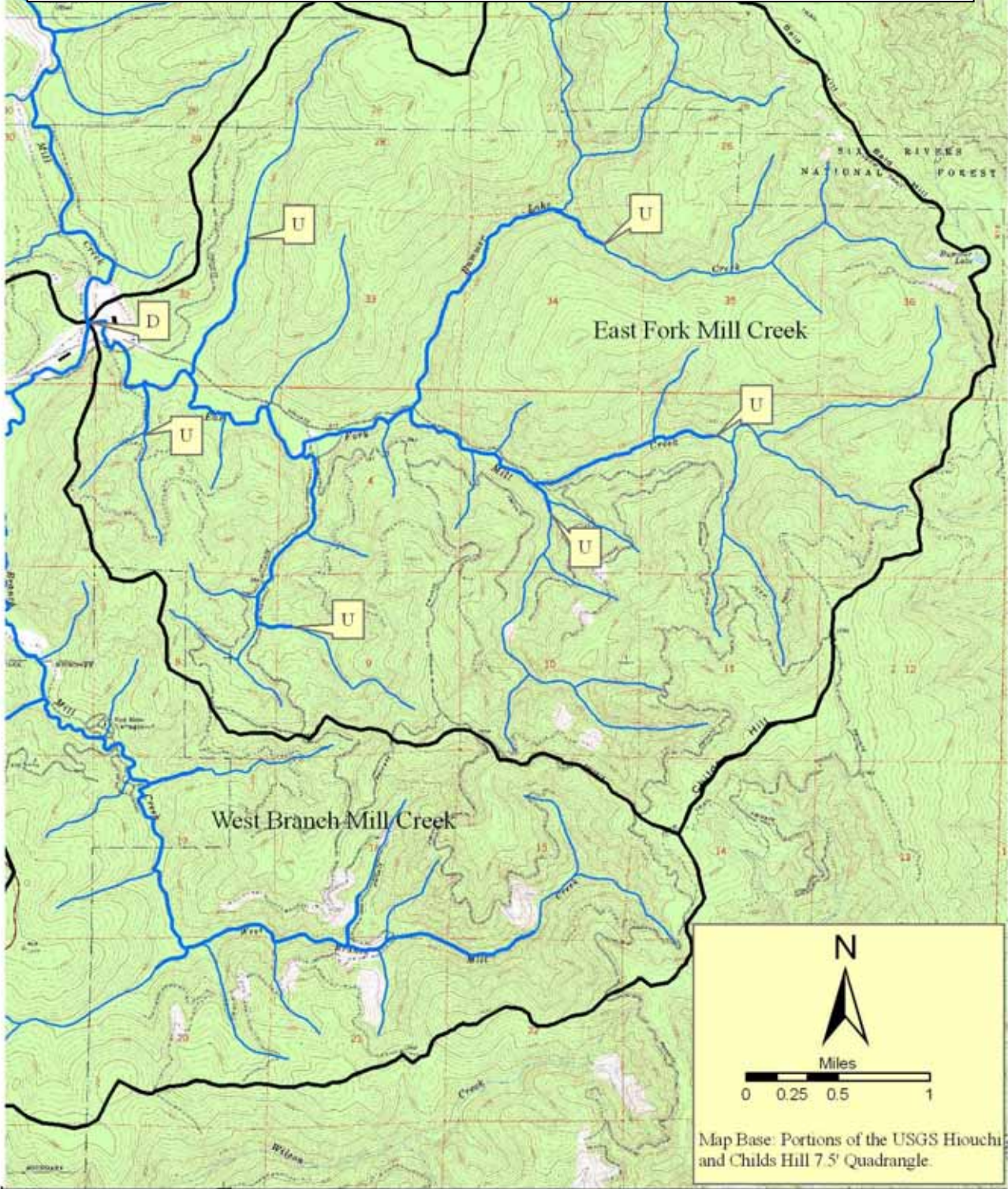


Figure 2. East Fork Mill Creek Instream and Floodplain Restoration Project Location Map. Upstream and downstream project extent indicated by U and D, respectively.

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name - Portrait

Possible Species within the Childs Hill Quad and Surrounding Quads for:
 East Fork Mill Creek Instream and Floodplain Habitat Improvement Project
 T15N, R1E S2, 3, 4, 5, 6, 7, 8, 9; T16N, R1E S32, 33, 34
 United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 Butte County morning-glory <i>Calystegia atriplicifolia ssp. buttensis</i>	PDCON04012			G5T3	S3	4.2
2 Chace juga <i>Juga chacei</i>	IMGASK4180			G1	S1	
3 Coast Range lomatium <i>Lomatium martindalei</i>	PDAPI1B140			G5	S2.3	2.3
4 Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
5 Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
6 Darlingtonia Seep	CTT51120CA			G4	S3.2	
7 Del Norte buckwheat <i>Eriogonum nudum var. paralinum</i>	PDPGN08498			G5T2T4	S2?	2.2
8 Del Norte pyrrocoma <i>Pyrrocoma racemosa var. congesta</i>	PDASTDT0F4			G5T4	S2.3	2.3
9 Del Norte salamander <i>Plethodon elongatus</i>	AAAAD12050			G4	S3	SC
10 Fort Dick limnephilus caddisfly <i>Limnephilus atercus</i>	IITRI15020			G4	S1	
11 Henderson's fawn lily <i>Erythronium hendersonii</i>	PMLIL0U070			G4	S1.3	2.3
12 Hippolyta fritillary <i>Speyeria zerene hippolyta</i>	IILEPJ6087	Threatened		G5T1	S1	
13 Howell's fawn lily <i>Erythronium howellii</i>	PMLIL0U080			G3G4	S2.3	1B.3
14 Howell's jewel-flower <i>Streptanthus howellii</i>	PDBRA2G0N0			G2	S1.2	1B.2
15 Howell's sandwort <i>Minuartia howellii</i>	PDCAR0G0F0			G4	S3.2	1B.3
16 Humboldt marten <i>Martes americana humboldtensis</i>	AMAJF01012			G5T2T3	S2S3	SC
17 Koehler's stipitate rock-cress <i>Arabis koehleri var. stipitata</i>	PDBRA060Z2			G3T3	S1.3	1B.3
18 Langsdorf's violet <i>Viola langsdorfii</i>	PDVIO04100			G4	S1.1	2.1
19 Lyngbye's sedge <i>Carex lyngbyei</i>	PMCYP037Y0			G5	S2.2	2.2
20 Mcdonald's rock-cress <i>Arabis macdonaldiana</i>	PDBRA06150	Endangered	Endangered	G2	S2.1	1B.1
21 Mendocino gentian <i>Gentiana setigera</i>	PDGEN060S0			G2	S1	1B.2
22 Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	
23 Nuttall's saxifrage <i>Saxifraga nuttallii</i>	PDSAX0U160			G4?	S1.1	2.1

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 United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 Oregon coast paintbrush <i>Castilleja affinis ssp. litoralis</i>	PDSCR0D012			G4G5T4	S2.2	2.2
25 Oregon goldthread <i>Coptis laciniata</i>	PDRAN0A020			G4G5	S2.2	2.2
26 Oregon polemonium <i>Polemonium carneum</i>	PDPLM0E050			G4	S1	2.2
27 Pacific fisher <i>Martes pennanti (pacifica) DPS</i>	AMAJF01021	Candidate	unknown code...	G5	S2S3	SC
28 Pacific gilia <i>Gilia capitata ssp. pacifica</i>	PDPLM040B6			G5T3T4	S2.2?	1B.2
29 Pacific tailed frog <i>Ascaphus truei</i>	AAABA01010			G4	S2S3	SC
30 Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0			G3	S3.2	1B.2
31 Siskiyou checkerbloom <i>Sidalcea malviflora ssp. patula</i>	PDMAL110F9			G5T1	S1.1	1B.2
32 Siskiyou paintbrush <i>Castilleja miniata ssp. elata</i>	PDSCR0D213			G5T3	S2.2	2.2
33 Sonoma tree vole <i>Arborimus pomo</i>	AMAFF23030			G3	S3	SC
34 Steller (=northern) sea-lion <i>Eumetopias jubatus</i>	AMAJC03010	Threatened		G3	S2	
35 Thurber's reed grass <i>Calamagrostis crassiglumis</i>	PMPOA17070			G3Q	S1.2	2.1
36 Tracy's romanzoffia <i>Romanzoffia tracyi</i>	PDHYD0E030			G4	S1.3	2.3
37 Waldo wild buckwheat <i>Eriogonum pendulum</i>	PDPGN084Q0			G4	S2.2	2.2
38 Wolf's evening-primrose <i>Oenothera wolfii</i>	PDONA0C1K0			G1	S1.1	1B.1
39 Yontocket satyr <i>Coenonympha tullia yontockett</i>	IILEPN6035			G5T1T2	S1	
40 Yuma myotis <i>Myotis yumanensis</i>	AMACC01020			G5	S4?	
41 alpine marsh violet <i>Viola palustris</i>	PDVIO041G0			G5	S1S2	2.2
42 arctic spoonwort <i>Cochlearia officinalis var. arctica</i>	PDBRA0S032			G5T3T4	S1.3	2.3
43 arctic starflower <i>Trientalis arctica</i>	PDPRI0A030			G5	S1.2	2.2
44 black swift <i>Cypseloides niger</i>	ABNUA01010			G4	S2	SC
45 bristle-stalked sedge <i>Carex leptalea</i>	PMCYP037E0			G5	S2?	2.2

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 United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
46 cackling (=Aleutian Canada) goose <i>Branta hutchinsii leucopareia</i>	ABNJB05035	Delisted		G5T4	S2	
47 coast cutthroat trout <i>Oncorhynchus clarkii clarkii</i>	AFCHA0208A			G4T4	S3	SC
48 coast fawn lily <i>Erythronium revolutum</i>	PMLIL0U0F0			G4	S3	2.2
49 coast sidalcea <i>Sidalcea oregana ssp. eximia</i>	PDMAL110K9			G5T1	S1.2	1B.2
50 coastal triquetrella <i>Triquetrella californica</i>	NBMUS7S010			G1	S1.2	1B.2
51 dark-eyed gilia <i>Gilia millefoliata</i>	PDPLM04130			G2	S2.2	1B.2
52 double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020			G5	S3	
53 fibrous pondweed <i>Potamogeton foliosus var. fibrillosus</i>	PMPOT030B1			G5T2T4	S1S2	2.3
54 foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050			G3	S2S3	SC
55 fork-tailed storm-petrel <i>Oceanodroma furcata</i>	ABNDC04010			G5	S1	SC
56 fringed myotis <i>Myotis thysanodes</i>	AMACC01090			G4G5	S4	
57 ghost-pipe <i>Monotropa uniflora</i>	PDMON03030			G5	S2S3	2.2
58 giant fawn lily <i>Erythronium oregonum</i>	PMLIL0U0C0			G5	S2.2	2.2
59 great blue heron <i>Ardea herodias</i>	ABNGA04010			G5	S4	
60 great burnet <i>Sanguisorba officinalis</i>	PDROS1L060			G5?	S2.2	2.2
61 green yellow sedge <i>Carex viridula var. viridula</i>	PMCYP03EM3			G5T5	S1.3	2.3
62 horned butterwort <i>Pinguicula macroceras</i>	PDLNT01040			G5	S3.2	2.2
63 lagoon sedge <i>Carex lenticularis var. limnophila</i>	PMCYP037A7			G5T5	S1S2.2	2.2
64 leafy reed grass <i>Calamagrostis foliosa</i>	PMPOA170C0		Rare	G3	S3.2	4.2
65 leafy-stemmed mitrewort <i>Mitella caulescens</i>	PDSAX0N020			G5	S4.2	4.2
66 little-leaved huckleberry <i>Vaccinium scoparium</i>	PDERI180Y0			G5	S2.2?	2.2
67 long-beard lichen <i>Usnea longissima</i>	NLLEC5P420			G4	S4.2	

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 United States

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68 maidenhair spleenwort <i>Asplenium trichomanes ssp. trichomanes</i>	PPASP021K2			G5T5	S2.3	2.3
69 maple-leaved checkerbloom <i>Sidalcea malachroides</i>	PDMAL110E0			G3G4	S3S4.2	4.2
70 marbled murrelet <i>Brachyramphus marmoratus</i>	ABNNN06010	Threatened	Endangered	G3G4	S1	
71 mardon skipper <i>Polites mardon</i>	IILEP66030	Candidate		G2G3	S1	
72 marsh pea <i>Lathyrus palustris</i>	PDFAB250P0			G5	S2S3	2.2
73 minute pocket moss <i>Fissidens pauperculus</i>	NBMUS2W0U0			G3?	S1.2	1B.2
74 mountain crowberry <i>Empetrum nigrum ssp. hermaphroditum</i>	PDEMP03021			G5T5	S2?	2.2
75 naked flag moss <i>Discelium nudum</i>	NBMUS2E010			G3G4	S1.2	2.2
76 nodding vanilla-grass <i>Hierochloa odorata</i>	PMPOA35040			G5	S1.3?	2.3
77 northern meadow sedge <i>Carex praticola</i>	PMCYP03B20			G5	S2S3	2.2
78 northern red-legged frog <i>Rana aurora</i>	AAABH01021			G4T4	S2?	SC
79 northern spotted owl <i>Strix occidentalis caurina</i>	ABNSB12011	Threatened		G3T3	S2S3	SC
80 opposite-leaved lewisia <i>Lewisia oppositifolia</i>	PDPOR040B0			G4	S2.2	2.2
81 osprey <i>Pandion haliaetus</i>	ABNKC01010			G5	S3	
82 pink sand-verbena <i>Abronia umbellata ssp. breviflora</i>	PDNYC010N2			G4G5T2	S2.1	1B.1
83 rhinoceros auklet <i>Cerorhinca monocerata</i>	ABNNN11010			G5	S3	
84 rocky coast Pacific sideband <i>Monadenia fidelis pronotis</i>	IMGASC7032			G4G5T1	S1	
85 sand dune phacelia <i>Phacelia argentea</i>	PDHYD0C070			G2	S1.1	1B.1
86 seacoast ragwort <i>Packera bolanderi var. bolanderi</i>	PDAST8H0H1			G4T4	S1.2	2.2
87 seaside pea <i>Lathyrus japonicus</i>	PDFAB250C0			G5	S1.1	2.1
88 serpentine catchfly <i>Silene serpenticola</i>	PDCAR0U2B0			G2	S2.2	1B.2
89 serpentine sedge <i>Carex serpenticola</i>	PMCYP03KM0			G4	S2.3	2.3

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 United States

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
90 short-leaved evax <i>Hesperovax sparsiflora var. brevifolia</i>	PDASTE5011			G4T2T3	S2S3	1B.2
91 silver-haired bat <i>Lasionycteris noctivagans</i>	AMACC02010			G5	S3S4	
92 southern torrent salamander <i>Rhyacotriton variegatus</i>	AAAAJ01020			G3G4	S2S3	SC
93 summer-run steelhead trout <i>Oncorhynchus mykiss irideus</i>	AFCHA0213B			G5T4Q	S2	SC
94 tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered		G3	S2S3	SC
95 tufted puffin <i>Fratercula cirrhata</i>	ABNNN12010			G5	S2	SC
96 western lily <i>Lilium occidentale</i>	PMLIL1A0G0	Endangered	Endangered	G1	S1.2	1B.1
97 western ragwort <i>Packera hesperia</i>	PDAST8H1L0			G3	S1.2	2.2
98 western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened		G4T3	S2	SC
99 western white bog violet <i>Viola primulifolia ssp. occidentalis</i>	PDVIO040Y2			G5T2	S2.2	1B.2
100 white-flowered rein orchid <i>Piperia candida</i>	PMORC1X050			G3	S3.2	1B.2
101 white-tailed kite <i>Elanus leucurus</i>	ABNKC06010			G5	S3	
102 willow flycatcher <i>Empidonax traillii</i>	ABPAE33040		Endangered	G5	S1S2	
103 yellow-tubered toothwort <i>Cardamine nuttallii var. gemmata</i>	PDBRA0K0R3			G5T3	S2.2	1B.3