

## **APPENDIX C**

Habitat suitability matrices

Common Name	Form	Breeding/Feeding	[HABITAT RATING goes in this column]	BF multiplier	Adjusted Suitability	Rare Value	Suitability + Value	Conifer 0-20 yrs (1)	Conifer forest 21-40 (2)	Conifer forest 41-60 (3)	Conifer forest 61-80 (4)	Conifer forest 81-200 (5)	Mixed forest (7)	Hardwood forest (8)	Conifer woodland (9)	Mixed woodland (10)	Hardwood woodland (11)	Other savanna (12)	Oak savanna (13)	Upland shrub (14)	Wetland shrub (15)	Orchards (17)	Short grass (20)	Natural grass (21)	Tall grass (22)	Rock (24)	Seasonal wetlands (26)	Permanent wetlands (27)	Built low density (33)	
COVER TYPE NUMBER								1	2	3	4	5	7	8	9	10	11	12	13	14	15	17	20	21	22	24	26	27	33	Comments
Clouded Salamander	H	BF	0	1.0	0	1	1	1	1	2	2	3	3	1	1	2	1	1	1	1	0	0	0	0	0	2	0	0	1	Large logs; has been found in a basement and in a wood pile in our area.
Oregon Slender Salamander	H	BF	0	1.0	0	1	1	0	1	2	2	3	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	Associated with large logs in OG forest. Also, under bark and in talus.
Western Toad	H	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	Lay eggs in ponds or lakes.	
Western Toad	H	F	0	0.2	0	3	3	2	1	1	1	1	1	1	2	2	3	2	3	3	0	0	0	0	3	2	3	0	Forage widely, seek shelter underground or under large debris or vegetation	
Red-Legged Frog	H	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	Breed in shallow ponds with winter sun exposure and submerged vegetation.	
Red-Legged Frog	H	F	0	0.2	0	3	3	2	3	3	3	3	3	2	3	3	1	1	1	3	0	0	3	1	0	1	3	1	Disperse widely, mostly in moist forests.	
Western Pond Turtle	H	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	2	3	2	0	2	3	2	0	0	0	1	0	Lay eggs in open areas near water.	
Western Pond Turtle	H	F	0	0.2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	3	0	Basin and eat vegetation in ponds, sloughs, etc.	
Western Rattlesnake	H	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	3	3	3	3	3	0	0	2	0	3	0	0	Inhabitat dry, rocky, brushy areas; savannas; edited H for Type 24.	
Western Rattlesnake	H	F	0	0.2	0	3	3	2	0	0	0	0	0	2	1	1	3	3	3	3	1	1	0	2	2	3	0	0	May forage in dry forests as well as in breeding habitats; edited H for 24.	
Bald Eagle	B	B	0	0.8	0	3	3	0	0	0	0	2	2	3	2	3	2	1	0	0	0	0	0	0	0	0	0	0	Most nests are near water. Large, old trees used.	
Bald Eagle	B	F	0	0.2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	3	0	Fish are most important element of diet, but many other things are consumed.	
Northern Goshawk	B	BF	0	1.0	0	3	3	0	0	1	3	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	Nest in mature stands with open understories, often near water.	
Peregrine Falcon	B	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	Nest on remote cliffs; also, tall buildings, bridges. SRHS rock areas small.	
Peregrine Falcon	B	F	0	0.2	0	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	3	2	2	0	Birds are a primary food, but mammals and some insects eaten, also.	
Mountain Quail	B	BF	0	1.0	0	2	2	3	2	1	2	1	1	2	2	1	3	1	1	0	1	0	1	0	0	1	0	0	Open habitats with shrub patches are best.	
Band-Tailed Pigeon	B	BF	0	1.0	0	2	2	2	2	3	3	3	3	1	3	3	1	2	2	0	0	0	0	0	0	0	0	0	Breed in denser forests, forage in more open. Supplement diet by visiting mineral sites.	
Spotted Owl	B	BF	0	1.0	0	3	3	0	1	2	3	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	Nest in OG tree cavities, occasionally on platforms created by branches.	
Common Nighthawk	B	B	0	0.8	0	3	3	3	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	May nest in open areas, but becoming very rare.	
Common Nighthawk	B	F	0	0.2	0	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	Forage widely.	
Lewis' Woodpecker	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	Oak-pine associated; need large diameter snags with cavities.	
Acorn Woodpecker	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	3	0	0	3	0	0	1	0	0	0	0	0	0	2	0	Need stands with large oaks with some dead limbs, and open understory.	
Pileated Woodpecker	B	BF	0	1.0	0	2	2	1	1	2	3	3	3	2	2	1	1	2	0	1	2	0	0	0	0	0	0	0	Nest in cavities in large trees, usually in conifer forests.	
Olive-Sided Flycatcher	B	BF	0	1.0	0	3	3	2	1	1	1	3	2	0	3	3	0	3	1	0	0	0	0	0	0	0	0	0	Prefer scattered, large trees and snags, at forest edges and openings; often near water.	
Willow Flycatcher	B	BF	0	1.0	0	3	3	3	0	0	0	0	0	0	0	0	3	1	3	3	0	0	0	0	0	0	0	0	Prefer upland and riparian shrub thickets for nesting (can be exotic-dominated).	
Horned Lark	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	2	0	Nest in bare ground patches in short grassy habitats.	
Purple Martin	B	B	0	0.8	0	3	3	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	Nests in cavities in open habitats, including snags. Often near water.	
Purple Martin	B	F	0	0.2	0	3	3	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	3	0	Forages over open water, grasslands, and forests.	
White-Breasted Nuthatch	B	BF	0	1.0	0	3	3	0	0	0	0	0	1	3	0	1	3	0	3	1	0	0	0	0	0	0	0	1	Nest in cavities. Prefer larger Oregon white oaks.	
Western Bluebird	B	BF	0	1.0	0	3	3	3	0	0	0	0	0	0	1	2	2	3	3	1	1	1	1	1	1	0	0	1	Nest in cavities in snags in open habitats.	
Yellow-Breasted Chat	B	BF	0	1.0	0	3	3	1	0	0	0	0	0	0	0	1	0	2	3	3	0	0	0	0	0	0	0	0	Nest in thickets near water.	
Chipping Sparrow	B	BF	0	1.0	0	3	3	1	0	0	0	0	1	1	1	2	2	3	3	3	0	2	0	0	0	0	0	0	Breed and forage in forest openings.	
Vesper Sparrow	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	3	0	0	0	0	0	Need grasslands with occasional shrubs for singing perches.	
Grasshopper Sparrow	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	1	0	1	0	0	Need grasslands with occasional shrubs for singing perches.	
Western Meadowlark	B	BF	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	3	1	0	1	0	0	Nest in short grass areas, but need patchiness with a few shrubs.	
Long-Eared Myotis	M	B	0	0.8	0	2	2	3	2	2	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	2	0	2	Buildings, hollow trees.	
Long-Eared Myotis	M	F	0	0.2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	1	1	0	3	3	2	Buildings, hollow trees, crevices.
Long-Legged Myotis	M	B	0	0.8	0	2	2	1	2	2	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	2	0	2	Buildings, hollow trees.	
Long-Legged Myotis	M	F	0	0.2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	1	1	1	0	3	3	2	Forage widely, use caves, buildings, etc. for roosting.	

Vertebrates adapted from Adamus et al. 2000; invertebrates and plants, Salix Associates.

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Common Name																														Vertebrates adapted from Adamus et al. 2000; invertebrates and plants, Salix Associates.	
California Myotis	M	B	0	0.8	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	1	1	1	5	0	0	2	No information available.
California Myotis	M	F	0	0.2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1	1	1	1	0	3	3	2	Forage widely, night roost in crevices.	
Silver-Haired Bat	M	B	0	0.8	0	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	1	Breed more in mature & OG stands.	
Silver-Haired Bat	M	F	0	0.2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	0	3	3	1	Use mines, buildings in winter; also roost in tree cavities, under bark	
Townsend's Big-Eared Bat	M	B	0	0.8	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	Caves, buildings; sensitive to disturbance	
Townsend's Big-Eared Bat	M	F	0	0.2	0	3	3	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	0	3	3	1	Caves, buildings; sensitive to disturbance	
Brazilian Free-Tailed Bat	M	B	0	0.8	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	2	0	0	2	Caves, buildings	
Brazilian Free-Tailed Bat	M	F	0	0.2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	1	1	1	0	3	3	2	Caves, buildings	
Western Gray Squirrel	M	BF	0	1.0	0	3	3	1	2	2	2	2	3	3	2	3	3	2	3	3	0	1	1	0	0	0	0	0	0	2	Oak-pine (or occ. Doug fir) associated; need large diameter snags with cavities.
Camas Pocket Gopher	M	BF	0	1.0	0	2	2	1	0	0	0	0	0	0	1	1	1	3	3	3	1	2	2	3	3	0	1	0	3	Generally well-drained open or shrubby areas, ag fields and orchards. Bulb and tuber foods important.	
White-Footed Vole	M	BF	0	1.0	0	2	2	2	2	2	2	2	3	3	2	3	3	1	1	1	1	0	0	0	0	0	0	0	0	Little known. Seems to prefer moist, forested areas near streams; possibly edges.	
Red Tree Vole	M	BF	0	1.0	0	2	2	1	1	2	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Mature conifer forests preferred.	
Taylor's checkerspot	I		0	1.0	0	3	3	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	3	0	0	0	0	Native prairie with host and nectar plants best.	
Fender's blue butterfly	I		0	1.0	0	3	3	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	3	0	0	0	0	Native prairie with host and nectar plants best.	
Hemp dogbane	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	0	0	0	0	Native prairie, but can tolerate some disturbance. Ag field edges may be OK.	
Clasping-leaved dogbane	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Native prairie, but can tolerate some disturbance. Ag field edges may be OK.	
Narrow-leaved milkweed	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Native prairie, but can tolerate some disturbance. Ag field edges may be OK.	
Rosin weed; tuckweed	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Native prairie.	
Timwort	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Moist areas with little vegetation, such as seeps and vernal pool edges	
<b>Tall bugbane</b>	P		0	1.0	0	3	3	1	1	2	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	Moist areas, not dry forest. Gaps best.
Mountain lady's-slipper	P		0	1.0	0	2	2	1	1	1	1	1	1	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	Filtered shade, but not too dense.
Willamette Valley larkspur	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Native moist prairie, and bottomland forest gaps and edges.
Beautiful shooting star	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Moist to wet areas.	
Willamette Valley daisy	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Native moist to wet prairie.
<b>Wayside aster</b>	P		0	1.0	0	3	3	1	1	1	1	1	1	1	3	3	3	3	3	2	2	0	0	0	0	0	0	0	0	0	On edges and in gaps.
Sinister gilia	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Open areas. Little information available.
Holy grass	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Moist meadows, slopes, riparian.
Shaggy horkelia	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Wet to dry prairie, savanna, woodland edges.
howellia	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	Aquatic, most visible on mud when water recedes in late summer.
<b>Thin-leaved peavine</b>	P		0	1.0	0	3	3	0	0	0	0	0	0	0	1	1	3	1	3	0	0	0	0	1	0	0	0	0	0	0	Likes edges, particularly in riparian areas.
Pacific pea	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	1	3	1	3	0	0	0	0	0	0	0	0	0	0	0	Likes edges, particularly in riparian areas.
Bradshaw's lomatium	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	Wet prairies.
Large-fruited lomatium	P		0	1.0	0	2	2	0	0	0	0	0	0	0	2	2	2	3	3	0	0	0	0	3	0	0	0	0	0	0	Upland prairies, savannas and woodlands.
<b>Fleshy lupine</b>	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Open areas. Little information available.
Golden-fruited sedge	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Moist areas.
Kincaid's lupine	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Moist to upland prairie and savanna.
Dwarf montia	P		0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Vernally moist areas in marshes, prairies, gravel, with little vegetation competition
<b>Howell's montia</b>	P		0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0	Vernally moist areas in marshes, prairies, gravel, with little vegetation competition

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<b>Grass widows</b>	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	Vertebrates adapted from Adamus et al. 2000; invertebrates and plants, Salix Associates.
Oceanspray broomrape	P	0	0	1.0	0	2	2	0	0	0	0	0	1	1	2	2	2	2	2	2	2	0	0	0	0	0	2	0	0	0	Parasitic on Ocean-spray (Holodiscus discolor).
Coffee fern	P	0	0	1.0	0	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	South-facing rocky areas.
Dotted smartweed	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	Wet areas.
Racemose pyrrocoma	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Prairies.
Thompson mistmaiden	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	1	0	0	0	Seepy, south slope areas.
Toothcup	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	Aquatic, most visible on mud when water recedes in late summer.
Pale bulrush	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	3	2	0	Marshes, sloughs, pond edges, ditches.
Drooping bulrush	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	3	2	0	Marshes, sloughs, pond edges, ditches.
<b>Puget groundsel</b>	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	3	3	3	2	2	0	0	0	0	0	1	0	0	0	0	0	Savanna, possibly prairie.
<b>White-topped aster</b>	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	Moist, open areas.
Meadow checkermallow	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	1	1	1	2	2	0	0	0	0	0	3	0	0	0	0	0	Upland prairies, savannas and woodlands.
Cusick's checkermallow	P	0	0	1.0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	0	0	0	0	0	Moist to wet areas, open to partly shady.
Hooker's pink	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	2	2	3	3	0	0	0	0	0	1	0	1	0	0	0	Oak savanna, or woodlands along edges or in gaps.
<b>Hitchcock's bl.-eyed grass</b>	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	3	0	0	0	0	0	Open, moist to wet areas.
Howell's brodiaea	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	0	0	0	0	0	Open, dry to moist areas.
Blue verbena	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	0	3	1	0	0	Moist areas.
Hall's violet	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	0	1	0	0	0	Native upland prairie remnants.
<b>Upland yellow violet</b>	P	0	0	1.0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3	0	1	0	0	0	Native upland prairie remnants.
Dotted water-meal	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	Marshes, sloughs, pond edges
Columbia water-meal	P	0	0	1.0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	Marshes, sloughs, pond edges