Appendix G: Critical Habitat Primary Constituent Elements (PCEs)

Mazama Pocket Gopher

(1) Soils that support the burrowing habits of the Mazama Pocket Gopher, and where the four Thurston/Pierce subspecies of the Mazama Pocket Gopher may be found. These are usually friable, loamy, and deep soils, some with relatively greater content of sand, gravel, or silt, all generally on slopes less than 15 percent. Most are moderately to well-drained, but some are poorly drained. The range of each subspecies of the Mazama Pocket Gopher overlaps with a subset of potentially suitable soil series or soil series complexes.

a. Olympia pocket gopher soils include the following soil series or soil series complex: Alderwood; Cagey; Everett; Godfrey; Indianola; Kapowsin; McKenna; Nisqually; Norma; Spana; Spanaway; Spanaway-Nisqually complex; and Yelm.

b. Tenino pocket gopher soils include the following soil series or soil series complex: Alderwood; Cagey; Everett; Indianola; Kapowsin; Nisqually; Norma; Spanaway; Spanaway-Nisqually complex; and Yelm.

c. Yelm pocket gopher soils include the following soil series or soil series complex: Alderwood; Cagey; Everett; Godfrey; Indianola; Kapowsin; McKenna; Nisqually; Norma; Spanaway; Spanaway-Nisqually complex; and Yelm.

(2) Areas equal to or larger than 50 ac (20 ha) in size that provide for breeding, foraging, and dispersal activities, found in the soil series or soil series complexes listed in (1), above, that have:

a. Less than 10 percent woody vegetation cover;

b. Vegetative cover suitable for foraging by gophers. Pocket gophers' diet includes a wide variety of plant material, including leafy vegetation, succulent roots, shoots, tubers, and grasses. Forbs and grasses that Mazama Pocket Gophers are known to eat include, but are not limited to: *Achillea millefolium* (common yarrow), *Agoseris* spp. (agoseris), *Cirsium* spp. (thistle), *Bromus* spp. (brome), *Camassia* spp. (camas), *Collomia linearis* (tiny trumpet), *Epilobium* spp. (several willowherb spp.), *Eriophyllum lanatum* (woolly sunflower), *Gayophytum* diffusum (groundsmoke), *Hypochaeris radicata* (hairy cat's ear), *Lathyrus* spp. (peavine), *Lupinus* spp. (lupine), *Microsteris gracilis* (slender phlox), *Penstemon* spp. (penstemon), *Perideridia gairdneri* (Gairdner's yampah), *Phacelia heterophylla* (varileaf phacelia), *Polygonum douglasii* (knotweed), *Potentilla* spp. (cinquefoil), *Pteridium aquilinum* (bracken fern), *Taraxacum officinale* (common dandelion), *Trifolium* spp. (clover), and *Viola* spp. (violet); and

c. Few, if any, barriers to dispersal within the unit or subunit. Barriers to dispersal may include, but are not limited to, forest edges, roads (paved and unpaved), abrupt elevation changes, Scotch broom thickets, highly cultivated lawns, inhospitable soil types or substrates, development and buildings, slopes greater than 35%, and open water.

Taylor's Checkerspot Butterfly

(1) Patches of early seral, short-statured, perennial bunchgrass plant communities composed of native grass and forb species in a diverse topographic landscape ranging in size from less than 1 ac up to 100 ac (0.4 to 40 ha) with little or no overstory forest vegetation that have areas of bare soil for basking that contain:

> (a) In Washington and Oregon, common bunchgrass species found on northwest grasslands include *Festuca roemeri* (Roemer's fescue), *Danthonia californica* (California oat grass), *Koeleria cristata* (prairie Junegrass), *Elymus glaucus* (blue wild rye), *Agrostis scabra* (rough bentgrass), and on cooler, high-elevation sites typical of coastal bluffs and balds, *Festuca rubra* (red fescue).
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> (b) On moist grasslands found near the coast and in the Willamette Valley, there may be *Bromus sitchensis* (Sitka brome) and *Deschampsia cespitosa* (tufted hairgrass) in the mix of prairie grasses. Less abundant forbs found on the grasslands include, but are not limited to, *Trifolium* spp. (true clovers), narrow-leaved plantain (*Plantago lanceolata*), harsh paintbrush (*Castilleja hispida*), Puget balsamroot (*Balsamorhiza deltoidea*), woolly sunflower, nineleaved desert parsley (*Lomatium triternatum*), fine-leaved desert parsley (*Lomatium utriculatum*), common camas (*Camassia quamash*), showy fleabane (Erigeron speciosus), Canada thistle (*Cirsium arvense*), common yarrow, prairie lupine (*Lupinus lepidus*), and sicklekeeled lupine (*L. albicaulis*).

(2) Primary larval host plants (narrow-leaved plantain and harsh paintbrush) and at least one of the secondary annual larval host plants (blue-eyed Mary (*Collinsia parviflora*), sea blush (*Plectritis congesta*), or dwarf owl-clover (*Triphysaria pusilla*) or one of several species of speedwell (marsh speedwell (*Veronica scutella*), American speedwell (*V. beccabunga var. americana*), or thymeleaf speedwell (*V. serpyllifolia*).

(3) Adult nectar sources for feeding that include several species found as part of the native (and one nonnative) species mix on northwest grasslands, including, but not limited to: narrowleaved plantain; harsh paintbrush; Puget balsam root; woolly sunshine; nineleaved desert parsley; fine-leaved desert parsley or spring gold; common camas; showy fleabane; Canada thistle; common yarrow; prairie lupine; sicklekeeled lupine, and wild strawberry (*Fragaria virginiana*).

(4) Aquatic features such as wetlands, springs, seeps, streams, ponds, lakes, and puddles that provide moisture during periods of drought, particularly late in the spring and early summer. These features can be permanent, seasonal, or ephemeral.

Oregon Spotted Frog

(1) Nonbreeding (N), Breeding (B), Rearing (R), and Overwintering Habitat (O). Ephemeral or permanent bodies of freshwater, including, but not limited to natural or manmade ponds, springs, lakes, slow-moving streams, or pools within or oxbows adjacent to streams, canals, and ditches, that have one or more of the following characteristics:

- Inundated for a minimum of 4 months per year (B, R) (timing varies by elevation but may begin as early as February and last as long as September);
- Inundated from October through March (O);

- If ephemeral, areas are hydrologically connected by surface water flow to a permanent water body (e.g., pools, springs, ponds, lakes, streams, canals, or ditches) (B, R);
- Shallow water areas (less than or equal to 30 centimeters (12 inches), or water of this depth over vegetation in deeper water (B, R);
- Total surface area with less than 50 percent vegetative cover (N);
- Gradual topographic gradient (less than 3 percent slope) from shallow water toward deeper, permanent water (B, R);
- Herbaceous wetland vegetation (i.e., emergent, submergent, and floating leaved aquatic plants), or vegetation that can structurally mimic emergent wetland vegetation through manipulation (B, R);
- Shallow water areas with high solar exposure or low (short) canopy cover (B, R);
- An absence or low density of nonnative predators (B, R, N)

(2) Aquatic movement corridors. Ephemeral or permanent bodies of fresh water that have one or more of the following characteristics:

- Less than or equal to 5 km (3.1 miles) linear distance from breeding areas;
- Impediment free (including, but not limited to, hard barriers such as dams, biological barriers such as abundant predators, or lack of refugia from predators).

(3) Refugia habitat. Nonbreeding, breeding, rearing, or overwintering habitat or aquatic movement corridors with habitat characteristics (e.g., dense vegetation and/or an abundance of woody debris) that provide refugia from predators (e.g., nonnative fish or bullfrogs).