APPENDIX A

Oregon Spotted Frog [OSF] and OSF Critical Habitat Presence Assessment

Oregon Spotted Frog and OSF Critical Habitat Presence Assessment
February 17, 2015

Use the following questions to determine if you should complete an Oregon Spotted Frog or OSF Critical Habitat assessment.

1. Is the project in one of the following watersheds? (These are mapped as USGS HUCs (10 and/or 12) in the WSDOT GIS workbench with the exception of the Green River in Kent, which is only part of a HUC – see OSF map attached.) Baker River, Black River-Chehalis River, Chambers Creek-Frontal Puget Sound, Chapman Creek, Finney Creek-Skagit River, Fraiser Creek, Green River Kent, Lacamas Creek, Lower Nisqually River-Frontal Puget Sound, Lower Snoqualmie River, Lower Trout Lake Creek, Outlet Creek, Quilceda Creek-Frontal Possession Sound, Samish River, Skagit River-Frontal Skagit Bay, South Fork Nooksack River, Sumas River, Wallace River-Skykomish River, and the Woods Creek-Skykomish River. If yes go to question 2, If no – no effect for OSF and OSF CH.

2. Is the project in Oregon Spotted Frog Critical Habitat? If yes, evaluate the project using the on-site screening tool to describe the suitability of the critical habitat. If no – go to question 3.

3. Is the project likely to impact any aquatic (pond, channel, ditch, river, stream, lake) or wetland (including seasonally flooded pastures, disturbed or farmed wetlands etc.) habitat? If yes, evaluate the project using the on-site screening tool. If no, document the effect determination: most likely a no effect or NLTAA depending on the findings of the analysis.

Use of the screening tool: The assessment should be applied to the area that will be potentially impacted by the project (action area). The action area should consist of the project site plus all upstream or downstream areas where impacts from activities may occur (for example, hydrological variations).

A separate assessment should be made for the OSF, as an individual of the species, and OSF critical habitat. If the action area is entirely or partially within critical habitat, the action area will need to be screened for the presence of any component of the primary constituent elements (PCEs) (see below for the PCEs). If any of the components of the PCEs are present within the action area, the impacts to critical habitat must be analyzed.

Office Oregon Spotted Frog Screening Model.

Use the following GIS layers/information or most current versions of the GIS layers to determine whether the action area may contain potentially suitable habitat for Oregon spotted frog. These layers can help to inform whether the PCEs of critical habitat may be present; however if the action area is entirely or partially within critical habitat, a site visit may be required.

a. Evaluate the soils: Do the soils consist of loams (silt, clay, fine sandy gravelly, cobbly and stony), mucks (e.g. Semiahmoo, Mukilteo), Loamy sands, or other poorly drained fibisols, mesisols, organic cryosols, gleysols or umisols.

b. Evaluate project site elevation – For projects in the Lower Trout Lake Creek, Fraiser Creek, Outlet Creek and Chapman Creek HUCs, does the action area lie between sea level and 2,650 feet? For the all other OSF HUCs, does the action area lie between sea level and 1,100 feet in elevation?

c. Do any of the following types occur within the action area? (do not assess for OSF if the attributes are within marine, or brackish, or tidally influence bodies of water)

   i. Washington Department of Ecology 2011 Modeled wetland layer/grid code attributes

      - Grid Code 1, Class_Name Potentially Disturbed Wetlands
      - Grid Code 2, Class_Name Palustrine Forested Wetland
      - Grid Code 3, Class_Name Palustrine Scrub/Shrub Wetland
      - Grid Code 4, Class_Name Palustrine Emergent Wetland
      - Grid Code 9, Class_Name Water
      - Grid Code 10 Class_Name Palustrine Aquatic Bed

   ii. National Land Cover 2011

      - Grid_code 81: Pasture/hay (May be an extension or overlap Potentially Disturbed Wetlands class in the DOE Wetland inventory)
      - Grid_code 95: Herbaceous emergent wetlands
      - Grid_code 90: Woody wetlands
      - Grid_code 11: Open water

   iii. National Hydrology Dataset 2011: This layer should be used as a tool to look for connectivity between permanent water and refugia/summer habitat.

      - Waterways, including ditches, channels, canals, streams, and rivers.

   If the action area contains any of the features included in the above criteria (a-c) it should be considered potentially suitable for OSF presence. Complete the site visit level screening questions below to determine if the wetland contains all of the important habitat elements.

Critical Habitat Primary Constituent Elements

PCE 1—Nonbreeding (N), Breeding (B), Rearing (R), and Overwintering Habitat (O). Ephemeral or permanent bodies of fresh water, 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)

PCE 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 3.1 mi (5 km) linear distance from breeding areas;
- Impediment free (including, but not limited to, hard barriers such as dams, impassable culverts, lack of water, or biological barriers such as abundant predators, or lack of refugia from predators).

PCE 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).

On-Site Screening Model

During the site visit, screen the action area. Screen the action area to determine the type of OSF habitat: breeding, summer or winter habitat that may be present. All three habitat types do not need to be present within the action area for the area to be considered suitable to support OSF. If WSDOT does not have right of entry to these areas, field screening may not be possible. In access limited scenarios, conduct a visual survey of the area to be best of the personnel's ability.

a. Evaluate the action area for Breeding habitat

i. Contains low gradient shallows with extensive areas < 12 inches deep.

ii. Inundated for at least 5 weeks during late winter/early spring, starting as early as February.

iii. Dominated by (constituting > 50% of existing vegetative cover) emergent wetland vegetation. Ideal vegetation cover would be plants such as *Carex, Eleocharis, Juncus, Sparganuim, Spiraea, Potamogeton, Scirpus, Utricularia, Ranunculus,* filamentous algae, and native grasses, but which may also contain subdominant vegetation of other plant species having an upright submergent or emergent growth form. However, most OSF occupied areas are dominated by reed canary-grass (*Phalaris*[1]), therefore, do not discount this vegetation type as breeding habitat.

iv. Have > 10% plant coverage of bottom substrate, primarily in submergent and emergent growth forms. Reed canary-grass may be being managed to replicate short, emergent vegetation.

v. Have low surface and above-water canopy closure in the form of woody stemmed shrubs and trees, excepting the margins (within 50 ft of open expanses) of deciduous forest stands where leaf-out occurs after egg-laying[3], and,

vi. Remain connected to summer-season habitat by still or slow moving surface waters[2] until post hatching in an average year. This period will be 5-8 weeks from the date of egg deposition, and will usually occur by June 30 in an average year.

Note that in some watersheds, occupied breeding habitat has been planted with trees and shrubs as wetland mitigation. These habitats may continue to be occupied but may not meet all of the criteria in this screen.

b. Evaluate the action area for suitable summer – season features.

   i. Contains persistent (perennial) lentic pools, ditches, canals, or slow moving rivers, that:

      - Have emergent, floating or submergent wetland vegetation growth forms. (Note they will use reed canary-grass dominated systems)

      - May have Palustrine forested vegetation including *Spiraea*, *Salix* or *Alnus* in shrub or tree form or upland shrub-tree form vegetation present and within a distance that provides at least partial shading.

      - Are/become connected via suitable surface water to winter habitat during the fall.

c. Evaluate the site for Winter habitat.

   i. Contains ponded, pooled or channeled areas of either lotic or lentic water that:

      - Exceed 6" in depth.

      - Have some combination of aquatic bed, emergent and scrub shrub vegetation present and intermixed with unconsolidated bottom habitat.

      - Are not scoured (scoured = having flows capable of removing rooted vegetation or re-arranging distribution of large- grained sand and gravel substrates) by winter storm-related flows during an average year.) (Cowardin et al 1997)

      - Inundated from at least October through March

      - If site elevation is such that ice cap persists for > 1- 2 weeks during an average winter, then in channel flow or springs/ upwelling must be present.

Document your findings in the BA/PBA and use the information from the screening tools to support your effect determination.

References

The following site has good pictures of OSF and their habitat, along with calls. <http://www.californiaherps.com/noncal/northwest/nwfrogs/pages/r.pretiosa.html>.

Germaine, S.S. and B.L. Cosentino. 2004 Screening Model for Determining Likelihood of Site Occupancy by Oregon Spotted Frogs (*Rana pretiosa*) in Washington State. Final Report. Washington Department of Fish and Wildlife, Olympia Washington, USA.

Bohannon, J. D. Gay, C. Johnson, M. Widner, and C. Bauman. 2012. Oregon Spotted Frog presence surveys in Skagit and Whatcom Counties, WA. Final Report. USFWS Region 1 and Washington Department of Fish and Wildlife, Olympia, WA USA.

[1] Sites where grazing has ceased and reed canary-grass has grown tall and dense are now known to sustain breeding populations of Oregon spotted frogs for some time. Examples include Beaver Creek and 123rd Ave (Thurston County), Trout Lake (Klickitat County) and Samish River headwaters (Whatcom County). Though spotted frogs clearly favor mowed or grazed habitat for egg-laying, egg mass inventories in dense reed canary-grass dominated wetlands have proven that the frogs will exploit the most suitable conditions they can find (Observations by Kelly McAllister, Lisa Hallock, and Marc Hayes).

[2] "Still or slow-moving water" has been added as a qualifier to distinguish suitable movement corridors from the unsuitable conditions found in swift and substrate-scoured streams.

[3] Oregon spotted frog egg-laying sites have been found under deciduous tree canopy, very close to an open wetland environment, at Samish headwaters (Stephen Nyman, pers. Comm.) and Beaver Creek (K. McAllister and L. Hallock, pers. Comm.).