

APPENDIX F: OREGON SPOTTED FROG HABITAT SURVEY PROTOCOL

Introduction

Potentially suitable habitat for Oregon Spotted Frog (OSF) was mapped in an overlay called the Oregon Spotted Frog Habitat Screen Layer ('OSF Habitat Screen'; HCP Figure 2.6). The OSF Habitat Screen includes 39,493 ac (15,982 ha) and intersects 5,718 tax parcels. Thurston County developed the OSF Habitat Screen with technical assistance from the United States Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), and other knowledgeable parties. The development of the OSF Habitat Screen is described in HCP Section 2.2.5.

The OSF Habitat Screen identifies a mix of known and potential habitat for OSF. On-the-ground surveys for OSF in Thurston County to date have focused on areas immediately around known locations, therefore survey of potential, but unconfirmed OSF habitat has been limited. The County, USFWS, and WDFW acknowledge that the entire OSF Habitat Screen is not suitable OSF habitat. Therefore, prior to any Covered Activity occurring within the OSF Habitat Screen, except routine right-of-way maintenance, an OSF habitat verification process will be completed. OSF habitat verification process will utilize the protocols identified in this document. Additional follow up species survey and technical assistance comments from USFWS on survey results will be completed as needed and appropriate. Impacts will only be assessed where suitable OSF habitat is verified with this protocol. A survey completed for OSF habitat will be valid for one year.

Oregon Spotted Frog Suitable Habitat Definition

OSF habitat is characterized by 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.

The OSF needs two broad categories of habitat: breeding and nonbreeding. Suitable habitat for OSF may include any one of these habitats, or a combination.

- Breeding habitat consists of ovipositioning and rearing habitat and is characterized as shallow water (< 12 in deep) emergent (short-stature (< 2 foot) sedge, rush, and grass vegetation) wetlands, which are unshaded (0-75% canopy cover¹) and that ideally have hydrologic connection during highwater season, even for short periods (30 or less days) to perennial waters. The extent of this habitat can vary inter- and intra-annually with fluctuating water levels.
- Non-breeding, summer and winter habitat types can include characteristics of breeding habitat but also include slow moving deeper and shaded waters with floating and submerged

¹ Areas with deciduous canopy species will typically not be leafed out during OSF breeding season.

vegetation. This can include springs, ponds, lakes, sluggish streams or rivers, irrigation canals, shrub wells, roadside ditches, swales, or depressional areas.

If the parcel and/or project contain habitat which meets the OSF suitable habitat definition, then the area is considered to contain suitable OSF habitat.

OSF Habitat Suitability Verification Protocol

Step 1: Office GIS Evaluation

County staff will review proposed project information, aerial photos, maps, and GIS resources. If the following condition can be verified, the project area is NOT considered OSF habitat, and may be removed from OSF review:

- A. The entire parcel is forested with >75% canopy cover of deciduous or evergreen tree species²;

If the above condition is NOT present, continue with a field evaluation (described below).

Step 2: Field Evaluation

Conduct visits to evaluate parcels and included project areas for suitable OSF habitat from January 1 – April 15. If USFWS notifies the County, this period may be modified. This temporal period is typically when fall and winter precipitation events in Thurston County cause inundation of seasonal wetlands that Oregon spotted frog use for breeding. Therefore, identification of all habitat types is most likely to be possible during this time. This evaluation period may be adjusted through adaptive management over the permit term of the HCP.

Assess conditions on the parcel and specifically within the project area to determine if OSF habitat (breeding, rearing summer, or winter) is present. All habitat types do not need to be present within the parcel for the area to be considered suitable habitat for OSF.

General Evaluation Questions

If the answer to either of the following questions (B and C) is YES, there is NOT suitable habitat onsite, and the project may be removed from further review. If the answers to questions are all NO, OSF habitat may be present - continue to the next section to determine what type if any is present.

- B. Is all aquatic habitat on the parcel a flowing stream with inorganic substrates (i.e., gravel cobble) in a forest with >75% canopy cover of deciduous or evergreen tree species and/or > 75% forest associated or woody wetland vegetation? **YES/NO DESCRIBE**
- C. Is all aquatic habitat on the parcel lasting < 30 days and not hydrologically connected (above surface) to other persistent water (present > 30 days)? **YES/NO DESCRIBE**

² A site visit may be conducted to confirm the office review. Should the parcel condition be substantially different a field evaluation may be required.

Evaluation questions for Breeding and Rearing Habitat

If the answer to one or more of the questions below (D-I) is YES, it is suitable OSF habitat, with potential conditions for Breeding and Rearing:

- D. Does the parcel contain *shallows* with extensive (> 1,000 sq. ft.) areas < 12 inches deep? **YES/NO**
- E. Are these shallows (Question D) inundated for at least 5 weeks during late winter/early spring, starting as early as February? **YES/NO**
- F. Is the vegetation covering the parcel or in these shallows dominated by (constituting > 50% of existing vegetative cover) emergent wetland vegetation³? **YES/NO DESCRIBE**
- G. Do these shallows (Question D) have > 10% vegetative coverage of substrate, primarily (> 50%) in submergent and emergent growth forms? **YES/NO DESCRIBE**
- H. Do these shallows (Question D) have low (< 75%) 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-laying⁴? **YES/NO DESCRIBE**
- I. Do any or all these shallows (Question D) remain hydrologically connected to summer-season habitat by still- or slow-moving surface waters until post hatching (June 30th) in an average year? **YES/NO DESCRIBE**

Evaluation questions for suitable summer habitat

If the habitat element below (M) is present, it is suitable OSF habitat, with potential for summer occupancy:

- M. Does the parcel contains perennial lentic pools, ditches, canals, or slow-moving rivers, or other wetted areas that have emergent, floating, or submergent wetland vegetation (potentially including freshwater woody wetland vegetation such as: hardhack, willow, or alder (*Spiraea* spp., *Salix* spp., or *Alnus* spp.) in shrub-tree form)? **YES/NO DESCRIBE**

³ Vegetation cover would include species such as *Carex*, *Eleocharis*, *Juncus*, *Sparganium*, *Spiraea*, *Potamogeton*, *Scirpus*, *Utricularia*, *Ranunculus*, filamentous algae, and native grasses, but may also contain subdominant vegetation of other plant species having an upright submergent or emergent growth form. As most OSF occupied areas are currently dominated by reed canarygrass (*Phalaris*), non-native vegetation may function as breeding habitat.

⁴ Note that in some watersheds, occupied breeding habitat has been planted with trees and shrubs as wetland mitigation/enhancement. These habitats may continue to be occupied but may not meet all the criteria in this screen.

Evaluation questions for suitable winter habitat

If one or more of the habitat elements below (N-P) is present, it is suitable OSF habitat, with potential for winter occupancy:

- N. Does the parcel contain any ponded, pooled, or channeled areas of either lotic (flowing) or lentic (standing) water that exceeds 6” in depth? **YES/NO DESCRIBE**

- O. Does the parcel contain any ponded, pooled, or channeled areas of either lotic or lentic water that have some combination of aquatic bed, emergent, and scrub shrub vegetation present and are intermixed with unconsolidated bottom habitat? **YES/NO DESCRIBE**

- P. Does the parcel contain any ponded, pooled, or channeled areas of either lotic or lentic water that are not scoured⁵ by winter storm-related flows during an average year, but are inundated from at least October through March? **YES/NO DESCRIBE**

⁵ Scoured: having flows capable of removing rooted vegetation or re-arranging distribution of large- grained sand and gravel substrates.

Oregon Spotted Frog Survey System

