Appendix K: Project Site Survey and Reporting Protocols for Plant and Butterfly Habitat

1.1 Introduction

This appendix provides protocols for completing a survey of a proposed project site for Covered Species.

1.2 Survey Windows

Surveys to document the presence or absence of Covered Species must occur during the season when the species are identifiable. In some cases this may need to be several months prior to habitat restoration or maintenance actions.

Nelson's checkermallow and Kincaid's lupine can be confused with similar, more common species, so surveys for them can be of two types. "Presence surveys" are conducted when the species can be positively identified (while the plants are in flower). "Absence surveys" are conducted during seasons when leaves of the species are reliably present so that if leaves are not encountered, neither the Covered Species nor its look-alike are present. Absence surveys can be conducted over a wider window of time than presence surveys. The two types of surveys can be used in series. If an absence survey finds the species may be present, a follow-up presence survey will be required for a positive identification. If the absence survey shows that the species is absent, no further survey is required.

1.2.0 Nelson's checkermallow (*Sidalcea nelsoniana*)

- Absence surveys can be conducted prior to and during the blooming period (April through July) to rule out the presence of any checkermallow species by looking for plants in a vegetative state.
- Presence surveys for *Sidalcea nelsoniana* must be conducted during the blooming period, mid June through mid July, to distinguish this species from other *Sidalcea* species, including field and rose checkermallow.

1.2.1 Peacock larkspur (*Delphinium pavonaceum*)

- Surveys should be conducted during the blooming period from May 1 through June 15.

1.2.2 Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*)

- Absence surveys may be conducted from March 1 through July 31.
- Presence surveys must occur from May 1 through June 30.

1.2.3 Bradshaw's lomatium (*Lomatium bradshawii*)

- Surveys should be conducted during the blooming period from April 1 through May 31.

1.2.4 Willamette daisy (*Erigeron decumbens*)

- Surveys should be conducted during the blooming period from June 1 through July 15.

1.2.5 Fender's blue butterfly (*Icaricia icarioides fenderi*) habitat

- Surveys for butterfly host plants (Kincaid's lupine) should be completed as described in Section 1.2.2. Surveys for nectar species can generally be completed during the flight period of the butterfly, May 1- June 15.

1.2.6 Taylor's checkerspot butterfly (*Euphydryas editha taylori*) habitat

- Surveys for butterfly host plants (English plantain) can be completed during the growing season. Surveys for nectar species can generally be completed during the flight period of the butterfly, which usually occurs between April 1 and May 31.

1.3 Qualifications for Botanical Surveys

The biologist or natural resource specialist conducting botanical surveys and providing direction and guidance regarding protection of Covered Species during vegetation management activities must possess the following qualifications:

- Experience conducting floristic field surveys and/or butterfly surveys depending on the species being targeted for survey.
- Familiarity identifying Willamette Valley prairie species and high priority weed species.
- Experience identifying each of the five covered plant species.

1.4 Field Survey Protocol

To ensure no rare species are missed during surveys, all species in the project area (area to be impacted by the proposed project) will be identified to species, subspecies, or variety, as applicable. Some sites may require more than one visit during the

growing season to ensure an accurate inventory of Covered Species at the site (i.e., if the site contains habitat for both Bradshaw's lomatium and Nelson's checkermallow the surveyor may need to visit the site in April to look for Bradshaw's lomatium and in June or July to look for Nelson's checkermallow).

All habitats within the project area will be surveyed thoroughly in order to properly inventory and document the plant species present. Population boundaries of any Covered Species populations will be mapped using GPS and sketch maps on aerial photos, to identify the location as accurately as possible. The number of individuals in each population will be counted or estimated, as appropriate (i.e., individual peacock larkspur plants will be counted while lupine abundance would be recorded as area of foliar coverage in m^2).

1.4.0 Required Reporting and Documentation

Written survey reports will include the following sections, some of which will be completed by the biologist/natural resource specialist, and some of which may be completed by the permit applicant or Cooperator.

1.4.1 Project location and description

- A detailed map of the location and footprint of the proposed project.
- A detailed description of the proposed project, including one-time or ongoing activities that may affect botanical resources.
- A description of the general biological setting of the project area.
- Dates of surveys and rationale for timing and intervals; names of personnel conducting the surveys; and total hours spent in the field for each surveyor on each date.

1.4.2 Results

- A description and map of the vegetation communities on the project site.
- A description of the phenology of each of the plant communities at the time of each survey date.
- A list of all plants observed on the project area using accepted scientific nomenclature, along with any special status designation. The reference(s) used for scientific nomenclature shall be cited.
- Written description and detailed GIS map(s) showing the location of each Covered Species, butterfly nectar-plant species (if within the Fender's Blue Butterfly nectar zone), or locally significant plant found, the size of each population, and method used to estimate or census the population.
- Copies of survey forms (if applicable) and accompanying maps.

1.4.3 Discussion

- Any factors affecting the results of the surveys
- An assessment of potential impacts of the proposed project to the Covered Species. This shall include a map showing the distribution of Covered Species and locally significant plants and communities on the site in relation to the proposed activities. Impacts to the Covered Species shall be discussed.
- Recommended measures to avoid and/or minimize impacts.
- References cited and persons contacted.
- Qualifications of surveyor(s) - a Curriculum Vitae or similar.