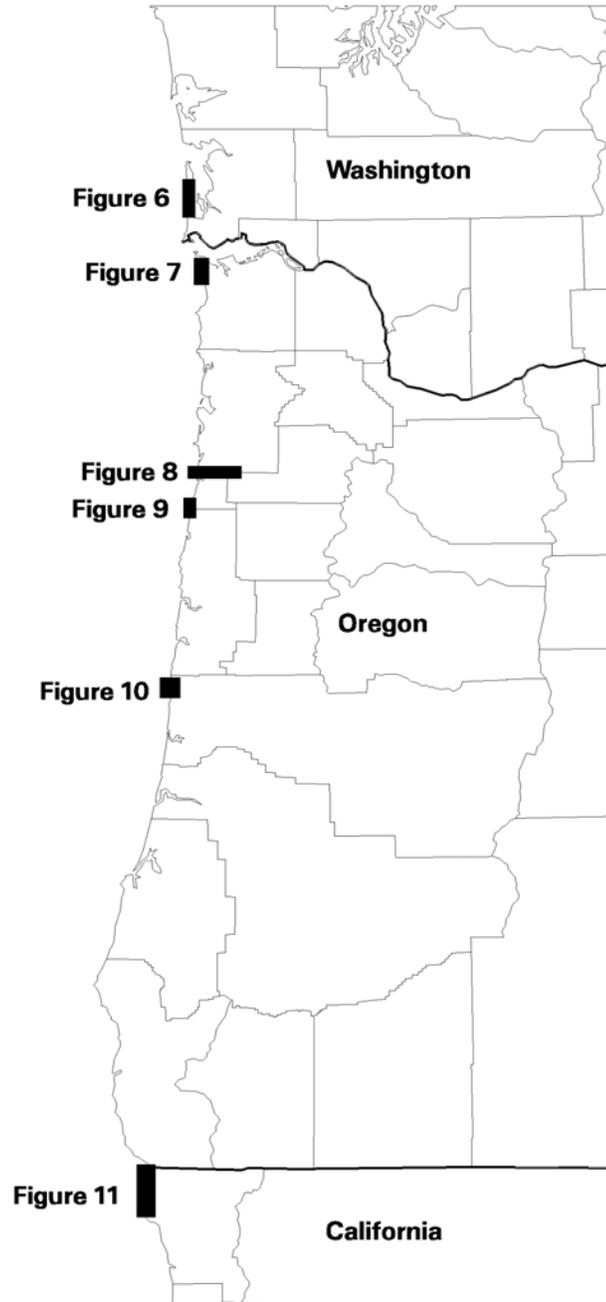
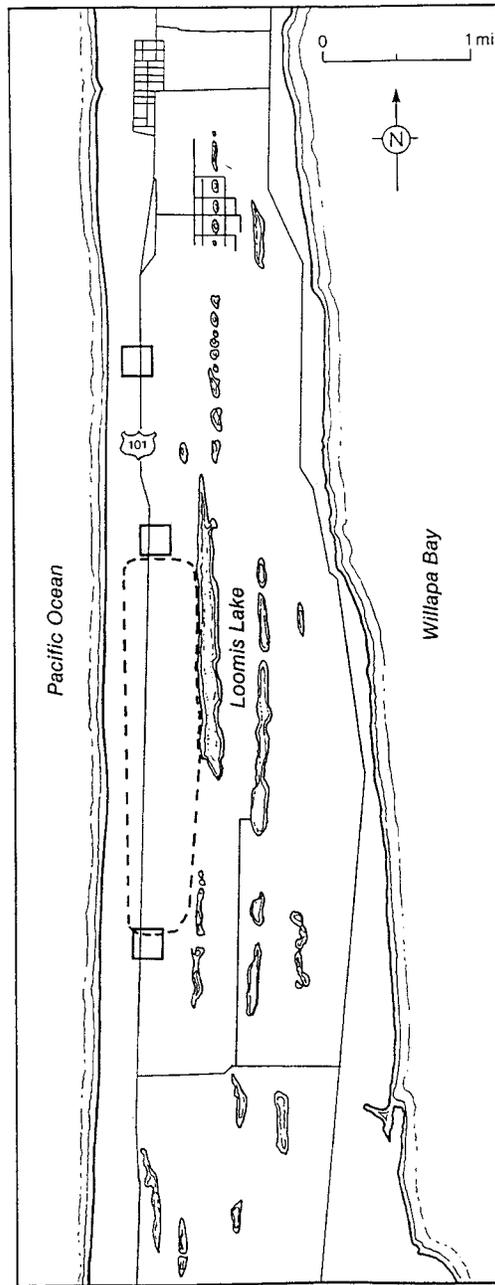


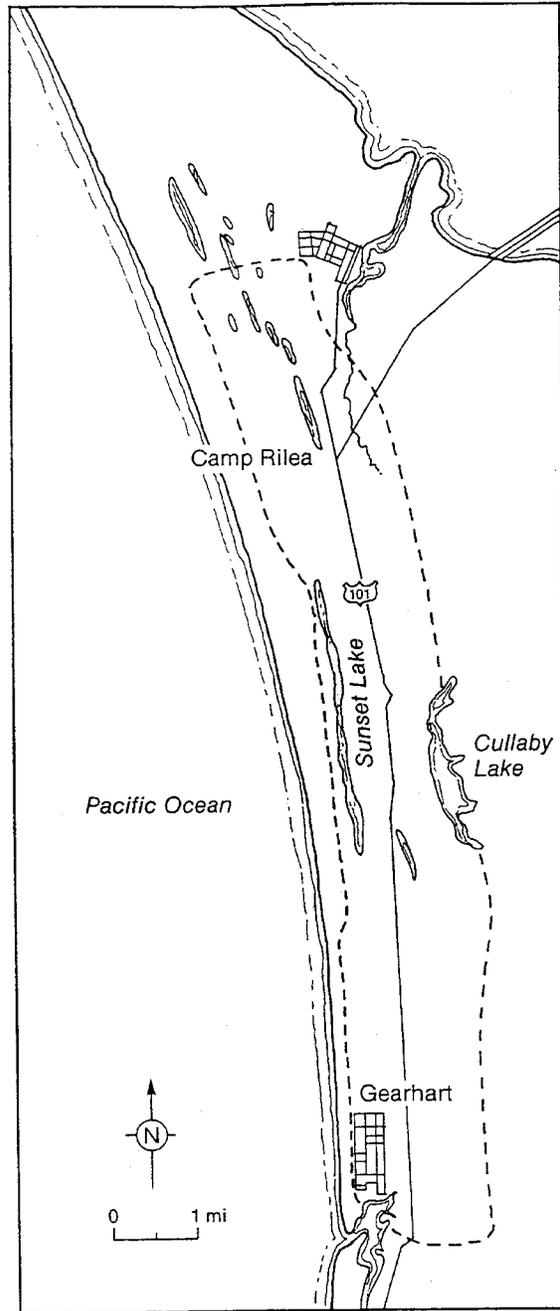
## Appendix A: Maps of Habitat Conservation Areas



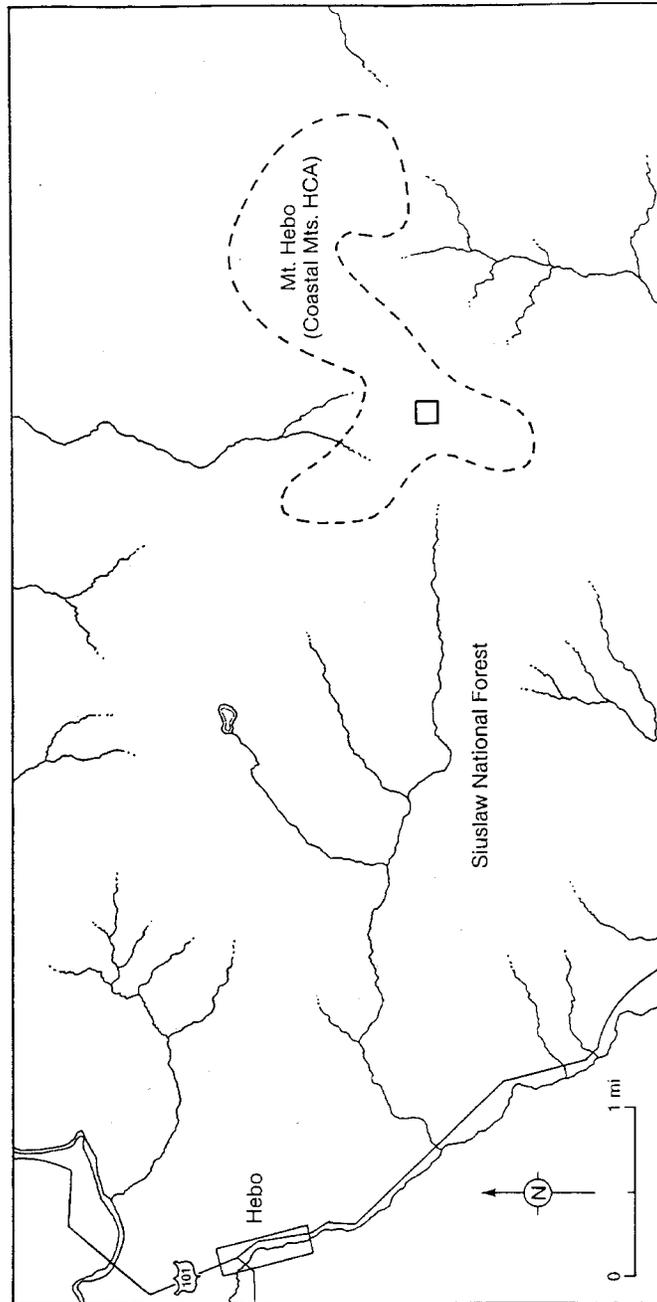
**Figure 5.** Index map of Habitat Conservation Areas for the Oregon silverspot butterfly.



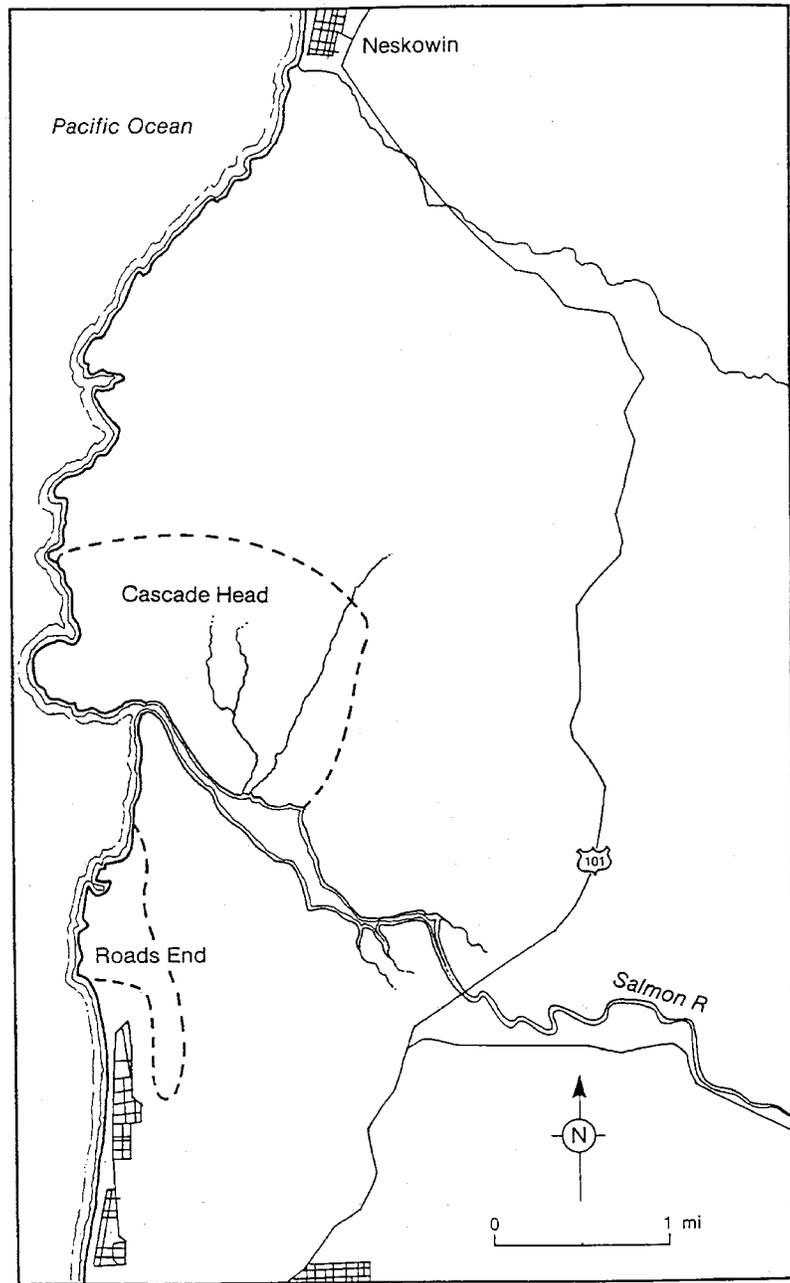
**Figure 6. Long Beach Habitat Conservation Area**



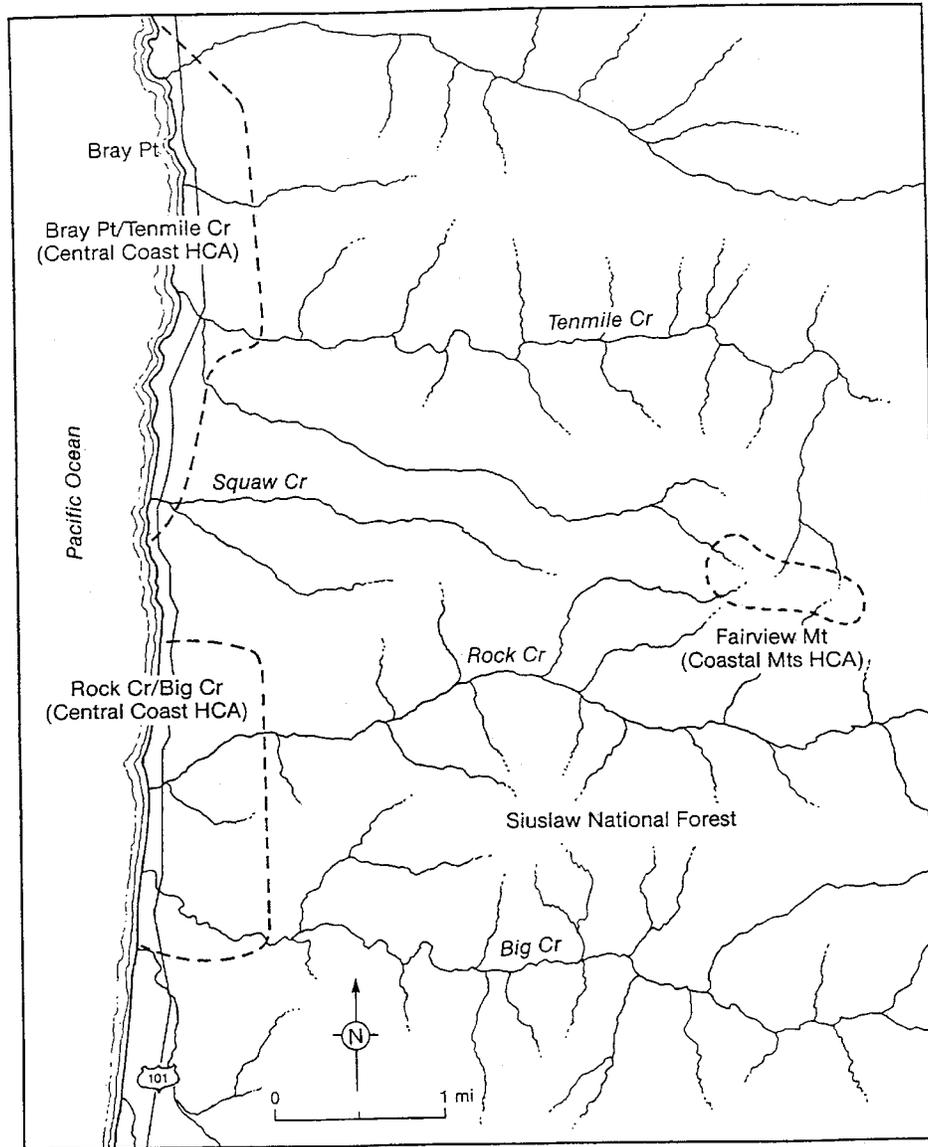
**Figure 7. Clatsop Plains Habitat Conservation Area**



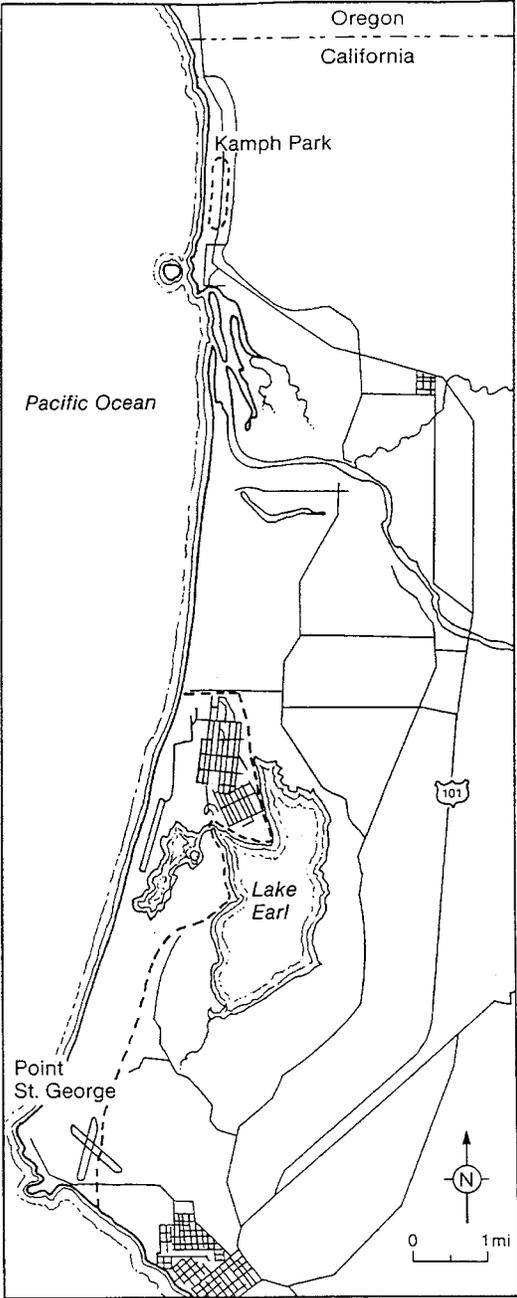
**Figure 8. Mt. Hebo, Coastal Mountain Habitat Conservation Area**



**Figure 9. Cascade Head Habitat Conservation Area**



**Figure 10. Central Coast Habitat Conservation Area and Fairview Mountain, Coastal Mountain Habitat Conservation Area**



**Figure 11. Del Norte Habitat Conservation Area**

## **Appendix B:**

### **Summary of Comments on the Draft Revised Recovery Plan for the Oregon Silverspot Butterfly.**

#### **I. Background**

We listed the Oregon silverspot butterfly as a federally threatened species in October 1980, under the Endangered Species Act of 1973, as amended. The original recovery plan for the Oregon silverspot butterfly was published in January 1982. The revised recovery plan attempts to provide updated information on the distribution, population trends, and threats as well as to expand the area to be addressed in recovery planning.

In April 2000, we released the draft revised recovery plan for the Oregon silverspot butterfly for a 60-day comment period, which ended June 16, 2000. Over 100 copies of the draft revised recovery plan were sent out for review during the comment period.

Twenty-six comment letters were received. Many of the comment letters provided specific comments on wording to increase clarity or contained requests for updating information on specific habitat conditions or population status at recovery sites. These comments were incorporated, as appropriate, into this final revised recovery plan, and are not discussed further here.

Of the 26 comment letters received, 4 were from entities which oversee management of Oregon silverspot butterfly habitat areas (U.S. Forest Service - Siuslaw National Forest, The Nature Conservancy, Oregon Military Department, and Washington Department of Fish and Wildlife). Nineteen of the letters indicated support for the plan in general or for specific provisions within the plan. Issues raised during the public comment period that were not completely addressed or incorporated into the final revised recovery plan, or that resulted in substantive changes to the plan, are discussed below. Comment letters on the draft revised plan are on file at the U.S. Fish and Wildlife Service's Oregon Fish and Wildlife Office, 2600 SE. 98<sup>th</sup> Avenue, Suite 100, Portland, Oregon 97266.

## II. Summary of Major Comments and Service Responses

**Issue 1:** Two comment letters suggested that the Draft Revised Recovery Plan's Appendix B (Estimates of Oregon silverspot population numbers and habitat acreages) included outdated information which should be updated with recent census information and included in the body of the plan.

**Response:** A section called "Population Status" (page 10) was added to the plan to replace the Appendix. This section incorporates the most recent survey information (2000 census data by The Nature Conservancy [Pickering 2000]) and updated information on long-term trends based on quantitative transect surveys.

**Issue 2:** Two comment letters addressed the adequacy, basis, and use of 3 percent cover of early blue violets as a goal in recovery criterion number two.

**Response:** The criterion was reworded with Recovery Team input. In criterion number two the early blue violet goal based on "percent cover" was replaced with "density" (mature violet plants per square meter), as a more appropriate unit of measure for species such as early blue violet with low abundance and aggregated distribution. In addition, clear, executable, and relatively cost efficient sampling methods could be used to monitor density, facilitating uniform collection of data and the ability to make comparisons between years and sites.

A numerical goal for early blue violet abundance was not included in the criterion since information on violet density requirements over an entire site is not known. Violet densities observed at Oregon silverspot butterfly habitats in the 1990's ranged from 20 to 100 violet plants per square meter (square yard), however these densities applied to specific patches of ovipositing habitat and did not represent a uniform violet density throughout the entire site. Prior to incorporating a "habitat patch" concept into the recovery criteria, a clearer understanding of Oregon silverspot butterfly habitat dynamics would need to be developed. This concept would include the number, size, density, and distribution of violet patches needed by silverspots as well as the distribution of these patches relative to nectar sources and wind protection.

We recommend that density of violet plants be monitored at each Oregon silverspot butterfly habitat area and that management objectives be created

specifically for each site. In the absence of specific data on target violet density, the objectives should include establishment of violet patches that are within the range of violet abundances observed in the early 1990's at sites which supported Oregon silverspot butterfly populations (20 to 100 violet plants per square meter [square yard]).

The recovery objective was also modified to emphasize the importance of maintaining an abundance of nectar plants within each habitat area. Emphasizing establishment and maintenance of several species at high densities would help ensure that: 1) nectar is available throughout the flowering season to meet the energy needs of Oregon silverspot butterflies during both early and late season, 2) nectar sources are provided in close proximity to violets to reduce necessity of butterfly dispersal which could result in higher instances of highway mortality, and 3) a variety of species are present so that if one species has a poor response due to weather, management techniques, depredation, or other reasons, the likelihood that not all plants will be affected is high.

The recovery objective emphasizes a native community approach to providing the important habitat components for Oregon silverspot butterflies. This includes reducing cover of non-native, invasive species which have been a major contributing factor in the decline of silverspot populations. Another important structural component of quality Oregon silverspot habitat, low vegetation height, would be maintained by this approach.

**Issue 3:** Several comment letters suggested changes to the priority system or the budget listed in the Implementation Schedule.

**Response:** Standard definitions of priorities are used in all recovery plans to provide consistency and allow comparisons across species. Priority 1 tasks are actions that must be taken to prevent extinction or to prevent the species from declining irreversibly; priority 2 tasks are actions that must be taken to prevent a significant decline in species population or habitat quality, or other significant adverse impact short of extinction; priority 3 tasks are all other actions necessary to provide for full recovery of the species. The Implementation Schedule assigns priority 2 to nearly 50 tasks. Further refinement of the priorities within this grouping is needed and would be appropriately addressed by the Oregon Silverspot Butterfly Working Group.

The plan's estimates of costs for each task are to be used for planning purposes only. These numbers do not represent any commitment of funds by any of the parties listed. We recommend that the recovery tasks, implementation schedule, and costs listed in this plan be used by each agency in the development of management plans and budgets, however, we expect that these cost items will be revised to meet actual on-the-ground estimates for completion of work.

**Issue 4:** Two individuals provided comments which expressed concern that the plan would result in the Federal government taking private land.

**Response:** The plan does not advocate that the government take ownership of any private lands through eminent domain. Any acquisition of suitable habitat which may occur would be through negotiations with willing sellers; and fair market values would apply. The plan's estimates of acquisition costs are minimum values to be used for preliminary planning processes only and are not based on nor intended to reflect the current market value of property, nor are any specific properties targeted in this plan.

Section 9 of the Endangered Species Act prohibits *take* of threatened or endangered species unless a permit is granted by the Service. The definition of "take" includes to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. "Harm" in the definition of "take" in the Endangered Species Act means an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing important behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3).

While take of an endangered species is prohibited by Federal law, a private landowner may apply for an Incidental Take permit. The private landowner, or Applicant, would develop a Habitat Conservation Plan which would describe how the Applicant would minimize and mitigate the impacts of the proposed action on the species. More information is provided on the Habitat Conservation Planning process on page 24 of the plan. Habitat Conservation Plans are also addressed in tasks 1.1, 1.2, 1.4, 1.5, and 1.6.

Another option presented in the plan is the Safe Harbor Agreement which provides incentives and reduces disincentives to private landowners to foster the

recovery of listed species. Through the Safe Harbor option, we would provide assurances to landowners that the use of their property will not be subject to additional restrictions under the Endangered Species Act due to voluntary conservation activities which benefit and attract listed species (e.g., restoration of native grassland habitats, removal of invasive brush). Under a Safe Harbor agreement, participating landowners would be allowed to return their property to its original baseline condition at some time in the future provided a net conservation benefit is achieved. Safe Harbor Agreements are also addressed in tasks 1.1, 1.2, 1.4, 1.5, and 1.6.

**Issue 5:** Two individuals indicated interest in undertaking conservation actions for Oregon silverspot butterfly on their lands, but were concerned about increased government regulation if they improved habitat.

**Response:** We have developed the Safe Harbor program to assist landowners who wish to restore habitat or undertake other actions on private properties to benefit listed species. Through the Safe Harbor option, we provide assurances to landowners that the use of their property will not be subject to additional restrictions under the Endangered Species Act due to voluntary conservation activities which benefit and attract listed species. Under a Safe Harbor agreement, participating landowners would be allowed to return their property to its original baseline condition at some time in the future provided that a net conservation benefit is achieved. Landowners interested in the Safe Harbor program should contact us for more information and technical assistance. Washington landowners should contact the Western Washington Fish and Wildlife Office in Lacey at (360)753-9440; Oregon landowners should call the Oregon Fish and Wildlife Office in Portland at (503)231-6179; California landowners should call the Coastal California Fish and Wildlife Office in Arcata at (707)822-7201.

## Appendix C: Glossary

androconial scales: specialized scales on the male which produce sex pheromones used in courtship behavior.

Conservation Plan: A plan developed for the conservation and management of a species or ecosystem. Conservation measures specified in a conservation plan generally include but are not limited to habitat protection, habitat management, and land use practices, but may include additional measures or methods of conservation, such as artificial propagation and population augmentation.

diapause: a period of physiologically enforced dormancy, *i.e.*, developmental arrest in an insect between periods of activity.

discal: an area in the center of each butterfly wing.

eclose: to emerge as a butterfly from pupal stage.

forewing: the front wing of a butterfly.

habitat conservation area: An area containing one or more populations, or potential habitat for management of at least two viable populations.

habitat conservation plan: The Fish and Wildlife Service may permit the “take” of endangered or threatened animals if it is incidental to, and not the purpose of, an otherwise lawful activity. The applicant for such an “incidental take permit” must submit a satisfactory “conservation plan” that specifies, among other things, the impacts that are likely to result from the taking and the measures the permit applicant will undertake to minimize and mitigate such impacts. These conservation plans, prepared under section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended, have come to be known as “habitat conservation plans.” The Endangered Species Act’s provision for habitat conservation planning, adopted in 1982, was modeled after the conservation plan developed by private landowners and local governments to protect the habitat of two federally listed butterfly species on San Bruno Mountain in San Mateo County, California. Congress did, however,

recognize that each habitat conservation plan would be unique to its own factual setting.

habitat management plan: A conservation plan specifically developed for the management of lands with the intent and goal of maintaining habitat to provide for species and/or ecosystem conservation.

hindwing: the rear wing of a butterfly.

larval instars: a stage in the life of an arthropod between two successive molts.

metamorphosis: a change of physical form, structure, or substance, such as from a caterpillar to a butterfly.

nectar (used as a verb): to seek out nectar-bearing flowers and feed on their nectar.

orographic: associated with or induced by the presence of mountains, as in orographic precipitation.

oviposit: to lay eggs

phenology: the science of relations between climate and periodic biological phenomena, *e.g.*, the timing of flowering, fruiting, or, for butterflies, emergence.

population: a group of individuals at a given locality which interbreed when mature.

pupal stage: an immature stage after the larva (caterpillar) in which transformation to the adult stage occurs in a metamorphic insect.

submarginal band: an area just inside the margin of a butterfly wing.

succession: a change in vegetation due to environmental variables or the intrinsic nature of the plants themselves. In many, but not all, areas in this butterfly's range, this means encroachment of woody plants into grassy areas.

(minimum) viable population: a threshold level at which the population has a reasonable chance of survival or sustainability over time.