

APPENDICES

I. Species Status and Biology

The Oregon silverspot butterfly (*Speyeria zerene hippolyta*) was listed as a threatened species with critical habitat in 1980 (USID 1980; 45 FR 44935). A recovery plan was completed in 1982 (USDI 1982) and a revised recovery plan was completed in 2001 (USDI 2001). The species recovery priority number is 3, indicating a high degree of threat and high recovery potential (USDI 1983; 48 FR 43098). Much of the following information was extracted from the revised recovery plan and unpublished reports from The Nature Conservancy to the U.S. Fish and Wildlife Service.

Threats to the species include loss of early successional, coastally-influenced grassland habitat containing early blue violet (*Viola adunca*) the caterpillar host plant, adult nectar sources and adult courtship areas. Invasion by exotic species, natural succession, fire suppression and land development have resulted in loss and modification of the species' habitat.

Historic Distribution and Habitat

Historically, Oregon silverspot butterflies occurred along the Pacific coast from southern Washington to northern California. At least 20 separate localities were known for the butterfly in the past. Currently the butterfly is known to have been extirpated from at least 11 colonies (2 in Washington, 8 in Oregon, and 1 in California). Of the remaining occupied sites, one is in Del Norte County (Lake Earl), two are in Lane County (Rock Creek-Big Creek and Bray Point), and two are in Tillamook County (Cascade Head and Mt. Hebo). The population at a sixth site in Clatsop County (Clatsop Plains) has declined in recent surveys with only one Oregon silverspot butterfly documented in 1998 (VanBuskirk 1993, 1998).

Oregon silverspot butterfly habitat in Lane County, Oregon is located on the Siuslaw National Forest at Bray Point south to Rock Creek and Big Creek. Bray Point and Rock Creek-Big Creek are located at opposite ends of a 5 mile corridor, bisected by Highway 101, comprised primarily by private residences and two small, undeveloped State waysides. Movement of Oregon silverspot butterflies has been documented between Bray Point and the Rock Creek-Big Creek area (VanBuskirk and Pickering 1999). Critical Habitat was designated between the mouths of Rock Creek and Big Creek in 1980 when this location supported the only known viable population of Oregon silverspot butterflies.

Current Status of the Species

The Nature Conservancy has conducted annual population censuses for Oregon silverspot butterflies at the four central coast sites in Oregon since 1990. These sites are: Cascade Head, Mount Hebo, Bray Point, and Rock Creek-Big Creek. Weekly censuses were summed to provide an index of abundance value for each site, which provides a conservative method to determine long-term trends and stability of the individual

populations at each site (see Table 1 for index of abundance values 1990-2005) (Pickering 2005).

TABLE 1. Oregon silverspot butterfly Index of Abundance values for the central coast sites, 1990-2005 (TNC 2005).					
Year	Mt. Hebo	Cascade Head	Bray Point	Rock Creek	TOTALS
1990	1100	1138	169	142	2549
1991	2888	790	280	113	4071
1992	2628	1295	265	242	4430
1993	1041	184	81	35	1341
1994	2200	284	81	65	2630
1995	3413	302	53	374	4142
1996	2507	302	146	356	3311
1997	2664	164	101	332	3261
1998	2743	57	46	257	3103
1999	4983	132	2	149	5266
2000	2111	160 (107)	9	108	2388
2001	1402	118	0	192	1712
2002	2272	34 (4)	2	139	2447
2003	2625	206 (161)	4	136	2971
2004	588	36	2 (50)	131(47)	757
2005	657	147 (132)	0	55	859
MEAN	2238	334	78	177	2827

Oregon silverspot butterfly populations at the four central coast sites exhibited a marked decline in 1993, and 2004 following unfavorable weather conditions (Pickering 1998, 2005). The Mount Hebo population has remained the largest population of all four central coast sites and in 2005 showed an increase following a large drop in 2004. The Cascade Head population has been augmented 4 times in recent years to counter the potential effects of genetic inbreeding on a small isolated population (numbers of augmented adult butterflies are in parentheses, but were included in the index counts). The Rock Creek population index of abundance value decreased significantly in 2005, potentially indicating the need for future augmentations at this site also. Bray Point values remain extremely low, with 0 detected during the 2005 census, with just one incidental observation that year.

Very little is currently known about Oregon silverspot populations in Del Norte County, California. California Department of Fish and Game estimated that there were 62 Oregon silverspot butterflies on State land (U.S. Army Corps of Engineers 2000). Surveys conducted in 2003 found a maximum of 81 butterflies observed along 4250 meters of transects over a one week period within the Pacific Shores subdivision, where the density of silverspot butterflies averaged roughly 5 OSB/ha (Wright 2003). In 2005, approximately 120 butterflies were observed during the census.

The status of the Clatsop Plains Oregon silverspot butterfly population is unknown, but suspected extirpated. The last butterfly observed on Camp Rilea was in 1995 and the last seen on nearby private lands was in 1998. In annual surveys since that time no butterflies have been observed, though survey efforts have declined over time.

II. Net Conservation Benefit

The biological goal of the conservation measures set forth in this Agreement is to provide a net conservation benefit to Oregon silverspot butterfly. By reducing competition from invasive plant species, and restoring native vegetation, we hope to improve early blue violet (larval host plant) and native nectar sources of the Oregon silverspot butterfly. Active management for these plant species will directly and indirectly impact Oregon silverspot butterfly populations.

Techniques to increase early blue violet densities and restore marine terrace and coastal headland “salt spray” meadows and are still evolving, thus, the Service anticipates that it will take time for Oregon silverspot butterfly populations to respond to the habitat restoration efforts. All recovery actions will be done in accordance with the Revised Recovery Plan of the Oregon silverspot butterfly (USFWS 2001).

To achieve a net conservation benefit for Oregon silverspot butterfly, methods of invasive plant species control will be continually refined in order to meet the changing landscape. As invasive species are reduced, early blue violets and native nectar plant sources are expected to respond positively. Native plant species (including early blue violet) may also be planted to replenish a depleted seed bank. Increased densities may result in greater numbers of OSB over time, providing that concurrent habitat management actions occur at nearby population centers.

The cooperator agrees to voluntarily manage the enrolled lands to produce a cumulative net conservation benefit to the covered species by implementing conservation measures to increase native habitat quality. The net conservation benefit will contribute, directly or indirectly, to recovery of the covered species, after taking into account the length of the Agreement and any off-setting adverse effects of authorized take. Although the Agreement may not permanently conserve or recover species populations or their habitats, it provides for important short-term benefits to the species, including but not limited to the following: restoring degraded marine terrace and “salt spray” meadow habitat which support the OSB; increase connectivity of OSB populations on the Oregon central coast; and, creating areas for testing and implementing new conservation strategies.

The Parties anticipate this Agreement will result in an increased distribution of the covered species within the enrolled lands. Without this cooperative effort, these lands would not otherwise be utilized by the species in the foreseeable future. The Agreement is a mutually beneficial relationship between a government agency and a private landowner to benefit endangered and threatened species. Therefore, the cumulative impact of this Agreement and the activities it covers, which are facilitated by the authorized take, will provide a net conservation benefit to the species.

III. Cooperative Agreement Template

COOPERATIVE AGREEMENT for Oregon Silverspot Butterfly Central Coast Populations in Lane County, Oregon

1. PARTIES AND PURPOSE. This Cooperative Agreement (“CA”) is between the **United States Fish and Wildlife Service**, an agency of the United States Department of the Interior (“Service”); **The Nature Conservancy** (“TNC”), a District of Columbia non profit corporation; and **[Property owner]** (“Cooperator”). This agreement is intended to promote good land stewardship by assisting the Cooperator in carrying out actions to benefit the Oregon silverspot butterfly (*Speyeria zerene hippolyta*) on land owned by the Cooperator. Participation in this Cooperative Agreement is a prerequisite for obtaining a Certificate of Inclusion issued as part of the agreement between TNC and the Service titled “Safe Harbor Agreement with The Nature Conservancy and Private Property Owners for Voluntary Enhancement/Restoration Activities Benefiting Oregon Silverspot Butterfly Central Coast Populations in Lane County, Oregon” (the “Agreement”).

The Agreement and this CA do not release the Cooperator from the responsibility to avoid “take” of any federally-listed species that already occupy portions of the property which is the subject of this CA.

This Cooperative Agreements includes, at a minimum:

- (1) A map of the enrolled property;
- (2) Identification on the map of any existing butterfly baseline responsibilities on the property;
- (3) Identification on map of proposed habitat improvements;
- (4) Term of the Cooperative Agreement (10 year minimum); and
- (5) Further detail of the landowner's (Cooperator's) and TNC's responsibilities under the Cooperative Agreement.

2. ENROLLED PROPERTY. The Cooperator owns property at **[tax map key information]** in Lane County, Oregon, that that has the potential to be used by Oregon silverspot butterflies. TNC will enroll **[# acres]** of this property (the “[landowner’s name] Property” or “Enrolled Property”) under the Agreement, as shown on the attached property map (**Tax map**).

3. BASELINE CONDITIONS. The baseline determination includes an assessment of Oregon silverspot butterfly larval habitat (expressed as area occupied by early blue violets or number of violets (*Viola adunca*)). The baseline for the _____ Property is set at **[#]** of early blue violets and/or **[#]** area of early blue violets.

Force majeure events such as hurricanes, rainstorms, severe drought, fires, or insect/disease epidemics are beyond the reasonable control of the Cooperator, and could either extirpate Oregon silverspot butterflies from enrolled lands or render Oregon silverspot butterfly habitat on enrolled lands unsuitable for continued occupation. These events may reduce Oregon silverspot butterfly numbers or habitat (expressed as area occupied by early blue violets) below original baseline conditions through no fault of or negligence of the Cooperator. The Service recognizes that baseline determinations and population levels may drop temporarily below baseline due to uncontrollable circumstances, even during normal environmental circumstances (i.e. Oregon silverspot butterflies may disperse to and from the site between years and early blue violets may not sprout and/or bloom annually.) In such circumstances the Cooperator, TNC, and the Service may agree to revise the Cooperative Agreement baseline conditions to reflect the new circumstances.

4. CONSERVATION MEASURES

4.1 Intended Outcome. The purpose of the Agreement and this CA is to re-establish Oregon silverspot butterfly habitat on non-Federal lands within the dispersal corridor linking two existing populations on Siuslaw National Forest lands. Successful re-establishment of violets and/or nectar plants and suppression of non-native vegetation on key parcels along this corridor may facilitate butterfly dispersal between managed sites by providing breeding habitat and nectar sources. The biological goal of this Agreement is to aid in Oregon silverspot butterfly recovery by restoring several sub-populations and, at a landscape level, a viable metapopulation. To accomplish this, it is essential that the Cooperator, the Service, and TNC work together to provide good habitat and positive stewardship for Oregon silverspot butterflies. Management activities undertaken pursuant to this CA are intended to result in additional habitat being available to Oregon silverspot butterflies.

The [Name of Cooperator] property is a [# of acre(s)] parcel ... [describe the property, management goals, its management, vegetation, location, and potential for this Agreement.]

4.2 General Activities. TNC will coordinate a variety of management activities pursuant to the Agreement for Oregon silverspot butterflies in Lane County, Oregon. These management activities may include the following: 1) modifying existing vegetation, 2) planting native vegetation, and 3) enhancing early blue violet populations. General restoration and management activities are described in the Agreement.

4.3 Specific Activities on _____ Property. Management activities specific to the [last name of Cooperator] Property include the following:

List all of the restoration and management activities here
TNC will provide an annual work plan tailored to each property.

As long as the Cooperator implements the above restoration and management activities and the baseline levels are maintained, the Cooperator may develop, farm, ranch, harvest timber, or make any other lawful use of the enrolled property, even if loss of Oregon silverspot butterflies or occupied habitat above the established baseline levels occurs.

4.4 Other Management Activities. Nothing in this Agreement prevents the Cooperator from implementing land management activities not described in this CA, including improving habitat for Oregon silverspot butterflies, as long as (1) the Cooperator has consulted with TNC prior to implementation, and (2) such activities maintain the baseline conditions or enhance native coastal meadows habitat, and do not adversely affect the beneficial actions set forth in this CA.

4.5 Emergency Actions. Emergency situations caused by anticipated natural disasters (e.g., hurricanes, fire, excessive rainfall, extreme drought, insect infestations, or epidemic disease) may require Cooperator to initiate certain emergency actions that may result in take of Oregon silverspot butterflies. Prior to taking any such emergency actions, the Cooperator will notify TNC and make reasonable accommodations for survey and/or relocation of Oregon silverspot butterflies and/or early blue violets, possibly with the assistance of the Service. If prior notification is not reasonably possible, the Cooperator will take into account known locations of Oregon silverspot butterflies and early blue violets, and avoid impacts to the maximum extent possible during his/her emergency actions. The Cooperator will notify TNC within 10 working days of taking emergency actions, including the measures taken to avoid impacts to Oregon silverspot butterflies.

5. RESPONSIBILITIES OF THE PARTIES

The Cooperator and TNC agree to carry out certain responsibilities under this Cooperative Agreement. The Cooperator understands that in order to fulfill the responsibilities of the Safe Harbor Agreement, TNC must report to the Service all implementation and monitoring activities related to Oregon silverspot butterflies management in accordance with the Safe Harbor Agreement.

5.1 Cooperator:

5.1.1 Implement (or allow to be implemented) the restoration and management activities specified herein in compliance with all federal, state and local laws, including, but not limited to, physical delineation of the habitat area on the ground if and as deemed necessary by TNC or the Service.

5.1.2 Provide the Service and TNC with written notice six months (or, per Service approval, sufficient notice to move violets or adult butterflies, if applicable) in advance of any planned activity that TNC or the Cooperator reasonably anticipates will result in "take" (i.e., death, injury, or other harm) of the covered species, above the baseline conditions, on the

_____ Property, and provide the Service the opportunity to capture and/or relocate any potentially affected species, if appropriate. For situations involving the potential for bodily injury, loss of life, or significant property damage (including, e.g., responses to address surface drainage of roads and septic system repair), the Cooperator may incidentally take species without prior notice. However, the Cooperator will provide notice to the Service and TNC as soon as practicable before or immediately following those actions. Post-action notice will not exceed 10 days.

5.1.3 Upon reasonable notice, allow access to the _____ Property by the Service, TNC, and their approved contractors, for purposes related to this Agreement, including, but not limited to, biological and compliance monitoring, technical assistance, baseline determinations, management actions, and capture and relocation of the covered species.

5.1.4 Notify the Service and TNC of any transfer of ownership at least 90 calendar days prior to the intended transfer, so that the Service and/or TNC can attempt to contact the new owner, explain the baseline responsibilities applicable to the enrolled property, and seek to interest the new owner in signing the existing Agreement or a new one to benefit listed species on the _____ Property.

5.1.5 Report to the Service and TNC any dead, injured, or ill specimens of the covered species observed on the _____ Property.

5.1.6 Within 14 days, inform TNC and the Service when Oregon silverspot butterflies are known or suspected to be present on the _____ Property.

5.1.7 Assist TNC in compiling an annual report on activities on the _____ Property related to Oregon silverspot butterflies management and any activities that resulted in or may have resulted in incidental take of Oregon silverspot butterflies on the _____ Property.

5.1.8 Consider adaptive management recommendations that TNC may present to the Cooperator.

5.1.9 Seek technical assistance from TNC on appropriate action if considering implementing Covered Species habitat restoration activities not specified herein.

5.2 TNC's responsibilities include the following:

5.2.1. Apply for and hold the Permit, subject to the terms of the Safe Harbor Agreement.

5.2.2 TNC will assist the Cooperator in ensuring that the management activities specified in this Cooperative Agreement to be implemented by the Cooperator comply with all relevant local, state, and federal regulations and statutes, and with the terms of the Agreement.

5.2.3 Designate a Project Field Manager for the _____ Property.

5.2.4 Provide oversight of baseline condition assessment.

5.2.5 Provide technical assistance to the maximum extent practicable in implementing management activities.

5.2.6 Provide 48 hours advance notification to the Cooperator before any visit by TNC and/or Service staff to the _____ Property.

5.2.7 In situations where there is the potential for take in connection with activities on the property, consult with Cooperator and the Service to determine the number and status of Oregon silverspot butterflies present, and assess whether the butterflies above baseline conditions should remain on the Enrolled Property or be relocated.

5.2.8 Depending upon funding availability, monitor and report the implementation of agreed-upon management activities and terms of this Cooperative Agreement, as well as take authorized by the Permit. In the event that TNC has reductions in staff or funding for compliance or effectiveness monitoring, the Service will try to fulfill the monitoring responsibilities outlined in this Agreement.

5.2.9 Report to the Service any dead, injured, or ill specimens of the Covered Species observed on the _____ Property.

5.2.10 With assistance from the Cooperator provide annual reports due December 31 to the Service describing the current status of _____ Property, including: (i) an assessment of butterflies and their habitat, (ii) management actions implemented and outcomes if known, and (iii) descriptions of activities required by the CA and/or related to butterflies management and any activities that resulted in or may have resulted in incidental take of butterflies.

6. AGREEMENT DURATION. Obligations under this Cooperative Agreement will be in effect for a minimum of 10 years from the date it is executed. Upon signing the Cooperative Agreement, a Certificate of Inclusion will be issued to the Cooperator under Permit [**permit reference number**]. The Certificate of Inclusion will authorize incidental take of Oregon silverspot butterflies from [**date**] to [**date**], above a determined

baseline condition, within the remaining duration of the 35-year term of the Permit at the time the Certificate of Inclusion is issued. Copies of the Cooperative Agreement and Certificate of Inclusion will be held by TNC and those completed within the annual reporting cycle will be submitted to the Service attached to the annual reports.

7. INCIDENTAL TAKE.

7.1 Definition. Take is defined as actions or attempted actions to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect such species. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. “Harass” is further defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns including, but not limited to, breeding, feeding or sheltering. Incidental take is any take of federally-listed wildlife or State-listed wildlife and plants that is incidental to, but not the purpose of, otherwise lawful activities. Oregon silverspot butterfly adults, eggs, and larvae may not be captured, collected, or otherwise directly “taken” as this form of take is not considered to be incidental to other activities.

7.2 Allowed Land Uses. Under the terms of this Cooperative Agreement, the Cooperator is authorized to make use of their Enrolled Property in any lawful manner that does not result in reducing the population and/or occupied habitat of Oregon silverspot butterflies below the established baseline conditions. Such uses may include, but are not limited to: driving vehicles, building or fence construction, grazing of livestock, gardening, forestry, hunting, farming, mowing, or cultivation of agricultural crops. The Cooperator may continue current land-use practices, undertake new ones, or make any other lawful use of the property, even if such use results in the take of Oregon silverspot butterflies or loss of occupied habitat in excess of baseline amounts, provided the actions do not affect the beneficial actions set forth in this Cooperative Agreement.

8. FUNDING. Funding for management activities undertaken by the Cooperator will be the responsibility of the Cooperator. TNC and/or the Service will inform the Cooperator of potential funding opportunities through State or Federal grant programs that may be relevant. Cooperator shall not be responsible for funding management activities undertaken by TNC and/or the Service.

9. MODIFICATION OF COOPERATIVE AGREEMENT. TNC or the Cooperator may propose modifications or amendments to this Cooperative Agreement by providing written notice to the other party and obtaining their written concurrence. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results, and a copy shall be provided to the Service for comment. The parties will make their best efforts to respond to proposed modifications within 60 calendar days of receiving the notice. Proposed modifications will become effective upon the parties’ written concurrence.

10. TERMINATION OF THE COOPERATIVE AGREEMENT.

10.1 As provided for in section 12 of the Service's Safe Harbor Policy (64 FR 32717), the Cooperator may, upon 60 days prior written notice to TNC and the Service, terminate this CA prior to the expiration date for circumstances beyond the Cooperator's control provided that the baseline conditions have been maintained and the Service is provided an opportunity to relocate affected species during the 60 day period after the notice is received. Upon termination, the Cooperator must relinquish the CI to TNC, and Covered Species management on the Cooperator's lands will terminate. Such termination will not affect the Cooperator's authorization under the Permit to take any species individual or occupied habitat that is not part of the Cooperator's baseline at the time of termination.

10.2 The Cooperator also may terminate this CA upon 60 days prior written notice for any other reason, but termination for reasons other than circumstances beyond the control of the Cooperator shall extinguish the Cooperator's authority to take species or occupied habitat under the CI and Permit, and the status of Covered Species on the _____ Property will be determined as of the termination date of the CA for purposes of compliance with the Endangered Species Act.

11. CERTIFICATE OF INCLUSION SUSPENSION OR REVOCATION. The Service may suspend or revoke a Cooperator's Certificate of Inclusion if Cooperator breaches the obligations under the CA and fails to cure the breach in a timely manner, and the effect of the breach is to materially diminish the likelihood that the Cooperative Agreement will achieve its goals.

12. SUCCESSION AND TRANSFER This CA shall be binding on and shall insure to the benefit of the parties (including officers, directors, employees, lessees and agents thereof) and their respective successors and transferees, in accordance with applicable regulations (50 CFR 13.24 and 13.25). The rights and obligations under this CA are transferable to subsequent non-Federal property owners pursuant to 50 CFR 13.25, upon consent of the successor or transferee of the land, execution of a new CA, and issuance of a CI. A new owner(s) will have the same rights and obligations with respect to the Enrolled Property as the original owner.

13. MUTUAL RELEASE. TNC and Cooperator hereby release and shall hold each other harmless from any liability arising from or related to this CA or activities undertaken on the _____ Property pursuant to this CA.

14. NOTIFICATION. Communication and correspondence required by this Cooperative Agreement should be directed to the addresses below. Names and addresses may be changed upon written notice to all parties.

Oregon Coast Stewardship Ecologist
The Nature Conservancy
Oregon Coast Office
2499 North Bank Road
Otis, Oregon 97368
(541) 994-5564

State Supervisor
Oregon Fish and Wildlife Office
U.S. Fish and Wildlife Service
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179

Dated effective as of the last date of signature below.

THE UNITED STATES FISH AND WILDLIFE SERVICE

By _____
Title _____
Date _____

THE NATURE CONSERVANCY,
a District of Columbia non profit corporation

By _____
Title _____
Date _____

COOPERATOR:

Date _____

IV. Safe Harbor Agreement Landowner Certificate of Inclusion Template

CERTIFICATE OF INCLUSION

This certifies that the property described as follows [**(description of portion of property covered by the Safe Harbor permit)**] owned by [**Cooperator's name**], is included within the scope of Permit No. [**(permit number)**], issued by the U.S. Fish and Wildlife Service to [**(permittee)**], on [**(date)**], and expiring on [**(date)**] under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1539(a)(1)(A). Such Permit authorizes certain activities by participating landowners (Cooperators) as part of a Safe Harbor program to restore and enhance habitat for the Oregon silverspot butterfly. Pursuant to that Permit and this Certificate of Inclusion, the holder of this Certificate is authorized to engage in any otherwise lawful activity on the above described property that may result in the incidental taking of Oregon silverspot butterflies, as appropriate, subject to the terms and conditions of such Permit and the terms and conditions of the Safe Harbor Agreement entered into pursuant thereto by The Nature Conservancy, and the Service on [(date)], that becomes binding upon [**Cooperator's name**], on the date and signature herein.

Name of Permittee

Date

Participating Landowner

Date