

Because the final regulation allows refineries and acid plants to use lime and settle treatment with clarifiers in place of evaporation lagoons, the non-water quality impacts may differ slightly from those associated with the interim final regulation. Generally, the change in impact will be minor. The Agency expects no change for the primary copper smelting subcategory because the zero discharge requirement has not been changed.

#### Energy Costs

The operation of a clarifier generally uses more energy than does an evaporation lagoon. However, total energy consumption attributable to use of clarifiers is very low. An investigation made as a part of the Agency's development of the BAT regulation indicates that the median energy increase for a treatment system consisting of a cooling tower, chemical precipitation (e.g., clarification), filtration, and activated carbon system is 0.17 percent. This system is much more energy intensive than operation of a clarifier alone. The power consumption for wastewater treatment by either evaporation lagoons or clarification is small in comparison with total plant energy consumption.

#### Solid Waste

The quantity of sludge generated by application of the final regulation will be somewhat greater than that attributable to the interim final regulation. The addition of lime contemplated by the final regulation will add some additional solids which must be disposed of. The additional quantity of sludge which would be generated is not significant.

Operation of a clarifier requires the direct handling and disposal of sludge by some means (e.g., pumping to a sludge pond, truck hauling, etc.), whereas operation of an evaporation lagoon requires no special sludge handling procedures until the lagoon is filled.

#### Air Pollution

Often during dry summer months the water level in an evaporation pond will drop substantially because of evaporation. This exposes large pond areas which have a fine dust cover. Any wind at this time can cause dust problems. Use of clarifiers rather than lagoons should mitigate this problem.

#### Land Use

Clarifiers require substantially less land than do evaporation ponds. While some additional land may be required for sludge disposal, on balance the final regulation will entail less land-use than

the interim final regulation. For example, plant 118 would have had to purchase prime wheat land north of its facility if evaporation lagoons had been required, whereas the clarification systems can be installed on existing property.

#### Other Impacts

No impact or major changes in noise generation, radiation levels, or number of employees working at any facility are anticipated due to the changes made today.

#### Appendix D—(Economic Impact and Effluent Reduction Benefits)

##### Cost and Economic Impact

Twenty of the twenty-three facilities covered by this regulation are already in compliance. The Agency estimates the aggregate compliance costs for the remaining three facilities to be \$1.9 million (investment) and \$1.7 million (annual, including interest and depreciation). The Agency's economic impact analysis, which updates the analysis performed in connection with the interim final regulation in light of the final regulation, assessed integrated facility production costs with and without BPT compliance costs. These costs were compared with metal selling price and aggregated industry production costs. No unemployment, plant closures, or significant reduction in industry production capacity is expected to result from this regulation.

This regulation does not require a regulatory analysis because annual compliance costs are less than \$100 million and none of the other criteria for regulatory analysis are met. This determination is in accordance with the Agency's procedures for improving environmental regulations, published at 44 FR 30988 (May 29, 1979). Nonetheless, the technical and economic impact evaluations satisfy the regulatory analysis requirements.

##### Effluent Reduction Benefits

The Agency estimates that compliance with the final regulation will prevent the yearly discharge of approximately 32,600,000 pounds of total suspended solids; 3,330,000 pounds of copper; 1,500,000 pounds of lead; 1,200,000 pounds of zinc, and 91,000 pounds of cadmium from those plants not currently in compliance with the final regulation. Using the estimated Agency costs for compliance, approximate annual costs of removing pollutants are \$.05 per pound of total suspended solids, \$.051 per pound of copper, \$1.13 per pound of lead, \$1.42 per pound of zinc and \$18.68 per pound

of cadmium. The Agency concludes that the costs of today's regulation are reasonable in light of the effluent reduction benefits to be achieved.

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

#### Listing the Oregon Silverspot Butterfly as a Threatened Species With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

**SUMMARY:** The Service determines the Oregon silverspot butterfly (*Speyeria zerene hippolyta*) to be a Threatened species. This action is being taken because all known populations of the butterfly are small, limited in range, and threatened by housing development and recreational activities. The Oregon silverspot butterfly is known to occur only at a few sites on the central Oregon coast and at one site in Washington. Critical Habitat in Oregon is included with this final rule. The rule will provide protection to wild populations of this species.

**DATE:** This rule becomes effective on October 15, 1980.

**ADDRESSES:** Questions concerning this action may be addressed to Lynn A. Greenwalt, Director, U.S. Fish and Wildlife Service, Washington D.C. 20240.

**FOR FURTHER INFORMATION CONTACT:** Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, (703/235-2771).

#### SUPPLEMENTARY INFORMATION:

##### Background

The Oregon silverspot butterfly is an orange and brown butterfly with silver spots on the underwings, and belongs to the family Nymphalidae. The butterfly formerly occurred along the coasts of Washington and Oregon, but most of the colonies have been extirpated due to housing or park development. Only one healthy colony is known. The main threats to the butterfly are housing development and increased recreational use of the coastal areas to which it is restricted.

The Oregon silverspot butterfly was included by the Service in a March 20, 1975 status of review (40 FR 12691) seeking information to determine whether this butterfly should be

proposed for listing as an Endangered or Threatened species.

On July 3, 1978, the Service published a proposed rulemaking in the Federal Register (43 FR 28938-45) advising that sufficient evidence was on file to support a determination that the Oregon silverspot butterfly was a Threatened species pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). That proposal summarized the factors thought to be contributing to the likelihood that this species could become Endangered within the foreseeable future, specified the prohibitions which would be applicable if such a determination were made, and solicited comments, suggestions, objections, and factual information from any interested person. Section 4(b)(1)(A) of the Act requires that the Governor of each State or Territory, within which a resident species of wildlife is known to occur, be notified and be provided 90 days to comment before any such species is determined to be a Threatened species or an Endangered Species. A letter was sent to the Governor of Oregon on July 14, 1978, notifying him of the proposed rulemaking for the Oregon silverspot butterfly. On July 14, 1978, a memorandum was sent to the Service Directorate and affected Regional personnel, and letters were sent to other interested parties notifying them of the proposal and soliciting their comments and suggestions. On March 26, 1980, the Service published a rulemaking in the Federal Register (45 FR 19864-65) repropoing Critical Habitat for the Oregon silverspot butterfly, to comply with the 1978 Endangered Species Act Amendments. A letter notifying the Governor of Oregon of this action, a memorandum to affected Regional personnel, and letters to other interested parties were sent on March 31, 1980. A public meeting and a public hearing on the reproposal of Critical Habitat for the Oregon silverspot butterfly were held at New Port, Oregon on April 15 and April 29, 1980.

Official comment was received from the Governor of Oregon, the Oregon Office of State Forester, the Division of State Lands, and the U.S. Forest Service.

#### Summary of Comments and Recommendations

Section 4(b)(1)(C) of the Act requires that a summary of all comments and recommendations received be published in the Federal Register prior to adding any species to the list of Endangered and Threatened Wildlife and Plants.

In the July 3, 1978 proposal (43 FR 28938-45) to list the Oregon silverspot butterfly as a Threatened species, the

March 26, 1980 proposal of Critical Habitat (45 FR 19860-61), and the respective Press Releases, all interested parties were invited to submit factual reports or information which might contribute to the formulation of a final rulemaking.

All comments received from July 3 to September 1, 1978 regarding the proposal to list the Oregon silverspot butterfly as Threatened were considered. Comments regarding the reproposal of Critical Habitat received from March 26 to May 27, 1980 were considered. Additional opportunity for public comment was provided by the April 15, 1980, public meeting and the April 29, 1980, public hearing.

In response to the July 3, 1978 proposal, eight comments were received. Two conservation organizations, the Xerces Society and the International Union for Conservation of Nature and Natural Resources, supported the proposal.

Dr. Frederick Rindge, Curator of Lepidoptera at the American Museum of Natural History, noted that the distribution of this subspecies was uncertain, and opposed listing it, but supported Critical Habitat designation in order to protect the salt spray meadow habitat. Dr. Lee Miller of the Allyn Museum of Entomology felt that including the Tenmile Creek area within Critical Habitat for the butterfly might have been done as a "land-grab" to prevent development. Dr. Ralph Macy of Portland State University supported the proposal. Dr. David McCorkle of the Oregon College of Education reported that the Tenmile Creek site might be unsuitable for the butterfly due to habitat modification. The U.S. Forest Service supported the listing proposal but recommended that the Tenmile Creek site be excluded from the Critical Habitat. Robert Langston, a lepidopterist, supported the listing proposal.

In response to the March 26, 1980, reproposal of Critical Habitat for the Oregon silverspot butterfly, six comments were received. The Governor of Oregon supported listing the butterfly and designation of its Critical Habitat. The Oregon Office of State Forester expressed concern about possible impacts on private lands resulting from Critical Habitat designation on adjacent Federal lands, and possible effects on timber supply in Lane County. A non-substantive comment was received from the Oregon Division of State Lands. Two private citizens supported the listing proposal and Critical Habitat designation; one of these letters urged inclusion of the Tenmile Creek area in the Critical Habitat designation.

Dr. Robert Pyle, representing the Lepidoptera Specialist Group of the Survival Service Commission of the International Union for Conservation of Nature and Natural Resources, restated that organization's support for the listing proposal and designation of Critical Habitat. Dr. Pyle stated that the Oregon silverspot butterfly probably still occurred on the Long Beach Peninsula in the State of Washington, although its habitat there was severely restricted and threatened by development.

At the April 15, 1980, public meeting, four private individuals, including three entomologists, supported the listing proposal. A representative of the Forest Service supported the proposal, subject to the Forest Service's recommendations on Critical Habitat, which were presented in March 27 and May 27, 1980, letters to the Fish and Wildlife Service. These letters supported the designation of Critical Habitat but recommended a change in the eastern boundary. Mr. Hugh Sherwood, a landowner in the area proposed as Critical Habitat, opposed Critical Habitat designation for his property because he believed that such designation would lower the value of his land, particularly with regard to a potential buyer, Mr. Victor Renaghan, who held an option to buy the property. Mr. Sherwood felt that Critical Habitat designation would prevent development of the type planned by Mr. Renaghan. Mr. Sherwood also believed that the salt spray meadow was man-made, and that in the absence of human activities the meadow and the Oregon silverspot butterfly would disappear due to overgrowth by shrubs, especially salal (*Gaultheria shallon*).

At the April 29, 1980, public hearing, statements were made by four persons. Mr. Tom Smith, a local resident, and Dr. Paul Johnson, a research entomologist, supported the listing proposal and designation of Critical Habitat. Mrs. Elizabeth Starker Cameron, a landowner in the Critical Habitat area, expressed concern that some land uses could be precluded on her property as a result of Critical Habitat designation. Mr. B. Bond Starker stated that possible economic consequences of preserving species or subspecies should be considered.

#### Conclusion

With respect to Dr. Rindge's comments concerning the distribution and status of the Oregon silverspot butterfly, the two lepidopterists who have most recently studied this subspecies, Dr. David McCorkle of the Oregon College of Education and Dr. Paul Johnson of Oregon State University, feel that the subspecies is restricted to coastal areas. If the

butterfly were not listed, it would be impossible to designate Critical Habitat to protect the salt spray meadow habitat because Critical Habitat can only be designated in relation to a listed species. In response to Dr. Miller's comments, the Service has no present plans to acquire property in the Tenmile Creek Area. This area is not being included in the present Critical Habitat designation, although it could be proposed for inclusion in the future, since it represents one of the few known colonies of the Oregon silverspot butterfly. With regard to the comments of the Oregon Office of State Forester, no adverse effects on timber production in Lane County is anticipated. The U.S. Forest Service has no plans to cut the forest areas bordering the salt spray meadow, which are used for shelter by the butterflies. In general, the Forest Service's plans to protect and manage the area would be the same regardless of Federal listing of the Oregon silverspot butterfly and designation of its Critical Habitat. The Forest Service is aware of the butterfly and salt spray meadow areas and plans to manage these areas for their unique scenic and biological features. Critical Habitat designation for the Oregon silverspot butterfly is not expected to affect timber production in Lane County.

The Fish and Wildlife Service accepted the recommendation of the Forest Service and moved the eastern boundary of the proposed Critical Habitat 1,500 feet to the West to bring the area into a more accurate representation of the butterflies' habitat. The Fish and Wildlife Service does not know of or anticipate effects on privately held lands within the Critical Habitat. In response to Mr. Sherwood's concerns regarding adverse effects of Critical Habitat designation on his land, the Service has been unable to identify any specific effects of such designation. Service personnel, including an economist, met with Mr. Renaghan, the party who holds an option to buy Mr. Sherwood's land. Mr. Renaghan's tentative plans for development involved no apparent Federal participation nor did it appear that such development would result in significant adverse effects on the butterfly's habitat. Mr. Renaghan has been unable to have Lane County officials review and approve his development plans, but this situation has existed prior to Critical Habitat reproposal for the Oregon silverspot butterfly. The U.S. Forest Service and the Fish and Wildlife Service realize that management of the salt spray meadow will be necessary, and believe that such activities will

have to be carefully planned to maintain the salt spray meadow habitat, and that unregulated human activities in the area are not compatible with the salt spray meadow ecosystem. Regarding the comments of Mrs. Cameron and Mr. Starker, the Service considers economic and other impacts in the designation of Critical Habitat. No impacts on activities on Mrs. Cameron's land are presently known.

The Service must point out that considerable development constraints already exist on the lands in question due to local (Lane County) zoning. Critical Habitat designation would not necessarily prevent any activity with Federal involvement in the included area; depending on the proposed activity, consultation between the Fish and Wildlife Service and the relevant Federal agency might be necessary. Similar consultation could occur in areas outside the Critical Habitat if the continued existence of the Oregon silverspot butterfly was likely to be jeopardized. Critical Habitat designation is a means of alerting Federal agencies to the presence of a Threatened or Endangered species in a particular area.

Several persons recommended inclusion, either at the present or in the future, of additional lands in Critical Habitat for the Oregon silverspot butterfly. Due to some uncertainty concerning the status of the butterfly and the condition of the salt spray meadow habitat at other localities, Critical Habitat designation has been restricted at this time to portions of Lane County where a viable population of the butterfly is known to occur. It may be necessary to consider other areas in the formulation of a recovery plan for the butterfly. The Service feels that it should proceed with the final rulemaking at this time with the information available. Protective provisions of the Endangered Species Act will apply to the Oregon silverspot butterfly throughout its range.

After a thorough review and consideration of all the information available, the Director has determined that the Oregon silverspot butterfly is in danger of becoming extinct throughout all of its range. Two of the five factors described in Section 4(a) of the Act, and affecting the butterfly, were outlined in the July 3, 1978 proposal (43 FR 20938-45) to list this butterfly as Threatened. The five criteria as described in that proposal are reprinted below:

(1) *The present or threatened destruction, modification, or curtailment of its habitat or range.* This species is found only in the salt spray meadows along the extreme edge of the Pacific Coast. It has been reported from one site in Washington and seven sites in

Oregon. Colonies of butterfly are now either severely reduced in number or extirpated at all the sites except the Rock Creek-Big Creek site in Lane County, Oregon.

(2) *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable to this species.

(3) *Disease or predation.* This factor is not known to affect the present status of this species.

(4) *The inadequacy of existing regulatory mechanisms.* There currently exist no State or Federal laws protecting this species or its habitat.

(5) *Other natural or manmade factors affecting its continued existence.* None.

#### Critical Habitat

Subsection 4(a)(1) of the Act states in pertinent part:

At the time any such regulation (to determine a species to be Endangered or Threatened) is proposed, the Secretary shall be regulation, to the maximum extent prudent, specify any habitat of such species which is then considered to be Critical Habitat.

50 CFR Part 424 defines Critical Habitat as:

- (i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and
- (ii) Specific areas outside the geographical area occupied by the species at the time it is listed upon determination by the Secretary that such areas are essential for the conservation of the species.

The Service has concluded that an area in Lane County, Oregon should be designated as Critical Habitat for the Oregon silverspot butterfly. This area incorporates suggestions made by the U.S. Forest Service, and is the only known remaining site where a healthy population of the butterfly exists. The physical and biological features of the butterfly's habitat are such as to require management considerations and protection. The biological constituent elements in the Critical Habitat which are essential to the conservation of the Oregon silverspot butterfly are included below in the description of Critical Habitat for this species.

Section 4(b)(4) of the Act requires the Service to consider economic and other impacts of specifying a particular area as Critical Habitat. The Service has prepared an impact analysis which has been used as the basis for a decision that economic and other impacts of this action are insignificant for the foreseeable future.

**Effect of the Rulemaking**

All prohibitions of 50 CFR 17.31 pertaining to Threatened Wildlife will apply to the Oregon silverspot butterfly. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import, or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce this species. It also will be illegal to possess, sell, deliver, carry, transport or ship any specimens illegally taken. Certain exceptions will apply to agents of the Service and State conservation agencies. Permits for specified purposes will be available in accordance with 50 CFR 17.32.

**Section 7(a) of the Act provides:**

**Federal Agency Actions and Consultations—**(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption of such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

(3) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under section 4 or result in the destruction or adverse modification of critical habitat proposed to be designated for such species. This paragraph does not require a limitation on the commitment of resources as described in subsection (d)

Provisions for Interagency Cooperation were published in the Federal Register on January 4, 1978 (43 FR 870-876), and codified at 50 CFR Part 402. These regulations are intended to assist Federal agencies in complying with Section 7 of the Act. The rule now being issued will require Federal agencies to satisfy these statutory and regulatory obligations with respect to the Oregon silverspot butterfly. These agencies will be required not only to insure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of this species, but also to insure that their actions do not result in the destruction or adverse modification of the habitat that has been determined by the Secretary to be critical.

Section 4(f)(4) of the Act requires, to the maximum extent practicable, that any final regulation specifying Critical Habitat be accompanied by a brief description and evaluation of those activities which, in the opinion of the Director, may adversely modify such habitat if undertaken, or may be impacted by such designation. Such activities are identified below for the Oregon silverspot butterfly.

1. A threat to the continued existence of this species is real estate development in the coastal salt spray meadows. Several of the former colonies have been extirpated or reduced in size by housing development.

2. Increased recreational use could adversely affect the butterfly's habitat. Detrimental activities could include trampling of the meadow habitat, damage from vehicles, and development of trails and other recreational facilities without considering the butterfly's needs.

3. Modification of forest areas adjoining the salt spray meadows could eliminate refuge areas used for shelter by the butterfly.

The only apparent Federal involvement affecting the proposed critical Habitat is the Forest Service's management of portions of Siuslaw National Forest. The Forest Service intends to protect the Oregon silverspot butterfly and its habitat, and has provided the Fish and Wildlife Service

with information about anticipated effects of management of the salt spray meadow habitat. This information is included in the final economic analysis which the Fish and Wildlife Service prepared regarding this rulemaking. Designation of Critical Habitat will not impact upon the other activities listed

**Effect Internationally**

The Service will review the status of the Oregon silverspot butterfly to determine whether it should be proposed to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora for placement upon the appropriate appendix to that Convention and whether it should be considered under the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, or other appropriate international agreements.

**National Environmental Policy Act**

A final environmental assessment has been prepared and is on file in the Service's Office of Endangered Species. This assessment is the basis for a decision that this rule is not a major Federal action that significantly affects the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

The primary author of this rule is E. Michael M. Bentzien, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975).

Note.—The Department of the Interior has determined that this is not a significant rule and does not require preparation of a regulatory analysis under Executive Order 12044 and 43 CFR Part 14.

**Regulations Promulgation**

Accordingly, subparts B and I of Part 17 of Chapter I of Title 50 of the U.S. Code of Federal Regulations is amended as follows:

**§ 17.11 (Amended)**

1. Section 17.11 is amended by adding the Oregon silverspot butterfly to the list, alphabetically, under "Insecta" as indicated below:

| Species                      |                                  | Historic range     | Vertebrate population where endangered or threatened | Status | When listed | Critical habitat | Special |
|------------------------------|----------------------------------|--------------------|--|--------|-------------|------------------|---------|
| Common name                  | Scientific name                  |                    |  |        |             |                  |         |
| Butterfly: Oregon silverspot | <i>Speyeria zerene hippolyta</i> | Oregon, Washington | NA   | T      |             | § 17.95(f)       |         |

**§ 17.95 (Amended)**

2. Section 17.95(i) is amended by adding Critical Habitat for the Oregon Silverspot butterfly as follows:

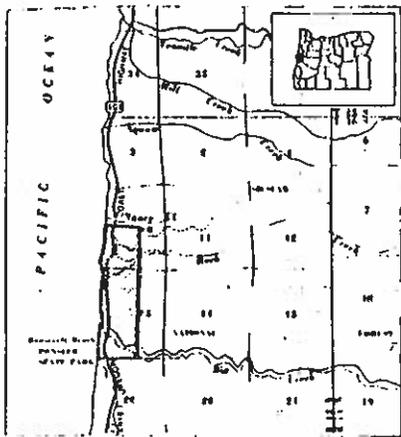
**Oregon Silverspot Butterfly**

(*Speyeria zerene hippolyta*)

Oregon, Lane County T. 16 S., R. 12 W. Those portions of section 15 and of the south

half of section 10 which are west of a line parallel to, and 1500 feet west of, the east section boundaries of sections 10 and 15.

Constituent biological elements essential to the continued existence of the Oregon



silverspot butterfly within the Critical Habitat include the larval foodplant (*Viola adunca*), grasses and forbs in which the larvae find shelter, the composite plants from which the adults obtain nectar, and the spruce woods in which the adults find shelter.

Dated: June 26, 1980.

Lynn A. Greenwall,  
Director, Fish and Wildlife Service.

(FR Doc. 80-19829 Filed 7-1-80; 8:45 am)

BILLING CODE 4310-55-M

## 50 CFR Part 17

### Listing the Palos Verdes Blue Butterfly as an Endangered Species With Critical Habitat

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines the Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) to be an Endangered species. This action is being taken because all known populations of the butterfly are small, limited in range, and threatened by weed control practices and in one location, development. The Palos Verdes blue butterfly is known to occur only at three sites on the Palos Verdes Peninsula, Los Angeles County, California. Critical Habitat is included with this final rule. The final rule would provide protection to wild populations of this species.

**DATE:** This rule becomes effective on August 1, 1980.

**ADDRESSES:** Questions concerning this action may be addressed to Lynn A. Greenwall, Director, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

**FOR FURTHER INFORMATION CONTACT:** Mr. John L. Spinks, Jr., Chief, Office of

Endangered Species, U.S. Fish and Wildlife Service (703/235-2771).

#### SUPPLEMENTARY INFORMATION:

##### Background

The Palos Verdes blue butterfly is a small lycaenid butterfly restricted to the Palos Verdes peninsula, Los Angeles County, California. The butterfly was originally known from only one site (Perkins and Emmel, 1977) where it was extirpated by housing development; three other small colonies were subsequently discovered (Mattoni, 1970). The main threats to these colonies are overgrowth of weeds, weed control practices that adversely affect the butterfly's larval foodplant, the locoweed *Astragalus trichopodus leucopsis* (Arnold, 1980), and, in the case of one colony, recreational development.

On July 3, 1978, the Service published a proposed rulemaking in the Federal Register (43 FR 28938-45) advising that sufficient evidence was on file to support a determination that the Palos Verdes blue butterfly was an Endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 *et. seq.*). That proposal summarized the factors thought to be contributing to the likelihood that this species could become Endangered within the foreseeable future, specified the prohibitions which would be applicable if such a determination were made, and solicited comments, suggestions, objections, and factual information from any interested person. Section 4(b)(1)(A) of the Act requires that the Governor of each State or Territory, within which a resident species of wildlife is known to occur, be notified and be provided 90 days to comment before any such species is determined to be a Threatened species or an Endangered species. A letter was sent to the Governor of the State of California on July 14, 1978, notifying him of the proposed rulemaking for the Palos Verdes blue butterfly. On July 14, 1978, a memorandum was sent to the Service Directorate and affected Regional personnel, and letters were sent to other interested parties notifying them of the proposal and soliciting their comments and suggestions. On March 26, 1980, the Service published a rulemaking in the Federal Register (45 FR 19060-61) proposing Critical Habitat for the Palos Verdes blue butterfly. A letter notifying the Governor of the State of California of this action, a memorandum to affected Regional personnel, and letters to other interested parties were sent on May 31, 1980. A public meeting and a public hearing on the proposal of Critical Habitat for the Palos Verdes

blue butterfly were held at Rancho Palos Verdes, California on April 18 and May 2, 1980.

Official comment was received from the Governor of California through his Resources Agency and Department of Fish and Game.

#### Sources Cited

- Arnold, R. A. 1980. Status of proposed threatened or endangered California Lepidoptera. Contract report to California Department of Fish and Game, 48 p.
- Mattoni, R. M. T. 1978. September 8 letter to Mr. Harold O'Connor, Deputy Associate Director, U.S. Fish and Wildlife Service.
- Perkins, E. M., and J. F. Emmel. 1977. A new subspecies of *Glaucopsyche lygdamus* from California. Proc. Entomol. Soc. Wash. 79:466-71.

#### Summary of Comments and Recommendations

Section 4(b)(1)(C) of the Act requires that a summary of all comments and recommendations received be published in the Federal Register prior to adding any species to the list of Endangered and Threatened Wildlife and Plants.

In the July 3, 1978 proposal (43 FR 28938-45) to list the Palos Verdes blue butterfly as an Endangered species, the March 26, 1980 proposal of Critical Habitat (45 FR 19060-61), and the respective Press Releases, all interested parties were invited to submit factual reports or information which might contribute to the formulation of a final rulemaking.

On October 3, 1978, the Governor of California commented through the Secretary of Resources of that State. Federal listing of the Palos Verdes blue butterfly was opposed until more information became available. Mr. Arnold's previously cited report provided corroborative evidence; in response to the March 26, 1980 proposal of Critical Habitat for the butterfly, the Governor responded through an April 17, 1980 letter from the Director of Fish and Game. This letter supported the proposed listing and Critical Habitat designation, and waived the Governor's 90 day comment period.

All public comments received from July 3 to September 1, 1978 regarding the proposal to list the Palos Verdes blue butterfly as Endangered were considered.

Comments regarding the proposal of Critical Habitat received from March 26 to May 27, 1980, were considered. Additional opportunity for public comment was provided by the public meeting and hearing.

In addition to the official comments summarized above, several comments were received from individuals and