

**Authority:** 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

**§ 121.710 [Corrected]**

15. In § 121.710, remove the words "part 160, subpart 160.041, of this chapter" and add, in their place, the words "approval series 160.041".

**PART 122—OPERATIONS**

16. The authority citation for part 122 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306, 6101; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

**§ 122.604 [Corrected]**

17. In § 122.604, in paragraph (a) introductory text, remove the words "at least 76 millimeters (3 inches) high"; in paragraph (d), add the words "and numbers" after the word "letters" and remove the words "in letters and numbers at least 40 millimeters (1.5 inches) high"; in paragraph (e) introductory text add the words "and numbers" after the word "letters" and remove the words "in letters and numbers at least 40 millimeters (1.5 inches) high".

**SUBCHAPTER T—SMALL PASSENGER VESSELS (UNDER 100 GROSS TONS)**

**PART 175—GENERAL PROVISIONS**

18. The authority citation for part 175 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306; 49 U.S.C. App. 1804; 49 CFR 1.45, 1.46. Sec. 175.900 also issued under 44 U.S.C. 3507.

19. In § 175.400, in the definition for "High Speed Craft", in the equation "V = 3.7 × displ<sup>1/667</sup> h", add a decimal point before the number "1667", and add, in alphabetical order, a definition for "wood vessel" to read as follows:

**§ 175.400 Definitions of terms used in this subchapter.**

\* \* \* \* \*

*Wood vessel* means, for the purposes of subdivision and lifesaving equipment requirements in this subchapter, a traditionally-built, plank-on-frame vessel, where mechanical fasteners (screws, nails, trunnels) area used to maintain hull integrity.

\* \* \* \* \*

**PART 177—CONSTRUCTION AND ARRANGEMENT**

20. The authority citation for part 177 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

21. In § 177.500, in paragraph (j)(1), remove the last word "and" and add, in its place, the word "or"; and revise paragraph (o)(1) to read as follows:

**§ 177.500 Means of escape.**

\* \* \* \* \*

(o) \* \* \*

(1) The space has a deck area less than 30 square meters (322 square feet);

\* \* \* \* \*

**PART 178—INTACT STABILITY AND SEAWORTHINESS**

22. The authority citation for part 178 continues to read as follows:

**Authority:** 43 U.S.C. 1333; 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

**§ 178.330 [Corrected]**

23. In § 178.330(a)(4)(v), remove the equation

$$\text{"Weight on Upper Deck"} = \frac{\text{Weight on Upper Deck}}{\text{\# of Passengers on Upper Deck}} \times \frac{\text{Wt per Passenger}}{\text{Wt per Passenger}} \times 1.33"$$

and add, in its place, the following equation:

$$\text{"Weight on Upper Deck"} = (\text{\# of Passengers on Upper Deck}) \times (\text{Wt per Passenger}) \times 1.33"$$

**PART 180—LIFESAVING EQUIPMENT AND ARRANGEMENTS**

24. The authority citation for part 180 continues to read as follows:

**Authority:** 46 U.S.C. 2104, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

**§ 180.130 [Corrected]**

25. In § 180.130(b), remove the words "part 160, subparts 160.062 or 160.162, of this chapter" and add, in their place, the words "approval series 160.062 or 160.162".

**§ 180.210 [Corrected]**

26. In § 180.210(d), remove the words "complying with approval series 160.056" and add, in their place, the words "approved under approval series 160.156".

**PART 185—OPERATIONS**

27. The authority citation for part 185 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306, 6101; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

**§ 185.604 [Corrected]**

28. In § 185.604, in paragraph (a) introductory text, remove the words "at least 76 millimeters (3 inches) high"; in paragraph (d), add the words "and numbers" after the word "letters" and remove the words "in letters and numbers at least 40 millimeters (1.5 inches) high"; and, in paragraph (e) introductory text, add the words "and numbers" after the word "letters" and remove the words "in letters and numbers at least 40 millimeters (1.5 inches) high".

Dated: December 1, 1997.

**Joseph J. Angelo,**

*Acting Assistant Commandant for Marine Safety and Environmental Protection.*

[FR Doc. 97-31895 Filed 12-4-97; 8:45 am]

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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**RIN 1018-AC32**

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Callippe Silverspot Butterfly and the Behren's Silverspot Butterfly and Threatened Status for the Alameda Whipsnake**

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

**ACTION:** Final rule.

**SUMMARY:** The Fish and Wildlife Service (Service) determines endangered status pursuant to the Endangered Species Act of 1973, as amended (Act) for the callippe silverspot butterfly (*Speyeria callippe callippe*) and Behren's silverspot butterfly (*Speyeria zerene behrensi*) and threatened status for the Alameda whipsnake (Alameda striped racer) (*Masticophis lateralis euryxanthus*). The callippe silverspot butterfly is found at two sites on grasslands in the San Francisco Bay

area. Behren's silverspot butterfly is found within coastal terrace prairie at one site in southern Mendocino County. These butterflies are imperiled by overcollecting, urban development, alien plant invasion and competition, and excessive livestock grazing. The Alameda whipsnake occurs in the northern coastal scrub and chaparral habitats of Contra Costa and Alameda counties. This snake and its associated habitat are threatened by fire suppression and related wildfire problems associated with lack of fuel reduction, urban development, genetic isolation, and excessive livestock grazing. This rule implements Federal protection and recovery provisions afforded by the Act for these animals.

**DATES:** Effective December 5, 1997.

**ADDRESSES:** The complete file for this rule is available for public inspection, by appointment, during normal business hours, at the Sacramento Field Office, U.S. Fish and Wildlife Service, 3310 El Camino Ave., Suite 130, Sacramento, California 95821.

**FOR FURTHER INFORMATION CONTACT:** Mike Westphal or Diane Windham, staff biologists, at the above address or by telephone (916/979-2725).

**SUPPLEMENTARY INFORMATION:**

**Background**

The callippe silverspot butterfly (*Speyeria callippe*) is a member of the brush foot family (Nymphalidae). The animal was described by J.A. Boisduval (1852) from specimens collected during the month of June by Pierre Lorquin in San Francisco, California (dos Passos and Grey 1947). It is a medium sized butterfly with a wingspan of approximately 5.5 centimeters (cm) (2.2 inches (in)). The upper wings are brown with extensive black spots and lines, and the basal areas are extremely melanic (dark-colored). Wing undersides are brown, orange-brown, and tan with black lines and distinctive black and bright silver spots. Basal areas of the wings and body are densely pubescent (hairy).

The discal area on the upper hind wings of the callippe silverspot butterfly is a darker, more extensive yellow than on the related Lilian's silverspot butterfly (*Speyeria callippe liliana*). The callippe silverspot butterfly is larger and has a darker ground color with more melanic areas on the basal areas of the wings than Comstock's silverspot butterfly (*Speyeria callippe comstocki*), another related taxon.

The callippe silverspot butterfly is found in native grassland and associated habitats (Thomas Reid Associates 1982; Steiner 1990; Mattoon, *in litt.*,

November 22, 1992). The females lay their eggs on the dry remains of the larva foodplant, Johnny jump-up (*Viola pedunculata*), or on the surrounding debris (Arnold 1981, Thomas Reid Associates 1982). Within about 1 week of hatching the larvae eat their egg shells. The caterpillars wander a short distance and spin a silk pad upon which they pass the summer and winter. The larvae are dark colored with many branching sharp spines on their backs.

The caterpillars immediately seek out the foodplant upon termination of their diapause in the spring. In May, after having gone through five instars, each larva forms a pupa within a chamber of leaves drawn together with silk. Adults emerge in about 2 weeks and live for approximately 3 weeks. Depending upon environmental conditions, the flight period of this single-brooded butterfly ranges from mid-May to late July. The adults exhibit hilltopping behavior, a phenomenon in which males and virgin or multiple-mated females seek a topographic summit on which to mate (Shields 1967).

Arnold (1983, 1985) conducted taxonomic studies on the subspecies of *Speyeria callippe* using wing characters. He concluded that the species consisted of 3 subspecies rather than the widely recognized and accepted 16 subspecies. Based on his study, the range of *Speyeria callippe callippe* would extend from Oregon to southern California and east into the Great Basin (Arnold 1985). A comprehensive analysis of this species found that the original classification remains more appropriate and that subspecies *callippe* is restricted to the San Francisco Bay region (Hammond 1986; Murphy undated). The Service recognizes the conclusions of Hammond (1986) and the distribution of the callippe silverspot butterfly as described by Sterling Mattoon (S. Mattoon, *in litt.*, November 22, 1992).

The callippe silverspot butterfly is known from 14 historic populations in the San Francisco Bay region. The historic range of the callippe silverspot butterfly includes the inner Coast Ranges on the eastern shore of San Francisco Bay from northwestern Contra Costa County south to the Castro Valley area in Alameda County (S. Mattoon, *in litt.*, November 22, 1992). On the west side of the Bay, it ranged from San Francisco south to the vicinity of La Honda in San Mateo County. Five colonies, including the one located at Twin Peaks in San Francisco have been extirpated for a variety of reasons. Currently, extant colonies are known only from private land on San Bruno Mountain in San Mateo County, and a

city park in Alameda County (S. Mattoon, *in litt.*, November 22, 1992).

Behren's silverspot butterfly (*Speyeria zerene behrensi*) is also a member of the brush foot family (Nymphalidae). William H. Edwards described this taxon in 1869 based on an adult male collected by an unknown lepidopterist in Mendocino, California (Edwards 1869, dos Passos and Grey 1947). It is a medium-sized butterfly with a wingspan of approximately 5.5 cm (2.2 in). The upper surfaces are golden brown with numerous black spots and lines. Wing undersides are brown, orange-brown, and tan with black lines and distinctive silver and black spots. Basal areas of the wings and body are densely pubescent.

Behren's silverspot butterfly is similar in appearance to two other subspecies of *Speyeria zerene* (Howe 1975, Hammond 1980, McCorkle and Hammond 1988). The Oregon silverspot butterfly (*Speyeria zerene hippolyta*), federally listed as threatened, has lighter basal suffusion on the upper sides of the wings than Behren's silverspot butterfly. Another related taxon, the endangered Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*) is larger in size and also lighter in color than *Speyeria zerene behrensi*.

Behren's silverspot butterfly inhabits coastal terrace prairie habitat. The life history of Behren's silverspot butterfly is similar to the callippe silverspot butterfly. The females lay their eggs in the debris and dried stems of the larval foodplant, violet (*Viola adunca*) (McCorkle 1980, McCorkle and Hammond 1988). Upon hatching, the caterpillars wander a short distance and spin a silk pad upon which they pass the fall and winter. The larvae are dark-colored with many branching, sharp spines on their backs. The caterpillars immediately seek out the foodplant upon termination of their diapause in the spring. They pass through five instars before forming a pupa within a chamber of leaves that they draw together with silk. The adults emerge in about 2 weeks and live for approximately 3 weeks. Depending upon environmental conditions, the flight period of this single-brooded butterfly ranges from July to August. Adult males patrol open areas in search of newly emerged females.

The historic range of Behren's silverspot butterfly extends from the mouth of the Russian River in Sonoma County northward along the immediate coast to southern Mendocino County in the vicinity of Point Arena (S. Mattoon, *in litt.*, August 4, 1989). Six historic populations are known from coastal terrace prairie and associated habitats.

The single extant population is located on private land near Point Arena in Mendocino County.

The Alameda whipsnake (Alameda striped racer) (*Masticophis lateralis euryxanthus*) is a member of the family Colubridae (Stebbins 1985). It was described by William J. Riemer (1954) from a total of six specimens collected in the vicinity of Berkeley, Alameda County, and near Somersville, Contra Costa County, and from Mount Diablo, Contra Costa County, California. The Alameda whipsnake is a slender, fast-moving, diurnal snake with a narrow neck and a relatively broad head with large eyes. The dorsal surface is colored sooty black with a distinct yellow-orange stripe down each side. The anterior portion of the ventral surface is orange-rufous colored, the midsection is cream colored, and the posterior and tail are pinkish. Adults range in length from 91 to 122 cm (3 to 4 feet (ft)).

The Alameda whipsnake inhabits the inner Coast Ranges in western and central Contra Costa and Alameda counties (Jennings 1983, McGinnis 1992, Swaim 1994). Urban development has fragmented the originally continuous range of the whipsnake into five populations centered in the (1) Sobrante Ridge, Tilden/Wildcat Regional Parks area to the Briones Hills, in Contra Costa County (Tilden-Briones population); (2) Oakland Hills, Anthony Chabot area to Las Trampas Ridge, in Contra Costa County (Oakland-Las Trampas population); (3) Hayward Hills, Palomares area to Pleasanton Ridge, in Alameda County (Hayward-Pleasanton Ridge population); (4) Mount Diablo vicinity and the Black Hills, in Contra Costa County (Mount Diablo-Black Hills population); and (5) Wauhab Ridge, Del Valle area to the Cedar Mountain Ridge, in Alameda County (Sunol-Cedar Mountain population). These populations all occur on private or public, non-Federal, land.

Due to the fragmentation of the range of the Alameda whipsnake, little or no interchange occurs among the five populations. The ability of the whipsnake to interchange among the first three populations described above is contingent on their dispersing over the Caldecott Tunnel in Contra Costa County and under Highway 580 in Alameda County at the Eden Canyon interchange, the Dublin Boulevard undercrossing, or where San Lorenzo Creek passes under the highway. The ability of the Alameda whipsnake to interchange between the Hayward-Pleasanton Ridge and Sunol-Cedar Mountain populations depends on their dispersing along Alameda Creek in Alameda County and crossing under

Highway 680 where the creek passes under the highway, or crossing under the highway at Scott's Corner along Vallecitos Creek, or where two unnamed tributaries to Arroyo de la Laguna cross under Highway 680 north of Scott's Corner. The Mount Diablo-Black Hills population has no path for dispersal to any of the other populations.

The Alameda whipsnake is distinguished from the chaparral whipsnake (*Masticophis lateralis lateralis*) by its sooty black dorsum, by wider yellow-orange stripes that run laterally down each side, the lack of a dark line across the rostral, an uninterrupted light stripe between the rostral and eye, and the virtual absence of spotting on the venter of the head and neck.

The Alameda whipsnake is typically found in northern coastal scrub, coastal sage scrub and chaparral plant communities (Ornduff 1974, Swaim 1994), but may also occur in adjacent grasslands and oak and oak/bay woodlands (Swaim 1994). They demonstrate a preference for open-canopy stands and habitats with woody debris and exposed rock outcrops, and they tend to be found on southeast, south, and southwest facing slopes (Swaim 1994). This extremely fast-moving snake holds its head high off the ground to peer over grass or rocks for potential prey and is an active diurnal predator. Its diet includes lizards, small mammals, snakes, and nesting birds.

Radiotelemetry data suggest that Alameda whipsnakes can occupy home ranges varying in size from 1.9 to 8.7 hectares (ha) (5.0 to 21.5 acres (ac)). Home ranges of marked snakes overlapped (Swaim 1994). Some animals were recorded to have moved over 1.8 kilometers (km) (1 mile (mi)) while crisscrossing their areas (McGinnis 1992).

Alameda whipsnakes breed from March through June, with mating appearing to occur near the hibernacula of the female (Swaim 1994). Whipsnakes lay clutches of 6 to 11 eggs, May through July (Stebbins 1985), and the young hatch and emerge in the late-summer to early-fall (Swaim 1994).

#### Previous Federal Action

A proposed rule to list the callippe silverspot butterfly as endangered with critical habitat was published on July 3, 1978 (43 FR 28938). The critical habitat portion of this proposal was withdrawn by the Service on March 6, 1979 (44 FR 12382) because of procedural and other substantive changes in the Act by the amendments of 1978. The Service again published a proposed rule to designate critical habitat for the callippe

silverspot butterfly on March 28, 1980 (45 FR 20503). The proposal to list the callippe silverspot butterfly and the reproposal of critical habitat were withdrawn on September 30, 1980 (45 FR 64607) because the Act amendments of 1978 required that the final rule for the species be completed within 2 years after the date of publication of the proposal to list it as endangered or threatened. This insect was listed as a category 2 candidate species in the Animal Notice of Review on May 22, 1984 (49 FR 21664) and January 6, 1989 (54 FR 554). Category 2 species were those taxa for which the Service had data that indicated listing was possibly appropriate, but for which substantial data on their biological vulnerability and threats was not currently available to support issuance of proposed listing rules. The callippe silverspot butterfly was listed as a category 1 species in the Animal Notice of Review on November 21, 1991 (56 FR 58804), because of increased threats from overcollecting (see Factor B in the "Summary of Factors Affecting the Species" section of this rule). Category 1 species were those taxa for which the Service had on file sufficient information on biological vulnerability and threats to support proposed listing rules. As announced in a notice published in the February 28, 1996, **Federal Register** (61 FR 7596), the designation of multiple categories of candidates has been discontinued, and only former category 1 species are now recognized as candidates for listing purposes.

Ms. Dee Warencia petitioned the Service to list the callippe silverspot butterfly as an endangered species in a letter dated January 14, 1991, which was received on January 22, 1991. The Service completed a status review and determined that sufficient information existed to propose the species for listing. The 12-month petition finding was published on February 4, 1994, with the proposed rule (59 FR 5377).

On March 20, 1975, Behren's silverspot butterfly was listed as one of 42 insects whose status was being reviewed for listing as either endangered or threatened by the Service (40 FR 12691). This insect was listed as a category 2 species in the Animal Notice of Review on May 22, 1984 (49 FR 21664), and January 6, 1989 (54 FR 554). Dr. Dennis Murphy of Stanford University petitioned the Service to list Behren's silverspot butterfly as an endangered species in a letter dated June 28, 1989, which was received on June 29, 1989. The Service determined that the petition contained substantial information indicating that the action requested may be warranted and

published notice of the 90-day finding on November 1, 1990 (55 FR 46080). It was listed as a category 1 species in the Animal Notice of Review on November 21, 1991 (56 FR 58804), on the basis of significant increases in habitat loss and threats occurring throughout its range. The 12-month petition finding was published with the proposed rule to list the species on February 4, 1994 (59 FR 5377).

On September 18, 1985, the Service published the Vertebrate Wildlife Notice of Review (50 FR 37958) which included the Alameda whipsnake as a category 2 candidate species for possible future listing as endangered or threatened. The January 6, 1989, Animal Notice of Review (54 FR 554) solicited information on its status as a category 2 candidate species. The Alameda whipsnake was moved to category 1 in the November 21, 1991, Animal Notice of Review (56 FR 58804) on the basis of significant increases in habitat loss and threats occurring throughout its range. On February 4, 1994, the Service published a proposed rule in the **Federal Register** (59 FR 5377) to list the Alameda whipsnake as an endangered species.

The processing of this final rule follows the Service's listing priority guidance published in the **Federal Register** on December 5, 1996 (61 FR 64475). This guidance clarifies the order in which the Service will process rulemakings following two related events—(1) the lifting, on April 26, 1996, of the moratorium on final listings imposed on April 10, 1995 (Public Law 104-6), and (2) the restoration of significant funding for listing through passage of the Omnibus Budget Reconciliation Act following severe funding constraints imposed by a number of continuing resolutions between November 1995 and April 1996. Under this guidance, highest priority (Tier 1) is given to processing emergency listings, and second highest priority (Tier 2) is given to resolving the listing status of outstanding proposed listings. The third highest priority (Tier 3) is assigned to resolving the conservation status of candidate species and processing administrative findings on petitions to add species to the lists or reclassify species from threatened to endangered status. The lowest priority (Tier 4) is given to processing critical habitat determinations, delistings, and other types of reclassifications. Processing of this final rule is a Tier 2 action.

### Summary of Comments and Recommendations

In the February 4, 1994, proposed rule (59 FR 5377) and associated notifications, all interested parties were requested to submit factual information that might assist the Service in determining whether these taxa warrant listing. Appropriate State and Federal agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Notices of this proposal were published in the *San Francisco Chronicle* and *San Mateo Times* on February 8, 1994, and the *Oakland Tribune* on February 10, 1994.

During the comment period, the Service received comments from 16 commenters. Six commenters supported the listing of all three taxa. Five commenters supported the listing of the callippe silverspot. The East Bay Regional Park District (EBRPD) supported the listing of the Alameda whipsnake. One commenter provided information on conservation methods for the callippe silverspot, but did not express an opinion on the listing. Letters from the City of Danville, California Department of Parks and Recreation (CDPR), and the U.S. National Biological Survey (now the Biological Resources Division of the U.S. Geological Survey) provided additional information on the Alameda whipsnake but did not express an opinion on the listing. No public hearing was requested.

On November 1, 1996, the Service published in the **Federal Register** (61 FR 56501) a notice reopening the comment period for 30 days for these taxa. The basis for this reopening was the length of time that had elapsed since closure of the initial comment period, changing procedural and biological circumstances, and the need to review the best scientific information available during the decision-making process. Specifically, the Service requested information regarding—(1) the known or potential effects of fire suppression and general fire management practices on the Alameda whipsnake and its habitat; (2) any other threats to these taxa; and (3) the size, number, or distribution of populations of these taxa. During the 30-day reopened comment period, the Service received comments from 10 entities and individuals. One commenter stated that the listing of the callippe silverspot butterfly would not be beneficial. Two commenters supported listing of all three taxa and one commenter expressed no opinion on the listing of all three taxa. The remaining letters mentioned only the

Alameda whipsnake, with two supporting the listing, one opposing the listing, and three expressing no opinion. In accordance with the Service policy on peer review, published in the **Federal Register** on July 1, 1994 (59 FR 34270), the opinions of three independent scientists were also solicited. No responses were received from these specialists.

The Service has reviewed all of the written comments described above. New information received since publication of the proposed rule is incorporated in the "Background" and "Summary of Factors Affecting the Species" sections of this final rule. The issues raised in comments received and the Service's responses are summarized as follows:

**Issue 1:** One commenter disagreed that the Alameda whipsnake would not be impacted by construction and operation of the proposed Los Vaqueros Reservoir. The commenter stated that the snake would be adversely affected by the reservoir project if there are historic records of the snake from the areas that would be inundated.

**Service Response:** The quarrying operations for the Los Vaqueros project will not be undertaken at the location first proposed for the project, where an Alameda whipsnake was observed (Jones and Stokes 1992). The Service is not aware of any records showing that this species had ever occurred in the inundation zone.

**Issue 2:** One commenter stated that feral pigs (*Sus scrofa*) prey on snakes and other wildlife.

**Service Response:** The Service has incorporated this information in this final rule.

**Issue 3:** One commenter believed that commercial collecting of the Alameda whipsnake was an overstated threat and contended that this was incorrectly used as a justification for not designating critical habitat. Another commenter stated that the location of the callippe silverspot butterfly population at San Bruno Mountain was well known to butterfly collectors. He asserted that the threat of collecting was not a justification for determining that designation of critical habitat is not prudent for the callippe silverspot butterfly.

**Service Response:** Under section 4(a)(3)(A) of the Act and 50 CFR 424.12, the Secretary must designate critical habitat if such designation is prudent and determinable. Section 4(b)(2) of the Act further states that any area may be excluded from critical habitat if it is determined that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat. In the case of the

Alameda whipsnake and callippe silverspot butterfly, the Service believes that designation of critical habitat for these species would confer little, if any, conservation benefit to these species beyond that provided by listing. Application of the statute and its regulations are described in more detail in the "Critical Habitat" section of this rule.

*Issue 4:* Several commenters contended that the failure of the San Bruno Mountain Habitat Conservation Plan (HCP) is the primary cause of the decline of the callippe silverspot butterfly.

*Service Response:* In 1982, a Section 10(a)(1)(B) incidental take permit was issued to the cities of Brisbane, Daly City, South San Francisco, and the County of San Mateo for the endangered mission blue butterfly (*Icaricia icarioides missionensis*), San Bruno elfin butterfly (*Incisalia mossii bayensis*), and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). This permit and HCP is described in the "Available Conservation Measures" section of this rule. The Service is not aware of any documented evidence or data showing that the callippe silverspot butterfly is declining as a result of the San Bruno Mountain HCP. However, the HCP does not regulate collecting threats to the callippe silverspot butterfly or other butterfly species inhabiting San Bruno Mountain. Listing the callippe silverspot butterfly will provide this species with regulatory protection from collection and other impacts.

*Issue 5:* One commenter thought that designation of San Bruno Mountain as critical habitat for the callippe silverspot butterfly would lead to increased levels of environmental review and greater protection for the species.

*Service Response:* Critical habitat extends additional protection to listed species through section 7 of the Act by requiring that Federal agencies ensure that any actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat. However, because development activities on callippe silverspot butterfly habitat on San Bruno Mountain have already been completed, designation of critical habitat would not provide additional benefits to the species. A section 10(a)(1)(B) HCP currently protects habitat in the area.

*Issue 6:* One commenter was concerned that particulate matter from vehicle exhaust and quarry operations may pose a significant threat to the callippe silverspot butterfly.

*Service Response:* The adult and early stages of the callippe silverspot butterfly

and other lepidopterans may be prone to injury and mortality from dust because their respiratory apparatus (spiracles) are easily clogged. The Service is concerned that high levels of dust from quarry operations on San Bruno Mountain may adversely affect the butterflies in areas immediately bordering this location.

*Issue 7:* One commenter claimed that the three species are being used by environmentalists as "roadblocks" to economic uses of private property. Another commenter stated that public lands should be managed for productivity and sustainability and that the economic impact, customs, traditions and culture of local communities should be considered during the listing process.

*Service Response:* Under section 4(a)(1)(A) of the Act, a listing determination must be based solely on the best scientific and commercial data available. The legislative history of this provision clearly states the intent of Congress to "ensure" listing decisions are "based solely on biological criteria and to prevent non-biological considerations from affecting such decisions" (H.R. Rep. No. 97-835, 97th Cong. 2d Sess. 19 (1982)). As further stated in the legislative history, "\* \* \* economic considerations have no relevance to determinations regarding the status of species \* \* \*." Because the Service is specifically precluded from considering economic impacts, either positive or negative, in a decision on listing any species, the Service does not evaluate or consider the economic impacts of listing these species.

Section 2(a)(3) of the Act recognizes that species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people. The Service recognizes that the species included in this listing have esthetic, ecological, education, historical and scientific value.

*Issue 8:* One commenter thought it would be prudent for the Service to indicate the percentage of Alameda whipsnake habitat lost since 1971, the year the species was listed as "threatened" under the California Endangered Species Act, to document the level of protection afforded the species with State listing.

*Service Response:* The Service mapped Alameda whipsnake habitat that was extant in 1970 and identified areas where conversion and encroachment into potential habitat had occurred from then until 1996. To the extent determinable from aerial photographs and slides, projects impacting habitat during the 1970-1996

period were mapped. Such projects included road construction and widening, subdivision construction and expansion, and brush removal. Approximately 25 projects in Alameda County and 41 projects in Contra Costa County either converted or encroached upon chaparral in the 1970-1996 period. The extent of conversion and encroachment ranged from approximately 0.8 to 2.0 ha (2 to 5 ac) to approximately 8 to 20 ha (20 to 50 ac) for larger projects. Freeway construction and residential and commercial development have added dispersal barriers measuring up to 4.8 km (3.0 mi) wide. The Service's conclusion, from this review, was that regional development has significantly fragmented the remaining Alameda whipsnake populations and that natural genetic exchange between the five remaining populations is unlikely.

A precise assessment of the amount of habitat loss is difficult, because Alameda whipsnakes are known to use adjacent habitats at a high level (McGinnis 1992), and may be found at distances up to approximately 500 meters (1,640 feet) from scrub and chaparral habitat and utilize riparian habitat as a corridor (Swaim 1994). The substantial amount of habitat loss documented by the Service brings into question the effectiveness of current regulatory protection which is further discussed under factor D in the "Summary of Factors" section of this rule.

The issues raised in comments received during the 30 days that the comment period was reopened and the Service's responses to these issues are summarized as follows:

*Issue 9:* Several commenters noted the benefits of fuels management for snake habitat maintenance and public safety. One commenter noted the difficulty in conducting prescribed burns near residential communities. Another commenter recommended that the Service explicitly recognize the tradeoff between protecting individual snakes from mortality during fuels management and the benefits of maintaining long-term suitable habitat conditions. The commenter further noted that restrictions on fuels treatment activities should meet appropriate standards for reasonableness, given the critical need to provide for public safety.

*Service Response:* The subject of the effects of fire suppression and general fire management practices on the Alameda whipsnake and its habitat was a factor in deciding to reopen the comment period. The Service is concerned that fire suppression has had, and continues to have, negative impacts

on habitat for the Alameda whipsnake. Fire suppression is discussed in depth under factor E of the "Summary of Factors" section of this rule. The Service also recognizes the need for efficient fire control in urban areas and would work with appropriate management agencies to develop fuels management plans that protect the public while affording the maximum practicable conservation benefit to Alameda whipsnakes.

*Issue 10:* One commenter expressed concern that the proposed rule to list these taxa may not have complied with the regulatory policies announced by the Department of the Interior on July 1, 1994. In particular, the commenter expressed concern that the listing proposal had not been subjected to peer review, as required by the Notice of Policy Statement published in the **Federal Register** on that date (59 FR 34270).

*Service Response:* The proposed rule to list these taxa was published on February 4, 1994 (59 FR 5377), predating the Service's formal policy on peer review made final on July 1, 1994 (59 FR 34270). However, the list of interested parties to whom the Service sent the proposed rule for comment included several experts on the life history, taxonomy, and ecology of the taxa proposed for listing. During the reopened comment period discussed above in the "Previous Federal Actions" section, the opinions of three independent specialists were solicited in accordance with this policy. No responses were received from these specialists.

*Issue 11:* One commenter noted that because California has experienced severe fires during the past several years, fire suppression may not be a threat to the Alameda whipsnake.

*Service Response:* Several areas of California, particularly southern California, have recently experienced wildfires. Within the range of the Alameda whipsnake, however, there have been few large wildfires within the last 10 years with the notable exception of the Oakland Hills firestorm of 1991. Although this fire occurred within the range of the species, the burned areas were mostly located in developed portions of the Oakland Hills that did not contain habitat suitable for the whipsnake. Fire suppression practices that do not include controlled burning can lead to severe fires that damage both urban and wildlife areas, whereas controlled burning can benefit both wildlife habitat and reduce the risk of catastrophes such as the 1991 fire. Fire suppression is discussed in detail under

factor E of the "Summary of Factors" section of this rule.

*Issue 12:* One commenter was concerned over the method by which information was gathered on private property.

*Service Response:* The Service is not aware of any information that was gathered without the permission of the property owner. Information was obtained from Environmental Impact Reports or Statements that are required under the California Environmental Quality Act (CEQA) or National Environmental Protection Act, reports and data summaries prepared by State agencies and independent scientists, information submitted during public comment periods, and other information published in the scientific journals or available in student dissertations.

*Issue 13:* One commenter stated that the Service did not use sound scientific information as indicated by its use of phrases such as "may be threatened."

*Service Response:* Section 4(b)(a)(A) of the Act requires that listing determinations be based on the best scientific and commercial data available. The Service has relied on the best available scientific and commercial data in making this listing determination. The data upon which this determination is based were collected by the petitioners and qualified scientists. The phrase "may be threatened," in particular, is used to indicate that a potential threat may become an actual one in the foreseeable future. The Service believes that it is sound and responsible science to acknowledge a lack of absolute certainty when that is the case.

*Issue 14:* One commenter asked what scientific information was used to determine what constitutes "inappropriate grazing levels."

*Service Response:* The final rule includes livestock grazing as one of many factors affecting the species, and ranks it as a contributing factor, rather than as a major factor. Indeed, this final rule states that some grazing could help to keep other plants from outcompeting the butterflies' host plants. Studies on Alameda whipsnakes that have been equipped with radiotelemetry units have shown that the whipsnake forages in grassland between stands of scrub. Livestock grazing that significantly reduces or eliminates plant cover in these grasslands would lead to an increased loss of snakes and their prey to other predators. The Service believes that livestock grazing, if appropriately managed, can benefit both the Alameda whipsnake and the two species of butterflies.

*Issue 15:* One commenter stated that involvement of State and local governments, as well as all types of land users, should be required prior to listing a species.

*Service Response:* To solicit comments from the public, a notice of the February 4, 1994, proposed rule (59 FR 5377) was published in the *San Francisco Chronicle* and *San Mateo Times* on February 8, 1994, and in the *Oakland Tribune* on February 10, 1994. In addition, appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. On November 1, 1996 (61 FR 56501), the Service reopened for public comment the proposed listing of the three species with a closing date of December 2, 1996, to allow further comments from the public.

*Issue 16:* One commenter stated that the expense of amending the San Bruno Mountain HCP to permit incidental take of callippe silverspot butterflies would preclude other habitat management activities.

*Service Response:* The Service will work with the permit holders involved in the San Bruno Mountain HCP to ensure that the process of amending their Section 10(a)(1)(B) permit will not cause undue diversion of funding from other habitat management activities.

#### **Summary of Factors Affecting the Species**

After a thorough review and consideration of all information available, the Service has determined that the callippe silverspot butterfly (*Speyeria callippe callippe*) and Behren's silverspot butterfly (*Speyeria zerene behrensi*) should be classified as endangered species, and the Alameda whipsnake (*Masticophis lateralis euryxanthus*) should be classified as a threatened species. Procedures found at section 4(a)(1) of the Act and regulations (50 CFR part 424) implementing the listing provisions of the Act were followed. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to the callippe silverspot butterfly (*Speyeria callippe callippe*), Behren's silverspot butterfly (*Speyeria zerene behrensi*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*) are as follows:

##### **A. The Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range**

The primary causes of the decline in the callippe silverspot butterfly and

Behren's silverspot butterfly is the loss and degradation of habitat from human activities, including off-road vehicle use, trampling by hikers and equestrians, inappropriate levels of livestock grazing, and invasive exotic vegetation. Off-road vehicles and uncontrolled off-trail foot traffic pose a threat to the colonies of the two butterfly species. These activities could harass, injure, or kill individuals of the two species by trampling or crushing the early life stages, the foodplants of the larvae, or the adults' nectar sources. The Behren's silverspot butterfly also is imperiled by residential and commercial development.

The callippe silverspot butterfly was once considerably more widespread in the San Francisco Bay area, and at least five populations of this species have been eliminated by urban development and other causes. The species was known historically from 14 sites in San Mateo, Alameda, Sonoma, and Solano counties, only 2 of which are still extant. One of the known extant populations of the callippe silverspot butterfly is located in a city park in Alameda County. This colony is small and likely to be imperiled by anthropogenic and natural causes (S. Mattoon, *in litt.*, November 22, 1992). The population at San Bruno Mountain in San Mateo County is largely protected against further loss of habitat, which will remain undeveloped in perpetuity by virtue of the San Bruno Mountain HCP (Thomas Reid Associates 1982; S. Mattoon, *in litt.*, November 22, 1992). However, overcollection of specimens by lepidopterists at San Bruno Mountain and at sites where hybrids can be found in Solano County continues to pose a threat (see Factor B).

Behren's silverspot butterfly has been extirpated from a significant portion of its former range, which extended from the mouth of the Russian River in Sonoma County north to southern Mendocino County. One of the six historically known colonies was eliminated by a housing development (S. Mattoon, *in litt.*, August 7, 1989). Currently, this species is known from a single locality near Point Arena in Mendocino County (Sally DeBecker, Pacific Gas and Electric, *in litt.*, 1990). The site is subject to grazing by livestock. Although no development plans have been proposed for this site, urban development is occurring in the vicinity. No specimens have been observed at the sites of the other historically known colonies since 1987.

The current threats to the habitat of the Alameda whipsnake are urban development and associated impacts due to increased population densities,

inappropriate grazing practices, and alteration of suitable habitat from fire suppression (see factor E below for a full discussion of the effects of fire suppression on Alameda whipsnake habitat). The central and western portions of Alameda and Contra Costa counties are highly urbanized and continue to be subject to increased urbanization. Habitat fragmentation from urban development and associated highway and road construction has led to isolation of the five populations by wholly preventing or severely reducing movement of individuals between areas of suitable habitat as described earlier in this rule. These activities have also reduced the total amount of suitable habitat available for the Alameda whipsnake. Swaim (1994) listed 55 historical localities for this species, of which only 25 are considered to be extant.

McGinnis (1992) documented colonies scattered throughout the range of the snake that are likely to be adversely impacted by various residential developments. In addition, the Service has identified numerous housing developments that threaten the Alameda whipsnake populations. Some housing developments in Alameda County will further fragment habitat areas of the Hayward-Pleasanton Ridge population. These developments include the proposed 200 ha (500 ac) Schaefer Ranch Project with approximately 474 homes, and the 58 ha (146 ac) Hansen Ranch Project, both of which could potentially impact suitable habitat for the Alameda whipsnake. The Schaefer Ranch contains suitable habitat and the adjacent Hansen Ranch is in close proximity to an Alameda whipsnake sighting (California Department of Fish and Game (CDFG), *in litt.*, February 13, 1996). In addition, the proposed dedication of approximately 64 ha (161 ac) of the Schaefer Ranch project to the EBRPD will increase public use and associated recreational impacts to habitat of the Alameda whipsnake. The proximity of urban development will also increase the likelihood of predation from domestic and feral cats to EBRPD lands that are otherwise protected from development (DelVecchio 1997) (see factor C below).

Two other proposed projects to the south affect the Hayward-Pleasanton Ridge population. The 632 ha (1,580 ac) Hayward 1900 project and the 156 ha (391 ac) Bailey Ranch are adjacent housing developments along Walpert Ridge in Hayward (Planning Collaborative 1995, City of Hayward 1996). Both the Walpert Ridge and the Bailey Ranch sites have habitat

occupied by the Alameda whipsnake (McGinnis 1992). In addition, contiguous habitat exists between known occupied habitat to the west and east of the Bailey Ranch and Hayward 1900 development projects. Although Bailey Ranch has proposed mitigation to offset impacts to the Alameda whipsnake, both developments will further impact and fragment the Hayward-Pleasanton Ridge population. Hayward 1900 has proposed open space but is planning to construct trails and vineyards in the proposed open space (Planning Collaborative 1995). Vineyards, associated agricultural land uses, and trails could eliminate and fragment whipsnake habitat and further restrict the movement of snakes.

Within the Oakland-Las Trampas population, several proposed developments may impact Alameda whipsnakes and their habitat. Several of these proposed projects are located contiguous to the east side of Las Trampas Regional Wilderness and contain habitat known to be occupied by Alameda whipsnakes. The proposed 9 ha (22 ac) Rossmoor Neighborhood Nine Project would result in the direct loss of snake habitat and could potentially impact mitigation habitat previously provided to offset impacts from an earlier phase of the project (CDFG, *in litt.*, November 25, 1995). The proposed expansion of the Oakland Zoo could potentially impact suitable snake habitat (K. Swaim and S. McGinnis, Hayward State University, pers. comm., 1996). Some of these projects have, or may, set aside suitable habitat for the Alameda whipsnake, preserved either as open space or as mitigation for habitat losses associated with the project. Although these proposed developments may mitigate for impacts to Alameda whipsnakes, the undeveloped hillsides that support chaparral growth will be subject to increased fire suppression due to the close proximity of urban development. This fire suppression will result in habitat degradation and an increased probability of catastrophic wildfires as discussed under factor E below.

The Mount Diablo-Black Hills, Tilden-Briones, and Sunol-Cedar populations are indirectly threatened by urban development. The Mount Diablo-Black Hills population will be adversely affected by the urban expansion of the cities of Pittsburg, Oakley, Brentwood, and Antioch. These cities are projected to expand by over 40,000 units, which will result in increased visitation and

associated impacts to nearby EBRPD parks and Mt. Diablo State Park. Specific developments such as the 115-unit Clayton Ranch (412 ha (1,030 ac)) and 5,200-unit Cowell Ranch (1,709 ha (4,272 ac)) will expose the eastern flank of the Mt. Diablo-Black Hills population to these indirect impacts of urbanization. The Mt. Diablo-Black Hills population is also subject to increased urban impacts on the south side from the proposed Dougherty Valley (2,400 ha (6,000 ac)) and Tassajara Valley (1,600 ha, (4,000 ac)) projects, which total over 17,000 units. The Tilden-Briones population will be subject to increased population pressure from the north by the approved 800-unit Franklin Canyon (392 ha (980 ac)) projects (Mooers, 1996). Additional developments are approved or proposed adjacent to the Sunol-Cedar population in the rapidly growing areas near Dublin and Pleasanton in Alameda County. These projects will increase human disturbance from recreational use on regional and state parks, and as urban development encroaches into the current open space buffers between existing developments and whipsnake habitat on public lands, the threat of predation and harassment from domestic and feral cats increases (Coleman *et al.* 1997). Predation threats are discussed in more detail under factor C below.

The past and ongoing fragmentation of Alameda whipsnake habitat makes some populations of this species more vulnerable to extinction. The Tilden-Briones and Oakland-Las Trampas populations occupy a narrow, interrupted band of ridgetop chaparral dividing the heavily urbanized Oakland/Berkeley region to the west from the rapidly urbanizing Highway 680 corridor to the east (USGS 1997). Habitat patches with high ratios of edge to interior are known to provide less value for some species than round or square patches provide (Jimerson and Hoover 1991; Saunders *et al.* 1991). In fragmented habitats, species most prone to extinction are those that depend on native vegetation, require combinations of different habitat types, require large territories, and exist at low densities (Saunders *et al.* 1991). Alameda whipsnakes have been shown to be associated with native Diablan sage scrub, to forage in adjacent grasslands, and to migrate along riparian corridors. While the home range of the Alameda whipsnake, estimated to vary between 2 and 9 ha (5 and 20 ac), is not large compared to that of some animals, the narrow habitats of the Tilden-Briones and Oakland-Las Trampas populations,

less than 1.6 km (1 mi) wide in some places, may impose a significant constraint on the species. Few individuals have been captured during trapping studies conducted over thousands of trap days, indicating that Alameda whipsnakes may be sparse even in suitable habitat (Swaim 1994). These factors may combine to cause Alameda whipsnakes to be vulnerable to extinction in small habitat patches resulting from habitat fragmentation.

#### *B. Overutilization for Commercial, Recreational, Scientific or Educational Purposes*

The callippe silverspot butterfly and Behren's silverspot butterfly are highly prized by insect collectors. Although no studies specifically document the impact of the removal of individuals on natural populations of either butterfly species, based on studies of another endangered nymphalid butterfly (Gall, 1984a and 1984b) and a lycaenid butterfly (Duffey 1968), both butterflies are vulnerable to impacts from collection due to their isolated, possibly small populations. Butterfly collectors have been observed on San Bruno Mountain (S. Stern, *in litt.*, June 21, 1994). Some of these specimens are being traded for other butterfly taxa or are being held by the collectors in anticipation of their greater value should the species be listed. The Service also is aware of reports that Behren's silverspot butterfly is actively sought by amateur lepidopterists. Both collecting from small colonies and scientific studies that repeatedly handle and mark individuals (particularly of females and in years of low abundance) could seriously damage the populations through loss of individuals and the resulting loss of genetic variability within the population (Singer and Wedlake 1981, Gall 1984b, Murphy 1988). Collection of females dispersing from a colony also can reduce the probability that new colonies will be founded. Collectors pose a threat because they may be unable to recognize when they are depleting butterfly colonies below the thresholds of survival or recovery, especially when they lack appropriate biological training or when they visit the area for a short period of time (Collins and Morris 1985).

An extensive commercial trade has been documented for the callippe silverspot butterfly and the Behren's silverspot butterfly, as well as for other imperiled and rare butterflies (U.S. Attorney's Office 1994, *United States v. Richard J. Skalski, Thomas W. Kral, and Marc L. Grinnell, Case No. CR932013, 1993*). The Service is concerned that

issuance of a final rule for these animals that is not effective immediately upon publication will result in greatly intensified level of collecting and commercial trade in the callippe silverspot butterfly and Behren's silverspot butterfly. Because of the immediate threat posed by these ongoing activities, the Service finds that good cause exists for this rule to take effect immediately upon publication in accordance with 5 U.S.C. 553(d)(3).

The Alameda whipsnake does not appear to be particularly popular among reptile collectors; however, Federal listing could raise the value of the animals within reptilian trade markets and increase the threat of unauthorized collection above current levels (K. McCloud, U.S. Fish and Wildlife Service, Law Enforcement Division, pers. comm., 1994 and 1996). Even limited interest in the species among reptile collectors could pose a serious threat to smaller populations of the snake.

#### *C. Disease or Predation*

It appears that predation or disease do not pose a significant threat to the callippe silverspot butterfly or Behren's silverspot butterfly. The potential impact of disease on the Alameda whipsnake is unknown.

A number of native and exotic mammals and birds are known or likely to be predators of the Alameda whipsnake including the California kingsnake (*Lampropeltis getula californiae*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginianus*), coyote (*Canis latrans*), gray fox (*Vulpes cinereoargenteus*), and hawk (*Buteo* species). Urbanization can lead to increased numbers and access to habitat by native predators, leading to increased levels of predation on native fauna (Goodrich and Buskirk 1995). The recent introduction of the red fox (*Vulpes vulpes*), a species not native to this region of the State, poses an additional threat to the Alameda whipsnake. In situations where Alameda whipsnake habitat has become fragmented, isolated, and otherwise degraded by human activities, increased predatory pressure may become excessive, especially where alien species, such as rats (*Rattus* species), feral pigs (*Sus scrofa*), and feral and domestic cats (*Felis domestica*) and dogs (*Canis familiaris*) are introduced. These additional threats become particularly acute where urban development immediately abuts Alameda whipsnake habitat. A growing movement to maintain feral cats in parklands is an additional potential

threats from predation on wildlife (Coleman *et al.* 1997, Roberto 1995). The EBRPD is currently facing public pressure to allow private individuals to maintain feral cats on park lands (DeVecchio 1997). Although the actual impact of predation on Alameda whipsnakes under such situations has not been studied, feral cats are known to prey on reptiles, including yellow racers (Hubbs 1951), a fast, diurnal snake closely related to the Alameda whipsnake (Stebbins 1985). Predation pressure on Alameda whipsnakes may increase from maintained colonies of feral cats in Alameda whipsnake habitat.

#### D. The Inadequacy of Existing Regulatory Mechanisms

The callippe silverspot butterfly and Behren's silverspot butterfly are not specifically protected under any Federal, State or local law. The California Endangered Species Act (CESA) does not provide protection to insects (sections 2062, 2067 and 2068, Fish and Game Code). Although the San Bruno Mountain HCP provides protection from habitat destruction, butterfly collectors have been observed on San Bruno Mountain (S. Stern, *in litt.*, June 21, 1994) and unauthorized collection remains an ongoing threat. The extent of illegal trade in these and other butterfly species and the potential threat poaching poses to small populations is discussed in detail under factor B above.

The California Environmental Quality Act (CEQA) requires a full public disclosure of the potential environmental impact of proposed projects. The public agency with primary authority or jurisdiction over the project is designated as the lead agency and is responsible for conducting a review of the project and consulting with other agencies concerned with resources affected by the project. Section 15065 of the CEQA guidelines requires a finding of significance if a project has the potential to "reduce the number or restrict the range of a rare or endangered plant or animal." Species that are eligible for listing as rare, threatened, or endangered but are not so listed are given the same protection as those species that are officially listed with the State. Once significant impacts are identified, the lead agency has the option to require mitigation for effects through changes in the project or to decide that overriding considerations make mitigation infeasible. In the latter case, projects may be approved that cause significant environmental damage, such as destruction of

endangered species. Protection of listed species through CEQA is, therefore, at the discretion of the lead agency. The CEQA provides that, when overriding social and economic considerations can be demonstrated, project proposals may go forward, even in cases where the continued existence of the species may be jeopardized, or where adverse impacts are not mitigated to the point of insignificance. In addition, proposed revisions to CEQA guidelines, if made final, may weaken protections for threatened, endangered, and other sensitive species.

The CEQA and CESA afford the Alameda whipsnake some conservation benefits. The animal was listed as a threatened species by the State of California in 1971 (CDFG 1987). Although these State laws provide a measure of protection to the species, resulting in the formulation of mitigation measures to reduce or offset impacts for projects proposed in certain areas of Alameda whipsnake habitat, these laws are not adequate to protect the species in all cases. Further, only State, and not Federal, agencies are required to consult under CESA. In response to a comment on the proposed rule, the Service mapped Alameda whipsnake habitat that was extant in 1970 and identified areas where conversion and encroachment into suitable habitat has occurred since the State listed the Alameda whipsnake as threatened in 1971. Based upon this analysis, the Service has determined that approximately 25 projects in Alameda County, and approximately 41 projects in Contra Costa County, either converted or encroached upon suitable habitat from 1970 to 1996. The extent of conversion and encroachment ranged from approximately 2 to 5 ac to approximately 20 to 50 ac for larger projects. Although some of these projects were required to set aside and preserve suitable habitat for the Alameda whipsnake as open space or as mitigation for habitat losses associated with the project, many of these preserved areas remain threatened by fire suppression practices and catastrophic wildfire for the reasons identified and discussed in factor E below.

With appropriate management, areas of open space managed by the EBRPD, East Bay Municipal Utilities District (EBMUD), and Mount Diablo State Park, conservation strategies for Alameda whipsnake may be developed. Although these public lands include substantial areas occupied by the whipsnake, the quality of the habitat continues to decline because of surrounding urban encroachment. Urban encroachment

also exacerbates the habitat fragmentation problems, and greatly restricts the ability of these agencies to conduct effective fire management practices that have the potential to sustain suitable habitat for the Alameda whipsnake and prevent catastrophic wildfires.

#### E. Other Natural or Man-Made Factors Affecting Their Continued Existence

The use of insecticides would threaten the callippe silverspot butterfly and the Behren's silverspot butterfly if use occurred in proximity to occupied habitat. Silverspot butterfly larvae are extremely sensitive to pesticides, and even the accumulation of runoff in the soil after spraying has proven lethal to the larvae of members of the genus *Speyeria* (Mattoon *et al.* 1971). However, the Service is not aware of plans to apply insecticides or pesticides on or near the habitat occupied by either of these two species.

Livestock grazing could threaten the two butterfly species if it occurs at harmful levels, such that the vegetation is overgrazed and the foodplants and nectar sources of these butterflies are eliminated or greatly reduced in abundance. Grazing animals can also trample the larval foodplants and adult nectar sources. Significant reduction or loss of these food sources could threaten the population viability of these butterflies. However, some livestock grazing could keep other plants from outcompeting the butterflies' host plants.

McGinnis (1992) has suggested that grazing has impacted the habitat of the Alameda whipsnake in many areas east of the Coast Range. Livestock grazing that significantly reduces or eliminates shrub and grass cover can be detrimental to this snake. Many snake species, including the Alameda whipsnake, avoid such open areas because of the increased danger from predators and the lack of prey (McGinnis 1992).

The invasion of California's native grassland and coastal prairie by alien plants has adversely affected native flora and fauna. Numerous non-native species have invaded these plant communities (Heady 1988, Heady *et al.* 1988). Introduced alien plants, such as iceplant (*Carprobrotus* sp.), gum trees (*Eucalyptus* spp.), and gorse (*Ulex europaeus*), often outcompete and supplant native vegetation. In the absence of control and eradication programs, invasive alien plants may eliminate the remaining native plants, including the host plants of Behren's and callippe silverspot butterflies. Adequate levels of *Viola* species are

especially critical for the long term survival of populations of these butterflies (S. Mattoon, *in litt.*, August 4, 1989, and November 22, 1992). Non-native plants may also replace native vegetation in habitat for the Alameda whipsnake, potentially degrading the habitat and reducing the prey base. Radiotelemetry data indicate that Alameda whipsnakes tend to avoid dense stands of eucalyptus (Swaim 1994).

Periodic fires can be an important factor in maintaining the grassland and coastal prairie habitat of the callippe silverspot butterfly and the Behren's silverspot butterfly. Without fire, succession will eliminate the foodplants of the larvae of the two butterflies (Orsak 1980, Hammond and McCorkle 1984). Periodic cool, fast-moving fires appear important for the maintenance of the habitat of these two species. Dead grass and other vegetation from previous years may not decay quickly enough and may gradually accumulate to form a thick layer of thatch that smothers violets. The larvae of the silverspot butterflies may survive fires that move rapidly through grassland habitats, whereas hotter, slow-moving brush and woodland fires may kill them (Orsak 1980, Hammond and McCorkle 1984). In addition, under windy conditions, fast-moving grassland fires burn in patches that leave "islands" of unburned habitat where any butterflies present are not harmed.

The Alameda whipsnake is threatened directly and indirectly by the effects of fire suppression. Fire suppression exacerbates the effects of wildfires through the buildup of fuel (underbrush and woody debris), creating conditions for slow-moving, hot fires as described above. The highest intensity fires occur in the summer and early fall when accumulated fuel is abundant and dry. During this period, hatchling and adult Alameda whipsnakes are aboveground (Swaim 1994), and populations are likely to sustain the heaviest losses from fires. The development of a closed scrub canopy also results in a buildup of flammable fuels over time (Parker 1987, Rundel 1987). Fire suppression has led to the encroachment of nonindigenous and ornamental trees into grassland habitats, further increasing flammable fuel loads in and around Alameda whipsnake habitat.

Fire suppression can alter the structure of snake habitat by allowing plants to establish a closed canopy (Parker 1987) that will tend to create relatively cool conditions. Alameda whipsnakes have a higher mean active body temperature (33.4 degrees centigrade) and a higher degree of body

temperature stability (stenothermy) than has been documented in any other species of snake under natural conditions (Swaim 1994). Alameda whipsnakes apparently can maintain this high, stable body temperature by using open and partially open and/or low growing shrub communities that provide cover from predators while providing a mosaic of sunny and shady areas between which Alameda whipsnakes can move to regulate their body temperatures (Swaim 1994). Tall, shaded stands of vegetation, such as poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), or other vegetation may not provide the optimum temperature gradient for Alameda whipsnakes. Survey data show that Alameda whipsnakes are less likely to be found where these plant species create a closed canopy (Swaim 1994).

In addition, many of the native coastal scrub and chaparral plant species require periodic fires to stimulate new sprouting, seedling recruitment, and seed dispersal (Parker 1987; Keeley 1987, 1992). The natural fire frequency necessary to provide this stimulus in this habitat type is debated by scientists but ranges from 10 to 30 years (Keeley and Keeley 1987, Rundel 1987). Therefore, depending on the rate of fuel accumulation, prescribed burns can be conducted in areas where fires have been suppressed with a frequency of 10 to 30 years (J. Ferreira, CDPR, pers. comm. 1996).

The California Department of Forestry and Fire Protection (CDFFP) has primary authority for wildfire management in the State of California. Where joint jurisdiction exists, such as with regional or State park lands, a memorandum of understanding (MOU) is often developed. Through these MOUs, consideration of cultural, esthetic, and natural resources, can be addressed during planning and implementation of wildfire management. However, CDFFP has the final decision on wildfire management. The policy of the CDFFP for unprescribed fires, such as those resulting from lightning strikes, is to put them out immediately (B. Harrington, CDFFP, pers. comm. 1996). Similarly, while CDFFP is engaging in some prescribed burn programs, they remain hesitant to fully endorse prescribed burning, especially where there is an urban-parkland interface (CDFFP 1989; J. Di Donato, EBRPD, pers. comm. 1996).

The CDPR has management responsibilities for Mount Diablo State Park, where a considerable portion of the suitable whipsnake habitat occurs. Residential development has occurred

around most of the perimeter of the Park (J. Ferreira, pers. comm. 1996). The urban-parkland interface has necessitated that CDPR, with CDFFP, develop and implement a wildfire management plan and program. According to a MOU with CDPR, the CDFFP is the designated lead agency on fire management in Mount Diablo State Park and, therefore, has the final decision on how to manage each fire on CDPR lands (CDPR and CDFFP 1995). The CDPR drafted the *Mount Diablo Wildfire Management Plan* for the Park in 1987. This plan originally sought to reduce the high levels of livestock grazing on parklands to an "interpretive level" to manage more successfully for wildlife values (J. Ferreira, pers. comm. 1996). Local ranchers who grazed cattle on or adjacent to parklands were opposed to this plan and gained the support of local fire agencies to continue grazing because grazing was seen as a form of fire management (J. Ferreira, pers. comm. 1996).

In 1995, grazing pressure was significantly reduced and CDPR took a new approach in fire management planning by revising the *Mount Diablo Wildfire Management Plan*. The revised plan was developed in coordination with CDFFP and outlines presuppression, suppression, and fire management programs (CDPR and CDFFP 1995). These programs identify areas for prescribed burns, fire breaks to be maintained, and unique cultural resources, rare and endangered plants, and structures. Rare and endangered animal species (including the Alameda whipsnake) are not specifically identified in the plan. The ultimate decision on "initial attack" of any given fire occurrence still lies with CDFFP, which generally prefers to suppress fires on Mount Diablo. In addition, CDFFP has been concerned about conducting prescribed burns due to the proximity of the urban-parkland interface (J. Ferreira, pers. comm., 1996).

Encroaching urban development has necessitated the implementation of rigorous fire suppression practices in and around suitable habitat areas for the Alameda whipsnake by land management agencies to protect people and property. The EBRPD guidelines state that opportunities for prescribed burning on their lands is limited because of the urban-parkland interface and the risk of the fire escaping control lines (EBRPD 1992). Another obstacle the regional climatic conditions required to conduct prescribed burning safely. Although the EBRPD has developed prescribed burning plans and strategies to manage their lands, implementation of these plans has been

hindered by the close proximity of adjacent residential and commercial development areas (J. Di Donato, pers. comm., 1996). Although the EBRPD is in the process of updating their prescribed burn program in response to the 1991 Oakland Hills firestorm, the public does not fully endorse prescribed burning (EBRPD 1995).

The breeding of closely related individuals can cause genetic problems in small populations, particularly the expression of deleterious genes (known as inbreeding depression). Both the callippe silverspot butterfly and the Behren's silverspot butterfly exist only as very small, isolated populations (S. Mattoon, *in litt.*, August 4, 1989, and November 22, 1992). Alameda whipsnakes tend to be relatively rare even in suitable habitat as is indicated by trapping studies that show low capture rates and relatively high recapture rates (about 3 captures, 1 recapture per 1,000 trap days) (Swaim 1994). Individuals and populations possessing deleterious genetic material are less able to adapt to changes in environmental conditions, even relatively minor changes. Further, small populations are vulnerable to the effects of genetic drift (the loss of genetic variability). This phenomenon also reduces the ability of individuals and populations to successfully respond to environmental stresses. Overall, these factors influence the survivability of smaller, genetically isolated populations of each of the three species listed herein.

The callippe silverspot butterfly, Behren's silverspot butterfly, and the Alameda whipsnake are all vulnerable to the effects of habitat fragmentation. Subdivision of natural land into smaller blocks of suitable habitat is often the result of human activities such as urban development, road construction, fire management policies, and inappropriate livestock grazing practices. Further reduction of population size and genetic interchange among populations through isolation, genetic drift, and inbreeding depression, may result in less vigorous and adaptable populations of these three species listed herein. Small, isolated populations are vulnerable to extinction from random fluctuations in population size or variations in population characteristics (e.g., sex ratios) caused by annual weather patterns, food availability, and other factors. Because most of the populations of these species are isolated from other conspecific populations, natural recolonization from other populations is unlikely or impossible, and the vulnerability of each population to natural events is high.

An additional threat to the San Bruno Mountain population of the callippe silverspot butterfly is the high level of dust from quarry operations in the vicinity. Adult and early stages of the taxon may be prone to injury and mortality from dust because their respiratory apparatus (spiracles) are easily clogged.

The Service has carefully assessed the best scientific and commercial information regarding past, present, and future threats faced by these species in determining this final rule. Based on this evaluation, the preferred action is to list the callippe silverspot butterfly and Behren's silverspot butterfly as endangered species, and the Alameda whipsnake as a threatened species. The current range restrictions of these species make them increasingly vulnerable to threats described above under factors A through E.

Urban development threatens both the callippe silverspot butterfly and Behren's silverspot butterfly. One of the two known extant colonies of the callippe silverspot butterfly is imminently imperiled, and both colonies are threatened by overcollection. The single known population of Behren's silverspot butterfly is similarly threatened. Available habitat and population levels are depleted to the extent that these butterflies are near the brink of extinction. Because the callippe silverspot butterfly and Behren's silverspot butterfly are in danger of extinction throughout all or a significant portion of their ranges, these species fit the definition of endangered as defined by the Act.

All five remaining populations of the Alameda whipsnake are threatened by a variety of factors. Each of these populations consist of several to numerous subpopulations with varying degrees of connectivity between them. In the western portion of the species' range, the Tilden-Briones population is threatened by a high potential for catastrophic wildfire and urban development. However, the remaining habitat, regional parklands, and municipal watersheds in this area overlap to the extent that a regional preserve may be possible. The Oakland-Las Trampas population is threatened by a high potential for catastrophic wildfire and the effects of habitat fragmentation and urban development. The Hayward-Pleasanton Ridge population is the most susceptible to extirpation. This population is scattered in distribution and is, therefore, more vulnerable to the effects of development and subsequent habitat fragmentation. In the eastern portion of the species'

range, the Mount Diablo-Black Hills population is threatened by a high potential for catastrophic wildfire, development and its associated impacts, and inappropriate grazing practices. Because of the location of public lands and the potential for improved fire and grazing management on parklands, this population is a good candidate for recovery, if urbanization threats can be controlled. The Sunol-Cedar Mountain population is threatened by development and inappropriate grazing practices. Overall, the Oakland-Las Trampas and Hayward-Pleasanton Ridge populations are the most immediately imperiled with habitat fragmentation becoming prevalent enough to compromise their long-term viability.

In the proposed rule (59 FR 5377), the Service proposed to list the Alameda whipsnake as endangered based primarily on the threats of urbanization and invasive alien vegetation. The Service has reevaluated the available information, including information provided during the public comment period, regarding threats to the species. Urbanization and the negative effects of structural changes in both the native and alien vegetative component of whipsnake habitat continue to threaten the survival of the Alameda whipsnake. However, these threats are not now of sufficient magnitude to create a danger of extinction throughout all, or a significant portion, of the range of the species. The Service now concludes that the failure to implement appropriate fire management practices on public lands to sustain suitable Alameda whipsnake habitat, coupled with the rate of loss of suitable habitat on private lands, make it likely that the Alameda whipsnake will become in danger of extinction throughout all, or a significant portion, of its range in the foreseeable future. Because the Alameda whipsnake is likely to become an endangered species within the foreseeable future, this species fits the definition of threatened as defined by the Act.

#### Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) the specific areas within the geographical area occupied by a 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) that may require special management considerations or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use

of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Service regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform required analyses of the impacts of the designation is lacking or if the biological needs of the species are not sufficiently known to permit identification of an area as critical habitat. Section 4(b)(2) of the Act requires the Service to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the conservation benefits, unless to do such would result in the extinction of the species. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

#### *The Callippe Silverspot and Behren's Silverspot Butterflies*

As discussed under factor B in the "Summary of Factors Affecting the Species" section above, an extensive international commercial trade has been documented to exist for butterflies in general (Collins and Morris 1985) and for threatened or endangered species of butterflies in particular, which are accorded higher value because of the formal recognition of their rarity (*United States v. Richard J. Skalski, Thomas W. Kral, and Marc L. Grinnell*, Case No. CR932013, 1993). This trade includes several species of the genus *Speyeria*, including the callippe silverspot butterfly which was illegally collected after the species was proposed for listing under the Act, the Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*), and the Oregon silverspot butterfly (*S. zerene hippolyta*), the last two of which are listed federally subspecies that are similar in appearance to the Behren's silverspot butterfly (*S. zerene behrensi*) included

in this rule (Howe 1975, Hammond 1980, McCorkle and Hammond 1988). Illegal collecting has been observed at one of the two remaining sites for the callippe silverspot butterfly (*S. Stern, in litt.*, 1994).

The Service is also aware of reports that Behren's silverspot butterfly is actively sought by collectors. The fact that this species is not yet a commodity in illegal trade is likely attributable to the lack of specific knowledge of the location of its sole remaining population. Trade in these specimens is not limited to the occasional adult butterfly, but can include dozens of individuals and hundreds of larvae (*United States v. Richard J. Skalski, Thomas W. Kral, and Marc L. Grinnell*, Case No. CR932013, 1993). The effects that even limited collecting can have on small populations are discussed in detail under factor B in the "Summary of Factors Affecting the Species" section above. Because of the increased value of listed species, the illicit commercial trade in the callippe silverspot butterfly and Behren's silverspot butterfly would be likely to increase upon listing. Although the San Bruno Mountain locality is purportedly known to collectors (see issue 3 under the "Summary of Comments and Recommendations" section above), this is a large area (340 ha (850 ac)) and precise maps and descriptions of critical habitat, such as those which would appear in the **Federal Register** if critical habitat was designated, are not now available to the general public. The specific localities of the two other localities of the callippe or silverspot butterflies are not well known, but they are near roads or trails and could be easily accessed by the public if precise locality information is provided.

In addition, neither the callippe silverspot butterfly nor the Behren's silverspot butterfly would receive any benefit from the designation of critical habitat beyond that provided by listing. Critical habitat only applies to activities on Federal lands and activities on private lands involving Federal authorization or funding. All known populations of these species occur on non-Federal land. The only Federal land within the historical range of Behren's silverspot butterfly is a small parcel at the U.S. Coast Guard lighthouse at Point Arena. Although this installation is in close proximity to the only known site for this species, no specific records document any historical occurrence at this site. The habitat at this site, and elsewhere within the historical range of the species, is presumed to be currently unsuitable for the species. No activity involving a Federal action currently

occurs on the sole site where the species remains. Even if a future Federal project were to occur in the area, it would require consultation with the Service pursuant to section 7 of the Act before it could be implemented. Because this butterfly exists only as a single, small population, any future activity involving a Federal action that would adversely modify critical habitat, that is, would appreciably diminish the value of the critical habitat for the survival and recovery of the species, would also likely jeopardize the species' continued existence.

Colonies of the callippe silverspot butterfly are known only to exist at two sites, both of which are privately owned. The callippe silverspot butterfly was considered during the formulation of the San Bruno Mountain HCP under the provisions of a section 10(a)(1)(B) of the Act. This HCP, in which the callippe silverspot butterfly was designated as a species of concern, permanently protects approximately 92 percent of its habitat on San Bruno Mountain. The HCP also includes management activities, funded by development projects, that benefit the butterfly including annual monitoring of the colonies on the site (*V. Harris, in litt.*, 1996). Habitat for the other known population is partially protected in a city park in Alameda County. No Federal actions, authorizations, or licensing currently occurs on this site. Although there are scattered Federal landholdings throughout the historical range of the callippe silverspot butterfly, there are no historical collections of this species from any Federal lands. Because of the extensive urbanization within its historical range, no suitable habitat remains for the species other than at the two sites at which it is currently known to persist (Orsak 1980; Steiner 1990; *S. Mattoon, in litt.*, 1992). Federal agency involvement, therefore, is not likely to occur on either of the two sites at which the callippe silverspot butterfly persists. Even if a future Federal project were to occur at either site, it would require consultation with the Service pursuant to section 7 of the Act before it could be implemented. Because only two small populations of this butterfly remain, any future activity involving a Federal action that would adversely modify critical habitat, that is, would appreciably diminish the value of the critical habitat for the survival and recovery of the species, would also likely jeopardize the species' continued existence.

Critical habitat designation in areas outside of the currently occupied territory of the callippe silverspot butterfly also would serve no purpose

because these areas are highly urbanized and essentially have no practical value for the survival and recovery of the species. In addition, activities within these areas are very unlikely to involve a Federal action which would trigger section 7 consultation. Furthermore, in the unlikely event that an activity involving a Federal action is proposed in one of these areas, it is very unlikely that the Service would determine that the activity would appreciably diminish the value of the area for the survival and recovery of the species because these areas essentially have no such value to the species currently. Critical habitat designation in areas outside of the currently occupied territory of the Behren's silverspot butterfly also would serve little purpose because activities within these areas are very unlikely to involve a Federal action which would trigger section 7 consultation.

The Service finds, therefore, that designation of critical habitat for the callippe silverspot butterfly and the Behren's silverspot butterfly is not prudent because doing so would make these butterflies more vulnerable to incidents of collection further contributing to their decline.

Designation of critical habitat for the callippe silverspot butterfly and the Behren's silverspot butterfly is also not prudent because it would confer no benefit to the species beyond that provided by listing.

#### *Alameda Whipsnake*

As discussed earlier, the historical range of the whipsnake has been fragmented by urbanization into five populations, each of which is effectively isolated from the others. The core of each of these five populations is comprised of relatively large expanses of public, non-Federal lands, which comprise about 80 percent of known whipsnake habitat. Although these public lands are protected from development, other threats to the whipsnake remain, including the negative effects of fire suppression on the structure of whipsnake habitat, the indirect effects of urban development (e.g., increased recreational use of the public lands, increased predation by pets, etc.), and other factors discussed in the "Summary of Factors Affecting the Species" section above. The Service is not aware of any Federal lands within the range of the Alameda whipsnake, and activities involving a Federal action are not likely to occur on the public, non-Federal lands.

Private lands comprise the other 20 percent of known whipsnake habitat. There is a remote possibility of Federal agency involvement on these lands in

the form of insurance provided by the Department of Housing and Urban Development (HUD) for housing loans. Such actions within whipsnake habitat, however, are likely to be rare. In addition, urban development will only occur along the periphery of the core areas of whipsnake populations. Because of the need for an active fire management program in the form of prescribed burns to maintain the necessary habitat structure for the whipsnake, areas slated for development in this urban-wildland interface do not offer suitable long-term habitat potential for the whipsnake and, therefore, cannot be considered to be habitat essential to the conservation of the species nor habitat requiring special management considerations. Even if Federal involvement in the form of housing loans were to occur in these areas, it would require consultation with the Service pursuant to section 7 of the Act before it could be implemented. The potential for the involvement of other Federal agencies within the historical range of the Alameda whipsnake is discussed in the "Available Conservation Measures" section below.

Critical habitat designation outside of the areas where the Alameda whipsnake currently occurs also would serve no purpose because these areas are not essential for the survival and recovery of the species. The Service believes that sufficient occupied habitat remains which, if managed for greater benefits for the Alameda whipsnake, would ensure the survival and provide for the recovery of the species.

Any potential conservation benefit from designation of critical habitat for the Alameda whipsnake is undermined by the risk of overcollection. The demand for live reptiles as collectibles and exotic pets has increased rapidly in recent years and the high level of demand by reptile collectors often encourages smuggling of wild-caught specimens (U.S. Fish and Wildlife Service 1996). While the Alameda whipsnake has not been particularly popular among reptile collectors in the past, the act of listing increases the attractiveness and value of listed entities to collectors, thereby potentially increasing the threat of unauthorized collection (K. McCloud, pers. comm. 1994, 1996). The identification of localities of the whipsnake through designation of critical habitat would exacerbate the threat of overcollection because many areas in which the whipsnake occurs are readily accessible by road or public trail. The effects that even limited collecting can have on small populations are discussed in

detail under factor B in the "Summary of Factors Affecting the Species" section above. Because of the likelihood for an increase in the value of a species upon listing, any current illicit commercial trade in the Alameda whipsnake would likely increase with this listing.

Because of the expected rarity of Federal agency involvement and the low conservation value of lands on which Federal involvement is most likely to occur, the Service finds that critical habitat designation is not prudent for the Alameda whipsnake due to lack of any significant benefit beyond that conferred by listing. Moreover, the publication of precise maps and descriptions of critical habitat in the **Federal Register** would make this snake more vulnerable to incidents of collection further contributing to its decline. Any benefit which might be derived from the designation of critical habitat for the Alameda whipsnake is outweighed by the increased threat of collection.

#### **Available Conservation Measures**

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires recovery actions be carried out for all listed species. The protection required of Federal agencies and prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

As noted previously, HUD may insure housing loans in areas that presently support the Alameda whipsnake. Such actions are likely to be rare but these loans would be subject to review by the Service under section 7 of the Act.

Other Federal agencies that possibly could be affected if these animals are listed would include the Army Corps of Engineers and the Department of Transportation (Federal Highways Administration). Both agencies cooperate in projects within the historical range of the Alameda whipsnake. The projects, however, are typically confined to waterways and highways both of which occur in low-lying areas that no longer provide suitable habitat for the whipsnake. Such areas are surrounded by intense urban development and are, in combination with the urban areas, the primary landscape components that have already effectively isolated the five core populations of the whipsnake. Involvement by the Army Corps of Engineers or the Federal Highway Administration in the core areas that comprise the remaining habitat for the whipsnake is highly unlikely since these areas are comprised primarily of steep mountainous terrain where projects that impact regulated wetlands, flood control projects, and highway construction projects rarely occur. No populations of the callippe silverspot butterfly, Behren's silverspot butterfly, or Alameda whipsnake are known to occur on property owned by the Federal government.

One of the two known extant populations of the callippe silverspot butterfly is protected by the San Bruno Mountain HCP (USFWS permit number PRT 2-9818). In 1982, a Section 10(a) incidental take permit was issued to the cities of Brisbane, Daly City, South San Francisco, and the County of San Mateo, for the endangered mission blue butterfly, San Bruno elfin butterfly, and San Francisco garter snake. The permit allows for the loss of animals and habitat through urban development of approximately 344 ha (850 ac) of San Bruno Mountain. The HCP permanently protects about 1,114 ha (2,752 ac) of natural habitat at this site. The conference report on the 1982 amendments to the Act indicates that Congress intended HCPs to encompass both listed and unlisted species, especially unlisted species that may later require protection. Although the callippe silverspot butterfly was not included as a "covered" species in the Section 10(a) permit, the HCP included specific provisions for the butterfly in the event it did become listed by the Service. These provisions protect 92 percent of the species' habitat at the site through various mechanisms (such as landowner obligations for land dedications, open space set-asides, mitigation measures, and habitat

enhancement), implement annual monitoring of its population, and allow for adaptive management to conserve the species. However, no specific provisions were included in the HCP to protect the callippe silverspot butterfly from poachers.

The listing of the callippe silverspot butterfly, Behren's silverspot butterfly, and the Alameda whipsnake will also bring sections 5 and 6 of the Act into effect. Section 5 authorizes acquisition of lands by the Secretary of the Interior (and Secretary of Agriculture in certain cases) for the purposes of conserving endangered and threatened species. Pursuant to section 6, the Service would be able to grant funds to affected states for management actions aiding in protection and recovery of these animals.

Listing the callippe silverspot butterfly and the Behren's silverspot butterfly as endangered and the Alameda whipsnake as threatened provides for the development of recovery plans for them. Such plans will bring together State and Federal efforts for conservation of the animals. The plans will establish a framework for agencies to coordinate activities and cooperate with each other in conservation efforts. The plans will set recovery priorities and estimate costs of various tasks necessary to accomplish them. They also will describe site-specific management actions necessary to achieve conservation of the species.

Listing of the Alameda whipsnake will likely result in the increased ability of public land agencies to promote management plans that address the need to manage for Alameda whipsnakes, including, but not limited to, increased ability to conduct prescribed burns, manage predators, control feral pigs and other feral animals, regulate recreational use, and develop educational programs for the benefit of the Alameda whipsnake.

The Act and implementing regulations found at 50 CFR 17.21 for endangered species and 17.31 for threatened species set forth a series of prohibitions and exceptions that apply to all endangered wildlife and to threatened wildlife not covered by a special rule. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any such species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that was illegally taken. Certain exceptions

can apply to agents of the Service and State conservation agencies.

It is the policy of the Service published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify, to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is increase public awareness of the effect of this listing on proposed and ongoing activities within a species' range.

With respect to the callippe silverspot butterfly or Behren's silverspot butterfly, the Service believes that neither observing the species (without capture) nor light to moderate grazing of its habitat by livestock would likely result in a violation of section 9.

With respect to the callippe silverspot butterfly or Behren's silverspot butterfly, the following actions likely would be considered a violation of section 9:

- (1) Capture or collection of adults or any other life history stages;
- (2) Collection, damage, or destruction of foodplants (*Viola* species) or other nectar sources within the species range; and,
- (3) Destruction of the species' occupied habitat by actions including, but not limited to, road, street or highway construction; subdivision construction; application of herbicides or other chemical agents; brush removal; or off-road vehicle use.

With respect to the Alameda whipsnakes, the following actions likely would be considered a violation of section 9:

- (1) Unauthorized collecting or handling of whipsnakes;
- (2) Destruction or degradation of occupied whipsnake habitat by actions including, but not limited to, road construction, road widening, subdivision construction, brush removal, or off-road vehicle use; and,
- (3) Destruction or degradation of occupied whipsnake habitat by livestock grazing if conducted following notification by the Service that such grazing constitutes "take" of whipsnakes.

Permits may be issued to carry out otherwise prohibited activities involving endangered and threatened animal species under certain circumstances. Regulations governing permits are found in 50 CFR 17.22, 17.23, and 17.32. For endangered species, such permits are available for scientific purposes, to enhance the propagation or survival of the species, to alleviate economic hardship in certain circumstances, and/or for incidental take in connection with otherwise

lawful activities. For threatened species there are also permits for zoological exhibition, educational purposes or other purposes consistent with the purposes of the Act. Further information regarding regulations and requirements for permits may be obtained from the U.S. Fish and Wildlife Service, Endangered Species Permits, 911 N.E. 11th Avenue, Portland, Oregon 97232-4181 (telephone 503/231-2063, facsimile 503/231-6243).

**National Environmental Policy Act**

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

**Required Determinations**

The Service has examined this regulation under the Paperwork Reduction Act of 1995 and found it to contain no information collection requirements.

**References Cited**

A complete list of all references cited in this rule are available upon request from the Sacramento Field Office (see **ADDRESSES** section).

**Authors**

The primary authors of this final rule are Mike Westphal, Sheila Larsen and Diane Windham, Sacramento Field Office (see **ADDRESSES** section).

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

**Proposed Regulations Promulgation**

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of

Federal Regulations, is amended as set forth below:

**PART 17—[AMENDED]**

1. The authority citation for Part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.11(h) by adding the following in alphabetical order under REPTILES to the List of Endangered and Threatened Wildlife:

3. Amend § 17.11(h) by adding the following in alphabetical order under INSECTS to the List of Endangered and Threatened Wildlife:

**§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
REPTILES							
* Whipsnake, Alameda (=striped racer, Alameda).	* <i>Masticophis lateralis euryxanthus.</i>	* U.S.A. (CA) .....	* NA .....	* T	* 628	* NA	* NA
INSECTS							
* Butterfly, Behren's silverspot.	* <i>Speyeria zerene behrensii.</i>	* U.S.A. (CA) .....	* NA .....	* E	* 628	* NA	* NA
* Butterfly, callippe silverspot.	* <i>Speyeria callippe callippe.</i>	* U.S.A. (CA) .....	* NA .....	* E	* 628	* NA	* NA
* 	* 	* 	* 	* 	* 	* 	* 

Dated: November 18, 1997.  
**Jamie Rappaport Clark,**  
 Director, U.S. Fish and Wildlife Service.  
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