DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS–R8–ES–2012–0069; 4500030114]

RIN 1018–AY52

Endangered and Threatened Wildlife and Plants; Proposed Listing of the Mount Charleston Blue Butterfly as Endangered and Proposed Listing of Five Blue Butterflies as Threatened Due to Similarity of Appearance

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, propose to list the Mount Charleston blue butterfly (*Plebejus shasta charlestonensis*) as an endangered species under the Endangered Species Act of 1973, as amended (Act). We also propose to list the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*) as threatened due to similarity of appearance to the Mount Charleston blue, with a special rule pursuant to section 4(d) of the Act. We solicit additional data, information, and comments that may assist us in making a final decision on this proposed action. In addition, we propose to make nonsubstantive, administrative changes to a previously published listing and special rule regarding five other butterflies to correct some inadvertent errors and to make these two special rules more consistent.

DATES: We will accept comments received or postmarked on or before November 26, 2012. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES** section, below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in the **ADDRESSES** section by November 13, 2012.

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: *http://www.regulations.gov*. In the Search box, enter Docket No. FWS–R8–ES–2012–0069, which is the docket number for this rulemaking. You may submit a comment by clicking on ''Comment Now!''

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2012–0069, Division of Policy and Directives Management, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042–PDM, Arlington, VA 22203.

We request that you send comments only by the methods described above. We will post all comments on *http://www.regulations.gov*. This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

FOR FURTHER INFORMATION CONTACT: Edward D. Koch, Field Supervisor, U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, 1340 Financial Blvd., Suite 234, Reno, Nevada 89502, by telephone 775–861–6300 or by facsimile 775–861–6301. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

This document consists of: (1) A proposed rule to list the Mount (Mt.) Charleston blue butterfly (*Plebejus shasta charlestonensis*) (formerly in genus *Icaricia*) as an endangered species and a proposed rule to list the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*) as threatened due to similarity of appearance to the Mt. Charleston blue butterfly; (2) a prudency determination regarding critical habitat designation for the Mt. Charleston blue butterfly; and (3) nonsubstantive, administrative corrections to a previously published listing of the Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) and special rule regarding the cassius blue butterfly (*Leptotes cassius theonus*), ceraunus blue butterfly (*Hemiargus ceraunus antibubastus*), and nickerbean blue butterfly (*Cyclargus ammon*).

Why we need to publish a rule. Under the Endangered Species Act (Act), a species may warrant protection through listing if it is an endangered or threatened species throughout all or a significant portion of its range. If a species is determined to be an endangered or threatened species throughout all or a significant portion of its range, we are required to promptly publish a proposal in the **Federal Register** and make a determination on our proposal within one year. Critical habitat shall be designated, to the maximum extent prudent and determinable, for any species determined to be an endangered or threatened species under the Act. Listing a species as an endangered or threatened species and designations and revisions of critical habitat can only be completed by issuing a rule.

This rule proposes endangered status for the Mt. Charleston blue butterfly and proposes threatened status for the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and two Spring Mountains dark blue butterflies based on similarity of appearance to the Mt. Charleston blue butterfly. This rule also finds that designation of critical habitat for the Mt. Charleston blue butterfly is not prudent at this time.

The basis for our action. Under the Act, we can determine that a species is an endangered or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence. We have determined that the Mt. Charleston blue butterfly is threatened by:

- Habitat loss and degradation due to fire suppression and succession, implementation of recreation development projects and fuels reduction projects, and nonnative plant species (Factor A);
- Collection (Factor B);
- Inadequate regulatory mechanisms (Factor D); and
- Drought and extreme precipitation events, which are predicted to increase as a result of climate change (Factor E).

We have additionally determined that five species of blue butterflies warrant listing based on similarity of appearance to the Mt. Charleston blue butterfly:

- Lupine blue butterfly;
- Reakirt's blue butterfly;
- Spring Mountains icarioides blue butterfly; and
- Two Spring Mountains dark blue butterflies.

Further, we have determined that it is not prudent to designate critical habitat for the Mt. Charleston blue butterfly because the benefits are clearly outweighed by the expected increase in threats associated with a critical habitat designation:

- Publication of maps and descriptions of specific critical habitat

areas will pinpoint populations more precisely than does the rule;

• Publishing the exact locations of the butterfly's habitat will further facilitate unauthorized collection and trade. Its rarity makes the Mt. Charleston blue butterfly extremely attractive to collectors; and

• Purposeful or inadvertent activities have already damaged some habitat. Many locations are difficult for law enforcement personnel to regularly access and patrol.

We will seek peer review. We are seeking comments from knowledgeable individuals with scientific expertise to review our analysis of the best available science and application of that science and to provide any additional scientific information to improve this proposed rule. Because we will consider all comments and information received during the comment period, our final determinations may differ from this proposal.

This document consists of: (1) A proposed rule to list the Mount (Mt.) Charleston blue butterfly (*Plebejus shasta charlestonensis*) (formerly in genus *Icaricia*) as an endangered species and a proposed rule to list the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*) as threatened due to similarity of appearance to the Mt. Charleston blue butterfly; and (2) a prudency determination regarding critical habitat designation for the Mt. Charleston blue butterfly.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from the public, other concerned governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat or both.

(2) The factors that are the basis for making a listing determination for a species under section 4(a) of the Act (16 U.S.C. 1531 *et seq.*), which are:

(a) The present or threatened destruction, modification, or curtailment of its habitat or range;

(b) Overutilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation;

(d) The inadequacy of existing regulatory mechanisms; or

(e) Other natural or manmade factors affecting its continued existence.

(3) Biological, commercial and noncommercial trade or collection, or other relevant data concerning any threats (or lack thereof) to this species and regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

(5) Any information on the biological or ecological requirements of the species, and ongoing conservation measures for the species and its habitat.

(6) The reasons why we should or should not designate habitat as ''critical habitat'' under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether that increase in threats outweighs the benefit of designation such that the designation of critical habitat is not prudent.

(7) Specific information on:

(a) The amount and distribution of Mt. Charleston blue butterfly and its habitat;

(b) What may constitute ''physical or biological features essential to the conservation of the species,'' within the geographical range currently occupied by the species;

(c) Where these features are currently found;

(d) Whether any of these features may require special management considerations or protection;

(e) What areas, that were occupied at the time of listing (or are currently occupied) and that contain features essential to the conservation of the species, should be included in the designation and why; and

(f) What areas not occupied at the time of listing are essential for the conservation of the species and why.

(8) Land use designations and current or planned activities in the areas occupied by the species or potential habitat and their possible impacts to the Mt. Charleston blue butterfly.

(9) Information on the projected and reasonably likely impacts of climate change on the Mt. Charleston blue butterfly or its habitat.

(10) Threats to the Mt. Charleston blue butterfly from collection of or commercial trade involving the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*), due to the Mt. Charleston blue's similarity in appearance to these species.

(11) Effects of and necessity of establishing the proposed 4(d) special rule to establish prohibitions on collection of, or commercial trade involving, the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and two Spring Mountains dark blue butterflies.

(12) Any foreseeable economic, national security, or other relevant impacts that may result from designating any area that may be included in the final designation. We are particularly interested in any impacts on small entities, and the benefits of including or excluding areas from the proposed designation that are subject to these impacts.

(13) Whether our approach to designating critical habitat could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concerns and comments.

(14) The likelihood of adverse social reactions to the designation of critical habitat and how the consequences of such reactions, if likely to occur, would relate to the conservation and regulatory benefits of the proposed critical habitat designation.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is a threatened or endangered species must be made ''solely on the

basis of the best scientific and commercial data available.''

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We request that you send comments only by the methods described in the **ADDRESSES** section.

If you submit information via *http://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the Web site. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *http://www.regulations.gov.* Please include sufficient information with your comments to allow us to verify any scientific or commercial information you include.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Previous Federal Actions

In 1991 and 1994, the U.S. Fish and Wildlife Service (Service) included the Mt. Charleston blue butterfly in a compilation of taxa for review and potential addition to the Lists of Endangered and Threatened Wildlife and Plants (56 FR 58804, November 21, 1991; 59 FR 58982, November 15, 1994). The Mt. Charleston blue butterfly was formerly referred to as the Spring Mountains blue (butterfly) (56 FR 58804, November 21, 1991; 59 FR 58982, November 15, 1994), but this common name is no longer used to avoid confusion with other butterflies having similar common names. In both years, the Mt. Charleston blue butterfly was assigned to ''Category 2,'' meaning that a proposal to list was potentially appropriate, but adequate data on biological threats or vulnerabilities were not currently available. The trend for Mt. Charleston blue butterfly was described as ''declining'' in 1991 and 1994 (56 FR 58804; 59 FR 58982). These notices stressed that Category 2 species were not proposed for listing by the notice, nor were there any plans to list those Category 2 species unless supporting information became available.

In the February 28, 1996, Candidate Notice of Review (61 FR 7595), we adopted a single category of candidate defined as ''Those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded.'' In previous Candidate Notices of Review, species and subspecies matching this 1996 definition were known as Category 1 candidates for listing. Thus, the Service no longer considered Category 2 species and subspecies as candidates and did not include them in the 1996 or any subsequent Candidate Notices of Review. The decision to stop considering Category 2 species and subspecies as candidates was designed to reduce confusion about the status of these species and subspecies and to clarify that we no longer regarded these species and subspecies as candidates for listing.

On October 20, 2005, we received a petition dated October 20, 2005, from The Urban Wildlands Group, Inc., requesting that we emergency list the Mt. Charleston blue butterfly as an endangered or threatened species. In a letter to the petitioner dated April 20, 2006, we stated that our initial review did not indicate that an emergency situation existed, but that if conditions changed, an emergency rule could be developed. On May 30, 2007, we published a 90-day petition finding (72 FR 29933) in which we concluded that the petition provided substantial information indicating that listing of the Mt. Charleston blue butterfly may be warranted, and we initiated a status review. On April 26, 2010, CBD amended its complaint in *Center for Biological Diversity* v. *Salazar, U.S. Fish and Wildlife Service,* Case No.: 1:10–cv–230–PLF (D.D.C.), adding an allegation that the Service failed to issue its 12-month petition finding on the Mount Charleston blue butterfly within the mandatory statutory timeframe. On March 8, 2011, we published a 12-month finding (76 FR 12667) in which we concluded that listing the Mt. Charleston blue butterfly was warranted, but precluded by higher priority listing actions. On October 26, 2011, we listed the Mt. Charleston blue butterfly as a new candidate in the Candidate Notice of Review (76 FR 66370).

Endangered Species Status for Mt. Charleston Blue Butterfly

Background

It is our intent to discuss below only those topics directly relevant to the listing of the Mt. Charleston blue butterfly as an endangered species in this section of the proposed rule.

Taxonomy and Subspecies Description

The Mt. Charleston blue butterfly is a distinct subspecies of the wider ranging Shasta blue butterfly (*Plebejus shasta*), which is a member of the Lycaenidae family. Pelham (2008, pp. 25–26) recognized seven subspecies of Shasta blue: *P. s. shasta, P. s. calchas, P. s. pallidissima, P. s. minnehaha, P. s. charlestonensis, P. s. pitkinensis,* and *P. s. platazul* in ''A catalogue of the butterflies of the United States and Canada with a complete bibliography of the descriptive and systematic literature'' published in volume 40 of the Journal of Research on the Lepidoptera (2008, pp. 379–380). The Mt. Charleston blue butterfly is known only from the high elevations of the Spring Mountains, located approximately 25 miles (mi) (40 kilometers (km)) west of Las Vegas in Clark County, Nevada (Austin 1980, p. 20; Scott 1986, p. 410). The first mention of the Mt. Charleston blue butterfly as a unique taxon was in 1928 by Garth (p. 93), who recognized it as distinct from the species Shasta blue (Austin 1980, p. 20). Howe (in 1975, Plate 59) described specimens from the Spring Mountains as the *P. s. shasta* form *comstocki.* However, in 1976, Ferris (p. 14) placed the Mt. Charleston blue butterfly with the wider ranging Minnehaha blue subspecies. Finally, Austin asserted that Ferris had not included populations from the Sierra Nevada in his study, and in light of the geographic isolation and distinctiveness of the Shasta blue population in the Spring Mountains and the presence of at least three other well-defined races (subspecies) of butterflies endemic to the area, it was appropriate to name this population as the subspecies Mt. Charleston blue butterfly (*P. s. charlestonensis*) (Austin 1980, p. 20).

Our use of the genus name *Plebejus,* rather than the synonym *Icaricia,* reflects recent treatments of butterfly taxonomy (Opler and Warren 2003, p. 30; Pelham 2008, p. 265). The Integrated Taxonomic Information System (ITIS) recognizes the Mt. Charleston blue butterfly as a valid subspecies based on Austin (1980) (Retrieved April 2, 2012, from the Integrated Taxonomic Information System on-line database, *http://www.itis.gov*). The ITIS is hosted by the United States Geological Survey (USGS) Center for Biological Informatics (CBI) and is the result of a partnership of Federal agencies formed to satisfy their mutual needs for scientifically credible taxonomic information.

As a subspecies, the Mt. Charleston blue butterfly is similar to other Shasta blue butterflies, with a wingspan of 0.75 to 1 inch (in) (19 to 26 millimeters (mm)) (Opler 1999, p. 251). Males and females of Mt. Charleston blue are dimorphic (occurring in two distinct forms). The upperside of males is dark to dull iridescent blue, and females are brown with a blue overlay. The species has a discal black spot on the forewing and a row of submarginal black spots on the hindwing. The underside is gray, with a pattern of black spots, brown blotches, and pale wing veins to give it a mottled appearance. The underside of the hindwing has an inconspicuous band of submarginal metallic spots (Opler 1999, p. 251). Based on morphology, the Mt. Charleston blue butterfly is most closely related to the Great Basin populations of Minnehaha blue butterfly (Austin 1980, p. 23), and it can be distinguished from other Shasta blue butterfly subspecies by the presence of sharper and blacker postmedian spots on the underside of the hindwing (Scott 1986, p. 410).

The Mt. Charleston blue butterfly is similar in appearance to five other sympatric (occupying the same or overlapping geographic areas without interbreeding) butterflies that occur roughly in the same habitats: lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*). The lupine blue butterfly (also commonly referred to as the Acmon blue, Texas blue, or Southwestern blue butterfly) is the most similar to the Mt. Charleston blue butterfly (Boyd and Austin 1999, p. 44). The Mt. Charleston blue butterfly is distinguished from the lupine blue butterfly by a less broad and distinct orange band on the hindwing (Boyd and Austin, p. 44), and the postmedian spots on the underside of the hindwing are brown rather than black (Scott 1986, p. 410). The Reakirt's blue butterfly is similar in size or slightly smaller than the Mt. Charleston blue butterfly and is identified by black underside hindwing spots at the hind corner and large round black underside forewing spots (Scott 1986, p. 413; Opler 1999, pp. 230, 251). The Spring Mountains icarioides blue butterfly is larger than the Mt. Charleston blue butterfly and usually lacks the upperside forewing dash (Scott 1986, p. 409). In addition the underside hindwing postmedian spots of the Spring Mountains icarioides blue butterfly are typically ringed with white (Scott 1986, p. 409). The two Spring Mountains dark blue butterflies and the Spring Mountains icarioides blue butterfly lack the metallic marginal spots on the underside hindwing that is present on the Mt. Charleston blue butterfly (Scott 1986, p. 403; Brock and Kaufmann 2003, pp. 134, 136, 140). The two Spring Mountains dark blue butterflies have a more prominent orange band on the hindwing and do not have black dashes in the middle of the upperside forewing and hindwing as the Mt. Charleston blue butterfly does (Brock and Kaufmann 2003, pp. 136, 140; Scott 1986, pp. 403, 410).

Distribution

Based on current and historical occurrences or locations (Austin 1980, pp. 20–24; Weiss *et al.* 1997, Map 3.1; Boyd and Murphy 2008, p. 4, Pinyon 2011, Figure 9–11; Thompson *et al.* 2012, p. 99), the geographic range of the Mt. Charleston blue butterfly is in the upper elevations of the Spring Mountains, centered on lands managed by the U.S. Forest Service (Forest Service) in the Spring Mountains National Recreation Area of the Humboldt-Toiyabe National Forest within Upper Kyle and Lee Canyons, Clark County, Nevada. The majority of the occurrences or locations are along the upper ridges in the Mt. Charleston Wilderness and in Upper Lee Canyon area, while a few are in Upper Kyle Canyon. Table 1 lists the various locations of the Mt. Charleston blue butterfly that constitute the subspecies' current and historical range. Estimates of population size for Mt. Charleston blue butterfly are not available, so the occurrence data summarized in Table 1 represent the best scientific information on distribution of Mt. Charleston blue butterfly and how that distribution has changed over time.

TABLE 1—LOCATIONS OR OCCURRENCES OF THE MT. CHARLESTON BLUE BUTTERFLY SINCE 1928, AND THE STATUS OF THE BUTTERFLY AT THE LOCATIONS

[Survey efforts are variable through time]

Location name	First/last time observed	Most recent survey year(s) (even if not observed)	Status	Primary references
1. South Loop Trail, Upper Kyle Canyon.	1928/2011	2007, 2008, 2010, 2011.	Known occupied; adults consistently observed.	Weiss *et al.* 1997; Kingsley 2007; Boyd 2006; Datasmiths 2007; SWCA 2008; Pinyon 2011; Thompson *et al.* 2012.
2. Las Vegas Ski and Snowboard Resort (LVSSR), Upper Lee Canyon.	1963/2010	2007, 2008, 2010, 2011.	Known occupied; adults consistently observed.	Weiss *et al.* 1994; Weiss *et al.* 1997; Boyd and Austin 2002; Boyd 2006; Newfields 2006; Datasmiths 2007; Boyd and Murphy 2008;Thompson *et al.* 2012.
3. Foxtail, Upper Lee Canyon ...	1995/1998	2006, 2007, 2008	Presumed occupied; adults intermittently observed.	Boyd and Austin 1999; Boyd 2006; Datasmiths 2007; Boyd and Murphy 2008.
4. Youth Camp, Upper Lee Canyon.	1995/1995	2006, 2007, 2008	Presumed occupied; adults intermittently observed.	Weiss *et al.* 1997; Boyd 2006; Datasmiths 2007; Boyd and Murphy 2008.
5. Gary Abbott, Upper Lee Canyon.	1995/1995	2006, 2007, 2008	Presumed occupied; adults intermittently observed.	Weiss *et al.* 1997; Boyd 2006; Datasmiths 2007; Boyd and Murphy 2008.
6. Lower LVSSR Parking, Upper Lee Canyon.	1995/2002	2007, 2008	Presumed occupied; adults intermittently observed.	Weiss *et al.* 1997; Boyd 2006; Datasmiths 2007; Boyd and Murphy 2008.

TABLE 1—LOCATIONS OR OCCURRENCES OF THE MT. CHARLESTON BLUE BUTTERFLY SINCE 1928, AND THE STATUS OF THE BUTTERFLY AT THE LOCATIONS—Continued

[Survey efforts are variable through time]

Location name	First/last time observed	Most recent survey year(s) (even if not observed)	Status	Primary references
7. Mummy Spring, Upper Kyle Canyon.	1995/1995	2006	Presumed occupied; adults intermittently observed.	Weiss *et al.* 1997; Boyd 2006.
8. Lee Meadows, Upper Lee Canyon.	1965/1995	2006, 2007, 2008	Presumed occupied; adults intermittently observed.	Weiss *et al.* 1997; Boyd 2006; Datasmiths 2007; Boyd and Murphy 2008.
9. Bristlecone Trail	1990/2011	2007, 2011	Presumed occupied	Weiss *et al.* 1995; Weiss *et al.* 1997; Kingsley 2007; Thompson *et al.* 2012.
10. Bonanza Trail	1995/1995	2006, 2007	Presumed occupied	Weiss *et al.* 1997; Boyd 2006; Kingsley 2007.
11. Upper Lee Canyon holotype	1963/1976	2006, 2007	Presumed extirpated	Weiss *et al.* 1997; Boyd 2006; Datasmiths 2007.
12. Cathedral Rock, Kyle Canyon.	1972/1972	2007	Presumed extirpated	Weiss *et al.* 1997; Datasmiths 2007.
13. Upper Kyle Canyon Ski Area.	1965/1972	1995	Presumed extirpated	Weiss *et al.* 1997.
14. Old Town, Kyle Canyon	1970s	1995	Presumed extirpated	The Urban Wildlands Group, Inc. 2005.
15. Deer Creek, Kyle Canyon	1950	unknown	Presumed extirpated	Howe 1975.
16. Willow Creek	1928	unknown	Presumed extirpated	Weiss *et al.* 1997; Thompson and Garrett 2010.

We presume that the Mt. Charleston blue butterfly is extirpated from a location when it has not been recorded at that location through formal surveys or informal observation for more than 20 years. We selected a 20-year time period because it would likely allow for local extirpation and recolonization events (metapopulation dynamics) to occur and would be enough time for succession or other vegetation shifts to render the habitat unsuitable (see discussion in Biology and Habitat sections below). Using this criterion, the Mt. Charleston blue butterfly is considered to be ''presumed extirpated'' from 6 of the 16 known locations (Locations 11–16 in Table 1) (Service 2006b, pp. 8–9). Of the remaining 10 locations, 8 locations or occurrences are ''presumed occupied'' by the subspecies (Locations 3–10 in Table 1) and the first 2 locations are ''known occupied'' (Locations 1–2 in Table 1) (Service 2006b, pp. 7–8). We note that the probability of detection of Mt. Charleston blue butterflies at a particular location in a given year is affected by factors other than the butterfly's abundance, such as survey effort and weather, both of which are highly variable from year to year.

The presumed occupied category is defined as a location within the current known range of the subspecies where adults have been intermittently observed and there is a potential for diapausing (a period of suspended growth or development similar to hibernation) larvae to be present. The butterfly likely exhibits metapopulation dynamics at these locations. In this situation, the subspecies is subject to local extirpation, with new individuals emigrating from nearby ''known occupied'' habitat, typically during years when environmental conditions are more favorable to emergence from diapause and the successful reproduction of individuals (see discussion in ''Habitat'' section below). At some of these presumed occupied locations (Locations 4, 5, 7, 8, and 10 in Table 1), the Mt. Charleston blue butterfly has not been recorded through formal surveys or informal observation since 1995 by Weiss *et al.* (1997, pp. 1–87). Of the presumed occupied locations, 3, 6, and 9 have had the most recent observations (observed in 1998, 2002, and 2011, respectively) (Table 1). Currently, we consider the occurrence at Mummy Spring as presumed occupied because it has been intermittently observed; however, this location is not near known occupied habitat and may be extirpated.

We consider the remaining two Mt. Charleston blue butterfly locations or occurrences to be ''known occupied'' (Locations 1 and 2 in Table 1). Known occupied locations have had successive observations during multiple years of surveys and occur in high-quality habitat. The South Loop Trail location in Upper Kyle Canyon (Location 1 in Table 1) is considered known occupied because: (1) The butterfly was observed on the site in 1995, 2002, 2007, 2010, and 2011 (Service 2007, pp. 1–2; Kingsley 2007, p. 5; Pinyon 2011, pp. 17–19; Thompson *et al.* 2012, p. 99); (2) the high quality of the habitat is in accordance with host plant densities of 10 plants per square meter as described in Weiss *et al.* (1997, p. 31) (Kingsley 2007, pp. 5 and 10; Thompson *et al.* 2012, p. 99); and (3) in combination with the observations and high-quality habitat, the habitat is in an area of relatively large size (SWCA 2008, pp. 2 and 5; Pinyon 2011, p. Figure 8). The South Loop Trail area is the most important remaining population area for the Mt. Charleston blue butterfly (Boyd and Murphy 2008, p. 21). The South Loop Trail runs along the ridgeline between Griffith Peak and Charleston Peak and is located within the Mt. Charleston Wilderness. This area was mapped using a global positioning system unit and included the larval host plant, *Astragalus calycosus* var. *calycosus* (Torrey's milkvetch), as well as occurrences of two known nectar plants, *Hymenoxys lemmonii* (Lemmon's bitterweed) and *Erigeron clokeyi* (Clokey fleabane) (SWCA 2008, pp. 2 and 5; Pinyon 2011, p. 11). The total area of the South Loop Trail location is 60 acres (ac) (24 hectares (ha)).

We consider the Las Vegas Ski and Snowboard Resort location (LVSSR) in Upper Lee Canyon (Location 2 in Table

1) to be ''known occupied'' because: (1) The butterfly was first recorded at LVSSR in 1963 (Austin 1980, p. 22) and has been consistently observed at LVSSR every year between 1995 and 2006 (with the exception of 1997 when no surveys were performed (Service 2007, pp. 1–2)) and in 2010 (Thompson and Garrett 2010, p. 5); and (2) the ski runs contain two areas of high-quality butterfly habitat in accordance with host plant densities of 10 plants per square meter as described in Weiss *et al.* (1997, p. 31). These areas are LVSSR #1 (2.4 ac (0.97 ha)) and LVSSR #2 (1.3 ac (0.53 ha)), which have been mapped using a global positioning system unit and field-verified. Thus, across its current range, the Mt. Charleston blue butterfly is known to persistently occupy less than 64 ac (26 ha) of known occupied habitat.

Status and Trends

While there are no estimates of the size of the Mt. Charleston blue butterfly population, the best available information indicates a declining trend for this subspecies, as discussed below. Prior to 1980, descriptions of the Mt. Charleston blue butterfly status and trends were characterized as usually rare (Austin and Austin 1980, p. 30). The Mt. Charleston blue butterfly is known to be rare because few have been observed since the 1920's, even though there have been many collections and studies of butterflies in the Spring Mountains, particularly since the 1950's (Boyd and Austin 1999, p. 2).

It is important to note that year-to-year fluctuations in population numbers do occur (most likely due to variations in precipitation and temperature that affect both the Mt. Charleston blue butterfly and its larval host plant (Weiss *et al.* 1997, pp. 2–3 and 31–32)). However, the failure to detect Mt. Charleston blue butterflies at many of the known historical locations during the past 20 years, especially in light of increased survey efforts in recent years (since 2006), indicates a reduction in the butterfly's distribution and likely decrease in total population size. In addition, five additional locations may be presumed extirpated in 2015, if surveys continue to fail to detect Mt. Charleston blue butterflies (these include Youth Camp, Gary Abbott, Lee Meadows, Bonanza Trail, and Mummy Spring, Table 1). Mt. Charleston blue butterflies were last observed at these sites in 1995, which was the last year reported as a good year (Boyd and Murphy 2008, p. 22) for Mt. Charleston blue butterflies, as indicated by the numbers observed at LVSSR (121 counted during 2 surveys each of 2 areas), and presence detected at 7 other locations (Weiss 1996, p. 4; Weiss *et al.* 1997, Table 2).

Survey information indicates that the numbers of recently observed Mt. Charleston blue butterflies are extremely low because butterflies have become increasingly difficult to detect. Zonneveld *et al.* (2003) determined that observable population size is interdependent with survey days and detection probability. Thus, the decreasing observations of Mt. Charleston blue butterflies after repeated visits in any year, after multiple years of surveying, indicates a declining and smaller population. In 2006, surveys within presumed occupied habitat at LVSSR located one individual butterfly adjacent to a pond that holds water for snowmaking (Newfields 2006, pp. 10, 13, and C5). In a later report, the accuracy of this observation was questioned and considered inaccurate (Newfields 2008, p. 27).

In 2006, Boyd (2006, pp. 1–2) conducted focused surveys for the subspecies at nearly all previously known locations and within potential habitat along Griffith Peak, North Loop Trail, Bristlecone Trail, and South Bonanza Trail but did not observe the butterfly at any of these locations. In 2007, surveys were again conducted in previously known locations in Upper Lee Canyon and LVSSR, but no butterflies were recorded (Datasmiths 2007, p. 1; Newfields 2008, pp. 21–24). In 2007, two Mt. Charleston blue butterflies were sighted on different dates at the same location on the South Loop Trail in Upper Kyle Canyon (Kingsley 2007, p. 5). In 2008, butterflies were not observed during focused surveys of Upper Lee Canyon and the South Loop Trail (Boyd and Murphy 2008, pp. 1–3; Boyd 2008, p. 1; SWCA 2008, p. 6), although it is possible that adult butterflies may have been missed on the South Loop Trail because the surveys were performed very late in the season. No formal surveys were conducted in 2009; however, no individuals were observed during the few informal attempts made to observe the species (Service 2009).

In 2010, the Mt. Charleston blue butterfly was observed during surveys at LVSSR and the South Loop Trail area. One adult was observed in Lee Canyon at LVSSR on July 23, 2010, but no other adults were detected at LVSSR during surveys conducted on August 2, 9, and 18, 2010 (Thompson and Garrett 2010, pp. 4–5). The Mt. Charleston blue butterfly was not observed at LVSSR in 2011 (Thompson *et al.* 2012, p. 99). Adults were most recently observed in 2010 and 2011 at the South Loop Trail area. According to reports from surveys conducted in July and August of 2011 at the South Loop Trail area (Thompson *et al.* 2012, p. 99; Pinyon 2011, pp. 17–19), the highest total number of adults counted among the days this area was surveyed was 17 on July 28, 2010, and 13 on August 12, 2011 (Pinyon 2011, p. 17). Final reports have not been completed by Thompson *et al.* for the 2011 surveys and the results here are considered preliminary. Based on the available survey information, the low number of sightings in recent years is likely the result of declining population size.

Habitat

Weiss *et al.* (1997, pp. 10–11) describe the natural habitat for the Mt. Charleston blue butterfly as relatively flat ridgelines above 2,500 m (8,200 ft), but isolated individuals have been observed as low as 2,000 m (6,600 ft). Boyd and Murphy (2008, p. 19) indicate that areas occupied by the subspecies featured exposed soil and rock substrates with limited or no canopy cover or shading and flat to mild slopes. Like most butterfly species, the Mt. Charleston blue butterfly is dependent on plants both during larval development (larval host plants) and the adult butterfly flight period (nectar plants). The Mt. Charleston blue butterfly requires areas that support *Astragalus calycosus* var. *calycosus,* the only known larval host plant for the subspecies (Weiss *et al.* 1994, p. 3; Weiss *et al.* 1997, p. 10; Datasmiths 2007, p. 21), as well as primary nectar plants. *A. c.* var. *calycosus* and *Erigeron clokeyi* are the primary nectar plants for the subspecies; however, butterflies have also been observed nectaring on *Hymenoxys lemmonii* and *Aster* sp. (Weiss *et al.* 1994, p. 3; Boyd 2005, p. 1; Boyd and Murphy 2008, p. 9).

The best available habitat information relates mostly to the Mt. Charleston blue butterfly's larval host plant, with little to no information available characterizing the butterfly's interactions with its known nectar plants or other elements of its habitat; thus, the habitat information discussed in this document centers on *Astragalus calycosus* var. *calycosus.* Studies are currently underway to better understand the habitat requirements and preferences of the Mt. Charleston blue butterfly (Thompson *et al.* 2011, p. 99). *Astragalus c.*var. *calycosus* is a small, low-growing, perennial herb that has been observed growing in open areas between 5,000 to 10,800 ft (1,520 to 3,290 m) in subalpine, bristlecone, and mixed-conifer vegetation communities of the Spring Mountains (Nachlinger

and Leary 2007, p. 36). Within the alpine and subalpine range of the Mt. Charleston blue butterfly, Weiss *et al.* (1997, p. 10) observed the highest densities of *A. c.* var. *calycosus* in exposed areas and within canopy openings and lower densities in forested areas.

Weiss *et al.* (1997, p. 31) describe favorable habitat for the Mt. Charleston blue butterfly as having high densities (more than 10 plants per square meter) of *Astragalus calycosus* var. *calycosus.* Weiss *et al.* (1995, p. 5) and Datasmiths (2007, p. 21) indicate that, in some areas, butterfly habitat may be dependent on old or infrequent disturbances that create open areas. Vegetation cover within disturbed patches naturally becomes higher over time through succession, gradually becoming less favorable to the butterfly. Therefore, we conclude that open areas with relatively little grass cover and visible mineral soil and high densities of host plants support the highest densities of butterflies (Boyd 2005, p. 1; Service 2006a, p. 1). During 1995, an especially high-population year (a total of 121 butterflies were counted during surveys of 2 areas at LVSSR on 2 separate dates, where each survey for each area takes approximately 22 minutes to complete for a single observer (Weiss 1996, p. 4)), Mt. Charleston blue butterflies were observed in small habitat patches and in open forested areas where *A. c. var. calycosus* was present in low densities, on the order of 1 to 5 plants per square meter (Weiss *et al.* 1997, p. 10; Newfields 2006, pp. 10 and C5). Therefore, areas with lower densities of the host plant may also be important to the subspecies, as these areas may be intermittently occupied or may be important for dispersal.

Fire suppression and other management practices have likely limited the formation of new habitat for the Mt. Charleston blue butterfly, as discussed below. The Forest Service began suppressing fires on the Spring Mountains in 1910 (Entrix 2007, p. 111). Throughout the Spring Mountains, fire suppression has resulted in higher densities of trees and shrubs (Amell 2006, pp. 2–3) and a transition to a closed-canopy forest with shade-tolerant understory species (Entrix 2007, p. 112) that is generally less suitable for the Mt. Charleston blue butterfly. Boyd and Murphy (2008, pp. 23 and 25) hypothesized that the loss of presettlement vegetation structure over time has caused the Mt. Charleston blue butterfly's metapopulation dynamics to collapse in Upper Lee Canyon. Similar losses of suitable butterfly habitat in woodlands and their negative effect on butterfly populations have been documented (Thomas 1984, pp. 337–338). The disturbed landscape at LVSSR provides important habitat for the Mt. Charleston blue butterfly (Weiss *et al.* 1995, p. 5; Weiss *et al.* 1997, p. 26). Periodic maintenance (removal of trees and shrubs) of the ski runs has effectively arrested forest succession on the ski slopes and serves to maintain conditions favorable to the Mt. Charleston blue butterfly, and to its host and nectar plants. However, the ski runs are not specifically managed to benefit habitat for this subspecies, and operational activities regularly modify Mt. Charleston blue butterfly habitat or prevent host plants from reestablishing in disturbed areas.

Biology

The Mt. Charleston blue butterfly has been described as biennial where it diapauses as an egg the first winter and as a larvae near maturity the second winter (Ferris and Brown, pp. 203–204; Scott 1986, p. 411); however, Emmel and Shields (1978, p. 132) suggested that diapause was passed as partly grown larva because freshly hatched eggshells were found near newly laid eggs (indicating that the eggs do not overwinter). The Mt. Charleston blue butterfly is generally thought to diapause at the base of its larval host plant, *Astragalus calycosus* var. *calycosus,* or in the surrounding substrate (Emmel and Shields 1978, p. 132). The pupae of some butterfly species are known to persist in diapause up to 5 to 7 years (Scott 1986, p. 28). The number of years the Mt. Charleston blue butterfly can remain in diapause is unknown. Experts have speculated that the Mt. Charleston blue butterfly may only be able to diapause for two seasons (Murphy 2006, p. 1; Boyd and Murphy 2008, p. 21). However, in response to unfavorable environmental conditions, it is hypothesized that a prolonged diapause period may be possible (Scott 1986, pp. 26–30; Murphy 2006, p. 1; Datasmiths 2007, p. 6; Boyd and Murphy 2008, p. 22).

The typical flight and breeding period for the butterfly is early July to mid-August with a peak in late July, although the subspecies has been observed as early as mid-June and as late as mid-September (Austin 1980, p. 22; Boyd and Austin 1999, p. 17; Forest Service 2006a, p. 9). As with most butterflies, the Mt. Charleston blue butterfly typically flies during sunny conditions, which are particularly important for this subspecies given the cooler air temperatures at high elevations (Weiss *et al.* 1997, p. 31). Excessive winds also deter flight of most butterflies, although Weiss *et al.* (1997, p. 31) speculate that this may not be a significant factor for the Mt. Charleston blue butterfly given its low-to-the-ground flight pattern.

Like all butterfly species, both the phenology (timing) and number of Mt. Charleston blue butterfly individuals that emerge and fly to reproduce during a particular year are reliant on the combination of many environmental factors that may constitute a successful (''favorable'') or unsuccessful (''poor'') year for the subspecies. Other than observations by surveyors, little information is known regarding these aspects of the subspecies' biology, since the key determinants for the interactions among the Mt. Charleston blue butterfly's flight and breeding period, larval host plant, and environmental conditions have not been specifically studied. Observations indicate that above- or below-average precipitation, coupled with above- or below-average temperatures, influence the phenology of this subspecies (Weiss *et al.* 1997, pp. 2–3 and 32; Boyd and Austin 1999, p. 8) and are likely responsible for the fluctuation in population numbers from year to year (Weiss *et al.* 1997, pp. 2–3 and 31–32).

Most butterfly populations exist as regional metapopulations (Murphy *et al.* 1990, p. 44). Boyd and Austin (1999, pp. 17 and 53) indicate this is true of the Mt. Charleston blue butterfly. Small habitat patches tend to support smaller butterfly populations that are frequently extirpated by events that are part of normal variation (Murphy *et al.* 1990, p. 44). According to Boyd and Austin (1999, p. 17), smaller colonies of the Mt. Charleston blue butterfly may be ephemeral in the long term, with the larger colonies of the subspecies more likely than smaller populations to persist in ''poor'' years, when environmental conditions do not support the emergence, flight, and reproduction of individuals. The ability of the Mt. Charleston blue butterfly to move between habitat patches has not been studied; however, field observations indicate the subspecies has low vagility (capacity or tendency of a species to move about or disperse in a given environment), on the order of 10 to 100 meters (m) (33 to 330 feet (ft)) (Weiss *et al.* 1995, p. 9), and nearly sedentary behavior (Datasmiths 2007, p. 21; Boyd and Murphy 2008, pp. 3 and 9). Furthermore, dispersal of lycaenid butterflies, in general, is limited and on the order of hundreds of meters (Cushman and Murphy 1993, p. 40). Based on this information, the likelihood of long-distance dispersal is

low for the Mt. Charleston blue butterfly, and its susceptibility to being affected by habitat fragmentation caused by forest succession is high (discussed further in Factor A).

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, we may list a species based on any of the following five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. Listing actions may be warranted based on any of the above threat factors, singly or in combination. Each of these factors is discussed below.

Factor A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Below, we evaluate several factors that negatively impact the Mt. Charleston blue butterfly's habitat, including fire suppression, fuels reduction, succession, introduction of nonnative species, recreation, and development. We also examine available conservation measures in the form of conservation agreements and plans, which may offset some of these threats.

Fire Suppression, Succession, and Nonnative Species

Butterflies have extremely specialized habitat requirements (Thomas 1984, p. 337). Changes in vegetation structure and composition as a result of natural processes are a serious threat to butterfly populations because these changes can disrupt specific habitat requirements (Thomas 1984, pp. 337–341; Thomas *et al.* 2001, pp. 1791–1796). Cushman and Murphy (1993, p. 4) determined 28 at-risk lycaenid butterfly species, including the Mt. Charleston blue butterfly, to be dependent on one or two closely related host plants. Many of these host plants are dependent on early successional environments. Butterflies that specialize on such plants must track an ephemeral resource base that itself depends on unpredictable and perhaps infrequent ecosystem disturbances. For such butterfly species, local extinction events are both frequent and inevitable (Cushman and Murphy 1993, p. 4). The Mt. Charleston blue butterfly may, in part, depend on disturbances that open up the subalpine canopy and create conditions more favorable to its host plant, *Astragalus calycosus* var. *calycosus,* and nectar resources (Weiss *et al.* 1995, p. 5; Boyd and Murphy 2008, pp. 22–28) (see Habitat section, above).

Datasmiths (2007, p. 21) also suggest suitable habitat patches of *Astragalus calycosus* var. *calycosus* are often, but not exclusively, associated with older or infrequent disturbance. Weiss *et al.* (1995, p. 5) note that a colony once existed on the Upper Kyle Canyon Ski Area (Location 11 in Table 1), but since the ski run was abandoned no butterflies have been collected there since 1965. Boyd and Austin (2002, p. 13) observe that the butterfly was common at Lee Meadows (Location 8 in Table 1) in the 1960s, but became uncommon at the site because of succession and a potential lack of disturbance. Using an analysis of host plant density, Weiss *et al.* (1995 p. 5) concluded that Lee Meadows does not have enough host plants to support a population over the long term (minimally 5–10 host plants per square meter). Disturbances such as fire promote open understory conditions for *A. c.* var. *calycosus* to grow and reduce fragmentation of Mt. Charleston blue butterfly habitat.

Fire suppression in the Spring Mountains has resulted in long-term successional changes, including increased forest area and forest structure (higher canopy cover, more young trees, and more trees intolerant of fire) (Nachlinger and Reese 1996, p. 37; Amell 2006, pp. 6–9; Boyd and Murphy 2008, pp. 22–28; Denton *et al.* 2008, p. 21; Abella *et al.* 2011, pp. 10, 12). Frequent low-severity fires would have maintained an open forest structure characterized by uneven-aged stands of fire-resistant *Pinus ponderosa* (ponderosa pine) trees (Amell 2006, p. 5) in lower elevations. The lower-elevation habitats of the Mt. Charleston blue butterfly are the most affected by fire suppression, as indicated by Provencher's 2008 Fire Regime Condition Class analysis of the Spring Mountains (p. 18); there has been an increase in area covered by forest canopy and an increase in stem densities with more trees intolerant of fire within the lower-elevation Mt. Charleston blue butterfly habitat.

Large-diameter *Pinus ponderosa* trees with multiple fire scars in Upper Lee and Kyle Canyons indicate that low-severity fires historically burned through mixed-conifer forests within the range of the Mt. Charleston blue butterfly (Amell 2006, p. 3). There are no empirical estimates of fire intervals or frequencies in the Spring Mountains but it is presumed to be similar to *Pinus ponderosa* forests in other regions where it has been reported to be 4 to 20 or 2 to 39 years (Barbour and Minnich 2000 as cited in Amell 2006, p. 3; Denton *et al.* 2008, p. 23). Open mixed-conifer forests in the Spring Mountains were likely characterized by more abundant and diverse understory plant communities compared to current conditions (Entrix 2007, pp. 73–78). These successional changes have been hypothesized to have contributed to the decline of the Mt. Charleston blue butterfly because of reduced densities of larval and nectar plants, decreased solar radiation, and inhibited butterfly movements that subsequently determine colonization or recolonization processes (Weiss *et al.* 1997, p. 26; Boyd and Murphy 2008, pp. 22–28).

Boyd and Murphy (2008, p. 23) note that important habitat characteristics required by Mt. Charleston blue butterfly— *Astragalus calycosus* var. *calycosus* and preferred nectar plants occurring together in open sites not shaded by tree canopies—would have occurred more frequently across a more open forested landscape, compared to the current denser forested landscape. Not only would the changes in forest structure and understory plant communities result in habitat loss, degradation, and fragmentation for the Mt. Charleston blue butterfly across a broad spatial scale, a habitat matrix dominated by denser forest also may be impacting key metapopulation processes by reducing probability of recolonization following local population extirpations in remaining patches of suitable habitat (Boyd and Murphy 2008, p. 25).

The introduction of forbs, shrubs, and nonnative grasses can be a threat to the butterfly's habitat because these species can compete with, and decrease, the quality and abundance of larval host plant and adult nectar sources. This has been observed for many butterfly species including the Quino checkerspot butterfly (*Euphydryas editha quino*) (62 FR 2313; January 16, 1997) and Fender's blue butterfly (*Plebejus* (= *Icaricia*) *icarioides fenderi*) (65 FR 3875; January 25, 2000). Succession, coupled with the introduction of nonnative species, is also believed to be the reason the Mt. Charleston blue butterfly is no longer present at the old town site in Kyle Canyon (Location 12 in Table 1) and at the Mt. Charleston blue butterfly

holotype (the type specimen used in the original description of a species or subspecies) site in Upper Lee Canyon (Location 9 in Table 1) (Urban Wildlands Group, Inc. 2005, p. 3; Boyd and Austin 1999, p. 17).

Introduction of nonnative species within its habitat negatively impacts the quality of the Mt. Charleston blue butterfly's habitat. As mentioned previously (see Habitat section), periodic maintenance (removal of trees and shrubs) of the ski runs has effectively arrested succession on the ski slopes and maintains conditions that can be favorable to the Mt. Charleston blue butterfly. However, the ski runs are not specifically managed to benefit habitat for this subspecies and its habitat requirements, and operational activities (including seeding of nonnative species) regularly modify Mt. Charleston blue butterfly habitat or prevent host plants from reestablishing in disturbed areas. According to Weiss *et al.* (1995, pp. 5–6), the planting of annual grasses and *Melilotus* (sweetclover) for erosion control at LVSSR is a threat to Mt. Charleston blue butterfly habitat. Titus and Landau (2003, p. 1) observed that vegetation on highly and moderately disturbed areas of the LVSSR ski runs are floristically very different from natural openings in the adjacent forested areas that support this subspecies. Seeding nonnative species for erosion control was discontinued in 2005; however, because of erosion problems during 2006 and 2007, and the lack of native seed, LVSSR resumed using a nonnative seed mix, particularly in the lower portions of the ski runs (not adjacent to Mt. Charleston blue butterfly habitat) where erosion problems persist.

The best available information indicates that, in at least four of the six locations where the Mt. Charleston blue butterfly historically occurred, suitable habitat is no longer present due to vegetation changes attributable to succession, the introduction of nonnative species, or a combination of the two.

Recreation, Development, and Other Projects

As discussed in the *Distribution* section above, the Mt. Charleston blue butterfly is a narrow endemic subspecies that is currently known to occupy two locations and presumed to occupy eight others. One of the two areas where Mt. Charleston blue butterflies have been detected in recent years is the LVSSR. Several ground-disturbing projects occurred within Mt. Charleston blue butterfly suitable habitat at LVSSR between 2000 and 2011 (see 76 FR 12667, pp. 12672, 12673). These projects were small spatial scale (ground disturbance was less than about 10 acres each) but are known to have impacted suitable habitat and possibly impacted individual Mt. Charleston blue butterflies (eggs, larvae, pupae, or adults). In addition to these recreation development projects at LVSSR, a small area of suitable habitat and possibly individual Mt. Charleston blue butterflies were impacted by a water system replacement project in Upper Lee Canyon in 2003, and a small area of suitable habitat (less than 1 acre) was impacted by a stream restoration project at Lee Meadows in 2011. It is difficult to know the full extent of impacts to the Mt. Charleston blue butterfly's habitat as a result of these projects because Mt. Charleston blue butterfly habitat was not mapped nor were some project areas surveyed prior to implementation.

Three future projects also may impact Mt. Charleston blue butterfly habitat in Upper Lee Canyon. These projects are summarized below:

(1) A March 2011 Master Development Plan for LVSSR proposes to improve, upgrade, and expand the existing facilities to provide year-round recreational activities. The plan proposes to increase snow trails, beginner terrain, and snowmaking reservoir capacity and coverage, widen existing ski trails, replace and add lifts, and develop ''gladed'' areas for sliding that would remove deadfall timber to reduce fire hazards (Ecosign 2011, I–3—I–4, IV–5—IV–7). The plan proposes to add summer activities including lift-accessed sightseeing and hiking, nature interpretive hikes, evening stargazing, mountain biking, conference retreats and seminars, weddings, family reunions, mountain music concerts, festivals, climbing walls, bungee trampoline, beach and grass volleyball, a car rally, and other activities (Ecosign 2008, pp. I–3—I–4). Widening existing ski trails and increasing snowmaking reservoir capacity (Ecosign 2011, p. IV–5, Figure 21a) would impact the Mt. Charleston blue butterfly at a known occupied and at a presumed occupied location (Location 2 and 5 in Table 1). Summer activities would impact the Mt. Charleston blue butterfly and its known occupied and presumed occupied habitat by attracting visitors in higher numbers during the time of year when larvae and host plants are especially vulnerable to trampling (Location 2 in Table 1). The LVSSR Master Development Plan, which has been accepted by the Forest Service, considered Mt. Charleston blue butterfly habitat during development of the plan. Impacts to Mt. Charleston blue butterfly habitat from the LVSSR Master Development Plan will be addressed further during the National Environmental Policy Act (NEPA) process (discussed further in Factor D) (Forest Service 2011a, p. 3).

(2) The Old Mill/Dolomite/McWilliams Reconstruction Projects to improve camping and picnic areas in Upper Lee Canyon are currently being planned and evaluated under NEPA (discussed further in Factor D) (Forest Service 2011c pp. 1–4). Project details are limited because planning is currently underway; however, the Service has met with the Forest Service and provided recommendations to consider for analysis of potential direct and indirect impacts of these projects to the Mt. Charleston blue butterfly and its potential habitat within or in close proximity to the project area (Datasmiths 2007, Figure 1; Forest Service 2011c, Project Map; Forest Service 2011f, pp. 1–5; Service 2011, p. 1). The recommendations provided by the Service will assist with the development of a proposed action that will avoid or minimize adverse effects to the Mt. Charleston blue butterfly and its potential habitat.

(3) The Foxtail Group Picnic Area Reconstruction Project is currently being planned and evaluated under NEPA (discussed further in Factor D) (Forest Service 2011g, pp. 1–4). Project details are limited because planning is currently underway; however, the Service has met with the Forest Service and provided recommendations for minimizing potential direct and indirect impacts of these projects to the Mt. Charleston blue butterfly and its habitat (Datasmiths 2007, Figure 1; Forest Service 2011f, pp. 1–5; Forest Service 2011g, Project Map; Service 2011, p. 1).

Fuel Reduction Projects

In December 2007, the Forest Service approved the Spring Mountains National Recreation Area Hazardous Fuels Reduction Project (Forest Service 2007a, pp. 1–127). This project resulted in tree removals and vegetation thinning in three presumed occupied Mt. Charleston blue butterfly locations in Upper Lee Canyon, including Foxtail Ridge, Lee Canyon Youth Camp, and Lee Meadows, and impacted approximately 32 ac (13 ha) of presumed occupied habitat that has been mapped in Upper Lee Canyon (Locations 3, 4 and 8 in Table 1) (Forest Service 2007a, Appendix A-Map 2; Datasmiths 2007, p. 26). Manual and mechanical clearing of shrubs and trees will be repeated on a 5- to 10-year rotating basis and will result in direct

impacts to the Mt. Charleston blue butterfly and its habitat, including crushing or removal of host plants and diapausing larvae (if present). Implementation of this project began in the spring of 2008 throughout the Spring Mountains National Recreation Area, including Lee Canyon, and the project is nearly completed for its initial implementation (Forest Service 2011a, p. 2).

Although Boyd and Murphy (2008, p. 26) recommended increased forest thinning to improve habitat quality for the Mt. Charleston blue butterfly, the primary goal of this project was to reduce wildfire risk to life and property in the Spring Mountains National Recreation Area wildland urban interface (Forest Service 2007a, p. 6), not to improve Mt. Charleston blue butterfly habitat. Mt. Charleston blue butterflies require larval host plants in exposed areas not shaded by forest canopy cover because canopy cover reduces solar exposure during critical larval feeding periods (Boyd and Murphy 2008, p. 23). Although the fuel reduction project incorporated measures to minimize impacts to the Mt. Charleston blue butterfly and its habitat, shaded fuel breaks created for this project may not be open enough to create or significantly improve Mt. Charleston blue butterfly habitat. Also, shaded fuel breaks for this project are concentrated along access roads, property boundaries, campgrounds, picnic areas, administrative sites, and communications sites, and are not of sufficient spatial scale to improve habitat that does not occur within close proximity to these landscape features and reduce the threat identified above resulting from fire suppression and succession.

Although this project may result in increased understory herbaceous plant productivity and diversity, there are short-term risks to the Mt. Charleston blue butterfly's habitat associated with project implementation. In recommending increased forest thinning to improve Mt. Charleston blue butterfly habitat, Boyd and Murphy (2008, p. 26) cautioned that thinning treatments would need to be implemented carefully to minimize short-term disturbance impacts to the Mt. Charleston blue butterfly and its habitat. Individual butterflies (larvae, pupae, and adults), and larval host plants and nectar plants, may be crushed during project implementation. In areas where thinned trees are chipped (mastication), layers of wood chips may become too deep and impact survival of Mt. Charleston blue butterfly larvae and pupae, as well as larval host plants and nectar plants. Soil and vegetation disturbance during project implementation also would result in increases in weeds and disturbance-adapted species, such as *Chrysothamnus* spp. (rabbitbrush), and these plants would compete with Mt. Charleston blue butterfly larval host and nectar plants.

Conservation Agreement and Plans That May Offset Habitat Threats

A conservation agreement was developed in 1998 to facilitate voluntary cooperation among the Forest Service, the Service, and the State of Nevada Department of Conservation and Natural Resources in providing long-term protection for the rare and sensitive flora and fauna of the Spring Mountains, including the Mt. Charleston blue butterfly (Forest Service 1998, pp. 1–50). The Conservation Agreement was in effect for a period of 10 years after it was signed on April 13, 1998 (Forest Service *et al.* 1998, pp. 44, 49), was renewed in 2008 (Forest Service 2008), and coordination between the Forest Service and Service has continued. Many of the conservation actions described in the conservation agreement have been implemented; however, several important conservation actions that would have directly benefited the Mt. Charleston blue butterfly have not been implemented. Regardless, many of the conservation actions in the conservation agreement (for example, inventory and monitoring) would not directly reduce threats to the Mt. Charleston blue butterfly or its habitat.

In 2004, the Service and Forest Service signed a memorandum of agreement that provides a process for review of activities that involve species covered under the 1998 Conservation Agreement (Forest Service and Service 2004, pp. 1–9). Formal coordination through this memorandum of agreement was established to: (1) Jointly develop projects that avoid or minimize impacts to listed, candidate, and proposed species, and species under the 1998 conservation agreement; and (2) to ensure consistency with commitments and direction provided for in recovery planning efforts and in conservation agreement efforts. More than half of the past projects that impacted Mt. Charleston blue butterfly habitat were reviewed by the Service and Forest Service under this review process, but several were not. Some efforts under this memorandum of agreement have been successful in reducing or avoiding project impacts to the Mt. Charleston blue butterfly, while other efforts have not. Examples of projects that have reduced or avoided impacts to the Mt. Charleston blue butterfly include the Lee Meadows Restoration Project (discussed above in Recreation, Development, and Other Projects under Factor A) and the Bristlecone Trail Habitat Improvement Project (Forest Service 2007c, pp. 1–7; Forest Service 2007d, pp. 1–14; Service 2007, p. 1–2). A new conservation agreement is currently being developed for the Spring Mountains National Recreation Area (SMNRA).

The loss or modification of known occupied and presumed occupied Mt. Charleston blue butterfly habitat in Upper Lee Canyon, as discussed above, has occurred in the past. However, more recently, the Forest Service has suspended decisions on certain projects that would potentially impact Mt. Charleston blue butterfly habitat (see discussion of lower parking lot expansion and new snowmaking lines projects under Recreation, Development, and Other Projects, above).

In addition, the Forest Service has reaffirmed its commitment to collaborate with the Service in order to avoid implementation of projects or actions that would impact the viability of the Mt. Charleston blue butterfly (Forest Service 2010c). This commitment includes: (1) Developing a mutually agreeable process to review future proposed projects to ensure that implementation of these actions will not lead to loss of population viability; (2) reviewing proposed projects that may pose a threat to the continued viability of the subspecies; and (3) jointly developing a conservation agreement (strategy) that identifies actions that will be taken to ensure the conservation of the subspecies (Forest Service 2010c). The Forest Service and the Fish and Wildlife Service are currently in the process of developing the conservation agreement.

The Mt. Charleston blue butterfly is a covered species under the 2000 Clark County Multiple Species Habitat Conservation Plan (MSHCP). The Clark County MSHCP identifies two goals for the Mt. Charleston blue butterfly: (a) ''Maintain stable or increasing population numbers and host and larval plant species''; and (b) ''No net unmitigated loss of larval host plant or nectar plant species habitat'' (RECON 2000a, Table 2.5, pp. 2–154; RECON 2000b, pp. B158–B161). The Forest Service is one of several signatories to the Implementing Agreement for the Clark County MSHCP, because many of the activities from the 1998 Conservation Agreement were incorporated into the MSHCP. Primarily, activities undertaken by the Forest Service focused on conducting

surveying and monitoring for butterflies. Although some surveying and monitoring occurred through contracts by the Forest Service, Clark County, and the Service, a butterfly monitoring plan was not fully implemented.

Recently, the Forest Service has been implementing the LVSSR Adaptive Vegetation Management Plan (Forest Service 2005b, pp. 1–24) to provide mitigation for approximately 11 ac (4.45 ha) of impacts to presumed occupied butterfly habitat (and other sensitive wildlife and plant species habitat) resulting from projects that the Forest Service implemented in 2005 and 2006. Under the plan, LVSSR will revegetate impacted areas using native plant species, including *Astragalus calycosus* var. *calycosus.* However, this program is experimental and has experienced difficulties due to the challenges of native seed availability and propagation. Under the plan, *A. c.* var. *calycosus* is being brought into horticultural propagation. These efforts are not likely to provide replacement habitat to the Mt. Charleston blue butterfly for another 5 years (2016–2018), because of the short alpine growing season.

Summary of Factor A

The Mt. Charleston blue butterfly is currently known to occur in two locations: the South Loop Trail area in upper Kyle Canyon and LVSSR in Upper Lee Canyon. In addition, the Mt. Charleston blue butterfly is presumed to occupy eight locations: Foxtail, Youth Camp, Gary Abbott, Lower LVSSR Parking, Lee Meadows, Bristlecone Trail, Bonanza Trail, and Mummy Spring. Habitat loss and modification, as a result of fire suppression and long-term successional changes in forest structure, implementation of recreational development projects and fuels reduction projects, and nonnative species, are continuing threats to the butterfly's habitat in Upper Lee Canyon. Recreational area reconstruction projects currently planned also may negatively impact Mt. Charleston blue butterfly habitat in Upper Lee Canyon. In addition, proposed future activities under a draft Master Development Plan at LVSSR may impact the Mt. Charleston blue butterfly and its habitat in Upper Lee Canyon.

Because of its likely small population size, projects that impact even relatively small areas of occupied habitat could threaten the long-term population viability of Mt. Charleston blue butterfly. The continued loss or modification of presumed occupied habitat would further impair the long-term population viability of the Mt. Charleston blue butterfly in Upper Lee Canyon by removing diapausing larvae (if present) and by reducing the ability of the Mt. Charleston blue butterfly to disperse during favorable years. The successional advance of trees, shrubs, and grasses, and the spread of nonnative species are continuing threats to the subspecies in Upper Lee Canyon. The Mt. Charleston blue butterfly is presumed extirpated from at least three of the six historical locations (Upper Lee Canyon holotype, Upper Kyle Canton Ski Area, and Old Town), likely due to successional changes and the introduction of nonnative plants. Nonnative forbs and grasses are a threat to the subspecies and its habitat at LVSSR.

There are agreements and plans in place (including the 2008 Spring Mountains Conservation Agreement and the 2000 Clark County Multiple Species Habitat Conservation Plan) that are intended to conserve the Mt. Charleston blue butterfly and its habitat. Future voluntary conservation actions could be implemented in accordance with the terms of these agreements and plans but will be largely dependent on the level of funding available to the Forest Service for such work. Conservation actions (for example, mechanical thinning of timber stands and prescribed burns to create openings in the forest canopy suitable for the Mount Charleston blue butterfly and its host and nectar plants) could reduce to some degree the ongoing adverse effects to the butterfly of vegetative succession promoted by alteration of the natural fire regime in the Spring Mountains. The Forest Service's commitment to collaboratively review proposed projects to minimize impacts to the Mt. Charleston blue butterfly may reduce the threat posed by activities under the Forest Service's control, although we are unable to determine the potential effectiveness of this new strategy at this time. Therefore, based on the current distribution and recent, existing, and likely future trends in habitat loss, we find that the present and future destruction, modification, and curtailment of its habitat or range is a threat to the Mt. Charleston blue butterfly.

Factor B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Rare butterflies and moths are highly prized by collectors, and an international trade exists in specimens for both live and decorative markets, as well as the specialist trade that supplies hobbyists, collectors, and researchers (Collins and Morris 1985, pp. 155–179; Morris *et al.* 1991, pp. 332–334; Williams 1996, pp. 30–37). The specialist trade differs from both the live and decorative market in that it concentrates on rare and threatened species (U.S. Department of Justice [USDJ] 1993, pp. 1–3; *United States* v. *Skalski et al.,* Case No. CR9320137, U.S. District Court for the Northern District of California [USDC] 1993, pp. 1–86). In general, the rarer the species, the more valuable it is; prices can exceed $25,000 for exceedingly rare specimens. For example, during a 4-year investigation, special agents of the Service's Office of Law Enforcement executed warrants and seized over 30,000 endangered and protected butterflies and beetles, with a total wholesale commercial market value of about $90,000 in the United States (USDJ 1995, pp. 1–4). In another case, special agents found at least 13 species protected under the Act, and another 130 species illegally taken from lands administered by the Department of the Interior and other State lands (USDC 1993, pp. 1–86; Service 1995, pp. 1–2).

Several listings of butterflies as endangered or threatened species under the Act have been based, at least partially, on intense collection pressure. Notably, the Saint Francis' satyr (*Neonympha mitchellii francisci*) was emergency-listed as an endangered species on April 18, 1994 (59 FR 18324). The Saint Francis' satyr was demonstrated to have been significantly impacted by collectors in just a 3-year period (59 FR 18324). The Callippe and Behren's silverspot butterflies (*Speyeria callippe callippe* and *Speyeria zerene behrensii*) were listed as endangered species on December 5, 1997 (62 FR 64306), partially due to overcollection. The Blackburn's sphinx moth (*Manduca blackburni*) was listed as an endangered species on February 1, 2000 (65 FR 4770), partially due to overcollection by private and commercial collectors. Most recently, the Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) was emergency-listed as an endangered species (76 FR 49542; August 10, 2011), with collection being one of the primary threats.

Butterflies in small populations are vulnerable to harm from collection (Gall 1984, p. 133). A population may be reduced to below sustainable numbers by removal of females, reducing the probability that new colonies will be founded. Collectors can pose threats to butterflies because they may be unable to recognize when they are depleting colonies below the thresholds of survival or recovery (Collins and Morris 1985, pp. 162–165). There is ample evidence of collectors impacting other imperiled and endangered butterflies

(Gochfeld and Burger 1997, pp. 208–209), host plants (Cech and Tudor 2005, p. 55), and even contributing to extirpations (Duffey 1968, p. 94). For example, the federally endangered Mitchell's satyr (*Neonympha mitchellii mitchellii*) is believed to have been extirpated from New Jersey due to overcollection (57 FR 21567; Gochfeld and Burger 1997, p. 209).

Rare butterflies can be highly prized by insect collectors, and collection is a known threat to some butterfly species, such as the Fender's blue butterfly (65 FR 3882; January 25, 2000). In particular, small colonies and populations are at the highest risk. Overcollection or repeated handling and marking of females in years of low abundance can seriously damage populations through loss of reproductive individuals and genetic variability (65 FR 3882; January 25, 2000). Since the publication of the 12-month finding (76 FR 12667) in 2011, we have discovered information that indicates butterfly collecting is a threat for the Mt. Charleston blue butterfly and that collectors seek diminutive butterflies. In areas of the southwestern United States surrounding the range of the Mt. Charleston blue butterfly, other diminutive lycaenid butterflies such as Western-tailed blue butterfly (*Everes amyntula*), Pygmy blue butterfly (*Brephidium exilis*), Ceraunus blue butterfly (*Hemiargus ceraunus*), and Boisduval's blue butterfly (*Plebejus icariodes* ssp.) have been confiscated from commercial traders who illegally collected them (U.S. Attorney's Office 1994, pp. 4, 8, 16; Alexander 1996, pp. 1–6). Furthermore, we have information that diminutive butterfly collecting is occurring within the Spring Mountains (Service 2012, pp. 1–4). Because diminutive butterflies are sought, the inadvertent collection of Mt. Charleston blue butterflies has likely occurred and is expected to continue.

When Austin first described the Mt. Charleston blue butterfly in 1980 (Austin 1980, p. 22), he indicated that collectors regularly visited areas close to the known collection sites of the Mt. Charleston blue butterfly. Records indicate collection has occurred in several locations within the Spring Mountains, with Lee Canyon being among the most popular areas for butterfly collecting (Table 2; Austin 1980, p. 22; Service 2012, p. 2). Butterfly collectors may sometimes remove the only individual of a subspecies observed during collecting trips, even if it is known to be a unique specimen (Service 2012, p. 3). In many instances, a collector may not know he has a particularly rare or scarce species until after collection and subsequent identification takes place. The best available information indicates that Mt. Charleston blue butterflies have been collected for personal use (Service 2012, p. 2).

TABLE 2—NUMBERS OF MT. CHARLESTON BLUE BUTTERFLY SPECIMENS COLLECTED BY AREA, YEAR, AND SEX

Collection area	Year	Male	Female	Unknown	Total
Mt. Charleston	1928			*~700	*~700
Willow Creek	1928	15	19		34
Lee Canyon	1963	8	6	8	22
	1976	1			1
	2002	1			1
Kyle Canyon	1965	3			3
Cathedral Rock	1972			1	1
Deer Creek Rd	1950	2			2
South Loop	2007			1	1
Total		30	25	10	65

References: Garth 1928, p. 93; Howe 1975, Plate 59; Austin 1980, p. 22; Austin and Austin 1980, p. 30; Kingsley 2007, p. 4; Service 2012, p. 2

* = Collections by Frank Morand as reported in Garth 1928, p. 93. Not included in totals.

In some cases, private collectors often have more extensive collections of particular butterfly species than museums (Alexander 1996, p. 2). Butterfly collecting (except those with protected status) for noncommercial (recreational and personal) purposes does not require a special use authorization (Forest Service 1998b, p. 1; Joslin 1998, p. 74). However, within the SMNRA, Lee Canyon, Cold Creek, Willow Creek, and upper Kyle Canyon have been identified since 1996 as areas where permits are required for any butterfly collecting (Forest Service 1998, pp. 28, E9). However, no permits have been issued for collecting in these areas.

On Forest Service-administered lands, a special use permit is required for the commercial collection of butterflies (36 CFR 251.50), which would include collections for research, museums, universities, or professional societies (Forest Service 2003, pp. 2–3). There are no records indicating that special use permits have been issued for commercial collecting of Mt. Charleston blue butterflies in the Spring Mountains (S. Hinman 2011, pers. comm.); however, as discussed above, unauthorized commercial collecting has occurred in the past.

For most butterfly species, collecting is generally thought to have less of an impact on butterfly populations compared to other threats. Weiss *et al.* (1997, p. 29) indicated that, in general, responsible collecting posed little harm to populations. However, when a butterfly population is very small, any collection of butterflies results in the direct mortality of individuals and may greatly affect the population's viability and ability to recover. Populations already stressed by other factors may be severely threatened by intensive collecting (Thomas 1984, p. 345; Miller 1994, pp. 76, 83; New *et al.* 1995, p. 62). Thomas 1984 (p. 345) suggested that closed, sedentary populations of less than 250 adults are most likely to be at risk from overcollection.

In summary, due to the small number of discrete populations, overall small metapopulation size, close proximity to roads and trails, restricted range, and evidence of ongoing collection, we have determined that collection is a threat to the subspecies now and will continue to be in the future.

Factor C. Disease or Predation

We are not aware of any information regarding impacts from either disease or predation on the Mt. Charleston blue butterfly. Therefore, we do not find that disease or predation is a threat to the Mt. Charleston blue butterfly or likely to become a threat.

Factor D. The Inadequacy of Existing Regulatory Mechanisms

Under this factor, we examine whether existing regulatory mechanisms are inadequate to address the threats to the species discussed under the other factors. Section 4(b)(1)(A) of the Act requires the Service to take into account ''those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species * * *.'' In relation to Factor D under the Act, we interpret this language to require the Service to consider relevant Federal, State, and tribal laws, regulations, and other such mechanisms that may minimize any of the threats we describe in threat analyses under the other four factors, or otherwise enhance conservation of the species. We give strongest weight to statutes and their implementing regulations and to management direction that stems from those laws and regulations. An example would be State governmental actions enforced under a State statute or constitution, or Federal action under statute.

Having evaluated the significance of the threat as mitigated by any such conservation efforts, we analyze under Factor D the extent to which existing regulatory mechanisms are inadequate to address the specific threats to the species. Regulatory mechanisms, if they exist, may reduce or eliminate the impacts from one or more identified threats. In this section, we review existing State and Federal regulatory mechanisms to determine whether they effectively reduce or remove threats to the Mt. Charleston blue butterfly.

The Mt. Charleston blue butterfly occurs primarily on Federal land under the jurisdiction of the Forest Service; therefore, the discussion below focuses on Federal laws. There is no available information regarding local land use laws and ordinances that have been issued by Clark County or other local government entities for the protection of the Mt. Charleston blue butterfly. Nevada Revised Statutes sections 503 and 527 offer protective measures to wildlife and plants, but do not include invertebrate species such as the Mt. Charleston blue butterfly. Therefore, no regulatory protection is offered under Nevada State law. Please note that actions adopted by local groups, States, or Federal entities that are discretionary, including conservation strategies and guidance, are not regulatory mechanisms and were discussed above in the Conservation Agreement and Plans That May Offset Habitat Threats section in Factor A, above.

Mt. Charleston blue butterflies have been detected in only two general areas in recent years—the South Loop Trail area, where adult butterflies were recently detected during the summer of 2010 and 2011, and at LVSSR in 2010. The Forest Service manages lands designated as wilderness under the Wilderness Act of 1964 (16 U.S.C. 1131–1136). With respect to these areas, the Wilderness Act states the following: (1) New or temporary roads cannot be built; (2) there can be no use of motor vehicles, motorized equipment, or motorboats; (3) there can be no landing of aircraft; (4) there can be no other form of mechanical transport; and (5) no structure or installation may be built. As such, Mt. Charleston blue butterfly habitat in the South Loop Trail area is protected from direct loss or degradation by the prohibitions of the Wilderness Act. Mt. Charleston blue butterfly habitat at LVSSR and elsewhere in Lee Canyon and Kyle Canyon is located outside of the Mt. Charleston Wilderness, and thus is not subject to protections afforded by the Wilderness Act.

The National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 *et seq.*), requires Federal agencies, such as the Forest Service, to describe proposed agency actions, consider alternatives, identify and disclose potential environmental impacts of each alternative, and involve the public in the decisionmaking process. Federal agencies are not required to select the NEPA alternative having the least significant environmental impacts. A Federal agency may select an action that will adversely affect sensitive species provided that these effects are identified in a NEPA document. The NEPA itself is a disclosure law, and does not require subsequent minimization or mitigation of actions taken by Federal agencies. Although Federal agencies may include conservation measures for the Mt. Charleston blue butterfly as a result of the NEPA process, such measures are not required by the statute. The Forest Service is required to analyze its projects, listed under Factor A, above, in accordance with the NEPA.

The SMNRA is one of 10 districts of the Humboldt-Toiyabe National Forest and was established by Public Law 103–63, dated August 4, 1993 (the Spring Mountains National Recreation Area Act, 16 U.S. C. 460hhh *et seq.*). The Federal lands of the SMNRA are managed by the Forest Service in Clark and Nye Counties, Nevada, for the following purposes:

(1) To preserve the scenic, scientific, historic, cultural, natural, wilderness, watershed, riparian, wildlife, threatened and endangered species, and other values contributing to public enjoyment and biological diversity in the Spring Mountains of Nevada;

(2) To ensure appropriate conservation and management of natural and recreational resources in the Spring Mountains; and

(3) To provide for the development of public recreational opportunities in the Spring Mountains for the enjoyment of present and future generations. Habitat of the Mt. Charleston blue butterfly is predominantly in the SMNRA and one of several resources considered by the Forest Service under the guidance of its land management plans.

The National Forest Management Act (NFMA) of 1976, as amended (16 U.S.C. 1600 *et seq.*), provides the principal guidance for the management of activities on lands under Forest Service jurisdiction through associated land and resource management plans for each forest unit. Under NFMA and other Federal laws, the Forest Service has authority to regulate recreation, vehicle travel and other human disturbance, livestock grazing, fire management, energy development, and mining on lands within its jurisdiction. Current guidance for the management of Forest Service lands in the SMNRA is under the Toiyabe National Forest Land and Resource Management Plan and the Spring Mountains National Recreation Area General Management Plan (Forest Service 1996). In June 2006, the Forest Service added the Mt. Charleston blue butterfly, and three other endemic butterflies, to the Regional Forester's Sensitive Species List, in accordance with Forest Service Manual 2670. The Forest Service's objective in managing sensitive species is to prevent listing of species under the Act, maintain viable populations of native species, and develop and implement management objectives for populations and habitat of sensitive species. Projects listed in Factor A, above, have been guided by these Forest Service plans, policies, and guidance. These plans, policies, and guidance notwithstanding, removal or degradation of known occupied and presumed occupied butterfly habitat has occurred as a result of projects approved by the Forest Service in Upper Lee Canyon. Additionally, this guidance has not been effective in reducing other threats to the Mt. Charleston blue butterfly (for example, invasion of nonnative plant species and commercial and personal collection activities) (Weiss *et al.* 1995, pp. 5–6, Titus and Landau 2003, p. 1; Boyd and Murphy 2008, p. 6; Service 2012, pp. 1–4).

Since the Mt. Charleston blue butterfly is designated a sensitive species, Standard 0.28 of the Land and Resource Management Plan for the Spring Mountains requires a collecting permit issued by the Regional Forester (except for traditional use by American Indians) (Forest Service 1996, p. 18). Furthermore, Standard 11.6 indicates that collecting, regardless of species, in specific areas, including Cold Creek, Lee Canyon, upper Kyle Canyon, and Willow Creek, also requires a permit (Forest Service 1996, p. 31). These items, identified as ''standards,'' are constraints or mitigation measures that must be followed as directed by the General Management Plan (Forest Service 1996, p. 2). Collection permits are not required for activities contracted by, or performed under, agreement with the Forest Service. Additional information obtained since publication of the 12-month finding indicates that collecting has occurred before and after the Mt. Charleston blue butterfly was designated a sensitive species (see Factor B); however, no permits have been issued to date (Service 2012, p. 1–4; Shawnee Hinman, pers. comm. March 22, 2012).

Summary of Factor D

Although Mt. Charleston blue butterfly habitat at the South Loop Trail area is to be afforded protection by prohibitions of the Wilderness Act from many types of habitat-disturbing actions, in fact, habitat-disturbance activities (such as those associated with recreation) have occurred in other locations and may continue to occur. Projects conducted under the current management plans have disturbed habitat, and may occur again in the future.

The current existing regulatory mechanism designed to regulate the collection of Mt. Charleston blue butterflies is not effectively addressing or ameliorating the threat of collection to the Mt. Charleston blue butterfly, because of inadequate enforcement. Specifically, the Mt. Charleston blue butterfly is designated a sensitive species by the Forest Service, and, since 2006, a permit has been required for the noncommercial collection of this subspecies. This requirement provides limited protection, however, because collections of this and other species of butterflies have taken place without permits being issued. As discussed above, we have evidence of nonpermitted collection. Therefore, existing law, regulation, and policy have not prevented the collection of Mt. Charleston blue butterflies (see Factor B, Table 2).

In addition, Mt. Charleston blue butterflies occur in extremely small populations that are limited in distribution and are vulnerable to collections, projects, or actions that impact populations or even relatively small areas of occupied or suitable habitat. Therefore, we conclude that there is an inadequacy in the existing regulatory mechanisms designed to protect the Mt. Charleston blue butterfly from threats discussed in this finding (Factor A and B above).

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

Our analyses under the Endangered Species Act include consideration of ongoing and projected changes in climate. The terms ''climate'' and ''climate change'' are defined by the Intergovernmental Panel on Climate Change (IPCC). ''Climate'' refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2007, p. 78). The term ''climate change'' thus refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2007, p. 78). Various types of changes in climate can have direct or indirect effects on species. These effects may be positive, neutral, or negative and they may change over time, depending on the species and other relevant considerations, such as the effects of interactions of climate with other variables (e.g., habitat fragmentation) (IPCC 2007, pp. 8–14, 18–19). In our analyses, we use our expert judgment to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change.

Global climate projections are informative, and, in some cases, the only or the best scientific information available for us to use. However, projected changes in climate and related impacts can vary substantially across and within different regions of the world (e.g., IPCC 2007a, pp. 8–12). Therefore, we use ''downscaled'' projections when they are available and have been developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species (see Glick *et al.* 2011, pp. 58–61, for a discussion of downscaling). IPCC models are at a landscape scale and project that precipitation will decrease in the southwestern United States (IPCC 2007b, p. 8, Table SPM.2). The IPCC reports that temperature increases and rising air and ocean temperature is unquestionable (IPCC 2007a, p. 4). Site-specific models project temperatures in Nevada are likely to increase as much as 2.8 degrees Celsius (5 degrees Fahrenheit) by the 2050s (TNC 2011, p. 1). Precipitation variability in the Mojave Desert region is linked spatially and temporally with events in the tropical and northern Pacific Oceans (El Niño and La Niña) (USGS 2004, pp. 2–3). In our analyses, we use our expert judgment to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change as it affects the Mt. Charleston blue butterfly.

The Mt. Charleston blue butterfly population has declined since the last high-population year in 1995 (a total of 121 butterflies were counted during surveys of 2 areas at LVSSR on 2 separate dates (Weiss 1996, p. 4)). This subspecies has a limited distribution, and population numbers are likely small. Small butterfly populations have a higher risk of extinction due to random environmental events (Shaffer 1981, p. 131; Shaffer 1987, pp. 69–75; Gilpin and Soule 1986, pp. 24–28). Weather extremes can cause severe butterfly population reductions or extinctions (Murphy *et al.* 1990, p. 43; Weiss *et al.* 1987, pp. 164–167; Thomas *et al.* 1996, pp. 964–969). Given the limited distribution and likely low population numbers of the Mt. Charleston blue butterfly, late-season snowstorms, severe summer monsoon thunderstorms, and drought have the potential to adversely impact the subspecies.

Late-season snowstorms have caused alpine butterfly extirpations (Ehrlich *et al.* 1972, pp. 101–105), and false spring conditions followed by normal winter snowstorms have caused adult and pre-diapause larvae mortality (Parmesan 2005, pp. 56–60). In addition, high rainfall years have been associated with butterfly population declines (Dobkin *et al.* 1987, pp. 161–176). Extended periods of rainy weather can also slow larval development and reduce overwintering survival (Weiss *et al.* 1993, pp. 261–270). Weiss *et al.* (1997, p. 32) suggested that heavy summer monsoon thunderstorms adversely impacted Mt. Charleston blue butterflies during the 1996 flight season. During the 2006 and 2007 flight season, severe summer thunderstorms may have affected the flight season at LVSSR and the South Loop Trail (Newfields 2006,

pp. 11 and 14; Kingsley 2007, p. 8). Additionally, drought has been shown to lower butterfly populations (Ehrlich *et al.* 1980, pp. 101–105; Thomas 1984, p. 344). Drought can cause butterfly host plants to mature early and reduce larval food availability (Ehrlich *et al.* 1980, pp. 101–105; Weiss 1987, p. 165). This has likely affected the Mt. Charleston blue butterfly. Murphy (2006, p. 3) and Boyd (2006, p. 1) both assert a series of drought years, followed by a season of above-average snowfall and then more drought, could be a reason for the lack of butterfly sightings in 2006. Continuing drought could be responsible for the lack of sightings in 2007 and 2008 (Datasmiths 2007, p. 1; Boyd 2008, p. 2). Based on this evidence, we believe that the Mt. Charleston blue butterfly has likely been affected by unfavorable climatic changes in precipitation and temperature that are both ongoing and projected to continue into the future.

High-elevation species like the Mt. Charleston blue butterfly may be particularly susceptible to some level of habitat loss due to global climate change exacerbating threats already impacting the subspecies (Peters and Darling 1985, p. 714; Hill *et al.* 2002, p. 2170). The Intergovernmental Panel on Climate Change (IPCC) has high confidence in predictions that extreme weather events, warmer temperatures, and regional drought are very likely to increase in the northern hemisphere as a result of climate change (IPCC 2007, pp. 15–16). Climate models show the southwestern United States has transitioned into a more arid climate of drought that is predicted to continue into the next century (Seager *et al.* 2007, p. 1181). In the past 60 years, the frequency of storms with extreme precipitation has increased in Nevada by 29 percent (Madsen and Figdor 2007, p. 37). Changes in local southern Nevada climatic patterns cannot be definitively tied to global climate change; however, they are consistent with IPCC-predicted patterns of extreme precipitation, warmer than average temperatures, and drought (Redmond 2007, p. 1). Therefore, we think it likely that climate change will impact the Mt. Charleston blue butterfly and its high-elevation habitat through predicted increases in extreme precipitation and drought. Alternating extreme precipitation and drought may exacerbate threats already facing the subspecies as a result of its small population size and threats to its habitat.

Summary of Factor E

Small butterfly populations have a higher risk of extinction due to random environmental events (Shaffer 1981, p. 131; Gilpin and Soule 1986, pp. 24–28; Shaffer 1987, pp. 69–75). Because of its small population and restricted range, the Mt. Charleston blue butterfly is vulnerable to random environmental events; in particular, the Mt. Charleston blue butterfly is threatened by extreme precipitation events and drought. In the past 60 years, the frequency of storms with extreme precipitation has increased in Nevada by 29 percent (Madsen and Figdor 2007, p. 37), and it is predicted that altered regional patterns of temperature and precipitation as a result of global climate change will continue (IPCC 2007, pp. 15–16). Throughout the entire range of the Mt. Charleston blue butterfly, altered climate patterns could increase the potential for extreme precipitation events and drought, and may exacerbate the threats the subspecies already faces given its small population size and the threats to the alpine environment where it occurs. Based on this information, we find that other natural or manmade factors are affecting the Mt. Charleston blue butterfly such that these factors are a threat to the subspecies' continued existence.

Proposed Determination

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Mt. Charleston blue butterfly. The Mt. Charleston blue butterfly is sensitive to environmental variability with the butterfly population rising and falling in response to environmental conditions (see Status and Trends section). The best available information suggests the Mt. Charleston blue butterfly population has been in decline since 1995, the last year the subspecies was observed in high numbers, and that the population is now likely extremely small (see Status and Trends section). To some extent, the Mt. Charleston blue butterfly, like most butterflies, has evolved to survive periods of unfavorable environmental conditions as diapausing larvae or pupae (Scott 1986, pp. 26–30). The pupae of some butterfly species are known to persist in diapause up to 5 to 7 years (Scott 1986, p. 28). The number of years the Mt. Charleston blue butterfly can remain in diapause is unknown. It has been speculated that the Mt. Charleston blue butterfly may only be able to diapause for two seasons in a row (Murphy 2006, p. 1; Boyd and Murphy 2008, p. 21); however, a longer diapause period may be possible (Murphy 2006, p. 1; Datasmiths 2007, p. 6; Boyd and Murphy 2008, p. 22). The best available information suggests environmental conditions from 2006 to 2009 have not been favorable to the Mt. Charleston blue butterfly (see Status and Trends section).

Surveys are planned for 2012 to further determine the status and provide more knowledge about the ecology of the Mt. Charleston blue butterfly. Threats facing the Mt. Charleston blue butterfly, discussed above under listing Factors A, B, D, and E, increase the risk of extinction of the subspecies, given its few occurrences in a small area. The loss and degradation of habitat due to fire suppression and succession; the implementation of recreational development projects and fuels reduction projects; and the increases in nonnative plants (see Factor A), along with the persistent, ongoing threat of collection of the subspecies for commercial and noncommercial purposes (see Factor B) and the inadequacy of existing regulatory mechanisms to prevent these impacts (see Factor D), will increase the inherent risk of extinction of the remaining few occurrences of the Mt. Charleston blue butterfly. These threats are likely to be exacerbated by the impact of climate change, which is anticipated to increase drought and extreme precipitation events (see Factor E). The Mt. Charleston blue butterfly is currently in danger of extinction because only small populations are known to occupy 2 of 18 historical locations, its status at 8 other locations where it is presumed to be occupied may be nearing extirpation, and the threats are ongoing and persistent at all known and presumed occupied locations.

The Act defines an endangered species as any species that is ''in danger of extinction throughout all or a significant portion of its range'' and a threatened species as any species ''that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.'' We find that the Mt. Charleston blue butterfly is presently in danger of extinction throughout its entire range, based on the immediacy, severity, and scope of the threats described above and its limited distribution of two known occupied locations and eight presumed occupied locations nearing extirpation. The Mt. Charleston blue butterfly thus meets the definition of an endangered species rather than threatened species because (1) It has been extirpated from six locations and eight others are imminently near extirpation; (2) it is limited to only two small populations; and (3) these small populations are facing severe and imminent threats. Therefore, on the basis of the best

available scientific and commercial information, we propose listing the Mt. Charleston blue butterfly as endangered in accordance with sections 3(6) and 4(a)(1) of the Act.

Under the Act and our implementing regulations, a species may warrant listing if it is a threatened or endangered species throughout all or a significant portion of its range. The Mt. Charleston blue butterfly proposed for listing in this rule is highly restricted in its range and the threats occur throughout its range. Therefore, we assessed the status of the subspecies throughout its entire range. The threats to the survival of the subspecies occur throughout the subspecies' range and are not restricted to any particular significant portion of that range. Accordingly, our assessment and proposed determination applies to the subspecies throughout its entire range, and we did not further evaluate a significant portion of the subspecies' range.

Available Conservation Measures

Conservation measures provided to species listed as an endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness and conservation by Federal, State, Tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act requires the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed, preparation of a draft and final recovery plan, and revisions to the plan as significant new information becomes available. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. The recovery plan identifies site-specific management actions that are designed to achieve recovery of the species, objective, measurable criteria that determine when a species may be downlisted or delisted, and methods for monitoring recovery progress. Additionally, recovery plans contain estimated time and costs to carry out measures that are needed to achieve the goal and intermediate steps toward that goal. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (comprising species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. When completed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our Web site (*http://www.fws.gov/endangered*), or from the Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (e.g., restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If this species is listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the State of Nevada would be eligible for Federal funds to implement management actions that promote the protection and recovery of the Mt. Charleston blue butterfly. Information on our grant programs that are available to aid species recovery can be found at: *http://www.fws.gov/grants.*

Although the Mt. Charleston blue butterfly is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or 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.

Federal agency actions within the species habitat that may require conference or consultation or both as described in the preceding paragraph include management and any other landscape altering activities on Federal lands administered by the Forest Service.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. The prohibitions of section 9(a)(2) of the Act, codified at 50 CFR 17.21 for endangered wildlife, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. Under the Lacey Act (18 U.S.C. 42–43; 16 U.S.C. 3371–3378), it is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered and threatened

wildlife species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 for endangered species, and at 17.32 for threatened species. With regard to endangered wildlife, a permit must be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities.

It is our policy, as 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 to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of species proposed for listing. The following activities could potentially result in a violation of section 9 of the Act; this list is not comprehensive:

(1) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the species, including import or export across State lines and international boundaries, except for properly documented antique specimens of the species at least 100 years old, as defined by section 10(h)(1) of the Act;

(2) Introduction of nonnative species or the unauthorized release of biological control agents that compete with or attack any life stage of the Mt. Charleston blue butterfly, such as the introduction of nonnative ant, wasp, fly, beetle, or other insect species to the State of Nevada; or

(3) Unauthorized modification of known occupied or presumed occupied habitats of the Mt. Charleston blue butterfly that support larval host and nectar plants.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**). Requests for copies of the regulations concerning listed animals and general inquiries regarding prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Endangered Species Permits, 2800 Cottage Way, Suite W–2606, Sacramento, California, 95825–1846 (telephone 916–414–6464; facsimile 916–414–6486).

Critical Habitat and Prudency Determination for the Mt. Charleston Blue Butterfly

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

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, we designate critical habitat at the time we determine that a species is an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the 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. We have determined that both circumstances apply to the Mt Charleston blue butterfly. This determination involves a weighing of the expected increase in threats associated with a critical habitat designation against the benefits gained by a critical habitat designation. An explanation of this ''balancing'' evaluation follows.

Increased Threat to the Subspecies by Designating Critical Habitat

Designation of critical habitat requires the publication of maps and a narrative description of specific critical habitat areas in the **Federal Register**. The degree of detail in those maps and boundary descriptions is greater than the general location descriptions provided in this proposal to list the species as endangered. We are concerned that designation of critical habitat would more widely announce the exact location of the butterflies to poachers, collectors, and vandals and further facilitate unauthorized collection and trade. Due to its extreme rarity (a low number of individuals, combined with small areas inhabited by the remaining metapopulation), this butterfly is highly vulnerable to collection. Disturbance and other harm from humans are also serious threats to the butterfly and its habitat (see Factor B above). At this time, removal of any individuals or damage to habitat would have devastating consequences for the survival of the subspecies. These threats would be exacerbated by the publication of maps and descriptions in the **Federal Register** and local newspapers outlining the specific locations of this critically imperiled butterfly. Maps and descriptions of critical habitat, such as those that would appear in the **Federal Register** if critical habitat were designated, are not now available to the general public. Please note that while we have listed area and trail names of historically occupied, presumed occupied, and currently occupied locations, these lists do not indicate specific locations, and the actual currently known occupied locations are a portion of the much larger-scale areas listed in the tables in this document.

We have specific evidence of taking for this subspecies, and the noncommercial collection of butterflies from the Spring Mountains in Nevada is ongoing (Service 2012, pp. 1–5). As a subspecies endemic to the Spring Mountains, the Mt. Charleston blue butterfly is sought by collectors who may not be aware of specific locations where it is found (Service 2012, pp. 1–5). While we are not aware of a specific market for butterflies from the Spring Mountains, there have been collections documented (collected, collected and sold, and collected with intent to sell) in nearby surrounding areas such as the Death Valley National Park, Grand Canyon National Park, and Kaibab National Forest (U.S. Attorney's Office, 1993, pp. 2–3). A great deal of effort is made by collectors to conceal collection activities that may be legal or illegal, so as not to draw attention to the collectors (U.S. Attorney's Office, 1993, pp. 1–86). Some collections in nearby areas have been for commercial purposes (U.S. Attorney's Office, 1993, pp. 1–86).

Additionally, we are aware of a market for butterflies that look similar to the Mt. Charleston blue butterfly, including one of the species proposed for listing due to similarity of appearance. It is clear that a demand currently exists for both imperiled butterflies and those similar in appearance to the Mt. Charleston blue. Due to the small number of discrete populations, overall small metapopulation size, accessibility of some occupied habitats, and restricted range, we find that collection is a threat to the Mt. Charleston blue butterfly and could occur at any time. Even limited collection from the remaining metapopulation would have deleterious effects on the reproductive and genetic viability of the subspecies and thus could contribute to its extinction. Identification of critical habitat would increase the severity of this threat by depicting the exact locations where the subspecies may occur and more widely publicizing this information, exposing the fragile population and its habitat to greater risks.

Identification and publication of critical habitat maps would also likely increase enforcement problems. Although take prohibitions exist, effective enforcement is difficult. As discussed in Factors B, D, and elsewhere above, the threat of collection exists, and areas are already difficult to patrol. Areas within the Mt. Charleston Wilderness are remote and accessible mainly by a steep and long ascent, making the areas difficult for law enforcement personnel to patrol and monitor. Designation of critical habitat could facilitate further use and misuse of sensitive habitats and resources, and create additional difficulty for law enforcement personnel in an already challenging environment. Overall, we find that designation of critical habitat will increase the likelihood and severity of the threats of unauthorized collection of the subspecies and destruction of sensitive habitat, as well as exacerbate enforcement issues.

Benefits to the Subspecies From Critical Habitat Designation

It is true that designation of critical habitat for the Mt. Charleston blue butterfly within the Spring Mountains would have some beneficial effects. Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of that species' critical habitat. Critical habitat only provides protections where there is a Federal nexus; that is, those actions that come under the purview of section 7 of the Act. Critical habitat designation has no application to actions that do not have a Federal nexus. Section 7(a)(2) of the Act mandates that Federal agencies, in consultation with the Service, evaluate the effects of their proposed actions on any designated critical habitat. Similar to the Act's requirement that a Federal agency action not jeopardize the continued existence of listed species, Federal agencies have the responsibility not to implement actions that would destroy or adversely modify designated critical habitat. Critical habitat designation alone, however, does not require that a Federal action agency implement specific steps toward species recovery.

All areas known to support the Mt. Charleston blue butterfly since 1995 are or have been on Federal lands; these areas are currently being managed for multiple uses. Management efforts are reviewed by the Forest Service and the Service to consider Mt. Charleston blue butterfly conservation needs. Because the butterfly exists only as two occupied and eight presumed occupied, small metapopulations, any future activity involving a Federal action that would destroy or adversely modify occupied critical habitat would also likely jeopardize the subspecies' continued existence. Consultation with respect to critical habitat would provide additional protection to a species only if the agency action would result in the destruction or adverse modification of the critical habitat but would not jeopardize the continued existence of the species. In the absence of a critical habitat designation, areas that support the Mt. Charleston blue butterfly will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as appropriate. Federal actions affecting the Mt. Charleston blue butterfly, even in the absence of designated critical habitat areas, will still benefit from consultation pursuant to section 7(a)(2) of the Act and may still result in jeopardy findings. Another potential benefit to the Mt. Charleston blue butterfly from designating critical habitat is that it could serve to educate landowners, State and local government agencies, and the general public regarding the potential conservation value of the area. In addition, designation of critical habitat could inform State agencies and local governments about areas that could be conserved under State laws or local ordinances. However, since awareness and education involving the Mt. Charleston blue is already well underway, designation of critical habitat would likely provide only minimal incremental benefits. Therefore, designation of specific areas as critical habitat that are currently occupied or recently occupied is unlikely to provide measurable benefit to the subspecies.

Increased Threat to the Subspecies Outweighs the Benefits of Critical Habitat Designation

Upon reviewing the available information, we have determined that the designation of critical habitat would increase the threat to the Mt. Charleston blue butterfly from unauthorized collection. At the same time, we have determined that a designation of critical habitat is likely to confer little measurable benefit to the subspecies beyond that provided by listing. Results of consultations on Federal actions affecting the Mt. Charleston blue butterfly, should it be listed under the Act, would likely be no different with critical habitat than without its designation. Overall, we find that the risk of increasing significant threats to the subspecies by publishing location information in a critical habitat designation greatly outweighs the benefits of designating critical habitat.

In conclusion, we find that the designation of critical habitat is not prudent, in accordance with 50 CFR 424.12(a)(1), because the Mt. Charleston blue butterfly is threatened by collection, and designation can reasonably be expected to increase the degree of these threats to the subspecies and its habitat. Critical habitat designation could provide some benefit to the subspecies, but these benefits are significantly outweighed by the increased risk of collection pressure and enforcement problems that could result from depicting, through publicly available maps and descriptions, exactly where this extremely rare butterfly and its habitat occurs.

Similarity of Appearance

Section 4(e) of the Act authorizes the treatment of a species, subspecies, or population segment as an endangered or threatened species if: ''(a) Such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to an endangered or threatened

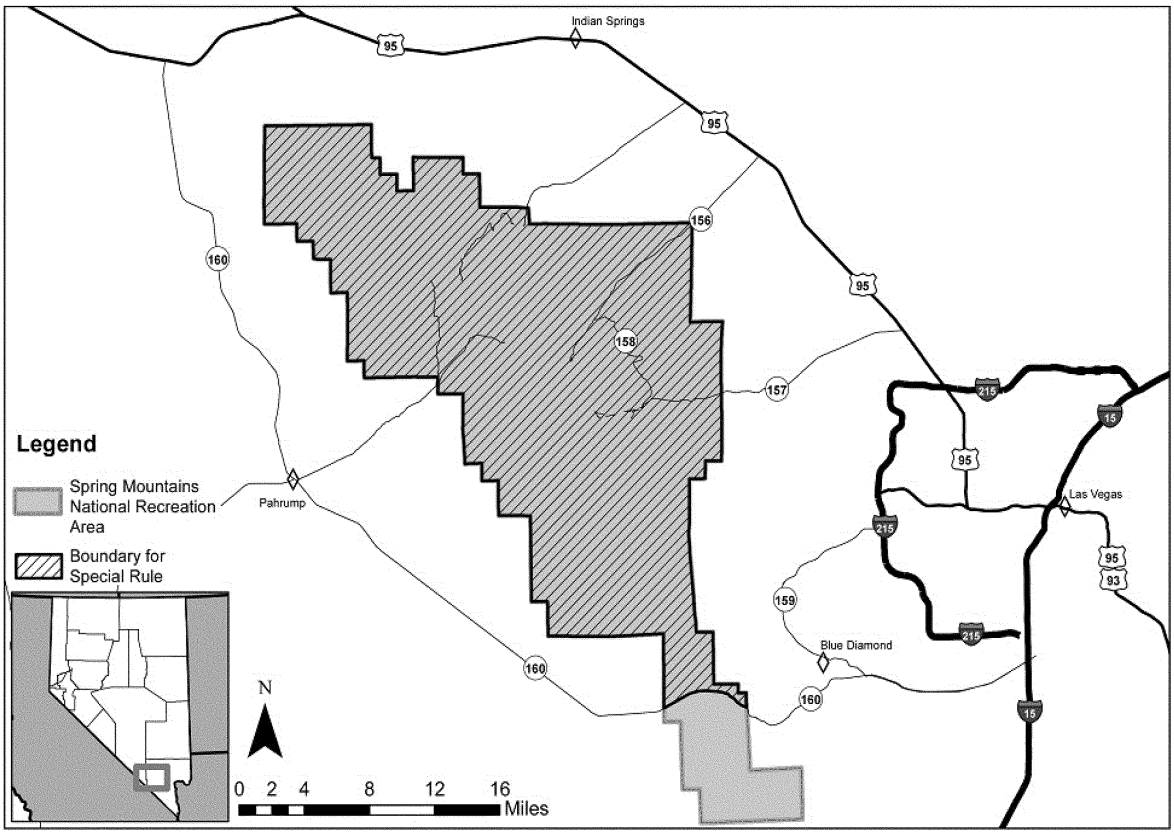
species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.'' Listing a species as an endangered or threatened species under the similarity of appearance provisions of the Act extends the take prohibitions of section 9 of the Act to cover the species. A designation of an endangered or threatened species due to similarity of appearance under section 4(e) of the Act, however, does not extend other protections of the Act, such as consultation requirements for Federal agencies under section 7 and the recovery planning provisions under section 4(f), that apply to species that are listed as an endangered or threatened species under section 4(a). All applicable prohibitions and exceptions for species listed under section 4(e) of the Act due to similarity of appearance to a threatened or endangered species will be set forth in a special rule under section 4(d) of the Act.

There are only slight morphological differences between the Mt. Charleston blue and the lupine blue, Reakirt's blue, Spring Mountains icarioides blue, and the two Spring Mountains dark blue butterflies, making it difficult to differentiate between the species, especially due to their small size. This poses a problem for Federal and State law enforcement agents trying to stem unauthorized collection of the Mt. Charleston blue. It is quite possible that collectors authorized to collect similar species may inadvertently (or purposefully) collect the Mt. Charleston blue butterfly, thinking it to be the lupine blue, Reakirt's blue, Spring Mountains icarioides blue, or one of the two Spring Mountains dark blue butterflies, which also occur in the same geographical area and habitat type and have overlapping flight periods. The listing of these similar blue butterflies as threatened species due to similarity of appearance eliminates the ability of amateur butterfly enthusiasts and private and commercial collectors to purposefully or accidentally misrepresent the Mt. Charleston blue as one of these other species.

The listing will facilitate Federal and State law enforcement agents' efforts to curtail unauthorized possession, collection, and trade in the Mt. Charleston blue. At this time, the five similar butterflies are not protected by the State. Extending the prohibition of collection to the five similar butterflies through this listing of these species due to similarity of appearance under section 4(e) of the Act and providing applicable prohibitions and exceptions in a special rule under section 4(d) of the Act will provide greater protection to the Mt. Charleston blue. For these reasons, we are proposing to list the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and the two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*) as threatened species due to similarity of appearance to the Mt. Charleston blue, pursuant to section 4(e) of the Act on private and public lands within the District Boundary for the Spring Mountains National Recreation Area of the Humboldt-Toiyabe National Forest and north of Nevada State Highway 160 (commonly referred to as the Spring Mountains and Mt. Charleston) (see Figure 1).

Figure 1. Map of the area where the proposed special rule for the Mt. Charleston blue butterfly applies to the five similarity of appearance butterflies.

Map of Where a Special Rule Under Section 4(d) of the Act Applies to Five Similarity-of-Appearance Butterflies



Special Rule Under Section 4(d) of the Act

Whenever a species is listed as a threatened species under the Act, the Secretary may specify regulations that he deems necessary and advisable to provide for the conservation of that species under the authorization of section 4(d) of the Act. These rules, commonly referred to as ''special rules,'' are found in part 17 of title 50 of the Code of Federal Regulations (CFR) in sections 17.40–17.48. This special rule to be promulgated under the designation 50 CFR 17.47, will establish prohibitions on collection of the lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*), or their immature stages, where their ranges overlap with the Mt. Charleston blue butterfly, in order to protect the Mt. Charleston blue butterfly from collection, possession, and trade. In this context, collection is defined as any activity where lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies or their immature stages are, or are attempted to be, collected.

Capture of the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies, or their immature stages, is not prohibited if it is accidental, such as during research, provided the animal is released immediately upon discovery at the point of capture. Scientific activities involving collection or propagation of these similarity-of-appearance butterflies are not prohibited provided there is prior written authorization from the Service. All otherwise legal activities involving the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies that are conducted in accordance with applicable State, Federal, Tribal, and local laws and regulations are not considered to be take under this proposed rule.

Effects of These Rules

Listing the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies as threatened species under the ''similarity of appearance'' provisions of the Act, and the promulgation of a special rule under section 4(d) of the Act, extend take prohibitions to these species and their immature stages. Capture of these species, including their immature stages, is not prohibited if it is accidental, such as during research, provided the animal is released immediately upon discovery, at the point of capture.

There are over 100 species and subspecies of butterflies within the 10 genera, occurring domestically and internationally, that could be confused with the Mt. Charleston blue butterfly, or the 4 similarity of appearance butterflies. We are aware that legal trade in some of these other blue butterflies exists. To avoid confusion and delays in legal trade, we strongly recommend maintaining the appropriate documentation and declarations with legal specimens at all times, especially when importing them into the United States. Legal trade of other species that may be confused with the Mt. Charleston blue butterfly or the five similarity of appearance butterflies should also comply with the import/export transfer regulations under 50 CFR 14, where applicable.

All otherwise legal activities that may involve what we would normally define as incidental take (take that results from, but is not the purpose of, carrying out an otherwise lawful activity) of these similar butterflies, and which are conducted in accordance with applicable State, Federal, Tribal, and local laws and regulations, will not be considered take under this regulation. For example, this special 4(d) rule exempts legal application of pesticides, grounds maintenance, recreational facilities maintenance, vehicle use, vegetation management, exotic plant removal, and burning. These actions will not be considered as violations of section 9 of the Act if they result in incidental take of any of the similarity of appearance butterflies. We think that not applying take prohibitions for those otherwise legal activities to these five similar butterflies (lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies) will not pose a threat to the Mt. Charleston blue because: (1) Activities such as grounds maintenance and vegetation control in developed or commercial areas are not likely to affect the Mt. Charleston blue, and (2) the primary threat to the Mt. Charleston blue comes from collection and commercial trade. Listing the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and the two Spring Mountains dark blue butterflies under the similarity of appearance provision of the Act, coupled with this special 4(d) rule, will help minimize enforcement problems related to collection, and enhance conservation of the Mt. Charleston blue butterfly.

Peer Review

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our listing decision is based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this public comment period on our specific proposed listing, prudency determination, and similarity of appearance proposal.

We will consider all comments and information received during this comment period on this proposed rule during our preparation of a final determination. Accordingly, the final decision may differ from this proposal.

Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register**. Such requests must be sent to the address shown in the **ADDRESSES** section. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Persons needing reasonable accommodation to attend and participate in a public hearing should contact the Nevada Fish and Wildlife Office at 775–861–6300, as soon as possible. To allow sufficient time to process requests, please call no later than 1 week before the hearing date. Information regarding this proposed rule is available in alternative formats upon request.

Nonsubstantive Administrative Action

Included in this proposed rule is text to correct errors in a previously issued rule. When we published the final rule to list the Miami blue butterfly (*Cyclargus thomasi bethunebakeri*) as endangered and to list three additional butterflies as threatened by similarity of appearance (77 FR 20948; April 6, 2012), the last column in the table at 50 CFR 17.11(h) was inadvertently omitted

from the published rule. This column indicates where the public may locate a special rule pertaining to the three species that were listed as threatened by similarity of appearance (cassius blue butterfly, ceraunus blue butterfly, and nickerbean blue butterfly) in title 50 of the Code of Federal Regulations. Therefore, we are providing that information in this proposed rule. We are also proposing a revision to paragraph (a) of that special rule, which is found in 50 CFR 17.47, to make the format of that special rule consistent with this proposed special rule, which will be located immediately following, at 50 CFR 17.47(b). These changes are administrative and nonsubstantive.

Required Determinations

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with listing a species as endangered or threatened under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to NEPA in connection with designating critical habitat under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We determined that there are no tribal lands occupied by the Mt. Charleston blue butterfly at the time of listing. Therefore, this rulemaking, if finalized, will not affect tribal lands.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the Nevada Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this package are the staff members of the Nevada Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, 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), the List of Endangered and Threatened Wildlife, by:

a. Revising the entries for ''Butterfly, cassius blue'', ''Butterfly, ceraunus blue'', ''Butterfly, Miami blue'', and Butterfly, nickerbean blue''; and

b. Adding new entries for ''Butterfly, lupine blue'', ''Butterfly, Mt. Charleston blue'', ''Butterfly, Reakirt's blue'', ''Butterfly, Spring Mountains dark blue'', ''Butterfly, Spring Mountains dark blue'', and ''Butterfly, Spring Mountains icarioides blue'', in alphabetical order under Insects, to read as follows:

§ 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						
*	*	*	*	*	*		*
INSECTS							
*	*	*	*	*	*		*
Butterfly, cassius blue.	*Leptotes cassius theonus.*	U.S.A. (FL), Bahamas, Greater Antilles, Cayman Islands.	NA	T (S/A)	801	NA	17.47(a)
Butterfly, ceraunus blue.	*Hemiargus ceraunus antibubastus.*	U.S.A. (FL), Bahamas.	NA	T(S/A)	801	NA	17.47(a)
*	*	*	*	*	*		*
Butterfly, lupine blue	*Plebejus lupini texanus.*	U.S.A. (AZ, CA, CO, NE, NM, NV, TX, UT), Mexico.	NA	T (S/A)		NA	17.47(b)
*	*	*	*	*	*		*
Butterfly, Miami blue	*Cyclargus thomasi bethunebakeri.*	U.S.A. (FL), Bahamas.	NA	E	801	NA	NA
*	*	*	*	*	*		*
Butterfly, Mt. Charleston blue.	*Plebejus shasta charlestonensis.*	U.S.A. (NV), Spring Mountains.	NA	E		NA	NA
*	*	*	*	*	*		*
Butterfly, nickerbean blue.	*Cyclargus ammon* ..	U.S.A. (FL), Bahamas, Cuba.	NA	T(S/A)	801	NA	17.47(a)
*	*	*	*	*	*		*
Butterfly, Reakirt's blue.	*Echinargus isola*	U.S.A. (AR, AZ, CA, CO, IA, IL, IN, KS, LA, MI, MN, MO, MS, ND, NE, NM, NV, OH, OK, SD, TN, TX, UT, WA, WI, WY), Mexico.	NA	T(S/A)		NA	17.47(b)
*	*	*	*	*	*		*
Butterfly, Spring Mountains dark blue.	*Euphilotes ancilla cryptica.*	U.S.A. (NV), Spring Mountains.	NA	T(S/A)		NA	17.47(b)
Butterfly, Spring Mountains dark blue.	*Euphilotes ancilla purpura.*	U.S.A. (NV), Spring Mountains.	NA	T(S/A)		NA	17.47(b)
Butterfly, Spring Mountains icarioides blue.	*Plebejus icarioides austinorum.*	U.S.A. (NV), Spring Mountains.	NA	T(S/A)		NA	17.47(b)
*	*	*	*	*	*		*

3. Amend § 17.47 by revising the introductory text or paragraph (a) and paragraph (a)(4) and adding paragraph (b) to read as follows:

§ 17.47 Special rules–insects.

(a) Cassius blue butterfly *(Leptotes cassius theonus),* Ceraunus blue butterfly *(Hemiargus ceraunus antibubastus),* and Nickerbean blue butterfly *(Cyclargus ammon).* The provisions of this special rule apply to these species only when found in coastal counties of Florida south of Interstate 4 and extending to the boundaries of the State at the endpoints of Interstate 4 at Tampa and Daytona Beach. Specifically, regulated activities are prohibited in the following counties: Brevard, Broward, Charlotte, Collier, De Soto, Hillsborough, Indian River, Lee, Manatee, Pinellas, Sarasota, St. Lucie, Martin, Miami-Dade, Monroe, Palm Beach, and Volusia.

* * * * *

(4) Collection of the cassius blue butterfly, ceraunus blue butterfly, and nickerbean blue butterfly is prohibited in the areas set forth in paragraph (a).

(b) Lupine blue butterfly (*Plebejus lupini texanus*), Reakirt's blue butterfly (*Echinargus isola*), Spring Mountains icarioides blue butterfly (*Plebejus icarioides austinorum*), and two Spring Mountains dark blue butterflies (*Euphilotes ancilla cryptica* and *E. a. purpura*). The provisions of this special rule apply to these species only when found on private and public lands within the District Boundary for the Spring Mountains National Recreation Area of the Humboldt-Toiyabe National Forest and north of Nevada State Highway 160 (commonly referred to as the Spring Mountains and Mt. Charleston).

(1) The provisions of § 17.31(c) apply to these species (lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and two Spring Mountains dark blue butterflies), regardless of whether in the wild or in captivity, and also apply to the progeny of any such butterfly.

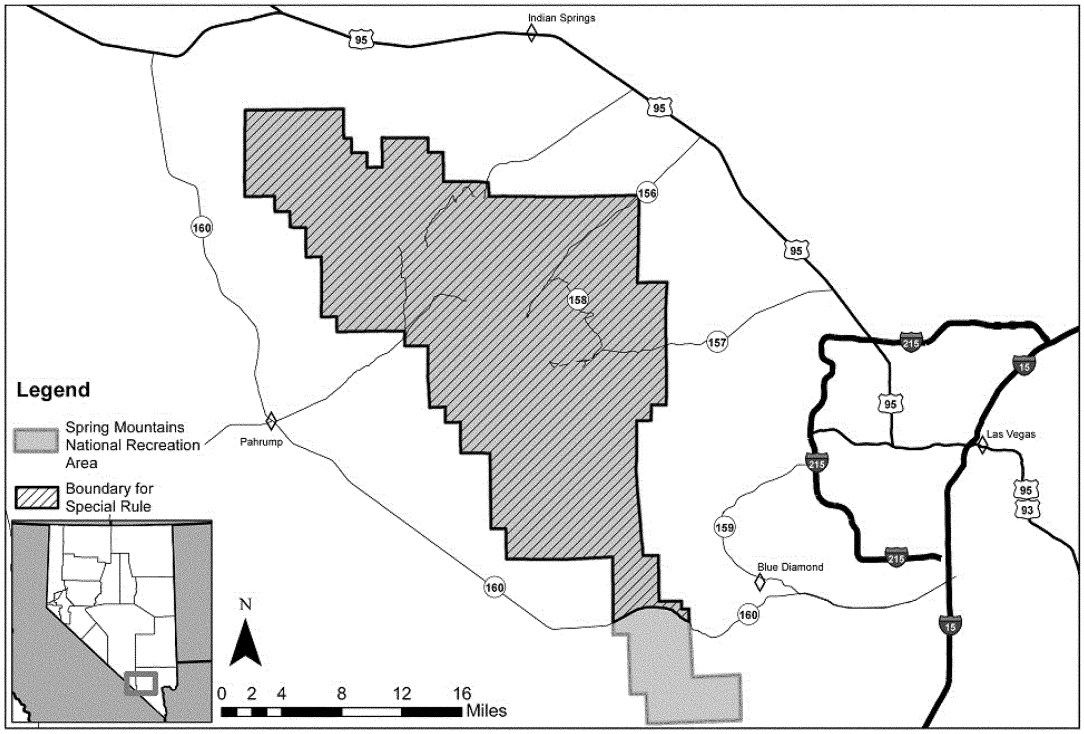
(2) Any violation of State law will also be a violation of the Act.

(3) Incidental take, that is, take that results from, but is not the purpose of, carrying out an otherwise lawful activity, will not apply to the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and two Spring Mountains dark blue butterflies.

(4) Collection of the lupine blue butterfly, Reakirt's blue butterfly, two Spring Mountains dark blue butterflies, and Spring Mountains icarioides blue butterfly is prohibited in the Spring Mountains of Nevada.

(5) A map showing the area covered by this special rule follows:

Map of Where a Special Rule Under Section 4(d) of the Act Applies to Five Similarity-of-Appearance Butterflies



Dated: September 11, 2012.

Michael J. Bean,

Acting Principal Deputy Assistant Secretary for Fish and Wildlife and Parks.

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