DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AT96

Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule To List the Sacramento Mountains Checkerspot Butterfly as Endangered With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; withdrawal.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), withdraw the proposed rule published in the **Federal Register** on September 6, 2001 (66 FR 46575), to list the Sacramento Mountains checkerspot butterfly (*Euphydryas anicia cloudcrofti*) (butterfly) as endangered with critical habitat pursuant to the Endangered Species Act of 1973, as amended (Act). This withdrawal is based on our conclusion that the threats to the species as identified in the proposed rule are not as significant as earlier believed. We base this conclusion on our analysis of current threats. We find that best scientific and commercial data available indicate that the threats to the species and its habitat, as analyzed under the five listing factors described in section 4(a)(1) of the Act, have been reduced below the statutory definition of threatened or endangered. Therefore, we are withdrawing our proposal to list the species as endangered.

ADDRESSES: Supporting documentation for this rulemaking is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road NE., Albuquerque, New Mexico 87113.

FOR FURTHER INFORMATION CONTACT: Susan MacMullin, Field Supervisor, New Mexico Ecological Services Field Office (telephone 505–761–4706, facsimile 505–346–2542).

SUPPLEMENTARY INFORMATION:

Background

It is our intent to discuss only those topics directly relevant to this final listing determination. For more information on the butterfly, refer to the September 6, 2001 (66 FR 46575) proposed rule, and the October 7, 2004 Conservation Plan (69 FR 60178). However, some of this information is discussed in our analyses below, such as the summary of factors affecting the species.

Previous Federal Action

On January 28, 1999, we received a petition from Mr. Kieran Suckling of the Southwest Center for Biological Diversity in Tucson, Arizona, dated November 1998, which requested that we emergency list the butterfly as endangered. The petitioner stated that the species merits listing because of its restricted range, adverse impacts resulting from a proposed United States Department of Agriculture Forest Service (Forest Service) land transfer, improvements to a Forest Service campground, construction of homes and other structures, aggressive nonnative weeds that may be affecting the larval food plants and adult nectar sources, climate change, and livestock overgrazing. The petitioner requested emergency listing due to the perceived immediate threats to the species' continued existence from a proposed land transfer between the Forest Service and the Village of Cloudcroft in the Sacramento Mountains in Otero County, New Mexico.

In accordance with section 4(b)(3)(A) of the Act, we published notice of our 90-day administrative finding in the **Federal Register** on December 27, 1999 (64 CFR 72300), that the petitioner presented substantial information indicating that listing may be warranted, but that emergency listing was not warranted, and commenced a status review. No further action was conducted related to the listing of the butterfly following the publication of the December 27, 1999 finding.

In response to our failure to make a 12-month finding within the statutory time frame allowed by the Act, the Center for Biological Diversity filed a lawsuit. On July 31, 2001, the United States District Court for the District of New Mexico, in *Center for Biological Diversity* v. *Gale A. Norton,* CIV 01–0258 PK/RLP ordered us to complete and submit for publication to the **Federal Register** a 12-month finding for the butterfly within 30 days. On September 6, 2001, we published a proposed rule to list the butterfly as endangered with critical habitat (66 FR 46575). The proposed rule constituted our 12-month administrative finding. As part of the rulemaking process, we also held one public hearing in Alamogordo, New Mexico, on October 18, 2001, and extended the public comment period until December 5, 2001 (66 FR 49158, September 16, 2001). We invited all interested parties to submit comments on the proposed listing rule and proposed critical habitat designation.

In the proposed rule, we determined that the butterfly was in danger of extinction throughout all or a significant portion of its range because much of the remaining suitable habitat and the long-term persistence of the subspecies were threatened. At that time, the known threats included: Commercial and private development, Forest Service projects, fire suppression activities, highway reconstruction, off-highway vehicle use, and overgrazed range conditions. Additional background information is available in the September 6, 2001, proposed rule (66 FR 46575).

In response to growing interest by the local community to conserve the butterfly, the Service began coordination in 2001 with local and Federal partners. Subsequently, we developed the ''Conservation Plan for the Sacramento Mountains Checkerspot Butterfly'' (Conservation Plan) (see ''Conservation Plan'' section below). The Conservation Plan was available for a 30-day public comment period and documents conservation actions that will benefit the species (69 FR 60178, October 7, 2004). We also held a public information meeting in Cloudcroft, New Mexico, on October 13, 2004.

On November 8, 2004, we announced the availability of the draft economic analysis and draft environmental assessment for the proposal to designate critical habitat for the butterfly (69 FR 64710). Section 4 (b)(2) of the Act requires that we consider economic impacts, impacts to national security, and other relevant impacts prior to making a final decision on what areas to designate as critical habitat. We solicited data and comments from the public on these draft documents, as well as on all aspects of our proposal, so that we could consider these in this final determination.

Summary of Comments and Recommendations

In the notices announcing the public comment periods, we requested all interested parties submit comments on the proposed listing and critical habitat designation, as well as the associated draft economic analysis and draft environmental assessment, and information pertaining to the Conservation Plan or management actions that reduce the threats to the butterfly, current status, ecology, distribution, threats, and management/conservation efforts in place. We requested this information in order to make a final listing determination based on the best scientific and commercial data currently available. During the public comment periods, we received written comments from a total of 40 entities, and 22 speakers gave verbal

comments at the public hearing. Substantive information provided in all public comments, written and verbal, either has been incorporated directly into this withdrawal or is addressed below. Similar comments are grouped together by issue.

(1) *Comment:* Commercial and private development is not a threat to the species, because very little is occurring within the range of the butterfly.

Our Response: The economic analysis found that in recent years, approximately 8 to 10 new homes have been constructed annually within the boundary of the proposed critical habitat designation. This trend is expected to continue into the foreseeable future. Based upon this estimate, over the next 20 years, approximately 160 to 200 small-scale residential projects may occur within the boundary of proposed critical habitat for the butterfly. Of these, the economic analysis assumed that 55 to 69 may conduct butterfly surveys because they would be conducted within areas that were proposed as critical habitat and provide butterfly habitat. Eight to 24 of those areas surveyed may be found to be in use by butterflies (for a detailed discussion see Service 2004). This draft economic analysis estimated that the median lot size of these developments was 0.14 hectares (ha) (0.34 acres (ac)), indicating that up to 3.2 ha (8 ac) of suitable butterfly habitat may be impacted from commercial and private development activities (Service 2004). In the proposed rule, we described an additional 4 ha (10 ac) of impacts from a private development on the east side of the Village of Cloudcroft. Thus, we estimate that about 1 percent of the suitable butterfly habitat on private lands (i.e., 18 of 1,196 ac) may be subject to commercial and private development. We do not believe that this level of an impact is a significant threat to the butterfly (see ''Summary of Factors'' section below for a more detailed discussion).

(2) *Comment:* There is no evidence that exotic weeds have any effect on butterfly populations. How is listing the butterfly going to help solve the exotic weed problem?

Our Response: Nearly 30 percent of mountain meadows and over half of some individual meadows were dominated by noxious weeds on the Sacramento Ranger District in 1995 (Forest Service 1995). In 2002, the Forest Service conferenced with us regarding a District-wide noxious weed management program. Under this action, the Forest is using manual methods (e.g., spot applications) to remove noxious weeds within habitat occupied by the butterfly. We anticipated some impacts to host plants will occur, but these were expected to be insignificant (i.e., should never reach the level where incidental take of the butterfly will occur) or discountable (i.e., effects to the butterfly from the action are extremely unlikely to occur) to the butterfly. The Sacramento Ranger District is currently monitoring and treating infestations of nonnative vegetation. These actions have long-term benefits for the butterfly because the threat of nonnative vegetation to the butterfly has been minimized.

(3) *Comment:* If global warming is really a threat to the butterfly, are you going to get the whole planet to change its habits to protect this one butterfly?

Our response: We agree that we cannot address an issue of this magnitude and complexity on a species by species basis. However, we recognized in the proposal that the butterfly may be vulnerable to changes in climate. We also note that this does not imply that the species cannot survive natural events such as drought since the butterfly evolved in an environment subject to periodic atypical weather events.

When a species has specific and limited habitat requirements, it is reasonable to assume that climate shifts occurring more rapidly than evolutionary timeframes might have an impact on the species in the future. Even if we cannot address these issues on a species by species basis, we believe it is important, where possible, to document the extent of any problems, to spur research or collaborative solutions. The U.S. Geological Survey (USGS) and the Service recently launched our Future Challenges Project with a scientific workshop at the National Conservation Training Center. At this workshop, we explored four environmental drivers that will affect our work and missions in the future. We examined the issues of water resources, invasive species, climate change, and biotechnology for their potential long-term impacts in managing biological resources and the systems that support them over the next 10 to 20 years. For example, we know the importance of coordinating research, monitoring, and risk assessment efforts so that human and financial resources are used effectively and directed at the highest priority needs. Closely related is the importance of accessing and sharing research and results so that the best information available is used by all decision-makers.

(4) *Comment:* If listing the butterfly makes it more vulnerable to collection, then why list the subspecies?

Our response: As part of our analysis under section 4(a)(1) of the Act, we disclose and analyze the known or potential threats to species and any related information. In the case of the butterfly, we acknowledged that listing can increase the publicity and interest in a species' rarity, and thus may directly increase the value and demand for specimens. To limit potential overcollecting, the Forest Service issued a closure order restricting the collection of any butterflies without a permit on the Smokey Bear and Sacramento Districts of the Lincoln National Forest (Forest Service 2001). The Forest Service posted the closure order in accordance with their regulations and also published a notice of the closure order in the newsletter of the Lepidopterists' Society (36 CFR 261, Lepidopterists' Society Newsletter 1999, Holland 1999) (see discussion under ''Factor B'' below).

(5) *Comment:* Based upon the fact that one of the only butterfly pupa ever found was attached to the side of a building, it does not appear that developments are a threat to the subspecies.

Our response: The building where the pupa was found occurs in an area where butterfly habitat adjacent to the building was largely intact and is being used by the butterfly. Based on this and other information we have reviewed (see ''Factor A'' section below), it appears that private and commercial development activities can be conducted in such a way as to minimize impacts on the butterfly. For example, the Forest Service has found that the butterfly continues to exist within areas that are developed (Forest Service 2004e).

(6) *Comment:* Recent studies have shown that the butterfly's population and range are actually much larger than previously thought. There is no evidence that the range of the butterfly is shrinking.

Our response: As we noted in the 2001 proposed rule, the Forest Service has been conducting surveys since 1998 to estimate the range of the butterfly. The known range of the butterfly has not been extended since 2000 (Forest Service 2002). We do not have long-term monitoring data to evaluate whether the butterfly's population is increasing, stable, or declining. Still, on a gross scale, our observations indicate that the range of the butterfly has not changed since 2000 (Forest Service 2002b). The Forest Service and Service will continue

to monitor the butterfly population and range (Service 2004b).

(7) *Comment:* No studies have been conducted in the adjacent Mescalero Apache Nation lands, where there could be large numbers of butterflies in their plentiful meadows. The Village of Cloudcroft comments state they have spoken with ''at least two officials from the Mescalero Indian Reservation who assume the butterfly is found on the Mescalero Indian Reservation.''

Our response: We have no information to be able to verify the information that the butterfly is found on the Mescalero Apache Nation lands (see ''Mescalero Apache Nation'' section below). We have provided technical assistance to the Mescalero Apache Nation through field identification and survey techniques that we conducted on Forest Service lands. We offered assistance to the Mescalero Apache Nation in conducting surveys. However, we have no knowledge that there is any occupied butterfly habitat on Mescalero Apache Nation lands or that surveys have ever been completed there.

(8) *Comment:* There is no compelling information that the butterfly's population has been reduced.

Our response: We have no evidence that the butterfly's population is declining (see also comment number 6). Section 4(b)(1)(A) of the Act requires us to make listing determinations on the basis of the best scientific and commercial data available. In this final listing determination, we are withdrawing the proposal to list the butterfly as endangered based upon our analysis of the current threats and our conclusion that the butterfly no longer meets the definition of threatened or endangered.

(9) *Comment:* Both adult and larval foodplants for the butterfly are common and abundant throughout its range. There is no information to indicate that the foodplants are declining from any threats.

Our response: We agree that adult foodplants are common. Larval foodplants have been impacted in some areas, but do not appear to be the sole determinant of the presence or abundance of the butterfly (Pittenger *et al.* 2001). Our current understanding of the threats to the butterfly and its foodplants is fully described under the ''Summary of Factors Affecting the Species'' section below.

(10) *Comment:* The Service needs to conduct an analysis under the National Environmental Policy Act (NEPA) for the listing of the butterfly.

Our response: While we are not required to complete an analysis under NEPA for the listing of the butterfly, we did however, complete a draft environmental assessment under NEPA on the proposed designation of critical habitat, and released it for public comment on November 8, 2004 (69 FR 64710). We believe that this issue is no longer relevant because we are withdrawing our listing proposal.

(11) *Comment: Euphydryas anicia cloudcrofti* is not a unique species or subspecies and was only referred to as *cloudcrofti* for regional identification purposes.

Our response: We disagree. *Euphydryas anicia cloudcrofti* is recognized as a distinct taxonomic subspecies that is a listable entity under the Act if it were to meet the definition of threatened or endangered (16 U.S.C. 1532(16)). The subspecies was isolated by post-Pleistocene climate changes and subsequent changes in the distribution of plant communities (Pittenger and Yori 2003). This spatial isolation resulted in a unique variation that is locally adapted and recognized as a distinct subspecies (Pittenger and Yori 2003, Pratt 2001, Toliver *et al.* 1994, Cary and Holland 1992, Ferris and Holland 1980).

(12) *Comment:* The scientific record indicates there was a specimen found 282 kilometers (km) (175 miles (mi)) north of the Village of Cloudcroft that was identified as this butterfly. The specimen might have been mislabeled, but should be looked into.

Our response: Holland and Ferris (1980) stated that, ''There is a single male of *cloudcrofti* in the American Museum of Natural History collection (O. Buchholz Collection) labeled ''Beulah, New Mexico VI.27.02''. Beulah was a former settlement in the Sapello Valley, San Miguel Co., N.M., some 282 kilometers (km) (175 miles (mi)) north of the Village of Cloudcroft. We suspect that this specimen was mislabeled and actually came from the Cloudcroft area.'' Toliver *et al.* (1994) and Cary (2003) document an undescribed subspecies of *Occidryas* (= *Euphydryas*) *anicia* collected in San Miguel County, New Mexico, in 1882, 1901, 1902, 1949, and 1954. It was also observed in Mora County, New Mexico, in 1995 (Toliver *et al.* 1994) and 2003 (Cary 2003). We conducted surveys within Mora County in 2003 and 2004 during the presumed active season. In 2003, adult butterflies of this undescribed subspecies were photographed by Cary (2003) in Mora County, although New Mexico penstemon (*Penstemon neomexicanus*) or orange sneezeweed (*Helenium hoopesii*), the primary foodplants of the butterfly, have not been observed. We suspect that if the undescribed subspecies still occupies the area, it occurs at very low densities.

Pratt (2000, 2001), who conducted extensive surveys throughout New Mexico, including the Sacramento Mountains (Pratt 2001a, 2001b, 2001cF), found that the butterfly is highly isolated from other populations of *Euphydryas anicia* and, after reviewing the taxonomic relationships within *Euphydryas* described by Brussard *et al.* (1989), he believes that *cloudcrofti* may be its own separate species. Genetic studies have not been conducted between *cloudcrofti* and other *Euphydryas anicia* populations, including the undescribed subspecies in Mora County, New Mexico. Because the known foodplants of the Sacramento Mountains checkerspot butterfly have not been documented outside of Otero and Lincoln Counties, we do not believe that the undescribed subspecies is the same as the Sacramento Mountains checkerspot butterfly. This conclusion is consistent with previous interpretations of other lepidopterists who are familiar with and have observed these butterflies (Toliver *et al.* 1994, Holland and Ferris 1980).

(13) *Comment:* Was the proposed rule peer reviewed?

Our response: Yes. In September 2001, we sent the proposed rule to six peer reviewers. Only one responded; this peer reviewer supported the proposed listing.

(14) *Comment:* Where have butterfly festivals been organized and are there any economic benefits of such festivals?

Our response: We are aware of many butterfly festivals organized across the country. In fact, Mission, Texas, has been holding a festival for eight years (*http://www.texasbutterfly.com/*). Similarly, there are large butterfly festivals in Paris, Arkansas (*http://www.butterflyfestival.com/*), Haynesville, Louisiana (*http://www.claiborneone.org/haynesville/butterfly.html*), and celebrations for listed butterflies such as the Karner blue butterfly festival in Black River Falls, Wisconsin *http://www.downtownblackriverfalls.com/karner_blue_butterfly_fest.htm*). These festivals can draw thousands of participants and provide a large economic benefit to the community.

The Service and the Albuquerque Biological Park organized an overnight trip to Cloudcroft to view the butterfly and other sensitive species. This trip entailed about 20 people staying in The Lodge overnight and visiting local businesses. The Albuquerque Biological Park conservatively estimated that their group spent a minimum of $3,500 in Cloudcroft businesses.

(15) *Comment:* Cattle grazing has occurred for over 100 years in the Sacramento Mountains and is not threatening the butterfly.

Our response: We agree with this statement. Livestock grazing was recognized as a threat to the species in 2001. We have reevaluated this conclusion in light of recent information from the Forest Service and others (*e.g.*, Forest Service 2001, 2004b, 2004i, Service 2004a, 2004b, Weiss 1999). Historic and current levels of grazing are not a significant threat to the species. The potential threat of grazing is further reviewed under the ''Summary of Factors Affecting the Species'' section below. We conclude that current and future levels of grazing have not and will not result in significant adverse effects to the butterfly because grazing monitoring and subsequent management changes (reducing number of livestock, moving to other pastures, etc.) ensure that utilization levels are met and foodplants for the butterfly are being maintained.

(16) *Comment:* The Forest Service indicated that there is no potential risk to the butterfly related to the control of tussock moth (Orgyia pseudotsugata) as it was described in the proposed rule. They stated that any future proposed treatments would need to be analyzed under NEPA, and the suggestion that carbaryl or *Bacillus thuringensis* would be used to control these or other forest insects was premature.

Our response: We agree and have revised our analysis to reflect this new information. See ''Summary of Factors Affecting the Species'' section below for further details.

(17) *Comment:* The Forest Service indicated that all of their activities, including for example wildland urban interface (WUI) treatments, land exchanges, recreational improvements, and special use permits are currently evaluated for effects on the butterfly and its habitat. The Forest Service has implemented these conservation measures through modified project design features, avoidance of the species and/or habitat, or implemented mitigation measures such as surveys or seasonal restrictions. The butterfly and its habitat are receiving adequate protection and management on the Lincoln National Forest as the Regional Forester designated the butterfly a Sensitive Species, and, as such, will continue to be analyzed in all applicable NEPA documents.

Our response: We agree with the comments, and we are withdrawing our proposal to list the species (see ''Summary of Factors Affecting the Species'' section below), in part, due to this effort and designation from the Forest Service.

(18) *Comment:* The Forest Service indicated that the majority of range conditions within meadows used by the butterfly are in satisfactory condition and are providing the necessary host plants for the species. Host plants have likely increased or at minimum remained stable.

Our response: We assumed in our proposed rule that butterfly abundance was related to density of foodplants. Although the presence of foodplants is a necessary component of suitable butterfly habitat, it appears that foodplant density has little influence on number of adult butterflies (Pittenger *et al.* 2001). We agree that range conditions within meadows used by the butterfly are providing the necessary host plants for the species (see ''Summary of Factors Affecting the Species'' section below). It is also unknown why the butterfly is not present in meadows where larval and adult foodplant density is high (Pittenger *et al.* 2001, Pittenger and Yori 2003). Further research is needed to clarify the attributes of butterfly habitat.

(19) *Comment:* Female butterflies lay hundreds of eggs. Therefore, biologically it does not make sense that if a few larvae get crushed by recreation or other activities, it would cause the butterfly population to decline or lead to its extinction.

Our response: We have also reached this conclusion (see our response to Comment 24 below). The proposed rule was a comprehensive document that analyzed a myriad of potential threats. At that time, we indicated the potential significance of many of the impacts had not been quantified. After further evaluation, we believe that the magnitude of each potential threat is a necessary component to accurately evaluate the potential of each threat. The commentor is correct that in a functioning metapopulation, as we believe is the case here, the loss of a few butterflies will not jeopardize the continued existence of the species.

(20) *Comment:* What level of impact triggers an ''adverse effect'' determination for the butterfly from the Service.

Our response: If the species were listed under the Act, the level of impact that triggers an adverse effect determination would be the same as any other species under section 7 of the Act. Federal agencies are required to consult with us under section 7 of the Act when activities with a Federal nexus (*i.e.*, when a Federal agency is funding, permitting, or in some way authorizing a project) may affect a species or its designated critical habitat. The Federal action agency is required to make the determination as to whether their project may affect a species or designated critical habitat. If the anticipated effects from a proposed action are insignificant, discountable, or entirely beneficial, then we concur that the activity is not likely to adversely affect the species or its critical habitat (*i.e.*, an informal consultation). Conversely, those activities that are likely to result in incidental take or adversely affect the species or its critical habitat require formal consultation.

(21) *Comment:* Based upon Forest Service observations following the Scott Able fire in 2000, catastrophic wildfire is not a threat for the butterfly. The species lives in meadows, which are usually little affected from wildfires within mixed conifer fuel type.

Our response: The information from the Scott Able fire indicates that the majority of areas burned were within the mixed conifer forest (Forest Service 2001). Meadows were essentially passed over by this wind-driven fire and did not sustain any high burn intensities (Forest Service 2001). In fact, within the meadows that burned, fire intensities were generally light (Forest Service 2001) (see Factor A below).

Recovery of butterfly populations after fires is a function of the species' ability to gain access to suitable postfire habitats and their ability to rebuild numbers from survivors or colonizers (Swengel 2001). We expect that the effects of fire on butterfly habitat quality and availability will vary based on the severity and spatial configuration of the fire, the response of foodplants to burn severity, and suitability of postfire vegetation. While we have a good understanding of the general factors that influence fire behavior, the way in which a fire behaves on the landscape is highly complex. As a result, fire behavior and severity can be understood and predicted in general terms, but exact predictions are not possible (Forest Service 2004). For example, butterfly habitat quality may either be enhanced or diminished by wildfire. It is probable that a fire of moderate severity could enlarge existing meadows or create suitable corridors between occupied areas.

As described below, the Sacramento Ranger District and surrounding area has been identified as a high-priority area for fuel treatments within New Mexico. As a result, the Lincoln National Forest has increased funding and implemented projects across the Sacramento Ranger District to reduce the threat of wildfire (Forest Service 2001). In their comments, the Forest

Service reviewed the last 50 years of fire activity on the Sacramento Ranger District, the impact of recent fuels-reduction projects, and the potential impacts to meadows from fires. They concluded that the potential impacts to the butterfly from catastrophic wildfire were low (Forest Service 2001). We agree with this conclusion as further explained in the ''Summary of Factors Affecting the Species'' below.

(22) *Comment:* The Forest Service stated that the only road construction project planned within butterfly habitat is associated with campground reconstruction activities.

Our response: We agree and have revised our analysis to reflect this new information.

(23) *Comment:* The Forest Service commented that recent and future developed recreation site rehabilitation projects were conducted to provide for public safety, accessibility, and compliance with the American with Disabilities Act, resource protection, and to improve campground image (color, style, etc). They indicated that the redesign of all campgrounds within meadows will result in a net reduction in camping and picnicking capacity by reducing the number of units (*i.e.*, camp sites and picnic tables).

Our response: We agree and have revised our analysis to reflect this new information.

(24) *Comment:* The Forest Service contends that the annual mountain bike race is a recreational use that does not adversely affect the butterfly because the race occurs in mid-May prior to the growing season of the larval host plants.

Our response: Although we believe that the annual mountain bike race has the potential to adversely affect (and incidentally take) post-diapause larvae, the significance of this threat is considered low. Some larvae may be crushed and killed, but we would expect less than 1 ha (2.4 ac) of occupied habitat (i.e., trails through occupied meadows) to be impacted from this activity to occur, which would not affect the metapopulation dynamics of the species (e.g., the linear nature of trails would not preclude butterfly movement and recolonization) (see ''the ''Summary of Factors Affecting the Species'' below).

(25) *Comment:* Was the model used to estimate the amount of existing butterfly habitat developed by people qualified to do this kind of work? Was the model peer reviewed?

Our response: As noted in the proposed rule, the Forest Service used a Geographic Information System (GIS) to model the extent of existing butterfly habitat (Forest Service 1999b). The model was developed to focus survey efforts within areas thought to provide butterfly habitat. It is our understanding that this model was developed by biologists and cartographers. The information upon which the model was built was identified in the proposed rule. We asked our peer reviewers to review any aspect of the proposed rule, which included the model and estimate of existing butterfly habitat. No one commented on this aspect of the proposal. This model has been refined since 2001 (Forest Service 2004e) (see ''Summary of Factors Affecting the Species'' section below). We consider the refined model to be the best scientific and commercial information available for estimating existing butterfly habitat. As we have found, the model provided no certainty that the potential habitat may be occupied (e.g., the 1999 model overestimated potential butterfly habitat by about 50 percent) (see ''Summary of Factors Affecting the Species'' section below).

(26) *Comment:* The proposed rule states that the construction of roadways is believed to have historically eliminated or reduced the quality or quantity of butterfly habitat, and cites Pittenger (1999). Nowhere in the reference cited is there any discussion or mention of the historic effect of road construction on the quantity or quality of habitat for the butterfly.

Our response: Our analysis used this citation because it documented the impact caused by recent road construction activities on the quantity and quality of butterfly habitat. On October 27, 2004, we visited this area and found that foodplants have naturally been reestablished during the 2004 growing season. Based upon our observation of a recently colonized site (Service 2004d), we believe the area impacted from the recent road construction activities may be utilized by the butterfly as soon as next year (see ''Summary of Factors Affecting the Species'' section below).

(27) *Comment:* Erroneous information is provided in the proposed rule regarding the severity of impacts of the New Mexico Highway 130 reconstruction project at Deerhead Campground. The project did not result in the extirpation of the butterfly from Deerhead Campground, because it still exists in the area.

Our response: The proposed rule did not state that butterflies were extirpated from Deerhead Campground. The rule identified that in 1998 and 1999, butterflies were located within the construction footprint (Forest Service 1999a, 1999b; 1999d.); however, none were observed during surveys in 2000 and 2001. No butterflies have been observed within the construction footprint since 1999. However, the commentor is correct, in that, butterflies are still occupying other parts of Deerhead Campground. As noted above in our response to comment 26, this area has been naturally revegetated with foodplants during 2004.

(28) *Comment:* There is little to no evidence to back the claim in the proposed rule that overgrazing has occurred in the valleys of the Sacramento Ranger District of the Lincoln National Forest over the last several decades.

Our response: Much of the information we reviewed in 2001 was from the Sacramento Grazing Allotment. We had assumed in the proposed rule that the continuing heavy grazing (i.e., above 35 percent forage utilization) on this allotment was impacting the butterfly. However, further examination of information from the Forest Service demonstrated that the butterfly and its proposed critical habitat are only found within a portion of the Nelson Pasture on the summer unit of the Sacramento Allotment, which does not receive any cattle use because of topography and lack of water (Service 2004a). For the other allotments within the range of the butterfly, we conclude that current and future grazing will not result in significant adverse effects to the butterfly because the Forest Service ensures that utilization levels are met and foodplants are maintained (see ''The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range'' section).

(29) *Comment:* Has New Mexico penstemon (*Penstemon neomexicanus*) been found outside the geographic range of the butterfly?

Our response: Yes. There are areas (e.g., Russia Canyon and Rawlins Canyon) where New Mexico penstemon is locally common, but are apparently unoccupied by the butterfly since it has not been located during surveys in these areas (Pittenger et al. 2001, Forest Service 2000, 2000a, Bleakly 1998, 1999). Additionally, the butterfly's host plants are known to occur within portions of the Smokey Bear Ranger District, in the vicinity of Ruidoso, New Mexico, just north of Mescalero Apache Nation lands (Forest Service 2000a). However, the butterfly has not been documented north of the Sacramento Ranger District (Forest Service 2000a).

(30) *Comment:* The information submitted in the proposed rule does not comply with the Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Dissemination by Federal

Agencies issued by Executive Office of the President, Office of Management and Budget (OMB) (Information Guidelines) (66 FR 49718).

Our response: These guidelines require that agencies issue their own quality guidelines to ensure objectivity, utility, and integrity of information to be disseminated (66 FR 49718). The proposed rule was published prior to the October 1, 2001, effective date of the Information Guidelines. However, we used the best scientific and commercial data available in the formulation of our proposed rule as required by the Act. Additionally, we have reviewed this final determination and the rulemaking process that we have followed for this action relative to the current guidelines and have determined that this determination is in compliance with the parameters established therein.

(31) *Comment:* We received a variety of comments regarding the proposed critical habitat, the draft economic analysis, and draft environmental assessment.

Our response: Because we are withdrawing the proposal to list the butterfly, we are no longer proposing critical habitat for this subspecies. As such, the draft economic analysis and draft environmental assessment are no longer applicable, and we are not addressing comments on those documents in this determination.

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for adding species to the Federal list of endangered and threatened species. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act. The following analysis examines the listing factors and their application to the butterfly. Within this section we evaluate new data received since the proposed rule, projects that were completed since 2001, and the related conservation measures that reduce present and future threats to the species.

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

Several categories of activities have the potential to affect the butterfly and its habitat, including commercial and private development, Forest Service activities, fire suppression and wildfire, highway and forest road reconstruction, recreational impacts, domestic livestock grazing, and nonnative vegetation. This section of the rule presents information for each of the factors affecting the butterfly and its habitat, followed by a summary of how formalized conservation efforts eliminate or reduce adverse effects.

Commercial and Private Development

In 2001, commercial and private development was identified as a significant threat to the butterfly (66 FR 46575). The butterfly likely occupies a significant amount of private lands since habitat used by the butterfly occurs on Forest Service land that is immediately adjacent to these areas and the elevational and habitat characteristics are contiguous (Forest Service 2000a, 2004e).

The proposed rule estimated that there were less than 2,104 ha (5,198 ac) of potential butterfly habitat, composed of 1,034 and 1,070 ha (2,553 and 2,645 ac) on private and Forest Service lands, respectively. A refinement of the original data was conducted by the Forest Service in 2004 (Forest Service 2004e). These current data are similarly based upon focused surveys to ground truth the 1999 GIS model that we detailed in our proposed rule, but include only those lands within the proposed critical habitat boundary. Nevertheless, we are not aware of any butterfly occurrences outside of the previously known range of the butterfly, which was fully enclosed in the proposed critical habitat boundary. The refined estimate is that 1,096 ha (2,709 ac) of suitable butterfly habitat exist on Forest Service and private lands, with 484 ha (1,196 ac) occupied by the butterfly on Forest Service lands and 314 ha (777 ac) occupied on private lands (Forest Service 2004e). About 298 ha (736 ac) of the 1,096 ha (2,709 ac) of suitable habitat are unoccupied, with 79 ha (194 ac) on Forest Service lands and 219 ha (542 ac) on private lands (Forest Service 2004e). This current estimate is the best information we have regarding the range and distribution of the butterfly.

We also mapped meadows within the mixed-conifer forest at approximate elevations between 2,450 and 2,750 meters (8,000 to 9,000 feet) elevation on the Mescalero Apache Nation lands, but have no data to indicate whether these lands are occupied by the butterfly (see ''Mescalero Apache Nation'' section below). As detailed in response to comment 7 above, we have no knowledge that surveys have ever been completed there.

Our economic analysis found that in recent years, approximately 8 to 10 new homes have been constructed annually within the known range of the butterfly, which includes lands within the limits of the Village of Cloudcroft and areas outside these limits in Otero County (Service 2004). Although development is no longer being encouraged by the Village of Cloudcroft due in part to the lack of water for residential use (Service 2004b, Village of Cloudcroft 2001), there are two existing subdivisions with developable lots available (Service 2004). The economic analysis estimated that over the next 20 years, approximately 160 to 200 small-scale residential projects may occur within the butterfly's critical habitat boundary. Of these, 8 to 24 private lots within the range of the butterfly (i.e., the Village of Cloudcroft or Otero County) may be found to be in use by butterflies (Service 2004). These estimates, in conjunction with the median lot size of 0.14 ha (0.34 ac), indicates that up to 3.2 ha (8 ac) of suitable butterfly habitat may be impacted from commercial and private development activities over the next 20 years (Service 2004). In the proposed rule, we identified that a subdivision on the east side of the Village of Cloudcroft was currently developing and eliminating approximately 4 ha (10 ac) of suitable, and likely currently used, butterfly habitat. Depending on the location and configuration of each development, these activities have the potential to threaten the butterfly. Nevertheless, this amount is not a significant threat to the butterfly because it represents about 1 percent of the suitable butterfly habitat on private lands (i.e., 7.3 of 484 ha (18 of 1,196 ac)).

In the proposed rule we stated that a 9-hole golf course was being discussed as a community recreational goal and objective for the Village of Cloudcroft in 2005 (Cloudcroft Area Sustainability Team 1995). Based upon comments related to the proposed rule from the Village of Cloudcroft (2001), we found that this information is not accurate. The Village's view on development has changed, due in part to a lack of groundwater (Service 2004b). For example, in August 2004, a water crisis was declared in Cloudcroft and drinking water was being hauled to the Village (Shinabery 2004a, 2004b). They no longer intend to develop a golf course (Village of Cloudcroft 2001, Service 2004b).

Since the proposed rule, we have also received updated information on the Village of Cloudcroft land transfer, which is located in areas adjacent to the Village. In the proposed rule, we found that the land transfer would provide additional land for commercial, industrial, educational, and recreational expansion for the Village of Cloudcroft, further degrading or eliminating suitable

habitat and restricting the movement of butterflies between local populations. The Forest Service has completed NEPA compliance and signed a decision notice to allow the Village of Cloudcroft to purchase 33 ha (81 ac) of National Forest lands pursuant to the Townsite Act (Forest Service 2001a, 2001b). The land transfer includes five parcels of land totaling 33 ha (81 ac). Within these parcels butterflies have been observed in parts of parcels 3, 4, and 5. The portion of these parcels that is considered to be butterfly habitat amounts to about 1.2 ha (3 ac) of the 33 ha (81 ac) being offered to the Village (Forest Service 2001a, 2001b, Service 2004, 2004d). The remaining 32 ha (78 ac) are currently not suitable butterfly habitat (Forest Service 2001a, 2001b). To date, the Village has not purchased the five parcels of land; however, the majority of these parcels are intended for use as greenbelts and buffers and not development as we had described in our proposed rule (Forest Service 2001a, 2001b, Service 2004b). The use of these areas as greenbelt would be consistent with the Village of Cloudcroft's local zoning regulations related to open space. The Village of Cloudcroft's Village Code document (Chapter 7 of the Village Code—Greenbelt Zones Use Regulations G–1 Zone), states that Greenbelt Zones shall consist of open space with no structures or commercial signs allowed (Service 2004). In addition, the zoning regulations prohibit overnight parking or camping within greenbelt zones. The Village of Cloudcroft has stated its intention to keep all new land annexed from the Forest Service as greenbelt (Service 2004b). It is our understanding that greenbelt areas are not generally mowed by the Village of Cloudcroft (Forest Service 2004f). Because of the small scale of potential impacts involved in this land transfer (less than 1.2 ha (3 ac)), the new information on the species' ability to recolonize areas (see discussion on the edges of the football field below), and the intention to keep these parcels as greenbelt, we now conclude that the incremental impact of this land transfer when added to other past, present, or reasonable foreseeable future actions (i.e., cumulative effects) on the butterfly's long-term persistence is not significant.

The history of habitat occupied by the butterfly (e.g., Deerhead Campground, Pines Campground) could be characterized by frequent, often major, impacts to soils and vegetation. For example, impacts from logging operations and infrastructure were historically present throughout the Sacramento Mountains (Kaufmann et al. 1998, Glover 1984). In fact, a railroad was constructed in June 1900 and operated until 1947 through the area where present-day Deerhead Campground is located (NMSHTD 2001; Glover 1984). The butterfly continues to be found at this locality. Thus, it appears that the butterfly and its foodplants can tolerate a certain amount of natural and man-made disturbances.

We previously identified that heavy clearing or mowing of native vegetation on improved (i.e., with existing structures) or unimproved private lands, to reduce the threat of wildfire or improve the residential appearance, could eliminate larval or adult food plants and/or localities that are used by the butterfly. Additionally, we found that the conversion of native landscapes to nonnative vegetation (e.g., lawns or gardens) could fragment butterfly localities, eliminate movement corridors, and cause additional loss of suitable habitat (Wood and Samways 1991, Holland 2001). Although these activities have the potential to reduce blocks of native vegetation to fragments, creating a matrix of native habitat islands, we have no specific information to conclude that these activities are significantly threatening the butterfly.

The Village of Cloudcroft is situated on approximately 324 ha (800 ac), and is surrounded by National Forest lands (Forest Service 2001b). The character of the Village is largely residential, with cabins, houses, and business serving the local vacation and tourist-based economy. Within the butterfly habitat of the Village of Cloudcroft, the native vegetation is generally not cleared or mowed because it adds to the rustic charm of the area. The New Mexico State Highway Transporation Department (NMSHTD) is responsible for maintaining the rights-of-way within Highways 82, 244, and 130. Much of the potential butterfly habitat within these rights-of-way is too steep for mowing or mowing is not needed (Forest Service 1999b). The NMSHTD generally occurs outside of the known range of the butterfly Dry Canyon eastward to Mayhill, but may occasionally mow the vegetation within the known range of the butterfly adjacent to Highways 82, 244, and 130, if the rights-of-way are not too steep (Forest Service 1999b, 2004f). The Forest Service found there are at least 3 areas within the Village of Cloudcroft that are occupied by the butterfly, including the edges of the existing golf course, residential areas along the southeast, and adjacent to Highway 82 (Forest Service 2004e). As noted below, we found another area (i.e., the edges of the football field) that was not butterfly habitat and had been recently cleared of trees, has been colonized this year (Service 2004d). This has been reported elsewhere for butterflies in the genus *Euphydryas* (Ehrlich and Hanski 2004). For example, freshly created habitats on road verges, railway embankments, and wide forest tracks (associated with timber extraction) have been colonized by many species of butterfly (see Thomas 1994). These areas are likely to provide connectivity through ''stepping stones'' to other occupied butterfly localities (Thomas et al. 1992).

Recently, we also found that butterfly habitat has been created adjacent to a football field that was part of a 1996 land purchase (Service 2004d, Forest Service 2001a, 2001b). In an area adjacent to the football field that was previously forested and not considered butterfly habitat (Forest Service 2001a), we found larvae in diapause. During surveys in October 2004, we found New Mexico penstemon and valerian (*Valeriana edulis*) growing abundantly throughout the area and, based upon the presence of larvae, conclude that reproduction occurred in this area during 2004 (Service 2004d). This indicates that larval foodplants were naturally reestablished following forest clearing and soil disturbance. The butterfly subsequently colonized the area. This information demonstrates the resiliency of the butterfly and its footplants, and their ability to colonize new habitat. Based upon our assessment of these data, it appears that habitat connectivity is still provided through much of the land within the range of the butterfly. Thus, heavy clearing or mowing of native vegetation cannot be considered a significant threat presently or in the foreseeable future.

Summary

As evidenced by the foregoing discussion of occupied butterfly habitat on private lands within the Village of Cloudcroft and Otero County, it has been demonstrated that the butterfly can co-exist within developed areas. The potential threat to the butterfly from private and commercial development is not as significant as we originally believed. For example, we estimate that no more than 7.3 of 484 ha (18 of 1,196 ac) of suitable butterfly habitat on private land have the potential to be impacted from development activities. The Village of Cloudcroft will also continue to follow their greenbelt zoning regulations, thus limiting potential impacts within butterfly habitat on newly purchased/acquired land. This new information indicates commercial and private development is

no longer a substantial threat to the species currently or in the foreseeable future within the Village of Cloudcroft and Otero County.

Forest Service Activities

In the proposed rule we concluded that those Forest Service projects listed below, that are within the known range of the butterfly, had the potential to adversely affect the butterfly. Since the time of the proposal, the Forest Service has eliminated some proposed projects (*e.g.*, the construction of a new administrative building) in habitat used by the butterfly (Forest Service 2001, 2003a). They have also taken actions to protect and manage the butterfly, including instituting a butterfly closure order (see discussion below), fencing occupied butterfly habitat, and conducting butterfly surveys to determine range and occupancy (Forest Service 1999a, 1999b, 1999h, 2000a, 2000d, 2004). These actions have eliminated or lessened threats to the species and have been beneficial for increasing our knowledge of this species.

Below, we provide a brief summary of projects that have gone through conferencing as required for proposed species under section 7 of the Act. The next section includes an update to those projects previously identified as threats to the species: (1) The capital improvement projects for three campgrounds; (2) a new power line, service road, and corridor; (3) livestock grazing activities in several allotments, one of which (Sacramento Allotment) encompasses over 44,921 ha (111,000 ac); (4) a land transfer to the Village of Cloudcroft, which was analyzed above; and fire suppression and wildfire.

We have a good history of conferencing with the Forest Service under section 7 of the Act on activities that may affect the butterfly. Thus, we can describe the kinds of actions that have undergone informal and formal conferencing. For example, we have found that many potential threats anticipated in the proposed rule resulted in insignificant and discountable effects for the butterfly (Service 2002, 2004a). These include: noxious weed management, reconstruction of Fir Campground, some wildland urban interface fuels management projects, and construction of the new Forest Service administrative building (Service 2002, 2003a, Forest Service 2003a). Additionally, the majority of formal conferences that have anticipated incidental take of butterflies have found that short-term impacts will occur, but the overall project will result in long-term benefits for the species (Rio Peñasco II, Pines Campground reconstruction), or that impacts to occupied habitat will not affect the metapopulation dynamics of the species (Service 2001a, 2002b, 2002c, 2004e).

To date, six projects have undergone formal conferencing for the butterfly and its proposed critical habitat. The projects with anticipated take include: (1) Cloudcroft Water Wells (2–22–02–F–012; 1.5 ha (3.7 ac) of occupied habitat impacted); (2) Genetics Study (2–22–02–F–667; 100 pre-diapause larvae collected); (3) Mark-release movements study (2–22–02–F–470; 15 adult butterflies harmed, unlimited number harassed); (4) Rio Peñasco II vegetation management project (2–22–02–F–397; 14.7 ha (36.4 ac) of occupied habitat impacted); (5) Pines Campground Reconstruction project (2–22–03–F–0061; 4.2 ha (10.5 ac) of occupied habitat impacted); (6) Village of Cloudcroft Apache and Powerline water wells (2–22–04–F–721; less than 1.2 ha (3 ac) of occupied habitat impacted). We are also currently conferencing on two additional projects: (1) The reinitiation of the Rio Peñasco II vegetation management project that will likely impact an additional 13 ha (33 ac) of occupied butterfly habitat; and (2) a proposed elk study that will impact about 2.4 ha (6 ac) of occupied habitat. In all of our conferences, we concluded that the actions, as proposed, were not likely to jeopardize the continued existence of the butterfly and are not likely to destroy or adversely modify proposed critical habitat.

Campground Projects

In 1998, recreation managers and engineers of the Lincoln National Forest and the Forest Service's Southwest Regional Office reviewed improvements needed throughout existing developed campgrounds of the Sacramento Ranger District. In 1998, all phases of the district's recreation improvement proposal were submitted for funding under the Recreation Capital Improvement Program (Forest Service 2003b). As described below, three of the four phases have been completed (Pines, Fir, and Silver, Saddle, and Apache Campgrounds).

Pines Campground located near the Village of Cloudcroft contains one of the largest known concentrations of the butterfly. Reconstruction activities in this campground were completed following formal conferencing (Service 2002a). We found that the implementation of this project, along with the conservation measures, will likely result in short-term adverse impacts to the butterfly and its habitat, but will ultimately reduce the long-term recreational impacts to the species and its habitat in this locality (Service 2002a). For example, the capacity of the campground has been significantly reduced, indicating that potential recreational impacts have decreased. The construction of retaining walls, fencing, and signs, the enforcement of areas not open to camping, and the installation of a barrier across the butterfly habitat has resulted in long-term benefits for the species (*e.g.*, the impact of trampling of foodplants and crushing of larvae has been reduced). For these reasons, we believe that the reconstruction of Pines Campground did not disrupt the metapopulation dynamics of the butterfly (Service 2003). Because these activities were completed during 2004 (Service 2004d), this action no longer threatens the butterfly.

The Fir Campground Capital Improvements Project underwent informal conferencing and resulted in a letter of concurrence (Service 2002). This project also redesigned the group camping area and paved the existing road. The Forest Service flagged and avoided butterfly locations during project construction. Additionally, a boundary fence was constructed to reduce long-term recreational and visitor impacts to butterfly habitat in the area. This action was completed in summer 2002 and no longer threatens the butterfly.

Silver, Saddle, and Apache Campgrounds were reconstructed during the summer of 2001 (Forest Service 2000). The Forest Service conducted butterfly surveys and did not locate any individuals; consequently, the Forest Service determined that no threatened, endangered, or sensitive species would be adversely affected (Forest Service 2000). Because this action was completed, it no longer threatens the butterfly.

Under phase 4, the Forest Service is currently finalizing a proposal to reconstruct the remaining 5 campgrounds (Sleepy Grass, Black Bear Group, Aspen Group, Deerhead, and Slide Group) that are occupied by the butterfly (Forest Service 2003b, 2004i). We toured the five campgrounds on October 27, 2004, and discussed aspects of the proposal. For the final five campgrounds slated for renovations, the Forest Service's draft environmental analysis evaluates three alternatives: A no action and two action alternatives (Forest Service 2004i). Both action alternatives incorporate measures to minimize impacts to the butterfly, although one alternative will protect more butterfly habitat through the placement of camp and day use sites in areas that are not butterfly habitat (*e.g.*,

forest habitat) (Forest Service 2004i). Regardless of which action alternative is chosen, this proposal will result in long-term benefits to the butterfly because more area of butterfly habitat will be protected than under existing conditions (Forest Service 2004i). The purpose of the project is to improve or replace the facilities in the campground to enhance the safety, accessibility and enjoyment of the site for National Forest visitors, while conserving the natural and cultural resources in the area. The main tenets of this proposal are to reduce the number of camping sites and condense the campgrounds into smaller areas through permanent campground boundaries with physical barriers (*e.g.*, fences or boulders) to reduce access and associated trampling of butterfly habitat (Forest Service 2004i). Construction activities will likely be initiated during 2005 and will follow predefined best management practices and include seasonal restrictions during construction, monitoring of construction activities, surveys for the butterfly and foodplants, and revegetation where appropriate (Service 2004d, Forest Service 2004i). Construction will not result in a disruption of the overall metapopulation dynamics of the species because impacts will only be a short-term disturbance of butterfly habitat, with a minor amount of butterflies affected. We have found that these types of impacts are not a significant threat to the butterfly because the species and its foodplants have been demonstrated to be resilient to some disturbances (*e.g.*, edges of the football field, campgrounds, and railroad) (Service 2004d). This remaining capital improvement project will offset the high demand for developed recreation, while limiting associated recreational impacts to the butterfly. For these reasons, reconstruction of the remaining five campgrounds is not considered a threat to the butterfly and will result in long-term benefits over existing conditions.

Powerline, Service Road, and Corridor

The Forest Service issued a special use permit for the Otero County Electrical Cooperative Powerline project to install a new powerline corridor (Service 2000). The Forest Service determined that the powerline project was expected to result in a disturbance of less than 0.4 ha (1 ac) of suitable butterfly habitat (Forest Service 1999a). They developed a seed mix for erosion control, avoided construction during the active season of butterfly, and added some nectar-source species to restore the area of disturbance (Forest Service 1999a, 2000b). This action resulted in insignificant effects to the butterfly and does not threaten the butterfly currently or in the foreseeable future.

In October 2001, we informally conferenced on the Dry Canyon Telephone project with the Forest Service (Service 2001a). Under this project, the Forest Service relocated a planned telephone line from suitable butterfly habitat to burial in the middle of a road (Forest Service 1999) that is not butterfly habitat. The Forest Service also completed several conservation measures (*e.g.*, foodplants were flagged and avoided within equipment staging areas) as part of this project (Forest Service 2002). The impacts associated with habitat disturbance from this project were temporary. Therefore, this project was, but is no longer considered a threat to the species.

The economic analysis estimated that over the next 10 years about 145 km (90 mi) of rights-of-way within butterfly habitat will be maintained, and that the Forest Service and Otero County Electric Cooperative will apply conservation activities for the species that range from $30,400 to $39,600 per mile ($48,640 to $63,360 per km) (Service 2004c). Rights-of-way provide access to powerlines and poles for routine monitoring and maintenance activities (1999a). For example, powerlines are visually inspected about 4 to 6 times per year by driving a vehicle along the powerline and checking for any problems or hazards (*e.g.*, remove hazard trees) (Forest Service 1999a). Existing rights-of-way access range from two-track dirt paths to graveled roads in some of the areas that traverse or are adjacent to a variety of areas including meadows, mixed conifer forest, and pavement (Forest Service 1999a). These activities could result in adverse effects to the butterfly from scraping and grading activities (*e.g.*, some individuals will likely be crushed and killed); however, we anticipate that the majority of impacts from rights-of-way maintenance activities will be temporary (scraping and leveling vegetation from within the footprint of existing rights-of-way). The Forest Service indicated that they will issue a special use permit that includes conservation measures for the butterfly (Forest Service 2004i). Moreover, annual maintenance projects are expected to be conducted in phases such that not all 145 km (90 mi) of rights-of-way will be impacted in a given year (Forest Service 2004l). We encouraged the Forest Service to include a seasonal restriction during the active season of the butterfly and revegetate areas that are disturbed during maintenance activities to limit adverse impacts (Service 2004c). The Forest Service indicated that they were unable to include specific measures because activities vary from year to year and project to project (Forest Service 2004l). Nevertheless, the contractors that conducted our draft economic analysis of the proposed critical habitat for the butterfly interviewed employees of the Otero County Electric Cooperative and found that they were anticipating seasonal restrictions on maintenance activities (Service 2004). Based upon this information, the special use permit will likely include some measures to limit adverse effects on the butterfly, but may not avoid all impacts such as crushing of larvae from heavy equipment use. Nevertheless, because of the linear nature of these impacts and the recognition that adjacent habitat will remain intact, we believe this activity represents only a limited threat to the species. We also note that no new Electric Cooperative projects are currently planned, indicating no other powerline-related threats are foreseeable (Service 2004).

Domestic Livestock Grazing

The known range of the butterfly includes portions of six livestock grazing allotments and two horse pastures: La Luz Watershed, Sacramento, Russia Canyon, Pumphouse, James Canyon, Walker C.C, and Heliport and Pines horse pastures. The La Luz Watershed allotment covers about 2,023 ha (5,000 ac) and is closed and not grazed by livestock (Service 2004c, Forest Service 2002d). No livestock grazing occurs in the portion of the Sacramento allotment occupied by the butterfly because the topography is too steep for cattle to access (Service 2004a). The Heliport Horse Pasture (180 ha (446 ac)) is not grazed, whereas the Pines Horse Pasture (23 ha (57 ac)) is stocked with up to 4 horses for about 5 months out of the year (Service 2004c). The Pumphouse Allotment currently is stocked with up to 66 cattle, the Walker C.C. Allotment is permitted to stock up to 69 cattle, and the Russia Canyon Allotment is stocked with up to 42 cattle (Service 2004, 2004c). These allotments are grazed for about 6 months out of the year, from around mid-May to mid-October during the active season of the butterfly (Service 2004c). The butterfly occurs within about 91 ha (225 ac) of the Pumphouse Allotment and 7.2 ha (18 ac) of the Russia Canyon Allotment; however, surveys have not detected butterflies within the Walker C.C. Allotment (Forest Service 2001, 2004n). The grazing permit for the James Canyon allotment (4,299 ha (10,623 ac)) was cancelled in the early 1990s. Prior to that time, the allotment was stocked

with about 142 cattle for 6 months out of the year. The Forest Service is currently considering resumption of livestock grazing in the James Canyon Allotment (Forest Service 2004b). The Forest Service has proposed a utilization level of 35 percent in areas open to livestock grazing, and would permanently close about 2,790 ha (6,900 ac) of the allotment to grazing within the Silver Springs Canyon area (Service 2004c, Forest Service 2004b). Therefore, about 40 percent (63 ha (155 ac) of 154 ha (380 ac)) of the occupied butterfly habitat will not be grazed by livestock (Forest Service 2004b).

Currently, the allowable forage utilization level in livestock grazing allotments within the range of the butterfly is 35 percent with a minimum stubble height of 10 centimeters (cm) (4 inches (in)) (Service 2004c). The Forest recently requested formally conferencing for the James Allotment regarding potential impacts related to trampling of larvae from livestock (Forest Service 2004b). Prior to this request, we there have been no conferences between the Forest Service and the Service on livestock activities and the butterfly (Service 2004c). Nevertheless, the Forest Service manages these allotments consistent with existing range management standards and guidelines under their Forest Plan, and when management adjustments are necessary to meet the forage levels, adjustments are made through the permit administration process (Forest Service 2002d, 2004i, 2004l, United States District Court 2002). The existing forage utilization (*i.e.*, 35 percent) is adequate for the protection of the butterfly to limit adverse effects (Service 2004c). Moreover, the Forest Service has been and is proposing to distribute livestock throughout the pastures in each allotment to minimize the number of cattle and the potential for trampling of butterflies within individual meadows (Forest Service 2002d, 2004b). The Forest Service will also formally monitor three meadows within the James Canyon and Pumphouse Allotments (Forest Service 2004i), in addition to monitoring requirements under a previous (2001) court settlement agreement (*Forest Guardians* v. *United States Forest Service et al.* CIV 00–490 JP/RLP & CIV 00–1240 JP/RLP–ACE (Consolidated)) and as part of the permit administration process (Forest Service 2002d). If needed, management adjustments (*e.g.*, reducing the number of livestock or removing all livestock) are made through the permit administration process (Forest Service 2002d, 2004i, 2004l).

Although we previously assumed that grazing can eliminate or reduce the food plants used by the butterfly, we now conclude that management of current and future levels of grazing is compatible with conservation of the butterfly because the Forest Service is currently and will continue to manage these allotments for moderate grazing (*i.e.*, 35 percent forage utilization) (Service 2004c, Forest Service 2002d, 2004i). For example, we incorrectly assumed that grazing would reduce or eliminate sneezeweed (*Helenium hoopesii*). In fact, the USDA Poisonous Plant Research Laboratory (2004) reports that sneezeweed is a poisonous nonpalatable species that induces chronic vomiting when eaten by animals. The Forest Service also indicated that most of the mountain meadows are currently in satisfactory range conditions and that sneezeweed may actually decrease as range conditions improve (Forest Service 2001).

A focused study on the butterfly found that heavy grazing of butterfly foodplants, particularly during years with below-normal precipitation, may result in increased trampling and mortality of butterfly larvae because New Mexico penstemon may be among the few plants that are green (Pittenger and Yori 2003). On the other hand, the Forest Service indicated that Pumphouse Canyon has one of the highest densities of the butterfly even with high forage utilization in 1999 (*i.e.*, 60 to 70 percent) from combined elk and livestock use (Forest Service 2001, 2002d). Leaf lengths of palatable grass species in Pumphouse Canyon averaged 8.4 cm (3.3 in) in 1999, 11.4 cm (4.5 in) in 2000, 21.3 cm (8.4 in) in 2001, and 10.1 cm (5.3 in) in 2002 (Forest Service 2002d). A leaf length of 10.1 cm (4 in) and greater reflects moderate forage utilization and equates to about 35 percent forage utilization (Forest Service 2002d). The Forest Service did not provide any monitoring data to us from 2003 or 2004, but indicated that they are managing this and other allotments to attain moderate forage use (Forest Service 2004d, 2004i). Although Pittenger and Yori (2003) found that heavy grazing on New Mexico penstemon occurred during 2002 within the Pumphouse Allotment, there were no differences in the density of New Mexico penstemon when compared to ungrazed meadows within Spud Patch Canyon. They also did not find a difference in the overall number of adult butterflies observed between moderate and heavy grazing years (*i.e.*, 2000, 2001, and 2002) within the Pumphouse Allotment (Pittenger and Yori 2003). Forage utilization may have been high in 1999 because of a disproportionate amount of grazing by elk (Forest Service 2002d) (see discussion below on current elk management).

We do not expect that heavy grazing will continue to occur within the range of the butterfly because the Forest Service has recently been monitoring and managing these allotments to attain 35 percent forage utilization and they must manage and protect long-term range conditions consistent with their range management regulations (*e.g.*, see 36 CFR 222) (Forest Service 2002d, 2004b, 2004i, 2004l, United States District Court 2002). We also note that, similar to other site-specific decisions, authorized grazing permits must be consistent with the applicable Forest Plan at the time they are issued (36 CFR 219.10).

We find that the Lincoln National Forest Plan will manage butterfly habitat because at least two of the applicable standards and guidelines apply to the butterfly including: (1) Protecting and managing essential and critical habitats of threatened, endangered, and sensitive species through ensuring that legal and biological requirements of designated plant and animal species are met; and (2) identifying, protecting, and enhancing existing and potential habitat of all threatened, endangered, and sensitive species (USDA Forest Service 1986). The butterfly has been designated by the Regional Forester as a Sensitive Species, and, as such, will continue to be analyzed in all applicable NEPA documents (Forest Service 2004i). The Forest Service has indicated that conservative stocking levels, deferred and rest-rotation grazing schemes, and timing of permitted grazing are the best ways to minimize grazing impacts on the butterfly (Forest Service 2001). We agree with this conclusion.

We acknowledge that grazing can incidentally kill butterflies through trampling and/or accidental ingestion of larvae or eggs (Pittenger and Yori 2003, Forest Service 2002, White 1986), and anticipate such effects are occurring within each of the allotments that overlap with occupied butterfly habitat (*i.e.*, Pumphouse, Russia Canyon, and La Luz Watershed). However, because the Forest Service is managing these allotments for medium-intensity grazing, we believe the effects will be minimal and not result in the butterfly population being compromised (Forest Service 2002d). In the future, this same management strategy (*i.e.*, the forage

utilization threshold) will ensure larval and adult foodplants are maintained.

In 2001, the New Mexico Department of Game and Fish changed the management objective for game management unit 34, which overlaps with the range of the butterfly. A 5-year plan was adopted to reduce the number of elk from about 4,000 to 1,000 across the entire game management unit (Forest Service 2002). The current elk population goal is 1,700 animals, with the most recent survey results estimating a current elk population of 2,700 animals within this game management unit (Forest Service 2004b). The New Mexico Department of Game and Fish has continued to increase the number of elk hunting tags and has implemented depredation hunts to minimize the impact of elk grazing on range conditions (Forest Service 2004b). These actions will continue to further reduce the impact of grazing on the butterfly.

The foregoing analysis indicates that even when grazing is not closely managed, grazing appears to have a negligible effect on butterfly populations and its major foodplant, New Mexico penstemon (Pittenger and Yori 2003). Still, we expect that grazing will be closely managed to attempt to meet 35 percent forage utilization (Forest Service 2002d, 2004i, 2004l). For these reasons, the current and future occurrence of grazing does not represent a principal factor in the viability of the species and its habitat.

Trespass Horses

About 20 to 40 trespass horses have been observed grazing in meadows of the James Allotment within the northern portion of the Sacramento Ranger District (Forest Service 2004b, Service 2004b). Trespass horses could have an impact on forage utilization levels and trampling of butterfly host plants and larvae (Forest Service 2004b). The Forest Service has posted impoundment notices, contacted presumed owners, and spent $10,000 repairing and rebuilding fences along the Forest boundary (Forest Service 2004i). To date, these efforts have not been successful in reducing the number of trespass horses on the Sacramento Ranger District (Forest Service 2004b). Similar to livestock grazing, we believe that trespass horses will have negligible effects on butterfly populations and its major foodplant, New Mexico penstemon. They are also unlikely to eat sneezeweed because it is a poisonous, nonpalatable species. Horses are currently having very little impact on soil and range conditions. For example, the Forest Service reports that the soil condition rating is satisfactory and range condition is stable or increasing on 98 percent of the James Allotment (Forest Service 2004b). For these reasons, trespass horses are considered a low threat to the butterfly, because they occur in a limited number of meadows in the James Allotment (Forest Service 2004b). We also note that the Forest Service has committed to removing the feral horses from the James Allotment, and we anticipate that this will happen in the near future (Forest Service 2004b, Service 2004b). We have not relied upon this future removal in our determination that trespass horses are a low threat.

Fire Suppression and Wildfire

In the proposed rule, we concluded that the condition of mountain forest lands as a result of 100 years of fire suppression in the Sacramento Ranger District threatened the butterfly. In light of new information we received (*e.g.*, Service 2004b, Forest Service 2002a, 2002c), we reexamined our original conclusion. Prior to 1900, the mean natural fire interval for forests in the Sacramento Mountains was about 4 to 5 years (Kaufmann *et al.* 1998). Frequent, low-intensity surface fires historically maintained a forest that was more open (*i.e.*, more non-forested patches of different size, more large, older trees, and fewer dense thickets of evergreen saplings) than is currently the case (Kaufmann *et al.* 1998).

Due to the small known range and low abundance of the butterfly, the subspecies is potentially vulnerable to catastrophic wildfires. Although at least nine catastrophic wildfires have burned over 34,000 ha (90,000 ac) during the last 50 years in the Sacramento Mountains (Kaufmann *et al.* 1998), a significant fire has not been documented within occupied habitat or proposed critical habitat since 1916 (Service 2004b). Because fire is an inherently variable process depending on season, fuels, wind, moisture, etc. it impossible to accurately predict how the butterfly will respond. Nevertheless, the effects of fire on butterfly habitat quality and availability can be expected to vary based on the severity of fire, the response of foodplants to burn severity, and suitability of postfire vegetation (Romme *et al.* 2004).

Although the effect of fire upon this species is unknown (*e.g.*, for a recent review see Service 2004b), some local information is available from post-fire monitoring of the Scott Able fire that burned 24 km (15 mi) southeast of the Village of Cloudcroft. In May 2000, the Scott Able fire burned 6,400 ha (16,000 ac) in the Lincoln National Forest, covering elevations between 2,250 to 3,000 m (7,000 to 9,300 ft) (Cary 2004 cited in Service 2004b). This intense, wind-driven fire burned an estimated 0 to 10 percent of the meadows and 85 to 90 percent of the forested canopies within the mapped fire boundary (Cary 2004 cited in Service 2004b), meeting the qualifications for a stand replacement fire in much of the burned area (McCarthy and Yanoff 2003). Meadows in mixed conifer habitat that did not burn were situated primarily along drainages (Cary 2004 cited in Service 2004b). The butterfly does not occur in the location of the burn, but New Mexico penstemon and sneezeweed can be found (Cary 2004 cited in Service 2004b). Between 2001 and 2003, mobile butterflies associated with shrubs, grasses, and forbs have shown a positive response to the fire, with most species peaking in 2001 after abundant spring precipitation (Cary 2004 cited in Service 2004b).

Fires in the Sacramento Mountains tend to burn in a mosaic pattern (*i.e.*, patches of burned and unburned vegetation) and are less likely to burn in meadows compared to surrounding forests because of the types of fuel involved (Forest Service 2001, 2002c). In fact, weather conditions that would trigger a wildfire in forested areas (*i.e.*, mixed conifer fuel type) that are adjacent to meadows consist of very dry, windy days (Forest Service 2001, 2002c). Meadow habitat is usually not at high risk during fires within the mixed-conifer fuel type because fire behavior during wind-driven events generally burns through the crowns or canopy of trees, with little to no high-severity burns within meadows (Forest Service 2001, 2002c). These conditions would not result in pronounced heat effects in the soil or seedbank (R. Guaderrama cited in Service 2004b, Forest Service 2001), especially within areas where the larval host plants grow, because they usually lack continuous fine fuels. For example, in areas burned by the Scott Able fire, underlying soils were not exposed to extreme temperatures and soils were generally unharmed (Forest Service 2000). These data suggest that meadows and drainages may be less likely to burn during wind-driven events, which offers some protection to the butterfly and its habitat. Still, some amount of butterfly habitat will likely burn. In that event, it is likely that adjacent butterfly localities in surrounding habitat and unburned inclusions would serve as source populations to recolonize burned areas following a fire. This information suggests that catastrophic wildfire may

not be as great a threat as we had originally believed.

Since 1999, the Sacramento Ranger District of the Lincoln National Forest has been working on reducing the threat of catastrophic wildfire in the wildland-urban interface (WUI) (Forest Service 1999, Service 2004). We have been following several projects throughout the Sacramento Ranger District, and have found that some projects may not only provide a reduction in the risk of catastrophic wildfire, but also enhance marginally suitable butterfly habitat along the edges of forests/meadows (Service 2004d). We have observed that the butterfly's foodplants, particularly New Mexico penstemon have been reestablished within areas that were recently disturbed (*e.g.*, Highway 130 adjacent to Deerhead Campground, edges of the football field) (Service 2004d). The type of disturbance and soils likely influence whether foodplants will be reestablished; however, many of the forest/meadow edges that are contained within WUI projects have low-density foodplants already established (Forest Service 2000c). Within these areas, we believe that an increase in sunlight from thinning activities will allow foodplants to increase in both size and abundance. This is what we have observed within the construction footprint of Highway 130 adjacent to Deerhead Campground, the edges of the football field on Lost Lodge Road, and in drainages throughout these areas that have been thinned (Service 2004d).

In the Sacramento Mountains, several locations adjacent to occupied butterfly habitat have been progressively thinned since 2002. Thinned areas occur in Bailey Canyon (215 ha, 532 ac), Pineywood Canyon (262 ha, 647 ac), Deerhead Canyon (146 ha, 360 ac), and along Cox Canyon (72 ha, 178 ac). An additional 373 ha (921 ac) are designated for thinning in Apache Canyon and 81 ha (201 ac) are projected for a different part of Deerhead Canyon (Service 2004b). Thinned locations adjacent to suitable butterfly habitat may be used or colonized by the butterfly (Service 2004d). Pittenger and Yori (2003) documented butterfly movement between meadows, with the movements of one butterfly crossing a closed-canopy mixed-conifer forest for the entire route. Butterfly movements such as this example are likely not common because forests do not provide the necessary foodplants. Thus, woodland canopy reduction is important for open-habitat butterflies, which readily move from meadows into corridors, but rarely from meadows into dense woodlands (Sutcliffe and Thomas 1996). Also, open-habitat specialist butterflies are known to reach higher densities in patches connected by corridors than in isolated patches (Haddad and Baum 1999). The formation of cleared corridors or stepping-stone patches by thinning could allow the butterfly to migrate between suitable meadows (Maina and Howe 2000, Service 2001b), thus encouraging colonization of new sites or genetic exchange among the subpopulations. Thinning has also been associated with the establishment of plant and butterfly edge specialists (*i.e.*, species that are adapted to the conditions created at the boundary between wild and disturbed lands such as a forest where the adjacent land has been cut), which could provide potential microhabitats or nectar sources for the butterfly (Bergman 2001). We have not done an extensive inventory of all areas thinned throughout the Sacramento Ranger District; however, we maintain that areas where foodplants become more abundant could enhance habitat connectivity between occupied localities and provide long-term benefits for the butterfly, even with the potential for short-term impacts (*e.g.*, Service 2002b, 2001b). Thus, we conclude that thinned forests could facilitate habitat connectivity between meadows occupied by the butterfly (Service 2001b).

Since 2000, the Forest Service has invested almost $11 million to reduce hazardous fuels on more than 18,616 ha (46,000 ac) on the Lincoln National Forest, with funding and amount of land treated in 2004 nearly three times the 2000 level (Forest Service 2001, 2002a, 2003, 2004c, 2004h, 2004m, Service 2004b). As part of the Healthy Forests Initiative, in June 2004, the Lincoln National Forest received $750,000 to thin an additional 607 to 809 ha (1,500 to 2,000 ac) of overgrown stands of trees adjacent to communities in Lincoln and Otero counties (2004h). Vegetation management activities within the range of the butterfly consist primarily of thinning treatments to reduce fire fuels loads and restore forest structure to a more natural state. About 89 percent of the lands within the proposed critical habitat boundary (12,419 of 17,628 ha (30,687 of 43,560 acres)) are classified by the Forest Service as WUI treatment areas (Service 2004c). The goals of these thinning treatments are to reduce the threat of catastrophic wildfire in the wildland-urban interface and to assist in the economic sustainability of these communities. As described above, little quantitative data has been gathered following the WUI projects being implemented on the Lincoln National Forest. Nevertheless, qualitatively we have found a beneficial response of the butterfly to the increase in thinning (Service 2004d). Recent WUI projects have targeted reducing ladder fuels (those fuels that convey flames from the ground to the tree canopy) and tree densities in forests surrounding the meadows (Service 2004b). These projects should assist in lowering the risk of catastrophic wildfire in forested areas and may reduce the intensity and severity of wildfires in adjacent butterfly habitat (*i.e.*, meadows).

The Forest Service is also currently proposing to amend their Forest Plan to allow broader application of natural fire to aid in forest restoration (Forest Service 2004d). Depending on the season of burns and other factors, fire activity from this action could be expected to range from creeping surface fires with flame lengths of less than 30 cm (12 in) burning in pine litter and duff (leaves and branches on the forest floor) during periods when temperatures are low and the relative humidity is high, to an active surface fire burning freely in all surface fuels, and actively torching groups of seedling and small-pole-size (2.54 to 10 cm)(1 to 4 in) trees. The more active fires will also regularly torch individual overstory trees of various sizes as well as small groups of overstory trees with continuous ladder fuels beneath them. These types of burns would generally provide conditions suitable for increased herbaceous plant growth by removing a thick layer of dead plant debris within treated areas, in addition to enlarging some of the meadows (*i.e.*, from killing conifers that have encroached). We believe that the mosaic effect created by burned and unburned areas, in conjunction with a reduction in catastrophic fire risk and increase in meadows (from encroaching conifers burning), may result in long-term benefits for the butterfly.

We previously concluded that wildfire was one of the most significant threats facing this species. In the proposed rule, we found that a significant increase in funding was required to reduce the risk of catastrophic fire for the butterfly. The new information we reviewed indicates this funding and subsequent increases in fuels management have occurred and will continue for the foreseeable future (Forest Service 2001, 2002a, 2003, 2004c, 2004h, Service 2004b). We have also reexamined our original conclusion based upon site-specific data from fires that have burned in the last few years. These data demonstrate that meadows

generally do not burn at high intensity, but usually burn as a mosaic (Service 2004b). Given recent information from the Sacramento Mountains and new and continued efforts to reduce the risk of catastrophic wildfire, we no longer consider fire a threat of high magnitude. In fact, fire and activities conducted to reduce the risk of fire may be beneficial by increasing connectivity between areas of suitable butterfly habitat. Thus, we find the threat to the butterfly from catastrophic wildfire has been reduced and is no longer significant.

Highway and Forest Road Reconstruction

In the proposed rule, we concluded that construction of roadways had historically eliminated or reduced the quality or quantity of butterfly habitat. We reexamine this conclusion based upon new information. The Forest Service indicated in their comments on the proposed rule that the only road construction planned within butterfly habitat is associated with campground reconstruction projects (Forest Service 2001). These activities, including the associated road construction, are not considered a threat to the butterfly (see ''Campground Projects'' section above). Road grading activities will likely occur on both Forest Service and private lands. The Forest Service has not found adverse impacts to the butterfly from these actions because the majority of these maintenance activities occur within the existing footprint of the road during the non-active season of the butterfly (Forest Service 2001). These road maintenance activities can cause localized adverse impacts to the butterfly through the elimination of larval food and adult host plants or the crushing of life history stages. However, as described under the Otero Electrical Powerline analysis above, many of these impacts are likely temporary and will not lead to a disruption of local populations.

The NMSHTD project detailed in the proposed rule cleared a variety of vegetation by scraping and widening the road and shoulders, constructing retaining walls, adding drainage ditches and culverts, and reconstructing a curve. Topsoil and larval food plants were stockpiled and used in revegetation when the project was completed. Monitoring documented that transplanting efforts were not effective (Pittenger and Yori 2003); however, the area has been revegetated from naturally occurring seeds and now contains larval food plants and adult nectar sources (Service 2004). Although the butterfly has not been documented within this area to date, we believe it may be used as early as the 2005 active season of the species (April through October). We base this conclusion on observations in the areas adjacent to the football field that had similar vegetation disturbance and subsequent foodplant and butterfly recolonization (Service 2004d). This information indicates that road maintenance and reconstruction activities have the potential to adversely affect the butterfly, but they have not been demonstrated to be a serious impact because the butterfly and its foodplants are more resilient than previously thought. Thus, we do not consider road reconstruction and maintenance activities to be a serious threat to the butterfly that will result in long-term consequences.

Recreational Impacts

Off-highway vehicles (OHVs) pose a threat to the butterfly through direct crushing of eggs, larvae, pupae, or thermoregulating (maintenance of a constant internal body temperature regardless of environmental temperature) adults located on bare soils, leaves, or grasses within or adjacent to trails and roads (66 FR 46575, September 6, 2001). The Forest Service recently produced a map and report that categorized meadow disturbances (Forest Service 2004e). They found that dispersed camping and OHV use is increasing on the Forest, and that impacts are occurring in about half of the occupied butterfly habitat (225 ha (555 ac)) (Forest Service 2004e). The level of OHV activity is high within four areas (Pumphouse Canyon, Bailey Canyon, Zinker Canyon, and La Luz road in the vicinity of Forest Road 162A).

During 2004, the Forest Service focused on reducing the impact of illegal OHV traffic and related recreational impacts within the occupied butterfly habitat of Bailey Canyon by: (1) Fencing access points to meadows within these areas; (2) felling logs and trees across trails; (3) enforcing regulations that prohibit travel off-road use in certain areas; (4) placing signs in the middle of illegally created OHV trails; and (5) increasing public education regarding impacts of OHV on natural resources (Forest Service 2004f, Service 2004d). For example, fencing that was placed in Bailey Canyon during summer 2004 has thus far proved to be an effective deterrent against OHVs entering occupied butterfly habitat (Service 2004d, Forest Service 2004i). Fencing, signs, and monitoring by law enforcement personnel have similarly stopped OHVs from entering butterfly habitat in other areas of the forest (*e.g.*, Pines Campground and Silver Springs) (Forest Service 2000c). The Forest Service indicated that these fences have not been cut or torn down and OHVs generally stay out of meadows if their access is blocked (Service 2000c, 2004d). The Forest Service has committed to continue to alleviate OHV-related impacts to the butterfly by installing physical barriers, posting signs, felling trees, and enforcement (Forest Service 2004i). Nationally, the Forest Service is also currently revising their travel management regulations to require each Forest to establish a system of roads and trails and regulate or prohibit certain motor vehicle uses (July 15, 2004, 69 FR 42381).

We are not relying on this effort in our analysis of this potential threat, but recognize that the revised travel management regulations may provide a long-term conservation benefit to the species by providing a consistent policy that can be applied to all classes of motor vehicles, including OHVs, that would allow the agency to regulate different types of uses. Nevertheless, it is likely that even with these measures, some temporary OHV-related impacts will continue to affect the butterfly and its habitat. OHV impacts will likely result in the temporary crushing or possible destruction of foodplants in localized areas and mortality of individual butterflies (or other life-history stage) (Service 2004d). We believe the magnitude of these impacts is low based on our observations of OHV use and the estimate of OHV impacts in Kockelman (1983). Kockelman (1983) estimated that a two-wheel OHV leaves a track about 13 cm (5 in) wide and disturbs about 0.4 ha (1 ac) for every 32 km (20 mi) traveled, whereas tracks made by a 4-wheel OHV are typically 0.5 m (18 in) wide and disturb about 0.4 ha (1 ac) for every 10 km (6 mi) traveled. Using these estimates, we believe that only a small proportion of occupied butterfly habitat would be impacted in a given year. For example, if a 4-wheel OHV tracks across occupied butterfly habitat, the OHV would need to travel 96.5 km (60 mi) uniformly to completely disturb a 4.0-ha (10-ac) meadow. Many of the OHV impacts that have been observed are single events (*i.e.*, there are fewer than 5 to 10 OHV tracks across a meadow) (Forest Service 2000c, Service 2004d). This type of an impact would account for very little habitat disturbance. For all of these reasons, we do not believe that OHVs significantly threaten the butterfly.

In the proposed rule, we found the butterfly may also be threatened by impacts from mountain bikes, hiking, and camping because of the

development of trails, a reduction of native vegetation to barren areas, and trampling, but the potential significance of these impacts had not been quantified. We indicated that the species had the potential to be impacted by these activities because larvae could be found along and adjacent to several popular mountain biking routes, hiking trails, and dispersed camp sites.

The Forest Service has conducted project-by-project analysis of large events (see discussion below) to determine potential impacts to the butterfly. These analyses will continue because the species is designated as a sensitive species on the Lincoln National Forest (Forest Service 2001, 2004i). As a sensitive species, the Forest Service conducts surveys within habitat that is capable of supporting the butterfly and analyzes the impacts of proposed projects as part of the NEPA process (Forest Service 2004i). For example, the Forest Service indicated that their biologists survey routes prior to large events such as races, and they determined the trails were not occupied by larvae and, therefore, were not affected (Forest Service 2001). It is our understanding that if larvae were to be found within the route of a race, the Forest would either analyze the impact on the species through the development of a Biological Evaluations (BEs) and a NEPA document, or they would move the route to avoid impacts to the butterfly. We do not have quantitative data on the potential impact from hiking or dispersed camping. However, our observations over the last several years suggest the potential adverse impacts from hiking and dispersed camping are minor and result in short-term crushing of vegetation (Service 2000a).

We still believe mountain biking, hiking, or camping may directly or indirectly affect larval food plants, nectar sources, or various life stages of the butterfly through the development of trail ruts, the loss of residual topsoil and vegetation, increased erosion, the creation of stretches of standing water or muddy trail/road conditions, the development of parallel tracks, and the establishment of unauthorized trails (Cessford 1995). However, it does not appear that these impacts are likely significant for the butterfly. We reached this conclusion because we have found that some small-scale impacts such as those described above, particularly temporary crushing of vegetation (*e.g.*, on trails), does not result in long-term impact to the local population (*e.g.*, see Service 2000, 2000a, 2002c, 2004e) because only a small number of individuals have the potential to be affected. Thus the overall population would remain intact.

We have continued to observe a variety of these small-scale impacts (*e.g.*, barren ground, trampled food plants, multiple trails, vehicle tracking, etc.) in areas used by larval and adult life stages of the butterfly. Nevertheless, it does not appear that these small-scale disturbances have reduced the amount of suitable habitat in and around developed campgrounds or undeveloped campsites known to support the butterfly, because the subspecies is still abundant within these areas (*e.g.*, Deerhead, Pines, Sleepygrass, Slide, Black Bear, and Fir Campgrounds) (Forest Service 2004e). Consequently, the effect of mountain bikes, hiking, and camping on the butterfly is not currently considered a threat.

Nonnative Vegetation

In the proposed rule, we found that nonnative vegetation threatened the butterfly by out-competing and reducing or eliminating food plants for larvae and nectar plants used by adults (66 FR 46575, September 6, 2001). On the Lincoln National Forest, there are 12 aggressive nonnative plant species, including Russian knapweed *(Acroptilon repens)*, musk thistle *(Carduus nutans)*, oat grass, and teasel *(Dipsacus sylvestris)*. In 2002, we completed an informal conference with the Forest Service regarding a District-wide noxious weed management program (Service 2002, Forest Service 2000d). This program also authorizes the NMSHD to treat noxious weeds within state and Federal highway rights-of-way (Forest Service 2000d). We concluded that the effects from the Forest Service's proposal to manage and remove noxious weeds were expected to be insignificant (*i.e.*, should never reach the level where incidental take will occur) or discountable (*i.e.*, effects are extremely unlikely to occur) to the butterfly (Service 2002). These data indicate that nonnative vegetation and the application of herbicides are currently being managed, which significantly reduced the threat to the species. As such, we do not believe the nonnative vegetation and the application of herbicides are a significant threat to the butterfly.

Conclusion for Factor A

The butterfly appears to exhibit much of the same behavior, life history, and patchy distribution as other well-studied species in this genus. The patchy distributional pattern is expected in many butterflies in the genus *Euphydryas* and other species, because they exist as metapopulations and at any instant butterflies may be using some areas and not others (Hanski and Gilpin 1991). Suitable habitat within the range of the species can play a pivotal role in maintaining natural metapopulations, especially butterflies that may have limited dispersal abilities (Murphy and Weiss 1988).

In the proposed rule, we found that much of the remaining suitable butterfly habitat, and the long-term persistence of the species, was threatened by the direct and indirect effects of commercial and private development, Forest Service projects, catastrophic wildfire, fire suppression activities, highway reconstruction, OHV use, trampling, overgrazed range conditions, and nonnative vegetation. As detailed above, we received new information since publication of the proposed rule specific to the butterfly and the potential threats. It is our determination that based on an analysis of the best scientific and commercial data available that the present or threatened destruction, modification, or curtailment of the butterfly's habitat or range is no longer a significant factor because new information indicates that these threats have been eliminated or reduced. Considering the magnitude, imminence, and irreversibility of threats to the butterfly and its habitat, we now conclude that the threats identified under Factor A are not likely to cause the species to become endangered within the foreseeable future throughout all or a significant portion of its range (see discussion after ''Factor E'' below). Based upon the information reviewed above, we also conclude that the butterfly is not endangered of extinction throughout all or a significant portion of its known range.

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

In our proposal, we found that the species was at risk from over-collection. The Forest Service issued a closure order in April 2000 for the collection of any butterflies without a permit on the Smokey Bear and Sacramento Districts of the Lincoln National Forest (Forest Service 2001). This closure order restricts the collection of the butterfly without a permit. Pursuant to 36 CFR, § 261.58(s), the Forest Service specifically prohibited ''capture, collection, killing, possession, storage, or transportation of the Sacramento Mountains checkerspot butterfly, and of life stages or parts thereof.'' The Forest Service posted the closure order in accordance with their regulations and also published a notice of the closure

order in the newsletter of the Lepidopterists' Society (36 CFR 261, Lepidopterists' Society Newsletter 1999, Holland 1999). Forest Service Law Enforcement is aware of possible threat of illegal collecting. It is our understanding that they patrol these areas. Penalty for illegal collection is a maximum of $5,000 and 6 months in jail. Since the closure order was enacted, we have not found any evidence (*e.g.*, glassine collection envelopes, commonly used to house captured individuals) that the butterfly is being illegally collected. Since 2000, we and the Forest Service have spent hundreds of person-hours in the field surveying for the butterfly, and neither we nor they have observed any people that appeared to be collecting the butterfly. The Forest Service intends to keep the closure order in place indefinitely. Consequently, on the basis of the efforts of the Forest service and the implementation of the closure order, we believe that over-collection is no longer considered a threat to the species.

C. Disease or Predation

There are no indications at this time or at the time of the proposal that disease or predation might be a limiting factor for the butterfly.

D. The Inadequacy of Existing Regulatory Mechanisms

Public Lands

While inadequate protection by way of existing regulatory mechanisms was a factor in our decision to propose this species for listing, developments since our proposal have addressed these inadequacies. The Forest Service has the authority through the National Forest Management Act (NFMA) to manage the land and activities under their administration to conserve the butterfly. For example, this species was placed on the Regional Forester's Sensitive Species List, and the Forest Service has minimized or avoided potentially adverse impacts to the butterfly by either altering or canceling several proposed projects including campground reconstruction, a new administrative building, Townsite Act proposal, nonnative vegetation management, and the Dry Canyon Telephone line project (see Factor A section above for details). The Forest Service indicated that they currently provide protection and management measures for the butterfly because it is a designated sensitive species (Forest Service 2001). The Forest Service will continue to protect and manage butterfly habitat on public lands by analyzing potential impacts of proposed projects on the butterfly (Service 2004b, Forest Service 2004i). In fact, Forest Service policy (FSM 2670.3) states that Biological Evaluations (BEs) must be completed for sensitive species, and signed by a journey-level biologist or botanist. The BE must be signed prior to any NEPA decision document. BEs must include an evaluation of effects of proposed management actions on these species or their habitats occurring within the analysis area. The NFMA also requires the Forest Service ''provide for a diversity of plant and animal communities'' (16 U.S.C. 1604(g)(3)(B)) as part of their multiple use mandate. The Forest Service is required to maintain ''viable populations of existing native and desired non-native species in the planning area'' (36 CFR 219.19). The Sensitive Species program was designed to meet this mandate and demonstrate their commitment to maintain biodiversity on National Forest System lands. The intent of this program is a proactive approach to conserving species to prevent a trend toward listing under the Act, and to ensure the continued existence of viable, well-distributed populations.

The Lincoln National Forest will continue developing BEs and conducting NEPA analyses for each project that will affect the butterfly or its habitat (Forest Service 2004i). We will continue to analyze these site-specific NEPA documents, conduct field surveys, and monitor the cumulative impacts of projects on the butterfly and its habitat.

In areas that have the potential to support the butterfly, the Forest Service has and will continue to do so under their existing authorities: (1) Protected and managed occupied and unoccupied butterfly habitat on public lands; (2) applied appropriate weed and pest control practices in or near occupied meadows; (3) decreased risk of catastrophic wildfire; (prioritized fuel treatment areas near known, occupied habitat to reduce the risk of catastrophic wildfire); (4) managed public recreation; (5) managed campgrounds near butterfly meadows to limit vehicles, tents, and other equipment in confined areas; (6) developed and installed an interpretive kiosk regarding the butterfly at Pines campground to educate campers and visitors; (7) evaluated the potential impact to the butterfly prior to issuing special use permits; (8) managed domestic livestock grazing at levels that minimize impacts to the butterfly; (9) issued a closure order to protect the butterfly from the threat of collection; (10) ensured effective contract administration for projects occurring in butterfly habitat (*i.e.*, monitor project implementation to document conservation measures are being implemented); and (11) implemented best management practices during maintenance of powerline corridors (Service 2004, 2004b, 2004c, 2004d, 2004e, 2002, 2002a, Forest Service 2004b, 2004i, 2002b, 2001, 2000b).

In the proposed rule, we found that existing regulatory mechanisms did not fully protect this species or its habitat on Forest Service lands. Because the Forest Service has implemented many efforts to manage and maintain butterfly habitat, and has the authority and regulations in place to continue such efforts into the future, we now find these efforts contribute significantly to the adequacy of existing regulatory mechanisms.

Private Lands

Private lands play an important role in the butterfly's continued existence. Since publication of the proposed rule, we have found that there are local regulatory mechanisms pertaining to open space on the Village of Cloudcroft's lands (Village of Cloudcroft 2001). As noted above, the Village of Cloudcroft local zoning regulations (i.e., the Village Code) states that Greenbelt Zones shall consist of open space with no structures or commercial signs allowed. Further, there shall be no overnight parking or camping allowed within these areas. Within the Village of Cloudcroft, it is our understanding that native vegetation within greenbelt areas is generally not mowed and, in some areas currently provides suitable butterfly habitat that is occupied (Forest Service 2004e). Although we are not relying a future land transfer in our current review, the Village of Cloudcroft is also proposing to offer 16 ha (40 ac) (some of which contains occupied butterfly habitat) near the Cloudcroft Ski Area in James Canyon to the Forest Service (Service 2004b). In exchange, the Forest Service has allotted 16 ha (40 ac) that is not butterfly habitat to the Village. This would bring additional butterfly habitat under Forest Service management and remove the potential threat of development. The Village has committed to improving the status of the butterfly and contributing to its long-term conservation by: (1) Following their zoning regulations on ''greenbelt zones'' and open space with no structures in recently annexed (and any future annexed) lands; (2) committing to a land exchange with the Forest Service; and (3) providing community education and outreach for the conservation of the butterfly. We

view these actions as adequate existing regulatory mechanisms to minimize the current and future threats to the butterfly.

On October 19, 2004, Otero County passed a resolution committed to conservation of the butterfly (Otero County 2004). This resolution outlines the County's commitment to conservation of the butterfly (Service 2004b, Otero County 2004), and initiated a process that will cause the County to begin amending its existing subdivision ordinance to provide conservation measures for the butterfly. The County has indicated to us that they intend to pass this ordinance in December 2004. As identified in Factor A above, the threat of commercial and private development is not believed to be significant at this time. Therefore, although future developments within butterfly habitat will likely be required to follow the amended subdivision ordinance, and we encourage and support this effort, we have not relied upon the development of a protective ordinance when analyzing the potential threat of this activity in Factor A above.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Insect Control

In the proposed rule, we also determined that the application of carbaryl and *Bacillus thuringensis* (BT) to control insects poses a threat to the butterfly. Carbaryl is considered moderately to highly toxic and is lethal to many non-target insects, whereas BT can kill the larval stage of many insects, including butterflies (Cornell University 1998a, 1998b). The Forest Service stated that any future proposed treatments would need to be analyzed under NEPA, and the suggestion that carbaryl or BT would be used to control these or other forest insects was premature. Although future applications of carbaryl or BT may pose a potential risk to the butterfly, there are no proposals to spray for insect outbreaks currently or in the future (Forest Service 2001, Service 2004b). This action is no longer considered a significant threat to the species.

Extreme Weather

In the proposed rule we identified periodic droughts and atypical weather events as a threat to the butterfly. As noted in our response to comment 3 above, we believe that the species can survive and has persisted despite natural events such as drought since the butterfly evolved in an environment subject to periodic atypical weather events.

Roads

When we proposed the butterfly as endangered we found that roads had the potential to threaten the butterfly (66 FR 46575, September 6, 2001), but the direct and indirect impact on the butterfly was unknown. Similar to other potential threats, we now believe that existing roads are not likely to cause long-term impacts or disrupt metapopulation dynamics based upon the amount of foodplants growing along roads and the presence of butterfly egg masses and larvae observed in these areas (Service 2004b). Thus, we conclude that these impacts are not a significant threat to the long-term viability of the species.

Mescalero Apache Nation

As identified in the proposed rule, it is unknown whether the butterfly is present on the Mescalero Apache Nation lands. These lands are managed by the Mescalero Apache Nation in accordance with tribal goals and objectives and within the framework of applicable laws. These lands are not Federal public lands or part of the public domain. The Mescalero Apache Nation is a sovereign government with inherent powers to make and enforce laws and manage and control its natural resources. To our knowledge, no butterfly surveys have been conducted on Mescalero Apache Nation lands. Therefore, we do not know the status of the butterfly on these lands, the amount or quality of suitable habitat, or the potential activities that may negatively or positively affect the species. Although timber harvest, prescribed burns, and grazing occur on Mescalero Apache Nation lands (i.e., see Service 2004g, Natural Resources Conservation Service 2004, Klinekole 1998), we have no information regarding the presence or significance of any of these or other potential threats to the butterfly on Mescalero Apache Nation lands. We have considered whether the Mescalero Apache Nation lands would be a significant portion of the range. While we have mapped meadows (i.e., potential butterfly habitat) within Mescalero Apache Nation lands which occur between 2,450 and 2,750 meters (8,000 to 9,000 feet), it is unknown whether the butterfly is present on Mescalero Apache lands, and therefore we have very little information to suggest these lands are significant to the butterfly. Therefore, we determine that Mescalero Apache lands do not constitute a significant portion of the range.

Finding and Withdrawal

A variety of projects and conservation measures have been implemented by the Forest Service since 2001 that have reduced or eliminated threats to the butterfly. We have detailed these above in our analysis. Furthermore, since the proposed rule to list the butterfly as endangered was published, information from the Forest Service refined mapping of occupied and unoccupied habitat. This information will assist greatly in planning efforts for individual projects by providing an overall representation to collectively guide activities that will manage and maintain connectivity between patches of suitable butterfly habitat. In addition, we have demonstrated the resiliency of the butterfly and its foodplants by documenting the creation of new habitat where the butterfly is reproducing (the edges of the football field) (Service 2004d).

Based on a thorough analysis of the best available scientific and commercial information available on the butterfly, we have revised our conclusion about the threats to the species. We believe that the two greatest threats we previously identified, catastrophic wildfire and private and commercial development, are no longer significant. We also believe that new information and current management related to the threat of livestock has led to a reduction of this threat. Nonnative vegetation, OHVs, and other recreational activities are being currently managed to minimize impacts on the butterfly. Forest thinning and fuels management projects, in addition to campground reconstruction projects, may have had some short-term impacts, but will result in long-term benefits to the species. We have determined that the factors analyzed above either alone or in combination no longer significantly threaten the species or are of low magnitude. To be considered a threat, a factor must be shown to play a significant role in the dynamics of the species to such an extent that it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Based upon the factors analyzed, we determine that the species no longer is in danger of extinction throughout all or a significant portion of its range, nor is it likely to become endangered within the foreseeable future.

This withdrawal of the proposed rule to list the butterfly as endangered is based on our conclusion that the butterfly is resilient to small-scale disturbance, such that the risk to the species has been reduced to a level

below the statutory definition of endangered or threatened. We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats facing the butterfly in determining to withdraw our proposed listing. Based on this evaluation, we are withdrawing our proposal to list the Sacramento Mountains checkerspot butterfly as endangered. As such, we are also withdrawing our proposal of critical habitat for the butterfly.

We will continue to monitor the status of the species through monitoring, management, and project-related analyses (see ''Conservation Plan'' below). Additional information and comments will continue to be accepted on aspects of the species. We encourage interested parties outside of those parties already signatories to the Conservation Plan to become involved in the conservation of the species. For example, the Forest Service will continue to analyze potential project-related impacts on the butterfly through NEPA. Any interested individual or party can review and comment on these documents. We will reconsider our determination in the event that new information indicates that threats to the species are of a considerably greater magnitude than we have identified.

Conservation Plan

As described above, we signed a Memorandum of Understanding with the Village of Cloudcroft, Otero County, and the Forest Service, and cooperatively developed a Conservation Plan. The goal of the Conservation Plan is to provide conservation and management on public and private lands within the range of the butterfly (69 FR 60178). The individual and collective commitments of each of the parties are detailed in the Conservation Plan, and include time and cost estimates and responsible partners. Following the close of the public comment period, we collected the comments for all of the parties involved in the cooperative effort and provided the comments to them at the close of the public comment period. The cooperating parties of the Conservation Plan reviewed, analyzed, and incorporated public comments as they deemed appropriate.

We did not rely upon the implementation of the conservation efforts identified in the Conservation Plan in making our final listing determination for the butterfly because many of the individual conservation efforts have not been completed and would require us to speculate on the certainty of their implementation and effectiveness. As such, we did not analyze the individual conservation efforts as they relate to the Service's Policy for Evaluation of Conservation Efforts When Making Listing Determinations (68 FR 15100, March 28, 2003) (PECE). Nevertheless, we summarize the Conservation Plan here to recognize that all of the parties are proactively looking for opportunities to conserve the butterfly within its range. We applaud the development of the Conservation Plan and believe it will assist in further improving the status of the butterfly and its habitat.

The Conservation Plan provides an in-depth review of the butterfly's life history, habitat requirements, and known threats and further identifies the specific conservation efforts that will assist in management and maintenance of the butterfly and its habitat. Conservation efforts are categorized by the four primary objectives of the Conservation Plan: (1) Protect and manage occupied and unoccupied butterfly habitat on public lands; (2) manage habitat and promote conservation of the butterfly on non-Federal and other private lands through education and outreach; (3) conduct research to fill information gaps and inform continued management; and, (4) provide adequate regulatory protection.

The Conservation Plan explains that long-term conservation of the species requires a thorough understanding of its life history and habitat requirements. Consequently, a step-down outline has been developed to guide research and monitoring to implement an adaptive management plan for the butterfly. The Conservation Plan describes in detail the process of adaptive management and assigns the responsibility to the cooperative team. We believe management of the butterfly will benefit from this process because the effectiveness of conservation measures will be monitored and adjustments will be made based on new information gained.

The Forest Service has been involved in a variety of projects that have implemented measures to conserve the species (Service 2004b). The Conservation Plan represents a continuation of this major commitment on behalf of this Federal land manager that accounts for approximately 50 percent of the known range of the species. Biologists from the Lincoln National Forest's Supervisor's Office and the Sacramento Ranger District have been implementing conservation actions since 1997 and will continue to serve in that capacity for the Conservation Plan (Forest Service 2000c, Service 2004b). Under the Conservation Plan we expect that the Forest Service will continue to allocate resources towards conservation efforts and coordinate with all parties involved with the conservation of the butterfly.

The Conservation Plan also commits Otero County and the Village of Cloudcroft to manage and promote conservation of the butterfly and its habitat on private lands (Service 2004b). As described above, Otero County initiated a process that will cause the County to begin amending its existing subdivision ordinance to provide conservation measures for the butterfly. In addition, the County has committed to promoting public support for butterfly conservation through development and distribution of informational and educational materials (Service 2004b). The Village of Cloudcroft is dedicated to public outreach and education programs to promote conservation of the butterfly. The Village will work with private landowners (in cooperation with the County) to educate landowners about butterfly conservation. This includes, but is not limited to, restoration of areas and planting butterfly food and larval host plants, and communication with landowners through the local newspaper and Village Council Workshops.

The butterfly is currently a priority for the Service's Partners for Fish and Wildlife Program. This program has been working with the Forest Service and non-Federal entities regarding conservation efforts related to the butterfly. For example, the Forest Service gathered New Mexico penstemon seeds from sites on the Lincoln National Forest, and the Service funded a project through the USDA's Plant Materials Center, Los Lunas, New Mexico. This project grew 1,800 New Mexico penstemon, which will likely be planted at the Albuquerque Biological Park for educational and seed source purposes.

All of the parties will assist each other to fill information gaps in the butterfly's basic biology, habitat, distribution, and population biology. The Conservation Plan describes research needs that were developed and prioritized in order to maximize the utility of the information gained such that it can be directly applied to management and conservation of the species. For example, we anticipate that regular monitoring will continue to be conducted by the Forest Service and other parties to the Conservation Plan. This information will be utilized in an adaptive management process to adjust or increase conservation efforts to manage OHV impacts on the butterfly

and its habitat (Service 2004b). Additionally, we intend to coordinate the development and implementation of this and other projects through the Sacramento Mountains Checkerspot Butterfly Conservation Plan Interagency Coordinating Committee (ICC). The cooperators will establish an ICC (see Conservation Plan, Appendix A. Section V, Service 2004b). This Committee will monitor the implementation of the Conservation Plan, provide a forum for exchange of information on the species, will set annual priorities, seek funding sources, and provide feedback to the cooperators. This group will meet at least annually and likely more often in the first few years.

We are confident in the interest and commitment of all parties to the Conservation Plan. We believe the implementation of conservation, management, and monitoring efforts will be beneficial for the butterfly.

Authority

The authority for this action is the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*).

Dated: December 15, 2004.

Craig Manson,

Assistant Secretary for Fish and Wildlife and Parks.

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