Dated: May 7, 2018.

Jonodev O. Chaudhuri,

Chairman.

Dated: May 1, 2018.

Kathryn Isom-Clause,

Vice Chair.

Dated: May 4, 2018.

E. Sequoyah Simermeyer,

Associate Commissioner.

[FR Doc. 2018–10365 Filed 6–7–18; 8:45 am]

BILLING CODE 7565–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R6–ES–2018–0008; FXES11130900000–189–FF09E42000]

RIN 1018–BC02

Endangered and Threatened Wildlife and Plants; Removing Oenothera coloradensis (Colorado Butterfly Plant) From the Federal List of Endangered and Threatened Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to remove the Colorado butterfly plant (*Oenothera coloradensis,* currently listed as *Gaura neomexicana* ssp. *coloradensis*) from the Federal List of Endangered and Threatened Plants (List) due to recovery. This determination is based on a thorough review of the best available scientific and commercial data, which indicate that the threats to the Colorado butterfly plant have been eliminated or reduced to the point that it has recovered, and that this plant is no longer likely to become endangered in the foreseeable future and, therefore, no longer meets the definition of a threatened species under the Endangered Species Act of 1973, as amended (Act). This proposed rule, if made final, would also remove the currently designated critical habitat for the Colorado butterfly plant. We are seeking information, data, and comments from the public on the proposed rule to remove the Colorado butterfly plant from the List (*i.e.,* ''delist'' the species). In addition, we are also seeking input on considerations for post-delisting monitoring of the Colorado butterfly plant.

DATES: We will accept comments received or postmarked on or before August 7, 2018. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below), must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by July 23, 2018.

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

- *Electronically:* Go to the Federal eRulemaking Portal: *http://www.regulations.gov.* In the Search box, enter Docket No. FWS–R6–ES–2018–0008, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on the blue ''Comment Now!'' box. If your comments will fit in the provided comment box, please use this feature of *http://www.regulations.gov,* as it is most compatible with our comment review procedures. If you attach your comments as a separate document, our preferred file format is Microsoft Word. If you attach multiple comments (such as form letters), our preferred formation is a spreadsheet in Microsoft Excel.
- *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R6–ES–2018–0008; U.S. Fish and Wildlife Service; MS: BPHC; 5275 Leesburg Pike, Falls Church, VA 22041–3803.

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

Document availability: This proposed rule and supporting documents, including a copy of the draft post-delisting monitoring plan referenced in this document, are available on *http://www.regulations.gov* at Docket No. FWS–R6–ES–2018–0008. In addition, the supporting file for this proposed rule will be available for public inspection, by appointment, during normal business hours at the Wyoming Ecological Services Field Office; 5353 Yellowstone Road, Suite 308A, Cheyenne, WY 82009; telephone: 307–772–2374. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

FOR FURTHER INFORMATION CONTACT: Tyler A. Abbott, Field Supervisor, telephone: 307–772–2374. Direct all questions or requests for additional information to: COLORADO BUTTERFLY PLANT QUESTIONS, U.S. Fish and Wildlife Service; Wyoming Ecological Services Field Office; 5353 Yellowstone Road, Suite 308A, Cheyenne, WY 82009. Individuals who are hearing-impaired or speech-impaired may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Information Requested

Public Comments

We want any final action resulting from this proposal to be as accurate as possible. Therefore, we invite tribal and governmental agencies, the scientific community, industry, and other interested parties to submit comments or recommendations concerning any aspect of this proposed rule. Comments should be as specific as possible. We particularly seek comments and new information concerning:

(1) Our analyses of the Colorado butterfly plant's abundance, distribution, and population trends;

(2) Potential impacts from disturbances, such as grazing and residential, urban, and energy development;

(3) Conservation activities within the plant's range;

(4) Potential impacts from the effects of climate change; and

(5) Input on considerations for post-delisting monitoring of the Colorado butterfly plant.

Please include sufficient supporting information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include. Please note that submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, may not meet the standard of information required by section 4(b)(1)(A) of the Act (16 U.S.C. 1531 *et seq.*), which directs that determinations as to whether any species is an endangered or threatened species must be made ''solely on the basis of the best scientific and commercial data available.''

To issue a final rule to implement this proposed action, we will take into consideration all comments and any additional information we receive. Such communications may lead to a final rule that differs from this proposal. All comments, including commenters' names and addresses, if provided to us, will become part of the supporting record.

You may submit your comments and materials concerning the proposed rule by one of the methods listed in **ADDRESSES**. Comments must be submitted to *http://www.regulations.gov* before 11:59 p.m. (Eastern Time) on the date specified in **DATES**. We will not consider hand-delivered comments that we do not receive, or mailed comments that are not postmarked, by the date specified in **DATES**.

We will post your entire comment—including your personal identifying information—on *http://www.regulations.gov.* If you provide personal identifying information in your comment, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Wyoming Ecological Services Field Office (see *Document availability* under **ADDRESSES**, above).

Public Hearing

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register** (see **DATES**, above). Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if any is requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

Peer Review

In accordance with our policy, ''Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities,'' published on July 1, 1994 (59 FR 34270), we will seek the expert opinion of at least three appropriate and independent specialists regarding scientific data and interpretations contained in this proposed rule. We will send copies of this proposed rule to the peer reviewers immediately following its publication in the **Federal Register**. We will ensure that the opinions of peer reviewers are objective and unbiased by following the guidelines set forth in the Director's Memo that updates and clarifies Service policy on peer review (USFWS 2016a). The purpose of such review is to ensure that our decisions are based on scientifically sound data, assumptions, and analysis. Accordingly, our final decision may differ from that described in this proposal.

Previous Federal Actions

On October 18, 2000, we published a rule in the **Federal Register** (65 FR 62302) listing the Colorado butterfly plant, with the scientific name *Gaura neomexicana* ssp. *coloradensis,* as a federally threatened species. On January 11, 2005, we designated critical habitat for the Colorado butterfly plant (70 FR 1940).

On May 25, 2010, we developed a recovery outline that laid out a preliminary course of action for the recovery of the Colorado butterfly plant. This recovery outline identified residential and urban development as the most immediate and severe threat to the species, with mowing and haying as an additional potential threat. A recovery plan has not been developed for this species, although a draft was assembled prior to the species' listing by the Service, the Nature Conservancy, and the Wyoming Natural Diversity Database in 1987 (USFWS 1987, entire).

On December 17, 2012, we completed a 5-year review of the Colorado butterfly plant. The review was revised in June 2016, to remove private information protected under wildlife extension agreements (WEAs) from the document. The 5-year review concluded that the species should remain listed as threatened but also stated that threats currently affecting the species were occurring at low levels overall for Colorado butterfly plant populations and recommended further actions and analyses prior to the next 5-year review to assist in determining whether the species could be delisted.

Species Description and Life History

Detailed information regarding the Colorado butterfly plant's biology and life history can be found in the Species Biological Report for Colorado butterfly plant (USFWS 2017a, pp. 6–7), which was reviewed by recovery partners. The Species Biological Report is an in-depth review of the species' biology and threats, an evaluation of its biological status, and an assessment of the resources and conditions needed to maintain long-term viability. The Species Biological Report is an interim approach taken as we transition to using a Species Status Assessment (SSA) framework as the standard format that the Service uses to analyze species as we make decisions under the Act, and includes similar analyses of the species' viability in terms of its resiliency, redundancy, and representation (USFWS 2016b, entire). We summarize relevant information below.

The Colorado butterfly plant is a short-lived perennial herb that is monocarpic or semelparous, meaning that it flowers once, sets seed, and then dies. Flowering plants may, on rare occasions, flower a second year or become vegetative the year after flowering (Floyd 1995, pp. 10–15, 32). Pollinators for related species of *Gaura* and *Colyphus* (Onagraceae, tribe Onagreae) consist of noctuid moths (*Noctuidae*) and halictid bees (*Lasioglossum;* Clinebell *et al.* 2004, p. 378); both moths and bees have been identified visiting Colorado butterfly plant flowers during annual surveys (USFWS 2016c, entire). Additionally, one study found that the Colorado butterfly plant does not exhibit a bimodal (day and night) pollination system that is seen in other *Gaura* species, since the majority of pollination occurs at night by noctuid moths (Krakos *et al.* 2013, entire).

The Colorado butterfly plant is self-compatible; plants produce flowers capable of forming viable seed with pollen from the same plant (Floyd 1995, p. 4). During dispersal, many seeds fall to the ground around parent plants (Floyd and Ranker 1998, p. 854). Because the seed floats, it also may be dispersed downstream. Livestock and native ungulates could provide an important dispersal mechanism as well, through ingestion of the seeds (USFWS 2012, p. 27). Populations of this species show evidence of a seedbank, an adaptation that enables the species to take advantage of favorable growing seasons, particularly in flood-prone areas (Holzel and Otte 2004, p. 279).

The number of individuals in a population of Colorado butterfly plants appears to be influenced by rates of seedling establishment and survival of vegetative rosettes to reproductive maturity. These factors may be influenced by summer precipitation (Floyd and Ranker 1998, p. 858; Fertig 2000, p. 13). The combination of cool and moist spring months is important in germination, and germination levels influence the outcome of flowering plant population census in subsequent years. Additionally, summer conditions, and temperature in particular, appear to be an important mortality factor rather than influencing germination (Laursen and Heidel 2003, p. 6). Differences in soil moisture and vegetation cover may also influence recruitment success (Munk *et al.* 2002, p. 123).

The vegetative rosettes within a population may provide an important

and particularly resilient stage of the life history of this species. Individual vegetative rosettes appear to be capable of surviving adverse stochastic events such as flooding (Mountain West Environmental Services 1985, pp. 2–3) and adverse climatic years when new seedling establishment is low. Therefore, episodic establishment of large seedling recruitment classes may be important for the long-term growth, replenishment, and survival of populations (Floyd and Ranker 1998, entire).

Taxonomy

The Colorado butterfly plant, a member of the evening primrose family (Onagraceae), was listed as *Gaura neomexicana* ssp. *coloradensis* in 2000 (65 FR 62302; October 18, 2000). Molecular studies by Hoggard *et al.* (2004, p. 143) and Levin *et al.* (2004, pp. 151–152) and subsequent revisions of the classification of the family Onagraceae (Wagner *et al.* 2007, p. 211) transferred the taxon previously known as *Gaura neomexicana* Wooton to *Oenothera* as *Oenothera coloradensis* ssp. *neomexicana* (Wooton) W.L. Wagner & Hoch. More recent analyses showed that there are no infraspecific entities (any taxa below the rank of species) within the taxon; the listed entity is now recognized as *Oenothera coloradensis* (Wagner *et al.* 2013, p. 67). A more detailed assessment of the taxonomy of the Colorado butterfly plant is available in the species Biological Report (USFWS 2017a, pp. 4–6). The taxonomic and nomenclatural changes do not alter the description, range, or threat status of the listed entity.

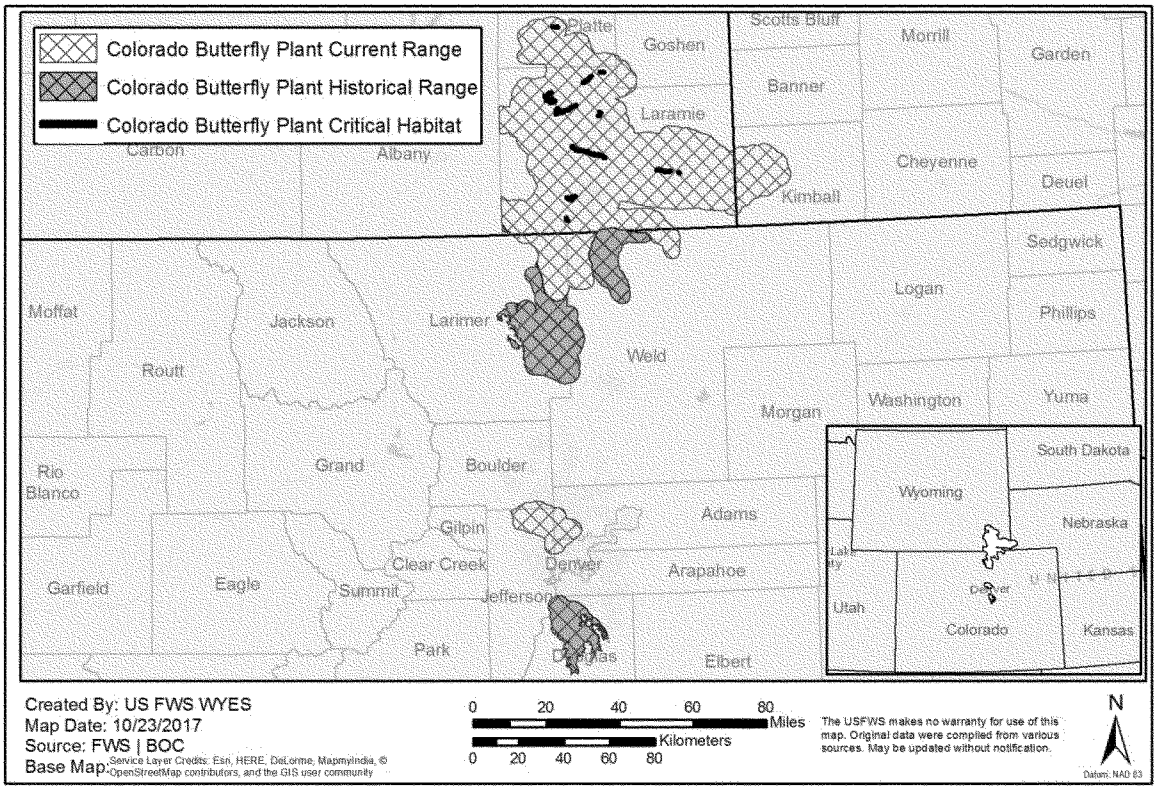
Throughout this proposed rule, we will use the current scientific name and rank, *Oenothera coloradensis,* for the Colorado butterfly plant. We acknowledge, however, that the listing of the Colorado butterfly plant in the Code of Federal Regulations (CFR) will continue to be identified as *Gaura neomexicana* ssp. *coloradensis* until such time as we publish a correction or a final delisting rule in the **Federal Register**.

Species Abundance, Habitat, and Distribution

The Colorado butterfly plant is a regional endemic riparian species known from 34 12-digit hydrologic unit code watersheds (watersheds) (28 extant and 6 extirpated), found from Boulder, Douglas, Larimer, and Weld Counties in Colorado, Laramie and Platte Counties in Wyoming, and western Kimball County in Nebraska (see figure below). Prior to 1984, few extensive searches for the plant had been conducted, and data taken from herbarium specimens were the primary basis of understanding the extent of the species' historical distribution. At that time, the plant was known from a few historical and presumably extirpated locations in southeastern Wyoming and several locations in northern Colorado, as well as from three extant occurrences in Laramie County in Wyoming and Weld County in Colorado. Prior to listing, extensive surveys were conducted in 1998, to document the status of the known occurrences, and all still contained Colorado butterfly plants (Fertig 1998a, entire).

BILLING CODE 4333–15–P

Figure of historical and current range (and the seven units of designated critical habitat entirely within Wyoming) of Colorado butterfly plant in Colorado, Wyoming, and Nebraska. Known occurrences are generalized to watersheds and buffered by 3.2 kilometers (km) (2 miles (mi)).



BILLING CODE 4333–15–C

Habitat Description

The Colorado butterfly plant occurs on subirrigated (water reaches plant root zone from below the soil surface), alluvial soils derived from conglomerates, sandstones, and tuffaceous mudstones and siltstones of the Tertiary White River, Arikaree, and Oglalla Formations (Love and Christiansen 1985 in Fertig 2000, p. 6) on level or slightly sloping floodplains and drainage bottoms at elevations of 1,524–1,951 meters (m) (5,000–6,400 feet (ft)). Populations are typically found in habitats created and maintained by streams active within their floodplains, with vegetation that is relatively open and not overly dense or overgrown (65 FR 62302; October 18, 2000). Populations occur in a range of ecological settings, including streamside, outside of the stream channel but within the floodplain, and spring-fed wet meadows. The plant is often found in but not restricted to early- to mid-succession riparian habitat. Historically, flooding was probably the main cause of disturbances in the plant's habitat, although wildfire and grazing by native herbivores also may have been important. Although flowering and fruiting stems may exhibit increased dieback because of the abovementioned events, vegetative rosettes appear to be little affected (Mountain West Environmental Services 1985, pp. 2–3).

It commonly occurs in communities dominated by nonnative and disturbance-tolerant native species including: *Agrostis stolonifera* (creeping bentgrass), *Poa pratensis* (Kentucky bluegrass), *Glycyrrhiza lepidota* (American licorice), *Cirsium flodmanii* (Flodman's thistle), *Grindelia squarrosa* (curlytop gumweed), and *Equisetum laevigatum* (smooth scouring rush). Its habitat on Warren Air Force Base (AFB) includes wet meadow zones dominated by *Panicum virgatum* (switchgrass), *Muhlenbergia richadrsonis* (mat muhly), *Schizachyrium scoparium* (little bluestem), *Spartina pectinata* (prairie cordgrass), and other native grasses. All of these habitat types are usually intermediate in moisture ranging from wet, streamside communities dominated by sedges, rushes, and cattails to dry, upland prairie habitats (Fertig 1998a, pp. 2–4).

Typically, Colorado butterfly plant habitat is open, without dense or woody vegetation. The establishment and survival of seedlings appears to be enhanced at sites where tall and dense vegetation has been removed by some form of disturbance. In the absence of occasional disturbance, the plant's habitat can become choked by dense growth of willows, grasses, and exotic plants (Fertig 1996, p. 12). This prevents new seedlings from becoming established and replacing plants that have died (Fertig 1996, pp. 12–14).

For the purposes of this analysis, we consider all occurrences of the Colorado

butterfly plant within the same watershed to be one population. There are no data (*e.g.,* genetic relatedness) available to more precisely define populations, and although distance of 1 km (0.6 mi) or greater may exceed the distance traveled by pollinators, it is possible that seeds may disperse over much greater distances (Heidel 2016, pers. comm.). Therefore, because these gaps are probably too small to prevent the dispersal of pollinators and/or seeds between subpopulations, colonies along the same stream reach should be considered part of the same population. This varies from the characterization of populations in both the listing decision (65 FR 62302; October 18, 2000) and critical habitat designation (70 FR 1940; January 11, 2005), where populations were defined by landowner and/or proximity within a drainage. We find organizing populations by watershed more accurately describes components of population ecology (genetic exchange within a geographic area), and stressors affecting the species tend to vary by watershed. Because of this new organization of population structure, some populations considered distinct and separate during the 2000 listing decision are now combined and vice versa, although many populations are the same in this proposed rule as they were presented in the 2000 listing rule.

Population Abundance and Trends

The Colorado butterfly plant occurred historically and persists in various ecological settings described above under Habitat Description including wet meadows, stream channels, stream floodplains, and spring-fed wetlands. A detailed summary of the status of the species between 1979 and 2016 is provided in the species' Biological Report (USFWS 2017a, pp. 13–22).

In 1998 and 1999, in preparation for listing the species, the rangewide census of flowering individuals was estimated at 47,300 to 50,300, with the majority of these occurring in Wyoming (Fertig 1998a, p. 5; Fertig 2000, pp. 8–13). However, a population was discovered in Colorado in 2005 that had a peak census of 26,000 plants in 2011, bringing the total rangewide population to approximately 73,300 to 76,300 plants over time. Another population was discovered upstream of known populations on Horse Creek in Laramie County, Wyoming, in 2016 with only 17 individuals, although the area had just been hayed and was likely an incomplete representation of the total number of plants in this population (USFWS 2016c, entire).

Average numbers may be a more appropriate way to represent populations than the minimum and maximum values, although all provide insight into the population's resiliency, or the ability to withstand stochastic events. The number of reproductive individuals in a population is somewhat driven by environmental factors and varies considerably, so understanding the variability in the number of individuals present in any given year is meaningful in assessing population resiliency. Population numbers have fluctuated five-fold over the course of the longest-running monitoring study (28 years) conducted on Warren AFB. There, the population peaked at over 11,000 flowering plants in 1999 and 2011, making it one of the largest populations rangewide, and then dropped to 1,916 plants in 2008 (Heidel *et al.* 2016, p. 1). The Warren AFB population numbers provide some indication of how population numbers can vary in landscapes not managed for agricultural purposes, and it is likely that numbers vary even more dramatically on managed landscapes. If this fluctuation was applied to the rangewide population estimates above, then total rangewide numbers for average years might be less than 50 percent of rangewide estimates in favorable years (Handwerk 2016, pers. comm.; Heidel 2016, pers. comm.).

The final listing rule (65 FR 62302; October 18, 2000) defined large populations as those containing more than 3,000 reproductive individuals; moderate populations as those containing 500 to 2,500 reproductive individuals; and small populations having fewer than 500 reproductive individuals. At the time, the species was represented by 10 stable or increasing populations, 4 extant but declining populations, 3 likely small populations, and 9 likely extirpated populations. However, after monitoring roughly half the known populations annually for the past 13 years, we understand that population size fluctuates significantly from year to year; therefore, population size in any given year is not a good indicator of resiliency. Therefore, our estimates of resiliency are now based on averages of population censuses over multiple years and trends of populations in response to management and stressors. Based on this, we now have 15 highly resilient populations, 2 moderately resilient populations, 6 low resiliency populations, 2 populations with unknown resiliency, 3 introduced populations, and records of 6 extirpated populations.

Colorado

In 2005, when critical habitat was designated for the Colorado butterfly plant, only a single population was known from Colorado. That population was not designated as critical habitat because it was protected under a WEA. Currently, the species is known to occur in Adams, Boulder, Douglas, Jefferson, Larimer, and Weld Counties in northern Colorado, spanning 12 watersheds (see figure above). Six historical occurrences have not been documented since 1984, and are presumed extirpated. Three of the eight records in Colorado are introduced and do not represent indigenous populations, and are either seeded into the wild or into a garden. These introduced sites were not designed specifically for species' conservation, and therefore are not the focus of this species status evaluation in Colorado.

The majority of Colorado butterfly plants in Colorado are located on lands managed by the City of Fort Collins Natural Areas Department (Ft. Collins or CFCNAD) in Weld and Larimer Counties. The plants are distributed among three distinct habitats on either side of Interstate 25 and have numbered between 3 to more than 26,000 reproductive individuals. These areas are being managed to maintain suitable habitat for the species (CFCNAD 2008, p. 1; CFCNAD 2010, p. 1; CFCNAD 2011a, entire; CFCNAD 2011b, entire; CFCNAD 2014, entire). Annual census information on flowering individuals at the Meadow Springs Ranch in Weld County indicates that the large fluctuations in population numbers are actually around a stable mean (434 flowering plant average, median of 205, range of 45 − 1,432 flowering plants). Other populations in Colorado have not been routinely monitored; consequently, no trend information is available (USFWS 2016c, entire). In summary, the species is represented in Colorado by two highly resilient, three low resiliency, and three introduced populations.

Nebraska

Populations of the Colorado butterfly plant in Nebraska are considered at the edge of the species' range and exist at higher elevations than we knew at the time we listed the species. Surveys conducted in 1985, along Lodgepole Creek near the Nebraska/Wyoming border in Kimball County, found just over 2,000 flowering plants (Rabbe 2016, pers. comm). A survey in 1992 found two populations of Colorado butterfly plant: One population (547 plants) along Lodgepole Creek and one population (43 plants) at Oliver Reservoir State Recreation Area (SRA) in the southwest panhandle of Nebraska in Kimball County (Fertig 2000a, p. 12).

Survey results from 2004 suggested the species was extirpated from the State. In 2005, no critical habitat was designated in Nebraska. However, a 2008 survey along historically occupied habitat and the Oliver Reservoir SRA, located 12 plants in four locations on private lands along Lodgepole Creek: 5 plants in areas where the species had been located before and 7 plants in areas newly watered by a landowner piping water into Lodgepole Creek from a cattle stock tank. No plants were found at the Oliver Reservoir SRA (Wooten 2008, p. 4). These areas have not been surveyed since 2008. Outside of these occurrences, no other populations of the species are known to occur in Nebraska (Rabbe 2016, pers. comm.).

Wyoming

Extant populations of Colorado butterfly plant in Wyoming occur throughout most of Laramie County and extend northward into Platte County (USFWS 2012, pp. 11–21), spanning 17 watersheds (see figure above). Over 90 percent of known occurrences in Wyoming are on private lands, with parts of two occurrences on State school trust lands, one occurrence on State lands, and one occurrence on Federal lands. Populations in Wyoming that are found partly or fully on State school trust lands are managed for agricultural uses. The population on Federal lands occurs on Warren AFB located adjacent to Cheyenne, provides information on species trends as it may have occurred prior to human settlement of the area (with wild grazers and natural streamflow), and represents the level of hydrological complexity of three different sizes of streams. The highest census numbers at Warren AFB totaled over 11,000 plants in 1998 and 2011, and the mean census numbers for all other years have remained at or above 50 percent of that peak, based on 1988–2016 numbers (Heidel *et al.* 2016, pp. 11–14).

In terms of genetic representation, a study conducted on Colorado butterfly plants occupying three drainages at Warren AFB found that one of the drainages was genetically unique and more diverse than the other two drainages (Floyd 1995, pp. 73–81). Another study at Warren AFB found that plants in one of the drainages contained unique alleles, sharing genetic composition with only a small number of individuals from the second and no individuals of the third drainage, indicating fine-scale genetic variability within that portion of the species' range (Tuthill and Brown 2003, p. 251). Assuming similar genetic structure across the species' range, this result suggests a high degree of genetic representation at the species' level. This genetic information, however, does not provide sufficient strength in terms of sample size in discerning populations from each other.

The Service has agreements with 11 private landowners within six watersheds in Laramie County, Wyoming, and one watershed in Weld County, Colorado (described in detail under Conservation Efforts, below), since 2004 to conduct annual monitoring of the Colorado butterfly plant. We also provide management recommendations to help landowners maintain habitat for the species. Many of the landowners graze cattle or horses where the species occurs; others use the areas for haying operations. Populations at these locations may fluctuate by as much as 100-fold annually (USFWS 2012, pp. 11–21; USFWS 2016c, entire). For example, one population was heavily grazed for over a decade, leading to counts of fewer than 30 reproductive individuals for several years, but when the grazing pressure was relieved, the population rebounded within 1 year to more than 600 reproductive individuals (USFWS 2016c, entire). This may indicate that either a robust seedbank was present or vegetative rosettes avoided the intense grazing pressure and bolted after grazing diminished. The total number of plants counted in Wyoming under these agreements has varied from approximately 1,000 to over 21,000 reproductive individuals since 2004. Combining annual census numbers from all monitored populations in Wyoming, we have observed small to extreme population fluctuations (USFWS 2012, pp. 11–21; USFWS 2016c, entire). Wyoming is represented by 13 highly resilient populations, 2 moderately resilient populations, and 2 populations with unknown resiliency due to lack of information.

The listing decision (65 FR 62302, October 18, 2000, see p. 62308) stated that ''[i]n order for a population to sustain itself, there must be enough reproducing individuals and sufficient habitat to ensure survival of the population. It is not known if the scattered populations of [the Colorado butterfly plant] contain sufficient individuals and diversity to ensure their continued existence over the long term.'' Today, we understand that, regarding ecological representation, the species is characterized by having at least one population within each ecological setting and within all but the southern-most portions of the historical range. Furthermore, most extant populations have high resiliency (with more than 100 reproductive individuals in most years). Additionally, most populations contain individuals in more than one ecological setting, such as individuals along the creek bank and individuals outside of the creek bank and in the floodplain of the creek. While surveyors typically census the number of flowering individuals during surveys due to relative ease in counting, the number of flowering plants in a survey location in any given year does not represent the resiliency of the population. Resiliency is determined through a combination of number of flowering individuals, trends in this number, and response of the population to stochastic events.

Conservation Efforts

The Service has worked with partners to protect existing populations. Much of this work has been accomplished through voluntary cooperative agreements. For example, beginning in 2004, the Service has entered into 11 WEAs with private landowners, representing six watersheds, to manage riparian habitat for Colorado butterfly plant (70 FR 1940; January 11, 2005). These 15-year WEAs cover a total of 1,038 hectares (ha) (2,564 acres (ac)) of the species' habitat along 59 km (37 mi) of stream. These agreements represent approximately one-third of the known populations of Colorado butterfly plant in Wyoming and Colorado, including some of the largest populations on private lands. All of the landowners have agreed to the following:

(1) Allow Service representatives or their designee access to the property for monitoring or fence installation;

(2) Coordinate hay cutting activities in areas managed primarily for hay production to consider the Colorado butterfly plant's seed production needs;

(3) Prevent application of herbicides closer than 30.5 m (100 ft) from known subpopulations of the Colorado butterfly plant; and

(4) Manage livestock grazing activities in conjunction with conservation needs of the Colorado butterfly plant.

One of the landowners signed a 10-year agreement instead of a 15-year agreement that was renewed for an additional 10 years in 2015. The remaining agreements expire in late 2019. We anticipate that participating landowners will continue to support the work being performed under the WEAs and will seek renewal of these agreements if the species remains listed under the Act. Based on the ongoing relationship that the Service has with these participating landowners, we anticipate that they would support the inclusions of their properties under the

post-delisting monitoring program should the Colorado butterfly plant be delisted.

One of the benefits of the WEAs for both the Service and private landowners is that we can review the population numbers annually and together develop management recommendations to improve growing conditions for the species. Populations occurring within designated critical habitat (see figure, above) have not been surveyed since 2004, and their trends, threats, and viabilities are uncertain. However, no projects potentially impacting critical habitat for this species have occurred. Additionally, we reviewed aerial imagery of the critical habitat units and found only two minimal changes between 2004 and 2015 (reflecting habitat conditions at the time of designation and the most recent aerial imagery available) throughout all critical habitat units; these changes affect only a few acres of designated critical habitat (USFWS 2017b, entire). Consequently, we determine that activities occurring on critical habitat are likely the same as they were at the time of designation. Furthermore, because many of the private lands included in the critical habitat designation are adjacent to lands under WEAs, we determine that the populations occurring within designated critical habitat are likely stable, and fluctuating similarly to populations on lands that we monitor under WEAs. We have no reason to believe that populations occurring on designated critical habitat are responding to stressors differently than those populations we monitor. Therefore, populations throughout the species' range on private, local, and Federal lands either have been observed to be, or are highly likely to be, fluctuating around a stable population size.

The Service and the U.S. Air Force signed a memorandum of agreement (MOA) on January 18, 1982 (updated in 1999 and 2004) to facilitate the preservation, conservation, and management of the Colorado butterfly plant (USFWS 1982, entire; USFWS 1999, entire; USFWS 2004, entire). In 2004, Warren AFB developed a conservation and management plan for the species (Warren AFB 2004, entire) that was added to their integrated natural resources management plan in 2014 (Warren AFB 2014, entire). Through these plans, the Service partners with the U.S. Air Force and Wyoming Natural Diversity Database to monitor and protect the population of the Colorado butterfly plant on the Warren AFB. This includes annual monitoring; nonnative, invasive species control and eradication; and maintenance of appropriate floodplain characteristics for the species. Based on 29 years of monitoring and management, the population of the Colorado butterfly plant on the Warren AFB is doing well, with some areas declining while others are increasing (Heidel *et al.* 2016, entire).

Three populations in Larimer and Weld Counties, Colorado, occur on properties owned by the City of Fort Collins, and two are among the largest across the species' range. The City of Fort Collins developed a 10-year master plan for the Natural Areas Department in 2014, which provides a framework for the conservation and preservation of natural areas, including the populations of the Colorado butterfly plant. The master plan prescribes conservation actions that allow for the persistence of the Colorado butterfly plant on the landscape (CFCNAD 2016a, entire), including prescribed burns to eliminate competition, managed grazing, and improved security of water flow to the species' habitat.

In summary, these agreements and plans have provided useful data, facilitated good management of nine of the largest and most resilient populations, and resulted in stable or increasing population trends. Because of the information we obtained through these agreements and plans, we are able to understand the resilience of individual plants and populations, the representation of the species within its ecological settings, and the redundancy of the plant population's numbers and potential for connectivity.

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing species, reclassifying species, or removing species from listed status. ''Species'' is defined by the Act as including any species or subspecies of fish or wildlife or plants, and any distinct vertebrate population segment of fish or wildlife that interbreeds when mature (16 U.S.C. 1532(16)). 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: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

Determining whether the status of a species has improved to the point that it can be downlisted (*i.e.,* reclassified from endangered to threatened) or delisted requires consideration of whether the species meets the definitions of either an endangered species or threatened species contained in the Act. For species that are already listed as endangered species or threatened species, this analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future following the delisting or downlisting and the removal or reduction of the Act's protections.

A species is an ''endangered species'' for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is a ''threatened species'' if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The word ''range'' in the significant portion of its range phrase refers to the range in which the species currently exists, and the word ''significant'' refers to the value of that portion of the range being considered to the conservation of the species. We consider ''foreseeable future'' as that period of time within which a reliable prediction can be reasonably relied upon in making a determination about the future conservation status of a species, as described in the Solicitor's opinion dated January 16, 2009. We consider 15 to 20 years to be a reasonable period of time within which reliable predictions can be made for the Colorado butterfly plant. This time period includes at least five generations of the species, coincides with the duration of one renewal of the WEAs expiring in 2019, and aligns with the timeframes for predictions regarding municipal development and growth in the area. For the purposes of this analysis, we first evaluate the status of the species throughout all of its range, then consider whether the species is in danger of extinction or likely to become so in any significant portion of its range.

In considering what factors might constitute threats, we must look beyond the exposure of the species to a particular factor to evaluate whether the species may respond to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure to a factor and the species responds negatively, the factor

may be a threat, and we attempt to determine how significant a threat it is. If the threat is significant it may drive, or contribute to, the risk of extinction of the species such that the species warrants listing as an endangered species or a threatened species as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors individually or cumulatively are operative threats that act on the species to the point that the species meets the definition of an endangered species or threatened species under the Act.

The Colorado butterfly plant is federally listed as threatened. Below, we present a summary of threats affecting the species and its habitats in the past, present, and predicted into the future. A detailed evaluation of factors affecting the species at the time of listing can be found in the listing determination (65 FR 62302; October 18, 2000) and designation of critical habitat (70 FR 1940; January 11, 2005). An evaluation of factors affecting the species after 2005 can be found in the 2012 5-year review (USFWS 2012, entire). The primary threats to the species identified at the time of listing include overgrazing by cattle or horses, haying or mowing at inappropriate times of the year, habitat degradation resulting from vegetation succession or urbanization of the habitat, habitat conversion to cropland or subdivision, water development, herbicide spraying, and competition with exotic plants (Marriott 1987, pp. 26–27; Fertig 1994, pp. 39–41, Fertig 2000a, pp. 16–17). Since the time of listing, oil and gas development and the effects of climate change have become potential threats to this species and are analyzed under Factor A and Factor E, respectively, below.

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

Residential, Urban, and Energy Development

At the time of listing (65 FR 62302; October 18, 2000), residential and urban development around the cities of Cheyenne and Fort Collins were identified as past causes of habitat conversion and habitat loss to the Colorado butterfly plant; these types of development were not a concern in Nebraska at the time of listing nor are they now. Although difficult to quantify because land conversion was not tracked during the settlement of the West, likely a few hundred acres of formerly suitable habitat were converted to residential and urban sites, contributing to loss of habitat (Fertig 1994, p. 38; Fertig 2000a, pp. 16–17). Much of the species' range occurs along the northern Front Range of the Rocky Mountains in Colorado and Wyoming, which has experienced dramatic growth in the recent past and is predicted to grow considerably in the future (Regional Plan Association 2016, entire), particularly in Larimer and Weld Counties in Colorado (University of Colorado Boulder 2015, pp. 119–120). The demand that urban development places on water resources also has the ability to dewater the streams and lower groundwater levels required by the species to maintain self-sustaining populations, and is explored below.

The two large populations of the Colorado butterfly plant in Larimer and Weld Counties, Colorado, occur on lands managed as open space by Fort Collins, and are not directly subject to residential or urban development. Consequently, despite projected increases in human density and urban development along the northern Front Range, these lands are managed to allow for the persistence of these populations, with managed grazing or burning (CFCNAD 2016b, entire). Fort Collins does not own all mineral rights on these lands; therefore, sensitive areas within these boundaries may be impacted by mineral development. However, in light of this potential threat, the city completed a planning process in which they highlighted areas to be avoided by mineral development (The Nature Conservancy 2013, entire). While oil and gas development has increased in northern Colorado and southeastern Wyoming since the time of listing, no oil or gas wells have been proposed or likely will be proposed in areas that will directly or indirectly impact populations of the Colorado butterfly plant in Colorado or in Wyoming, particularly due to the species' occurrence in riparian and wetland habitats. Because the plant occurs in riparian and wetland habitats that routinely flood, it is likely that oil and gas wells will be sited outside of population boundaries. While there is potential for indirect effects through spills or sedimentation, we have no specific information about those effects on the species to date.

According to publicly available information, there are no current proposals for urban or residential development on lands containing populations of Colorado butterfly plant in Wyoming. Monitoring of lands under agreement (CFCNAD, WEAs, and Warren AFB) has also shown that neither urbanization nor conversion to intensive agricultural activities has occurred as predicted in the final listing rule (65 FR 62302, October 18, 2000; USFWS 2012, pp. 11–22; USFWS 2016c, entire). Populations at WAFB remained stable over the past 29 years without being managed for agricultural purposes, although numbers of reproductive individuals fluctuate during any given year (Heidel *et al.,* 2016, pp. 14–18). Since the time of listing, the Service has received few requests for consultation under section 7 of the Act for projects that may adversely affect this species. Informal consultations have been limited to grazing, power lines, pipelines, road development, and drainage crossing projects, and avoidance and minimization of potential impacts has been readily achieved (USFWS 2017c, entire).

Furthermore, chapters 3 and 4 of the Laramie County Land Use Regulations address floodplain management and require specific provisions and permits for construction within floodplains (Laramie County 2011, pp. 165–185), which encompass all Colorado butterfly plant habitat within the county; these regulations, therefore, extend some level of protection to the species and its habitat. These regulations are in place to ''promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions'' (Laramie County 2011, p. 165), and protect many resources, including the Colorado butterfly plant and its habitat, by limiting development in the floodplains. These regulations are discussed in detail under Factor D, below.

The threats of residential and urban development, once considered significant threats to the Colorado butterfly plant, have been largely avoided because most development has occurred outside of the habitat in which this species occurs. Annual monitoring conducted by the Service since 2004 indicates that populations are stable and unaffected by any development that has occurred within the species' range. While human population growth and development are predicted for the Front Range of the Rocky Mountains in Colorado into the future, these areas are outside of the species' occupied habitat, and we do not anticipate development in the protected areas under management of Fort Collins, and do not anticipate development due to continued restrictions against

development within the floodplain. Additionally, increases in oil and gas development in northern Colorado and southeastern Wyoming have not directly or indirectly impacted populations of the Colorado butterfly plant. Current ownership and management by Fort Collins and Warren AFB of lands containing a majority of large populations of the Colorado butterfly plant protect the species from current and future impacts due to residential, urban, and energy development.

Agricultural Practices

At the time of listing (65 FR 62302; October 18, 2000), conversion of grassland to farmlands, mowing grasslands, and grazing were considered threats to the Colorado butterfly plant. Prior to listing, the conversion of moist, native grasslands to commercial croplands was widespread throughout much of southeastern Wyoming and northeastern Colorado (Compton and Hugie 1993, p. 22), as well as in Nebraska. However, conversion from native grassland to cropland has slowed throughout the species' range since the time of listing, with no lands converted in Laramie County and just 12 ha (30 ac) converted in Platte County between 2011 and 2012 (FSA 2013, entire).

Mowing areas for hay production that are occupied by the Colorado butterfly plant was identified as a threat at the time of listing, if conducted at an inappropriate time of year (prior to seed maturation) (Fertig 1994, p. 40; USFWS 1997, p. 8). However, monitoring over the past 13 years indicates that mowing prior to seed maturation occurs infrequently. Even in areas where early season mowing has occurred, annual monitoring has shown high numbers of reproductive plants present in subsequent years, suggesting that mowing for hay production is not a threat to the species (USFWS 2016c, entire).

The agricultural practices of grazing and herbicide application threatened the Colorado butterfly plant at the time of listing. However, since then, the Service has made and continues to make recommendations to cooperating landowners on agricultural management that fosters resiliency in populations of the species. We believe that these measures have decreased the severity of these stressors. We also anticipate that landowners will continue their current agricultural practices into the future, based on the data we have collected from WEAs (USFWS 2016c, entire) and analysis of aerial imagery of designated critical habitat (USFWS 2017b, entire). Through these agreements, we also learned that the species is highly adapted to withstand stochastic events. The assessment that the species is highly resilient is based on the information obtained through the WEAs; we do not rely on the implementation of the WEAs to ensure that the species remains highly resilient. Instead, we believe the plant will continue to thrive even if protections are removed. Grazing is further explored under Factor C, below, and herbicide spraying is further explored under Factor E, below.

Water Management

At the time of listing (65 FR 62302; October 18, 2000), water management (actions that moved water to croplands, such as irrigation canals, diversions, and center pivot irrigation development) was considered a threat that would remove moisture from Colorado butterfly plant habitat. The management of water resources for livestock production and domestic and commercial human consumption, coupled with increasing conversion of lands for agricultural production, often led to channelization and isolation of water resources; changes in seasonality of flow; and fragmentation, realignment, and reduction of riparian and moist lowland habitat (Compton and Hugie 1993, p. 22). All of these actions could negatively impact suitable habitat for the species.

Dewatering portions of Lodgepole Creek in Kimball County, Nebraska, has led to the extirpation of some of the species' known historical populations there, and low likelihood of long-term resiliency for the two extant populations last monitored in 2008 (Rabbe 2016, pers. comm.). Extant populations in Nebraska continue to experience dewatering and overgrazing on private land. However, when water was reintroduced to formerly occupied habitat after being absent for more than 10 years, a population was rediscovered (Wooten 2008, p. 4). While rediscovery of this population indicates persistence of a viable seedbank for at least 10 years, numbers of plants within the population declined from over 600 plants (Fertig 2000a, p. 12) to 12 plants (Wooten 2008, p. 4), and the application of water that allowed plants to grow was temporary, which suggests the population has a low likelihood of long-term resiliency.

In 2016, the Colorado Water Conservation Board on behalf of Fort Collins filed an instream flow right on Graves Creek, the stream that feeds the population of Colorado butterfly plants in Soapstone Prairie (CFCNAD 2016b, entire). While the water right has not yet been granted, we believe that this instream flow right will protect and maintain subirrigation of this large and important population through ensuring adequate water availability to the species throughout the year.

The entire range of the Colorado butterfly plant occurs within the Platte River Basin. Water usage in the Platte River system is managed collaboratively by the States of Colorado, Wyoming, and Nebraska, and the Department of the Interior, through the Platte River Recovery Implementation Program (PRRIP). The PRRIP, which began in 1997, provides a mechanism for existing and new water users and water-development activities in the Platte River Basin to operate in regulatory compliance with the Act regarding potential impacts to the five Platte River ''target species'' in Nebraska: *Grus americana* (whooping crane), *Sterna* (*Sternula*) *antillarum* (interior least tern), *Charadrius melodus* (northern Great Plains population of piping plover), *Scaphirhynchus albus* (pallid sturgeon), and *Platanthera praeclara* (western prairie fringed orchid). Because the PRRIP ensures that shortages to the target flows in the central Platte River will be substantially reduced by keeping water within the basin more consistently throughout the year (PRRIP 2016), the hydrological component of habitat for the Colorado butterfly plant will be better maintained as well.

In summary, water management can directly and indirectly impact the Colorado butterfly plant. While management of water resources has negatively impacted the species on a localized scale in the past, there is no indication that water management throughout the majority of the species' range poses a current threat to the species because programs and policies currently in place, such as the PRRIP and Graves Creek instream flow right, provide substantial assurances that the hydrological component of currently occupied habitat will remain protected over the long term.

Natural Succession and Competition With Nonnative, Invasive Species

In the absence of periodic disturbance, natural succession of the plant community in areas occupied by the Colorado butterfly plant moves from open habitats to dense coverage of grasses and forbs, and then to willows and other woody species. The semi-open habitats preferred by this species can become choked by tall and dense growth of willows; grasses; and nonnative, invasive species (Fertig 1994, p. 19; Fertig 2000a, p. 17). Natural disturbances such as flooding, fire, and native ungulate grazing were sufficient

in the past to create favorable habitat conditions for the species. However, the natural flooding regime within the species' floodplain habitat has been altered by construction of flood control structures and by irrigation and channelization practices (Compton and Hugie 1993, p. 23; Fertig 1994, pp. 39–40). Consequently, the species relies on an altered flood regime and other sources of disturbance to maintain its habitat.

In the absence of natural disturbances today, managed disturbance may be necessary to maintain and create areas of suitable habitat (Fertig 1994, p. 22; Fertig 1996, pp. 12–14; Fertig 2000a, p. 15). However, populations can persist without natural disturbances such as fire and flooding through natural dieback of woody vegetation and native ungulate grazing (Heidel *et al.,* 2016, pp. 2–5). Additionally, some Federal programs, such as those administered by the U.S. Department of Agriculture's Natural Resources Conservation Service, focus on enhancing or protecting riparian areas by increasing vegetation cover and pushing the habitat into later successional stages, which removes the types of disturbance the Colorado butterfly plant needs (65 FR 62302; October 18, 2000, p. 62307). However, these programs are implemented in only a small portion of the species' range. The Service learned from monitoring the 11 WEA properties that the typical approach of managing for livestock grazing, coupled with an altered flood regime, appears to provide the correct timing and intensity of disturbance to maintain suitable habitat for the species (USFWS 2012, pp. 9–21; USFWS 2016c, entire). There has been no noticeable change in general management practices or change in the natural succession rate in either the WEA properties or the designated critical habitat since the agreements were signed or the critical habitat was designated, and we have no reason to believe that these practices or rates will change in the foreseeable future. Therefore, through the information we have gathered since the time of listing, it appears that natural succession is not occurring at the level previously considered to threaten this species.

The final listing rule (65 FR 62302; October 18, 2000) included competition with exotic plants and noxious weeds as a threat to the Colorado butterfly plant. Competition with exotic plants and noxious weeds, here referred to as nonnative, invasive species, may pose a threat to the Colorado butterfly plant, particularly given the species' adaptation to more open habitats. In areas of suitable habitat for Colorado butterfly plant, the following plants may become dominant: The native *Salix exigua* (coyote willow); nonnative, invasive *Cirsium arvense* (Canada thistle); and nonnative, invasive *Euphorbia esula* (leafy spurge). *Salix* in particular increases in the absence of grazing or mowing. These species can outcompete and displace the Colorado butterfly plant, presumably until another disturbance removes competing vegetation and creates openings for Colorado butterfly plant seedlings to germinate (Fertig 1998a, p. 17). Since 2004, we have monitored populations of the Colorado butterfly plant that have slowly decreased in numbers or disappeared following the invasion and establishment of these other plant species, only to see Colorado butterfly plants return to the area following disturbance (USFWS 2016c, entire). Additionally, at least one population has moved to an uninvaded area downstream of its former invaded habitat (Handwerk 2016, pers. comm.), suggesting that populations can move to find more suitable habitat nearby.

Prior to listing, biological control agents were used to control nonnative, invasive species at Warren AFB and may have depressed numbers and extent of Canada thistle and leafy spurge. Introduced gall-forming flies have slowly become established on Warren AFB and have reduced the vigor, height, and reproductive ability of small patches of Canada thistle (Fertig 1997, p. 15), at least in some years (Heidel *et al.,* 2016, p. 16). Also on the Warren AFB, a biocontrol agent for leafy spurge, a different flea beetle than infests the Colorado butterfly plant, was observed in 1997 (Fertig 1998b, p. 18). While the effects of biocontrol agents on nonnative, invasive species appear promising, we do not have current information on the status of biocontrol of these agents.

Natural succession was considered a threat to the Colorado butterfly plant at the time of listing. However, we now understand that the altered flood regime of today, coupled with disturbance from fire and grazing, is sufficient to maintain suitable habitat throughout much of the species' range. Competition with nonnative, invasive species is an ongoing stressor for portions of populations, although these invasive species tend not to survive the regular disturbances that create habitat for the Colorado butterfly plant. Therefore, while individuals or populations may be out-competed by native or nonnative, invasive species at higher succession levels, periodic disturbance maintains or creates new habitats for the Colorado butterfly plant.

Summary of Factor A

The following stressors warranted consideration as possible current or future threats to the Colorado butterfly plant habitat under Factor A: (1) Residential, urban, and energy development; (2) agricultural practices; (3) water management; and (4) natural succession and competition with nonnative, invasive species. However, these stressors are either being adequately managed, have not occurred to the extent anticipated at the time of listing, or new information indicates that the species is tolerant of the stressor as described above. While these stressors may be responsible for loss of historical populations (they have negatively affected population redundancy), and are currently negatively affecting the populations in Nebraska, we do not anticipate a rangewide increase in these stressors in the future, although they will continue at some level.

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

Factor B was not considered a threat to the species at the time of listing (65 FR 62302; October 18, 2000). We are aware of three unpermitted collections of seeds of the Colorado butterfly plant for scientific and/or commercial purposes since the publication of the final listing rule. These three collections were limited events that occurred at an introduction site in Colorado and from a large, robust population in Wyoming. Based on recent population data, these unpermitted collection events had no apparent impact on the number and distribution of plants within these populations or the species' habitat (based on Heidel *et al.,* 2016, p. 13; USFWS 2016c, entire). Other than these collections, we are not aware of any attempts to use the Colorado butterfly plant for commercial, recreational, scientific, or educational purposes. In the future, we do not anticipate this species will be collected due to its lack of showiness for much of the year and because it occurs in generally inaccessible areas.

Summary of Factor B

At the time of listing, Factor B was not considered a threat to the Colorado butterfly plant. We are aware of only three unpermitted collections of the seeds of the species since listing. These collection events had no apparent effect on the number and distribution of plants from which they were taken. Based on available information, we do not consider there to be threats now or

in the future related to overutilization for commercial, recreational, scientific, or educational purposes.

C. Disease or Predation

The listing of the Colorado butterfly plant (65 FR 62302; October 18, 2000) did not include threats from disease or predation, although livestock grazing was described as a potential threat if grazing pressures were high. No diseases are known to affect this species. In 2007, a precipitous decline in plant numbers was observed in many populations monitored in Colorado and Wyoming. The exact cause of the decline was not positively identified, but weather and insect herbivory were two potential contributing factors. Weather-related impacts included an early start to the growing season, lower than normal spring precipitation levels (which were magnitudes lower than in all previous years), and higher mean temperatures in late summer. Insect herbivory also was suspected, as virtually all reproductive plants were riddled with holes, flowering and fruit production was curtailed or greatly reduced on all plants, and some bolted plants died before flowering. Interestingly, no vegetative (*i.e.,* non-reproductive) plants showed similar evidence of herbivory (Heidel *et al.,* 2011, pp. 284–285). Flowering plant numbers remained low or declined further in 2008. Surveyors identified one or more flea beetle species that may have been responsible for the herbivory. The likely flea beetle species (*Altica foliaceae*) is a native species, and its numbers are not known to be affected by human causes.

Insect herbivory may not be a severe or immediate threat to Colorado or Wyoming populations as the above-referenced impacted populations rebounded to pre-infestation numbers in 2009 and 2010 (Heidel *et al.,* 2011, p. 286). However, insect herbivory may be episodic and potentially tied to climate; preliminary tests have been conducted on its potential impact on population resiliency (Heidel *et al.,* 2011, p. 286). For example, in 2014, intense herbivory from flea beetles at Soapstone Prairie and Meadow Springs Ranch resulted in high mortality and a reduction in bolting of vegetative rosettes (Strouse 2017, pers. comm.), and numbers of reproductive individuals in those populations were low in 2015 and 2016. We found that these populations rebounded in 2017 to record numbers, in the same way populations rebounded after the 2007 flea-beetle-caused decline. This herbivory has not been reported for the Nebraska populations, although it is possible that similar insect herbivory influenced 2008 survey results in Nebraska.

Colorado butterfly plant is highly palatable to a variety of insect and mammalian herbivores including Gaura moth (*Schinia gaura*), cattle, horses, and pronghorn (*Antilocapra americana*), but the plant appears to have some capacity to compensate for herbivory by increasing branch and fruit production (Fertig 1994, p. 6; Fertig 2000a, p. 17). Livestock grazing can be a threat at some sites if grazing pressures are high or if use is concentrated during the summer flowering and fruiting period. Additionally, plants may be occasionally uprooted or trampled by livestock and wildlife. In at least two locations where a population was divided by a fence, the heavily grazed side of the fence had few or no Colorado butterfly plants, while the ungrazed side had many (Marriott 1987, p. 27; USFWS 2016c, entire).

Heavy grazing at key times of the year during the life cycle of the Colorado butterfly plant may be detrimental to populations by temporarily removing reproductive individuals and eliminating seed production for that year. However, even after many years of intensive grazing, populations rebounded upon relief (USFWS 2012, pp. 11–21; USFWS 2016c, entire). This response is likely due to survival of non-reproductive individuals and recruitment from the seedbank. Moderate grazing acts as a disturbance that keeps the habitat in an open or semi-open state suitable for this species, and light to medium grazing can provide benefits by reducing the competing vegetative cover and allowing seedlings to become established (USFWS 1997, p. 8).

Summary of Factor C

In general, while disease or predation has had an occasional negative impact on individuals and localities, most of these impacts do not appear to affect entire populations, nor do these impacts persist for any extended period of time. Individuals are resilient to damage; vegetative plants (basal rosettes) appear to be resistant to damage from grazing activities and are capable of withstanding stochastic events, and reproductive plants send out additional flowering branches upon injury. Also, the lack of any known diseases affecting the species and the species' redundancy of many populations distributed across most of the historical range would likely provide a buffer to any type of catastrophic disease outbreak.

D. The Inadequacy of Existing Regulatory Mechanisms

Under this factor, we examine whether the stressors identified within the other factors may be ameliorated or exacerbated by an existing regulatory mechanism. Section 4(b)(1)(A) of the Act requires the Service to take into account ''those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species.'' In relation to Factor D under the Act, we interpret this language to require the Service to consider relevant Federal, State, and Tribal laws, regulations, and other such binding legal mechanisms that may ameliorate or exacerbate any of the threats we describe in threats analyses under the other four factors, or otherwise enhance conservation of the species. Our consideration of these mechanisms is described in detail within our analysis of each of the factors (see discussion under each of the other factors).

For currently listed species, we consider the adequacy of existing regulatory mechanisms to address threats to the species absent the protections of the Act. Therefore, we examine whether other regulatory mechanisms would remain in place if the species were delisted, and the extent to which those mechanisms will continue to help ensure that future threats will be reduced or minimized.

In our discussion under Factors A, B, C, and E, we evaluate the significance of threats as mitigated by any conservation efforts and existing regulatory mechanisms. Where threats exist, we analyze the extent to which conservation measures and existing regulatory mechanisms address the specific threats to the species. Regulatory mechanisms, if they exist, may reduce or eliminate the impacts from one or more identified threats. Presently, the Colorado butterfly plant is a Tier 1 species in the Plants of Greatest Conservation Need in Colorado (Colorado SWAP 2015, entire), and the species is listed on the State endangered species list for Nebraska, and will continue to be so designated due to the species' extreme rarity in Nebraska (Wooten 2008, p. 1).

When we listed the Colorado butterfly plant in 2000 (65 FR 62302; October 18, 2000), the majority of known populations occurred on private lands managed primarily for agriculture, with one population at Warren AFB, and a few other populations throughout the species' range under various local jurisdictions. The listing decision described the species' status as

Sensitive by the U.S. Forest Service, although no populations occurred on Forest Service lands at the time. The listing decision also described the lack of protection extended to the Colorado butterfly plant through the Federal threatened status of *Zapus hudsonius preblei* (Preble's meadow jumping mouse) that occurs in the same range of habitats due to the two species' use of differing successional stages of riparian habitats (65 FR 62302; October 18, 2000).

Today, the population on Warren AFB represents one of the largest and most highly resilient populations of the species, is managed under an integrated natural resources management plan (Warren AFB 2014, entire) and a conservation and management plan under Air Force Information 32–7064 (Warren AFB 2004, entire). These plans call for annual monitoring, protection and maintenance, and research on threats and genetic variability of the population located there. Additionally, a Service employee stationed at Warren AFB manages its natural resources, including management of the Colorado butterfly plant and its habitat, such as directing the application of herbicide in the vicinity of the species' habitat. These plans would remain post-delisting. The population of the Colorado butterfly plant at Warren AFB has been monitored since before listing to determine population trends, detect any changes in its habitat, pursue viability assessment, and assess population response to different hydrological conditions. The results indicate that plant numbers fluctuate depending on climate and hydrology, and seem to be capable of rebounding after extreme stochastic events such as the flea beetle infestation of 2007 (Heidel *et al.,* 2016, pp. 15–17). Should the protections of the Act be removed from this species upon delisting, the aforementioned plans would remain in place, at least until the next plan revisions, which have yet to be scheduled.

Discovery and subsequent protection of large populations of the Colorado butterfly plant on lands owned and managed by Fort Collins are an important addition to conservation of the species after it was listed in 2000. The regulatory protections that these two populations receive from occurring on municipal natural areas lands include indefinite protections of land and water and restoring and rehabilitating land and natural systems to build ecological diversity and permanence (City of Fort Collins 2014, pp. 1–2). Populations managed by Fort Collins are afforded protection from oil and gas development (The Nature Conservancy 2013, entire) and from water withdrawals (CFCNAD 2016b, entire), as discussed above under Factor A. Also, as mentioned in ''Residential, Urban, and Energy Development'' under Factor A, the Laramie County Land Use Regulations address floodplain management and require specific provisions and permits for construction within floodplains (Laramie County 2011, pp. 165–185), which encompass all Colorado butterfly plant habitat within the county; therefore, these regulations extend some level of protection to the species and its habitat. While protecting riparian and wetland species is not the intent of these regulations, plants growing within the floodplain receive the habitat protections outlined as part of the floodplain construction avoidance provisions.

Lands without specific regulatory mechanisms contain most populations of the Colorado butterfly plant. Over a decade of monitoring 11 occurrences on private lands in Wyoming has documented fluctuations in population size about a stable mean, apparently driven by changes in precipitation and disturbance regime (USFWS 2012, pp. 11–22; USFWS 2016c, entire). Management of lands under WEAs is discussed in Conservation Efforts, above.

Populations of Colorado butterfly plant are not known to occur on lands managed by the Bureau of Land Management (BLM) at this time, although there is potential for populations to be discovered on BLM lands in the future. Because of this possibility, the Service and BLM in Wyoming have developed conservation measures under a Statewide programmatic consultation under section 7 of the Act for the Colorado butterfly plant. These conservation measures are incorporated into BLM's 2008 Record of Decision and Approved Rawlins Resource Management Plan (RMP; BLM 2008, entire) and include, but are not limited to: (1) Buffering individuals and populations by 800 m (0.5 mi); (2) implementing standards for healthy rangelands and guidelines for livestock grazing management for the public lands administered by BLM in the State of Wyoming; (3) limiting the number of grazing animals within the permit area; and (4) protecting surface water through prohibiting surface development in the following areas: Within 400 m (0.25 mi) of the North Platte River; within 152 m (500 ft) of live streams, lakes, reservoirs, and canals and associated riparian habitat; and within 152 m (500 ft) of water wells, springs, or artesian and flowing wells (BLM 2005, pp. 4–2 through 4–4). The newly discovered population on Wild Horse Creek (WY–23) occurs within the agreement area that BLM developed with the landowners, and so the conservation measures included in the Rawlins RMP are applied to this population.

Water use is managed under the PRRIP, as described above under Factor A, which ensures that water use in the Platte River is conducted in a way to maintain volume at certain times of the year in the central and lower reaches of the Platte River in Nebraska. Because all of the watersheds in which the Colorado butterfly plant is found occur within the PRRIP, the water on which the species depends is managed under this program (PRRIP 2006). The water that this species requires would continue to be included under the PRRIP even if the Colorado butterfly plant is removed from the List of Threatened and Endangered Plants.

Summary of Factor D

At the time of listing (65 FR 62302; October 18, 2000), no Federal or State laws or regulations specifically protected populations of the Colorado butterfly plant and its habitat. However, two of the three largest populations occur on Warren AFB and lands owned and managed for the species by Fort Collins where regulatory mechanisms now exist. Additionally, 13 years of annual monitoring of 11 survey areas on private lands under WEAs that has occurred since the species was listed has shown that land used for agricultural purposes can be compatible with the resilience of the species, even without any regulatory mechanism in place (see discussions under Factors A, C, and E). Consequently, we find that existing regulatory mechanisms, as discussed above, will continue to address stressors to the Colorado butterfly plant absent protections under the Act.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Factor E requires the Service to consider any other factors that may be affecting the Colorado butterfly plant. Under this factor, we discuss small population size and restricted range, herbicide spraying, and effects of climate change.

Small Population Size and Restricted Range

The final listing decision (65 FR 62302; October 18, 2000) included the limited range and the small population size of many populations to be a threat

to the Colorado butterfly plant. However, small population size and a restricted range is not a threat in and of itself. Historically, Colorado butterfly plant populations occurred from Castle Rock, Colorado, north to Chugwater, Wyoming, and east into a small portion of southwest Nebraska. The extent of its range was approximately 6,880 ha (17,000 ac). Most of this range is still occupied, although some small and/or peripheral populations in Nebraska and Colorado have been extirpated since intensive survey efforts began. Despite the loss of these populations, the species continues to maintain multiple resilient, representative, and redundant populations throughout nearly all of its range known at the time of listing (see figure, above).

We have evidence that populations throughout the range have persisted despite stochastic events that may have caused short-term declines in number of individuals. For example, a 100-year flood in August 1985 on the Warren AFB inundated the Crow Creek portion of the population, knocking down some plants and surrounding vegetation, and depositing sediments (Rocky Mountain Heritage Task Force 1987, as cited in Heidel *et al.,* 2016, p. 2). Instead of being extirpated, these populations rebounded in 1986 and continue to persist (summarized in Heidel *et al.,* 2016, pp. 2–18). Additionally, based on annual monitoring of populations on private property in Wyoming, stochastic events such as floods and hail storms have reduced population numbers during the event year, then populations rebounded in following years (USFWS 2012, pp. 11–22; USFWS 2016c, entire). Individual plants may be vulnerable to random events such as fires, insect or disease outbreaks, or other unpredictable events. However, this species is adapted to disturbance, and rather than being extirpated, the seedbank can provide opportunity for populations to rebound after such events.

The historical range included populations farther south into Larimer and Weld Counties in Colorado that were lost prior to the listing of the species in 2000. No populations in Larimer and Weld Counties in Colorado have been extirpated since the species was listed, and we do not think that further range restriction has occurred in this portion of the species' range. In the future, species range restriction may occur through loss of peripheral populations in Nebraska where dewatering has removed formerly suitable habitat (Wooten 2008, entire). However, these populations are downstream of highly viable populations in Wyoming, and do not constitute a removal of the species from this drainage entirely. The resiliency and redundancy of populations across much of the species' range indicate that further range restriction is not likely.

Herbicide Spraying

At the time of listing (65 FR 62302; October 18, 2000), the non-selective use of broadleaf herbicides to control Canada thistle, leafy spurge, and other nonnative, invasive plants was considered a threat to the Colorado butterfly plant. Non-selective spraying has had negative effects on some Colorado butterfly plant populations (Fertig 2000a, p. 16). For example, in 1983, which was prior to listing, nearly one-half of the mapped population on Warren AFB was inadvertently destroyed when sprayed with Tordon®, a persistent herbicide (Miller 1987, as cited in 65 FR 62302, October 18, 2000, p. 62307). The status of that portion of the population is unknown due to a subsequent lack of clear record-keeping at that time, prior to a Service biologist being employed on site; all plant locations have been tracked in the time after the Service biologist and Wyoming Natural Diversity Database began working at Warren AFB. Herbicide use along road crossings in and adjacent to plant populations was also noted (65 FR 62302, October 18, 2000, p. 62307).

After the 2000 listing of the Colorado butterfly plant, the Service worked with Warren AFB and private landowners under WEAs to develop best management practices for applying herbicides within the vicinity of known occurrences to remove nonnative, invasive species while minimizing adverse effects to individual Colorado butterfly plants. For example, the WEAs require an herbicide-application buffer of 30.5 m (100 ft) from known locations of the Colorado butterfly plant. However, at one property, the landowner inadvertently sprayed individual plants in spring 2016. During subsequent monitoring, Service staff observed reddened plants with shriveled leaves, which likely reduced the vigor of those individuals (USFWS 2016c, entire). We presume that there will be no long-term effects on the population, and in fact, we found vigorous Colorado butterfly plants growing in this area during surveys in 2017. Furthermore, if the species is delisted, we anticipate that landowners will continue to maintain this buffer in accordance with requirements under the WEAs and that Warren AFB will continue to avoid spraying herbicide in the vicinity of the species' habitat as stipulated in their integrated natural resources management plan and conservation and management plan.

While herbicide application may continue to occasionally occur within Colorado butterfly habitat, we know that unsprayed individuals persist in the population and can repopulate Colorado butterfly plants in areas where plants were killed. The seedbank can play an additional role in restoring Colorado butterfly plants to areas that have been sprayed. Based on our records, herbicide application is a management tool used in conjunction with nonnative, invasive species removal in only four of the known occurrences of the species, and these are among our largest and most resilient populations of the species. Our records indicate that, in general, application of buffers has been successful at reducing the presence of invasive species and competition near the Colorado butterfly plant (USFWS 2012, pp. 24–25; USFWS 2016c, entire), and when conducted appropriately, herbicide application can help improve habitat for the Colorado butterfly plant by eliminating competition.

Effects of Climate Change

Impacts from climate change were not considered in the final rule to list the species (65 FR 62302; October 18, 2000) or in the critical habitat designation (70 FR 1940; January 11, 2005). Our current analyses under the Act include consideration of ongoing and projected changes in climate. The terms ''climate'' and ''climate change'' are defined by the Intergovernmental Panel on Climate Change (IPCC). ''Climate'' refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2007, p. 78). The term ''climate change'' thus refers to a change in the mean or variability of one or more measures of climate (*e.g.,* temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2007, p. 78). Various types of changes in climate can have direct or indirect effects on species. These effects may be positive, neutral, or negative and they may change over time, depending on the species and other relevant considerations, such as the effects of interactions of climate with other variables (*e.g.,* habitat fragmentation) (IPCC 2007, pp. 8–14, 18–19). In our analyses, we use our expert judgment to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change.

According to IPCC, ''most plant species cannot naturally shift their geographical ranges sufficiently fast to keep up with current and high projected rates of climate change on most landscapes'' (IPCC 2014, p. 13). Plant species with restricted ranges may experience population declines as a result of the effects of climate change. The concept of changing climate can be meaningfully assessed both by looking into the future and reviewing past changes. A review of Wyoming climate since 1895 indicates that there has been a significant increase in the frequency of warmer-than-normal years, an increase in temperatures throughout all regions of the State, and a decline in the frequency of ''wet'' winters (Shumann 2011). Data from the Cheyenne area over the past 30 years indicate a rise in spring temperatures (Heidel *et al.* 2016). The current climate in Colorado butterfly plant habitat is quite variable, with annual precipitation ranging from 25–50 cm (10–20 in) of rain and 81–275 cm (32–108 in) of snow per year near the center of the species' range at Cheyenne Municipal Airport (NOAA 2016, entire). The years 2000 through 2006 appeared to have lower than average precipitation (NOAA 2016, entire), which may have affected the ability of plants to withstand flea beetle outbreak in 2007 (Heidel *et al.* 2011, p. 286). The Colorado butterfly plant is semelparous (individual plants are first vegetative, then flower and fruit, and then die). Therefore, individuals are likely capable of remaining in a vegetative state under some conditions and duration until suitable flowering conditions exist, suggesting that the species is adapted to variability in the amount and timing of precipitation.

Climate change may affect the timing and amount of precipitation as well as other factors linked to habitat conditions for the Colorado butterfly plant. For example, climate models predict that by 2050, watersheds containing the species will become warmer for all four seasons, precipitation will increase in the winter, and remain about the same in spring, summer, and fall (USGS 2016, pp. 1–3). Snow water equivalent will decrease in winter and spring, and soil water storage will decrease in all four seasons (USGS 2016, pp. 4–5). Modeling predicts an increase in winter precipitation, but decreases in soil water storage will mean less water for subirrigation of the species' habitat. This may mean a shorter window for seed germination, lower seed production, and potentially increased years at the rosette stage to obtain sufficient resources to bolt and flower. However, we also understand that C_3 plants (plants which combine water, sugar, and carbon dioxide in carbon fixation), including this species, have a 41 percent proportional increase in growth resulting from a 100 percent increase in carbon dioxide (Poorter 1993, p. 77). This increase in growth rate due to higher carbon dioxide may counteract the need to spend more time in the vegetative portion of the life cycle in response to climate change. Additionally, monitoring indicates that populations are able to withstand several consecutive years of poor growing conditions, and still rebound with suitable conditions (USFWS 2012, pp. 11–22; USFWS 2016c, entire). Climate change has the potential to affect the species and its habitat if flea beetle outbreaks are fostered or if flowering levels are suppressed. Although we lack scientific certainty regarding what those changes may ultimately mean for the species, we expect that the species' current adaptations to cope with climate variability will mitigate the impact on population persistence.

Summary of Factor E

Under this factor, we discussed the Colorado butterfly plant's small population size and restricted range, herbicide spraying, and climate change.

In 2000, when we listed the species, the stochastic extirpation of individual populations suggested that the range of the species might be declining. Despite the fact that some populations in Colorado, Wyoming, and Nebraska were extirpated prior to listing, and others in Nebraska were extirpated after listing, four additional populations have been discovered, two of which are protected, and there are still representative and redundant populations occurring throughout the range of the species. Further, individuals and populations are resilient to a single herbicide application, and have been shown to survive or bounce back from such events. Education of landowners has greatly reduced the indiscriminate application of herbicides near populations of the Colorado butterfly plant. Finally, while climate change presents a largely unknown potential stressor to the species, individual plants are capable of deferring the reproductive stage until suitable conditions are available, populations are made up of individuals found in a range of microhabitats, and populations are located within various ecological settings within the species' range. This indicates that the resiliency, redundancy, and representation of populations will maintain the species in the face of climate change.

Combination of Factors

Many of the stressors discussed in this analysis could work in concert with each other and result in a cumulative adverse effect to the Colorado butterfly plant, *e.g.,* one stressor may make the species more vulnerable to other threats. For example, stressors discussed under Factor A that individually do not rise to the level of a threat could together result in habitat loss. Similarly, small population size and a restricted range in combination with stressors discussed under Factor A could present a potential concern. However, most of the potential stressors we identified either have not occurred to the extent originally anticipated at the time of listing or are adequately managed as described in this proposal to delist the species. Furthermore, those stressors that are evident, such as climate change and grazing, appear well-tolerated by the species. In addition, for the reasons discussed in this proposed rule, we do not anticipate stressors to increase on lands that afford protections to the species (Warren AFB and CFCNAD lands) where many of the largest populations occur. Furthermore, the increases documented in the number and size of many populations since the species was listed do not indicate that cumulative effects of various activities and stressors are affecting the viability of the species at this time or into the future.

Proposed Determination of Species Status

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for determining whether a species is an endangered species or threatened species and should be included on the Federal Lists of Endangered and Threatened Wildlife and Plants (listed). The Act defines an endangered species as any species that is ''in danger of extinction throughout all or a significant portion of its range'' and a threatened species as any species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' We may delist a species according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered or threatened for the following reasons: (1) The species is extinct; (2) the species has recovered and is no longer endangered or threatened; and/or (3) the original scientific data used at the time the species was classified were in error.

Determination of Status Throughout All of the Colorado Butterfly Plant's Range

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Colorado butterfly plant. We examined the status of the species based on the 2010 Colorado butterfly plant recovery outline (USFWS 2010, entire). We also consulted with species experts and land management staff with Fort Collins and Warren AFB who are actively managing for the conservation of the Colorado butterfly plant.

The 2010 Colorado butterfly plant recovery outline presented a recovery vision for the species in which the primary focus was protection of existing populations, threats abatement, and research (USFWS 2010, entire). The initial action plan focused on protection of existing populations through partnerships with Warren AFB, Fort Collins, and private landowners, followed by developing a recovery plan that would contain objective, measurable recovery criteria which, when met, would indicate that the species could be removed from the Federal List of Endangered and Threatened Plants. In 2016, the Service's Wyoming Ecological Services Field Office began development of a recovery plan for the Colorado butterfly plant. In reviewing information regarding population numbers and trends, as well as threats, it appeared that most monitored extant populations were doing well. Threats named at the time of listing were either affecting the species at low levels, likely due to management actions to recover the species, or not affecting the species at all, as was observed in preparing the 2012 5-year status review (USFWS 2012, entire). Therefore, the Service conducted an assessment of the status of the species and whether it should remain on the List of Endangered and Threatened Plants under the Act.

We carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Colorado butterfly plant. We considered all of the stressors identified at the time of listing in 2000, as well as newly identified potential stressors such as oil and gas energy development and the effects of climate change. The stressors considered in our five-factor analysis (discussed in detail above under Summary of Factors Affecting the Species) fall into one or more of the following categories:

- *Minimized or mitigated:* The following stressors are adequately managed, and existing information indicates that this will not change in the future: Residential, urban, and energy development; agricultural practices; water management; overutilization; and herbicide spraying.
- *Avoided:* The following stressor has not occurred to the extent anticipated at the time of listing, and existing information indicates that this will not change in the future: Restricted range.
- *Tolerated:* The species is tolerant of the following stressors, and existing information indicates that this will not change in the future: Natural succession and competition with nonnative, invasive species; disease and predation; and climate change.

These conclusions are supported by the available information regarding the species' abundance, distribution, and trends, and are in agreement with conclusions presented in our 2010 recovery outline (USFWS 2010, entire) and in our 5-year review (USFWS 2012, entire). Thus, after assessing the best available information, we conclude that the Colorado butterfly plant is not in danger of extinction, nor is it likely to become so in the foreseeable future.

Determination of Status Throughout a Significant Portion of the Colorado Butterfly Plant's Range

Under the Act and our implementing regulations, a species may warrant listing if it is an endangered or a threatened species throughout all or a significant portion of its range. The Act defines ''endangered species'' as any species which is ''in danger of extinction throughout all or a significant portion of its range,'' and ''threatened species'' as any species which is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The term ''species'' includes ''any subspecies of fish or wildlife or plants, and any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature.'' We published a final policy interpretating the phrase ''Significant Portion of its Range'' (SPR) (79 FR 37578). The final policy states that (1) if a species is found to be an endangered or a threatened species throughout a significant portion of its range, the entire species is listed as an endangered or a threatened species, respectively, and the Act's protections apply to all individuals of the species wherever found; (2) a portion of the range of a species is ''significant'' if the species is not currently an endangered or a threatened species throughout all of its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range; (3) the range of a species is considered to be the general geographical area within which that species can be found at the time FWS or NMFS makes any particular status determination; and (4) if a vertebrate species is an endangered or a threatened species throughout an SPR, and the population in that significant portion is a valid DPS, we will list the DPS rather than the entire taxonomic species or subspecies.

The SPR policy is applied to all status determinations, including analyses for the purposes of making listing, delisting, and reclassification determinations. The procedure for analyzing whether any portion is an SPR is similar, regardless of the type of status determination we are making. The first step in our analysis of the status of a species is to determine its status throughout all of its range. If we determine that the species is in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range, we list the species as an endangered (or threatened) species and no SPR analysis will be required. If the species is neither an endangered nor a threatened species throughout all of its range, we determine whether the species is an endangered or a threatened species throughout a significant portion of its range. If it is, we list the species as an endangered or a threatened species, respectively; if it is not, we conclude that listing the species is not warranted.

When we conduct an SPR analysis, we first identify any portions of the species' range that warrant further consideration. The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that are not reasonably likely to be significant and either an endangered or a threatened species. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that (1) the portions may be significant and (2) the species may be in danger of extinction in those portions or likely to become so within the foreseeable future. We emphasize that answering these questions in the affirmative is not a determination that the species is an endangered or a threatened species throughout a significant portion of its range—rather, it is a step in determining whether a more detailed analysis of the issue is

required. In practice, a key part of this analysis is whether the threats are geographically concentrated in some way. If the threats to the species are affecting it uniformly throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats apply only to portions of the range that clearly do not meet the biologically based definition of ''significant'' (*i.e.,* the loss of that portion clearly would not be expected to increase the vulnerability to extinction of the entire species), those portions will not warrant further consideration.

If we identify any portions that may be both (1) significant and (2) endangered or threatened, we engage in a more detailed analysis to determine whether these standards are indeed met. The identification of an SPR does not create a presumption, prejudgment, or other determination as to whether the species in that identified SPR is an endangered or a threatened species. We must go through a separate analysis to determine whether the species is an endangered or a threatened species in the SPR. To determine whether a species is an endangered or a threatened species throughout an SPR, we will use the same standards and methodology that we use to determine if a species is an endangered or a threatened species throughout its range.

Depending on the biology of the species, its range, and the threats it faces, it may be more efficient to address the ''significant'' question first, or the status question first. Thus, if we determine that a portion of the range is not ''significant,'' we do not need to determine whether the species is an endangered or a threatened species there; if we determine that the species is not an endangered or a threatened species in a portion of its range, we do not need to determine if that portion is ''significant.''

We evaluated the range of the Colorado butterfly plant to determine if any area could be considered a significant portion of its range. The only portion of the range where threats are geographically concentrated are the three populations in Nebraska. Grazing and water management, particularly the dewatering of Lodgepole Creek downstream of the Wyoming/Nebraska border in the three populations in Nebraska, has proven to impact populations in that portion of the species' range. This stressor has affected these populations to a level that the populations were presumed extirpated at the time we designated critical habitat for this species (70 FR 1940; January 11, 2005). However, after water was reintroduced to the creek by a landowner, Colorado butterfly plants were again observed in Lodgepole Creek (Wooten 2008, p. 4). It is possible that the species only occurs in this portion of its range during times of adequate subirrigation and surface flows, and that seeds either remain dormant at this location for several years or are transported from neighboring populations located upstream on Lodgepole Creek in Wyoming. Nevertheless, the removal of water from Lodgepole Creek impacts populations of the Colorado butterfly plant within this portion of the species' range.

Because we identified an area on the periphery of the species' current range as warranting further consideration due to the geographic concentration of threats from water management, we then evaluated whether this area may be significant to the Colorado butterfly plant such that, without the members in that portion, the entire species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range. We can accomplish this by considering the viability of the remainder of the range without the portion and the biological or conservation importance of the portion. The viability of the remainder of the range, should the three populations in Nebraska be lost, will remain high: All of the highly and moderately resilient populations occur in the remainder of the range, which is comprised of more than 20 populations distributed through a geographically connected area, and which contains all of the ecological settings this species is known to inhabit.

Additionally, to determine significance of this threatened portion of the range, we examined its contribution to the species' viability in terms of its resiliency, redundancy, and representation. Regarding redundancy, the populations within this portion of the range occur on the eastern extreme of the historical range of the species and represent a very small component of the total distribution of the species, occurring downstream of several highly viable populations. Therefore, these populations do not substantially increase redundancy at the species level. Regarding resiliency, individual plants in this portion of the range may be resilient to dewatering or other stressors, but populations contain few individuals and are, therefore, threatened by stochastic events. Regarding representation, we understand that there may be connectivity among the populations occurring in Nebraska and the populations upstream on Lodgepole Creek in Wyoming. However, this connectivity is likely only through limited pollinator movement among the few flowering plants at any location, and through seed dispersal downstream from Wyoming to Nebraska, considering the distance is too great (>1 km/0.6 mi) for most pollinators to travel (Heidel 2016, pers. comm.). Consequently, the populations in Nebraska are likely not contributing any genetic information upstream. We do not have genetic information on these populations, but we understand that the populations in this portion of the species' range do not occupy unique ecological settings, have unique morphology, or have differing phenology than other populations of the species on Lodgepole Creek or in the rest of the species' range.

After careful examination of the Colorado butterfly plant population in the context of our definition of ''significant portion of its range,'' we determine an area on the periphery of the range warranted further consideration because threats are geographically concentrated there. After identifying this area, we evaluate whether it is significant and determine that it is not significant because, even without Colorado butterfly plants in this area, the species would not be in danger of extinction, or likely to become so in the foreseeable future. This is because the remainder of the species is characterized by high levels of resiliency, redundancy, and representation; the remainder of the species contains all of the highly and moderately resilient populations (high resiliency), is comprised of more than 20 populations distributed through a geographically connected area (high redundancy), and includes all of the ecological settings this species is known to inhabit (high representation). Therefore, we did not need to determine if the species is in danger of extinction or likely to become so in the foreseeable future in this peripheral area in Nebraska.

Determination of Status for the Colorado Butterfly Plant

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Colorado butterfly plant. The threats that led to the species being listed under the Act (primarily loss of the species' habitat (Factor A) and small population size, restricted range, and herbicide spraying (Factor E)) have not occurred to the extent anticipated at the time of listing, or are being appropriately managed by the actions of multiple conservation partners over the past 18 years. These actions include habitat management,

monitoring, and research. Given commitments shown by private landowners, local governments, cooperating agencies, and other partners as discussed under Factor D, we expect conservation efforts will continue to support a healthy, viable population of the species post-delisting and into the foreseeable future. Furthermore, there is no information to conclude that at any time over the next 20 years (as we define the foreseeable future for this species) the species will be in danger of extinction. Because the species is not in danger of extinction now or within the foreseeable future throughout all or any significant portion of its range, the species does not meet the definition of an endangered species or threatened species. We therefore propose to remove the Colorado butterfly plant from the Federal List of Endangered and Threatened Wildlife at 50 CFR 17.11(h) due to recovery. Because the species is neither in danger of extinction now nor likely to become so in the foreseeable future throughout all or any significant portion of its range, the species does not meet the definition of an endangered species or a threatened species under the Act.

Effects of the Rule

This proposal, if made final, would revise 50 CFR 17.12(h) to remove the Colorado butterfly plant from the Federal List of Endangered and Threatened Plants. The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to this species. Federal agencies would no longer be required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect the Colorado butterfly plant or its designated critical habitat. This proposal, if made final, would also remove the designation of critical habitat for the Colorado butterfly plant in Wyoming (codified at 50 CFR 17.96(a)).

Post-Delisting Monitoring

Section 4(g)(1) of the Act requires us, in cooperation with the States, to implement a monitoring program for not less than 5 years for all species that have been delisted due to recovery. The purpose of this requirement is to develop a program that detects the failure of any delisted species to sustain itself without the protective measures provided by the Act. If, at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing.

We are proposing delisting for the Colorado butterfly plant based on recovery actions taken and new information we have received. Since delisting would be due in part to recovery actions taken by Warren AFB, Fort Collins, and BLM, we have prepared a draft post-delisting monitoring plan for the Colorado butterfly plant. The plan has been developed with input from these and other partners.

It is our intent to work with our partners towards maintaining the recovered status of the Colorado butterfly plant. While not required, we intend to seek peer review comments on the draft post-delisting monitoring plan (PDM plan), including its objectives and procedures. A copy of the draft PDM plan is available at *http://www.regulations.gov* under Docket No. FWS–R6–ES–2018–0008. You can submit your comments on the draft PDM plan by one of the methods listed above under **ADDRESSES**.

Required Determinations

Clarity of This Proposed Rule

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

(a) Be logically organized;

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

(c) Use clear language rather than jargon;

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

(e) Use lists and tables wherever possible.

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

National Environmental Policy Act

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), need not be prepared in connection with regulations pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribes will be affected by this rule.

References Cited

A complete list of all references cited in this proposed rule is available at *http://www.regulations.gov* at Docket No. FWS–R6–ES–2018–0008, or upon request from the Wyoming Ecological Services Field Office (see **ADDRESSES**).

Authors

The primary authors of this proposed rule are staff members of the Wyoming Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we hereby propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

Authority: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

§ 17.12 [Amended]

■ 2. Amend § 17.12(h) by removing the entry ''*Gaura neomexicana* ssp. *coloradensis*'' under ''FLOWERING PLANTS'' from the List of Endangered and Threatened Plants.

§ 17.96 [Amended]

■ 3. Amend § 17.96(a) by removing the entry ''Family Onagraceae: *Gaura neomexicana* ssp. *coloradensis* (Colorado butterfly plant)''.

Dated: May 15, 2018.

James W. Kurth,

Deputy Director, U.S. Fish and Wildlife Service, Exercising the Authority of the Director, for the U.S. Fish and Wildlife Service.

[FR Doc. 2018–12409 Filed 6–7–18; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

RIN 0648–XE456

Pacific Fisheries Management Council; Notice of Intent To Withdraw an Environmental Impact Statement for Gear Rule Changes for the Pacific Coast Groundfish Fishery Trawl Catch Share Program

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Withdrawal of notice of intent to prepare an environmental impact statement.

SUMMARY: NMFS is issuing this notice to advise Federal, state, and local government agencies and the public that it is withdrawing its Notice of Intent (NOI) to prepare a draft Environmental Impact Statement (EIS) for the proposed action to revise regulations regarding the use and configuration of groundfish bottom trawl and midwater trawl gear in the Pacific Coast Groundfish Fishery's Trawl Catch Share Program, also called the Trawl Rationalization Program. After completion of the analysis, NMFS determined the impacts associated with this action would not reach a level necessitating an EIS, and is instead preparing an Environmental Assessment (EA).

DATES: The environmental impact statement for the proposed regulations is withdrawn as of June 8, 2018.

FOR FURTHER INFORMATION CONTACT: Colin Sayre, NMFS West Coast Regional Office, telephone: (206) 526–4656, or email: *colin.sayre@noaa.gov.*

SUPPLEMENTARY INFORMATION: NMFS Published a NOI in the **Federal Register** on March 3, 2016 (81 FR 11189) to prepare an EIS in accordance with the National Environmental Policy Act (NEPA) to analyze the impacts on the human environment resulting from changes to gear requirements for groundfish bottom trawl and midwater trawl gear in the Trawl Rationalization Program. Additional details about the range of alternatives considered in this action are included in the March 3, 2016, NOI, and are not repeated here. NMFS solicited public input on the scope of the analysis through a public comment on the NOI from March 3, 2016, to April 4, 2016.

Upon completion of the analysis for the proposed action, NMFS determined that the impacts associated with the implementation of the proposed action would not be significant and, therefore, there is no need to complete the EIS. Instead, NMFS is completing an EA, in compliance with NEPA, for the proposed action. Therefore, NMFS is withdrawing the NOI to prepare an EIS. NMFS plans to circulate the draft EA for public review and comment concurrent with publication of the proposed rule for this action.

Authority: 16 U.S.C. 1801 *et seq.* 40 CFR 1500–1508; and Companion Manual for NOAA Administrative Order 216–6A, 82 FR 4306

Dated: June 1, 2018.

Jennifer M. Wallace,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2018–12165 Filed 6–7–18; 8:45 am]

BILLING CODE 3510–22–P