2012, FTA's Circular 4703.1 became effective, which contains guidance for recipients of FTA financial assistance to incorporate EJ principles into plans, projects, and activities (available online at *http://www.fta.dot.gov/documents/FTA_EJ_Circular_7.14-12_FINAL.pdf*).

FTA has evaluated this action under the Executive Order, the DOT Order, and the FTA Circular. FTA has determined that this action will not cause disproportionately high and adverse human health and environmental effects on minority or low-income populations.

**List of Subjects in 49 CFR Part 614**

Grant programs—transportation, Mass transportation.

Issued in Washington, DC, under authority delegated in 49 CFR 1.90:

**K. Jane Williams,**

*Acting Administrator.*

## PART 614—[REMOVED AND RESERVED]

■ In consideration of the foregoing, and under the authority of Public Law 112–141, amend 49 CFR chapter VI by removing part 614.

[FR Doc. 2019–24156 Filed 11–4–19; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

### 50 CFR Part 17

**[Docket No. FWS–R6–ES–2018–0008; FXES11130900000C6–189–FF09E30000]**

**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:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), 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 final rule also removes the currently designated critical habitat for the Colorado butterfly plant.

**DATES:** This rule is effective December 5, 2019.

**ADDRESSES:** This final rule is available on the internet at *http://www.regulations.gov* under Docket No. FWS–R6–ES–2018–0008. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at *http://www.regulations.gov* under Docket No. FWS–R6–ES–2018–0008. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours, at our Wyoming Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**, below).

**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:**

### Previous Federal Actions

On June 8, 2018, we published a proposed rule to remove Colorado butterfly plant from the List of Endangered and Threatened Plants (*i.e.,* to ''delist'' the species) (83 FR 26623). Please refer to that proposed rule for a detailed description of the Federal actions concerning this species that occurred prior to June 8, 2018.

### Species Description and Life History

Detailed information regarding the Colorado butterfly plant's biology and life history can be found in the biological report for Colorado butterfly plant (USFWS 2017a, pp. 6 − 7). The biological report is an in-depth but not exhaustive 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 report includes analyses of the species' viability in terms of its resiliency, redundancy, and representation (USFWS 2017a, entire). Resiliency is the ability of the species to maintain healthy populations that can withstand annual environmental variation and stochastic events. Redundancy is the ability of the species to maintain an adequate number and distribution of populations that can withstand catastrophic events. Representation is the ability of the species to adapt to changing environmental conditions through genetic, ecological, demographic, and behavioral diversity across its range. We summarize relevant information from the biological report 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 *Colylophus* (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 censusing (USFWS 2016b, 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 (Floyd 1995, p. 4), meaning that plants produce flowers that are capable of forming viable seed from pollen from the same plant. There are no apparent adaptations for dispersal; many seeds fall to the ground around parent plants (Floyd and Ranker 1998, p. 854), and, because the seed floats, others 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). More recent evaluation suggests that the combination of cool and moist spring months is important in germination, and that 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. c*oloradensis* 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 transferred the taxon previously known as *Gaura neomexicana* Wooton to *Oenothera* as *Oenothera coloradensis* ssp. *neomexicana* (Wooton) W.L. Wagner & Hoch (Wagner *et al.* 2007, p. 211). 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 final rule, we will use the current scientific name and rank, *Oenothera coloradensis,* for the Colorado butterfly plant.

**Species Abundance, Habitat, and Distribution**

The Colorado butterfly plant is a regional endemic riparian species known from 34 12-digit hydrologic unit code (HUC) 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 the 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).

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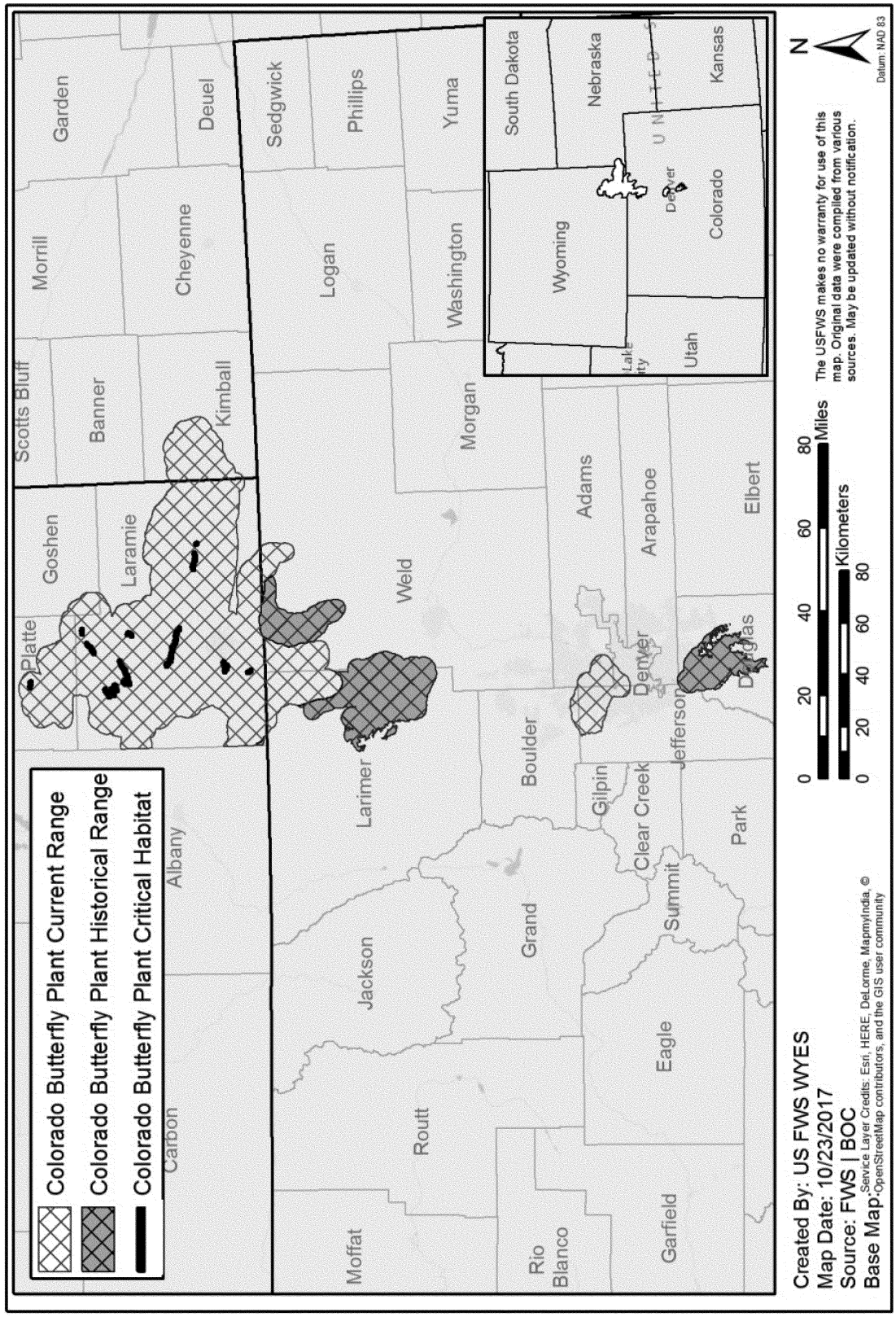
**Figure of historical and current range (and the seven units of designated critical habitat entirely within Wyoming) of Colorado butterfly plant in Colorado, Wyoming, and Nebraska.** All populations are generalized to 12-digit HUC watersheds and buffered by 3.2 kilometers (2 miles).

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### 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 (light, porous rock formed by consolidation of volcanic ash) 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 these 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 creeping bentgrass (*Agrostis stolonifera*), Kentucky bluegrass (*Poa pratensis*), American licorice (*Glycyrrhiza lepidota*), Flodman's thistle (*Cirsium flodmanii*), curlytop gumweed (*Grindelia squarrosa*), and smooth scouring rush (*Equisetum laevigatum*). Its habitat on Warren Air Force Base (AFB) includes wet meadow zones dominated by switchgrass (*Panicum virgatum*), mat muhly (*Muhlenbergia richardsonis*), little bluestem (*Schizachyrium scoparium*), prairie cordgrass (*Spartina pectinata*), 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 12-digit HUC watershed to be one population. Populations defined this way typically consist of numerous subpopulations, each with dozens to hundreds of flowering stems and rosettes. These subpopulations are often widely scattered, which contributes to this species' resiliency and redundancy. There are no data (*e.g.,* genetic relatedness) available to more precisely define populations, and although distance of 1 kilometer (km) (0.6 miles (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 (12-digit HUC) should be considered part of the same population. This approach to grouping populations 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 based on 12-digit HUCs to more accurately describe 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 final 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 our listing determination for 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. In 2016, another population was discovered in a different 12-digit HUC upstream of known populations on Horse Creek in Laramie County, Wyoming, 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 2016b, entire). Discovery of new populations suggests this species is faring better than presumed at the time of listing.

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 is shown to vary 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 containing 500 to 2,500 reproductive individuals, and small having fewer than 200 reproductive individuals (no populations contained 200 to 500 plants or 2,500 to 3,000 plants), and so characterized the species as being represented by 10 large stable or increasing populations, 4 moderate 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 14 years, we understand that population size can fluctuate significantly from year to year; therefore, population size in any given year is not a good indicator of resiliency. Individual populations exhibit substantial stochasticity, with localized extirpation and recolonization based on disturbances. 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. Resiliency is based on the average number of reproductive individuals within the survey area (generally having more than 100 reproductive individuals most years indicates high resiliency, between 50 and 100 is moderate, and under 50 is low), trends in population numbers where available, and response to stochastic events. Based on this, we now have 15 high resiliency populations, 2 moderate resiliency populations, 6 low resiliency populations, 2 populations with unknown resiliency, and records of 6 extirpated populations. Additionally, there are three introduced populations that do not contribute to recovery and were not assessed for resiliency, representation, or redundancy.

*Colorado*

The Colorado butterfly plant is known to occur in Adams, Boulder, Douglas, Jefferson, Larimer, and Weld Counties in northern Colorado, spanning 12 12-digit HUC watersheds (see figure above). Six historical occurrences have not been documented since 1984, and are presumed extirpated.

The majority of Colorado butterfly plants in Colorado are located on lands managed by the City of Fort Collins Natural Areas Department (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 (744 flowering plant average, median of 140, range of 45–2,719 flowering plants). Other populations in Colorado have not been routinely monitored; consequently, no trend information is available (USFWS 2016b, entire). In summary, the species is represented in Colorado by two high resiliency populations that contribute to species redundancy and three low resiliency populations with minimal contribution to species redundancy.

*Nebraska*

Populations of the Colorado butterfly plant in Nebraska are considered at the edge of the species' range (65 FR 62302, October 18, 2000). In 1985, monitoring along Lodgepole Creek in extreme eastern Wyoming and Kimball County, Nebraska, found 2,065 individual plants in six subpopulations. 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 later 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 west of the city of Kimball, Nebraska (Fertig 2000a, p. 12). Survey results from 2004 suggested the species was extirpated from the State (Fritz 2004, pers. comm.). However, a 2008 survey within three 12-digit HUC watersheds, along 13 km (8 mi) of 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.). In summary, due to the low abundance, dewatering, over-grazing, and poor habitat quality, the species is represented in Nebraska by three populations with low resiliency that provide minimal contribution to species redundancy.

*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 12-digit HUC watersheds. Over 90 percent of known occurrences in Wyoming are on private lands, with parts of two occurrences on State school trust lands, all of a third 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), but that overall population-level genetic diversity was low. 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 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.

Since 2004, the Service has had agreements with 11 private landowners within six 12-digit HUC watersheds in Laramie County, Wyoming, and one watershed in Weld County, Colorado (described in detail under Conservation Efforts, below), 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. 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 2016b, entire). This outcome 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 between 2004 and 2018 has varied from approximately 1,000 to over 21,000 reproductive individuals. Combining annual census numbers from all monitored populations in Wyoming, we have observed small to extreme population fluctuations, and some populations jumped from having few or no flowering plants in one year to

having hundreds or even thousands the following year (USFWS 2012, pp. 11–21; USFWS 2016, entire). Wyoming is represented by 13 highly resilient populations that contribute to species redundancy, 2 moderately resilient populations that contribute to species redundancy, and 2 populations with unknown resiliency and redundancy due to lack of information.

**Conservation Efforts**

The listing decision (65 FR 62302, October 18, 2000, 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 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. The Service has not typically measured the acreage of suitable habitat at each population for a number of reasons, namely because we found the number of individuals at the site to be more informative of the population's status and because of the wide variation in habitat types occupied by the species.

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 wildlife extension agreements (WEAs) with private landowners, representing six of the 12-digit HUCs, 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. All landowners whose properties will be included in the post-delisting monitoring program when this final rule goes into effect (see **DATES**, above) are amenable to creating new agreements—once the existing agreements expire this year—that will last the duration of the post-delisting monitoring.

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 the critical habitat determination surveying in 2004, and their trends, threats, and viabilities are uncertain. However, the Wyoming Ecological Services Field Office has not consulted under the Act with private landowners managing these parcels on any projects that may adversely affect the critical habitat for this species. 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 with the pending listing decision, and updated in 2004 with the pending critical habitat decision), 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 included a conservation and management plan for the species in its integrated natural resources management plan (CNHP 2004, 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. Conservation actions include 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 to maintain early successional habitat, and improved security of water flow to the species' habitat to ensure the necessary subirrigation is available for populations of Colorado butterfly plant.

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.

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 resiliency of individual plants and populations, the representation of the species within its ecological settings, and the redundancy of the plant population numbers and potential for connectivity.

**Summary of Changes From the Proposed Rule**

We have made updates to our discussions of the species' population status (including 2018 information) and factors affecting the species, based on comments submitted by the public and information provided to us by peer reviewers, as discussed later in this final rule.

**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 is an endangered species or threatened species because of the same five categories of threats specified in section 4(a)(1) of 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 (DOI Solicitor M–37021; 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 management timeframes in renewed WEAs, 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 times of the year incompatible with Colorado butterfly plant reproduction, 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 (65 FR 62302; October 18, 2000). Since the time of listing, oil and gas development and climate change have become potential threats to this species and are analyzed under Factor A and Factor E, respectively, below. The 2012 5-year review evaluated all potential threats to this species and found that all threats presented at a low overall level to the species (USFWS 2012, Appendix A) and

that the species had a high recovery potential (USFWS 2012, p. 39). In 2016, a revised 5-year review did not recommend delisting, but recommended a formal evaluation of whether the species needed to remain listed (USFWS 2016, p. 40). As a result, we completed a biological report the following year, which concluded that the species had moderate to high viability based on its resiliency, redundancy, and representation (USFWS 2017a, p. 33).

*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 2016, 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 CFCNAD, 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). CFCNAD 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, CFCNAD 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 2016b, entire). Monitoring data over the past 29 years at WAFB have shown that populations remain stable 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; therefore, these regulations 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 are a common-sense approach to protecting 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 CFCNAD, 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 and are not likely to do so in the future. Current ownership and management by CFCNAD 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 for hay production was identified as a threat at the time of listing, if conducted at sensitive times of year for Colorado butterfly plant (prior to seed maturation) (Fertig 1994, p. 40; USFWS 1997, p. 8). However,

monitoring by the Service 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 2016b, 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 determined 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 2016b, 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. Therefore, we do not rely on the implementation of the WEAs to ensure that the species remains highly resilient because the WEAs simply provided a mechanism for the Service to gain information to better understand its viability. Because of this information regarding resiliency, redundancy, and representation, we believe the plant will continue to thrive when the species is delisted and the protections of the Act 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 move 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 be threatened by 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 2015, the Colorado Water Conservation Board on behalf of CFCNAD filed an instream flow right on Graves Creek, the stream that feeds the population of Colorado butterfly plants in Soapstone Prairie (CFCNAD 2016b, entire). This instream flow right was appropriated on January 26, 2015, and allows for 0.17 cubic feet per second, year-round, which will protect and maintain subirrigation of this large and important population for CFCNAD 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; PRRIP 2019). The PRRIP, which has been in existence since 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: whooping crane (*Grus americana*), interior least tern (*Sterna* (*Sternula*) *antillarum*), northern Great Plains population of piping plover (*Charadrius melodus*), pallid sturgeon (*Scaphirhynchus albus*), and western prairie fringed orchid (*Platanthera praeclara*). 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, the hydrological component of habitat for the Colorado butterfly plant will be maintained at higher and more consistent levels than it was prior to the listing of the Colorado butterfly plant. The PRRIP also has an adaptive management plan to improve management decisions based on information learned. The implementation of the PRRIP ensures that more water will stay within the Platte River Basin and be available for populations of the Colorado butterfly plant.

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. 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 secure and available to populations of Colorado butterfly plant 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, monitoring of the population at Warren AFB indicates that 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 2016b, entire). There has been no noticeable change in general management practices (*e.g.,* mowing and grazing) 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 management practices or natural succession 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 coyote willow (*Salix exigua*); nonnative, invasive Canada thistle (*Cirsium arvense*); and nonnative, invasive leafy spurge (*Euphorbia esula*). Willow, 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 2016b, 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 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 sufficient current information on the status 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, they have not occurred to the extent anticipated at the time of listing, or 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 2016b, 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 the seeds were taken.

*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/fruit production was curtailed or greatly reduced on all plants, and some bolted plants died before flowering; interestingly, no vegetative plants showed 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 impacted populations mentioned above 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 run on insect herbivory's 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 gaurae*), 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 due to animals not being rotated among pastures 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 2016b, entire).

Heavy grazing at some times of the year may be detrimental to Colorado butterfly plant populations by temporarily removing reproductive individuals from a population and eliminating seed production for that year. However, even after many years of intensive grazing, populations have rebounded upon relief (USFWS 2012, pp. 11–21; USFWS 2016b, entire). This response is likely due to survival of nonreproductive 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 or conservation efforts. 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 each of the threats or stressors to the species (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 would 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 Preble's meadow jumping mouse (*Zapus hudsonius preblei*) 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, p. 62307).

Today, the population on Warren AFB represents one of the largest and most highly resilient populations of the species; it is managed under an integrated natural resources management plan (Warren AFB 2017, entire) and a conservation and management plan under Air Force Information 32–7064 (CNHP 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 is stationed at Warren AFB to manage its natural resources, which includes management of the Colorado butterfly plant and its habitat, such as directing herbicide application in the vicinity of the species' habitat. A Service employee will maintain this role at Warren AFB after delisting of the Colorado butterfly plant.

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 monitoring results indicate that plant numbers fluctuate depending on climate and hydrology, and the Colorado butterfly plant seems to be capable of rebounding after extreme stochastic events such as the flea beetle infestation of 2007 (Heidel *et al.* 2016, pp. 15–17). Upon delisting (see **DATES**, above), when the protections of the Act are removed from the Colorado butterfly plant, the Warren AFB management plans will maintain protections for this plant, at least until the next plan revisions, which have yet to be scheduled. Additionally, the species will continue to be managed and monitored as part of the post-delisting monitoring plan.

Discovery and subsequent protection of large populations of the Colorado butterfly plant on lands owned and managed by CFCNAD 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 restoration and rehabilitation of land and natural systems to build ecological diversity and permanence (City of Fort Collins 2014, pp. 1–2). Populations managed by CFCNAD are afforded protection from oil and gas development (The Nature Conservancy 2013, entire) and from water withdrawals (CFCNAD 2016b, entire), and are discussed above under Factor A. Also, as mentioned in ''Residential, Urban, and Energy Development'' under Factor A, 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; 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 (populations under WEAs) representing six 12-digit HUCs 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 2016b, entire). Management of lands under WEAs is discussed under Conservation Efforts, above.

While no known populations occur on lands managed by BLM in Wyoming, BLM completed a programmatic consultation under section 7 of the Act on potential impacts to the species and its critical habitat (BLM 2005, entire). The conservation measures that BLM committed to under this consultation will ensure the species is not adversely affected should a population be discovered on BLM lands. This consultation included specific conservation measures to be implemented in grazing areas managed by BLM that overlap potential Colorado butterfly plant habitats. These conservation measures are incorporated into BLM's resource management plan, which regulates and guides how BLM lands are managed. Therefore, if any populations of the Colorado butterfly plant are found on lands administered by BLM, they would benefit from the conservation measures already agreed upon with the Service. Upon delisting (see **DATES**, above), when the protections of the Act are removed from the Colorado butterfly plant, the species will continue to be afforded the protections outlined in BLM's resource management plan until the plan is revised.

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 2019). The water that this species requires continues to be addressed under the PRRIP, even when the Colorado butterfly plant is removed from the List.

Summary of Factor D

At the time of listing (65 FR 62302; October 18, 2000), we stated that no Federal or State laws or regulations specifically protected populations of the Colorado butterfly plant or its habitat. However, two of the three largest populations occur on Warren AFB and lands owned and managed for the species by CFCNAD 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 several conservation measures, along with 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 climate change.

Small Population Size and Restricted Range

The final listing rule (65 FR 62302; October 18, 2000) included the limited range and the small population size of many populations as a threat to the Colorado butterfly plant. 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 along Crow Creek 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, as shown by annual monitoring since 1988 (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 2016b, 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, range restriction may occur through loss of peripheral populations in the three 12-digit HUCs in Nebraska where dewatering has removed formerly suitable habitat (Wooten 2008, entire). However, these 12-digit HUCs 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 recordkeeping at that time, prior to a Service biologist being employed on site; all plant locations have been tracked in the time since 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 2016b, 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, we anticipate that landowners will continue to maintain this buffer in accordance with requirements under the WEAs when the species is delisted, although we have no assurances that the buffer will be maintained post-delisting.

While herbicide application may continue to occasionally inadvertently remove sprayed individuals from populations in which herbicide is applied, 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 2016b, entire), and when conducted appropriately, herbicide application can help improve habitat for the Colorado butterfly plant by eliminating competition.

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). 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 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, entire). Data from the Cheyenne area over the past 30 years indicate a rise in spring

temperatures (Heidel *et al.* 2016, pp. 6–7). 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 a 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, ensemble climate models predict that by 2050, watersheds containing the species will become warmer for all four seasons, and 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). This climate 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. Furthermore, exposure to higher concentrations of carbon dioxide causes plants to reduce the number and aperture of their stomata, which decreases the amount of water that is lost during transpiration (Lammertsma *et al.* 2011, p. 4035), which may offset declines in water availability during droughts. Additionally, populations are able to withstand several consecutive years of poor growing conditions and still rebound with suitable conditions (USFWS 2012, pp. 11–22; USFWS 2016b, entire). The effects of climate change have the potential to affect the species and its habitat if flea beetle outbreaks occur or if flowering levels are suppressed. Although we lack scientific certainty regarding what those changes may ultimately mean for the species, based on the best available information, we expect that the species' current adaptations to cope with climate variability will mitigate any 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. Information shared with landowners has greatly reduced the indiscriminate application of herbicides near populations of the Colorado butterfly plant. Finally, while the effects of climate change present 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 rule. Furthermore, those stressors that are evident, such as the effects of climate change and grazing, appear well-tolerated by the species. In addition, for the reasons discussed in this 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.

**Summary of Comments and Recommendations**

In the proposed rule published in the **Federal Register** on June 8, 2018 (83 FR 26623), we requested that all interested parties submit written comments on our proposal to delist the Colorado butterfly plant by August 7, 2018. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. We did not receive any requests for a public hearing. All substantive information provided during the comment period has either been incorporated directly into this final rule or is addressed below.

*Peer Reviewer Comments*

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270) and updated guidance issued on August 22, 2016 (USFWS 2016c, entire), we solicited expert opinion from three knowledgeable individuals with scientific expertise that included familiarity with the Colorado butterfly plant, its habitat, its biological needs and potential threats, or principles of conservation biology. We received a response from one peer reviewer.

We reviewed all comments we received from the peer reviewer for substantive issues and new information regarding the proposed delisting of the Colorado butterfly plant. The peer reviewer provided additional information, clarifications, and suggestions to improve the final rule, which we include in this rule or address

in the responses to comments below. The peer reviewer did not favor or oppose delisting the Colorado butterfly plant and provided only technical comments and editorial suggestions on the rule.

(1) *Comment:* The peer reviewer brought up the concern of genetic contamination resulting from unauthorized introductions of plant material from unknown or known sources as a potential threat to the species. The peer reviewer provided no data on genetic contamination on this or any related species to support this concern.

*Our Response:* The Service has no information that suggests that genetic contamination is occurring or has occurred or that unauthorized introductions have had a negative effect on any known populations. Therefore, we do not discuss genetic contamination as a potential threat affecting the species in this rule.

(2) *Comment:* The peer reviewer suggested that we clarify the definition of a population used in the final rule because the term ''watershed'' can be unclear.

*Our Response:* Throughout this rule, we refer to a population of the Colorado butterfly plant as all plants that occur within the same 12-digit hydrologic unit code (HUC) watershed. Plants in the same drainage but upstream or downstream of the 12-digit HUC are considered separate populations.

(3) *Comment:* The peer reviewer questioned our description of resiliency, asking why we did not consider any population to be stable that persists year after year.

*Our Response:* The analysis for the delisting of the Colorado butterfly plant focuses on the resiliency of populations rather than focusing on the term ''stable'' because of the dramatic variation in population numbers exhibited by most monitored populations. Resiliency includes not only population numbers but also trends in population numbers in response to management and stressors. A hypothetical population may persist year after year during the monitoring, but with declining numbers in response to management activities. We would not consider such a population to have high resiliency due to the declining trend and management that is not compatible with the persistence of the population.

(4) *Comment:* The peer reviewer asked if suitable habitat is still present at the six historical occurrences not documented since 1984, and when the sites were last surveyed in a good year.

*Our Response:* The Service has not made observations of habitat quality outside of populations under agreement. Element occurrence records from State agencies indicate visits to the sites in the 2000s and 2010s without finding Colorado butterfly plants, and included descriptions of habitat quality being typically suitable for the Colorado butterfly plant.

(5) *Comment:* The peer reviewer pointed out that our analysis of population resiliency did not include acreage of suitable habitat across years.

*Our Response:* The 2000 listing rule states, ''In 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'' (65 FR 62302, October 18, 2000, p. 62308). The Service has focused on the number of individuals and the diversity of their habitats in our monitoring efforts, specifically because the acreage of suitable habitat has been: (a) Difficult to determine based on the wide variation in habitat types occupied by this species; (b) occupied or unoccupied in any given year; (c) variable due to the frequent disturbances (floods, mowing, succession, etc.) affecting areas typically occupied by the Colorado butterfly plant; and/or (d) more or less constant in the agreement areas and does not provide us with valuable information about how the population is faring.

(6) *Comment:* The peer reviewer requested that a table be included in the final rule describing each of the occurrences/populations by name and State, the acres of suitable habitat present at each site, ownership of the site, the mean number of individuals, and indication of the threats to each occurrence at listing compared to now.

*Our Response:* Due to complexity of the table and costs associated with publication in the **Federal Register**, in this rule we omit the requested table, which can be found in the 2017 species biological report at *http://www.regulations.gov* under the supporting materials for Docket No. FWS–R6–ES–2018–0008. We have attempted to crosswalk all references to specific populations in this rule with other population identifiers used in the 2000 listing rule (65 FR 62302; October 18, 2000) and the 2005 designation of critical habitat (70 FR 1940; January 11, 2005).

(7) *Comment:* The peer reviewer pointed out an inconsistency in the description of management methods used by the City of Fort Collins Natural Areas Department at the Meadow Springs Ranch. The 2000 listing rule (65 FR 62302; October 18, 2000) said that the Meadow Springs Ranch was managed for municipal sewage treatment while the 2018 delisting proposed rule (83 FR 26623; June 8, 2018) described the site as managed to maintain suitable habitat for the Colorado butterfly plant.

*Our Response:* This large ranch is managed for both purposes, although the portion of the ranch where the Colorado butterfly plant occurs is not used for municipal sewage.

(8) *Comment:* The peer reviewer requested population-by-population assessment of threats and conservation actions.

*Our Response:* This final rule summarizes the overall picture of population status and analysis of stressors. Potential threats affecting populations are described in detail in the 2017 species biological report, which is available at *http://www.regulations.gov* under the supporting materials for Docket No. FWS–R6–ES–2018–0008.

(9) *Comment:* The peer reviewer questioned why the Service did not include potential loss of isolated populations that may contain unique alleles as a threat under Factor E.

*Our Response:* The genetic work conducted on this species to date has found very low genetic variation within and among populations (Tuthill and Brown 2003, pp. 254–256; Floyd 1995, pp. 73–81). There is no information to suggest that loss of isolated populations would reduce the genetic variation of the species, so that is not assessed as a threat under Factor E in this rule.

*Public Comments*

We received 14 letters from the public that provided comments on the proposed rule. Ten of the commenters included their views on whether the Colorado butterfly plant should be delisted. We also received four comments that were not directly related to the proposed action in any way and are not addressed below.

Relevant public comments are addressed in the following summary, and new information was incorporated into this final rule as appropriate.

(1) *Comment:* Three commenters acknowledged recovery of the Colorado butterfly plant, but suggested that we should not delist the species due to the loss of protections under the Act.

*Our Response:* The Act has been successfully applied to this species through work with Federal and private landowners who manage their lands while protecting the species. For the reasons discussed in this rule, the

species is not in danger of extinction now or in the foreseeable future, and so it no longer meets the Act's definition of a threatened species and no longer requires the protections of the Act.

(2) *Comment:* One commenter said that climate change was not addressed adequately in the proposed rule.

*Our Response:* The potential effects of climate change on the viability of this species are discussed in more detail in this final rule. In particular, we note that plants may fare better with increased carbon dioxide ($CO_2$) due to the increased ability to photosynthesize, paired with decreased water loss through transpiration because plants have reduced number and aperture of stomata under heightened $CO_2$. Predictions of temperature and precipitation regimes are unclear, as are the predictions regarding severity of storms, although we understand that this species is adapted to respond to unfavorable conditions by delaying bolting. This may be offset by the heightened ability for rapid growth due to increased $CO_2$.

(3) *Comment:* One commenter supported delisting the species but argued to maintain designated critical habitat.

*Our Response:* Under the Act, only those species listed as endangered or threatened species can have designated critical habitat. Therefore, the delisting of the Colorado butterfly plant also removes the designation of the plant's critical habitat.

(4) *Comment:* One commenter was concerned that threats had not been adequately addressed and that the species would need to be relisted in the future.

*Our Response:* None of the stressors that were thought to affect this species in 2000, when we listed the species (65 FR 62302; October 18, 2000), is currently affecting this species at a high level and is not predicted to worsen, as discussed in the 2017 species biological report, which is available at *http://www.regulations.gov* under the supporting materials for Docket No. FWS–R6–ES–2018–0008. The Service is implementing a post-delisting monitoring plan that will allow for the monitoring of a subset of populations throughout the range of the species. If monitored populations are determined to be imperiled, the Service has a process for re-evaluating the status of the species and reinstating protections under the Act, if needed.

**Determination of Species Status**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of ''endangered species'' or ''threatened species.'' The Act defines an ''endangered species'' as a species that is ''in danger of extinction throughout all or a significant portion of its range,'' and a ''threatened species'' as a species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The Act requires that we determine whether a species meets the definition of ''endangered species'' or ''threatened species'' because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence. We must consider these same five factors in delisting a species. 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 nor 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. The same factors apply whether we are analyzing the species' status throughout all of its range or a significant portion of its range.

*Colorado Butterfly Plant's Status Throughout All of Its Range*

After evaluating threats to the species under the section 4(a)(1) factors, 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: Small population size and 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 the effects of climate change.

These conclusions are supported by the available information regarding the species' abundance, distribution, and trends as outlined in the species biological report (USFWS 2017, entire), and are in agreement with conclusions presented in our 2010 recovery outline (USFWS 2010, entire) and in our 5-year review (USFWS 2012, entire) that the Colorado butterfly plant is not facing any imminent or significant threats. Thus, after assessing the best available information, we conclude that the Colorado butterfly plant is not in danger of extinction throughout all of its range nor is it likely to become so in the foreseeable future.

*Colorado Butterfly Plant's Status Throughout a Significant Portion of Its Range*

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range (SPR). Where the best available information allows the Service to determine a status for the species rangewide, that determination should be given conclusive weight because a rangewide determination of status more accurately reflects the species' degree of imperilment and better promotes the purposes of the Act. Under this reading, we should first consider whether the species warrants listing ''throughout all'' of its range and proceed to conduct a ''significant portion of its range'' analysis if, and only if, a species does not qualify for listing as either an endangered or a threatened species according to the ''throughout all'' language.

Having determined that the Colorado butterfly plant is not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction or likely to become so in the foreseeable future in an SPR. The range of a species can theoretically be divided into portions in an infinite number of ways, so we first screen the potential portions of the species' range to determine if there are any portions that warrant further consideration. To do the ''screening'' analysis, we ask whether there are portions of the species' range for which there is substantial information indicating that: (1) The portion may be

significant; and (2) the species may be, in that portion, either in danger of extinction or likely to become so in the foreseeable future. For a particular portion, if we cannot answer both questions in the affirmative, then that portion does not warrant further consideration and the species does not warrant listing because of its status in that portion of its range. Conversely, we emphasize that answering these questions in the affirmative is not a determination that the species is in danger of extinction or likely to become so in the foreseeable future throughout a significant portion of its range—rather, it is a step in determining whether a more detailed analysis of the issue is required.

If we answer these questions in the affirmative, we then conduct a more thorough analysis to determine whether the portion does indeed meet both of the SPR prongs: (1) The portion is significant; and (2) the species is, in that portion, either in danger of extinction or likely to become so in the foreseeable future. Confirmation that a portion does indeed meet one of these prongs does not create a presumption, prejudgment, or other determination as to whether the species is an endangered species or threatened species. Rather, we must then undertake a more detailed analysis of the other prong to make that determination. Only if the portion does indeed meet both SPR prongs would the species warrant listing because of its status in a significant portion of its range.

At both stages in this process—the stage of screening potential portions to identify any portions that warrant further consideration and the stage of undertaking the more detailed analysis of any portions that do warrant further consideration—it might be more efficient for us to address the ''significance'' question or the ''status'' question first. Our selection of which question to address first for a particular portion depends on the biology of the species, its range, and the threats it faces. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the second question for that portion of the species' range.

For the Colorado butterfly plant, we chose to evaluate the status question (*i.e.,* identifying portions where the Colorado butterfly plant may be in danger of extinction or likely to become so in the foreseeable future) first. To conduct this screening, we considered whether the threats are geographically concentrated in any portion of the species' range at a biologically meaningful scale. We examined the following threats, including cumulative effects: Residential, urban, and energy development; agricultural practices; water management; natural succession and competition with nonnative, invasive species; overutilization; disease and predation; inadequacy of existing regulatory mechanisms; small population size and restricted range; herbicide spraying; and the effects of climate change. The only geographically concentrated threat is grazing and water management of the three 12-digit HUCs in Nebraska. Grazing and water management, particularly the dewatering of Lodgepole Creek downstream of the Wyoming/Nebraska border in the three 12-digit HUCs 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. The Service's most-recent definition of ''significant'' has been invalidated by the courts (for example, *Desert Survivors* v. *Dep't of the Interior,* No. 16–cv–01165–JCS (N.D. Cal. Aug. 24, 2018)). Therefore, we determined whether the three populations in Nebraska could be significant under any reasonable definition of ''significant.'' To do this, we evaluated whether these populations taken together may be biologically important in terms of the resiliency, redundancy, or representation of the species.

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 the 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 (greater than 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 determined that the area in Nebraska on the periphery of the range warranted further consideration because threats are geographically concentrated there. After identifying this area, we determined that it is not biologically significant to the Colorado butterfly species as a whole because the Colorado butterfly plants in this area do not contribute meaningfully to the overall viability of the species. 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 have determined that the Colorado butterfly plant is not in danger of extinction, or likely to become so in the foreseeable future, within a

significant portion its the range. Our approach to analyzing SPR in this determination is consistent with the court's holding in *Desert Survivors* v. *Department of the Interior,* No. 16–cv–01165–JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018).

*Colorado Butterfly Plant's Determination of Status*

Our review of the best available scientific and commercial information indicates that the Colorado butterfly plant is not in danger of extinction or likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Therefore, we are removing the Colorado butterfly plant from the Federal List of Endangered and Threatened Plants at 50 CFR 17.12(h) due to recovery.

**Effects of the Rule**

This final rule revises 50 CFR 17.12(h) by removing the Colorado butterfly plant from the Federal List of Endangered and Threatened Plants. On the effective date of this rule (see **DATES**, above), the prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, no longer apply to this species. Federal agencies will 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 rule also removes 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 delisting the Colorado butterfly plant based on recovery actions taken and new information we have received. As delisting is due in part to recovery actions taken by Warren AFB, CFCNAD, and BLM, we have prepared a final post-delisting monitoring (PDM) plan for the Colorado butterfly plant with input from these and other partners. Monitoring will occur annually for at least 5 years, beginning in 2020. At the end of 5 years, the species' population status will be evaluated, with four possible outcomes: (1) The Colorado butterfly plant remains secure without the Act's protections, resulting in the conclusion of the post-delisting monitoring; (2) the Colorado butterfly plant species may be less secure than anticipated at the time of delisting, but information does not indicate that the species meets the definition of an endangered species or a threatened species, resulting in an extension of the PDM plan for an additional 3 to 5 years; (3) the PDM yields substantial information indicating that stressors may be causing a decline in the status of Colorado butterfly plant since the time of delisting, resulting in the initiation of a formal status review to determine whether relisting the species is appropriate; or (4) the PDM documents a decline in the species' probability of persistence, such that the species once again meets the definition of an endangered species or a threatened species under the Act, resulting in the immediate initiation of relisting the species.

A final PDM plan is available (see **ADDRESSES** or *http://www.regulations.gov* under Docket No. FWS–R6–ES–2018–0008). We will work closely with our partners to maintain the recovered status of the Colorado butterfly plant and ensure post-delisting monitoring is conducted and future management strategies are implemented (as necessary) to benefit the Colorado butterfly plant.

**Required Determinations**

*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 because no Tribal lands, sacred sites, or resources will be affected by the removal of the Colorado butterfly plant from the List of Endangered and Threatened Plants.

**References Cited**

A complete list of all references cited in this 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 **FOR FURTHER INFORMATION CONTACT**).

**Authors**

The primary authors of this final 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.

**Regulation Promulgation**

Accordingly, we 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: October 29, 2019.

**Margaret E. Everson,**

*Principal Deputy Director, U.S. Fish and Wildlife Service, Exercising the Authority of the Director, For the U.S. Fish and Wildlife Service.*

[FR Doc. 2019–24124 Filed 11–4–19; 8:45 am]

**BILLING CODE 4333–15–P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

### 50 CFR Part 648

**[RTID 0648–XX020]**

## Fisheries of the Northeastern United States; Summer Flounder Fishery; Quota Transfer From NC to RI and VA

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

**ACTION:** Notification of quota transfer.

**SUMMARY:** NMFS announces that the State of North Carolina is transferring a portion of its 2019 commercial summer flounder quota to the State of Rhode Island and the Commonwealth of Virginia. This quota adjustment is necessary to comply with the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan quota transfer provisions. This announcement informs the public of the revised commercial quotas for North Carolina, Virginia, and Rhode Island.

**DATES:** Effective November 4, 2019, through December 31, 2019.

**FOR FURTHER INFORMATION CONTACT:** Laura Hansen, Fishery Management Specialist, (978) 281–9225.

**SUPPLEMENTARY INFORMATION:** Regulations governing the summer flounder fishery are found in 50 CFR 648.100 through 648.110. These regulations require annual specification of a commercial quota that is apportioned among the coastal states from Maine through North Carolina. The process to set the annual commercial quota and the percent allocated to each state is described in § 648.102 and final 2019 allocations were published on May 17, 2019 (84 FR 22392).

The final rule implementing Amendment 5 to the Summer Flounder Fishery Management Plan, as published in the **Federal Register** on December 17, 1993 (58 FR 65936), provided a mechanism for transferring summer flounder commercial quota from one state to another. Two or more states, under mutual agreement and with the concurrence of the NMFS Greater Atlantic Regional Administrator, can transfer or combine summer flounder commercial quota under § 648.102(c)(2). The Regional Administrator is required to consider three criteria in the evaluation of requests for quota transfers or combinations: The transfer or combinations would preclude the overall annual quota from being fully harvested, the transfer addresses an unforeseen variation or contingency in the fishery, and the transfer is consistent with the objectives of the GMP and the Magnuson-Stevens Act.

North Carolina is transferring 23,481 lb (10,651 kg) and 7,706 lb (3,495 kg) of summer flounder commercial quota to Rhode Island and Virginia, respectively, through mutual agreement of the states. These transfers were requested to repay landings made by North Carolina-permitted vessels in Rhode Island and Virginia under safe harbor agreements. Based on the revised Summer Flounder, Scup, and Black Sea Bass Specifications, the revised summer flounder quotas for fishing year 2019 are now: North Carolina, 2,926,555 lb (1,327,463 kg); Rhode Island, 1,745,943 lb (9,1946 kg); and Virginia, 2,398,416 lb (1,087,903 kg).

**Authority:** 16 U.S.C. 1801 *et seq.*

Dated: October 29, 2019.

**Alan D. Risenhoover,**

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

[FR Doc. 2019–23966 Filed 11–4–19; 8:45 am]

**BILLING CODE 3510–22–P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

### 50 CFR Part 679

**[Docket No. 180831813–9170–02]**

**RIN 0648–XY053**

## Fisheries of the Exclusive Economic Zone Off Alaska; Reallocation of Pacific Cod in the Western Regulatory Area of the Gulf of Alaska

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

**ACTION:** Temporary rule; reallocation.

**SUMMARY:** NMFS is reallocating the projected unused amounts of Pacific cod total allowable catch (TAC) from catcher vessels using trawl gear to catcher vessels using hook-and-line gear, catcher/processors using trawl gear, vessels using jig gear, and vessels using pot gear in the Western Regulatory Area of the Gulf of Alaska (GOA). This action is necessary to allow the 2019 TAC of Pacific cod in the Western Regulatory Area of the GOA to be harvested.

**DATES:** Effective November 1, 2019 through 2400 hours, Alaska local time (A.l.t.), December 31, 2019.

**FOR FURTHER INFORMATION CONTACT:** Josh Keaton, 907–586–7228.

**SUPPLEMENTARY INFORMATION:** NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2019 Pacific cod TAC specified for catcher vessels using hook-and-line gear in the Western Regulatory Area of the GOA is 73 metric tons (mt) as established by the final 2019 and 2020 harvest specifications for groundfish of the GOA (84 FR 9416, March 14, 2019).

The 2019 Pacific cod TAC specified for catcher/processors using trawl gear in the Western Regulatory Area of the GOA is 125 metric tons (mt) as established by the final 2019 and 2020 harvest specifications for groundfish of the GOA (84 FR 9416, March 14, 2019).

The 2019 Pacific cod TAC specified for vessel using jig gear in the Western Regulatory Area of the GOA is 134 metric tons (mt) as established by the final 2019 and 2020 harvest specifications for groundfish of the GOA (84 FR 9416, March 14, 2019).

The 2019 Pacific cod TAC specified for vessels using pot gear in the Western Regulatory Area of the GOA is 1,980 metric tons (mt) as established by the final 2019 and 2020 harvest specifications for groundfish of the GOA (84 FR 9416, March 14, 2019).

The 2019 Pacific cod TAC apportioned to catcher vessels using trawl gear in the Western Regulatory Area of the GOA is 2,000 metric tons (mt), as established by the final 2019 and 2020 harvest specifications for groundfish of the GOA (84 FR 9416, March 14, 2019). The Administrator, Alaska Region, NMFS, (Regional Administrator) has determined that catcher vessels using trawl gear will not be able to harvest 330 mt of the 2019 Pacific cod TAC allocated to those vessels under § 679.20(a)(12)(i)(A)(*3*).

In accordance with § 679.20(a)(12)(ii)(B), the Regional Administrator has also determined that catcher vessels using hook-and-line