

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

[Docket No. FWS-R4-ES-2020-0063;  
FF09E22000 FXES1113090FEDR 223]

RIN 1018-BD83

**Endangered and Threatened Wildlife  
and Plants; Reclassification of Smooth  
Coneflower From Endangered To  
Threatened With a Section 4(d) Rule**

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

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), reclassify smooth coneflower (*Echinacea laevigata*) from endangered to threatened (“downlist”) under the Endangered Species Act of 1973, as amended (Act), due to improvements in the species’ overall status since the original listing in 1992. This action is based on a thorough review of the best available scientific and commercial information, which indicates that smooth coneflower is not currently in danger of extinction throughout all or a significant portion of its range, but it is still likely to become so in the foreseeable future. We are also finalizing a rule under section 4(d) of the Act that provides for the conservation of smooth coneflower.

**DATES:** This rule is effective August 5, 2022.

**ADDRESSES:** Public comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2020-0063.

**FOR FURTHER INFORMATION CONTACT:** Pete Benjamin, Field Supervisor, U.S. Fish and Wildlife Service, Raleigh Ecological Services Field Office, 551-F Pylon Drive, Raleigh, NC 27606; telephone (919) 856-4520. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

**SUPPLEMENTARY INFORMATION:**

**Executive Summary**

*Why we need to publish a rule.* Under the Act, a species may warrant

reclassification from endangered to threatened if it no longer meets the definition of endangered (in danger of extinction throughout all or a significant portion of its range). Smooth coneflower is listed as endangered, and we are reclassifying smooth coneflower as threatened (*i.e.*, “downlisting” the species) because we have determined it is not currently in danger of extinction. Reclassifying a species under the Act can only be accomplished by issuing a rule through the Administrative Procedure Act rulemaking process.

*What this document does.* This rule reclassifies smooth coneflower from endangered to threatened on the Federal List of Endangered and Threatened Plants (List), with a rule issued under section 4(d) of the Act, based on the species’ current status, which has been improved through implementation of conservation actions.

*The basis for our action.* Under the Act, we may determine that a species is an endangered or threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We may reclassify a species if the best available commercial and scientific data indicate the species no longer meets the applicable definition in the Act. We have determined that smooth coneflower is no longer in danger of extinction and, therefore, does not meet the Act’s definition of an endangered species, but the species does meet the Act’s definition of a threatened species because there are not enough permanently protected or managed populations to ameliorate ongoing habitat loss, degradation, and fragmentation from development. Existing management and regulatory mechanisms are not sufficient to protect the species from these threats such that it is not in danger of extinction within the foreseeable future.

*Peer review and public comment.* During the proposed rule stage, we sought the expert opinions of four appropriate specialists regarding the proposed reclassification rule. We received responses from two peer reviewers, which informed our determination. Information we received from peer review is incorporated into this final rule. We also considered all comments and information we received from the public during the comment

period, but none of these changed our determination.

**Previous Federal Actions**

Please refer to the proposed downlisting rule for smooth coneflower published on June 24, 2021 (86 FR 33159), for a detailed description of previous Federal actions concerning this species.

**Summary of Changes From the Proposed Rule**

In preparing this final rule, we reviewed and fully considered all comments we received during the comment period from the peer reviewers and the public on the proposed rule to reclassify smooth coneflower. Minor, nonsubstantive changes and corrections are made throughout this document in response to comments. However, the information we received during the peer review and public comment period on the proposed rule did not change our analysis, rationales, or determination for either reclassifying the smooth coneflower as a threatened species under the Act or the 4(d) rule for the species.

**I. Final Reclassification Determination  
Background**

A thorough review of the taxonomy, life history, ecology, and overall viability of smooth coneflower is presented in the recovery plan (Service 1995, entire), the 5-year review (Service 2011, entire), and the proposed downlisting rule (86 FR 33159; June 24, 2021). Smooth coneflower is a perennial herb in the aster family (Asteraceae). It was first described as *Brauneria laevigata* by Boynton and Beadle in 1903, from material collected in South Carolina (SC) in 1888. It was transferred to the genus *Echinacea* in 1929 (Small 1933, p. 1421; McGregor 1968, p. 120). Smooth coneflower grows up to 1.5 meters (59 inches (in)) tall from a vertical root stock; stems are smooth, with few leaves. Flower heads are usually solitary and are composed of ray flowers and disk flowers. The ray flowers (petal-like structures on composite flower heads) are light pink to purplish, strongly drooping, and 5 to 8 centimeters (cm; 1.9 to 3.1 in) long. Disk flowers (tiny tubular flowers in the central portion of composite flower head) are about 5 millimeters (mm) (0.2 in) long. Flowering occurs from May through July, and fruits develop from late June to September (Gaddy 1991, p. 18). Sexual reproduction results in a gray-brown, oblong-prismatic achene (dry, one-seeded fruit). Asexual reproduction in the form of short clonal rhizomes make new rosettes in both

garden and wild settings (Kunz 2018, pers. comm.). Smooth coneflower is dependent on insect pollinators for cross pollination. While skippers, butterflies, and wasps are frequent floral visitors, bees are believed to be the most effective pollinators (Gadd 2006, p. 15; Collins and Fore 2009, pp. 452–454).

In this rule, we follow guidance for defining element occurrences (EOs) and populations described by NatureServe (2002, pp. 10–11; NatureServe 2004, pp. 6, 14). We define an EO as any current (or historical) location where smooth coneflower occurs (or occurred), regardless of the spatial relationship

with other EOs. We define a population as either a stand-alone EO isolated by distance of unsuitable habitat (separated from other EOs by 2 kilometers (km) (1.2 miles (mi)) or more), or as a principal EO. A principal EO is two or more EOs located less than or equal to 2 km (1.2 mi) from each other, with suitable habitat in between them. For the purposes of evaluating the recovery of this species, it is most appropriate to consider populations rather than individual EOs.

At the time of listing in 1992, smooth coneflower had 21 extant populations (57 FR 46340; October 8, 1992). When

the recovery plan was written in 1995, there were 24 known populations rangewide, with an additional 3 populations in SC that were considered of cultivated origin at that time but are now believed to be natural populations, for a total of 27 populations (Service 1995, p. 2). New smooth coneflower occurrences have been discovered since the time of listing. Current State Natural Heritage Program database records document 44 extant populations of smooth coneflower (table 1).

**TABLE 1—TOTAL NUMBER OF EXTANT POPULATIONS OF SMOOTH CONEFLOWER THAT OCCUR IN EACH STATE WITHIN THE RANGE OF THE SPECIES**

[Georgia Department of Natural Resources (GADNR) 2019, unpaginated; North Carolina Natural Heritage Program (NCNHP) 2019, unpaginated; South Carolina Heritage Trust Program (SCHTP) 2019, unpaginated; Virginia Division of Natural Heritage (VADNH) 2018, unpaginated; White 2018, p. 6]

State	Number of extant populations
Virginia (VA) .....	15
North Carolina (NC) .....	6
South Carolina (SC) .....	12
Georgia (GA) .....	11
Totals .....	44

At the time of listing in 1992, all of the known smooth coneflower populations occurred in the piedmont or mountain physiographic provinces of GA, SC, NC, and VA. Since listing, new populations have been found in the inner coastal plain/sandhills region of SC (White 2018, p. 4) and the coastal plain of GA (Moffett 2018, pers. comm.).

Smooth coneflower is typically found in open woods, glades, cedar barrens, roadsides, clear cuts, dry limestone bluffs, and power line rights-of-way (ROWs). The species is usually found on magnesium- and calcium-rich soils associated with amphibolite, dolomite, or limestone (in VA); gabbro (in NC and VA); diabase (in NC and SC); marble, sandy loams, chert, and amphibolites (in SC and GA); and shallow soils with minor bedrock exposures (in GA) (Service 1995, pp. 2–3; White 2018, p. 4; GADNR 2019, unpaginated). The healthiest smooth coneflower populations are managed with prescribed fire or mechanical thinning, which provides smooth coneflower plants abundant sunlight and little competition from other plant species (Gaddy 1991, p. 1).

Land managers and biologists have routinely monitored smooth coneflower populations since before the species was listed in 1992. Monitoring at most populations usually involves a

flowering stem count, while each rosette of leaves is counted at some sites.

Flowering stem counts are generally the most common survey method because they require less time and biologists generally agree that plants produce no more than one flowering stem per growing season, making this method a conservative count of how many plants actually exist at a site. Basal rosettes and plants in vegetative state (non-flowering) can be very hard to find and count in dense herbaceous vegetation (NC Plant Conservation Program (NCPCP) 2018, unpaginated; White 2018, entire).

The species displays a relatively high level of genetic diversity based on analyses across the range of populations (Peters et al. 2009, pp. 12–13). There is also significant population genetic differentiation and a majority of the genetic variance is attributed to variation within populations, suggesting that populations may be adapting to local environments (Apsit and Dixon 2001, entire). Because this genetic variation exists, all populations should be maintained to conserve genetic diversity since each population contains only a subset of the total genetic variation. Regional population differentiation may be important in the selection of material to establish new populations, which suggests that, for

greatest success, reintroduction projects use local source material (Apsit and Dixon 2001, p. 76).

#### Recovery

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species, unless we determine that such a plan will not promote the conservation of the species. Under section 4(f)(1)(B)(ii), recovery plans must, to the maximum extent practicable, include objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of section 4 of the Act, that the species be removed from the List.

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species' likely future condition. However, they are not regulatory documents and determinations with respect to the species' status must be made consistent with section 4(a)(1) of the Act. A decision to revise the status of a species, or to delist a species, is ultimately based on an analysis of the best scientific and commercial data available to determine

whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

There are many paths to accomplishing recovery of a species, and recovery may be achieved without all of the criteria in a recovery plan being fully met. For example, one or more criteria may be exceeded while other criteria may not yet be accomplished. In that instance, we may determine that the threats are minimized sufficiently, and that the species is robust enough that it no longer meets the definition of an endangered species or a threatened species. In other cases, we may discover new recovery opportunities after having finalized the recovery plan. Parties seeking to conserve the species may use these opportunities instead of methods identified in the recovery plan. Likewise, we may learn new information about the species after we finalize the recovery plan. The new information may change the extent to which existing criteria are appropriate for identifying recovery of the species. The recovery of a species is a dynamic process requiring adaptive management that may, or may not, align with all criteria provided in a recovery plan.

#### Recovery Criteria

The Smooth Coneflower Recovery Plan was approved by the Service on April 18, 1995 (Service 1995, entire). It includes recovery criteria intended to indicate when threats to the species have been addressed to the point the species may no longer meet the

definition of an endangered species or threatened species and describes actions or tasks necessary to achieve those criteria.

The recovery plan identifies five downlisting criteria for smooth coneflower (Service 1995, p. 12):

1. Twelve (12) geographically distinct, self-sustaining populations are protected across the species' range, including populations in at least two counties in VA, two counties in NC, two counties in SC, and one county in GA;

2. At least nine of these populations must be in areas within the species' native ecosystem (not in gardens or similar artificial settings) that are in permanent conservation ownership and management;

3. Managers have been designated for each protected population;

4. Management plans have been developed and implemented for each protected population; and

5. Populations have been maintained at stable or increasing levels for 5 years.

The recovery plan also identifies the following five delisting criteria for smooth coneflower (Service 1995, p. 12):

1. Fifteen (15) geographically distinct, self-sustaining populations are protected across the species' range, including populations in at least two counties in VA, two counties in NC, two counties in SC, and one county in GA;

2. At least nine of these populations must be in areas within the species' native ecosystem (not in gardens or similar artificial settings) that are in permanent conservation ownership and management;

3. Managers have been designated for each protected population;

4. Management plans have been developed and implemented for each protected population; and

5. Populations have been maintained at stable or increasing levels for 10 years.

#### *Downlisting/Delisting Criteria 1 and 2 (Twelve (12) or Fifteen (15) Protected Self-Sustaining Populations in Native Ecosystem)*

Both criteria 1 and 2 for downlisting and delisting have been met. We currently know of 44 extant populations throughout the species' range. Of those 44, 16 populations ranked with excellent to good viability are found in areas where the habitat is under protective status (like a National Forest). As of 2019, 33 smooth coneflower populations are either on Federal lands or are in conservation ownership (9 in GA, 5 in NC, 12 in SC, and 7 in VA), 16 of which are ranked A (excellent viability; see tables 2 and 3, below), AB (excellent/good viability), or B (good viability) by their respective State Natural Heritage Programs (4 in GA, 3 in NC, 5 in SC, and 4 in VA). These populations are considered protected because they occur on several National Forests managed by the U.S. Forest Service (USFS), as well as lands owned and managed by State agencies, The Nature Conservancy (TNC), U.S. Army Corps of Engineers (USACE), U.S. Department of Energy (USDOE), and U.S. Department of Defense (DOD). Management plans in existence for many of these populations are detailed below.

TABLE 2—STATE DISTRIBUTION, HERITAGE PROGRAM RANK, OWNERSHIP, AND AVAILABILITY OF MANAGEMENT PLAN FOR THE HIGHLY RESILIENT, PROTECTED POPULATIONS

State	Population name	Heritage rank *	Ownership	Management plan?
GA .....	GA-A	AB	Federal .....	yes.
GA .....	GA-B	B	Federal .....	yes.
GA .....	GA-C	B	Federal .....	yes.
GA .....	GA-D	B	Federal .....	yes.
NC .....	NC-A	A	Federal, State .....	no.
NC .....	NC-B	A	State .....	yes.
NC .....	NC-C	B	Federal .....	no.
SC .....	SC-A	AB	Federal .....	yes.
SC .....	SC-B	B	Federal .....	yes.
SC .....	SC-C	A	Federal, State .....	yes.
SC .....	SC-D	A	Federal .....	yes.
SC .....	SC-E	AB	Federal .....	yes.
VA .....	VA-A	A	State .....	yes.
VA .....	VA-B	A	Private .....	yes.
VA .....	VA-C	AB	State .....	no.
VA .....	VA-D	AB	State .....	yes.

\* Heritage Ranks: A = excellent viability; AB = excellent/good viability; B = good viability.

With regard to the requirement in criterion 1 that populations be self-sustaining, we evaluated the resiliency of each population by looking at the ranks as assigned by the State Natural Heritage Programs. These 16 protected populations are ranked either A, AB, or

B (six are ranked A, five are ranked AB, and five are ranked B (see tables 2 and 3)). These 16 highly resilient populations (*i.e.*, those that have good to excellent viability scores (Table 3)) are scattered across the range of the species, including one county in GA (Stephens),

two counties in NC (Durham and Granville), two counties in SC (Barnwell and Oconee), and three counties in VA (Franklin, Halifax, and Montgomery). These populations span mountain, piedmont, and coastal plain physiographic provinces.

TABLE 3—SMOOTH CONEFLOWER RANKING CRITERIA

Heritage rank	Viability	Number of plants	Size and type of habitat	Management regime
A .....	Excellent .....	>1,000; flowering annually	>5 acres (>2 hectares); open glade or prairie remnant.	open (disturbed) from periodic fires, optimal soil conditions.
B .....	Good .....	100–1,000; most flowering annually.	1–5 acres; open glade or prairie remnant.	mostly open by periodic fires or other disturbance.
C .....	Fair .....	10–100; 50% or fewer flowering annually.	any size glade or prairie remnant; or isolated roadside or utility ROW with remnant glade or prairie flora.	limited.
D .....	Poor .....	<10; may not flower annually.	remnant glades or isolated ROWs .....	limited.

All of these populations occur in the species' natural ecosystem, which includes habitats such as open woodlands, glades, cedar barrens, and other habitat that is usually (but not always) found on magnesium- and calcium-rich soil. For many of the larger A- and B-ranked populations, the site ranks have not changed significantly over recent years.

The remaining 28 extant populations are ranked C (fair viability), D (poor viability), or E (extant, but their viability has not been assessed). A rank of X is given to sites considered to be extirpated, where evidence indicates that the species no longer exists in that location. A rank of H is given to sites considered to be historical, where recent field information verifying the continued existence of the population is lacking. We estimated that C-, D-, and E-ranked populations have low resiliency, and sites ranked H or X were not evaluated for resiliency because plants have not been found at those sites in recent years.

#### *Downlisting/Delisting Criterion 3 (Managers Have Been Designated for Each Protected Population)*

We verified ownership and management status of each of the 16 highly resilient, protected populations on Federal, State, and private conservation lands, to ensure that a land manager responsible for overseeing the management of smooth coneflower has been assigned. The four highly resilient populations in GA are managed by the USFS (Chattahoochee-Oconee National Forest) with assistance from the Atlanta Botanical Garden, State Botanical Garden of Georgia, and Georgia Department of Natural Resources (GADNR). The three highly resilient

populations in NC are managed by the North Carolina Department of Agriculture and Consumer Services (NCDACS) Research Stations Division, North Carolina Plant Conservation Program (NCPCP), USACE, and NC Botanical Garden (NCBG). In SC, most of the highly resilient populations occur on the Sumter National Forest, and four of the five highly resilient populations are managed by the Sumter National Forest, with one of those sites being co-owned and managed by South Carolina Heritage Trust Program (SHTP) as a Heritage Trust Preserve. The other highly resilient population, at the Savannah River Site, is owned by the USDOE and managed by the USFS. In VA, the four highly resilient populations are managed by the Virginia Division of Natural Heritage (VADNH), USFS (George Washington National Forest), and TNC.

Site managers have been identified for all 16 highly resilient populations identified under criteria 1 and 2 above; therefore, we consider this criterion to have been met.

#### *Downlisting/Delisting Criterion 4 (Management Plans Implemented)*

Because smooth coneflower requires early to mid-successional habitat, all highly resilient populations have received and will require some form of management in perpetuity to help maintain habitat in the right balance so that populations can thrive. Management techniques include the use of prescribed fire, well-timed mowing, mechanical clearing (including the use of chain saws to cut trees), and herbicides (selectively applied to cut stumps to prevent regrowth). All of these management actions have been implemented separately or in

combination to sustain suitable habitat for smooth coneflower. Of the 16 highly resilient populations considered in criteria 1 and 2, 13 of them can be considered to be included in management plans. However, these plans vary in scope and level of specificity toward smooth coneflower, and most plans are outdated. Only six of the plans are specific to the management of smooth coneflower, while the others address the overall management of an entire site but include some actions that may be beneficial to smooth coneflower. Of the six plans that are specific to the management of smooth coneflower, four were developed in the mid-1990s, and two were developed in the early 2000s. In the past 20 years, we have learned a lot about how to best manage the species with fire, as well as how to manage for invasive species. Many of these management practices (*e.g.*, conducting prescribed burns or mechanical clearing every 3 to 5 years, or controlling invasive species) need to be incorporated into older management plans.

Management plans exist for three of the four highly resilient smooth coneflower populations in VA, although new information about fire intervals could improve management of several sites (*e.g.*, VA–A, VA–B, and VA–D) (Heffernan et al. 2002, pp. 1–2; SanJule 2007, p. 5; USDA Forest Service 2014, entire). In NC, the site of the largest smooth coneflower population (NC–B) has been actively managed using prescribed fire, mowing, and other mechanical means as recommended by species experts (Barnett-Lawrence 1994, pp. 18–20, appendix 10; Barnett-Lawrence 1995, pp. 18–19; NCNHP 1996, unpaginated), but two of the

highly resilient populations lack management plans altogether. In SC, all highly resilient populations occurring on the Sumter National Forest in SC (SC-A, SC-B, SC-C, and SC-D) are managed by prescribed fire and mechanical clearing. While the Sumter National Forest Revised Land and Resource Management Plan is from 2004, this plan directs the USFS to maintain or restore at least eight self-sustaining populations of smooth coneflower (USDA Forest Service 2004, pp. 2–9; Roecker 2001, entire), a practice that is in effect today. In GA, the USFS adequately uses prescribed fire, mechanical clearing, and herbicide application to maintain open, glade-like woodland habitat for smooth coneflower and associated species at highly resilient populations (GA-A, GA-B, GA-C, and GA-D).

In summary, 13 of the 16 highly resilient (A-, AB-, and B-ranked) smooth coneflower populations are included in management plans, but only 6 of them specifically address smooth coneflower management. These plans vary in level of detail, scope, and time commitment, and several need to be updated with improved fire management and invasive species management practices. We find that the implementation of regular, dedicated management for the highly resilient populations is the reason these smooth coneflower populations are large, healthy, and viable, and contribute toward the recovery of the species. However, the Service considers criterion 4 for smooth coneflower to have been only partially met because not all populations have management plans, and several of the existing plans are out of date. The Service has developed a template management plan that land managers can use as a guide when developing or updating rare species management plans, particularly those that focus on smooth coneflower management, and we will be working toward getting all plans established and updated as part of our ongoing recovery work.

*Downlisting/Delisting Criterion 5 (Stable or Increasing Populations for 5 or 10 Years)*

Land managers conduct site visits to their respective smooth coneflower populations on a regular basis to assess population size and health and to determine what management actions, if any, are needed. Monitoring generally involves a flowering stem count, which is a conservative count of how many plants exist at a site (NCPCP 2018, unpaginated; White 2018, entire).

Virginia smooth coneflower populations occur on USFS, TNC, and

Virginia Department of Conservation and Recreation (VADCR) lands. These sites have been monitored by their respective land managers and researchers over the last 30 years. Because several of the smooth coneflower preserves in VA are large in size, a complete census has not been conducted every year, although the sites have been monitored during regular management activities. All four highly resilient populations in VA are considered stable over the 30+ years they have been monitored.

Land managers in NC have collected monitoring data on their smooth coneflower populations for decades. Of the high resiliency smooth coneflower populations in North Carolina, one has been increasing over the 14-year monitoring period, and two are stable over the 31-year monitoring period (NCPCP 2018, unpaginated).

South Carolina sites on the Sumter National Forest and a State-owned Heritage Preserve have been monitored since 1990 (White 2018, p. 6, table 1). A recent status survey of all of the smooth coneflower sites in SC determined that since 2006, trends indicated that for the most resilient SC smooth coneflower populations, four appear to be increasing in size, and one is considered stable, for at least the past 14 years.

All four of the highly resilient smooth coneflower populations in GA occur on the Chattahoochee-Oconee National Forest in northeastern GA. Biologists with the USFS, State Botanical Garden of Georgia, Atlanta Botanical Garden, GADNR, and Georgia Plant Conservation Alliance have visited these populations on a regular basis since the species was proposed for listing in 1991 and a Statewide status survey was conducted in 2000 (Sullivan 2000, entire). Monitoring data are intermittent, but the four highly resilient populations have been considered stable for the past 20 years since the Statewide status survey (Suiter 2020, pers. comm.).

Without more detailed data, it is difficult to determine specific trends, but based on our analysis of monitoring data and recent observations, we conclude that all of the 16 A-, AB-, and B-ranked (good to excellent resiliency) protected populations have been stable or increasing for more than 10 years; therefore, we consider this recovery criterion to have been met.

*Summary*

The implementation of recovery actions for smooth coneflower has significantly reduced the risk of extinction for the species. As indicated

above, many smooth coneflower populations are protected on public (Federal and State) and private lands, such as TNC preserves in VA. The most highly resilient smooth coneflower populations (*i.e.*, those considered contributing to species' recovery) are considered stable or increasing. Current information indicates that smooth coneflower is more abundant, and its range is somewhat larger, than when the species was listed. However, management plans for all protected populations are lacking, as only six specifically focus on management for smooth coneflower. Many of the existing management plans are out of date, from the 1990s and early 2000s, or are not being currently implemented.

**Regulatory Framework**

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 is an endangered species or a 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 any species is an endangered species or a 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.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects. We consider these same five factors in reclassifying a species from endangered to threatened (50 CFR 424.11(c)). Even though we are not delisting the species at this time, we also consider the risk to the species if it were not listed under the Act to better understand the species' future without the protections of the Act.

We use the term “threat” to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term “threat” includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term “threat” may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term “foreseeable future” extends only so far into the future as the Services can reasonably determine that both the future threats and the species’ responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. “Reliable” does not mean “certain”; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available

and should consider the timeframes applicable to the relevant threats and to the species’ likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species’ biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

#### **Summary of Biological Condition and Threats**

When we published the final rule to list smooth coneflower as an endangered species (57 FR 46340; October 8, 1992), the identified threats (factors) were the absence of natural disturbance (fire and/or grazing), highway construction and improvement, gas line installation, and residential and industrial development (Factor A); collecting (Factor B); beetle damage (Factor C); inadequacy of existing State regulatory mechanisms (Factor D); and low genetic variability, herbicide use, and possible encroachment of exotic species (Factor E).

The following analysis evaluates these previously identified threats, any other threats currently facing the species, and any other threats that are reasonably likely to affect the species in the foreseeable future, including cumulatively or synergistically.

#### *Habitat Degradation or Loss Due To Development and Absence of Natural Disturbance*

Smooth coneflower plants require open, sunny conditions to survive. Without regular disturbance such as fire, woody shrubs and trees create a dense canopy that prevents sunlight from reaching the forest floor where this herbaceous species occurs. Smooth coneflower is intolerant of dense shade and tends to die out after a few years of shady conditions.

Smooth coneflower occurrences on private land are vulnerable to habitat loss due to degradation, which results from fire suppression or the absence of other disturbances that maintain the habitat in an open state. For example, in Rockingham County, NC, a small smooth coneflower population occurred on private land in an open woodland between a highway and a railroad track. The lack of management or fire resulted in the site becoming overgrown, and no plants have been observed there in recent years. To encourage smooth coneflower growth, the site needs fire or mechanical disturbance in order to remove woody vegetation and open the

forest floor to sunlight (NCNHP 2019, unpaginated).

Development projects, such as residential and commercial construction and highway and utility construction and maintenance, pose a threat to smooth coneflower populations by clearing areas where the species occurs, thereby destroying populations. Further, development in close proximity to smooth coneflower populations may preclude the ability to use fire as a management tool at nearby protected populations because of the threat of fires escaping the management area and objections to smoke blowing into developed areas. For example, a smooth coneflower population on a small parcel of USFS land in Habersham County, GA, has declined over recent years due to the difficulty in managing fire on a parcel surrounded by private property. The lack of management has resulted in the growth of woody plants that have shaded smooth coneflower plants and resulted in this population’s decline (Radcliffe 2019, pers. comm.). As residential and commercial development continue to occur in the suburbs of Durham, NC, it will become harder to manage some of the adjacent smooth coneflower sites with fire (Starke 2019, pers. comm.).

While we are not aware of any smooth coneflower populations that have been destroyed due to residential or commercial development since the species was listed, this threat remains a concern. Recently, a new subpopulation of smooth coneflower was discovered on a property in Durham County, NC, that is slated for development. If a rare plant survey had not been conducted and these plants discovered, they would have been destroyed by the development of the site (Starke 2019, pers. comm.). There are likely additional undiscovered populations of smooth coneflower that are subject to destruction.

Development pressure based on urbanization predictions from the SLEUTH urban growth model indicate that all of the NC counties, more than half of the SC counties, and both of the northeastern GA counties of occurrence for smooth coneflower will exhibit high (greater than 90 percent) growth trends over the next 20 to 30 years as part of the “southern megalopolis,” or giant urban sprawl area in the Southeast (Terando et al. 2014, p. 3; Databasin 2014, entire). Smooth coneflower populations that occur on private lands in these counties will continue to face threats from development and land conversion in the foreseeable future. Most of the VA counties of occurrence are outside the boundaries of the

southern megalopolis and the VA urban crescent in the eastern part of the State (Databasin 2014, entire).

Smooth coneflower occurs on roadsides and utility ROWs throughout the range of the species. These populations are vulnerable to management practices that could negatively impact or destroy them. Herbicides, which are typically harmful to all plants, are often used to manage vegetation along road shoulders and in utility ROWs. Herbicide damage can be temporary or permanent depending on the herbicide used and the rate of application. Although dormant season (winter) mowing is generally not problematic for disturbance-dependent species, as it helps reduce competition and maintain sites in an open condition, any mowing that occurs during the growing season but before plants produce mature seeds is considered harmful because it arrests seed development and reproductive potential for that year. Smooth coneflower plants growing on a utility ROW in Granville County, NC, were accidentally sprayed with herbicides, killing many plants in this population (NCNHP 2019, unpaginated). Herbicide damage to smooth coneflowers has also occurred at the Savannah River Site in SC, but the population was able to recover (White 2018, Appendix 3, entire). Roadside and utility ROW occurrences are difficult to manage in an early successional state without harming smooth coneflower plants. For example, woody species encroachment has caused the decline of some smooth coneflower sites that occur in ROWs in Durham County, NC. In some cases, it is possible to manage lands adjacent to ROW populations by, for example, removing woody species to create suitable habitat for the species, encouraging the plant to gradually occupy habitat away from the ROW; however, adjacent, protected land does not always exist (Stark 2019, pers. comm.). In the status survey of smooth coneflower populations in SC, (White 2018, appendix 3, entire) indicates that many populations still face competition by woody species, the presence of invasive species, and road ROW maintenance.

The protection of some smooth coneflower populations has been accomplished through active management and reducing the impacts of development. These efforts are critical to the long-term survival of this species. Recognizing the importance of long-term management of smooth coneflower populations, management plans that incorporate the use of prescribed fire and/or mechanized vegetation control have been prepared

for several populations. The Service is working with many landowners that have smooth coneflower populations to complete or update management plans for their populations, as most management plans were first developed in the 1990s and early 2000s and need to incorporate new fire management and invasive species management practices. In 2018, we provided land managers with a management plan outline to facilitate the completion of thorough management plans. Due to greater awareness of the important role of fire in natural systems, prescribed fire and mechanical thinning are now regularly used as management tools on National Forests, military bases, nature preserves, and other protected lands where smooth coneflower occurs. Land managers such as the USFS, DOD, USACE, and Savannah River Site, among others, use prescribed fire on a 2- to 4-year interval as a management tool to control woody vegetation that might otherwise shade this disturbance-dependent species. For sites that are not managed intentionally for smooth coneflower, management practices will likely continue even if the species is not listed under the Act, primarily because the active management benefits the overall habitat and meets the management objectives of the landowner. In general, the management benefits smooth coneflower, and without it, the habitat conditions for smooth coneflower would likely degrade and we would need to reassess the status of the species under the Act. For the most part, management plans for many of the protected populations of smooth coneflower have been in place for several years, but we do not know if management actions would change for these populations if the species were not listed.

While development pressure on smooth coneflower populations on private lands remains, the threat of development for the most highly resilient populations is reduced, as they occur only on protected lands. As discussed earlier, many smooth coneflower populations occur on Federal lands, such as those owned or managed by the USFS (George Washington and Jefferson National Forests in VA, Sumter National Forest in SC, and Chattahoochee-Oconee National Forest in GA), USACE (Falls Lake), DOD (Fort Stewart and Fort Jackson Army Bases), and USDOE (Savannah River Site). These populations are protected on Federal lands from the threats of ecological succession or destruction due to development, primarily because Federal

partners are vested in the protection of the species under their management plans. Some smooth coneflower sites occur on active military bases with limited public access, such as Fort Jackson and Fort Stewart Army Bases, providing further protection of these populations. Likewise, the Savannah River Site, a former nuclear weapons facility, is closed to the public, and no development or construction is allowed in the areas where smooth coneflower occurs. This USDOE site, designated as a National Environmental Research Park, is managed by the USFS. Several other populations are permanently protected on non-Federal lands by the VADNH, NCDACS, NCPCP, TNC, and Mecklenburg County (NC) Parks and Recreation Department.

In response to impacts to populations of smooth coneflower in roadside and utility ROWs, State departments of transportation and utility companies, such as Duke Energy and Georgia Power, now have management agreements or memoranda of understanding with State wildlife agencies, State Natural Heritage Programs, the USFS, and other landowners to protect and manage smooth coneflower populations on their ROWs in a way that is protective of the species.

While significant progress has been made to address the protection and management of many smooth coneflower populations, development pressure and management challenges associated with adjacent development continue to pose a threat to unprotected smooth coneflower populations. Populations that occur on private lands face threats from development and land conversion. Additionally, protected populations adjacent to private land can be difficult to manage with prescribed fire due to concerns of neighbors. Without proper management, woody vegetation could grow up and shade a smooth coneflower population to the point of causing decline or eradication in less than 10 years. Long-term management is still of concern to the Service, as several populations are not specifically considered in management plans nor have commitments to be managed into the future. Maintenance activities pose a threat to smooth coneflower populations that occur on roadside and utility ROWs. Despite agreements with State and Federal agencies to conduct ROW maintenance in a way that is protective of rare plants, accidents happen frequently. These sites are mowed or sprayed with herbicide on an irregular basis with varying levels of impacts.

### Collection

When we published the final rule to list smooth coneflower as an endangered species (57 FR 46340; October 8, 1992), there was concern that populations might be decimated by collectors interested in exploiting this species for the horticulture and pharmaceutical trades. We expected that publicity might generate increased demand for this species in the nursery trade. However, the final listing rule also mentioned that smooth coneflower, although offered for sale by a few native plant nurseries, was not a significant component of the commercial trade in native plants (57 FR 46340, October 8, 1992, p. 46341). Currently, we are not aware of any plant nurseries that offer this species for sale, likely a result of the prohibitions on collecting endangered plants such as smooth coneflower. The only incidents of poaching known to the Service occurred at one site in GA. Flowers were broken off smooth coneflower plants at one of the roadside sites on Currahee Mountain, GA (Alley 2018, pers. comm.). While there is potential that specialty nurseries would be interested in selling this species in the future, the Service concludes that the demand for wild-collected plants is low, as other species in the genus *Echinacea* can be readily propagated using common horticultural techniques.

The concern in the final rule (57 FR 46340; October 8, 1992) that this species would be collected for the pharmaceutical trade was based on observations of over-collection of other species of *Echinacea* in the midwestern United States for use in medicinal products. However, the rule also stated that “devastation” of smooth coneflower populations for the commercial pharmaceutical trade has not yet been documented (57 FR 46340, October 8, 1992, p. 46342). Despite the concerns, in the 27 years that smooth coneflower has been listed, the Service has not been aware of any incidents of poaching this species for use in medicinal products. Because plants in the genus *Echinacea* are still used for medicinal purposes, the threat of this activity remains, but the probability is low due to relatively small population sizes compared to other species in the genus *Echinacea* that grow in midwestern States. Moreover, land managers have not reported poaching as a significant threat to their smooth coneflower populations because other species of *Echinacea* are so much more numerous.

Various types of academic research have been conducted on smooth coneflower since the species was listed in 1992. These studies involved the

collection of leaves, stems, flowers, and seeds for laboratory experiments or the collection of voucher specimens for herbaria. The North Carolina Botanical Garden (NCBG), State Botanical Garden of Georgia, and Atlanta Botanical Garden have collected smooth coneflower seeds over the years to be used in restoration projects in their respective States. These botanical gardens follow the Center for Plant Conservation guidelines for seed collection and minimize impacts to populations, a protocol that is followed for all species, regardless of whether the species is federally listed or not (Kunz 2018, pers. comm.). We evaluated these projects before they were initiated and determined that the level of collection was unlikely to pose any potential threat of overutilization for the species. We do not find that any of these research or seed banking projects have had long-term negative effects on smooth coneflower. If the species were not listed, we do not anticipate a significant increase in collection pressure, given current lack of poaching and low interest in the species.

We conclude that collection is not a major threat to the continued existence of smooth coneflower, as long as any future collection follows best conservation practices described in Menges et al. (2004, entire) and by the Center for Plant Conservation Best Practices.

### Damage Due to Herbivory by Beetles and Deer

When we listed smooth coneflower as an endangered species (57 FR 46340; October 8, 1992), leaf beetles in the family Chrysomelidae had been observed on smooth coneflower in NC, but their effects were unknown. As mentioned in the 2011 5-year review, a nonnative longhorn beetle (*Hemierana marginata*; family Cerambycidae) was identified at some smooth coneflower populations in NC. This beetle chews into the flowering stem and causes flowers to die before producing viable seeds. While this longhorn beetle has been reported from a few smooth coneflower populations in two NC counties, healthy smooth coneflower populations remain at these sites. Therefore, we conclude that the nonnative longhorn beetle is not a threat at this time.

White-tailed deer (*Odocoileus virginianus*) have been documented browsing on the flower heads of smooth coneflower, but deer herbivory on the leaves has not been observed (Starke 2019, pers. comm.). No other herbivory has been observed. Based on the best available information at this time, we

conclude that neither deer browsing nor any other herbivory is causing population-level effects to smooth coneflower.

### State Regulatory Protections

Smooth coneflower is listed as “State Endangered” by the GADNR. The relevant State law (Rules and Regulations of the State of Georgia, Subject 391–4–10, Protection of Endangered, Threatened, Rare, or Unusual Species) prohibits, among other things, the transfer of a State-listed plant from one property to another without the written permission of the landowner where the species was found. Violations of this law constitute a misdemeanor. In addition, the Georgia Environmental Policy Act (GA Code, title 12, chapter 16, article 1) requires the assessment of major proposed agency impacts on biological resources. Georgia’s Wildflower Preservation Act of 1973 (GA Code, title 12, chapter 6, article 3) protects rare plants. However, the Georgia Wildflower Preservation Act does not protect plants on private property. Regardless, nearly all known smooth coneflower populations in GA occur on Federal lands such as the Chattahoochee-Oconee National Forest and DOD (Department of the Army) installations such as Fort Stewart (Moffett 2018, pers. comm.). As discussed above (see *Habitat Degradation or Loss Due to Development and Absence of Natural Disturbance*), Federal lands provide some protection to smooth coneflower populations by limiting public access and reducing the threat of development, as well as ensuring agency-specific management plans.

Smooth coneflower is listed as “endangered” in NC by the NCPCP and protected by the Plant Protection and Conservation Act of 1979 (NC General Statutes, chapter 106, article 19B). This law prevents the removal of State-listed plants from the land without written permission of the landowner. However, it does not regulate destruction or mandate protection. It authorizes the NCPCP to establish nature preserves for protected species and their habitats. To that end, the NCPCP owns and manages several tracts of land as preserves for the protection of smooth coneflower and other associated rare plants.

The Virginia Endangered Plant and Insect Species Act (Code of Virginia, title 3.2, chapter 10), as amended, provides for the official listing and recovery of endangered and threatened plant and insect species in VA. The VADNH lists smooth coneflower as “threatened” in the State (VA Administrative Code, title 2, agency 5,



chapter 320, section 5–320–10 (2VAC5–320–10); Townsend 2018, p. 16). Virginia law prohibits the removal and sale or gifting of State-listed plant species from land other than a person's own land. The VADCR owns three natural area preserves that protect populations of smooth coneflower. The Virginia Endangered Plant and Insect Species Act has not played a major role in safeguarding smooth coneflower populations (Townsend 2019, pers. comm.).

Smooth coneflower is on the South Carolina Department of Natural Resources' list of rare, threatened, and endangered species of SC (SCHTP 2018, unpaginated); however, neither the law that authorizes the creation of this list, nor any other State law, provides general protection to listed plants in SC.

Populations of smooth coneflower are more abundant and widely distributed than when it was listed as an endangered species in 1992. It is also listed as endangered or threatened by three of the four States where it occurs (GA, NC, and VA). However, protection of this and other State-listed species on private land is challenging. State prohibitions against taking are difficult to enforce and do not cover adverse alterations of habitats such as exclusion of fire. As previously mentioned in this rule, the majority of the highest ranked populations (Ranks A, AB, and B) occur on protected Federal lands and other conservation properties.

#### Genetics

The final rule listing smooth coneflower as an endangered species (57 FR 46340; October 8, 1992) stated that, at that time, the remaining smooth coneflower populations contained few individual plants and there may have been low genetic variability within populations, making each remaining population important. However, we now know that smooth coneflower displays a relatively high level of diversity (Peters et al. 2009, entire). Thus, populations may be able to respond to selection pressures due to continued genetic exchange sustained by the outcrossing mating system of the species.

#### Encroachment From Invasive Species

Encroachment by nonnative, invasive plants poses a threat to some smooth coneflower populations, especially those occurrences located on highway ROWs or in utility line easements (such as power lines). These disturbed habitats often include nonnative species, some of which can become invasive. Invasive species change the floristic composition of these areas,

compete for nutrients, limit germination of seeds (by changing or eliminating that niche/microenvironment), and may shade out smooth coneflower plants. Another impact is the use of herbicides on invasive species that has the secondary effect of killing smooth coneflower. Smooth coneflower populations face threats by nonnative, invasive plants such as Japanese honeysuckle (*Lonicera japonica*), Sericea lespedeza (*Lespedeza cuneata*), shrubby lespedeza (*Lespedeza bicolor*), Japanese stiltgrass (*Microstegium vimineum*), and autumn olive (*Elaeagnus umbellata*) (White 2019, entire).

#### Climate Change

Based on observations of climatic conditions over a period of approximately 20 years, there is some biological and historical evidence to indicate that smooth coneflower is adapted to persist with the range of potential effects of climate change, including more frequent droughts (below average rainfall over a time period greater than the historical range of variability) and increased average maximum temperatures. Smooth coneflower is typically found in open, sunny areas with little to no shade and high sun exposure. These sites often occur in fairly xeric conditions such as open woods, glades, barrens, roadsides, clear cuts, dry limestone bluffs, and road and power line ROWs. Even though smooth coneflower populations in NC experienced severe droughts in 2007 and 2010, dry conditions did not negatively influence flower production (NCPCP 2018, entire). All natural populations in NC have survived through drought years and recovered. Despite some drought years, smooth coneflower populations in SC have generally experienced positive trends over the last 20 years, indicating that the species is not negatively affected by droughts (White 2018, entire). Smooth coneflower plants have sustained populations for years on dry clay road cuts (White 2019, pers. comm.). Adaptations to survive in sunny areas likely benefit this species during drought conditions. Further, the perennial growth habitat and underground rhizomes likely allow smooth coneflower to be more resilient to drought conditions.

To generate future climate projections across the range of smooth coneflower, we used the National Climate Change Viewer (NCCV), a tool developed by the U.S. Geological Survey (USGS) that allows the user to view climate projections at the State, county, and watershed level (Alder and Hostetler

2017, entire). The model simulates the response of the water balance to changes in temperature and precipitation in the climate models (30 separate models developed by the National Aeronautics and Space Administration). The NCCV also provides access to comprehensive summary reports for States, counties, and watersheds.

Using the NCCV and using representative concentration pathways (RCP) greenhouse gas emission scenarios (RCP 4.5 and 8.5) as possible outcomes, we calculated projected annual mean changes for maximum air temperature and precipitation for the period 2050–2074 in VA, NC, SC, and GA. Based on these results, all four States within the range of smooth coneflower will be subjected to higher maximum air temperatures (annual mean increase of 1.9–2.2 degrees Celsius (°C) (3.4–4.0 degrees Fahrenheit (°F)) for RCP 4.5; 2.7–3.2 °C (4.9–5.8 °F) for RCP 8.5) and slightly higher precipitation (annual mean increase of 0.57–0.74 centimeters (cm)/month (mo) (0.22–0.3 inches (in)/mo) for RCP 4.5; 0.51–0.76 cm/mo (0.2–0.3 in/mo) for RCP 8.5) relative to 1981–2010 (Alder and Hostetler 2017, entire). In general, across the species' range for both RCP 4.5 and 8.5, runoff is expected to remain at a similar levels or decrease slightly; soil water storage is expected to decrease slightly, and evaporative deficit will increase slightly (Alder and Hostetler 2017, entire). Because the average annual increase in precipitation is predicted to be only slightly higher, the increased evaporative deficit and the loss in runoff and soil storage is primarily a result of higher maximum and minimum air temperatures. Despite the slight increase in predicted precipitation, the coincident warming means that habitats are unlikely to maintain their current levels of moisture and will become slightly drier.

To evaluate the vulnerability of smooth coneflower to the effects of climate change, we also used NatureServe's Climate Change Vulnerability Index (CCVI) (Young et al. 2015, entire), a climate change model that uses downscaled climate predictions from tools such as Climate Wizard (Girvetz et al. 2009, entire) and combines these with readily available information about a species' natural history, distribution, and landscape circumstances to predict whether it will likely suffer a range contraction and/or population reductions due to the effects of climate change. The tool gauges 20 scientifically documented factors and indicators of these components, as well as documented responses to climate change where they exist. The CCVI

generated a vulnerability rating of “moderately vulnerable” for smooth coneflower, suggesting that the species’ abundance and/or range extent is likely to decrease slightly by 2050. Factors influencing the species’ moderate vulnerability include its restricted dispersal ability, anthropogenic barriers, predicted land use changes, dependence on a specific disturbance regime (often fire), and restriction to uncommon geological features.

Although the model suggested that smooth coneflower is sensitive to climate change and could be adversely affected in future years, there are a number of weaknesses associated with the CCVI (Anacker and Leidholm 2012, pp. 16–17). The specific weaknesses identified are: (1) The CCVI is weighted too heavily towards direct exposure to climate change (projected changes to future temperature and precipitation conditions that have high levels of uncertainties); (2) some important plant attributes are missing (mating system and pollinator specificity); (3) it is very difficult to complete scoring for a given species because some information is simply lacking; (4) some scoring guidelines are too simplistic (Anacker and Leidholm 2012, pp. 16–17); and (5) the model does not account for impacts to species’ vital rates.

Topographic complexity is a potential complementary factor in assessing vulnerability to climate change (Anacker and Leidholm 2012, pp. 12–16). Within smooth coneflower’s range, the Appalachian and Allegheny mountains are predicted to have slightly higher temperature changes as a result of climate change than the piedmont and coastal plain counties, so smooth coneflower populations in the mountains on the north end of the range may be more vulnerable when compared to those that occur, for example, in the coastal plain.

In summary, while smooth coneflower is considered moderately vulnerable to range contraction from future climate change, the predicted temperature and precipitation changes for both moderate (RCP 4.5) and extreme (RCP 8.5) scenarios indicate only slightly hotter and drier conditions by 2074. Thus, smooth coneflower is expected to have little to no change for any populations due to drought or temperature changes that are predicted for the future. Therefore, we conclude that climate change is not likely a major factor affecting the species’ resiliency into the foreseeable future.

#### *Stochastic Events*

Stochastic events (environmental and genetic stochasticity) do not appear to

be adversely affecting populations of smooth coneflower. Environmental stochasticity refers to variation in recruitment and mortality rates in response to weather, disease, competition, predation, or other factors external to the population. While drought and the timing and amount of rainfall are likely important factors in seed germination and establishment of smooth coneflower, we do not have any evidence of how these factors directly affect this species. Smooth coneflower soil seed banks are low to nonexistent, which could exacerbate the potential effects of stochastic events because the species does not have the seed bank to rely on for future recruitment (Walker 2009, p. 12); however, we have not yet observed that the low seedbank has affected highly resilient populations. With regard to genetic stochasticity, smooth coneflower populations have significant levels of population diversity and exhibit substantial population genetic differentiation (Peters et al. 2009, p. 12) (see *Genetics*, above), as such any genetic stochasticity such as allee effects or genetic bottlenecks are not likely. Based on the best available information, we conclude that environmental and genetic stochasticity do not pose a threat to smooth coneflower.

#### *Cumulative Effects*

The cumulative effects of encroaching development adjacent to protected sites and the management challenges that accompany that threat will continue to affect the species into the future. Increasing development adjacent to protected sites will likely lead to decreases in managing with prescribed burning in the future, which may or may not be replaced with adequate and appropriate habitat management by other means that are more expensive than managing with fire. The type of development also factors into management ability and flexibility, with major roads and places with vulnerable populations weighing more heavily on the decision of if/when to burn than other types of development.

#### **Summary of Comments and Recommendations**

In the proposed rule published on June 24, 2021 (86 FR 33159), we requested that all interested parties submit written comments on the proposal by August 23, 2021. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. A newspaper notice inviting general public comment was

published in the public notice section of USA Today on July 12, 2021. We did not receive any requests for a public hearing. We received four public comments, primarily in support of our proposed downlisting of smooth coneflower, during the proposed rule’s public comment period, but none raised issues substantial enough to change our conclusions from the proposed rule.

#### *Peer Reviewer Comments*

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought peer review of the proposed reclassification rule. The Service sent the proposed rule to four independent peer reviewers who had expertise in smooth coneflower ecology and the threats to its habitat. We received responses from two of the peer reviewers.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the information contained in the proposed reclassification rule. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve the final rule. Peer reviewer comments are addressed in the following summary and were incorporated into this final rule, as appropriate.

(1) *Comment:* One peer reviewer indicated that the studies we cited for information on reproductive biology seem to conflict, stating that while one cited study includes butterflies as pollinators, another more correctly identifies butterflies as visitors collecting nectar, not as effective pollinators.

*Our Response:* These two statements in the proposed rule were somewhat confusing. Based on the literature cited, skippers, butterflies, and wasps are frequent floral visitors; however, bees are believed to be the most effective pollinators (Gadd 2006, p. 15; Collins and Fore 2009, pp. 452–454). We have made minor edits to this final rule to clarify this distinction.

(2) *Comment:* One peer reviewer suggested that we provide reference to best management practices for the downlisting/delisting criterion 4 (management plans implemented). They also suggested that we comment on where outdated management plans fall short of current knowledge (e.g., updated fire frequency, timing, etc.).

*Our Response:* In the proposed rule and this final rule, we include best management practices where we indicate that smooth coneflowers require early to mid-successional habitat provided via management techniques that include the use of prescribed fire on 3- to 5-year rotations, or well-timed mowing or mechanical clearing, and the control of invasive species with herbicides selectively applied to cut stumps to prevent growth. We assert that maintaining open habitat (through prescribed fire or mechanical clearing) and invasive species control are important management practices that are critical to the long-term survival of smooth coneflower and have included reference to these practices in this final rule. We also note that the Service is working with land managers to update management plans by providing a template as a guide including how to best manage smooth coneflower with fire and for invasive species, which will help improve the seven generic management plans and the six outdated management plans mentioned above in *Downlisting/Delisting Criterion 4 (Management plans implemented)*.

(3) *Comment:* One peer reviewer stated that our conclusion regarding collection threat has some flaws, noting that the proposed rule indicated that the incidence of collection was limited and the Service indicated that the collection that did take place was conducted using very conservative practices. The peer reviewer suggested that the conclusion should be revised to state that overcollection is not a major threat as long as any future collection follows best conservation practices.

*Our Response:* Limited collection of smooth coneflower has occurred over time, but has been minimal in scope and not been a major threat to the species. Any future collection efforts should follow best conservation practices, as described in Menges et al. (2004) and by Center for Plant Conservation Best Practices. We noted in the proposed rule and reiterate in this final rule that overcollection has not been documented for the species (see *Collection*, above).

(4) *Comment:* One peer reviewer commented that the climate models we used do not account for impacts to the species' vital rates (*i.e.*, changes in survivorship/mortality, fecundity). The peer reviewer indicated that vital rates can be broadly used to look at range contraction but have long been used with metrics like population viability analyses to determine persistence/threat of individual sites/populations. However, the peer reviewer agreed that based on the information in the proposed reclassification, smooth

coneflower should have little changes at individual populations due to drought and temperature changes under predicted climate change.

*Our Response:* The climate change models we used do not account for impacts to the species' vital rates. However, given that smooth coneflower is tolerant of increased temperatures and drought, we have determined that climate change is not likely a major factor affecting the species' resiliency into the foreseeable future.

#### **Determination of Smooth Coneflower's Status**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 224) set forth the procedures for determining whether a species meets the definition of an endangered species or a threatened species. The Act defines "endangered species" as a species that is in danger of extinction throughout all or a significant portion of its range, and "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.

As also described above, the term "foreseeable future" extends only so far into the future as the Service can reasonably determine that both the future threats and the species' responses to those threats are likely. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors. Where we had data over longer time frames, we analyzed those data (*e.g.*, climate data); however, for the factors most influential in affecting the status of the smooth coneflower, such as development and succession due to lack of adequate management, we could only reliably predict the magnitude of the primary threats and the subsequent effects on smooth coneflower over a time frame of 20 to 30 years. Therefore, we consider the foreseeable future to be 20–30 . Threats that are reasonably likely to affect the species in the foreseeable

future include habitat loss due to development pressure on private lands and habitat succession due to lack of adequate management (see *Habitat Degradation or Loss Due to Development and Absence of Natural Disturbance*, above), including fire suppression near or on private lands and accidental mowing and herbicide application from roadside maintenance activities. Thus, all populations of smooth coneflower that are not actively managed or formally protected remain at risk of extirpation in the future. The 20–30 year period reflects the range from the time when the species was listed (1992) to the present (30 years), and provides a timeframe of reference observations that enables the Service to predict future management scenarios for the species and the species' response to threats and management actions. This prior experience indicates that a 20 to 30 year timeframe is the expected period over which implementation of management practices (such as prescribed fire) by conservation partners and tracking of the species' response to managed habitat improvement is reliable. Further, this time period coincides with the SLEUTH urban growth models, allowing us to make reliable predictions with respect to the threat of development. For formally protected populations, we expect management of the threat of fire suppression to continue as part of ongoing management well into the future. Therefore, we used the 20- to 30-year timeframe in developing our projections of future conditions for smooth coneflower.

#### **Status Throughout All of Its Range**

After evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we find that smooth coneflower continues to face threats from habitat succession (resulting from lack of fire or other management), particularly in areas where development is increasing near existing populations, thus making fire management difficult. In addition, development pressure, especially for unprotected populations on private lands, remains a concern. We are concerned about long-term management because several populations do not have management plans or the management plans no longer reflect the best available science. Even populations occurring on protected land adjacent to private lands are becoming increasingly more difficult to manage due to neighbors' concerns about nearby fires and smoke pollution. Even with agreements in place to protect them, populations in roadside

and utility ROWs still face threats from maintenance activities, especially herbicide spraying and mowing. The decline or disappearance of some smooth coneflower populations across the range of the species has been documented in Natural Heritage Program records and is attributed to habitat loss. Habitat loss (Factor A) is considered to be a moderate threat currently and is expected to continue in the foreseeable future.

At the time of listing in 1992, there was concern that smooth coneflower plants would be collected for the horticulture or pharmaceutical trade (Factor B). However, we do not find that collecting is currently a threat to this species or is expected to be in the foreseeable future.

Disease and predation (Factor C) were not identified as a significant threat to smooth coneflower when the species was listed in 1992. Natural herbivory by insects and mammals may occur, but it is a considered a low-magnitude threat because the species has sustained populations and there is no indication that the magnitude of an undetermined natural predation pressure significantly affects smooth coneflower survival. We find that disease and predation are not currently threats to this species, and we do not expect them to be threats in the foreseeable future.

The existing regulatory mechanisms (Factor D) are not adequate to protect smooth coneflower from development and habitat succession. Populations of smooth coneflower on USFS, DOD, and USDOE lands receive some protection by management protocols applicable to those lands. Furthermore, some populations in NC, SC, and VA occur on State-owned lands managed by their respective Natural Heritage Programs or the NCDACS as “dedicated nature preserves.” However, while NC, GA, and VA have plant protection laws, they only regulate the collection and trade of listed species and do not prohibit the destruction of populations on private lands or otherwise mandate protection. There is no State law protecting rare plants in SC.

Other natural and manmade factors affecting the continued existence (Factor E) of smooth coneflower identified at the time of listing (1992) include low genetic variability within populations, encroachment by exotic species, herbicide use, and the importance of periodic disturbance (addressed above under Factor A). Since listing, climate change is another factor that has been identified. Of these threats, encroachment by exotic (invasive) species and use of herbicides to manage those exotic species continue to be a

threat to smooth coneflower populations. New information since the time of listing indicates that smooth coneflower displays a relatively high level of diversity and that populations may be able to respond to selection pressures and maintain viability due to continued genetic exchange sustained by the outcrossing mating system of the species. Based on the number, distribution, and genetic diversity of the species, we conclude that potential impacts associated with stochastic events are not a threat to smooth coneflower. Despite our uncertainty about the species’ vulnerability to climate change, we do not consider climate change to be a threat to smooth coneflower based on the current resiliency of the species and its demonstrated tolerance to periods of drought.

Further, since the species’ 1992 listing under the Act, new smooth coneflower occurrences have been discovered throughout the range of the species, especially with the new sites in the coastal plain of GA and SC. Our understanding of the species’ distribution has improved as a result of increased survey efforts; the species is now known from 44 populations (up from 21 populations at the time of listing), 16 of which currently have high to medium resiliency. The species’ geographic representation is good, given the distribution of highly resilient populations over a four-State area. We believe that this improvement in the species’ viability demonstrates that it is not currently in danger of extinction throughout its range despite the persistence of the above-described threats.

In conclusion, based on our assessment of the best available scientific and commercial information, we find that while smooth coneflower populations continue to face threats from habitat loss and invasive species, and existing regulatory mechanisms are currently inadequate to protect some smooth coneflower populations from development and habitat succession, there are currently 16 protected, high resiliency smooth coneflower populations and a total of 44 populations, up from 21 populations at the time of listing. Therefore, the species no longer meets the Act’s definition of an endangered species.

We, therefore, proceed with determining whether smooth coneflower meets the Act’s definition of a threatened species. The ongoing threats of habitat loss, habitat fragmentation, habitat succession, and encroachment of nonnative and invasive species are of sufficient imminence,

scope, or magnitude to affect the resiliency of smooth coneflower populations for the foreseeable future. The species relies on management such as prescribed fire and mechanical clearing to maintain its habitat. However, management plans for most of the areas in which the species is protected are outdated, and it is uncertain how those plans will continue to be implemented. Threatened development near protected sites could impede management of those sites with fire. Adequate management commitments would need to be secured for more populations before the species could be delisted. Thus, after assessing the best available information, we conclude that although smooth coneflower is not currently in danger of extinction, but it is likely to become in danger of extinction within the foreseeable throughout all of its range.

#### *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. The court in *Center for Biological Diversity v. Everson*, 2020 WL 437289 (D.D.C. Jan. 28, 2020) (*Center for Biological Diversity*), vacated the aspect of our Final Policy on Interpretation of the Phrase “Significant Portion of Its Range” in the Endangered Species Act’s Definitions of “Endangered Species” and “Threatened Species” (79 FR 37578; July 1, 2014) that provided that the Service does not undertake an analysis of significant portions of a species’ range if the species warrants listing as threatened throughout all of its range. Therefore, we proceed to evaluating whether the species is endangered in a significant portion of its range—that is, whether there is any portion of the species’ range for which both (1) the portion is significant; and (2) the species is in danger of extinction in that portion.

Depending on the case, it might be more efficient for us to address the “significance” question or the “status” question first. We can choose to address either question first. 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 other question for that portion of the species’ range. In undertaking this analysis for smooth coneflower, we choose to address the status question first—we consider information pertaining to the geographic distribution of both the species and the threats that the species faces to identify

any portions of the range where the species is endangered.

For smooth coneflower, we considered whether the threats are geographically concentrated in any portion of the species' range at a biologically meaningful scale, which may indicate this portion could have a different status. We examined the threats of habitat succession, habitat loss, and invasive species, as well as the cumulative effects of these threats, and considered whether management actions were being implemented. Smooth coneflower populations on private lands throughout the range face the threat of development and are not being managed with prescribed fire. However, while the development threat is concentrated near already urbanizing areas, most coneflower populations near those areas are protected in preserves. The decline or disappearance of some smooth coneflower populations across the range of the species has been documented in Natural Heritage Program records and is attributed to habitat loss, primarily due to lack of proper management. There is no indication that management is more or less likely to be implemented in any particular area within the range; thus, no specific population appears to be more subject to stochastic events than others. Further, encroachment by invasive species, which is most prevalent in disturbed areas, such as highway ROWs or utility corridors, occurs throughout the smooth coneflower's range. Accordingly, we found no concentration of threats in any portion of the smooth coneflower's range at a biologically meaningful scale. Thus, there are no portions of the species' range where the species has a different status from its rangewide status. Therefore, it is unnecessary for us to determine whether any portion of the species' range is significant. This is consistent with the courts' holdings in *Desert Survivors v. Department of the Interior*, No. 16–cv–01165–JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018), and *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d, 946, 959 (D. Ariz. 2017).

#### *Determination of Status*

Our review of the best available scientific and commercial information indicates that smooth coneflower meets the Act's definition of a threatened species. Therefore, we are reclassifying smooth coneflower from an endangered species to a threatened species in accordance with sections 3(20) and 4(a)(1) of the Act.

#### **Available Conservation Measures**

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. The Act encourages cooperation with the States and requires that recovery actions be implemented for all listed species. The protections required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

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

Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery plan identifies site-specific management actions that set a trigger for review of the five factors that control whether a species may be downlisted or delisted, and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. All planning documents can be found on our website (<https://www.fws.gov/program/endangered-species>).

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

county-owned nature preserves). To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands where appropriate. Funding for recovery actions could become available from a variety of sources, including Federal budgets, State programs, and cost share grants from non-Federal landowners, the academic community, and nongovernmental organizations. We invite you to submit any new information on this species whenever it becomes available (see **FOR FURTHER INFORMATION CONTACT**).

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

Federal agency actions within the species' habitat that may require consultation as described in the preceding paragraph include management and any other landscape-altering activities on Federal lands administered by the USFS; issuance of section 404 Clean Water Act (33 U.S.C. 1251 *et seq.*) permits by the USACE; and construction and maintenance of roads or highways by the Federal Highway Administration.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a final listing on proposed and ongoing activities within the range of a listed species. The discussion below regarding protective regulations under section 4(d) of the Act complies with our policy.

#### **II. Final Rule Issued Under Section 4(d) of the Act**

The Act allows the Secretary to promulgate protective regulations for threatened species pursuant to section 4(d). Because we are reclassifying this species as a threatened species, the prohibitions in section 9 would not apply directly. We are, therefore, enacting a set of regulations to provide for the conservation of the species in accordance with section 4(d) of Act,

which also authorizes us to apply any of the prohibitions in section 9 to a threatened species. The rule includes a description of the kinds of activities that would or would not constitute a violation.

### Background

Section 4(d) of the Act contains two sentences. The first sentence states that the Secretary shall issue such regulations as she deems necessary and advisable to provide for the conservation of species listed as threatened. The U.S. Supreme Court has noted that statutory language like “necessary and advisable” demonstrates a large degree of deference to the agency (see *Webster v. Doe*, 486 U.S. 592 (1988)). Conservation is defined in the Act to mean the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Additionally, the second sentence of section 4(d) of the Act states that the Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants. Thus, the combination of the two sentences of section 4(d) provides the Secretary with wide latitude of discretion to select and promulgate appropriate regulations tailored to the specific conservation needs of the threatened species. The second sentence grants particularly broad discretion to the Service when adopting the prohibitions under section 9.

The courts have recognized the extent of the Secretary’s discretion under this standard to develop rules that are appropriate for the conservation of a species. For example, courts have upheld rules developed under section 4(d) as a valid exercise of agency authority where they prohibited take of threatened wildlife or include a limited taking prohibition (see *Alsea Valley Alliance v. Lautenbacher*, 2007 U.S. Dist. Lexis 60203 (D. Or. 2007); *Washington Environmental Council v. National Marine Fisheries Service*, 2002 U.S. Dist. Lexis 5432 (W.D. Wash. 2002)). Courts have also upheld 4(d) rules that do not address all of the threats a species faces (see *State of Louisiana v. Verity*, 853 F.2d 322 (5th Cir. 1988)). As noted in the legislative history when the Act was initially enacted, “once an animal is on the threatened list, the Secretary has an almost infinite number of options available to [her] with regard to the permitted activities for those species. [She] may, for example, permit taking,

but not importation of such species, or [she] may choose to forbid both taking and importation but allow the transportation of such species” (H.R. Rep. No. 412, 93rd Cong., 1st Sess. 1973).

### Provisions of the 4(d) Rule

Exercising the Secretary’s authority under section 4(d) of the Act, we have developed a rule that is designed to address the smooth coneflower’s specific threats and conservation needs. Although the statute does not require the Service to make a “necessary and advisable” finding with respect to the adoption of specific prohibitions under section 9, we find that this rule as a whole satisfies the requirement in section 4(d) of the Act to issue regulations deemed necessary and advisable to provide for the conservation of smooth coneflower.

As discussed above under Summary of Biological Condition and Threats, we have concluded that smooth coneflower is likely to become in danger of extinction within the foreseeable future primarily due to the present or threatened destruction, modification, or curtailment of its habitat or range (specifically due to fire suppression and subsequent ecological succession and development, and encroachment from invasive species). Specifically, a number of activities have the potential to affect smooth coneflower, including land clearing for development, fire suppression, and herbicide application to highway and utility ROWs. Extending the Act’s section 9 prohibitions for plants, including making it unlawful to remove, damage, or destroy smooth coneflowers, will provide for conservation of the species by helping to preserve remaining populations, slowing their rate of potential decline, and decreasing synergistic, negative effects from other stressors. Prohibiting import and export, transportation, and commerce of smooth coneflower limits unauthorized propagation and distribution, which prevents potential hybridization with other species of *Echinacea* and subsequent inbreeding depression. As a whole, the 4(d) rule helps in the efforts to recover the species.

The provisions of this 4(d) rule promote conservation of smooth coneflower by encouraging management of the landscape in ways that meet both land management considerations and the conservation needs of smooth coneflower, specifically by providing exceptions for State agency conservation actions, scientific permits for research, and use of cultivated-origin seeds for education. The provisions of this rule

are one of many tools that we will use to promote the conservation of smooth coneflower.

This 4(d) rule provides for the conservation of smooth coneflower by extending the prohibitions of section 9(a)(2), prohibiting the following activities, except as otherwise authorized or permitted: Import or export; removing and reducing to possession smooth coneflower from areas under Federal jurisdiction; maliciously damaging or destroying the species on any area under Federal jurisdiction; removing, cutting, digging up, or damaging or destroying the species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law; delivering, receiving, carrying, transporting, or shipping the species in interstate or foreign commerce in the course of a commercial activity; and selling or offering for sale the species in interstate or foreign commerce.

We may issue permits to carry out otherwise prohibited activities, including those described above, involving threatened plants under certain circumstances. Regulations governing permits are codified at 50 CFR 17.72. With regard to threatened plants, a permit may be issued for the following purposes: For scientific purposes, to enhance propagation or survival, for economic hardship, for botanical or horticultural exhibition, for educational purposes, or for other activities consistent with the purposes and policy of the Act. Additional statutory exemptions from the prohibitions are found in sections 9 and 10 of the Act.

We recognize the special and unique relationship with our State natural resource agency partners in contributing to conservation of listed species. State agencies often possess scientific data and valuable expertise on the status and distribution of endangered, threatened, and candidate species of wildlife and plants. State agencies, because of their authorities and their close working relationships with local governments and landowners, are in a unique position to assist us in implementing all aspects of the Act. In this regard, section 6 of the Act provides that we shall cooperate to the maximum extent practicable with the States in carrying out programs authorized by the Act. Therefore, as set forth at 50 CFR 17.71(b), any employee or agent of the Service or of a State conservation agency that is operating a conservation program pursuant to the terms of a cooperative agreement with the Service in accordance with section 6(c) of the

Act, who is designated by that agency for such purposes, will be allowed, when acting in the course of official duties, to remove and reduce to possession from areas under Federal jurisdiction smooth coneflowers that are covered by an approved cooperative agreement to carry out conservation programs. In addition, in accordance with 50 CFR 17.61(c)(2) through (4), any employee or agent of the Service, any other Federal land management agency, or a State conservation agency, who is designated by that agency for such purposes, will be able to, when acting in the course of official duties, remove and reduce to possession smooth coneflower from areas under Federal jurisdiction without a permit to care for a damaged or diseased specimen, or to salvage or dispose of a dead specimen.

We also recognize the beneficial and educational aspects of activities with seeds of cultivated plants, which generally enhance the propagation of the species. We intend to monitor the interstate and foreign commerce and the import and export of these specimens in a manner that will not inhibit such activities, providing the activities do not represent a threat to the survival of the species in the wild. In this regard, we have created an exception from the prohibitions for seeds of cultivated specimens, provided that a statement that the seeds are of “cultivated origin” accompanies the seeds or their container (e.g., the seeds could be moved across State lines or between territories for purposes of seed banking or use for outplanting without additional regulations).

Nothing in this 4(d) rule changes in any way the recovery planning provisions of section 4(f) of the Act, the consultation requirements under section 7 of the Act, or our ability to enter into

partnerships for the management and protection of smooth coneflower. However, interagency cooperation may be further streamlined through planned programmatic consultations for the species between us and other Federal agencies, where appropriate.

Required Determinations

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

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act, need not be prepared in connection with determining and implementing a species’ listing status under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

Government-to-Government Relationship With Tribes

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 22951), Executive Order 13175, 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 there are no Tribal interests affected by this rule.

References Cited

A complete list of references cited in this rulemaking is available on the internet at <https://www.regulations.gov>.

Authors

The primary authors of this rule are the staff members of the Fish and Wildlife Service’s Species Assessment Team and the Raleigh Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

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

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.
- 2. Amend § 17.12, in paragraph (h), by revising the entry for “*Echinacea laevigata*” under FLOWERING PLANTS in the List of Endangered and Threatened Plants to read as follows:

**§ 17.12 Endangered and threatened plants.**  
\* \* \* \* \*  
(h) \* \* \*

Scientific name	Common name	Where listed	Status	Listing citations and applicable rules
FLOWERING PLANTS				
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
<i>Echinacea laevigata</i> .....	Smooth coneflower .....	Wherever found .....	T	57 FR 46340, 10/8/1992; 87 FR [insert <b>Federal Register</b> page where the document begins], 7/6/2022; 50 CFR 17.73(f). <sup>4d</sup>
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *

- 3. Amend § 17.73 by adding paragraphs (c) through (f) to read as follows:

**§ 17.73 Special rules—flowering plants.**  
\* \* \* \* \*  
(c)–(e) [Reserved]  
(f) *Echinacea laevigata* (smooth coneflower)—(1) *Prohibitions.* The

following prohibitions that apply to endangered plants also apply to *Echinacea laevigata*. Except as provided under paragraph (f)(2) of this section, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or cause to be

committed, any of the following acts in regard to this species:  
(i) Import or export, as set forth at § 17.61(b) for endangered plants.  
(ii) Remove and reduce to possession from areas under Federal jurisdiction, as set forth at § 17.61(c)(1) for endangered plants.



(iii) Maliciously damage or destroy the species on any areas under Federal jurisdiction, or remove, cut, dig up, or damage or destroy the species on any other area in knowing violation of any State law or regulation or in the course of any violation of a State criminal trespass law, as set forth at section 9(a)(2)(B) of the Act.

(iv) Engage in interstate or foreign commerce in the course of commercial activity, as set forth at § 17.61(d) for endangered plants.

(v) Sell or offer for sale, as set forth at § 17.61(e) for endangered plants.

(2) *Exceptions from prohibitions.* In regard to *Echinacea laevigata*, you may:

(i) Conduct activities, including activities prohibited under paragraph (f)(1) of this section, if they are authorized by a permit issued in accordance with the provisions set forth at § 17.72.

(ii) Conduct activities authorized by a permit issued under § 17.62 prior to August 5, 2022 for the duration of the permit.

(iii) Remove and reduce to possession from areas under Federal jurisdiction, as set forth at § 17.61(c)(2) through (4) for endangered plants and § 17.71(b).

(iv) Engage in any act prohibited under paragraph (f)(1) of this section with seeds of cultivated specimens, provided that a statement that the seeds are of “cultivated origin” accompanies the seeds or their container.

**Martha Williams,**

*Director, U.S. Fish and Wildlife Service.*

[FR Doc. 2022–14291 Filed 7–5–22; 8:45 am]

**BILLING CODE 4333–15–P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS–R4–ES–2020–0078; FF09E21000 FXES1111090FEDR 223]

**RIN 1018–BE82**

#### **Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Canoe Creek Clubshell and Designation of Critical Habitat**

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

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), determine that the Canoe Creek clubshell (*Pleurobema athearni*), a freshwater mussel species endemic to a single watershed in north-central Alabama, is an endangered species under the

Endangered Species Act of 1973 (Act), as amended. We also designate critical habitat for the species under the Act. In total, approximately 58.5 river kilometers (36.3 river miles) in St. Clair and Etowah Counties, Alabama, fall within the boundaries of the critical habitat designation. This rule extends the Act’s protections to the species and its designated critical habitat.

**DATES:** This rule is effective August 5, 2022.

**ADDRESSES:** This final rule is available on the internet at <https://www.regulations.gov> under Docket No. FWS–R4–ES–2020–0078. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <https://www.regulations.gov> at Docket No. FWS–R4–ES–2020–0078.

The coordinates or plot points from which the maps are generated are included in the decision file for this critical habitat designation and are available at <https://www.regulations.gov> at Docket No. FWS–R4–ES–2020–0078 and on the Service’s website at <https://www.fws.gov/office/alabama-ecological-services>. Any additional tools or supporting information that we developed for the critical habitat designation will also be available at the Service’s website set out above and may also be included in the preamble and at <https://www.regulations.gov>, or both.

#### **FOR FURTHER INFORMATION CONTACT:**

William J. Pearson, Field Supervisor, U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office, 1208 Main Street, Daphne, AL 36526; telephone 251–441–5181. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

#### **SUPPLEMENTARY INFORMATION:**

##### **Executive Summary**

*Why we need to publish a rule.* Under the Act, a species warrants listing if it meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become endangered in the foreseeable future throughout all or a significant portion of its range). We have determined that the Canoe Creek clubshell meets the definition of an endangered species; therefore, we are

listing it as such. To the maximum extent prudent and determinable, we must designate critical habitat for any species that we determine to be an endangered or threatened species under the Act. Listing a species and designation of critical habitat can be completed only by issuing a rule.

*What this document does.* This rule lists the Canoe Creek clubshell (*Pleurobema athearni*) as an endangered species and designates critical habitat for this species under the Endangered Species Act. We are designating critical habitat in 2 units totaling approximately 58.5 river kilometers (km) (36.3 river miles (mi)) in St. Clair and Etowah Counties, Alabama.

*The basis for our action.* Under section 4(a)(1) of the Act, we may determine that a species is an endangered or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We have determined that habitat degradation through changes in water quality and quantity (Factor A), increased sedimentation (Factor A), and climate events (Factor E) are the primary threats to the species.

Section 4(a)(3) of the Act requires the Secretary of the Interior (Secretary) to designate critical habitat concurrent with listing to the maximum extent prudent and determinable. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

*Economic analysis.* In accordance with section 4(b)(2) of the Act, we prepared an economic analysis of the impacts of designating critical habitat. We made the draft economic analysis