Billing Code 4333–15

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2019–0065; 4500030113]

RIN 1018–BE11

Endangered and Threatened Wildlife and Plants; Removing San Benito Evening-primrose (*Camissonia benitensis*) from the Federal List of Endangered and Threatened Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule

SUMMARY: We, the U.S. Fish and Wildlife Service (Service or USFWS), propose to remove San Benito evening-primrose (*Camissonia benitensis*) from the Federal List of Endangered and Threatened Plants. This determination is based on a thorough review of the best available scientific and commercial information, which indicates that the threats to the species have been reduced or eliminated so that the plant no longer meets the definition of an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). We are seeking information and comments from the public regarding this proposed rule and the draft post-delisting monitoring plan for San Benito evening-primrose.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION]. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT**

by [INSERT DATE 45 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION].

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

(1) *Electronically*: Go to the Federal eRulemaking Portal: *http://www.regulations.gov*. In the Search box, enter FWS–R8–ES–2019–0065, which is the docket number for this rulemaking. Then click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on "Comment Now!"

(2) *By hard copy*: Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R8–ES–2019–0065; U.S. Fish and Wildlife Service, MS: JAO/1N; 5275 Leesburg Pike, Falls Church, VA 22041–3803.

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

Document availability: The recovery plan, 5-year review summary, and draft post-delisting monitoring plan referenced in this document are available at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2019–0065.

FOR FURTHER INFORMATION CONTACT: Stephen P. Henry, Field Supervisor, U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003; by telephone 805–644–1766. If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species may warrant removal (i.e., "delisting") from the Federal List of Endangered and Threatened Plants if it no longer meets the definition of an endangered species or a threatened species. Delisting a species can only be completed by issuing a rule.

What this document does. We propose to remove San Benito evening-primrose (*Camissonia benitensis*) from the Federal List of Endangered and Threatened Plants.

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 have determined that the threats to the species have been reduced or eliminated so that the plant no longer meets the definition of an endangered or threatened species under the Act. We are seeking information and comments from the public regarding this proposed rule and the draft post-delisting monitoring plan for the species. We will also seek peer review.

San Benito evening-primrose, a small annual plant with bright yellow flowers, is found in the central coast range in California's San Benito, Monterey, and Fresno counties. The scientific community's understanding of the San Benito evening-primrose's ecology and habitat has improved since time of listing due to the efforts of the Bureau of Land Management (BLM) to survey and study the plant over the last three decades. We listed San Benito evening-primrose as

threatened in 1985 due to ongoing threats of motorized recreation activities and commercial mining operations. At the time of listing, the San Benito evening-primrose was documented in only nine locations in a small area of only San Benito County.

Off-highway vehicle recreation, the greatest persistent threat to the species, has been reduced to levels that no longer pose a significant threat of extinction to San Benito evening-primrose or its habitat due to the closure of the Serpentine Area of Critical Environmental Concern, and the restriction of off-highway vehicle use within the Clear Creek Management Area. Most significantly, the species is much more wide-ranging and common than originally known and occurs across a broader range of habitat types (BLM 2018, p. 32). The number of known occurrences has increased from nine to 79 and the range of the species is now known from three watersheds and occupied habitat covers 63.2 acres (25.6 ha). The species persists through periods of disturbance due to the persistence of a robust and long lived seedbank that facilitates reestablishment, dispersal, and buffers against stochastic events. Annual surveys of San Benito evening-primrose have demonstrated a large amount of interannual variation in numbers of individuals observed. We conclude that the 27 occurrences that have been monitored since 1983 have remained relatively stable around a 5-year moving average when the abnormally high count year (1988) is considered. Furthermore, the significant increase in the number of occurrences detected by recent BLM surveys is not represented in the analysis of the 27 occurrences that were known at the time the Recovery Plan was written. The existing regulatory mechanisms in place are adequate to ensure the continued persistence of San Benito evening-primrose occurrences and suitable potential habitat. Based on the best available information, the intent of the recovery criteria and the recovery goal identified in the Recovery Plan has been met for the species. We, therefore, conclude that San Benito evening-primrose is no longer a

threatened species throughout its range, nor is it likely to become so within the foreseeable future.

Peer review. 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 will seek the expert opinions of at least three appropriate specialists regarding this proposed rule. The purpose of peer review is to ensure that our classification determinations are based on scientifically sound data, assumptions, and analyses. The peer reviewers have expertise in the biology, habitat, and threats to the species. A peer review panel will conduct an assessment of the proposed rule and the specific assumptions and conclusions regarding the proposed delisting. This assessment will be completed during the public comment period.

Because we will consider all comments and information we receive during the comment period, our final determinations may differ from this proposal. Based on the new information we receive (and any comments on that new information), we may conclude that the species is still warranted for listing. Such final decisions would be a logical outgrowth of this proposal, as long as we: (1) base the decisions on the best scientific and commercial data available after considering all of the relevant factors; (2) do not rely on factors Congress has not intended us to consider; and (3) articulate a rational connection between the facts found and the conclusions made, including why we changed our conclusion.

Information Requested

We intend any final action resulting from this proposal will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American tribes, the

scientific community, industry, or other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) The extent of any current threats to the species and its habitat.

(2) The potential for shrub encroachment to reduce suitable habitat for the species.

(3) The ability of previously degraded habitat to return to suitable habitat for colonization and/or reintroduction.

(4) The lasting effects of past off-highway vehicle (OHV) use and the level of natural restoration to those areas of suitable habitat disturbed by OHV use.

(5) The potential for climate change to either positively or negatively affect the species.

(6) The climatic conditions under which germination naturally occurs and by which seed set is initiated.

(7) The monitoring guidelines proposed for the post-delisting monitoring plan and whether they appropriately characterize the extent of disturbance and can adequately identify the thresholds at which San Benito evening-primrose can persist.

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

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

You may submit your comments and materials concerning this proposed rule by one of

the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

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

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

Public Hearing

Section 4(b)(5)(E) of the Act provides for one or more public hearings on this proposal, if requested. We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by the date shown in **DATES**. We will schedule a public hearing on this proposal, if any are requested, and announce the date, time, and place of those hearings, as well as how to obtain reasonable accommodation, in the *Federal Register* at least 15 days before the first hearing. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the *Federal Register*. The use of these virtual public hearings is consistent with our regulation at 50 CFR 424.16(c)(3).

Previous Federal Actions

On February 12, 1985, we listed San Benito evening-primrose as a threatened species (50 FR 5755–5759) based primarily on the threats from motorized recreation and active gravel mining. Nine occurrences of the plant were known at the time, ranging from only 10 to 100 individuals each (50 FR 5755). At the time of listing, we found that designation of critical habitat was not prudent, and no further action regarding critical habitat has been taken (50 FR 5757–5759). Accordingly, we do not address critical habitat in this proposed rule.

A recovery plan for San Benito evening-primrose was published on September 19, 2006 (71 FR 54837–54838) (Recovery Plan). In the Recovery Plan, we noted the need to fully map the extent and range of the species, acknowledging that additional occurrences had been found since listing in 1985. We also noted that, during 20 years of monitoring known occurrences, only 2 of those years had produced large numbers of individuals. This determination led recovery actions to focus heavily on preserving suitable habitat and the seed bank since target numbers of individuals were unlikely to be reliable indicators of population health (USFWS 2006, p. 51).

In 2009, the Service conducted a 5-year review pursuant to 16 U.S.C. 1533(c)(2)(A) to evaluate whether the species' status had changed since listing in 1985 and publication of the Recovery Plan in 2006 (USFWS 2009, entire). In the 5-year review, we reported an increase in the number of known sub-occurrences from 53 in 2006 at the time of the Recovery Plan to 69 in 2009 as well as changes in the management of OHV use.

We published a notice announcing the initiation of a 5-year review of the status of San Benito evening-primrose on June 18, 2018 (83 FR 28251–28254). This proposed rule to remove San Benito evening-primrose from the Federal List of Endangered and Threatened Plants also serves as a status review for the species.

Supporting Documents

In 2009, a 5-year review was prepared for San Benito evening-primrose. At the time, the review represented a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. Where we have more recent information than was contained in the 5-year review, we have incorporated it as appropriate into this proposed rule.

I. Proposed Delisting Determination

Background

San Benito evening-primrose is a small, yellow-flowered, annual species in the evening-primrose family (Onagraceae). The plant is slender with narrowly elliptic leaves 0.3 inches (in) (7–20 millimeters (mm)) in length and minutely serrate. The stem may be erect or decumbent (lying on the ground with the extremity curving upward) and ranges in height from 1.2 to 7.9 in (3–20 centimeters (cm)) with branches widely spreading. Petals are 0.1 to 0.2 in (3.5 to 4 mm) and may fade from yellow to reddish (Wagner 2012, pp. 925–929). San Benito evening-primrose is autogamous (self-fertilizing) and produces seed that persists for long periods of time, which creates well-established seed banks where the species occurs (Taylor 1990, pp. 7–8).

San Benito evening-primrose is known only from the southeastern portion of San Benito County, the western edge of Fresno County, and the northeastern edge of Monterey County, largely within the New Idria serpentinite mass (figure 1). Serpentine is a rock formed from ancient volcanic activity that results in minerals with a greenish and brownish appearance such as antigorite, lizardite, and chrysotile. The New Idria serpentinite mass covers approximately 13,000 hectares (32,124 acres) and is one of the largest serpentine formations in the southern Coast Ranges of California (Rajakaruna *et al.* 2011, p. 698). Average rainfall in areas occupied

by San Benito evening-primrose is 16–17 in (40–42 cm) annually with temperatures ranging from lows of 21 to 34 degrees Fahrenheit (F) (-6.7 to -1.1 degrees Celsius (C)) in the winter to highs of 90 to 100 degrees F (32.2 to 37.8 degrees C) in the summer (USFWS 2009, p. 8). Occupied habitat of San Benito evening-primrose occurs primarily on land managed by the Bureau of Land Management (BLM) (36.5 acres), as well as on private land (26.6 acres).

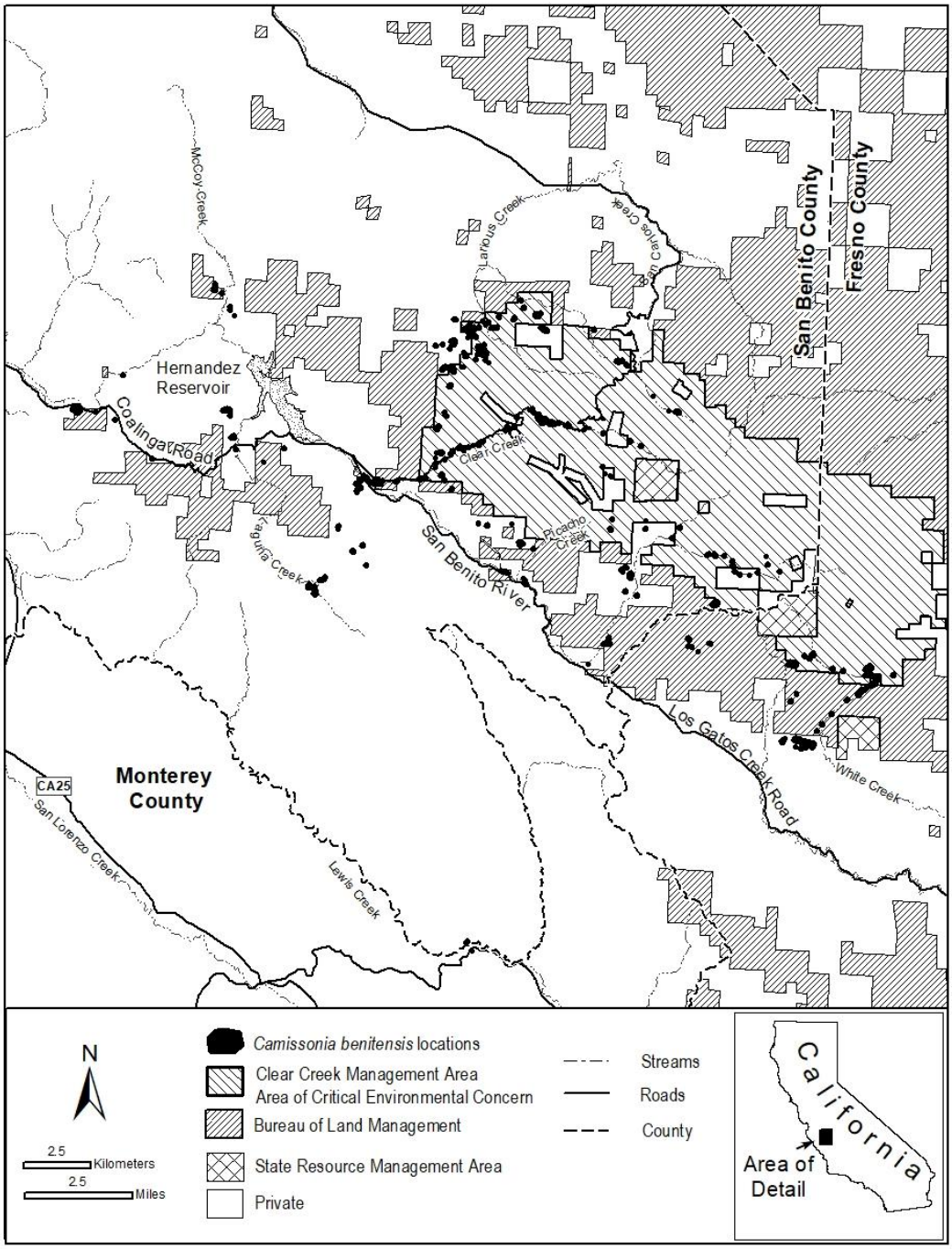

Figure 1. Known locations of San Benito evening-primrose with land management identified.

San Benito evening-primrose occurs at elevations between 1,969 to 3,938 feet (ft) (600 and 1,200 meters (m)) on alluvial terraces and upland geologic transition zones containing sandy to gravelly serpentine derived soil, but may also be found on greywacke, chert, and syenite

derived soils (Raven 1969, pp. 332–333, Taylor 1990, pp. 24–36, 39–42, BLM 2018, pp. 17–19). Alluvial terrace habitat is characterized by serpentine soils that are deeper and better developed than neighboring slopes, generally flat (<3 degrees slope), and contain less than 25 percent cover of chaparral or woody vegetation (Taylor 1990, pp. 69, 71–72, USFWS 2006, p. 13). Geologic transition zone habitat is characterized by sandy soils within uplands on slopes between 15 degrees and 60 degrees as well as rock outcrops and talus (Dick *et al*. 2014, p. 167, BLM 2018, p. 18). The transition zone that the habitat type refers to is the boundary between serpentine masses and non-serpentine rock (BLM 2014, pp. 110–112). Generally, alluvial habitat is found closer to water and in association with *Quercus durata* (leather oak), *Arctostaphylos* spp. (manzanita), *Pinus jeffreyi* (Jeffrey pine), *P. sabiniana* (bull pine), and *P. coulteri* (Coulter pine). Geologic transition zone habitat is found far from water and in association with *Q. douglassii* (blue oak), *Juniperus californicus* (California juniper), and *Q. berberidifolia* (scrub oak) (Dick *et al*. 2014, p. 167).

The BLM first identified the geologic transition zone habitat type in 2009 through surveys of potential habitat and known occurrences of San Benito evening-primrose. The discovery of the new habitat type, and associated new occurrences, increased the number of known point locations from 69 in 2009 to 658 in 2018 (BLM 2018, p. 32). The difference between geologic transition zone habitat and alluvial terrace habitat suggested the possibility that there were two genetically distinct lineages of San Benito evening-primrose or that the species may be hybridizing with the close relatives plains evening primrose (*C. contorta*) and sandysoil suncup (*C. strigulosa*). However, it was determined that hybridization was not occurring and that watersheds and habitat type did not explain any genetic differences that were identified (Dick *et al.* 2014, entire). The findings suggest that the known occurrences of San Benito

evening-primrose are all part of the same genetic population (Dick *et al.* 2014, entire).

The BLM has been conducting surveys for San Benito evening-primrose since 1980 within the Clear Creek Management Area, where the majority of sub-occurrences are located. The surveys conducted by the BLM have resulted in an increase in the understanding of the range of the species, habitat preferences, life history, and numbers (BLM 2018, entire). The monitoring has resulted in the identification of 658 point locations occurring within and outside of the boundary of the Clear Creek Management Area (CCMA), including a substantial number on private land (5 known point locations in 2009 and 290 known point locations in 2018). The species' current known range is bordered on the north by New Idria Road near the confluence of Larious Creek and San Carlos Creek, to the South at the Monterey County Line near Lewis Creek, to the west near the Hernandez Reservoir, and to the east by the eastern boundary of the serpentine area of critical environmental concern (ACEC), an area of approximately 307 square miles. The BLM's ACEC designations highlight areas where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. ACECs can also be designated to protect human life and safety from natural hazards. The known occurrences cover 64 ac (26 ha) of public and private land, and potential suitable habitat is currently estimated at 260 ac (105 ha) (BLM 2018, p. 31). The findings of the BLM have been documented in annual reports from 2009 to 2018 and are the source of the most recent information regarding the status of the occurrences of San Benito evening-primrose.

This document presents data that was provided by the BLM within the 2018 Annual Report (BLM 2018, entire) and from spatial data provided by the BLM in 2018. Within this report a single "occurrence" refers to areas where San Benito evening-primrose has been mapped. Mapped areas within 0.25 mi (0.4 km) of each other, but discontinuous, are considered

a single occurrence consisting of multiple sub-occurrences. The BLM has recorded point data, in addition to polygon sub-occurrences for San Benito evening-primrose, which are referred to as point locations in this report. Point locations are mapped point features while sub-occurrences are mapped polygon features. In 2018, 79 occurrences, consisting of 519 sub-occurrences, and 658 point locations were mapped by the BLM (table 1) (BLM 2018, p. 32; BLM 2018, spatial data).

Table 1. 2018 BLM survey results.

	Number of Occurrences	Number of Sub-occurrences	Number of Point Locations	Acres (hectares)
2018 San Benito evening-primrose (*Camissonia benitensis*) survey results	79	519	658	63.2 (25.6)

Occurrences consist of sub-occurrences (mapped polygons) within 0.25 mile of each other. Point locations are reported in the 2018 Annual Report (BLM 2018 p. 32). Acreage data are derived from the spatial extent of the mapped occurrences.

The BLM compared historical occurrence data to their point location counts in their annual reports, and Service used those comparisons in the Recovery Plan (USFWS 2006, entire) and 5-Year Review (USFWS 2009, entire). Here, we have chosen to update the occurrence organization because the numbers of occurrences, sub-occurrences, and point locations have increased dramatically since 2009. Table 1 illustrates the nested nature of the way the data are presented. When possible we use the same terminology as previous reports.

Recovery and Recovery Plan Implementation

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: "[O]bjective, 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." However, revisions to the list (adding, removing, or reclassifying a species) must reflect determinations made in accordance with sections 4(a)(1) and 4(b) of the Act. Section 4(a)(1) requires that the Secretary determine whether a species is an endangered species or threatened species (or not) because of one or more of five threat factors. Section 4(b) of the Act requires that the determination be made "solely on the basis of the best scientific and commercial data available." Therefore, recovery criteria should help indicate when we would anticipate that an analysis of the species' status under section 4(a)(1) would result in a determination that the species is no longer an endangered species or threatened species.

Thus, while recovery plans provide important guidance to the Service, States, and other partners on methods of minimizing threats to listed species and measurable objectives against which to measure progress towards recovery, they are not regulatory documents and cannot substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of or remove a species from the Federal List of Endangered and Threatened Plants (50 CFR 17.12) is ultimately based on an analysis of the best scientific and commercial data then available to determine whether a species meets the definition of an endangered species or a threatened species, regardless of whether that information differs from the recovery plan. Below, we summarize the recovery plan goals and discuss progress toward meeting the recovery objectives and how they inform our analysis of the species' status and the stressors affecting it.

The Recovery Plan (USFWS2006, pp. 48–74) describes the recovery goal and criteria that need to be achieved in order to consider removing San Benito evening-primrose from the Federal List of Endangered and Threatened Plants. We summarize the goal and then discuss

progress toward meeting the recovery criteria in the following sections.

Recovery Goal

In the Recovery Plan, the stated goal is to restore occurrences of San Benito evening-primrose so that they are self-sustaining and protected from future threats (USFWS 2006, p. 51). This goal is broadly evaluated through trends in the observed numbers of individuals indicated by annual monitoring, the abundance and distribution of suitable habitat, evaluation of the seed bank, and the effectiveness of protective measures that have been implemented to reduce threats from human activities such as mining, OHV use, and other recreational activity (USFWS2006, pp. 51–52). In order to evaluate threats to the species we must consider potential impacts within the foreseeable future. The Recovery Plan (USFWS 2006, entire) uses 20 years as the appropriate period of time to evaluate population stability because the number of individuals fluctuates widely from year to year and a longer monitoring time will better reflect changes in trends despite this variation (USFWS 2006, p. 51, 53). Given this and information on potential threats into the future, in this proposed rule we have adopted 20 to 30 years as the foreseeable future to evaluate potential threats and the species' responses to those threats.

Recovery Criteria

The Recovery Plan identified five criteria for removing San Benito evening-primrose from the Federal List of Endangered and Threatened Plants (USFWS 2006, pp. 52–54):

(1) Research has evaluated the possibility for restoration of suitable habitat and the natural rate of the replacement of suitable habitat (i.e., succession from open habitat to woody vegetation), the ecology of the seedbank, and population viability modeling. The results of completed research, and any other research that was conducted, should inform all other recovery criteria suggested by the Recovery Plan and are listed below.

(2) Known occurrences and sufficient additional suitable habitat within each watershed unit

throughout its range are protected from direct effects from OHV use and other recreational activities. Appropriate levels of compliance with use regulations by recreationists have prevented adverse impacts to San Benito evening-primrose occurrences and habitat.

(3) Currently occupied and suitable habitat for the species has been restored and maintained over an appropriate period of time, as informed by monitoring and research. Twenty years was estimated as "the appropriate period of time" in the Recovery Plan (USFWS 2006, p. 53). The Recovery Plan emphasizes maintaining suitable habitat and more precisely defining the requirements of suitable habitat. Additionally, disturbance and erosion rates should not be elevated above natural levels and the seed bank should be evaluated for continued persistence, as above-ground numbers of individuals are known to fluctuate widely from year to year.

(4) Population sizes have been maintained over a monitoring period that includes multiple rainfall cycles (successive periods of drought and wet years). The Recovery Plan states that the trend of above-ground counts of species should be stable or increasing and defines non-drought years as those with greater than 15 in (38 cm) of rainfall from October through April at the Priest Valley weather station.

(5) A post-delisting monitoring plan for San Benito evening-primrose has been developed.

Achievement of Recovery Criteria

Criterion 1: Research has been completed.

Research to increase the understanding of the extent of existing occurrences, the range of suitable habitat, the persistence of the seed bank, and analysis of the genetic variability across watersheds and habitat types have been undertaken since listing in 1985 (Taylor 1990, entire; BLM 2010, entire; BLM 2014, entire; BLM 2015, entire; BLM 2018, entire; Dick et al. 2014, entire).

Habitat Suitability. Research conducted in 1990 (Taylor 1990, entire) provided the first

comprehensive overview of the ecology of San Benito evening-primrose that established the initial understanding for the requirements of suitable habitat for the species, the species' life history, including early examination of the seed bank and germination characteristics, and the known distribution of the species as well as threats to the known occurrences. From 1990 through 2010, San Benito evening-primrose was thought to be restricted to alluvial terrace habitat that was characterized by relatively deep and well-developed, serpentine-derived soils on flat ground (compared to nearby barren serpentine slopes), association with ephemeral or intermittent streams, and open habitat lacking woody vegetation (Taylor 1990, pp. 39–40). In 2010, the BLM identified a second type of habitat, termed the "geologic transition zone," that was suitable for San Benito evening-primrose (BLM 2010, pp. 8–16). The geologic transition zone was characterized by relatively steeper slopes (0–~60 degrees) of uplands on serpentine soils at the interface with non-serpentine soils. Geologic transition zone habitat is not topographically constrained to the toe of slopes, whereas alluvial stream terrace habitat is. From the time of listing through 2018, the BLM conducted extensive surveys within these habitat types, which led to the discovery and documentation of over 600 new point locations. The results indicated that the majority of both occupied and potential habitat is greatest within the geologic transition zone type (BLM 2018, p. 32). The new sub-occurrences identified within the geologic transition zone habitat are relatively undisturbed in comparison to the highly disturbed sites of the initial locations known from alluvial stream terraces (BLM 2010, p. 11). The majority of new point locations are found outside of the historical areas used by OHVs and as a result have not been subjected to the same levels of disturbance. Approximately one-third to half of the currently known occurrences exist on private land outside of the Clear Creek Management Area (table 2, table 3) (BLM 2018, p. 33).

Seed Bank Analysis. Our understanding of the role of the seed bank in the life history of San Benito evening-primrose has similarly increased due to research efforts. The number of viable seeds within the seed bank was often many times greater than the above-ground expression in any given year—including those years in which there was a large above-ground expression (Taylor 1990, p. 57). The size of the seed bank at existing locations was reevaluated in 2010 by the BLM (BLM 2011, pp. 36–42). The BLM found that there were 519 times as many seeds as emergent plants when averaged across 67 sub-occurrences in 2010, emphasizing that the size of the seedbank is much greater than the total number of observed individuals in a given year. Maintaining a large amount of seed within the soil is a common strategy for short-lived annuals in habitats with frequent disturbance because the persistent seed bank buffers against stochastic environmental events such as drought (Kalisz and McPeek 1993, pp. 319–320; Fischer and Matthies 1998, pp. 275–277; Adams *et al.* 2005, p. 434). In species that develop large seed banks, it is not uncommon to see no above-ground expression one year and to see a large expression the following year, and this pattern has been well-documented with San Benito evening-primrose (BLM 2018, p. 11).

Disturbance Ecology. Frost heaving (the expansion and contraction of water within the soil during freeze-thaw cycles), small mammal soil disturbance (e.g., gopher burrowing), sediment movement from adjacent slopes, and erosion from stream flows were identified as the primary sources of natural disturbance experienced by San Benito evening-primrose (Taylor 1990, pp. 39–42, 57). Quantifiable measures of erosion (natural or anthropogenic) and a scale to measure disturbance severity and persistence, as well as the corresponding effect to San Benito evening-primrose and associated species, have not been developed. While San Benito evening-primrose tolerates, and is adapted to, disturbance from natural processes, anthropogenic

disturbances from activities such as mining, road and building construction, and OHV use are much more severe and may lead to loss of habitat through soil removal, soil compaction, and increased rates of erosion (BLM 2010, p. 29, Snyder *et al.* 1976, pp. 29–30, Brooks and Lair 2005, p. 7, Groom *et al.* 2007, pp. 130–131, Lovich and Bainbridge 1999, pp. 315–317, Switalski *et al.* 2017, p. 88). Alluvial terrace habitat that was greater than 50 percent disturbed from OHV use was considered to be unsuitable for San Benito evening-primrose (Taylor 1990, p. 71; USFWS 2006, p. 13). Geologic transition zone habitat was not considered here because it had not yet been recognized as suitable habitat, but tends to have less OHV disturbance than alluvial terrace habitat. The seed bank of San Benito evening-primrose is very large, and the amount of seed present is many times greater than the amount of individuals that germinate in any given year (Taylor 1990, p. 57, BLM 2011, pp. 33–42). Additionally, the BLM found that the majority of the existing seed bank is found within the top 1 to 3 in (4 to 8 cm) of soil (BLM 2013, pp. 19–34). As a result, any damage to, or loss of, the top layer of soil has the potential to negatively affect the ability of the species to persist through time.

Recolonization. Natural rates of recolonization of native flora in arid environments following disturbance have been estimated to be between 65–76 years for a return to predisturbance cover of annuals and perennials, and from 148–215 (and greater) years for a return to predisturbance species composition and cover (Abella 2010, pp. 1,258–1,260, Berry *et al.* 2015, pp. 149–150). Persistent OHV use reduced the number of *Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch) by 4–5 times the amount of comparable undisturbed areas (Groom *et al.* 2006, pp. 126–127). The reduction in mature individuals led to a decrease in the amount of seeds produced and suggested that persistent impacts from OHVs over extended periods of time may result in the depletion of the existing seedbank (Groom *et al.* 2006, pp. 131–

132). We can use this information as an indicator of how San Benito evening-primrose recolonization may be similarly affected by OHV.

The Recovery Plan recommends target numbers of individuals for a sub-set (27) of the known occurrences of San Benito evening-primrose (USFWS 2006, pp. 56–58). These occurrences also generally have the longest record of survey data and include the initial occurrences described in Taylor (1990, entire). Data from the BLM indicate that, despite cessation of OHV use in 2008, the number of individuals observed annually at these occurrences has not increased and may be decreasing (figure 2). The 5-year moving average indicates a decrease in the average number of individuals from 1988 through 1993 followed by stable to slightly increasing numbers of individuals. However, 1988 was an abnormal year, and the number of individuals counted during surveys was significantly greater than any other recorded year. The abnormally high numbers of individuals identified that year have a large effect on the observed trend in annual number of individuals. These data are consistent with available literature that suggests that a return to predisturbance conditions likely occurs on time scales of greater than 65–76 years and possibly even greater than 150 years.

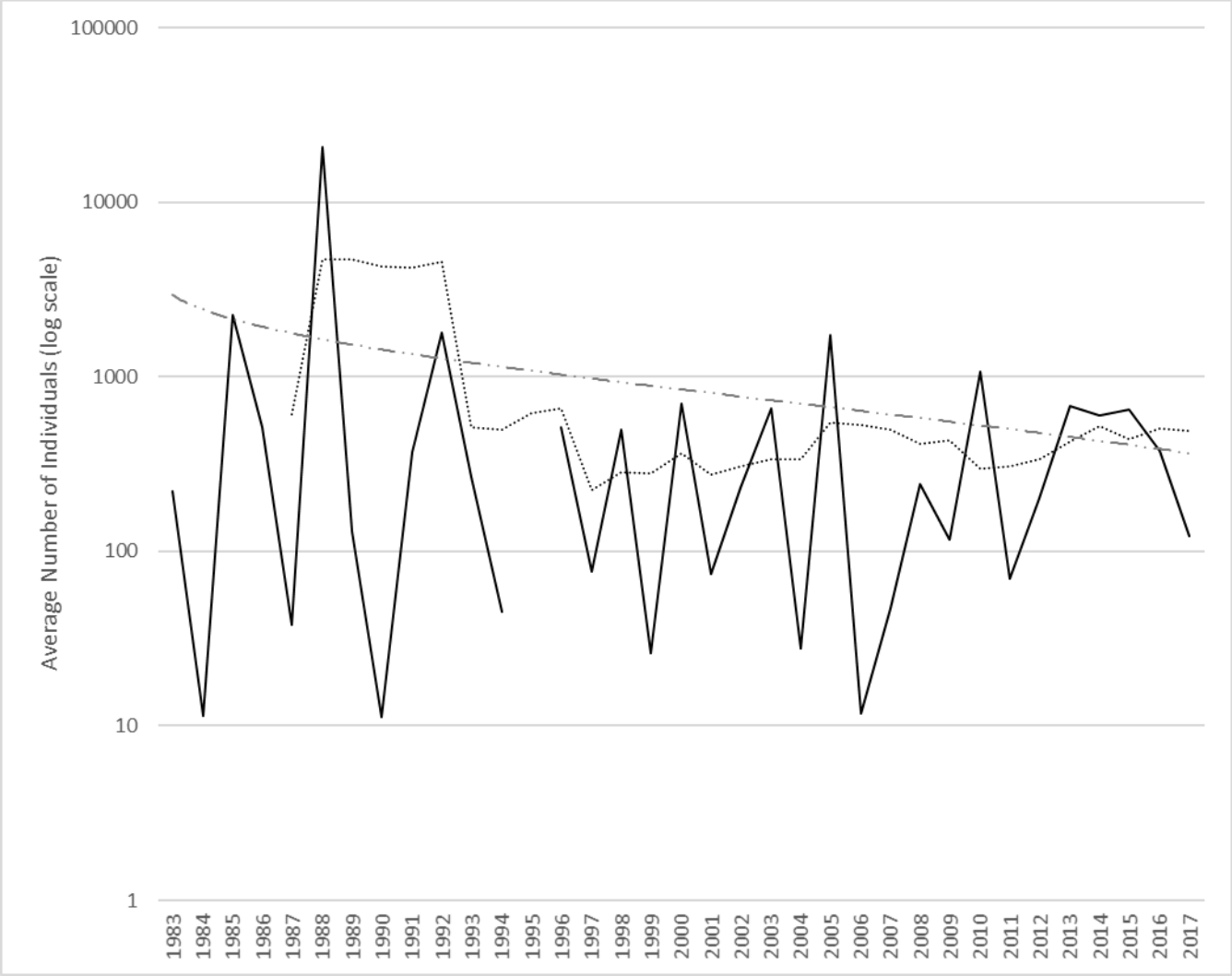

Figure 2. Average number of individuals observed at 27 locations of San Benito evening-primrose (*C. benitensis*) within the Clear Creek Management Area from 1983 through 2017. The solid line shows the annual average, while the dotted line shows the 5-year moving average. The hashed-dotted line shows a linear fit of the annual average data. Note that the y-axis is on a log scale. The number of individuals observed in 1988 was several orders of magnitude greater than any other observed year. Data for 1995 are not included because surveys occurred at the end of the blooming season.

Population Genetics. The occurrences of San Benito evening-primrose that the BLM began finding within geologic transition zone habitat were at first thought to be genetically distinct from occurrences within alluvial terrace habitat. The new occurrences were also located within different watersheds from the first known occurrences, and there was some question as to whether or not the species may be hybridizing with a close relative, *Camissonia strigulosa*

(contorted primrose). If the occurrences were genetically distinct, recovery actions, such as restoration of degraded habitat and out-planting efforts, would need to be identified for each habitat type. There were three distinct genetic clusters of San Benito evening-primrose found but none of the genetic clusters coincided with type of habitat or watershed (Dick *et al.* 2014, entire). Additionally, the same study found no evidence of hybridization between San Benito evening-primrose and contorted primrose. Because the genetic diversity identified within the occurrences was widespread and uncorrelated with habitat and watershed, future out-planting efforts would not need to be restricted to genetic type. The study instead concluded that seed from different occurrences should be mixed to increase diversity across the entire geographic range. In summary, research to increase the understanding of the extent of existing occurrences, the range of suitable habitat, the persistence of the seed bank, and analysis of the genetic variability across watersheds and habitat types have been undertaken fulfilling recovery criterion 1.

Criterion 2: Known occurrences and sufficient additional suitable habitat within each watershed unit throughout its range are protected from direct effects from OHV use and other recreational activities.

Wire fencing, steel pipe barriers, signage, and enforcement of trail restrictions were used to protect San Benito evening-primrose and suitable habitat prior to the 2006 amendment to the Resource Management Plan. The 2006 amendment to the Resource Management Plan closed to OHVs all areas not marked for limited or open use. This restricted the total OHV use area to 242 miles (390 km) of OHV trails and directed OHV use away from areas that provided suitable habitat for, or were occupied by, San Benito evening-primrose (BLM 2006 p. 3-1). By 2009, non-compliance with the 2006 Resource Management Plan had declined (BLM 2008, pp. 5–9;

USFWS 2009, pp. 19–21). In 2008, the EPA issued a report concluding that exposure to naturally occurring asbestos during recreational activities, including OHV use, was higher than the acceptable risk range for causing cancer within the CCMA (EPA 2008, p. 6-3). The level of exposure to asbestos varied with recreational activity and participant age, but was significant enough to warrant an emergency temporary closure of the CCMA (BLM 2008, p. 2). Although not the intent, the closure effectively temporarily protected all known occurrences of San Benito evening-primrose from OHV disturbance. The temporary closure remained in place until the 2014 amendment to the Resource Management Plan was adopted (BLM 2014, entire). The 2014 Resource Management Plan further restricted OHV access to areas of suitable habitat and known sub-occurrences of San Benito evening-primrose by reducing the amount of open trails and restricting access to the Serpentine Area of Critical Environmental Concern (ACEC) to 5 days per year per recreationalist through a permit system and a series of locked gates (BLM 2014, pp. 1–18).

The BLM has conducted OHV non-compliance monitoring as part of the annual San Benito evening-primrose surveys since 2008 and the initial closure of the Serpentine ACEC (table 2). During this time non-compliance has remained relatively low with the number of point locations or potential habitat being impacted by OHV ranging from 2 to 11 locations in a given year. The amount of disturbance within each area has been observed to be low, and natural recovery was observed. Upper Clear Creek, Larious Canyon, and San Carlos Creek are areas of repeated non-compliance despite annual repairing of fencing and barriers and issuance of citations for violating the closures when users are caught (BLM 2013, p. 5, BLM 2015, p. 6). The intensity of non-compliance varied from heavy (greater than 10 tracks observed) to moderate or low (less than 10 tracks observed). The BLM assumes that non-compliant OHV use

originates from private land adjacent to the CCMA.

Table 2. Summary of off-highway vehicle non-compliance within the Serpentine Area of Critical Environmental Concern 2008 through 2016.

Year*	Number of Point Locations with Observed Non-Compliance	Minimum Number of Tracks	Max Number of Tracks	Average Number of Tracks	Reference
2008	6	NA	NA	NA	BLM 2008 pp. 8–9
2009	3	NA	NA	NA	BLM 2010 p. 5
2010	2	2	10+	2	BLM 2011 pp. 12–13
2012	11	1	10+	7	BLM 2012 p. 5
2013	10	1	10+	8	BLM 2013 p. 5
2014	9	1	10+	5	BLM 2015 p. 6
2015	8	1	10+	7	BLM 2017 pp. 6–7
2016	6	1	10+	8	BLM 2017 p. 8

*No data available for 2011, 2017, 2018. Minimum, maximum, and average number of tracks observed were not available for the 2008 and 2009 survey seasons.

By 2014, the number of known point locations of San Benito evening-primrose had grown to 500 with the majority occurring within the geologic transition zone habitat. Approximately half of those locations were protected from OHV use due to the restrictions imposed by the 2014 Resource Management Plan (BLM 2014, pp. 1–18; BLM 2015, pp. 7–16). By 2018, 658 point locations of San Benito evening-primrose had been mapped by the BLM (BLM 2018, pp. 32–47). The 658 point locations correspond to 79 occurrences consisting of 519 sub-occurrences and covering 63.2 acres (25.6 ha) (table 1, figure 1). Twenty-three occurrences (81 sub-occurrences) are located within the Serpentine ACEC and are effectively protected from OHV use due to the 2014 Resource Management Plan (BLM 2018, p. 33) (table 3). There are 36 occurrences (260 sub-occurrences) within BLM-managed land outside of the Serpentine ACEC. OHV use within the CCMA, but outside of the Serpentine ACEC, has been designated as "limited," meaning that motorized use is restricted to highway-licensed vehicles and ATVs and utility task vehicles on designated routes only (BLM 2014, pp. 1-13 through 1-14). Forty-five occurrences (178 sub-occurrences) are known to occur on private land that are not subject to

management by the BLM or other Federal agencies (table 3, table 4).

When the recovery plan criteria were written, there were 27 known occurrences. Twenty-three of those occurrences were on land managed by the BLM, and four were on private property. Currently, there are 59 occurrences on BLM-managed land and 45 occurrences on private property. Although protections for the occurrences on private land cannot be guaranteed, the number of occurrences on land managed by the BLM has exceeded the goal of Recovery Criterion 2 through discovery of new occurrences.

Table 3. Number of occurrences, sub-occurrences, and acreage of mapped San Benito evening-primrose (*Camissonia benitensis*) locations by land manager (2018).

	Number of Occurrences	Number of Sub-Occurrences	Acres
BLM	36	260	23.8
ACEC	23	81	12.7
Private	45	178	26.6

Occurrences consist of sub-occurrences (mapped polygons) within 0.25 mile of each other. Point locations are reported in the 2018 Annual Report (BLM 2018 p. 32). Acreage data are derived from the spatial extent of the mapped occurrences. Note that occurrences that encompass multiple property owners may be counted twice because of how the mapped data are nested.

The majority of the known occurrences and sub-occurrences occur within the geologic transition zone identified by the BLM as habitat in 2010 (table 4). Occurrences of San Benito evening-primrose within geologic transition zone habitat are assumed to be less likely to be affected by OHV recreation since OHV riders have historically preferred the terrain associated with alluvial terrace habitat (BLM 2010, p. 11). In summary, known occurrences and sufficient additional suitable habitat within each watershed unit throughout its range are protected from direct effects from OHV use and other recreational activities, fulfilling recovery criterion 2.

Table 4. Number of known occurrences and sub-occurrences by land manager and habitat type.

	Alluvial Terrace Habitat			Geologic Transition Zone Habitat		
	Number of Occurrences	Number of Sub-Occurrences	Acres	Number of Occurrences	Number of Sub-Occurrences	Acres
BLM	17	104	6.7	19	156	17.2
ACEC	6	37	3.0	17	44	9.7
Private	10	26	0.6	35	152	26.0
Total	33	167	10.3	71	352	53.0

Occurrences consist of sub-occurrences (mapped polygons) within 0.25 mile of each other. Point locations are reported in the 2018 Annual Report (BLM 2018 p. 32). Acreage data are derived from the spatial extent of the mapped occurrences. Note that occurrences that encompass multiple property owners may be counted twice because of how the mapped data are nested.

Criterion 3: Currently occupied and suitable habitat for the species has been restored and maintained over an appropriate period of time, as informed by monitoring and research.

In the Recovery Plan, 20 years was identified as the appropriate period of time to conduct and evaluate the success of restoration activities. Twenty years was chosen to allow enough time for observations of natural and restored occurrences during non-drought years to be made in order to evaluate the stability of San Benito evening-primrose occurrences (USFWS 2006, pp. 53–54). Thirty-three years have passed since San Benito evening-primrose was listed by the Service as a threatened species. Restoration began prior to listing by using fencing to discourage disturbance by OHVs (Taylor 1990, pp. 24–36, 71). The BLM has continued to implement passive restoration measures such as installation of additional wire fencing and steel pipe barriers to reduce OHV trespass and signage to promote awareness of the natural resources (BLM 2018 pp. 50–56). Photopoint monitoring has demonstrated an increase in the amount of woody vegetation cover in previously open and disturbed areas. The increase in woody vegetation cover suggests that fencing and other barriers have been effective in reducing ground disturbance from OHV use prior to the temporary closure in 2008 and the permanent restrictions in 2014.

Seed of San Benito evening-primrose was introduced between 1990 and 1991 at six areas

near existing point locations. At five of the reintroduction sites, 30,000 seeds were broadcast into areas that were each 2,153 ft^2 (200–300 m^2) in area. Sixty thousand seeds were broadcast into the sixth site (BLM 2013, Excel data, Taylor 1993, p. 14). Very few plants, relative to the amount of seed reintroduced, were observed (between 3 and 147 plants) in the years immediately following the seeding. It has been determined that San Benito evening-primrose establishment from artificially sown seed is very low and that seeding introduction is not likely to be a successful restoration tool (Taylor 1993, p. 14). The areas where seed was introduced have continued to have small numbers of individuals observed each year. Approximately 3,000 seeds were sown in 2008 and 2012 in areas where San Benito evening-primrose had not been observed but where potential habitat existed that could support new occurrences. The number of individuals at these areas have remained similarly low ranging from 0 to 320 individuals in a single year (BLM 2018, pp. 34–47).

Restoration of five staging areas located on stream terraces that were heavily degraded from OHV use and mining (prior to 1939) was completed in 2010 (BLM 2011, pp. 4–10). The staging areas were characterized by a mix of lack of vegetation, soil compaction, buried original soil surface, debris from facilities, and erosion on adjacent hillslopes. A total of 2.01 ac (0.81 ha) of San Benito evening-primrose habitat was restored. Annual counts of San Benito evening-primrose at each of the staging areas and associated sub-occurrences have indicated that the number of individuals in any given year fluctuates greatly (BLM 2018, pp. 34–47). Staging areas 1, 4, and 5 have relatively stable annual counts, while staging areas 2 and 3 have had more variable, and possibly slightly declining, annual counts.

The BLM has also undertaken efforts to improve watershed quality by identifying the most appropriate species and methods to restore streambanks (BLM 2011, pp. 10–12). While the

immediate stream banks are not suitable habitat for San Benito evening-primrose, restoring natural hydrology and maintaining bank composition can reduce sedimentation and erosion in the watershed that indirectly supports the persistence of San Benito evening-primrose habitat. The BLM found that revegetation of degraded streambanks using sod of *Agrostis exarata* (spike bentgrass) was most effective. Additionally, six vehicle routes were closed and restored by removing access and ripping the compacted soil (BLM 2011 p. 10). In summary, currently occupied and suitable habitat for the species has been restored and maintained over an appropriate period of time, as informed by monitoring and research, fulfilling recovery criterion 3.

Criterion 4: Population sizes have been maintained over a monitoring period that includes multiple rainfall cycles (successive periods of drought and wet years).

The Recovery Plan recommended a target average number of individuals for 27 occurrences of San Benito evening-primrose (USFWS 2006, pp. 54–58; BLM 2018, pp. 34–35). The target counts were based on past observations of the number of individuals observed during favorable years and were considered to be approximate. Four of the 27 locations with a target number of individuals had an average annual count that met or exceeded the target levels between 1983 and 2017 (USFWS 2006, pp. 56–58; BLM 2018, pp. 34–35; USFWS Review of BLM reporting data). Five of the 27 locations had an annual average count that met or exceeded the target number of individuals when only years with normal precipitation are considered. We consider the average number of individuals because the number of individuals at any given site fluctuate greatly from year to year causing single year counts to be inaccurate measures of the stability of the species (figure 2).

The total annual number of individuals for the same 27 sites has fluctuated around a mean of approximately 9,600 individuals since 1983 (Figure 2). Over time, a slight decrease in the species count is observable, but is small enough to be affected by a single year's count. The slight negative trend is due to a significantly above-average year in 1988 where the total number of individuals observed was an order of magnitude greater than during any other annual count. The 5-year moving average indicates a decrease in the average number of individuals from 1988 through 1993, followed by stable to slightly increasing numbers of individuals. We also recognize that only those occurrences that were known by 2006, and had suggested target numbers of individuals, are represented in the 27 locations. This does not take into consideration the majority of currently known occurrences. Evaluating the trend of each of the 79 occurrences (658 point locations, see table 1) is not feasible because census data for the entirety of known point locations are not available.

The target number of individuals has not been met for 23 of the 27 occurrences with target criteria. However, the target numbers were estimates and the lack of a consistent decline in mean annual counts suggest that, while the occurrences are not increasing in abundance of San Benito evening-primrose, they are not threatened with extinction. The lack of decline in number of individuals over a 27-year monitoring period and an increase in the number of known occurrences indicate that the criteria of maintaining population numbers over an appropriate period of time has been met.

Criterion 5: A post-delisting monitoring plan for the species has been developed.

Section 4(g)(1) of the Act requires us, in cooperation with the States, to implement a system to monitor effectively, for not less than 5 years, all species that have been recovered and

delisted (50 CFR 17.11, 17.12). The purpose of this post-delisting monitoring is to verify that a species remains secure from risk of extinction after it has been removed from the protections of the Act. The monitoring is designed to detect the failure of any delisted species to sustain itself without the protective measures provided by the Act. If, at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act. Section 4(g) of the Act explicitly requires us to cooperate with the States in development and implementation of post-delisting monitoring programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of post-delisting monitoring. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation post delisting.

Post-delisting Monitoring Guidelines. Post-delisting monitoring is designed to verify that San Benito evening-primrose remains secure from risk of extinction after delisting by detecting changes in trend that indicate that the known occurrences have become unstable and/or are at risk of becoming once again threatened or endangered. The Act has a minimum post-delisting monitoring requirement of 5 years, but a longer period of time may be necessary to account for fluctuations in counts from year to year, potential changes in land use, and climatic variability. If a decline in abundance or a substantial new threat arises, post-delisting monitoring may be extended or modified and the status of the species will be reevaluated. The Service is responsible for establishing a final post-delisting monitoring plan. As the sole Federal entity that manages land where San Benito evening-primrose occurs, the BLM will contribute expertise for development and implementation of the final post-delisting monitoring plan. The draft post-delisting monitoring plan can be found at *http://www.regulations.gov* in Docket No. FWS–R8–

ES–2019–0065. The Service intends to work with the BLM to finalize the post-delisting monitoring plan upon publication of this proposed rule.

Summary of Recovery Criteria

Research and survey efforts have clarified the distribution, extent, and habitat characteristics of San Benito evening-primrose. The seed bank has been demonstrated to be prolific and an integral part of the species' ecology in responding to, and persisting through, negative stochastic events. A genetic evaluation of the newly identified sub-occurrences have shown that there is no genetic distinction based upon habitat type or watershed among the different sub-occurrences. Existing research has resulted in a better understanding of the species' ecology and has shown an increase in the species' range, suitable habitat, and number of occurrences. With the currently completed research, the intent of the first recovery criteria has been met.

The second recovery criteria has been achieved through the 2014 Resource Management Plan, which restricted OHV access to areas of suitable habitat and known sub-occurrences of San Benito evening-primrose by reducing the amount of open trails and restricting access to the Serpentine ACEC to 5 days per year per recreationalist through a permit system and a series of locked gates (BLM 2014, pp. 1–18).The identification of a new habitat type, the geologic transition zone, and numerous new point locations have increased the known range and amount of known occupied habitat. The topography and composition of geologic transition zone habitat is not typical of areas preferred by OHV users, and many of the new occurrences of San Benito evening-primrose were not subject to OHV disturbance. As a result, the majority of the currently known occurrences of San Benito evening-primrose have not been disturbed from OHV use. The existing Resource Management Plan (BLM 2014, entire) will continue to provide protection for

San Benito evening-primrose occurrences within the Serpentine ACEC and the CCMA through trail restrictions and a permitting system. The Post-delisting Monitoring Plan will provide guidelines for evaluating the species following delisting to detect substantial declines that may lead to consideration of reclassification to threatened or endangered. Changes in land use will still be subject to State and Federal environmental review.

Annual monitoring of 27 locations of San Benito evening-primrose listed in the Recovery Plan have shown that numbers of individuals at historically occupied habitat have remained relatively stable. Active and passive restoration efforts undertaken by the BLM, in conjunction with the closure of the Serpentine ACEC to OHV use, have improved degraded areas into suitable habitat for San Benito evening-primrose. The reduction in OHV use described in the 2014 Resource Management Plan provided protection of occupied habitat within the CCMA, and continued prohibition on OHV use will ensure that future degradation of occupied habitat will not occur within the CCMA. The Recovery Plan suggested target numbers of individuals that could be used as a point of reference to assess the stability of San Benito evening-primrose. Those goals have been met for four (five if only normal precipitation years are considered) of the 27 locations that are listed in the Recovery Plan. Those values were considered an approximation, and it appears that the 27 locations listed in the Recovery Plan have remained relatively stable around a 5-year moving average when the abnormally high-count year (1988) is considered (figure 2). Furthermore, the 27 locations are no longer representative of the entire range of San Benito evening-primrose due to the discovery of the geologic transition zone as suitable habitat and the associated increase in the known total number of individuals and occupied acreage.

Therefore, we conclude that based on the best available information, the recovery criteria

in the Recovery Plan have been achieved and the recovery goal identified in the Recovery Plan has been met for San Benito evening-primrose. Recovery criterion 1 has been met with research to increase the understanding of the extent of existing occurrences, the range of suitable habitat, the persistence of the seed bank, and analysis of the genetic variability across watersheds and habitat types. Recovery criterion 2 has been met with protection of known occurrences and sufficient additional suitable habitat within each watershed unit throughout its range. Recovery criteria three and four have been met through the closure of the Serpentine ACEC, restoration of degraded areas, and observed stability of 27 of the 79 occurrences over a period that included 18 years of normal rainfall over a 27-year period. Recovery criterion 5 has been met through the development of a draft post-delisting monitoring plan for the species, which will be finalized in collaboration with the BLM.

Regulatory and Analytical Framework

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 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.

Analytical Framework

The 5-year review documents the results of our comprehensive biological status review for the species, including an assessment of the potential threats to the species. The review provides the scientific basis that informs our regulatory decisions, which involve the further

application of standards within the Act and its implementing regulations and policies. The 5-year review can be found at *http://www.regulations.gov* under Docket FWS–R8–ES–2019–0065. Where information in the 5-year review is out of date, we have provided updated information in this proposed rule.

Summary of Biological Status and Threats

Historical analyses and discussion of the threats to San Benito evening-primrose are detailed in the Recovery Plan (USFWS 2006, pp. 26–36) and 5-Year Review (USFWS 2009, pp. 10–18). An updated analysis and discussion follows here. Primary threats to San Benito evening-primrose identified in the listing rule included OHV use of occupied and potential habitat and gravel mining. Uncertainty about the reproductive capacity of the species and vandalism were also considered additional threats at listing. Vandalism was considered a threat due to the small population size and public resistance to listing the species under the Act. The resistance came from the OHV community perception that listing the species would inhibit their ability to continue recreating. However, vandalism was not believed to be significant with subsequent reviews of the species in the Recovery Plan and 5-Year Review and is not considered further in this proposed rule. Since listing, the Recovery Plan and 5-Year Review identified as additional threats: soil loss and elevated erosion rates from OHV trails and staging areas, camping, facilities construction and maintenance, habitat alteration due to invasive species and/or natural vegetation community succession, climate change and the local effect on precipitation patterns and temperature, and stochastic events. The following sections provide a summary of the past, current, and potential future threats relating to San Benito evening-primrose.

Off-Highway Vehicle Use

Off-highway vehicle use of open serpentine barrens and alluvial terraces was considered the primary threat to San Benito evening-primrose when it was listed in 1985. Soil disturbance from OHVs use increased soil loss, soil compaction, and could result in the physical removal of plants. Staging areas and camping associated with OHV use had similar negative impacts to the species and its habitat. Between 1985 and 2010, the BLM implemented a series of measures to reduce effects to known habitat and occurrences of San Benito evening-primrose through fencing of sensitive areas, signage, designation of specific open riding areas, and enforcement and management of designated OHV trails. In 2005, the BLM estimated 50,000 visitor-use days per year occurred within the CCMA (USFWS 2006, p. 27). OHV use decreased in 2008 following the release of an EPA report that found high levels of naturally occurring asbestos that posed a significant health risk to visitors within the Serpentine ACEC.

To address the EPA findings, the BLM issued new Management Plans and associated Records of Decision in 2014, which restricted OHV access to areas of suitable habitat and known sub-occurrences of San Benito evening-primrose by reducing the amount of open trails and restricting access to the Serpentine ACEC to 5 days per year per recreationalist through a permit system and a series of locked gates (BLM 2014, pp. 1–18). Currently, only highway-licensed vehicles are allowed within the Serpentine ACEC on designated roads and by permit, which is limited to five use-days per year per person. These restrictions on OHV use have effectively removed OHV impacts to San Benito evening-primrose. OHV non-compliance with fencing and trail restrictions has been monitored within lands managed by the BLM. Findings of non-compliance remain low compared to levels of use prior to closure (table 2). Occurrences located on private property are not protected from OHV use, and occurrences on BLM land near private land are at greater risk of disturbance from OHV trespass. Under the current Resource

Management Plan (BLM 2014, entire), because of its implementation of closures and restrictions, we do not consider OHV use will become a threat to occurrences on BLM land in the foreseeable future. While BLM restrictions do not provide protection to occurrences on private land, the best available data on historical and current recreation levels do not indicate that the level of OHV use on private land will increase from current levels to levels that would threaten the persistence of the species in the foreseeable future.

Mining

The last commercial mining in the CCMA ceased extraction activities in 2002 (BLM 2018, p. 66). The BLM has acquired surface rights to 208 ha (520 ac) along the lower reaches of Clear Creek up to and including the confluence with the San Benito River. This acquisition protects habitat and occurrences of San Benito evening-primrose, but without having the mineral rights to the land, it cannot be considered fully under the control of the BLM (USFWS 2009, p. 13). The BLM decided in the 2014 Resource Management Plan that no mineral leasing or sales on public lands will occur within the Serpentine ACEC and that mineral leasing and sales on public lands outside of the Serpentine ACEC will have "no surface occupancy" stipulations where occupied special status species habitat occurs (BLM 2018, pp. 1-36 through 1-37). With these requirements, and no active mining leases within suitable habitat and known occurrences, we conclude that mining is no longer a significant threat to San Benito evening-primrose and is not likely to become a threat in the foreseeable future

Rock hounding (hobby of collecting rock and mineral specimens from the natural environment) within the CCMA persists as a recreation activity, although quantifying the amount and effect of rock hounding on San Benito evening-primrose is lacking. However, given the restricted vehicle access and relatively low impact of an individual user versus a commercial

mining operation, we consider that effects to San Benito evening-primrose from rock hounding are negligible and are not likely to become a threat in the foreseeable future.

Soil Loss and Elevated Erosion Rates

Soil loss and erosion may occur naturally due to seasonal disturbances as would be expected by frost heaving, overland sheet flow from precipitation, unconsolidated soil, sparse vegetation, and flood events. These natural disturbances promote areas relatively free of dense vegetation, increase water infiltration, and may aid in dispersal of the San Benito evening-primrose downstream or downslope from existing occurrences. Many of the threats presented under Factor A may be considered a "disturbance" to the habitat of the species, but this does not mean that they are beneficial. For example, the effects to soil from frost heaving and overland sheet flow are very different from those resulting from repeated use of OHVs. The BLM attempted to quantify the differences between the natural, or background, rates of soil loss and erosion, and those that result from OHV and highway vehicle use. The mean background soil loss in the Clear Creek Watershed was 8 yards^3 (yd^3)/ac-year (11 tons/ac-year) and that soil loss resulting from OHV open riding resulted in soil loss of 12 yd^3/ac-year (16 tons/ac-year) (PTI Environmental 1993, pp. 36–39). The erosion rate from roads was estimated at 59 yd^3/ac-year (80 tons/ac-year).

Increased erosion and elevated soil loss are indicative of loss of suitable habitat. The seed bank may be lost as soil erodes and the remaining soil may become compacted, decreasing germination potential as well as water retention. Trails that form from repeated use on open slopes or terraces may collect and funnel water, creating runnels, which in turn increase erosion while drawing water away from adjacent areas (Brooks and Lair 2005, p. 7; Ouren *et al.* 2007, pp. 5–16). The BLM has recognized this issue and has attempted to enact minimization measures

for soil loss and erosion. In the most recent Resource Management Plan, the BLM includes guidelines that call for road closures during extreme wet weather, prioritizing closed roads for restoration and reclamation, and establishing automated weather stations to monitor precipitation and soil moisture and requires approved erosion control strategies to be evaluated for any soil-disturbing activities on slopes of 20–40 percent (BLM 2014, p. 1-30). Presently, the threat of soil loss and erosion is limited to natural cycles, remnant effects of past land use, and roads (for which the above minimization measures apply). Considering that additional sub-occurrences of San Benito evening-primrose continue to be identified and persist within habitat that is more prone to erosion (upland slopes of the geologic transition zone habitat type), it is unlikely that natural rates of soil loss and erosion present a threat to the continued existence of the species and is not likely to do so in the foreseeable future.

Facilities Construction and Maintenance

The construction of the BLM Section 8 Administrative Site in 1988 and associated structures resulted in direct loss of San Benito evening-primrose and its habitat, although the species still occurs in the vicinity of the disturbance (USFWS 2009, pp. 12–13, BLM 2018, p. 34). The Section 8 Administrative Site was decommissioned in 2010 and replaced by the Clear Creek Administrative Site. The new administrative site was not constructed on occupied or potential habitat for San Benito evening-primrose, although the impacts resulting from the original disturbance remain (BLM 2018, p. 66). The old Section 8 Administrative Site is infrequently used and, at current levels of use, does not present a threat to the persistence of San Benito evening-primrose due to the discovery of new sub-occurrences and potential habitat throughout the CCMA (BLM 2018 p. 66). No new facilities and construction projects are planned, and it is not likely that new projects in occupied or potential habitat will be proposed in

the foreseeable future.

Habitat Alteration due to Invasive Species

The serpentine-derived soils inhibit invasion from nonnative plant species where San Benito evening-primrose occurs. However, the habitat may still be degraded if invasion by nonnative species is allowed to occur on adjacent land. High densities of nonnative species may negatively influence existing or potential habitat for San Benito evening-primrose by providing a persistent threat of colonization. Yellow star thistle (*Centaurea solstitialis*) and tocalote (*C. melitensis*) have been actively controlled near occurrences of San Benito evening-primrose within the CCMA since 2005 (BLM 2018, p. 62). The BLM has identified prescribed fire followed by broadcast application of clopyralid, a broadleaf specific herbicide, as the most effective means of reducing the cover of invasive species threatening San Benito evening-primrose. The cover of yellow star thistle has been reduced by 95 percent in the Clear Creek drainage, and San Benito evening-primrose has expanded into the improved habitat (BLM 2018, p. 62). The natural buffer that the serpentine-derived soils provide, coupled with BLM's management of invasive species and the expansion of known sub-occurrences and potential habitat, make it unlikely that invasive species present a significant threat either now or into the future to the persistence of San Benito evening-primrose. The abundance of invasive species will be monitored as part of the Post-delisting Monitoring Plan. The Post-delisting Monitoring Plan will suggest thresholds that will determine the necessary control efforts on federally managed land.

Succession to Woody Shrub Community

San Benito evening-primrose habitat is typically open and relatively free of high amounts of woody vegetation and canopy cover. Succession to a woody shrub community in habitat that

presently or historically supported San Benito evening-primrose could result in increased canopy cover (potentially shading out San Benito evening-primrose) and increased competition for resources (lessening the success of establishment and survival) (Taylor 1990, p. 66). Photopoints initiated by the BLM in 1980 suggest that open serpentine barrens are less susceptible to encroachment by woody shrubs (typically chaparral species such as manzanita (*Arctostaphylos* spp.)) than alluvial terrace habitat. This is presumably due to the greater concentration of serpentine soils on the open barrens compared to the more organic rich soils of the alluvial terraces. Continued evidence of encroachment into areas occupied by San Benito evening-primrose has been observed at established photomonitoring points (BLM 2018, pp. 56–57).

The immediate effect of encroachment by woody vegetation would be to reduce, or possibly eliminate, known occurrences and potential habitat of San Benito evening-primrose through competition and alteration of habitat structure. It is possible that the seed bank, once established, is long lived enough that it may persist through cycles of vegetation community shifts due to natural events such as fires. However, the species has not been studied for sufficient time to observe the effects of vegetation succession. The BLM has estimated that seed may remain viable for 107 years in the presence of common co-occurring shrubs (BLM 2015, pp. 16–28).

San Benito evening-primrose has not been observed in the geologic transition zone habitat for as long a period of time as either alluvial terrace habitat or the open serpentine barrens. As a result, the rate of succession to woody vegetation is not as well understood. It is likely that the rate of succession to woody habitat is less within geologic transition zone habitat than alluvial terrace, but greater than the rate of succession compared to open serpentine barrens. Succession of plant communities is a natural process and may result in loss of current or

potential habitat. However, the amount of new sub-occurrences that have been identified lessen the immediate risk to the existence of the species; therefore, succession to woody shrub community is not currently a species-level threat. No occurrences of San Benito evening-primrose have been extirpated due to succession of woody vegetation since monitoring began in 1980, and, because San Benito evening-primrose grows on serpentine soils, threats to the species from succession to woody vegetation is also unlikely to be a threat in the foreseeable future.

Stochastic Events

At the time of listing, only nine occurrences of San Benito evening-primrose were known within a relatively restricted range. The small number of occurrences increased the susceptibility of the species to extinction from a stochastic event, such as a fire, flood, drought, or other unpredictable event, because a single event had the capability to negatively impact all known occurrences at the same time. The threat from stochastic events due to a small number of occurrences has decreased as the number of known occurrences has increased to 79 occurrences (519 sub-occurrences or 658 point locations) occurring across multiple watersheds, and into a new habitat type (the geologic transition zone). The species' current known range is bordered on the north by New Idria Road near the confluence of Larious Creek and San Carlos Creek, to the south at the Monterey County line near Lewis Creek, to the west near the Hernandez Reservoir, and to the east by the eastern boundary of the Serpentine ACEC, an area of approximately 307 square miles.

Within this broad range, approximately 260 ac (105 ha) is considered potential habitat (BLM 2018, p. 31) and 63.2 ac (25.6 ha) are known to be occupied. Despite the occupied area being relatively small, it is spread over a large geographic area across multiple habitat types and many occurrences, suggesting a low possibility of extinction from a single stochastic event. The

presence of a long-lived and well-established seed bank further insulates San Benito evening-primrose from the possibility of extinction due to a single stochastic event. The land management practices of the BLM within the CCMA have promoted preserving and restoring San Benito evening-primrose habitat and the natural soil processes and hydrology of the watersheds it occurs within as well. Stochastic events are unlikely to threaten the species in the foreseeable future due to the current range of San Benito evening-primrose and number of known occurrences.

Climate Change

The terms "climate" and "climate change" are defined by the Intergovernmental Panel on Climate Change. The term "climate change" thus refers to a change in the mean or variability of one or more measures of climate (for example, temperature or precipitation) that persists for an extended period, whether the change is due to natural variability or human activity (IPCC 2014a, pp. 119–120). The effects of climate change are wide ranging but include alteration of historical climate patterns including storm frequency and severity, seasonal shifts in temperatures, and changing precipitation patterns. Globally, these effects may be positive, neutral, or negative for any given species, ecosystem, land use, or resource, and they may change over time (IPCC 2014b, pp. 49–54; IPCC 2018, pp. 9–12). Potential effects derived from climate change have consequences for the biological environment and may result in changes to the suitability of currently occupied habitat through increased drought stress, shortened growing seasons, and alteration of the historical soil and hydrologic cycles. The synthesis report that was issued by IPCC is conclusive that future climate conditions will be dissimilar from current climate conditions. The effects of these changes to San Benito evening-primrose and its habitat are not known, but we may reasonably infer potential effects from the globally anticipated changes. The

State of California assessment on climate change provides a better estimate for the effects of climate change to areas occupied by San Benito evening-primrose.

California released its fourth climate change assessment in 2018 (Langridge 2018, entire). The California assessment differs from the IPCC assessments in that it is localized to the State and has specific analyses for nine regions within the State. California's Fourth Climate Change Assessment uses downscaled versions of the global climate models used by IPCC to create localized predictions based on future emissions scenarios in order to provide relevant predictions for management and planning. The range of San Benito evening-primrose falls within the Central Coast region of California's fourth climate change assessment. In general, the region is expected to experience increasing minimum and maximum temperatures and slight increases in precipitation with significant increases in variability (Langridge 2018, p. 6). These expected trends are slightly variable across the three watersheds within which San Benito evening-primrose occurs (hydrologic unit code (HUC) 10): Upper San Benito River, Los Gatos Creek, and Larious Creek–Silver Creek. The predicted increases in minimum temperature, maximum temperature, and precipitation are similar for both high (representative concentration pathway (RCP) 8.5) and low (RCP 4.5) emissions scenarios and across model variations (Cal-adapt 2018, p. NA; table 5).

Table 5. Changes in precipitation, minimum average temperature, and maximum average temperature for low and high emission scenarios compared to historical averages for the three watersheds within which San Benito evening-primrose occurs.

Watershed	Precipitation (inches)		Min Avg. Temp. (degrees F)		Max Avg. Temp. (degrees F)	
	Historical Average	RCP 4.5 (RCP 8.5)	Historical Average	RCP 4.5 (RCP 8.5)	Historical Average	RCP 4.5 (RCP 8.5)
Upper San Benito River	17.8	20.4 (19.7)	38.9	41.7 (42.3)	71.0	73.9 (74.4)
Los Gatos Creek	14.4	16.8 (15.3)	44.7	47.5 (48.1)	74.8	77.6 (78.1)
Larious Creek–Silver Creek	15.1	17.4 (16.6)	42.3	45.3 (45.9)	72.3	75.3 (75.8)

Watersheds are based on the HUC 10 resolution. Reported values for the modeled futures are based on the average of the HadGEM2-ES (warmer and drier), CNRM–CM5 (cooler and wetter), and CanESM2 (average) models. The RCP 4.5 scenario refers to a future scenario where emissions peak near 2040 and then decline, while RCP 8.5 refers to a scenario where emissions continue to rise strongly through 2050 and plateau near 2100. The historical average is based on the years 1950–2005 as reported by cal-adapt.org. The modeled values are estimates from the years 2020–2050.

Based on the state of California assessment of climate change, the IPCC data, taking into account known uncertainties with climate change projection, the effects of the predicted changes due to climate change to occurrences of San Benito evening-primrose are varied. A slight increase in precipitation may provide additional water during the growing season, but the variability between seasons may result in long periods of drought followed by high-volume precipitation that may cause erosion. Increasing minimum temperatures may reduce the amount of days with frost, thereby altering the physical cues for germination, and increasing maximum temperatures could result in increased stress for flowering individuals. Conversely, increased amounts of rain may promote increased germination and seedling success. In order to precisely understand the effects of climate change, location-specific data on temperature, precipitation, San Benito evening-primrose germination, seedling success, and seed bank cycling over multiple years would be needed.

Shifts in community composition are likely to occur as a result of changes in California's climate and may impact the long-term suitability of currently occupied and potential habitat for San Benito evening-primrose. All California macrogroups of vegetation are expected to have moderate to high risk of vulnerability to climate change (Thorne et al. 2016, p. 1). This means that all vegetation communities are susceptible to portions of their current range becoming unsuitable. It is also possible that previously unsuitable areas for a given macrogroup will become suitable as physical parameters that were previously unfavorable become favorable. Vegetation communities migrating higher in elevation along temperature gradients or moving

upland as sea levels rise along hydrological gradients are typical examples of this scenario. However, the ability of a vegetation macrogroup to migrate assumes that natural seed dispersal pathways are available and that undeveloped land exists along dispersal pathways.

San Benito evening-primrose occurs within three macrogroups within San Benito and Fresno Counties: California foothill and valley forests and woodlands, chaparral, and California annual and perennial grassland. California foothill and valley forests and woodlands and chaparral are both ranked at moderate risk of vulnerability, and California annual and perennial grassland is ranked as moderate to high risk of vulnerability (Thorne *et al*. 2016, p. 3; table 6). Estimates of the percent of existing habitat that will become unsuitable, have no change, or become newly suitable based on low and high emissions scenarios are shown in table 6 based on data within Thorne *et al*. (2016, pp. 33–41; 114–122; 132–140).

Table 6. Results of sensitivity and adaptive capacity modeling and the resulting change in suitability of existing habitat for three vegetation macrogroups within which San Benito evening-primrose occurs.

Vegetation Macrogroup	Mean Vulnerability Rank	Unsuitable		No Change		Newly Suitable	
		Low (%)	High (%)	Low (%)	High (%)	Low (%)	High (%)
California foothill and valley forests and woodlands	Moderate	24	59	41	76	11	34
Chaparral	Moderate	8	54	46	92	17	47
California annual and perennial grassland	Mid-High	16	48	52	84	10	52

Data from Thorne et al. 2016 pp. 3; 33–41; 114–122; 132–140.

Under both high and low emissions scenarios, currently suitable habitat for San Benito evening-primrose is lost due to changes in climate. Conversely, the species that compose the vegetation communities that are associated with San Benito evening-primrose are expected to have the capability to migrate into newly suitable habitat. The primary concern, in regard to San Benito evening-primrose habitat, is the threat of an increase in woody vegetation as a response to

climate change. However, San Benito evening-primrose is found in serpentine and serpentine-derived soils that are not likely to be affected by climate change in the foreseeable future. The edaphic (soil) conditions may restrain woody vegetation migration into areas currently occupied. While the soil type may mitigate habitat loss due to habitat conversion, it may also restrain the species from dispersing to areas where climatic conditions are more favorable for survival. The currently predicted changes in precipitation and climate do not suggest that the species may become endangered due to those changes in the foreseeable future.

Existing Regulatory Mechanisms

State Protections

San Benito evening-primrose is not a State-listed taxon under the California Endangered Species Act. The species is listed by the California Native Plant Society (CNPS) as 1B.1, indicating that the taxon is rare throughout its range and is generally endemic to California as well as having been reduced throughout its historical range. Species listed by CNPS as 1B.1 meet the definition of threatened in the California Endangered Species Act as described in the California Fish and Game Code (CNPS 2018 Rare Plant Inventory Website) and must therefore be considered during environmental analysis for California Environmental Quality Act (CEQA) documentation (CEQA 2018 Guidelines Section 15380).

Federal Protections

In 2001, the BLM published the National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands. This guiding document ensures consistent and positive management of environmentally responsible motorized OHV use on public lands. Detailed regulations are established in BLM's 2014 Resource Management Plan for the CCMA that provides for protections of San Benito evening-primrose. BLM's 2014 Resource Management

Plan for the CCMA is in place until superseded. The restriction of OHV use within the CCMA and the Serpentine ACEC is based on concerns of health risks and will be unaffected by the delisting of San Benito evening-primrose. Currently, only highway-licensed vehicles are allowed within the Serpentine ACEC on designated roads and by permit, which is limited to five use-days per year per person, and within the CCMA trail riding is restricted to designated areas near Condon Peak (BLM 2014, p. 1-18). The Post-delisting Monitoring Plan will provide for continued evaluation of the status of occurrences to prevent the species from again becoming warranted for listing under the Federal Endangered Species Act.

The BLM has regulations and policies that guide the management of natural resources on the public lands they manage. In particular, Congress passed the Federal Land Policy and Management Act of 1976 to provide policy for "the management, protection, development, and enhancement" of public lands managed by the BLM. This law directs the BLM to "take any action necessary to prevent unnecessary or undue degradation of the lands" during mining operations (43 U.S.C. 1732 (b)). Mining operations that exceed 5 acres (2.02 ha), and certain other defined operations, require a plan of operations approved by the BLM (43 CFR 3809.1-4, 1-6).

BLM may enact special rules to protect soil, vegetation, wildlife, threatened or endangered species, wilderness suitability, and other resources by immediately closing affected areas to off-road vehicles that are causing resource damage until the adverse effects are eliminated and measures are implemented to prevent recurrence (43 FR 8340-8364).

Two Executive Orders (E.O.) apply specifically to off-road vehicles on public lands: E.O. 11644 directs agencies to designate zones of off-road use that are based on protecting natural resources, the safety of all users, and minimizing conflicts among various land uses. The BLM

and other agencies are to locate such areas and trails to minimize damage to soil, watershed, vegetation, or other resources, and to minimize disruption to wildlife and their habitats. Areas may be located in designated park and refuge areas or natural areas only if the head of the agency determines that off-road use will not adversely affect the natural, aesthetic, or scenic values of the locations. The respective agencies are to ensure adequate opportunity for public participation in the designation of areas and trails.

E.O. 11989 amends the previous order by adding the following stipulations: (a) whenever the agency determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources of particular areas or trails on public lands, it is to immediately close the areas or trails to the type of off-road vehicle causing the effects until it determines that the adverse effects have ceased and that measures are in place to prevent future recurrence; and (b) each agency is to close portions of public lands within its jurisdiction to off-road vehicles except areas or trails designated as suitable and open to off-road vehicle use.

As San Benito evening-primrose is a listed species under the Act, the BLM is required to consult with the Service on any activities it funds, authorizes, or carries out that may affect San Benito evening-primrose. There are no Federal prohibitions under the Act for negatively impacting listed plants on non-Federal lands, unless a person damages or destroys federally listed plants while in violation of a State law or a criminal trespass law. Where the species occurs on private lands, protections afforded by section 7(a)(2) of the Act are triggered only if there is a Federal nexus (i.e., an action funded, permitted, or carried out by a Federal agency). If the species is delisted, the protections afforded by the Act would no longer apply. Even in the absence of the protections of the Act, adequate regulatory mechanisms are in place, such as the

Federal Land Policy and Management Act of 1976, E.O. 11644 and E.O. 11989, to ensure the continued persistence of San Benito evening-primroses occurrences and suitable potential habitat.

Summary of Threats Analysis

A very limited range, small number of occurrences, and direct and indirect threats from OHV use and mining and associated facilities and road maintenance were the primary threats to San Benito evening-primrose at the time of listing in 1985 (50 FR 5755–5759, February 12, 1985). OHV use continued to be a significant threat to San Benito evening-primrose until the temporary closure of the Serpentine ACEC in 2008. The 2014 Resource Management Plan permanently reduced the amount of exposure San Benito evening-primrose has to OHV recreation and has resulted in indirectly removing the most significant threat to the species, which was direct loss of individuals by OHV recreation and indirect loss of habitat and seed bank through erosion on slopes and soil compaction on alluvial terraces. The threat from mining was reduced by 2002 with the closure of the last commercial mine, and future threats from mining are unlikely based on BLM management actions listed in the 2014 Resource Management Plan for the CCMA. Habitat alteration from invasive species and succession to woody vegetation communities are not likely to threaten San Benito evening-primrose because invasive species and woody vegetation communities are intolerant to serpentine soils. The significant increase in the number of known occurrences and the associated increase in range and the new habitat association greatly reduce the threat of stochastic events resulting in significant loss to the species. The effects of climate change on the species are predicted changes in temperature and rainfall by 2050, and do not suggest species-level threats to survival.

When individual threats that influence reproductive output, germination, and survival

occur together, one threat may add to, or exacerbate, the effects of another, resulting in a disproportionate increase in threat to the species. When this occurs, we call the interactive effects synergistic or cumulative. The lack of current threats to San Benito evening-primrose reduce the possibility of synergistic or cumulative effects occurring, and, given the current range of the species, number of known occurrences, and likelihood of new occurrences to become known, synergistic and cumulative effects do not pose a significant population-level impact to San Benito evening-primrose at this time nor do we anticipate that they will in the future.

Determination of San Benito Evening-Primrose Status

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of "endangered species" or "threatened species." The Act defines an "endangered species" as a species that is "in danger of extinction throughout all or a significant portion of its range," and a "threatened species" as a species that is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." For a more detailed discussion on the factors considered when determining whether a species meets the definition of "endangered species" or "threatened species" and our analysis on how we determine the foreseeable future in making these decisions, see Regulatory Framework, above.

Status Throughout All of Its Range

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we have assessed the best scientific and commercial information available regarding the past, present, and future threats faced by San Benito evening-primrose in this proposed rule. At the time of listing in 1985 (50 FR 5755–5759, February 12, 1985), San Benito evening-primrose was known from only nine occurrences within a very

narrow range that were all subject to potential loss from the threats listed in Factors A through E.

Off-highway vehicle recreation (Factor A), the greatest persistent threat to the species, has been reduced to levels that no longer pose a significant threat of extinction to San Benito evening-primrose or loss of its habitat, due to the closure of the Serpentine ACEC and the restriction of OHV use within the CCMA but outside of the Serpentine ACEC. Most significantly, surveys by the BLM have shown that the species is much more wide-ranging and common than originally known and occurs across a broader range of habitat types. The number of known occurrences has increased from 9 to 79 and includes 658 mapped point locations. The range of the species is now known from three watersheds, and occupied habitat covers 63.2 acres (25.6 ha). Our understanding of the ecology of the species has demonstrated that the species may persist through periods of disturbance due to the persistence of a robust and long-lived seedbank that facilitates reestablishment, dispersal, and buffers against stochastic events. Annual surveys of San Benito evening-primrose have demonstrated that there is a large amount of interannual variation in numbers of individuals observed. We believe that the 27 occurrences that have been monitored since 1983 have remained relatively stable around a 5-year moving average when the abnormally high count year (1988) is considered. Furthermore, the significant increase in the number of occurrences is not represented in the analysis of the 27 occurrences that were known at the time the Recovery Plan was written. The best available information indicates that Factors B, C, and E are not affecting the species and are unlikely to do so in the foreseeable future. The existing regulatory mechanisms in place are adequate to ensure the continued persistence of San Benito evening-primrose occurrences and suitable potential habitat because a majority of occurrences are managed on Federal land and are protected by a 2014 BLM Resources Management Plan and a BLM Area of Critical Environmental Concern (ACEC) designation.

Based on the information presented in this status review, the recovery criteria in the Recovery Plan have been achieved and the recovery goal identified in the Recovery Plan has been met for San Benito evening-primrose. Thus, after assessing the best available information, we conclude that San Benito evening-primrose is not in danger of extinction throughout all of its range either now or within the foreseeable future.

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 within the foreseeable future throughout all or a significant portion of its range.

Having determined that San Benito evening-primrose is not in danger of extinction or likely to become so within the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction or likely to become so within the foreseeable future in a significant portion of its range. The range of a species can theoretically be divided into portions in an infinite number of ways, so we first screen the potential portions of the species' range to determine if there are any portions that warrant further consideration. To do the "screening" analysis, we ask whether there are portions of the species' range for which there is substantial information indicating that: (1) the portion may be significant; and (2) the species may be, in that portion, either in danger of extinction or likely to become so in the foreseeable future. For a particular portion, if we cannot answer both questions in the affirmative, then that portion does not warrant further consideration and the species does not warrant listing because of its status in that portion of its range. Conversely, we emphasize that answering both of these questions in the affirmative is not a determination that the species is in danger of extinction or likely to become so in the foreseeable future throughout a significant portion of its range—rather, it is a step in

determining whether a more-detailed analysis of the issue is required.

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

We evaluated the range of San Benito evening-primrose to determine if any area may be a significant portion of the range. San Benito evening-primrose is a narrow endemic that occurs over 300 square miles, but occupies a relatively small amount of acreage (63.2 ac (25.6 ha) of occupied habitat). Genetic analysis indicated no differentiation in occurrences based on watershed or habitat and that there was no hybridization with a close relative. Every threat to the species in any portion of its range is a threat to the species throughout all of its range, and so the species has the same status under the Act throughout its narrow range. Therefore, we conclude, based on this screening analysis, that the species is not in danger of extinction or likely to become so in the foreseeable future in any significant portion of its range. Our conclusion—that we do not undertake additional analysis if we determine that the species has the same status under the Act throughout its narrow range—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); *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d , 946, 959 (D. Ariz. 2017); and *Center for Biological Diversity v. Everson*, 2020 WL 437289 (D.D.C. Jan. 28, 2020)..

Determination of Status

Our review of the best scientific and commercial data available indicates that the San Benito evening-primrose does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we propose to delist the San Benito evening-primrose from the List of Endangered and Threatened Plants.

Effects of This Rule

If this proposed rule is made final, it would revise 50 CFR 17.12(h) to remove San Benito evening-primrose from the Federal List of Endangered and Threatened Plants. The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to San Benito evening-primrose. Federal agencies would no longer be required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect San Benito evening-primrose.

Post-delisting Monitoring

Section 4(g)(1) of the Act requires us to implement a system to monitor effectively, for not less than 5 years, all species that have been recovered and delisted (50 CFR 17.11, 17.12). The purpose of this post-delisting monitoring is to verify that a species remains secure from the risk of extinction after it has been removed from the protections of the Act. The monitoring is designed to detect the failure of any delisted species to sustain itself without the protective measures provided by the Act. If, at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act. Section 4(g) of the Act

explicitly requires us to cooperate with the States in development and implementation of post-delisting monitoring programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of post-delisting monitoring. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation post-delisting.

Post-delisting Monitoring Overview

If we make this proposed rule final, the post-delisting monitoring is designed to verify that San Benito evening-primrose remains secure from the risk of extinction after its removal from the Federal List of Endangered and Threatened Plants by detecting changes in trend and habitat suitability. A draft post-delisting monitoring plan for the species can be found at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2019–0065. If this proposed rule is finalized, the final post-delisting monitoring plan will be agreed upon by the Service and the BLM prior to publication of a final rule.

Required Determinations

Clarity of the Rule

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

(a) Be logically organized;

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

(c) Use clear language rather than jargon;

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

(e) Use lists and tables wherever possible.

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

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

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare an environmental analyses pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal

public lands, to remain sensitive to Indian culture, and to make information available to tribes. There are no tribal lands associated with this proposed rule.

References Cited

A complete list of all references cited in this proposed rule is available on the Internet at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2019–0065, or upon request from the Ventura Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Ventura Fish and Wildlife Office in Ventura, California, in coordination with the Pacific Southwest Regional Office in Sacramento, California.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

§ 17.12 [Amended]

2. In § 17.12(h), remove the entry for "San Benito evening-primrose (*Camissonia benitensis*)" under FLOWERING PLANTS from the List of Endangered and Threatened Plants.

Aurelia Skipwith
Director,
U.S. Fish and Wildlife Service.

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