DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2022–0081; FF09E21000 FXES1111090FEDR 223]

RIN 1018–BF83

Endangered and Threatened Wildlife and Plants; 12-Month Finding for the Kern Plateau Salamander; Threatened Species Status With Section 4(d) Rule for the Kern Canyon Slender Salamander and Endangered Species Status for the Relictual Slender Salamander; Designation of Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; announcement of 12-month findings.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce 12-month findings on a petition to list the Kern Plateau salamander (*Batrachoseps robustus*), the Kern Canyon slender salamander (*Batrachoseps simatus*), and the relictual slender salamander (*Batrachoseps relictus*), three salamander species from the southern Sierra Nevada Mountains in California, under the Endangered Species Act of 1973, as amended (Act). We find that listing the Kern Canyon slender salamander and the relictual slender salamander is warranted. Accordingly, we propose to list the Kern Canyon slender salamander as a threatened species with a rule issued under section 4(d) of the Act (''4(d) rule''), and we propose to list the relictual slender salamander as an endangered species. We also propose to designate critical habitat under the Act for both of these species in Kern County, California. For the Kern Canyon slender salamander, approximately 2,051 acres (ac) (830 hectares (ha)) fall within the boundaries of the proposed critical habitat designation, and for the relictual slender salamander, approximately 2,685 ac (1,087 ha) fall within the boundaries of the proposed critical habitat designation. We also announce the availability of a draft economic analysis (DEA) of the proposed designations of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander. After a thorough review of the best available scientific and commercial information, we find that it is not warranted at this time to list the Kern Plateau salamander. We ask the public to submit to us at any time new information relevant to the status of the Kern Plateau salamander or its habitat.

DATES: For the proposed rule to list the Kern Canyon slender salamander and the relictual slender salamander and designate critical habitat for these species and for the draft economic analysis for this proposed rulemaking action, we will accept comments received or postmarked on or before December 19, 2022. 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 a public hearing, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by December 2, 2022.

Petition finding for the Kern Plateau salamander: For the Kern Plateau salamander, the finding in this document was made on October 18, 2022.

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

(1) *Electronically:* Go to the Federal eRulemaking Portal: *https://www.regulations.gov.* In the Search box, enter FWS–R8–ES–2022–0081, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on ''Comment.''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R8–ES–2022–0081, U.S. Fish and Wildlife Service, MS: PRB/3W, 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 *https://www.regulations.gov.* This generally means that we will post any personal information you provide us (see Information Requested, below, for more information).

Availability of supporting materials: For the proposed critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the decision file for this critical habitat designation and are available at *https://www.regulations.gov* at Docket No. FWS–R8–ES–2022–0081. Additional supporting information that we developed for this proposed critical habitat designation, including a draft economic analysis, is also available at *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Michael Fris, Field Supervisor, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Sacramento, CA 95825; telephone 916–414–6700. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species warrants listing if it meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become endangered in the foreseeable future throughout all or a significant portion of its range). If we determine that a species warrants listing, we must list the species promptly and designate the species' critical habitat to the maximum extent prudent and determinable. We have determined that the Kern Canyon slender salamander meets the definition of a threatened species and that the relictual slender salamander meets the definition of an endangered species; therefore, we are proposing to list them as such and proposing a designation of their critical habitat. Both listing a species as an endangered or threatened species and making a critical habitat determination can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

What this document does. We find that listing the Kern Plateau salamander as an endangered or threatened species is not warranted. We propose to list the Kern Canyon slender salamander as a threatened species and the relictual slender salamander as an endangered species, and we propose the designation of critical habitat for these two species.

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 Kern Canyon slender salamander is facing threats due to grazing, recreation, fire,

and climate change, and that these threats will increase such that the species is likely to become endangered in the foreseeable future; therefore, we are proposing to list it as a threatened species. We have determined that the relictual slender salamander is facing threats from roads, grazing, fire, timber harvest, and hazard tree removal that put the species in danger of extinction throughout all of its range. The relictual slender salamander exists in a very narrow area in a limited ecological setting, and a single catastrophic event could result in extinction of the species. Therefore, we are proposing to list it as an endangered species.

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

Information Requested

For the Kern Plateau salamander, we ask the public to submit to us at any time new information relevant to the species' status or its habitat.

For the Kern Canyon slender salamander and the relictual slender salamander, we intend that any final action resulting from this proposed rule 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 any other interested parties concerning this proposed rule.

We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns, including the locations of any additional populations of these species;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, their habitats, or both.

(2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to these species and existing regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status of these species.

(5) Information on regulations that are necessary and advisable to provide for the conservation of the Kern Canyon slender salamander and that we can consider in developing a 4(d) rule for the species. In particular, information concerning the extent to which we should include any of the section 9 prohibitions in the 4(d) rule or whether we should consider any additional exceptions from the prohibitions in the 4(d) rule.

(6) The reasons why we should or should not designate habitat as ''critical habitat'' under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including information regarding the following factors that the regulations identify as reasons why designation of critical habitat may be not prudent:

(a) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species; or

(b) Such designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Services may consider include but are not limited to: Whether the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or whether any areas meet the definition of ''critical habitat.''

(7) Specific information on:

(a) The amount and distribution of Kern Canyon slender salamander and relictual slender salamander habitat;

(b) Any additional areas occurring within the range of the species in Kern County that should be included in the designation because they (i) are occupied at the time of listing and contain the physical or biological features that are essential to the conservation of the species and that may require special management considerations, or (ii) are unoccupied at the time of listing and are essential for the conservation of the species; and

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change.

(8) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(9) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the related benefits of including or excluding specific areas.

(10) Information on the extent to which the description of probable economic impacts in the draft economic analysis is a reasonable estimate of the likely economic impacts and any additional information regarding probable economic impacts that we should consider.

(11) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act. If you think we should exclude any areas, please provide information supporting a benefit of exclusion.

(12) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

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, do not provide substantial information necessary to support a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made solely on the

basis of the best scientific and commercial data available, and section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific 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 *https://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 *https://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 *https://www.regulations.gov.*

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 Kern Canyon slender salamander is endangered instead of threatened, that the relictual slender salamander is threatened instead of endangered, or we may conclude that either or both species do not warrant listing as either endangered species or threatened species. For critical habitat, our final designation may not include all areas proposed, may include some additional areas that meet the definition of critical habitat, and may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in the extinction of the species.

In addition, we may change the parameters of the prohibitions or the exceptions to those prohibitions in the proposed 4(d) rule for the Kern Canyon slender salamander if we conclude it is appropriate in light of comments and new information received. For example, we may expand the prohibitions to include prohibiting additional activities if we conclude that those additional activities are not compatible with conservation of the species. Conversely, we may establish additional exceptions to the prohibitions in the final rule if we conclude that the activities would facilitate or are compatible with the conservation and recovery of the species.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing. We may hold the public hearing in person or virtually via webinar. We will announce any public hearing on our website, in addition to the **Federal Register**. The use of virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

List of Acronyms and Abbreviations

We use many acronyms and abbreviations in this rule. For the convenience of the reader, we define some of them here:

ac = acres
BLM = Bureau of Land Management
CAL FIRE = California Department of Forestry and Fire Protection
CESA = California Endangered Species Act
cm = centimeters
CNDDB = California Natural Diversity Database
ft = feet
ha = hectares
in = inches
km = kilometers
IPCC = Intergovernmental Panel on Climate Change
m = meters
mi = miles
OHV = off-highway vehicle
RCP = Representative Concentration Pathways
SSA = Species Status Assessment
USFS = U.S. Forest Service

Previous Federal Actions

On July 11, 2012, the Center for Biological Diversity (CBD 2012, entire) submitted a petition to list 53 species of reptiles and amphibians including the relictual slender salamander (*Batrachoseps relictus*), Kern Canyon slender salamander (*Batrachoseps simatus*), and Kern Plateau salamander (*Batrachoseps robustus*) as threatened or endangered species under the Act. On July 1, 2015, we published a 90-day finding that the petition presented substantial scientific and commercial information that the listing of the relictual slender salamander and the Kern Canyon slender salamander may be warranted (80 FR 37568). On September 18, 2015, we published a 90-day finding that the petition presented substantial scientific and commercial information that the listing of the Kern Plateau salamander may be warranted (80 FR 56423).

Supporting Documents

A species status assessment (SSA) team composed of Service biologists, in consultation with species experts, prepared an SSA report for the Kern Plateau salamander, the Kern Canyon slender salamander, and the relictual slender salamander (Service 2022a, entire). The SSA report represents 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. In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of four appropriate specialists regarding the SSA. We received two responses.

I. Finding for the Kern Plateau Salamander

Under section 4(b)(3)(B) of the Act, we are required to make a finding whether or not a petitioned action is warranted within 12 months after receiving any petition that we have determined contains substantial scientific or commercial information indicating that the petitioned action may be warranted (''12-month finding''). We must make a finding that the petitioned action is: (1) Not warranted; (2) warranted; or (3) warranted but precluded. ''Warranted but precluded'' means that (a) the petitioned action is warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are endangered or threatened species, and (b) expeditious progress is being made to add qualified species to the Lists of Endangered and Threatened Wildlife and Plants (Lists) and to remove from the Lists species for which the protections of the Act are no longer necessary. Section 4(b)(3)(C) of the Act requires that, when we find that a petitioned action is warranted but precluded, we treat the petition as though resubmitted on the date of such finding; accordingly, a subsequent finding must be made within 12 months of that date. We must publish these 12-month findings in the **Federal Register**.

Summary of Information Pertaining to the Five Factors

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.'' The regulatory language that is applicable to determinations of the foreseeable future is contained in the regulations at 50 CFR 424.11(d) promulgated in 2019 (*In re: Washington Cattlemen's Ass'n,* No. 22–70194 (9th Cir. Sept. 21, 2022) (staying the district court's vacatur of the 2019 regulations pending resolution of the motion for reconsideration) (Washington Cattlemen's)). However, those regulations remain the subject of ongoing litigation, and their continued applicability is therefore uncertain. If the litigation results in vacatur of the 2019 regulations, the regulations that were in effect before those 2019 regulations (the pre-2019 regulations) would again become the governing law for listing decisions. Because of the uncertainty surrounding the legal status of the regulations, we undertook two analyses of the foreseeable future for the Kern Plateau salamander: one under the 2019 regulations and one under the pre-2019 regulations, which may be reviewed in the 2018 edition of the Code of Federal Regulations at 50 CFR 424.11(d). Those pre-2019 regulations did not include provisions clarifying the meaning of ''foreseeable future,'' so we applied a 2009 Department of the Interior Solicitor's opinion (M–37021, ''The Meaning of 'Foreseeable Future' in Section 3(2) of the Endangered Species Act'' (Jan. 16, 2009) (M–37021).

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.

In conducting our evaluation of the five factors provided in section 4(a)(1) of the Act to determine whether the Kern Plateau salamander (Service 2022b, entire) currently meets the definition of ''endangered species'' or ''threatened species,'' we considered and thoroughly evaluated the best scientific and commercial data available regarding threats, regulatory mechanisms, conservation measures, current condition, and future condition. We reviewed the petition, information available in our files, and other available published and unpublished information. This evaluation includes information from recognized experts; Federal, State, and Tribal governments; academic institutions; private entities; and other members of the public. After comprehensive assessment of the best scientific and commercial data available, we determined that the Kern Plateau salamander does not meet the definition of an endangered or a threatened species.

The SSA Report for the Three Slender Salamanders and the Species Assessment Form for the Kern Plateau salamander contain more detailed biological information regarding the Kern Plateau salamander, a thorough description of the factors influencing the species' viability, and the current and future conditions of the species (Service 2022a, entire; Service 2022b, entire). This supporting information can be found on the internet at *https://www.regulations.gov* under docket number FWS–R8–ES–2022–0081. The following is a summary of our determination for the Kern Plateau salamander.

Summary of Finding

The Kern Plateau salamander is a slender salamander that has a broad, robust body with 16–17 costal grooves and a relatively short tail. The salamander is known from 35 sites, spread across areas of Sequoia National Forest and Inyo National Forest and privately owned land on the eastern slope of the Sierra Nevada, located in Inyo and Kern Counties, California.

The Kern Plateau salamander requires bodies of surface water such as seeps, springs, streams, and associated riparian and mesic habitat. In addition, the salamander requires the presence of sufficient refugia consisting of materials such as woody debris, bark, leaf litter, rocks, and other cover objects within mesic and riparian habitats. Abundant interstitial spaces must be available

underneath debris or cover objects to facilitate resting, foraging, and movement of salamanders. Microclimates underneath debris or cover objects must be cool and moist as the Kern Plateau salamander is susceptible to desiccation.

In the SSA report (Service 2022a, pp. 12–15), the range of the Kern Plateau salamander was divided into three geographic groups: the Kern Plateau geographic group in the southwestern Sierra Nevada in Kern County, CA; the Inyo geographic group on the eastern slope of Sierra Nevada in Inyo County, CA; and the Scodie Mountain geographic group in the Scodie Mountains in Kern County, CA. The Kern Plateau and Scodie Mountain geographic groups are entirely within the Sequoia National Forest. The Scodie Mountain geographic group also falls within the Kiavah Wilderness. The Inyo geographic group includes areas in the Inyo National Forest and outside of the National Forest in Owens and Indian Wells Valleys.

Kern Plateau Salamander: Status Throughout All of Its Range

The Kern Plateau salamander is an endemic species currently known from 35 sites across a 302,035-ha (746,347-ac) range, with no identified reductions in historical range, redundancy, or representation. In the SSA report and the SAF, we analyzed ten potential threats impacting the species and its habitat. Currently, habitat supporting the Kern Plateau salamander is primarily affected by habitat degradation from roads (Factor A), recreation (Factor A), grazing (Factor A), timber harvest and hazard tree removal (Factor A), fire (Factor A), and climate change (Factor E). These threats continue to degrade the seep and spring habitat, and in some rare cases may result in direct mortality of individual Kern Plateau salamanders.

Fire (Factor A) currently presents one of the largest risks to the Kern Plateau salamander. The fire threat as measured by CAL FIRE is high to very high at most of the sites occupied by the Kern Plateau salamander on the Kern Plateau and Scodie Mountain geographic groups, and moderate to high at sites in the Inyo geographic group (Service 2022a, figure 27). There are few regulatory mechanisms available to address the risk of catastrophic wildfire to the species. The Scodie Mountain geographic group previously experienced a high-severity fire in 1997 that altered the habitat type and likely degraded the seep and stream microhabitat. In addition to all sites being subjected to fire risk, most sites across the species' range are further subject to habitat degradation through grazing, with a majority of sites within grazing allotments (Factor A).

The threat from the impact of roads (Factor A), recreation (Factor A), and timber harvest and hazard tree removal (Factor A) to the Kern Plateau salamander varies throughout the species' range. Habitat in the Inyo geographic group is more isolated from roads and recreation, and timber harvest does not take place in the area (additionally, hazard tree removal may not be carried out in isolated areas). Timber harvest has not occurred within the Scodie Mountains, but within this area there are roads and trails in proximity to the occupied sites, and the nearby McIver's Cabin is a popular destination for OHV recreationists and hikers. Within the Kern Plateau geographic group, there are areas that have frequent motorized recreation use, tree harvest, and hazard tree removal. In the parts of geographic groups found within Inyo and Sequoia National Forests, the effects associated with some of the threats impacting the species are being reduced in magnitude due to implemented regulatory mechanisms (Factor D) within the national forests due to the Kern Plateau salamander being a USFS species of conservation concern.

After evaluating threats to the Kern Plateau salamander and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we find that though the Kern Plateau salamander currently has some reduced population resiliency in two of the geographic groups, population resiliency is maintained from historical levels at the third geographic group (Inyo), and, overall, the species is still extant at multiple sites throughout the range. Additionally, species redundancy is currently maintained at its historical condition throughout the two largest geographic groups. The Kern Plateau salamander is a narrow endemic and does not have a broad range that encompasses large environmental variability; however, because the species is still distributed throughout its historical range, which includes a range of elevations (1,434–2,804 m (4,705–9,200 ft)) and climatic conditions, the Kern Plateau salamander maintains ecological representation. Thus, after assessing the best available information, we conclude that the Kern Plateau salamander is not in danger of extinction throughout all of its range.

Therefore, we proceed with determining whether the Kern Plateau salamander is likely to become endangered within the foreseeable future throughout all of its range. In considering the foreseeable future as it relates to the status of the Kern Plateau salamander, we considered the timeframes applicable to the relevant risk factors (threats) to the species and whether we could draw reliable predictions about future exposure, timing, and scale of negative effects and the species' response to these effects. We considered whether we could reliably assess the risk posed by the threats to the species, recognizing that our ability to assess risk is limited by the variable quantity and quality of available data about effects to the Kern Plateau salamander and its response to those effects.

The SSA report's analysis of future scenarios over a 50-year timeframe encompasses the best available information for projected future changes in climate change and its effect on modified hydrology across the range of the Kern Plateau salamander. This 50-year timeframe enabled us to consider the threats/stressors acting on the species and to draw conclusions on the species' response to those factors. In our future conditions analysis, we considered the ''intermediate'' emissions scenario of RCP 4.5 (Scenario 1) and the ''very high'' emissions scenario of RCP 8.5 (Scenario 2). Under Scenario 1, the resiliency of the Inyo, Kern Plateau, and Scodie geographic groups will be reduced from the current condition. The resiliency of the Scodie Mountain geographic group will be the furthest reduced, and the Scodie Mountain geographic group will be more vulnerable to stochastic events. However, the representation and redundancy of the Kern Plateau salamander will be maintained from current levels. Under Scenario 2, decreased resiliency, representation, and redundancy is projected for the three geographic units, with the Scodie Mountain geographic group again being the most vulnerable to stochastic events. Despite a decline in resiliency under both scenarios and a decline in representation and redundancy under Scenario 2, the Kern Plateau salamander is projected to maintain its distribution throughout the major areas that it historically occupied, with the Inyo and Kern Plateau geographic groups retaining more suitable habitat and occupied sites than the Scodie Mountain geographic group. Even considering threats impacting the species and the species' response, the Kern Plateau salamander will likely maintain enough resiliency, representation, and redundancy to

maintain viability into the foreseeable future.

After assessing the best available information on the factors affecting the species (threats) within our future scenarios and the species' response to those factors, we conclude that the Kern Plateau salamander is not likely to become endangered within the foreseeable future throughout all of its range.

Kern Plateau Salamander: Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. Having determined that the Kern Plateau salamander is not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction or likely to become so in the foreseeable future in a significant portion of its range—that is, whether there is any portion of the species' range for which it is true that both (1) the portion is significant; and (2) the species is in danger of extinction now or likely to become so in the foreseeable future in that portion. Depending on the case, it might be more efficient for us to address the ''significance'' question or the ''status'' question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species' range.

In undertaking this analysis for the Kern Plateau salamander, we chose to address the status question first—we consider information pertaining to the geographic distribution of both the species and the threats that the species faces to identify any portions of the range where the species may be endangered or threatened.

For the Kern Plateau salamander, we considered the following 10 threats: Roads (Factor A), recreation (Factor A); grazing (Factor A); timber harvest (Factor A); hazard tree removal (Factor A); infrastructure development (Factor A); fire (Factor A); overutilization due to recreational, educational, and scientific use (Factor B); disease (Factor C); predation (Factor C); effects associated with small population size (Factor E); and climate change (Factor E). We also evaluated existing regulatory mechanisms (Factor D). Most of these threats are site-specific or affect only individual salamanders; thus, they do not rise to the level of affecting the species at a biologically meaningful scale. However, we now further consider the impact of climate change, fire, grazing, and timber harvest of dead trees, because these four threats occur across the range of the species, though there may be some local variation in magnitude.

Next, we consider if any portions of the range may be uniquely vulnerable to those threats. As we noted above, the Scodie Mountain geographic group has a reduced ability to withstand and recover from normal stochastic variation, relative to historical conditions and will have reduced condition in the foreseeable future as compared to other geographic groups. However, the impact of these threats listed above is only slightly higher in the Scodie Mountain geographic group than in the Kern Plateau geographic group. Additionally, the entirety of the Scodie Mountain geographic group falls within the boundary of the Sequoia National Forest; thus, the magnitude of threats is reduced by measures to reduce impacts to seeps and springs from threats such as grazing and from hazard tree removal. The land management plan outlines desired habitat management conditions for riparian areas which, upon implementation, would reduce the risks of catastrophic wildfire and climate change in the area. Though there are a limited number of occurrences in the Scodie Mountain geographic group, scientists have detected salamanders even post-fire, indicating that despite degraded habitat conditions, it still maintains the ability to withstand stochastic events. Thus, we found no concentration of threats at a biologically meaningful scale anywhere in the Kern Plateau salamander's range, and we conclude that there is no portion of the range where the status of the species differs from any other portion of the species' range.

Therefore, we find that the species is not in danger of extinction now or likely to become so in the foreseeable future in any significant portion of its range. This does not conflict with the courts' holdings in *Desert Survivors* v. *Department of the Interior,* 321 F. Supp. 3d 1011, 1070–74 (N.D. Cal. 2018), and *Center for Biological Diversity* v. *Jewell,* 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) because, in reaching this conclusion, we did not apply the aspects of the Final Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species'' (79 FR 37578; July 1, 2014), including the definition of ''significant'' that those court decisions held to be invalid.

Kern Plateau Salamander: Determination of Status

Our review of the best available scientific and commercial information indicates that the Kern Plateau salamander 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 find that listing the Kern Plateau salamander is not warranted at this time. A detailed discussion of the basis for this finding can be found in the Kern Plateau salamander species assessment form (Service 2022b, entire) and other supporting documents, such as the accompanying SSA report (Service 2022a, entire) (see *https://www.regulations.gov* under docket number FWS–R8–ES–2022–0081).

II. Proposed Listing Determination for the Kern Canyon Slender Salamander and the Relictual Slender Salamander

Background

A thorough review of the taxonomy, life history, and ecology of the Kern Canyon slender salamander and the relictual slender salamander is presented in the SSA report (Service 2022a, pp. 2–14).

The Kern Canyon slender salamander and the relictual slender salamander are lungless, terrestrial salamanders that are found in the southern Sierra Nevada. Slender salamanders are within the genus Batrachoseps and are known for their long, thin bodies, small limbs, and projectile tongues that they use to catch small invertebrate prey (Stebbins and McGinnis 2012, pp. 124–140). Relictual slender salamanders are small (1.3–1.9 in (3.3–4.7 cm) snout-vent length) with 18–19 costal grooves and have blackish brown coloration with a red, yellow, or brown dorsal stripe (Jockusch et al. 2012, p. 14; Stebbins and McGinnis 2012, p. 139). Kern Canyon slender salamanders are larger (1.6–2.2 in (4.0–5.6 cm) snout-vent length) with broader head and limbs and 20–21 costal grooves (Stebbins and McGinnis 2012, p. 130). The ventral surfaces and sides of Kern Canyon slender salamanders are dark brown with flecks of lighter color, and the dorsal surfaces are mottled bronze and red. Many of the life-history characteristics of the relictual and Kern Canyon slender salamanders are

unknown but are assumed to be similar to other species of slender salamanders.

Slender salamanders are thought to lay eggs terrestrially in protected areas, hatch from eggs as miniature adults, reach reproductive maturity in 2–4 years, and live for a maximum of 8–10 years (Hendrickson 1954, p. 19; Stebbins 1985, p. 39; Wake and Castanet 1995, p. 63; Jockusch and Mahoney 1997, entire; Wake 2017, entire). Slender salamanders are active on the surface seasonally when conditions are favorable for performing skin and buccopharyngeal respiration (oxygen is taken up simply by diffusion or by the contraction and relaxation of the muscles of the cheeks or mouth and throat). At lower elevations, the relictual slender salamanders and Kern Canyon slender salamanders have been found active on the surface from January to May; at higher elevations, they are active from March to early November (Jockusch et al. 2012, p. 17; Jockusch 2021a, pers. comm.). When these species are active on the surface, they are usually found under cover objects, such as rocks, woody debris, and leaf litter, that are in proximity to seeps, springs, or streams (Stebbins 1985, p. 39; Jockusch and Mahoney 1997, entire; Wake 2017, entire). When conditions are not favorable on the surface, slender salamanders are thought to shelter in underground burrows (Cunningham 1960, p. 95; Lannoo 2005, pp. 688–693).

The Kern Canyon slender salamander was known historically from 18 occupied sites to the southwest of the Isabella Lake reservoir in Kern County, California. Kern Canyon slender salamanders are found within Sequoia National Forest in the lower Kern River Canyon and outside of Sequoia National Forest within the Erskine Creek and Bodfish Creek drainages. Kern Canyon slender salamanders occur in narrow canyons in rocky habitat within the margins of seeps and streams or talus slopes (Lannoo 2005, pp. 691–693). They are found under rocks and woody debris in areas that retain soil moisture. Kern Canyon slender salamanders are associated with pine-oak woodlands with overstory of foothill pine (*Pinus sabiniana*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), California buckeye (*Aesculus californica*), Freemont cottonwood (*Populus fremontii*), sycamore (*Platanus racemosa*), and willow (*Salix* spp.). Historically, Kern Canyon slender salamanders may have also been found in open grasslands.

The relictual slender salamander has historically been documented at 13 sites within a small area of Sequoia National Forest in Kern County, California. Within this limited range, the species is found in small patches of moist, rocky habitat within the margins of seeps, springs, and streams. Relictual slender salamanders have been observed submerged in seeps and springs and under cover objects that have water beneath them (Lannoo 2005, p. 687; Jockusch et al. 2012, p. 17). Consequently, the species has been described as semi-aquatic and is thought to have a closer association with water than other species of slender salamanders. Two communal nests of relictual slender salamanders have been found during the spring and early summer in rocky habitat at the edge of seep and stream habitat (Jockusch 2021a, pers. comm.). In the lower Kern River Canyon, the relictual slender salamander is found in valley foothill riparian habitat and blue oak woodland with limited tree cover of oaks (*Quercus* spp.), buckeyes (*Aesculus* spp.), and sycamores. On Breckenridge Mountain, the species is found in Sierran mixed-conifer forest with closed canopies of pine (*Pinus* spp.), fir (*Abies* spp.), and oak (*Quercus* spp.).

Information on occurrences for the Kern Canyon slender salamander and the relictual slender salamander is limited, as widespread systematic surveys for the species have not been conducted. Therefore, the best available information on the Kern Canyon slender salamander and the relictual slender salamander comes from recorded incidental observations and opportunistic searches over limited areas. Due to the nature of these records of observations, the survey effort for the two species is not standard from one site to another, across geographic groups, or from species to species. At some of the sites where salamanders have been observed, the sites have not been searched for the species over the last 30–40 years. In these cases, there is considerable uncertainty as to whether the species continues to occupy the sites. In the absence of more recent information, if conditions at the site are still suitable to support the species, we assume that the species continues to occupy these sites but recognize that there is uncertainty associated with this assumption.

There is no available information on population structure or population sizes of either the Kern Canyon slender salamander or the relictual slender salamander. Therefore, we divide the sites of each species into geographic groups to aid our analysis in our SSA report and this proposed rule. The Kern Canyon slender salamander has historically been documented in 18 sites in the Lower Kern River Canyon and Erskine Creek geographic groups; only 9 of those sites are currently considered extant (table 1), although 2 have not had surveys reported to CNDDB in the last 30–40 years. The relictual slender salamander has been documented from 13 sites in the Lower Kern River Canyon geographic group, the Lucas Creek geographic group, and the Squirrel Meadow geographic group. All five sites in the Lower Kern River Canyon geographic group are considered to be extirpated, and eight sites in the other two geographic groups are currently considered extant. In 2019, a search of mesic habitat on Breckenridge Mountain led to the discovery of four sites (Flying Dutchman Drainage, Mill Creek Drainage A, Mill Creek Drainage B, Mill Creek Drainage C) occupied by the relictual slender salamander. At two of those sites more than 20 individuals were found; however, we do not have specific information on which of the 4 sites had more than 20 individuals (Figure 1; Jockusch 2021a, pers. comm.).

TABLE 1—KERN CANYON SLENDER SALAMANDER SITES IN CALIFORNIA

[CNDDB 2022, unpaginated; Jockusch 2021a, pers. comm]

Site	Geographic group	Range of number observed	Year first observed	Year last observed	Year last surveyed	Presumed extant?
Cow Flat Creek	Lower Kern River Canyon	0–5	1952	1970	1979 *	No **
Stark Creek	Lower Kern River Canyon	1–7	1960	1979	1979 *	No **
SE of HWY 178	Lower Kern River Canyon	2–11	1960	1978	1979 *	No **
Unnamed drainage (SW Democrat Hot Springs).	Lower Kern River Canyon	1	1970	1970	1970 *	No **
Dougherty Creek	Lower Kern River Canyon	1–8	1970	1991	1991 *	No **
Lucas Creek	Lower Kern River Canyon	20	1975	1975	1975 *	No **
Mill Creek	Lower Kern River Canyon	1	1979	1979	1979 *	No **

TABLE 1—KERN CANYON SLENDER SALAMANDER SITES IN CALIFORNIA—Continued

[CNDDB 2022, unpaginated; Jockusch 2021a, pers. comm]

Site	Geographic group	Range of number observed	Year first observed	Year last observed	Year last surveyed	Presumed extant?
Miracle Hot Springs	Lower Kern River Canyon	1–12	1979	2008	2008 †	Yes
Seep N of Cow Flat Creek	Lower Kern River Canyon	1	1991	1991	1991 *	No **
NE of Hobo Campground	Lower Kern River Canyon	1	2007	2018	2018	Yes
S Cow Flat Rd	Lower Kern River Canyon	1	2010	2010	2010	No **
Erskine Creek A	Erskine Creek Canyon	3	1981	1981	1981	Yes ‡
Erskine Creek B	Erskine Creek Canyon	12	1981	1981	1981	Yes ‡
Erskine Creek C	Erskine Creek Canyon	2–3	1992	1993	1993	Yes
Bodfish Creek A	Erskine Creek Canyon	2	2001	2001	2001	Yes
Erskine Creek D	Erskine Creek Canyon	1	2010	2010	2010	Yes
Eagle Peak	Erskine Creek Canyon	1	2019	2019	2019	Yes
Bodfish Creek B	Erskine Creek Canyon	1	2021	2021	2021	Yes
Geographic Group Summary	Lower Kern River Canyon	0–20	1952	2018	2018	Yes
Geographic Group Summary	Erskine Creek Canyon	1–12	1981	2021	2021	Yes

* More recent negative surveys have not been reported to CNDDB.

** A species expert indicates the Kern Canyon slender salamander may be largely or entirely gone from the site.

† A species expert indicates the Kern Canyon slender salamander has been observed at this site since 2008. However, the year of more recent observations has not been reported to CNDDB.

‡ Surveys for the Kern Canyon slender salamander at this site have not been reported to CNDDB in the last 30–40 years, so there is uncertainty as to whether the species is present.

TABLE 2—RELICTUAL SLENDER SALAMANDER SITES IN CALIFORNIA

[CNDDB 2022, unpaginated; Jockusch 2021a, pers. comm]

Site	Geographic group	Range of number observed	Year first observed	Year last observed	Year last surveyed	Presumed extant?
Cow Flat Creek	Lower Kern River Canyon	0–12	1955	1968	1979 *	No
Lucas Creek A	Lower Kern River Canyon	0–6	1960	1960	1975 *	No
Unnamed Tributary (E Democrat Hot Springs).	Lower Kern River Canyon	0–8	1964	1964	1964 *	No
Stark Creek	Lower Kern River Canyon	0–4	1964	1964	1964 *	No
Unnamed Tributary (SW Democrat Hot Springs).	Lower Kern River Canyon	0–3	1967	1967	1967 *	No
Lucas Creek B **	Lucas Creek	1–8	2001	2019	2019	Yes
Tributary to Lucas Creek A	Lucas Creek	2	2017	2017	2017	Yes
Tributary to Lucas Creek B	Lucas Creek	1	2021	2021	2021	Yes
NE of Squirrel Meadow	Squirrel Meadow	0–30	1977	2021	2021	Yes
Flying Dutchman Drainage	Squirrel Meadow	Information not available	2019	2021	2021	Yes
Mill Creek Drainage A	Squirrel Meadow	Information not available	2019	2021	2021	Yes
Mill Creek Drainage B	Squirrel Meadow	Information not available	2019	2021	2021	Yes
Mill Creek Drainage C	Squirrel Meadow	Information not available	2019	2019	2019	Yes
Geographic Group Summary	Lower Kern River Canyon	0–12	1955	1968	1979 *	No
Geographic Group Summary	Lucas Creek	1–8	2001	2021	2021	Yes
Geographic Group Summary	Squirrel Meadow	0–30	1977	2021	2021	Yes

* This site has been searched for the species since the year identified as the ''year last surveyed'' (Hansen 1997, entire; Jennings and Hayes 1994, p. 22; Lannoo 2005, p. 687). However, the more recent negative surveys have not been reported to CNDDB.

** This site encompasses two CNDDB occurrence points on Lucas Creek that are considered to be one site (Jockusch 2021b, pers. comm.).

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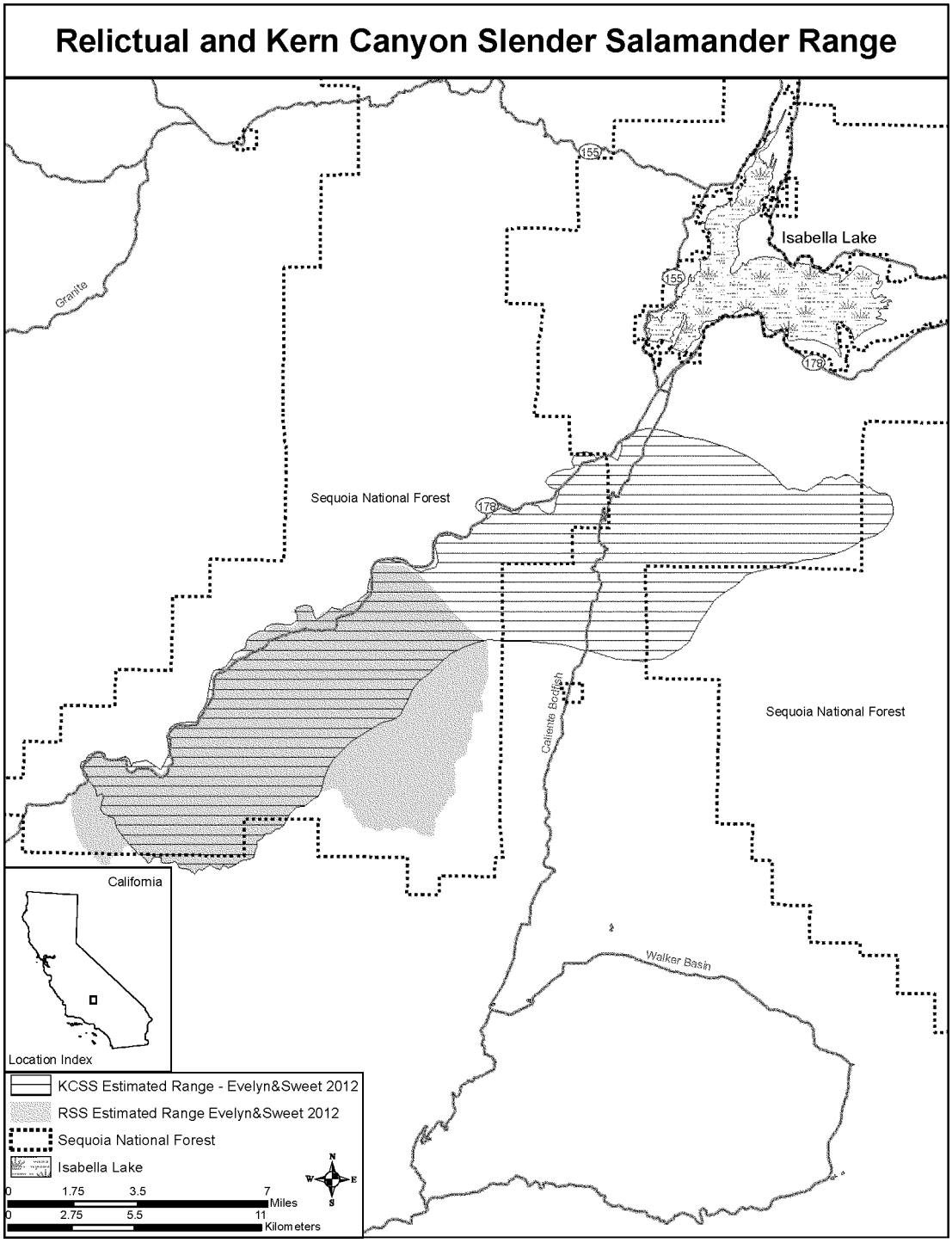

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Figure 1—Estimated Range of the Kern Canyon Slender Salamander and the Relictual Slender Salamander

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the Code of Federal Regulations set forth the procedures for determining whether a species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for threatened and endangered species. In 2019, jointly with the National Marine Fisheries Service, the Service issued final rules that revised the regulations in 50 CFR parts 17 and 424 regarding how we add, remove, and reclassify threatened and endangered species and the criteria for designating listed species' critical habitat (84 FR 45020 and 84 FR 44752; August 27, 2019). At the same time the Service also issued final regulations that, for species listed as threatened species after September 26, 2019, eliminated the Service's general protective regulations automatically applying to threatened species the prohibitions that section 9 of the Act applies to endangered species (collectively, the 2019 regulations).

However, as discussed under I. Finding for the Kern Plateau Salamander, the U.S. District Court for the Northern District of California vacated the 2019 regulations (*Center for Biological Diversity* v. *Haaland,* No. 4:19–cv–05206–JST, Doc. 168 (N.D. Cal. July 5, 2022) (*CBD* v. *Haaland*)), reinstating the regulations that were in effect before the effective date of the 2019 regulations as the law governing species classification and critical habitat decisions. Accordingly, in developing the analysis contained in this proposal, we applied the pre-2019 regulations, which may be reviewed in the 2018 edition of the Code of Federal Regulations at 50 CFR 17.31, 17.71, 424.02, 424.11(d)–(e), and 424.12(a)(1) and (b)(2)). Because of the ongoing litigation regarding the court's vacatur of the 2019 regulations, and the resulting uncertainty surrounding the legal status of the regulations, we also undertook an analysis of whether the proposal would be different if we were to apply the 2019 regulations. That analysis, which we described in a separate memo in the decisional file and posted on *https://www.regulations.gov,* concluded that we would have reached the same proposal if we had applied the 2019 regulations. For both species, the relevant critical habitat regulations we considered were (1) critical habitat prudency (424.12(a)(1)), (2) unoccupied critical habitat (424.12(b)(2)), and (3) the definition of physical or biological features (PBFs)(424.12.02). For the Kern Canyon slender salamander, we also considered (1) foreseeable future and (2) the 4(d) rule.

On September 21, 2022, the U.S. Circuit Court of Appeals for the Ninth Circuit stayed the district court's July 5, 2022, order vacating the 2019 regulations until a pending motion for reconsideration before the district court is resolved (*In re: Cattlemen's Ass'n,* No. 22–70194). The effect of the stay is that the 2019 regulations are currently the governing law. Because a court order requires us to submit this proposal to the **Federal Register** by September 30, 2022, it is not feasible for us to revise the proposal in response to the Ninth Circuit's decision. Instead, we hereby adopt the analysis in the separate memo that applied the 2019 regulations as our primary justification for the proposal. However, due to the continued uncertainty resulting from the ongoing litigation, we also retain the analysis in this preamble that applies the pre-2019 regulations and we conclude that, for the reasons stated in our separate memo analyzing the 2019 regulations, this proposal would have been the same if we had applied the pre-2019 regulations For the Kern Canyon slender salamander, we conclude that the decision would have been the same if we had applied the 2019 regulations at 50 CFR 424.11(d) because the data regarding timeframes used in our analysis pertaining to the threats and species' responses to those threats are based on the best available science, and supports our analysis that the threats and species' responses to those threats are likely (2019 regulations) and supports our ability to make reasonably reliable predictions about the future (2009 M-Opinion). Under either regulatory scheme we find that critical habitat is prudent for the relictual slender salamander and the Kern Canyon slender salamander and that unoccupied critical habitat is essential for the conservation of both species. In order to recover the species, connecting corridors of suitable habitat need to be maintained between areas occupied by the species. It is reasonably certain that the unoccupied units will contribute to the conservation of the species by providing additional areas for recovery actions and providing connectivity between occupied areas. The unoccupied units contain one or more of the physical or biological features that are essential to the conservation of the species and have the abiotic and biotic features that currently or periodically contain the resources and conditions necessary to support one or more life processes of the salamanders.

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 species' expected response 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.'' With the vacatur of the 2019 regulation regarding foreseeable future, we refer to a 2009 Solicitor's Opinion (M–37021), which states that the foreseeable future ''must be rooted in the best available data that allow predictions into the future'' and extends as far as those predictions are ''sufficiently reliable to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.''

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 SSA report documents the results of our comprehensive biological review of the best scientific and commercial data regarding the status of the species, including an assessment of the potential threats to the species. The SSA report does not represent our decision on whether the species should be proposed for listing as an endangered or threatened species under the Act. However, it does provide 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 following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS–R8–ES–2022–0081 and on *https://www.regulations.gov*.

To assess Kern Canyon slender salamander and relictual slender salamander viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years), redundancy supports the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation supports the ability of the species to adapt over time to long-term changes in the environment (for example, climate changes). In general, the more resilient and redundant a species is and the more representation it has, the more likely it is to sustain populations over time, even under changing environmental conditions. Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be categorized into three sequential stages. During the first stage, we evaluated the individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the SSA involved making predictions about the species' responses to positive and negative environmental and anthropogenic influences. Throughout all of these stages, we used the best available information to characterize viability as the ability of a species to sustain populations in the wild over time. We use this information to inform our regulatory decision.

Summary of Biological Status and Threats

In this discussion, we review the biological condition of each species and its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability.

We note that, by using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have not only analyzed individual effects on both species, but we have also analyzed their potential cumulative effects. We incorporate the cumulative effects into our SSA analysis when we characterize the current and future condition of the species. To assess the current and future condition of the species, we undertake an iterative analysis that encompasses and incorporates the threats individually and then accumulates and evaluates the effects of all the factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not just the presence of the factors, but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative effects analysis.

Species Needs for the Kern Canyon Slender Salamander and the Relictual Slender Salamander

Individual Needs

The Kern Canyon slender salamander and the relictual slender salamander require bodies of surface water such as seeps, springs, and streams and associated riparian and mesic habitat. In addition, the salamanders require the presence of sufficient refugia consisting of debris such as woody debris, bark, leaf litter, rocks, and other cover objects within mesic and riparian habitats. There must be abundant interstitial spaces underneath debris or cover objects to facilitate resting, foraging, and movement of salamanders. Microclimates underneath debris or cover objects must be cool and moist as the Kern Canyon slender salamander and the relictual slender salamander are susceptible to desiccation.

For the purpose of the SSA report and this proposed rule, the habitat factors considered most significant for the Kern Canyon slender salamander and the relictual slender salamander are seeps, springs, and streams; debris including woody debris, bark, leaf litter; and rocks that provide refugia within riparian and mesic habitats; cool and damp microhabitat conditions; and small invertebrate prey. Additionally, the Kern Canyon slender salamander and the relictual slender salamander require access to mates to carry out breeding (Service 2022a, p. 15; table 4).

Population Needs

At the population level, we used the best available information to assess the resources and circumstances that most influence the resiliency of Kern Canyon slender salamander and relictual slender salamander populations. The population needs that we evaluate for this species are survival, dispersal, fecundity, and abundance. Because information is not available on population structure or size for either species, we consider geographic groups as a proxy for populations and thus discuss resiliency by geographic group. We do note that, since we have no information on population structure or dispersal, analyzing resiliency by geographic groups may over-estimate the resiliency of the Kern Canyon slender salamander and the relictual slender salamander, as the extent of geographic groups is greater than estimated average dispersal distance of the salamanders.

With regard to survival, most of the individual needs identified above influence survival in a geographic group. Survival may be limited by both the quantity and quality of available habitat including the presence of seeps, springs, and streams; debris that provides refugia; and cool and damp microhabitats. However, we do not know how much suitable habitat is required to sustain geographic groups of either the Kern Canyon slender salamander or the relictual slender salamander. Survival is also affected by the availability of prey.

No information is available on the dispersal distances of the Kern Canyon slender salamander and the relictual slender salamander. In general, slender salamanders are thought to have small home ranges and to be highly sedentary. The maximum distances traveled by

other species of slender salamanders such as the Pacific slender salamander (*Batrachoseps pacificus*) and the California slender salamander (*Batrachoseps attenuatus*) is of 3.0–18.3 m (9.8–60.0 ft) (Hendrickson 1954, p. 12; Anderson 1960, p. 369; Cunningham 1960, p. 96). The salamanders may travel to participate in communal nesting or to find mates. In order for dispersal to be successful, connected mesic and riparian habitats must contain sufficient prey and debris for refugia to allow juveniles or adults to move across the landscape, rest, forage, find mates, and begin breeding. However, we do not know how much habitat connectivity is required to sustain the geographic groups of the Kern Canyon slender salamander and relictual slender salamander. The Kern Canyon slender salamander and the relictual slender salamander have patchy distribution and there may be barriers to dispersal between areas of suitable habitat. Barriers to dispersal for the Kern Canyon slender salamander and the relictual slender salamander may include roads, activities that cause ground disturbance such as construction or trampling, and a lack of surface water or moist riparian habitat that act as corridors.

Not much is known about the reproduction of the Kern Canyon slender salamander or the relictual slender salamander. In general, lungless salamanders (family: Plethodontidae) produce one clutch annually. The clutch sizes of the relictual slender salamander and the Kern Canyon slender salamander are unknown. However, visual counts indicate that gravid relictual slender salamanders carry between 16–22 eggs (Jockusch 2021a, pers. comm.; Jockusch 2021b, pers. comm.). Many of the individual needs of the Kern Canyon slender salamander and the relictual slender salamander are expected to influence fecundity of the species, including availability of suitable aquatic and riparian habitats, debris for refugia, small invertebrate prey, and mates.

While we do not have population estimates or a robust understanding of the abundance of the Kern Canyon slender salamander and the relictual slender salamander, many of the individual needs for the two species are expected to influence abundance. A variety of factors may regulate the numbers of the Kern Canyon slender salamander and the relictual slender salamander in each geographic group. These factors may be density-dependent (habitat quality, habitat abundance) or density-independent (climate). The salamanders require sufficient habitat to support population sizes large enough to recover from harmful events such as storms, droughts, or fires (environmental stochasticity). We discuss the potential impacts of such factors below, but we lack information regarding the amount of habitat and resulting population size that a single population would require to minimize such risks.

Species Needs

At the species level, we consider the needs of the Kern Canyon slender salamander and the relictual slender salamander in terms of redundancy and representation. In this SSA report and this proposed rule, we evaluate the redundancy of the Kern Canyon slender salamander and the relictual slender salamander by considering the number and distribution of sites occupied by each species in relation to the scale of catastrophic events that are likely to occur, such as the average size of fires in the region.

Regarding representation, in the absence of genetic data for the Kern Canyon slender salamander and the relictual slender salamander, we consider the breadth of environmental diversity for the species. In general, these salamander species are narrow endemics and do not have broad ranges that encompass large environmental variability. However, each of the salamander species occurs over a range of different elevations (Kern Canyon slender salamander: 451–1,676 m (1,480–5,500 ft); relictual slender salamander: 1,219–1,920 m (4,000–6,300 ft)). Due to the differences in climate found throughout the range of elevation occupied by each species, slender salamanders are active on the surface during different seasons. These differences in climatic conditions and temporal behaviors may indicate genetic variability between geographic groups, which may help the Kern Canyon slender salamander and the relictual slender salamander adapt to future environmental variability.

Threats

Following are summary evaluations of eight threats analyzed in the SSA report for the Kern Canyon slender salamander and the relictual slender salamander: roads (Factor A), recreation (Factor A), grazing (Factor A), timber harvest (Factor A), hazard tree removal (Factor A), infrastructure development (Factor A), fire (Factor A), and climate change (Factor E). We also evaluate existing regulatory mechanisms (Factor D) and ongoing conservation measures.

In the SSA, we also considered four additional threats: Overutilization due to recreational, educational, and scientific use (Factor B); disease (Factor C); predation (Factor C); and effects associated with small population size (Factor E). We concluded that, as indicated by the best available scientific and commercial information, these threats are currently having little to no impact on either the Kern Canyon slender salamander or the relictual slender salamander, and thus their overall effect now and into the future is expected to be minimal. Therefore, we will not present summary analyses of those threats in this document, but we will consider them in our cumulative assessment of impacts to the species. For full descriptions of all threats and how they impact the species, please see the SSA report (Service 2022a, pp. 21–34).

In considering the foreseeable future as it relates to the status of the Kern Canyon slender salamander, we considered the timeframes applicable to the relevant risk factors (threats) to the species and whether we could draw reliable predictions about future exposure, timing, and scale of negative effects and the species' response to these effects. We considered whether we could reliably assess the risk posed by the threats to the species, recognizing that our ability to assess risk is limited by the variable quantity and quality of available data about effects to the Kern Canyon slender salamander and its response to those effects. For the purposes of this assessment, we consider the foreseeable future for the Kern Canyon slender salamander to be 50 years. This time period represents our best professional judgment of the foreseeable future conditions related to the range of available climate change models and for reasonable extrapolations of current trends and the species' responses to those conditions.

Roads

Roads may alter seeps, springs, and drainages and reduce microhabitat features that support the Kern Canyon slender salamander and the relictual slender salamander, such as soil moisture and cover objects, especially during road construction or maintenance projects (Marsh and Beckman 2004, pp. 1889–1890; Clipp and Anderson 2014, p. 2690). Hydrologic effects are likely to persist for as long as the road remains a physical feature altering flow routing; these effects can often persist long after abandonment and revegetation of the road surface. Additionally, undersized or impaired culverts can degrade salamander habitat by flooding areas, changing stream dynamics, or rerouting

water such that it is no longer available to salamanders (Anderson et al. 2014, pp. 278–279). Roads can also act as barriers to movement and effectively isolate populations (Marsh et al. 2005, pp. 2006–2007). Furthermore, motor vehicle strikes may cause direct mortality of salamanders. However, because they are sedentary and nonmigratory, slender salamanders are considered to be at low risk of direct mortality by vehicle strikes (Brehme et al. 2018, p. 924).

Numerous County and USFS roads throughout Sequoia National Forest and on privately owned land may impact the two salamander species and their habitat. Most notably, State Route 178 is a heavily trafficked road that passes through the historical range of the relictual slender salamander and the current range of the Kern Canyon slender salamander in the Lower Kern River Canyon. Construction of State Route 178 in 1933 and subsequent repair, maintenance, and widening of the road altered drainages and degraded habitat occupied by the salamanders (Lannoo 2005, pp. 688–693; USFS 2011a, p. 39). The highway's construction may have contributed to the extirpation of the relictual slender salamander from the Lower Kern River Canyon (Lannoo 2005, pp. 688–690; USFS 2011a, p. 39). The Kern Canyon slender salamander may also have been extirpated from sites in the Lower Kern River Canyon due in part to degradation of habitat from construction and enhancement of State Route 178 (Lannoo 2005, p. 693; USFS 2011a, p. 39).

Additionally, road construction associated with timber harvest in Sequoia National Forest has historically degraded habitat for the relictual slender salamander. On Breckenridge Mountain in the early 1980s, a USFS logging road was rerouted through a portion of a seep occupied by the relictual slender salamander. The construction considerably modified the structure and hydrology of the seep and the number of relictual slender salamanders found at the site was reduced for the following 20 years (Jennings and Hayes 1994, p. 24; Jockusch et al. 2012, p. 18). The current land management plan for the Sequoia National Forest outlines standards to minimize the impact of existing roads on natural hydrologic flow and the impact of the construction of roads on wetlands, and to decommission and rehabilitate low-priority roads (USFS 2004, pp. 63, 65; USFS 2019a, p. 1555).

Currently, there are no plans to construct additional roads in the range occupied by the species. Still, existing roads are impacting the Kern Canyon slender salamander and the relictual slender salamander through degradation of seep and spring habitat. Direct mortality also occurs through roadkill; however, because slender salamanders are sedentary and nonmigratory, they are considered to be at low risk of direct mortality by vehicle strikes. Though these effects are site-specific and are not expected to rise to the level of population impacts, they are expected to continue into the foreseeable future.

Recreation

Recreation that results in ground disturbance within occupied habitat may have direct and indirect impacts on the Kern Canyon slender salamander and the relictual slender salamander. Recreation that could impact slender salamanders includes dispersed camping (camping outside designated sites), hiking, and OHV use. Trails that pass through meadows, seeps, or springs have the potential to alter hydrology and reduce habitat suitability for the Kern Canyon slender salamander and the relictual slender salamander. Trails adjacent to occupied habitat have the potential to alter hydrology, which may result in the loss of mesic habitat or increased runoff and sedimentation that may negatively impact water quality and seep and spring habitat (Sack and da Luz 2003, entire; Meadows et al. 2008, entire). Additionally, trampling by hikers, bikers, pets, and OHVs on trails within occupied habitat has the potential to directly kill individual slender salamanders.

Sequoia National Forest offers a variety of recreation activities for the public, including OHV trails, hiking, and camping; it receives more than one million visitors a year (USFS 2019a, p. 72). The Lower Kern River Canyon includes areas within the historical range of the relictual slender salamander and the current range of the Kern Canyon slender salamander that are high-use recreation areas. Parts of the eastern portion of Breckenridge Mountain within the range of the relictual slender salamander are moderate-use recreation areas (USFS 2019a, figure 23, p. 129). Additionally, OHV trails are located by sites occupied by the relictual slender salamander on Breckenridge Mountain and the Kern Canyon slender salamander in the Lower Kern River Canyon.

For most USFS trails, considerations have been made to determine the environmental impacts of the trails and adjustments have been made to minimize impacts (USFS 2004, pp. 59, 63, 65; USFS 2019a, p. 85). In the Lower Kern River Canyon within the historical range of the relictual slender salamander and the range of the Kern Canyon slender salamander, some areas have been gated off from OHVs to protect sensitive riparian habitat (USFS 2013, p. 7). In the 1980s, dispersed camping was restricted from some Sequoia National Forest lands in the Lower Kern River Canyon within the historical range of the relictual slender salamander and the range of the Kern Canyon slender salamander, but these lands remain open to OHVs and foot traffic (USFS 2011a, p. 43). On Breckenridge Mountain in Sequoia National Forest within the range of the relictual slender salamander, dispersed camping is permitted and there is a designated primitive campground. Additionally, illegal user-made OHV trails are continually established in the Sequoia National Forest on Breckenridge Mountain within the range of the relictual slender salamander (USFS 2019b, pp. 109, 115).

Recreation is currently impacting the Kern Canyon slender salamander and the relictual slender salamander through degradation of seep and spring habitat and possibly direct mortality of individuals, although these effects are site-specific. Though measures reducing the impact of this threat are in place due to forest management plans and effects are not occurring at the population level, some effects on seeps and springs and individual salamanders are expected to continue into the foreseeable future.

Grazing

Cattle grazing and associated infrastructure (water troughs, corrals, loading chutes, and fences) have the potential for direct and indirect impacts to the Kern Canyon slender salamander and the relictual slender salamander. The mesic habitat used by salamanders is often in areas that livestock congregate in to seek shade, cooler bedding, and water (USFS 2011a, p. 45). Grazing can cause erosion of stream channels and can damage and reduce vegetative cover (Kauffman and Krueger 1984, pp. 431–434; Armour et al. 1994, pp. 9–12). Loss of vegetative cover from grazing has the potential to lower groundwater tables and summer flows (Kauffman and Krueger 1984, pp. 431–434; Armour et al. 1994, pp. 9–12). To provide water for livestock, water is sometimes diverted from springs and streams, limiting the extent of wet in-channel and riparian habitat. Formerly perennial seeps, springs, and streams may become intermittent or dry due to loss of water storage capacity in the aquifers that formerly sustained them. Further, heavy grazing or grazing

incompatible with managing sensitive habitats can alter vegetative species composition and contribute to expansion of lodgepole pine (*Pinus contorta*) into areas that were formerly treeless (Ratliff 1985, pp. 33–36; Cole and Landres 1996, p. 171). Additionally, loss of vegetation cover caused by grazing and trampling can increase soil temperature and reduce soil moisture, thereby impacting the availability of suitable microclimate conditions for the Kern Canyon slender salamander and the relictual slender salamander (Riedel et al. 2008, entire).

In past decades, cattle grazing has severely degraded salamander habitat as grazing is concentrated at the bottom of narrow ravines where salamanders are found near the surface in higher densities (Lannoo 2005, pp. 688–693; USFS 2011a, p. 44). The rangelands of the Sequoia National Forest within the range of the Kern Canyon slender salamander and the relictual slender salamander have been grazed by livestock since the late 1800s (USFS 2019a, p. 5). Currently, grazing occurs throughout Sequoia National Forest, and most of the sites occupied by the Kern Canyon slender salamander and the relictual slender salamander are within grazing allotments. Grazing is managed by the current land management plan for the Sequoia National Forest (USFS 2004, pp. 55–56, 65–66). The plan includes management strategies that limit grazing in fens, meadows, and riparian areas and may therefore benefit the Kern Canyon slender salamander and the relictual slender salamander (USFS 2004, pp. 65–66). Specific measures include inventorying of fens prior to reissuing of grazing permits to ensure desired species richness and implementing grazing limitations or suspensions necessary in the event of habitat degradation. In the last 20 years, some riparian areas within the Lower Kern River Canyon and on Breckenridge Mountain have been fenced off to exclude livestock. Additionally, some sites occupied by the species within grazing allotments are in incidental use areas and may not be accessible to livestock because of rocky terrain.

Grazing is currently impacting the Kern Canyon slender salamander and the relictual slender salamander through degradation of seep and spring habitat. The impact of grazing is particularly severe in some habitat types more than others, though grazing within USFS lands is managed to reduce impacts to sensitive riparian features. Still, grazing is occurring throughout the range of both species, and we expect it will continue to occur and impact Kern Canyon slender salamander and the relictual slender salamander populations into the foreseeable future.

Timber Harvest

Timber harvest including commercial harvest, thinning treatments to reduce risk of fire, and snag removal post-fire or beetle-kill events has the potential to impact the Kern Canyon slender salamander and the relictual slender salamander through direct mortality and indirect impacts to habitat. Direct mortality may result from timber harvest involving the use of heavy equipment within the range of the species. Heavy equipment used for timber harvest may crush salamanders that are active on the surface. Aquatic and riparian habitats are impacted by timber harvest that takes place within the watershed due to increased runoff, erosion, and sedimentation, and the resulting changes in water flow, water quality, and stream morphology (Chamberlin 1982, entire).

Additionally, timber harvest has the potential to indirectly affect the terrestrial salamanders through construction of new roads to support timber harvesting and bring in large equipment, removal of shade structure that is important for the thermal regulation of the environment and suitable microclimate conditions that support the Kern Canyon slender salamander and the relictual slender salamander and through removal of woody debris that salamanders need for refugia (Duvall and Grigal 1999; entire). No studies have focused on the effects of timber harvest on the Kern Canyon slender salamander and the relictual slender salamander, but several studies have found that the abundance of terrestrial salamanders decreases in areas that have been harvested for timber (Petranka et al. 1993, entire; deMaynadier and Hunter 1995, entire; Dupuis et al. 1995, entire; Ash 1997, entire; Herbeck and Larsen 1999, entire; Knapp et al. 2003, entire; Homyack et al. 2011, entire).

Timber harvest on national forest lands within the range of the Kern Canyon slender salamander and the relictual slender salamander is managed by the land management plan for the Sequoia National Forest. The Revised Draft Land Management Plan for the Sequoia National Forest identifies 32,276 ha (79,755 ac) as suitable for timber production (USFS 2019b, p. 85). Areas classified as suitable for timber harvest encompass 6.3 percent of the estimated historical range of the relictual slender salamander and 0.5 percent of the estimated range of the Kern Canyon slender salamander. Additionally, Sequoia National Forest has had large tree mortality events due to drought conditions and beetle outbreaks and, therefore, may experience an increase in timber harvest of dead trees (Preisler et al. 2017, p. 166).

In recent years, large tree mortality events due to drought conditions and beetle outbreaks have occurred in the Sequoia National Forest (Preisler et al. 2017, p. 166). The estimated number of dead trees in the Sequoia National Forest has increased annually for the past decade (USFS 2018, entire). It is likely that tree mortality will continue due to worsening drought conditions that will continue to weaken trees and increase susceptibility to bark beetles and disease, necessitating increased thinning to reduce the threat of fire in the National Forests (Millar and Stephenson 2015, pp. 823–826; Young et al. 2017, pp. 78, 85). However, tree mortality is expected to be lower in wetter riparian areas along the seeps, springs, and streams that provide habitat for the Kern Canyon slender salamander and the relictual slender salamander.

The majority of forest roads in the National Forests of the Sierra Nevada were built between 1950 and 1990 to support major increases in timber harvest (USFS 2001, p. 443). Most of the impact of timber harvesting and associated road development on habitats within the National Forests of the Sierra Nevada took place during the expansion period in the latter half of the 20th century. Over the last 20 years, timber harvest in the Sequoia National Forest has decreased substantially. Timber harvest is now managed by the current land management plan for the Sequoia National Forest (USFS 2019a, entire). Current forest standards and guidelines outline timber harvest practices that maintain minimum forest density requirements and increase retention of down logs and coarse woody debris, thereby possibly benefiting the Kern Canyon slender salamander and the relictual slender salamander by contributing to the availability of refugia. Current forest standards and guidelines provide protections for riparian areas, such as maintaining buffers during timber and vegetation management activities. Further, riparian areas are protected by mechanical equipment buffers and are generally not harvested. However, fire suppression has resulted in increased conifer density and decreased riparian herbaceous vegetation in riparian areas, which may lead to more timber management in riparian areas in the future (USFS 2019b, pp. 109, 115).

Although impacts to habitat from timber harvest have the potential for population-level effects on the Kern Canyon slender salamander and the relictual slender salamander, at present the best available information indicates current levels of timber harvest are not adversely affecting either species. However, the legacy effects of timber harvest activities such as roads and modified hydrology may continue to have localized impacts on the habitat condition of some sites occupied by the Kern Canyon slender salamander and the relictual slender salamander. Timber harvest to remove dead trees may also increase in the foreseeable future as a result of increased tree mortality, further impacting slender salamander habitat, though the percentage of impacted habitat is expected to be small.

Hazard Tree Removal

The current land management plan for the Sequoia National Forest may call for removal of hazard trees in areas not suitable for timber production. Dead and dying trees and living trees that are deemed a risk to people or property may be removed along roads and trails and within wildfire areas (USFS 2019a, p. 170). Hazard tree removal is carried out for safety considerations and is not considered a component of a timber harvest system or commercial timber harvest. Hazard tree removal often takes place along existing roads and trails; because this activity does not necessitate the construction of additional forest roads, it likely has less impact on salamander habitat than timber harvest. Hazard tree removal may reduce fuel loads and thereby reduce the risk of high-severity wildfire within habitat occupied by the Kern Canyon slender salamander and the relictual slender salamander. As many of the sites occupied by the salamanders are near roads and trails, hazard tree removal is expected to occur at some of these sites within habitat occupied by both species. However, despite the impacts to salamander habitat, hazard tree removal is unlikely to result in salamander mortality as it does not generally involve the use of heavy equipment off existing roads and trails.

Hazard tree removal results in localized effects on the habitat of the Kern Canyon slender salamander and the relictual slender salamander where removal of trees occurs in proximity to habitat occupied by the species and results in modification of seep, spring, or creek margin habitat. Hazard tree removal of dead and dying trees that are a risk to people or property may increase in the foreseeable future as a result of increased tree mortality, though the amount of habitat impacted by hazard tree removal is expected to be small.

Infrastructure Development

Infrastructure development has had the greatest historical impact on habitat occupied by the relictual slender salamander and the Kern Canyon slender salamander. Damming of the Lower Kern River to form Isabella Lake in 1953 flooded areas in the Lower Kern River Canyon and prompted construction and expansion of State Route 178 and ongoing recreation development along the Lower Kern River. Flumes, tunnels, roads, and trails associated with the operation of the Kern River No. 1 hydroelectric project and two placer mining claims are also present along the Lower Kern River within the historical range of the relictual slender salamander and the range of the Kern Canyon slender salamander (USGS 2021a, pp. 1–3; USGS 2021b, pp. 1–3).

Ongoing maintenance is required for utility infrastructure including communication sites in the Lower Kern River Canyon and on Breckenridge Mountain and transmission lines and an electrical subunit in the Lower Kern River Canyon within the Sequoia National Forest. Maintenance of utilities can often be carried out from roads or already disturbed corridors where the Kern Canyon slender salamander and the relictual slender salamander are not expected to be found. However, utility crews may need to access off-road sites where the salamanders are found to replace or perform work on power poles. Equipment used for utility maintenance may cause direct mortality of salamanders by crushing salamanders that are active on the surface or damage habitat by altering seeps and springs. Infrastructure development associated with recreation, roads, hydroelectric projects, and utility maintenance has the potential to cause periodic habitat disturbance to sites occupied by the relictual slender salamander and the Kern Canyon slender salamander with impacts likely concentrated within the Lower Kern River Canyon.

There has been discussion of a future large infrastructure project involving construction of a proposed reservoir within the estimated range of the Kern Canyon slender salamander; however, the project is in the preliminary planning process (Service 2022a, p. 27). Implementation of the proposed project within the range of the species could degrade seep and spring habitat. However, no information is available to suggest that infrastructure development associated with this project will take place within the habitat of the Kern Canyon slender salamander and the relictual slender salamander. Overall, though infrastructure development has affected the two species in the past, current impacts are limited to occasional maintenance activities in limited areas of the species' range, and we do not expect that there will be population-level impacts now or in the foreseeable future.

Fire

Fire is a natural ecological process, and fires within the natural range of variation are generally considered beneficial to ecosystems in the Sierra Nevada. Over the long term, small, low-severity fires can improve habitat for fire-adapted plant species, create vegetation mosaics, and support nutrient cycling, thereby increasing resiliency of slender salamander habitat (Safford et al. 2012, entire). In contrast, very large fires with patches that burn at high severity, outside the natural range of variation, can remove forest cover and fragment habitat over large areas and long time periods.

Current habitat conditions within the ranges of the Kern Canyon slender salamander and the relictual slender salamander may contribute to ongoing fire risk. Years of fire suppression in forests of the western United States have led to greater canopy cover from small and medium trees, higher biomass density, and more surface fuels (Parks and Abatzoglou 2020, p. 4). Historically, the mean fire return interval within the Sierra Nevada was 11–16 years with a mean fire size between 200–400 ha (494–988 ac) and with 5 to 15 percent of that area burning at high severity (Safford and Stevens 2017, p. 7). Fire suppression over the last 100 years combined with extended droughts has led to increased fuel loads and changes in fire behavior with larger, more severe fires, and longer wildfire seasons in recent years (Miller and Safford 2012, p. 41; Mallek et al. 2013, p. 1; Safford and Stevens 2017, pp. v–vi; Nigro and Molinari 2019, p. 20).

From 1984 to 2017, forests in the western United States have experienced an eightfold increase in the annual area burned at high severity (Parks and Abatzoglou 2020, p. 4; Service 2022a, figure 8). Current fire return intervals within the estimated ranges of the Kern Canyon slender salamander and the relictual slender salamander are 56–81 years (USFS 2011b, unpaginated). Additionally, the mean size of fires in the Sierra Nevada over the past 30 years has increased to approximately 1,400 ha (3,459 ac) with 30 to 35 percent of the

burn area at high severity (Safford and Stevens 2017, p. 8).

Little is known about the impact of fire on terrestrial salamanders and their habitat. In general, riparian areas burn less frequently and at lower severity. However, fires may have large impacts on the Kern Canyon slender salamander and the relictual slender salamander due to their low mobility and small range sizes. Fires that burn at low and moderate severity and occur at low elevations during the dry summer, when the salamanders are most likely sheltering in underground burrows, may have minimal effects. However, at higher elevations, salamanders are thought to be active on the surface during the summer, and fires that burn at low to moderate severity may result in mortality of salamanders.

Throughout the range of the Kern Canyon slender salamander and the relictual slender salamander, high-severity fires are especially likely to result in direct mortality to both salamanders on the surface and those sheltered underground, due to radiating heat and loss of soil moisture, as temperatures at the soil-litter interface can reach 482–648 °C (900–1,200 °F) (Sampson 1944, p. 62). Individuals more than a few inches below the soil surface may survive the high-severity fire but will then have reduced or no surface cover and reduced or no invertebrate prey community until the landscape recovers. Additionally, because high-severity fire can reduce canopy cover and remove insulating groundcover soil, temperatures in the top 10 centimeters (3.9 in) of soil in recently burned stands can be 5–10 °C (9–18 °F) higher than in late successional stands, affecting the availability of suitable microclimate conditions for the salamanders following fires (Liu et al. 2005, p. 8; Treseder et al. 2004, p. 1831).

Furthermore, fire residence time may also influence the impact of fires on the Kern Canyon slender salamander and the relictual slender salamander as fires that burn at low severity for a long time may result in more direct mortality of salamanders than high-severity fires that move through the area quickly. Post-fire increases in soil temperature can be accompanied by long-term decreases in soil moisture and increases in soil water repellency, which may result in dry conditions that are intolerable for the Kern Canyon slender salamander and the relictual slender salamander (DeBano 2000, p. 196; Holden et al. 2013, p. 39). After fires occur, habitat may also be degraded by increased soil erosion, runoff, and sedimentation (Benavides-Solorio and MacDonald 2001, entire; Robichaud and Waldrop 1994, entire; Spigel and Robichaud 2007, entire). More research is necessary to better understand the relationships between wildfires, salamanders, and their habitat.

Large, catastrophic fire cannot be completely addressed by regulatory mechanisms. However, some management actions can reduce the potential severity or size of wildfires (Agee and Skinner 2005, entire; Safford et al. 2009, entire). Fuel reduction treatments, such as prescribed fire and mechanical thinning, can reduce the severity of a future fire (Agee and Skinner 2005, entire; Safford et al. 2009, entire). We have a limited understanding of the trade-off between impacts from conducting fuels treatments to prevent or reduce future fires and impacts from fires themselves to salamanders and their habitat (see sections on Timber Harvest and Hazard Tree Removal above). Fuels treatments that are carried out within habitat occupied by the salamanders may cause ground disturbance or result in modification of seep, spring, or creek margin habitat. Two species of terrestrial salamanders in the Sierra Nevada, the Sierra ensatina (*Ensatina eschscholtzi platensis*) and the gregarious slender salamander (*Batrachoseps gregarius*), were found to still be present after prescribed fire applications were conducted in the spring (Bagne and Purcell 2009, entire). However, fuel reduction treatments may not prevent catastrophic damage in an extreme fire event (Peterson et al. 2003, p. 3).

Additionally, if a wildfire becomes a threat to infrastructure, fire retardant may be used in areas occupied by the Kern Canyon slender salamander and the relictual slender salamander that are in proximity to development in the Lower Kern River Canyon and on Breckenridge Mountain. Fire retardants may negatively impact the survival of salamanders as fire retardants such as polybrominated diphenyl ethers can decrease survivorship and slow development and growth in amphibians (Coyle and Karasov 2010, pp. 136–138). Furthermore, post-fire restoration involving large machinery has the potential to impact salamander habitat through ground disturbance or result in direct mortality of salamanders that are active on the surface. Fire and management activities related to fire suppression and post-fire restoration may affect the Kern Canyon slender salamander and the relictual slender salamander through degradation of aquatic, mesic, and riparian habitats, loss of suitable cool and damp microclimates, loss of prey, and possibly direct mortality of individuals.

Because of the small ranges of the Kern Canyon slender salamander and the relictual slender salamander, entire geographic groups could be extirpated by fire, thus reducing species redundancy, and potentially causing loss in ecological representation. The mean size and intensity of fires has increased in the past decades. The trend in increasing annual area burned at high severity is expected to continue into the foreseeable future as a result of increasingly warmer and drier fire seasons due to climate change (Parks and Abatzoglou 2020, p. 6).

Climate Change

Climate change is the change in the mean or variability of one or more measures of climate that persist for an extended period, whether the change is due to natural variability or human activity (IPCC 2013, p. 1450). The climate has been warming at an unprecedented rate since the 1950s, and is likely to continue to increase, causing not only warmer conditions but also an increase in the intensity of storms (IPCC 2013, p. 4). The recent changes in climate are attributed to increased greenhouse gas emissions in the atmosphere, which are likely to continue to increase (IPCC 2013, pp. 4, 11–12, 19).

In California, the annual average temperatures have increased by about 0.8 °C (1.5 °F) since 1895 (Kadir et al. 2013, p. 38). Additionally, extreme heating events have increased throughout the State (Kadir et al. 2013, p. 48). Specifically, in the Sierra Nevada region, mean annual temperatures have generally increased by around 0.5–1.4 °C (1.0–2.5 °F) over the past 75–100 years (North 2012, p. 25). These trends are projected to continue, by all modern climate models, and to accelerate during coming decades. Within the Sierra Nevada, changes in climate are expected to vary in magnitude across the region with quicker warming trends and changes in precipitation at highest elevations (Dettinger et al. 2018, p. 5). The annual mean temperatures across the region are projected to warm by 1.0 °C (2.0 °F) by 2039 and by 2.5 °C (4.5 °F) by 2040–2069 as predicted by the average of 10 climate models (Abatzoglou 2013, entire; Pierce et al. 2013, p. 844; Hegewisch et al. 2018, unpaginated). Additionally, in the summer months of June, July, and August, mean temperatures are projected to increase by 3.3 °C (5.9 °F) by 2040–2069 in the Sierra Nevada region (Pierce et al. 2013, p. 842; Hegewisch et al. 2018, unpaginated).

With increasing temperatures and less snowfall, salamanders that occur at high elevations (such as relictual slender salamanders on Breckenridge Mountain) may experience extended periods of favorable conditions and may increase the time they spend on the surface until climatic conditions approach and surpass physiological limits. While temperature increases at high elevation may be within the thermal tolerances of the Kern Canyon slender salamander and the relictual slender salamander, temperature increases at low elevation may exceed salamander tolerances (Caruso and Rissler 2019, p. 12). At higher temperatures, salamanders must increase feeding frequency to maintain energy balances (Huey and Kingsolver 2019, entire). If salamanders are not able to increase feeding frequency or if prey are not available in sufficient quantities, then increased metabolism caused by temperature increases may have geographic group-level demographic consequences, such as decreased body sizes and growth rates (Caruso et al. 2014, p. 1,757; Muñoz et al. 2016, p. 8,744). Reductions in body size could lead to delayed maturity or reduced fecundity, ultimately leading to geographic group declines.

Future precipitation is predicted to vary less than temperature; long-term mean annual changes may be no more than plus or minus 10–15 percent of current totals (Dettinger et al. 2018, p. 5). However, precipitation extremes (both as deluge and drought) are expected to increase markedly under climate change (Dettinger et al. 2018, p. 5). As a result of projected warming, the transition from rain to snow during a storm is expected to rise by 457–914 m (1,500–3,000 ft) (Dettinger et al. 2018, p. 21). Sierra Nevada snowpacks will be unlikely to form below about 1,829 m (6,000 ft) elevation, and snowpacks will be reduced by more than 60 percent across most of the Sierra Nevada by the end of the century (Dettinger et al. 2018, p. 21). Losses of snowpack may be even greater due to feedback loops with warming trends causing snow cover losses, and snow cover losses resulting in warmer land surfaces, and thus enhanced warming trends in turn (Dettinger et al. 2018, p. 5). The higher snow-dominated elevations from 2,000–2,800 m (6,560–9,190 ft) will be the most sensitive to temperature increases (Point Blue 2011, p. 23). Seeps and springs fed by snowmelt may dry out or be more ephemeral during the non-winter months (Point Blue 2011, p. 24). This pattern could influence groundwater transport, and seeps and springs may be similarly depleted, leading to lower water levels and decreased area and hydroperiod (that is, duration of water retention) to support suitable habitat for the Kern Canyon slender salamander and the relictual slender salamander. More precipitation falling as rain and increased early snow melt is also expected to result in greater winter streamflow and floods that may impact salamander habitat by causing erosion of salamander habitat in stream margins (Dettinger et al. 2018, p. 5).

As a result of warmer temperatures, with corresponding tendencies for more rainfall, less snowfall, and earlier snowmelt, water will tend to exit bodies of surface water at high elevations earlier in the year (Harpold et al. 2015, entire). Additionally, the water that remains in habitats will evaporate and be used by plants more quickly due to warmer temperatures and increased evapotranspiration rates, so that by summer, soil moisture will be low (Harpold et al. 2015, entire). The average historical climatic water deficit, or the additional water that would have evaporated or transpired had it been present in the soils given the temperature, from 1990 to 2010 in the southern Sierra Nevada within the range of the Kern Canyon slender salamander and the relictual slender salamander is 840.6 mm (33.1 in) (Hegewisch et al. 2018, unpaginated). By 2039, the 20-year average climatic water deficit is projected to increase by 2.0–69.1 mm (0.1–2.7 in) and, by 2069, the 20-year average is projected to increase by 75.6–200.9 mm (3.0–7.9 in) (Hegewisch et al. 2018, unpaginated). Furthermore, total soil moisture in the summer is expected to decrease in areas at high elevation on Breckenridge Mountain (Hegewisch et al. 2018, unpaginated).

The Kern Canyon slender salamander and the relictual slender salamander will likely be impacted by climate change, but the full extent of impacts that climate change may have on terrestrial salamanders is poorly understood. Changing climatic conditions may have direct impacts on salamander physiology, survival, reproduction, recruitment, and population growth. Additionally, climate change may have indirect impacts on the species including changes in habitat quantity and quality, and prey distribution and abundance. For the Kern Canyon slender salamander and the relictual slender salamander to successfully forage and meet their energy requirements, temperature and moisture conditions must be suitable in adequate durations. Reduced sedimentary moisture may impact the survival of the Kern Canyon slender salamander and the relictual slender salamander by further constraining the time that the salamanders can be active on the surface. Reduced ambient moisture may also decrease the amount of suitable microhabitat for breeding and rearing as the salamanders are thought to need cool and damp protected microhabitat for egg laying. Additionally, warmer, and drier fire seasons due to climate change are predicted to result in more frequent fires burning at high severity (Parks and Abatzoglou 2020, entire).

Overall, the Sierra Nevada region is likely to be much drier in the future and the climatic water deficit will increase over the next 50 years due to climate change (Dettinger et al. 2018, p. 23; Hegewisch et al. 2018, unpaginated). Climate change is expected to affect the Kern Canyon slender salamander and the relictual slender salamander through degradation of seep and spring habitat, loss of suitable microhabitat conditions, and possibly, reduction in survival and fecundity of salamanders with risk varying across habitat type and elevation.

Conservation Efforts and Regulatory Mechanisms

The Kern Canyon slender salamander is listed in the State of California as a threatened species. As a threatened species under the CESA, ''take,'' which is described as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill, of the Kern Canyon slender salamander is prohibited. The relictual slender salamander is designated as a California Species of Special Concern. The Species of Special Concern designation carries no formal legal protection; the intent of the designation is to focus attention on animals of conservation risk, stimulate research on poorly known species, and achieve conservation and recovery of these animals before they meet criteria for listing as threatened or endangered.

The Kern Canyon slender salamander and the relictual slender salamander are designated by the USFS as Species of Conservation Concern. The USFS land management plans are designed to consider the needs of the Species of Conservation Concern and guide management that sustains habitat or conditions to support or restore populations of Species of Conservation Concern. While the current draft land management plan for Sequoia National Forest does not include specific measures for the Kern Canyon slender salamander or the relictual slender salamander, the land management plan outlines desired habitat management conditions for riparian areas which,

upon implementation, will provide a habitat benefit for the species.

Current Condition

We describe the current condition of the Kern Canyon slender salamander and the relictual slender salamander by characterizing their status in terms of resiliency, redundancy, and representation. We analyze the current conditions of each geographic group of each species by considering the threats and their effects on individual and population needs. The analysis of the current condition of each geographic group, which we use as a proxy for populations due to limited data on the two species, allows us to assess geographic group resiliency.

There are no population estimates for the Kern Canyon slender salamander or the relictual slender salamander. In the absence of population estimates, our analysis of the current condition of geographic groups is limited to the available records of observations for the species and the distribution of threats across the landscape. Many of the recorded observations of the species are from sites that were surveyed only once 30–40 years ago, and we have no more current information on the presence or absence of individuals from these sites. In these cases, there is uncertainty in assessing the current condition of the salamanders at the site. The lack of information on population size and structure of the Kern Canyon slender salamander and the relictual slender salamander and the absence of robust records of observations contributes to uncertainty in the analysis of the current condition of the species.

Kern Canyon Slender Salamander Current Condition

As discussed above in Background, the Kern Canyon slender salamander is currently considered extant at 8 sites in the Lower Kern River Canyon geographic group and the Erskine Creek Canyon geographic group. Species experts indicate that the sites within the Lower Kern River Canyon have been searched for the species in recent years; however, the species has not been found during these searches (Jockusch 2021b, pers. comm.). Because survey results are reported only when the species is present (that is, a positive survey) and not reported when the species is not encountered (that is, a negative survey), our analysis of the current condition of the species is limited to only positive surveys. Without documentation of negative surveys at these locations, we are unable to determine whether the species has been extirpated from these areas or if the species is still present but the current level of survey effort is inadequate to detect them. Species experts also indicate that the abundance of the species has declined across the range of the species (Jockusch 2021b, pers. comm.). Furthermore, the Kern Canyon slender salamander is currently found in wet patches of habitat in riparian habitat and the species no longer seems to occupy open grassland habitat (Jockusch 2021b, pers. comm.).

Lower Kern River Canyon Geographic Group—The Lower Kern River Canyon geographic group is composed of 11 historically occupied sites in the small streams, seeps, and springs adjacent to the Lower Kern River, south of Isabella Lake to Stark Creek. Communication with species experts indicates that the Kern Canyon slender salamander may be largely or entirely extirpated from the nine sites within the Lower Kern River Canyon that are to the west of the two easternmost sites near Miracle Hot Springs (Jockusch 2021b, pers. comm.). Roads, recreation, grazing, infrastructure, fire, and climate change are currently impacting this geographic group.

Development and roads (including State Route 178) are present throughout the Lower Kern River Canyon. The area has high recreation use with many access roads, trails, and camping areas (Service 2022a, figure 16). Dispersed camping was prohibited at some camp sites along the Lower Kern River beginning in the 1980s; therefore, impacts of recreation in this area have likely decreased since that time. Grazing takes place throughout the Lower Kern River Canyon and sensitive canyon bottom habitat has been degraded by ground disturbance and trampling by livestock (USFS 2011a, p. 44; Service 2022a, figure 17). However, between 2003 and 2004, three springs within Dougherty Canyon were fenced to exclude livestock and to protect the riparian vegetation associated within the area of three of the sites occupied by Kern Canyon slender salamander (USFS 2011a, p. 76).

Commercial timber harvest has not occurred in the area (Service 2022a, figure 18). However, tree mortality associated with drought and insect outbreaks has occurred in proximity to occupied sites, which may result in timber harvest to remove dead trees and hazard tree removal along State Route 178, USFS roads, or trails. Additionally, there is an electrical substation within 1,100 m (3,609 ft) of the easternmost site of this geographic group, and a transmission line runs south from the substation passing within 900 m (2,953 ft) of the same site (Service 2022a, figure 20). The impact of maintenance of this utility infrastructure on Kern Canyon slender salamander habitat may be low due to the distance between the utility infrastructure and the patches of habitat occupied by the species. From 1988–2017, this geographic group experienced frequent fires at a range of severities that may have impacted the condition of habitat (Service 2022a, figure 21). Moreover, fire suppression has affected riparian habitat by increasing conifer density and decreasing riparian herbaceous vegetation (USFS 2019b, p. 104). The fire threat remains high to very high throughout the canyon (Service 2022a, figure 22).

No information is available on dispersal or the availability of mates within the Lower Kern River Canyon. However, species experts have opined that the abundance of the Kern Canyon slender salamander has declined across its range (Jockusch 2021b, pers. comm.). Additionally, all sites are 300 m (984 ft) or more apart, and a high density of roads and trails extends throughout the canyon. Therefore, dispersal and access to mates in this geographic group is likely limited given the poor dispersal ability of slender salamanders and the small numbers of individuals that have been observed in the Lower Kern River Canyon. Considering the threats currently impacting this species, the habitat characteristics of seeps, springs, and streams; cool, damp microhabitats; and debris are likely degraded.

Overall, the resiliency of the Lower Kern River Canyon geographic group is reduced from historical conditions due to the possible extirpation of the species from many sites within the geographic group and ongoing threats to habitat from road construction and maintenance, recreation, grazing, fire, infrastructure development, and climate change.

Erskine Creek Canyon Geographic Group—The Erskine Creek Canyon geographic group is made up of four sites along Erskine Creek, two sites along Bodfish Creek, and one site near Eagle Peak in the Piute Mountains. This geographic group is likely small due to the patchy habitat distribution and the small number of individuals that have been observed over limited surveys. Dispersal may be limited as the occupied sites within this geographic group are separated by 350 m (1,148 ft), which is greater than the maximum distance traveled by slender salamanders. However, due to the presence of contiguous suitable habitat between the closest occupied sites along Erskine Creek, it is possible that the creek and associated riparian habitat may facilitate dispersal of the Kern

Canyon slender salamander among sites along the creek.

This geographic group experiences many of the same threats that were described for the Lower Kern River Canyon geographic group, though the sites of this geographic group are set back and separated from State Route 178, the electrical substation, and power lines. However, dirt roads run along both Erskine Creek and Bodfish Creek. Fires of moderate and high severity in 1984 and 2010 likely degraded habitat in this geographic group (Service 2022a, figure 21), and the fire threat remains very high throughout the area (Service 2022a, figure 22). Additionally, this geographic group is outside of Sequoia National Forest, so the Kern Canyon slender salamander does not receive the same conservation measures as it does in Sequoia National Forest. Overall, the current condition of this geographic group is likely better than the Lower Kern River Canyon geographic group as habitat outside of the Lower Kern River Canyon is less impacted by recreation and grazing. However, less is known about land management outside of the National Forest. The resiliency of this geographic group is likely reduced from historical conditions due to reduced abundance across the range of the species as well as past and ongoing habitat degradation from road construction and maintenance, fire, and climate change.

Kern Canyon Slender Salamander Current Condition Summary—Overall, there is uncertainty in the current condition of both geographic groups as there is limited recent information on this species. The resiliency of the two geographic groups is likely reduced from historical conditions due to the existing threats to the species, especially within the Lower Kern River Canyon, and the decline in abundance of the species across its range. Additionally, the species may be largely or entirely gone from many sites within the Lower Kern River Canyon. The redundancy of the species is likely reduced from historical conditions, as the species currently occupies fewer sites that are distributed over a narrower range. In relation to the scale of catastrophic events that are likely to occur, such as the size of fires, the redundancy of the species is limited. In terms of representation, the species is no longer found in open grasslands. Therefore, the species may currently persist in a limited ecological setting that is reduced from historical conditions.

Relictual Slender Salamander—Current Condition

As discussed in Background, the relictual slender salamander historically occupied 13 sites that we categorized into three geographic groups: the Lower Kern River Canyon geographic group, the Lucas Creek geographic group, and the Squirrel Meadow geographic group. The relictual slender salamander is presumed to be extirpated from all sites within the Lower Kern River Canyon geographic group. The two extant geographic groups are associated with patchy mesic habitat in conifer forest and oak woodland on Breckenridge Mountain (Hansen 2021, pers. comm.). The habitat currently occupied by the species is estimated to consist of less than 0.4 ha (1 ac) (Hansen 2021, pers. comm.). The current condition of the relictual slender salamander has been impacted by road construction, grazing, timber harvest, hazard tree removal, fire, and climate change.

Lucas Creek Geographic Group—The Lucas Creek geographic group is composed of three sites near Lucas Creek on Breckenridge Mountain. Within this geographic group, relictual slender salamanders have been observed only in pairs or small numbers. It is unknown whether dispersal occurs among sites within this geographic group. The occupied sites are separated by 350 m (1,148 ft) or more, which is beyond the maximum distance traveled by slender salamanders (18.3 m (60.0 ft) (Cunningham 1960, p. 96). However, Lucas Creek and associated riparian and meadow habitats may facilitate dispersal of relictual slender salamanders to occupied sites that are found along the creek and its tributaries. Dispersal between the Lucas Creek geographic group and the Squirrel Meadow geographic group is not thought to occur regularly as the geographic groups are separated by 5 km (3.1 mi).

The threats that are likely currently impacting this geographic group are road construction and maintenance, recreation, timber harvest, hazard tree removal, grazing, fire, and climate change. A county road runs between the sites in this geographic group and there are several USFS roads and trails throughout the area (Service 2022a, figure 10). All sites are within the Breckenridge grazing allotment (Service 2022a, figure 11). Grazing is allowed from April 1 to October 15, when salamanders on Breckenridge Mountain have been found active on the surface (Stewart 2010, p. 10). USFS timber harvest has taken place near all sites within this geographic group in 1987, 1988, 1996, and 2013, and habitat at these sites may still be impacted by legacy effects of these timber harvests (Service 2022a, figure 12). Additionally, extensive tree mortality necessitating hazard tree removal has occurred near Lucas Creek and its tributaries (Service 2022a, figure 13). This geographic group has not been impacted by fire since 1984. However, the fire threat as measured by CAL FIRE is high to very high at the sites within this geographic group (Service 2022a, figure 14, figure 15).

Considering the ongoing threats to this geographic group and the impacts of these threats, the habitat characteristics of seeps, springs, and streams; cool and damp microhabitat; and debris may be degraded. Dispersal may be restricted by the distance between occupied sites and the presence of roads, trails, and timber harvest. Regarding resiliency, this geographic group may be vulnerable to stochastic events because of its small size and the ongoing threats to habitat.

Squirrel Meadow Geographic Group—The Squirrel Meadow geographic group includes five sites occupied by the relictual slender salamander on Breckenridge Mountain to the east of Lucas Creek. We lack specific information on the exact location of the three sites associated with Mill Creek and the site within the Flying Dutchman drainage (table 1). At the site northeast of Squirrel Meadow, the relictual slender salamander is found within a strip of moist habitat about 1 m (3.3 ft) wide that is sustained by a seep (Jockusch 2021a, pers. comm.). The habitat at this site was damaged when a logging road was rerouted through the seep in the early 1980s (Jockusch et al. 2012, p. 18). Following these events, only four relictual slender salamanders were found at the site in 1983 and no individuals were found at the site during targeted searches over the following 20 years (Jennings and Hayes 1994, p. 24; Jockusch et al. 2012, p. 18; CNDDB 2022, unpaginated). A subsequent wildfire in 1988 that burned at low and moderate severity further compromised habitat at the site (Service 2022a, figure 14; Jockusch et al. 2012, p. 18).

In recent years, the relictual slender salamander appears to have rebounded at the site, as 15 salamanders were found in 2017 and 7 salamanders were observed in 2021 (Jockusch 2021a, pers. comm.; Jockusch 2021b, pers. comm; CNDDB 2022, unpaginated). Additionally, 9 of the salamanders found in 2017 were gravid females that were found associated with a communal

nest with at least 200 eggs (Jockusch 2021a, pers. comm.).

Road construction, timber harvest, hazard tree removal, fire, climate change, and possibly grazing have impacted the relictual slender salamander in this geographic group. As mentioned above, a USFS road runs directly through the seep that provides important habitat for this geographic group, and other roads are located adjacent to the site (Service 2022a, figure 10). The site northeast of Squirrel Meadow is outside of the boundaries of USFS grazing allotments (Service 2022a, figure 11). However, other sites are within the Breckenridge grazing allotment (Jockusch 2021b, pers. comm.). Additionally, timber harvest in 2013 and extensive tree mortality have occurred along the roads near the site northeast of Squirrel Meadow (Service 2022a, figure 12, figure 13). The fire threat is very high for this geographic group (Service 2022a, figure 15). Dispersal among sites in this geographic group is unknown but may be limited between sites that are within different drainages and separated by roads.

Considering the past threats that considerably altered habitat and the ongoing threats of road maintenance, grazing, fire, and climate change, the habitat characteristics of seeps, springs, and streams; cool and damp microhabitats; and debris are likely degraded. Overall, the resiliency of this geographic group is reduced from historical conditions due to habitat degradation and the ongoing threats to the habitat.

Relictual Slender Salamander Current Condition Summary—Of the three known geographic groups of the relictual slender salamander, two are extant and one is presumed to be extirpated. The two extant geographic groups, Lucas Creek and Squirrel Meadow, are both on Breckenridge Mountain and are approximately 5 km (3.1 mi) apart. The extant geographic groups are composed of only a few occupied sites that have been impacted by stressors and continue to be influenced by some stressors. Therefore, the geographic groups likely have reduced resiliency from historical conditions. In terms of redundancy, the ability of the species to withstand catastrophic events, we note that the species has reduced redundancy from historical conditions as the species occupies fewer sites that are distributed over a smaller area due to the extirpation of the Lower Kern River Canyon geographic group. In relation to the scale of catastrophic events that are likely to occur, such as the size of recent fires in the Sierra Nevada region, the redundancy of the species is very limited, and one fire could result in extinction of the species. The extirpated Lower Kern River Canyon geographic group included characteristics that were unique to the geographic group including habitat at lower elevation and salamanders that exhibited different periods of seasonal surface activity. The species may have lost genetic and ecological diversity through the extirpation of the Lower Kern River geographic group. Both extant geographic groups are found in similar habitat at high elevations on Breckenridge Mountain. Therefore, in terms of representation, the species currently exists in a limited ecological setting that is reduced from historical conditions.

Future Condition

We now will present our analysis of the future conditions of the Kern Canyon slender salamander, considering how those past and current factors discussed will continue to act on the species into the future for our foreseeable future timeframe of 50 years. While our analysis of the future conditions of the Kern Canyon slender salamander is based on the best scientific information available, substantial uncertainty remains in our understanding of these species and how they will respond to future conditions. The uncertainty in the current distribution and current condition of the Kern Canyon slender salamander contributes uncertainty to our assessment of the long-term future viability of the species.

As part of the SSA, we also developed two future condition scenarios to capture the range of uncertainties regarding future threats and the projected responses by the relictual slender salamander. Our scenarios examined possible future impacts of climate change, timber harvest, hazard tree removal, and fire. Because we determined that the current condition of the relictual slender salamander was consistent with an endangered species (see **Determination of Status for the Kern Canyon Slender Salamander and the Relictual Slender Salamander**, below), we are not presenting the results of the future scenarios in this proposed rule. Please refer to the SSA report (Service 2022a, pp. 42–50) for the full analysis of future scenarios.

The future scenarios consider the interactive effects of future climate change, described by RCP scenarios contributed by the Working Group III to the Fifth Assessment Report and described in the most recent Synthesis Report of the Intergovernmental Panel on Climate Change (IPCC 2014, pp. 9, 22, 57). In our future conditions analysis, we consider the ''intermediate'' emissions scenario of RCP 4.5 (Scenario 1) and the ''very high'' emissions scenario of RCP 8.5 (Scenario 2).

Under both future scenarios, the threats that interact synergistically with climate change are expected to grow in magnitude over time with increasing greenhouse gas emissions. The threat of fire is associated with the effects of climate change, such as increased drought, lower soil moisture, and decreased snowpack. Therefore, fire will continue to be a threat into the future with greater fire threat associated with increasing greenhouse emissions. We expect the pattern of increasing severity of fire and area burned in fires will continue to increase into the future under both future scenarios, with greater increases under Scenario 2. Additionally, timber harvest of dead trees and hazard tree removal will continue to increase in magnitude in the future with increasing greenhouse gas emissions, as drought conditions will continue to weaken trees and make them more susceptible to herbivory and disease. We do not have information to indicate that the existing threats of roads, recreation, grazing, and infrastructure will change in magnitude in the future. Furthermore, we have limited information on predation of the Kern Canyon slender salamander, but there is no indication that predation will increase from current levels in the future. As most of the range of the salamander is within National Forest lands where it is considered a USFS Species of Conservation Concern, the USFS is expected to continue to minimize the impacts of the threats posed by land management activities into the future. Therefore, these existing threats are expected to persist at the same magnitude as under the current condition for both future scenarios.

We examine the resiliency, redundancy, and representation of the Kern Canyon slender salamander under both plausible scenarios. Resiliency of geographic groups of this species depends on the availability of seeps, springs, and streams; cool and damp microhabitat; small invertebrate prey; and mates; and how these habitat factors influence species survival, dispersal, fecundity, and abundance. As we have a limited understanding of the species biology and the current condition of the species, our ability to predict the future condition of the species based on changes in availability of individual and population needs is somewhat limited. However, we can predict the magnitude

of threats to the species under the future scenarios and their impact on the viability of geographic groups of the Kern Canyon slender. We expect geographic groups of this salamander species to experience different changes to its habitat under these scenarios. We discuss the expected future resiliency of each geographic group based on the events that would occur under each scenario below. We then analyze the overall resiliency, representation, and redundancy of the species under each future scenario.

Under Scenario 1, with RCP 4.5 greenhouse gas emissions, moderate warming and drying will occur throughout the range of the Kern Canyon slender salamander. Reductions in soil moisture and snow water equivalent are expected to more than double within 50 years. We expect these changes in climate will result in reduced water flow and more arid conditions in slender salamander habitat. Drying will be more extreme in the high-elevation areas occupied by the species (Dettinger et al. 2018, p. 5). In these areas, the April 1st snow water equivalent will be reduced by up to 81 percent in the next 50 years. Reduction in snowpack will result in reduced water retention and runoff in the spring and summer, with runoff occurring earlier in the spring. Summer soil moisture is also projected to decline over time for all geographic groups of both species. Within 50 years, it is likely that water levels will be reduced in seeps, springs, and perennial springs, and some water sources may have truncated periods of water retention. Additionally, there may be less cool and moist microhabitat at high elevations. We expect that these changes in hydrology will reduce the suitability and availability of habitat for the Kern Canyon slender.

Additionally, under Scenario 1, both the threat of fire and the severity of fires will increase throughout the range of the Kern Canyon slender salamander. The species and its habitat will also be impacted by more frequent extreme weather events including winter storms and flooding. Increased fire and flooding will likely degrade seep, spring, and stream margin habitat and may result in direct mortality of salamanders. Additionally, increased tree mortality will lead to an increase in timber harvest of dead trees and hazard tree removal along roads and trails. The presence of roads, recreation, grazing, timber harvest, and infrastructure will continue to impact the species and their habitat over the next 50 years. The USFS will continue to minimize impacts to both species within the National Forests; however, the Kern Canyon slender salamander sites located on private lands are not afforded the same protections.

Under Scenario 2, higher greenhouse gas emissions past mid-century (RCP 8.5) will result in greater warming and drying, increased threat of fire, and greater frequency of extreme weather events than under Scenario 1. The impacts from roads, recreation, grazing, timber harvest, and infrastructure are expected to continue to pose a threat to the Kern Canyon slender salamander and its habitat at the same magnitude as under the current conditions. The USFS will continue to minimize impacts to the species within the National Forest; however, the Kern Canyon slender salamander sites located on private lands are not afforded the same protections.

Within 50 years, under Scenario 2, extreme weather events will occur more frequently. Additionally, temperatures and fire threat will increase, and April 1st snow water equivalent and summer total soil moisture will decrease to a greater degree than under Scenario 1. These changes will likely result in reduction of seep, spring, and stream habitats and suitable microhabitats. Loss of habitat will occur more often at high elevations where drying will be most severe. The April 1st snow water equivalent is predicted to decrease by up to 99 percent and summer total soil moisture is predicted to decrease by up to 27 percent at high elevations. Furthermore, prolonged droughts may reduce the time that the salamanders can be active on the surface without the risk of desiccation. At higher elevations, temperature increases may result in extended periods of favorable conditions, and salamanders may increase their surface activity. However, the dry conditions predicted under this scenario are expected to restrict the surface activity of salamanders at higher elevations despite increased temperatures. At lower elevations, temperature increases may exceed the tolerances of the species, resulting in restricted surface activity. Restricted surface activity at all elevations would limit the ability of salamanders to find prey and mates resulting in lower survival and fecundity.

The following sections summarize the conditions of the Kern Canyon slender salamander under both future scenarios based upon the best available information.

Kern Canyon Slender Salamander—Future Condition

Under Scenario 1 within 50 years, we expect that the water level of the seeps, springs, and streams that provide habitat for the Kern Canyon slender salamander will decline resulting in reduced condition of habitat. Habitat will also continue to be impacted by roads, heavy recreation use, grazing, infrastructure, and more frequent fires. We anticipate that the resiliency of both geographic groups will likely be slightly reduced from the current condition due to this habitat degradation. In 50 years, we expect that reductions in the quantity and quality of suitable habitat will result in minor reductions in the survival and abundance of Kern Canyon slender salamander within both geographic groups. We expect that the resiliency of both geographic groups of Kern Canyon slender salamander will be slightly reduced from the current condition. Both geographic groups are expected to retain occupied sites and, therefore, the species will maintain its current level of redundancy. We anticipate the Kern Canyon slender salamander will also retain ecological representation that is similar to the current condition. However, the Kern Canyon slender salamander will continue to be vulnerable to catastrophic events such as fires that are expected to occur more frequently under Scenario 1.

Under Scenario 2 within 50 years, we expect that the water level of the seeps, springs, and streams that provide habitat for the Kern Canyon slender salamander will decline. Additionally, as most sites occupied by the Kern Canyon slender salamander are located within narrow canyons along the margins of creeks and streams, habitat within both geographic groups of the Kern Canyon slender salamander will likely be degraded by more frequent higher volume precipitation and flooding events. We expect that this loss of habitat combined with habitat degradation from the continued impact of high recreation use, grazing, road, infrastructure, and increased incidence of fire, will likely result in reductions in survival and abundance of the Kern Canyon slender salamander within 50 years. As a result, the resiliency of both geographic groups will likely be reduced from the current condition. We expect that habitat loss will result in fewer occupied sites within 50 years. Therefore, within 50 years, we expect that the redundancy and representation of the species will be further reduced from the current condition, as the species will occupy fewer sites and exist in a further limited ecological setting. We anticipate Kern Canyon slender salamander will be more vulnerable to

extirpation from catastrophic events under this scenario.

Determination of Status for the Kern Canyon Slender Salamander and the Relictual Slender Salamander

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 an endangered species or a threatened species. The Act defines an ''endangered species'' as a species in danger of extinction throughout all or a significant portion of its range and a ''threatened species'' as a species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether a species meets the definition of 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.

In this proposed rule, we present summary evaluations of eight threats for the Kern Canyon slender salamander and the relictual slender salamander: roads (Factor A), recreation (Factor A), grazing (Factor A), timber harvest (Factor A), hazard tree removal (Factor A), infrastructure development (Factor A), fire (Factor A), and climate change (Factor E). We also evaluate existing regulatory mechanisms (Factor D) and ongoing conservation measures.

In the SSA, we also considered four additional threats: Overutilization due to recreational, educational, and scientific use (Factor B); disease (Factor C); predation (Factor C); and effects associated with small population size (Factor E). We concluded that, as indicated by the best available scientific and commercial information, these threats are currently having little to no impact on either the Kern Canyon slender salamander or the relictual slender salamander, and thus their overall effect now and into the future is expected to be minimal. However, we consider them in the determination for each species, because although these minor threats may have low impacts on their own, combined with impacts of other threats, they could further reduce the already low number of Kern Canyon slender salamanders and relictual slender salamanders. For full descriptions of all threats and how they impact the species, please see the SSA report (Service 2022a, pp. 20–31).

For the purposes of this assessment, we considered the foreseeable future to be 50 years. This time period represents our best professional judgment of the foreseeable future conditions related to the range of available climate change models and for reasonable extrapolations of current trends.

Kern Canyon Slender Salamander: Status Throughout All of Its Range

The Kern Canyon slender salamander is a narrow endemic that inhabits a limited range, with individuals recorded from a small number of sites along the Lower Kern River Canyon and associated creeks. The species has been extirpated from multiple historically occupied sites within the Lower Kern River Canyon due in part to effects associated with road construction from the widening of State Route 178 (Factor A). The species also has reduced representation from historical conditions, as it is no longer found in grassland habitats.

Currently, habitat supporting the Kern Canyon slender salamander is affected by recreation (Factor A), grazing (Factor A), and continuing hydrologic effects associated with roads. These threats continue to degrade the seep and spring habitat, and in some rare cases may result in direct mortality of individual Kern Canyon slender salamanders. Occupied areas in the lower Kern River Canyon are particularly affected by recreation and OHV use. Commercial timber harvest (Factor A) is having only a minimal impact on the Kern Canyon slender salamander, as less than one percent of the species' range is subject to timber harvest. Hazard tree removal (Factor A) and timber harvest of dead trees is currently minimally impacting the Kern Canyon slender salamander as hazard tree removal only impacts small areas of habitat and is unlikely to result in mortality. Fire (Factor A) currently presents one of the largest risks to the Kern Canyon slender salamander. The threat of fire in Kern Canyon slender salamander habitat is high to very high throughout the range of the species, and few regulatory mechanisms are available to address the risk of catastrophic wildfire to the species.

Many of the effects associated with the other threats impacting the species are being reduced in magnitude due to regulatory mechanisms (Factor D) implemented by Sequoia National Forest. Sensitive riparian areas have been gated from OHVs and fenced off from livestock.

Although the Kern Canyon slender salamander is currently being impacted by these threats and has been extirpated from some sites in the Kern Canyon geographic group, the species continues to occupy habitat spread throughout multiple drainages and at a range of elevations (2,350–5,500 ft (716–1,676 m)). Therefore, the species currently has sufficient redundancy and representation to withstand loss from a catastrophic event such as wildfire. Although the threats described above are continuing to degrade the seep, spring, and stream habitat that supports the Kern Canyon slender salamander, the species maintains some population resiliency, redundancy, and representation. Additionally, regulatory mechanisms implemented by the Sequoia National Forest are reducing the magnitude of threats, and State listing under CESA provides additional take prohibitions for the species. For that reason, we found that the Kern Canyon slender salamander is not endangered throughout all of its range. However, we expect that threats affecting the species will increase in magnitude into the future. We analyzed threats under two plausible future scenarios: the ''intermediate'' emissions scenario of RCP 4.5 (Scenario 1) and the ''very high'' emissions scenario of RCP 8.5 (Scenario 2). Under both plausible future scenarios, climate change (Factor E) is expected to reduce the water level of the seeps and springs that support the Kern Canyon slender salamander. Habitat will also continue to be impacted by roads, recreation, and grazing. Climate change is expected to intensify tree mortality and fire, potentially increasing the need for timber harvest and hazard tree removal. Given the high risk of fire in the species' range, more populations could be lost to fire, and under Scenario 2, more populations are likely to be lost. In all future scenarios, we expect there will be further reductions in population resiliency and species redundancy.

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we find that although the Kern Canyon slender salamander has reduced population resiliency and species redundancy and representation from its historical condition, it is not currently in danger of extinction throughout all of its range. However, the magnitude of all threats across the species' range is expected to increase in the foreseeable future, particularly as effects associated with climate change increase the frequency and severity of fire and the need for hazard tree removal, and the cumulative effect of those threats. Thus, after assessing the best available

information, we conclude that the Kern Canyon slender salamander is likely to become in danger of extinction within the foreseeable future throughout all of its range.

Kern Canyon Slender Salamander: Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. The court in *Center for Biological Diversity* v. *Everson,* 435 F. Supp. 3d 69 (D.D.C. 2020) (*Everson*), vacated the aspect of the Final Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species'' (hereafter ''Final Policy''; 79 FR 37578; July 1, 2014) that provided that the Service does not undertake an analysis of significant portions of a species' range if the species warrants listing as threatened throughout all of its range. Therefore, we proceed to evaluating whether the species is endangered in a significant portion of its range—that is, whether there is any portion of the species' range for which both (1) the portion is significant; and (2) the species is in danger of extinction in that portion. Depending on the case, it might be more efficient for us to address the ''significance'' question or the ''status'' question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species' range.

Following the court's holding in *Everson,* we now consider whether there are any significant portions of the species' range where the species is in danger of extinction now (*i.e.,* endangered). In undertaking this analysis for the Kern Canyon slender salamander, we choose to address the status question first—we consider information pertaining to the geographic distribution of both the species and the threats that the species faces to identify any portions of the range where the species is endangered.

For the Kern Canyon slender salamander, we considered whether the threats are geographically concentrated in any portion of the species' range at a biologically meaningful scale. We examined the following threats: Roads (Factor A), recreation (Factor A); grazing (Factor A); timber harvest (Factor A); hazard tree removal (Factor A); infrastructure development (Factor A); fire (Factor A); overutilization due to recreational, educational, and scientific use (Factor B); disease (Factor C); predation (Factor C); effects associated with small population size (Factor E); and climate change (Factor E). We also evaluated existing regulatory mechanisms (Factor D). We found that the Kern Canyon geographic group may have a concentration of threats, as it faces additional threats due to roads, recreation, and infrastructure. However, the impact of these threats is only slightly higher in the Kern Canyon geographic group than in the Erskine Creek geographic group. Additionally, the Kern Canyon geographic group is within the boundary of Sequoia National Forest, so although some threats are of a higher magnitude there, ongoing measures undertaken by the National Forest are decreasing the impacts of grazing and roads. Thus, neither geographic group is so reduced or faces such threats that it would be likely to be in danger of extinction now. Overall, we found no concentration of threats in any portion of the Kern Canyon slender salamander's range at a biologically meaningful scale.

Thus, there are no portions of the species' range where the species has a different status from its rangewide status. Therefore, no portion of the species' range provides a basis for determining that the species is in danger of extinction in a significant portion of its range, and we determine that the species is likely to become in danger of extinction within the foreseeable future throughout all of its range. This does not conflict with the courts' holdings in *Desert Survivors* v. *U.S. Department of the Interior,* 321 F. Supp. 3d 1011, 1070–74 (N.D. Cal. 2018) and *Center for Biological Diversity* v. *Jewell,* 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) because, in reaching this conclusion, we did not need to consider whether any portions are significant and, therefore, did not apply the aspects of the Final Policy's definition of ''significant'' that those court decisions held were invalid.

Kern Canyon Slender Salamander: Determination of Status

Our review of the best available scientific and commercial information indicates that the Kern Canyon slender salamander meets the definition of a threatened species. Therefore, we propose to list the Kern Canyon slender salamander as a threatened species in accordance with sections 3(20) and 4(a)(1) of the Act.

Relictual Slender Salamander: Status Throughout All of Its Range

The relictual slender salamander has a very narrow range; it is currently found from 8 sites, and the two extant geographic groups are separated by less than 5 km (3.1 mi). Historically, the relictual slender salamander occupied additional sites along route 178 in the Lower Kern River Canyon, but repeated searches of the area have failed to find the species, and species experts consider the relictual slender salamander to be extirpated from that area.

Currently, habitat supporting the relictual slender salamander is affected by recreation (Factor A), including a known primitive campsite on Breckenridge Mountain, grazing (Factor A), and continuing hydrologic effects associated with the small roads that pass through occupied areas (Factor A). These threats continue to degrade the seep and spring habitat that supports the species. Grazing is currently occurring in areas on Breckenridge Mountain during the times when the slender salamander is active on the surface, further degrading suitable habitat for the species. Commercial timber harvest (Factor A) has occurred in both geographic groups, and historical effects of logging may still be present in occupied habitat. Hazard tree removal (Factor A) and timber harvest of dead trees also have substantial impact on the species, particularly in the Lucas Creek area, which has experienced a high level of tree mortality. Existing sites in both extant geographic groups, particularly the Lucas Creek geographic group, are also far enough apart that relictual slender salamanders may not be able to disperse between occupied sites.

Fire (Factor A) currently presents one of the largest risks to the relictual slender salamander. The threat of fire in the Lucas Creek geographic group is particularly high, and the area has not burned since before 1984. However, effects associated with the other threats impacting the species are being reduced in magnitude due to regulatory mechanisms (Factor D) implemented by Sequoia National Forest; for example, some areas on Breckenridge Mountain have been fenced off from livestock grazing. However, few regulatory mechanisms are available to address the risk of catastrophic wildfire to the species, and the range of the species is limited enough that a single fire could cause the extinction of the species.

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1)

factors, we find that the resiliency, redundancy and representation of the relictual slender salamander have been reduced from historical conditions. Effects of historical threats along with ongoing impacts from roads, grazing, fire, timber harvest, and hazard tree removal are continuing to degrade the habitat that supports the species, causing further reductions in resiliency and redundancy. The relictual slender salamander exists in a very narrow area in a limited ecological setting, and a single catastrophic event could cause the species to become extinct at any time. Thus, after assessing the best available information, we determine that the relictual slender salamander is in danger of extinction throughout all of its range. We find that a threatened species status is not appropriate for the relictual slender salamander because the magnitude and imminence of the threats acting on the species now result in the relictual slender salamander meeting the definition of an endangered species.

Relictual Slender Salamander: Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. We have determined that the relictual slender salamander is in danger of extinction throughout all of its range and accordingly did not undertake an analysis of any significant portion of its range. Because the relictual slender salamander warrants listing as endangered throughout all of its range, our determination does not conflict with the decision in *Center for Biological Diversity* v. *Everson,* 435 F. Supp. 3d 69 (D.D.C. 2020) because that decision related to significant portion of the range analyses for species that warrant listing as threatened, not endangered, throughout all of their range.

Relictual Slender Salamander: Determination of Status

Our review of the best available scientific and commercial information indicates that the relictual slender salamander meets the definition of an endangered species. Therefore, we propose to list the relictual slender salamander as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition as a listed species, planning and implementation of recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, State, Tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies, including the Service, and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Section 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

The recovery planning process begins with development of a recovery outline made available to the public soon after a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions while a recovery plan is being developed. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) may be established to develop and implement recovery plans. The recovery planning process involves the identification of actions that are necessary to halt and reverse the species' decline by addressing the threats to its survival and recovery. The recovery plan identifies recovery criteria for review of when a species may be ready for reclassification from endangered to threatened (''downlisting'') or removal from protected status (''delisting''), and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery outline, draft recovery plan, final recovery plan, and any revisions will be available on our website as they are completed (*https://www.fws.gov/endangered*), or from our Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (for example, restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If these species are listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost-share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the State of California would be eligible for Federal funds to implement management actions that promote the protection or recovery of the Kern Canyon slender salamander and the relictual slender salamander. Information on our grant programs that are available to aid species recovery can be found at: *https://www.fws.gov/service/financial-assistance.*

Although the Kern Canyon slender salamander and the relictual slender salamander are only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for these species. Additionally, we invite you to submit any new information on these species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of

the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conferencing with the Service as described in the preceding paragraph during the time when the Kern Canyon slender salamander and the relictual slender salamander are proposed for listing include land management or other landscape-altering activities on Federal lands administered by the USFS (Sequoia National Forest) whose effects extend into the species' range, and would adversely affect either species at a scale and magnitude where their continued existence would be jeopardized (for example, widespread stream channelization or diversion, modification of spring openings, diversion of surface or ground water flow, or other activities that modify large portions of seep, spring, and stream habitat).

Once these species are listed, the requirement for consultation with the Service under 7(a)(2) applies. The threshold for consultation under 7(a)(2) is ''may affect,'' and some examples of Federal agency actions within the species' habitat that may then require consultation as described above could include management and any other landscape-altering activities on Federal lands administered by the USFS (Sequoia National Forest) and the BLM; issuance of section 404 Clean Water Act (33 U.S.C. 1251 *et seq.*) permits by the U.S. Army Corps of Engineers; construction and management of pipeline and power line rights-of-way by the Federal Energy Regulatory Commission; construction and maintenance of roads, bridges, or highways by the Federal Highway Administration.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to endangered wildlife. The prohibitions of section 9(a)(1) of the Act, codified at 50 CFR 17.21, make it illegal for any person subject to the jurisdiction of the United States to take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these) endangered wildlife within the United States or on the high seas. In addition, it is unlawful to import; export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any species listed as an endangered species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to employees of the Service, the National Marine Fisheries Service, other Federal land management agencies, and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22. With regard to endangered wildlife, a permit may be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of the species proposed for listing. Based on the best available information, the following actions are unlikely to result in a violation of section 9 for the relictual slender salamander, if these activities are carried out in accordance with existing regulations and permit requirements; this list is not comprehensive:

(1) Vehicle use on existing roads and trails in compliance with the Sequoia National Forest land management plan.

(2) Recreational use with minimal ground disturbance (for example, hiking, walking) in compliance with the Sequoia National Forest land management plan.

Based on the best available information, the following activities may potentially result in a violation of section 9 of the Act for the relictual slender salamander if they are not authorized in accordance with applicable law; this list is not comprehensive:

(1) Unauthorized handling or collecting of the species;

(2) Destruction or alteration of the species' habitat by modification of spring opening, stream channelization or diversion, discharge of fill material, draining, ditching, tiling, or diversion of surface or ground water flow;

(3) Unauthorized modification of riparian areas or disturbance of rocks and woody debris in riparian areas in which the species is known to occur;

(4) Incompatible livestock grazing that results in direct or indirect destruction of riparian habitat; and

(5) Introduction of nonnative species that compete with or prey upon the relictual slender salamander species, such as the introduction of competing, nonnative aquatic animals to the State of California.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Regarding the Kern Canyon slender salamander, the Act allows the Secretary to promulgate protective regulations for threatened species pursuant to section 4(d) of the Act. The discussion below regarding protective regulations for the Kern Canyon slender salamander under section 4(d) of the Act complies with our policy.

III. Proposed Rule Issued Under Section 4(d) of the Act

Background

Section 4(d) of the Act contains two sentences. The first sentence states that the Secretary shall issue such regulations as she deems necessary and advisable to provide for the conservation of species listed as threatened species. The U.S. Supreme Court has noted that statutory language similar to the language in section 4(d) of the Act authorizing the Secretary to take action that she ''deems necessary and advisable'' affords a large degree of deference to the agency (see *Webster* v. *Doe,* 486 U.S. 592, 600 (1988)). Conservation is defined in the Act to mean the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Additionally, the second sentence of section 4(d) of the Act states that the Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants. Thus, the combination of the two sentences of section 4(d) provides the Secretary with wide latitude of discretion to select and promulgate appropriate regulations tailored to the specific conservation needs of the threatened species. The second sentence

grants particularly broad discretion to the Service when adopting one or more of the prohibitions under section 9.

The courts have recognized the extent of the Secretary's discretion under this standard to develop rules that are appropriate for the conservation of a species. For example, courts have upheld, as a valid exercise of agency authority, rules developed under section 4(d) that included limited prohibitions against takings (see *Alsea Valley Alliance* v. *Lautenbacher,* 2007 WL 2344927 (D. Or. 2007); *Washington Environmental Council* v. *National Marine Fisheries Service,* 2002 WL 511479 (W.D. Wash. 2002)). Courts have also upheld 4(d) rules that do not address all of the threats a species faces (see *State of Louisiana* v. *Verity,* 853 F.2d 322 (5th Cir. 1988)). As noted in the legislative history when the Act was initially enacted, ''once an animal is on the threatened list, the Secretary has an almost infinite number of options available to [her] with regard to the permitted activities for those species. [She] may, for example, permit taking, but not importation of such species, or [she] may choose to forbid both taking and importation but allow the transportation of such species'' (H.R. Rep. No. 412, 93rd Cong., 1st Sess. 1973).

In the early days of the Act, the Service published at 50 CFR 17.31 a general protective regulation that would apply to each threatened wildlife species, unless we were to promulgate a separate species-specific protective regulation for that species. In the wake of the court's *CBD* v. *Haaland* decision vacating a 2019 regulation that had made 50 CFR 17.31 inapplicable to any species listed as a threatened species after the effective date of the 2019 regulation, the general protective regulation applies to all threatened species, unless we adopt a species-specific protective regulation. As explained below, we are adopting a species-specific rule that sets out all of the protections and prohibitions applicable to the Kern Canyon slender salamander.

The provisions of this proposed 4(d) rule would promote conservation of the Kern Canyon slender salamander by encouraging management of the habitat for the species in ways that facilitate conservation for the species. The provisions of this proposed rule are one of many tools that we would use to promote the conservation of the Kern Canyon slender salamander. This proposed 4(d) rule would apply only if and when we make final the listing of the Kern Canyon slender salamander as a threatened species.

As mentioned previously in Available Conservation Measures, section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of Federal actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat—and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency—do not require section 7 consultation.

These requirements are the same for a threatened species with a species-specific 4(d) rule. For example, a Federal agency's determination that an action is ''not likely to adversely affect'' a threatened species will require the Service's written concurrence. Similarly, a Federal agency's determination that an action is ''likely to adversely affect'' a threatened species will require formal consultation and the formulation of a biological opinion.

Provisions of the Proposed 4(d) Rule

Exercising the Secretary's authority under section 4(d) of the Act, we have developed a proposed rule that is designed to address the Kern Canyon slender salamander's conservation needs. As discussed previously in Summary of Biological Status and Threats, we have concluded that the Kern Canyon slender salamander is likely to become in danger of extinction within the foreseeable future primarily due to grazing, recreation, fire, and climate change. Section 4(d) requires the Secretary to issue such regulations as she deems necessary and advisable to provide for the conservation of each threatened species and authorizes the Secretary to include among those protective regulations any of the prohibitions that section 9(a)(2) of the Act prescribes for endangered species. We find that, if finalized, the protections, prohibitions, and exceptions in this proposed rule as a whole satisfy the requirement in section 4(d) of the Act to issue regulations deemed necessary and advisable to provide for the conservation of the Kern Canyon slender salamander.

The protective regulations we are proposing for the Kern Canyon slender salamander incorporate prohibitions from section 9(a)(1) to address the threats to the species. Section 9(a)(1) prohibits the following activities for endangered wildlife: importing or exporting; take; possession and other acts with unlawfully taken specimens; delivering, receiving, carrying, transporting, or shipping in interstate or foreign commerce in the course of commercial activity; or selling or offering for sale in interstate or foreign commerce. This protective regulation includes all of these prohibitions for the Kern Canyon slender salamander because the species is at risk of extinction in the foreseeable future and putting these prohibitions in place will help to prevent further declines, preserve the species' remaining populations, and decrease synergistic, negative effects from other ongoing or future threats.

In particular, this proposed 4(d) rule would provide for the conservation of the Kern Canyon slender salamander by prohibiting the following activities, unless they fall within specific exceptions or are otherwise authorized or permitted: importing or exporting; take; possession and other acts with unlawfully taken specimens; delivering, receiving, carrying, transporting, or shipping in interstate or foreign commerce in the course of commercial activity; or selling or offering for sale in interstate or foreign commerce.

Under the Act, ''take'' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Some of these provisions have been further defined in regulations at 50 CFR 17.3. Take can result knowingly or otherwise, by direct and indirect impacts, intentionally or incidentally. Regulating take would help preserve the species' remaining populations and

decrease synergistic, negative effects from other ongoing or future threats. Therefore, we propose to prohibit take of the Kern Canyon slender salamander, except for take resulting from those actions and activities specifically excepted by the 4(d) rule.

Exceptions to the prohibition on take would include all of the general exceptions to the prohibition against take of endangered wildlife, as set forth in 50 CFR 17.21 and certain other specific activities that we propose for exception, as described below.

The proposed 4(d) rule would also provide for the conservation of the species by allowing exceptions that incentivize conservation actions or that, while they may have some minimal level of take of the Kern Canyon slender salamander, are not expected to rise to the level that would have a negative impact (that is, would have only de minimis impacts) on the species' conservation. The proposed exceptions to these prohibitions include:

(1) Fuels management activities that are expected to have negligible impacts to the Kern Canyon slender salamander and its habitat, as long as they are conducted or authorized by the Federal agency with jurisdiction over the land where the activities occur. This includes fuels management activities developed by a Federal, State, county, or other entity to reduce the risk or severity of fire in Kern Canyon slender salamander habitat and to protect and maintain habitat that supports the species. These activities should be in accordance with established and recognized fuels management plans that include measures to minimize impacts to the species and its habitat, and:

(2) Fuels management activities on private lands where there is no Federal nexus. This exception applies to those situations, whether currently existing or that may develop in the future, where fuels management activities are essential to reduce the risk of catastrophic wildfire, and when such activities will be carried out in accordance with an established and recognized fuels or forest management plan that includes measures to minimize impacts to the species and its habitat.

Despite these prohibitions regarding threatened species, we may under certain circumstances issue permits to carry out one or more otherwise-prohibited activities, including those described above. The regulations that govern permits for threatened wildlife state that the Director may issue a permit authorizing any activity otherwise prohibited with regard to threatened species. These include permits issued for the following purposes: for scientific purposes, to enhance propagation or survival, for economic hardship, for zoological exhibition, for educational purposes, for incidental taking, or for special purposes consistent with the purposes of the Act (50 CFR 17.32). The statute also contains certain exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

We recognize the special and unique relationship with our State natural resource agency partners in contributing to the conservation of listed species. State agencies often possess scientific data and valuable expertise on the status and distribution of endangered, threatened, and candidate species of wildlife and plants. State agencies, because of their authorities and their close working relationships with local governments and landowners, are in a unique position to assist us in implementing all aspects of the Act. In this regard, section 6 of the Act provides that we must cooperate to the maximum extent practicable with the States in carrying out programs authorized by the Act. Therefore, any qualified employee or agent of a State conservation agency that is a party to a cooperative agreement with the Service in accordance with section 6(c) of the Act, who is designated by his or her agency for such purposes, would be able to conduct activities designed to conserve the Kern Canyon slender salamander that may result in otherwise prohibited take without additional authorization.

Nothing in this proposed 4(d) rule would change in any way the recovery planning provisions of section 4(f) of the Act, the consultation requirements under section 7 of the Act, or our ability to enter into partnerships for the management and protection of the Kern Canyon slender salamander. However, interagency cooperation may be further streamlined through planned programmatic consultations for the species between us and other Federal agencies, where appropriate. We ask the public, particularly State agencies and other interested stakeholders that may be affected by the proposed 4(d) rule, to provide comments and suggestions regarding additional guidance and methods that we could provide or use, respectively, to streamline the implementation of this proposed 4(d) rule (see Information Requested, above).

IV. Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features.

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.,* range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.,* migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation also does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat,

the Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement ''reasonable and prudent alternatives'' to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat).

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. We note that the court in *CBD* v. *Haaland* vacated the provisions from the 2019 regulations regarding unoccupied critical habitat. Therefore, the regulations that now govern designations of critical habitat are the implementing regulations that were in effect before the 2019 regulations.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information from the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act and in the 4(d) rule for the Kern Canyon slender salamander. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of the species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of those planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that a designation of critical habitat is not prudent when any of the following situations exist:

(i) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species; or

(ii) Such designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Services may consider include but are not limited to: Whether the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or whether any areas meet the definition of ''critical habitat.''

As discussed earlier in this document, no imminent threat of collection or vandalism identified under Factor B currently exists for these species, and identification and mapping of critical habitat is not expected to initiate any such threat. In our SSA report and proposed listing determination for both the Kern Canyon slender salamander and the relictual slender salamander, we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat to both the Kern Canyon slender salamander and the relictual slender salamander. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) have been met, we have determined that the designation of critical habitat is prudent for both the Kern Canyon slender salamander and the relictual slender salamander.

Critical Habitat Determinability

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the Kern Canyon slender salamander and the relictual slender salamander is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

(i) Data sufficient to perform required analyses are lacking, or

(ii) The biological needs of the species are not sufficiently well known to identify any area that meets the definition of ''critical habitat.''

When critical habitat is not determinable, the Act allows the Service an additional year to publish a critical

habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)).

We reviewed the available information pertaining to the biological needs of these two species and habitat characteristics where the species are located. This and other information represent the best scientific data available and led us to conclude that the designation of critical habitat is determinable for the Kern Canyon slender salamander and the relictual slender salamander.

Physical or Biological Features Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species, and which may require special management considerations or protection. The regulations at 50 CFR 424.02 define ''physical or biological features'' as the features that support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or absence of a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, we may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

Space for Individual and Population Growth and for Normal Behavior

The Kern Canyon slender salamander and the relictual slender salamander are endemic to, and occur exclusively within, humid habitat associated with seeps, springs, and streams in the Greenhorn and Piute Mountains in the southern Sierra Nevada in Kern County. Both species' habitat is constrained to riparian zones adjacent to seeps, springs, and streams due to the narrow physiological tolerances of both species. Habitat within larger fast-moving bodies of water, such as the Kern River, are not suitable habitat and do not contain the physical or biological features that support the Kern Canyon slender salamander or the relictual slender salamander.

Primary habitat for the Kern Canyon slender salamander is composed of wet stream and seep margins within rocky, narrow canyons supporting chapparal shrubs, sycamore (*Platanus racemosa*), California buckeye (*Aesculus californica*), willow (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), interior live oak (*Quercus wislizeni*), canyon live oaks (*Quercus chrysolepis*), and foothill pine (*Pinus sabiniana*). Historically, the Kern Canyon slender salamander was found on exposed hillsides and open grasslands, but the primary habitat of the species is now limited to riparian habitats or other moist microsites (Lannoo 2005, p. 692; Jockusch 2021b, pers. comm.).

Primary habitat for the relictual slender salamander is composed of seeps, perennial springs, and streams in rocky habitat supporting limited tree cover of oaks (*Quercus* spp.), buckeyes (*Aesculus* spp.), sycamores (*Platanus racemosa*), pines (*Pinus* spp.), and firs (*Abies* spp.).

We do not know how much suitable habitat and habitat connectivity is required to sustain viability of either the Kern Canyon slender salamander or the relictual slender salamander. There may be distinct, non-interbreeding populations or there may be some level of dispersal between localities associated with the same streams or different aquatic features providing at least a low level of connectivity between individual populations. The minimum number of populations necessary to sustain the salamanders is unknown. The distribution and quantity of available suitable habitat across the range necessary to support populations of either the Kern Canyon slender salamander or the relictual slender salamander are unknown.

While the amount of habitat necessary to support Kern Canyon slender salamander and relictual slender salamander individual and population growth and normal behavior is unknown, preservation of these features is essential for the species.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

The diets of the Kern Canyon slender salamander and the relictual slender salamander are assumed to be similar to other *Batrachoseps* species such as the California slender salamander and the Pacific slender salamander, which prey upon small invertebrates, earthworms, and slugs (Cunningham 1960, p. 98; Adams 1968, p. 171; Stebbins and McGinnis 2012, p. 127). The prey-related requirements (abundance, diversity, range, etc.) to sustain populations of either species are unknown.

Water is essential for survival of the Kern Canyon slender salamander and the relictual slender salamander. We have no specific information on the amount of water they require; however, both species are restricted to patches of humid habitat near sources of water such as small seeps, springs, and streams. The relictual slender salamander has a closer association with water than other species of terrestrial salamanders as relictual slender salamanders have been found submerged in water and under cover objects with water beneath them. During time of drought, water sources may become scarce, and associated riparian areas may become hot and dry. The relictual slender salamander and the Kern Canyon slender salamander may need to expend more energy and time in search of new water sources and humid habitat or may restrict surface activity and foraging time to seek shelter in subterranean refugia to avoid desiccation during time of drought.

Cover or Shelter

Kern Canyon slender salamanders and relictual slender salamanders require refugia to regulate body temperature,

forage for prey, and to escape and hide from predators. When active on the surface, Kern Canyon slender salamanders and relictual slender salamanders shelter under rocks, woody debris, bark, and leaf litter with sufficient interstitial spaces to allow for movement of salamanders. During dry and hot or cold seasons, Kern Canyon slender salamanders and relictual slender salamanders likely shelter in subterranean refugia consisting of passages made by other animals or produced by root decay, soil shrinkage, or water erosion (Cunningham 1960, p. 95; Lannoo 2005, pp. 688–693). The Kern Canyon slender salamander and the relictual slender salamander perform buccopharyngeal respiration (oxygen is taken up simply by diffusion or by the contraction and relaxation of the muscles of the cheeks or mouth and throat) and are susceptible to cutaneous water loss and desiccation. Therefore, a cool, moist microhabitat, either shielded from the sun by a cover object or subterranean, is likely preferred refugia to properly maintain suitable body temperature and moisture levels, forage for prey, and escape from predators.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

Virtually no information is available concerning the life cycle of the Kern Canyon slender salamander. Two communal nests of the relictual slender salamander containing numerous gravid females and approximately 125–200 eggs within each nest were observed during the months of March and June (Wake et al. 2002, p. 1026; Jockusch et al. 2012, p. 17; Jockusch 2021a, pers. comm.). These nests were associated with rocks adjacent to seeps (Jockusch 2021a, pers. comm.). Field observations of relictual slender salamanders indicate that gravid females may carry 16–22 eggs (Jockusch 2021b, pers. comm.). In general, female *Batrachoseps* produce one clutch annually (Jockusch 2021b, pers. comm.).

No information is available as to whether eggs or juvenile Kern Canyon slender salamanders and relictual slender salamanders require different habitat than adults. However, based on their small size and limited range, they likely are found in the same habitat.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the Kern Canyon slender salamander and the relictual slender salamander from studies of the species' habitat, ecology, and life history as described below. Additional information can be found in the SSA report (Service 2022a, entire; available on *https://www.regulations.gov* under Docket No. FWS–R8–ES–2022–0081). We have determined that the following physical or biological features are essential to the conservation of the Kern Canyon slender salamander and the relictual slender salamander:

(1) Aquatic habitat consisting of seeps, springs, and streams.

(2) Riparian habitat consisting of terrestrial areas adjacent to seeps, springs, and streams that contain:

a. Sufficient refugia consisting of woody debris, leaf litter, and rocks with abundant interstitial spaces to facilitate safe resting, foraging, and movement;

b. Suitable prey to allow for survival, growth, and reproduction; and

c. Riparian vegetation that provides shade cover contributing to cool and moist surface conditions for maintaining homeostasis, foraging opportunities, and physical structure for predator avoidance.

(3) Corridors of aquatic habitat or riparian habitat that provide connectivity between patches of occupied habitat to allow for movement of individuals.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of the Kern Canyon slender salamander and relictual slender salamander may require special management considerations or protection to reduce threats posed by: Destructive fires; climate change; and activities that cause surface disturbance including forest management activities (for example, fuels reduction, hazard tree management, forest restoration, prescribed fire), inappropriate livestock grazing, recreational activities, road construction and maintenance, and development.

Management activities that could ameliorate these threats include (but are not limited to): Maintaining existing populations and suitable habitat within population areas; restoring historical habitat and establishing new populations in the lower Kern River Canyon; use of best management practices designed to reduce erosion and bank destruction; protection of riparian corridors and woody vegetation; fencing to exclude livestock from occupied riparian areas; establishing and enhancing connectivity between currently occupied populations and adjacent suitable habitat; and developing habitat management plans based on site-specific conditions for Kern Canyon slender salamander and relictual slender salamander habitat.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat.

We are proposing to designate critical habitat in areas within the geographical area occupied by the Kern Canyon slender salamander and the relictual slender salamander at the time of listing. We also are proposing to designate specific areas outside the geographical area occupied by the Kern Canyon slender salamander and the relictual slender salamander because we have determined that those areas are essential for the conservation of the species. The currently occupied habitat for the Kern Canyon slender salamander and the relictual slender salamander is limited. Therefore, we identified suitable habitat within the estimated historical range of the Kern Canyon slender salamander and the relictual slender salamander that meets the definition of critical habitat and that is essential to provide for species redundancy into the foreseeable future.

Sources of data for these two species and their habitat requirements include the CNDDB, peer-reviewed articles on these species and/or related species, and communication with species experts.

For areas within the geographic areas occupied by the Kern Canyon slender salamander and the relictual slender salamander at the time of listing, we delineated critical habitat unit boundaries using the following criteria:

We determined occupied areas for each species by reviewing the CNDDB occurrence records for the species and peer-reviewed articles. Systematic surveys have not been carried out for both species, and no recent searches have been conducted for these species at some localities where these species were previously detected. As discussed above in Background, both species are

cryptic and shelter under cover objects when they are active on the surface. Because of their cryptic nature and the scarcity of occurrence records for both species, we determined that if suitable habitat containing the physical or biological features was still present in an area where a Kern Canyon slender salamander or a relictual slender salamander was previously detected and if there is no record of repeated negative searches for the species in that area, that there was a high likelihood that the species would still be present even if it had not been recently detected. Therefore, based on the best available information, we considered all the CNDDB Element Occurrences (occurrences) for the Kern Canyon slender salamander as occupied areas for the species. Based on the best available information, we considered the occurrences of the relictual slender salamander within the lower Kern River Canyon to be extirpated or unoccupied areas for the species and we considered all other occurrences of the relictual slender salamander as occupied areas for the species.

(1) We selected all suitable habitat (habitat that contained the physical or biological features) within a 300-ft (91-m) radius of an occurrence record. A 300-ft (91-m) radius was based on the riparian conservation areas in Sequoia National Forest outlined in the Land Management Plan for Sequoia National Forest (USFS 2019a, p. 16).

(2) We selected additional contiguous suitable habitat consisting of stream segments downstream of occurrence records and associated riparian areas within a 300-ft (91-m) radius that contain the physical or biological features to include dispersal areas and corridors of habitat connectivity for the two species.

(3) We then constrained the boundary of a critical habitat unit based on potential effects of physical barriers (for example, residential housing developments) that cause habitat fragmentation and prevent connectivity and dispersal opportunities, as we consider that individuals of either species would be unable or unlikely to pass such barriers.

We conclude that the occupied areas we are proposing for critical habitat provide for the conservation of both species because they are habitat that contain all of the physical or biological features for the extant occurrences that have been reported to CNDDB and that facilitate connectivity and dispersal opportunities within and among occurrences.

As previously stated, we also identified unoccupied areas for the Kern Canyon slender salamander and the relictual slender salamander. We have determined that in order to recover the Kern Canyon slender salamander, connecting corridors of suitable habitat need to be maintained between areas occupied by the species. Therefore, we identified two stream segments and riparian habitat associated with small streams in the Kern Canyon within the estimated range of the Kern Canyon slender salamander that provide corridors of suitable habitat (that contain the physical or biological features) between areas occupied by the species. For the unoccupied areas for the Kern Canyon slender salamander, we selected areas within 20 ft (6 m) of the center flowline of the two stream segments and north-facing riparian areas in the Kern Canyon within 20 ft (6 m) of the center flowline of the Kern River (the Kern Canyon slender salamander is currently only found on the south side of the Kern River). The Kern River is not considered critical habitat for the Kern Canyon slender salamander. We include these unoccupied areas as proposed critical habitat for the Kern Canyon slender salamander for the purpose of maintaining habitat connectivity between areas occupied by the species, which is essential to the conservation of the species. Habitat connectivity is necessary to maintain the redundancy of the species and reduce the chance that a catastrophic event would eliminate all populations in an area.

We have determined that in order to recover the relictual slender salamander, additional populations will need to be reestablished in areas historically occupied by the species and connecting corridors of suitable habitat will need to be maintained. Therefore, we identified areas outside the geographic area occupied by the relictual slender salamander at the time of proposed listing that were historically occupied by the relictual slender salamander. For the relictual slender salamander, we selected all suitable habitat (habitat that contained the physical or biological features) within a 300-ft (91-m) radius of the occurrence records that are presumed extirpated in the Kern Canyon. We selected additional contiguous suitable habitat consisting of stream segments downstream of the occurrence records and associated riparian areas within a 300-ft (91-m) radius of the streams to include areas for reestablishment and corridors of habitat connectivity. We then selected north-facing riparian areas in the Kern Canyon that contain the physical or biological features to include connecting corridors of suitable habitat between areas for reestablishment and areas occupied by the relictual slender salamander at the time of listing. The Kern River is not considered habitat for the relictual slender salamander. We include these unoccupied areas as proposed critical habitat for the relictual slender salamander for the purpose of reestablishing populations, which are essential to the conservation of the species since few extant populations remain. The addition of reestablished populations would increase the redundancy and representation of the species and reduce the chance that a catastrophic event would eliminate all populations.

We conclude that these unoccupied areas for the Kern Canyon slender salamander and the relictual slender salamander will contribute to the conservation of these species, and they contain the physical or biological features for the species.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Kern Canyon slender salamander and the relictual slender salamander. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

We propose to designate as critical habitat lands that we have determined are occupied at the time of listing (that is, currently occupied) and that contain one or more of the physical or biological features that are essential to support life-history processes of the species. We have also identified, and propose for designation as critical habitat, unoccupied areas that are essential for the conservation of the species.

Units are proposed for designation based on one or more of the physical or biological features being present to support the Kern Canyon slender salamander and the relictual slender

salamander's life-history processes. For the Kern Canyon slender salamander, the three occupied units contain all of the identified physical or biological features and support multiple life-history processes, and the one unoccupied unit contains only some of the physical or biological features necessary to support the Kern Canyon slender salamander's particular use of that habitat. For the relictual slender salamander, the two occupied units contain all of the identified physical or biological features and support multiple life-history processes, and the one unoccupied unit contains only some of the physical or biological features necessary to support the relictual slender salamander's particular use of that habitat. The unoccupied units for both species have aquatic habitat containing seeps, springs, and streams that support the life history needs of the species. The proposed critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document under Proposed Regulation Promulgation. We include more detailed information on the boundaries of the critical habitat designation in Proposed Critical Habitat Designation for the Kern Canyon Slender Salamander and Proposed Critical Habitat Designation for the Relictual Slender Salamander. We will make the coordinates or plot points or both on which each map is based available to the public on *https://www.regulations.gov* at Docket No. FWS–R8–ES–2022–0081.

Proposed Critical Habitat Designation for the Kern Canyon Slender Salamander

We are proposing to designate four units as critical habitat for the Kern Canyon slender salamander, for a total of approximately 2,051 ac (830 ha). The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the Kern Canyon slender salamander. The areas we propose as critical habitat are: (1) Bodfish Creek, (2) Erskine Creek, (3) Kern Canyon Tributaries, and (4) Kern Canyon Tributaries and Connecting Creeks. Table 3 shows the proposed critical habitat units and the approximate area of each unit. Unit 3 overlaps with proposed critical habitat for the relictual slender salamander.

TABLE 3—PROPOSED CRITICAL HABITAT UNITS FOR THE KERN CANYON SLENDER SALAMANDER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Size of unit	Occupied?
1. Bodfish Creek	Federal Unclassified/Private	125 ac (50 ha) 19 ac (8)	Yes.
2. Erskine Creek	Federal Unclassified/Private	182 ac (74 ha) 259 ac (105 ha)	Yes.
3. Kern Canyon Tributaries	Federal Unclassified/Private	1,377 ac (557 ha) 32 ac (13 ha)	Yes.
4. Kern Canyon Tributaries and Connecting Creeks.	Federal Unclassified/Private	25 ac (10 ha) 32 ac (13 ha)	No.
Total		2,051 ac (830 ha)	

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Kern Canyon slender salamander, below.

Unit 1: Bodfish Creek

This unit encompasses 144 ac (58 ha) within Kern County to the south of the Isabella Lake reservoir. This unit stretches along Bodfish Creek, approximately from river mile 3.5 to 5.2 (5.6 kilometers [km] from the confluence of Bodfish Creek and the Kern River to 8.4 km from the confluence of Bodfish Creek and the Kern River). Habitat within this unit is largely undeveloped and unfragmented. The majority of habitat is federally owned by the USFS and BLM. A small area in the southern portion of this unit is within Sequoia National Forest. General land use activities on the Federal lands within this unit include forest management (for example, fuels reduction, hazard tree management, forest restoration, prescribed fire) and grazing. Smaller tracts of land in rural areas in the northern portion of this unit are owned by private entities and have a small amount of residential development and may be used for livestock grazing. Wildfire and climate change are the primary ongoing threats to habitat within this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with forest management, recreational development, residential development, and grazing. This unit contains extant occurrences of the species and encompasses aquatic features and riparian habitat that are at higher elevation and are not fragmented by roads. This unit includes all the physical or biological features. This unit is considered occupied.

Unit 2: Erskine Creek

This unit encompasses 441 ac (178 ha) within Kern County to the south of Isabella Lake, a census-designated place in the Kern Canyon south of the Isabella Lake reservoir. This unit stretches along Erskine Creek, approximately from river mile 2.8 to 7.2 (4.6 km from the confluence of Erskine Creek and the Kern River to 11.6 km from the confluence of Erskine Creek and the Kern River). This unit is in a rural area and is sparsely fragmented by single lane roads. The majority of habitat within this unit is owned by private entities, and the remainder of the habitat is federally owned by the BLM. The privately owned parcels within this unit contain some residential development, and general land-use activities may include livestock grazing. General land use activities on the Federal lands within the unit include forest management (for example, fuels reduction, hazard tree management, forest restoration, prescribed fire), roads, and recreational development. Wildfire and climate change are the primary ongoing threats to habitat within this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with forest management, roads, recreational development, residential development, and grazing. This unit includes all the physical or biological features. This unit is considered occupied.

Unit 3: Kern Canyon Tributaries

This unit encompasses 1,409 ac (570 ha) within Kern County in Sequoia National Forest in the Kern Canyon.

This unit includes segments of streams and small tributaries that feed into the Kern River and associated riparian habitat on the south side of the Kern Canyon. Small streams within steep ravines and narrow canyons provide habitat for the Kern Canyon slender salamander within this unit. The mainstem of the Kern River is not considered to be habitat for the Kern Canyon slender salamander within this unit. Some of the habitat within this unit is fragmented by highway California State Route 178, single lane roads, and recreational development. The majority of habitat in this unit is federally owned by the USFS. General land use activities on Federal lands within the unit include forest management (for example, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, highway maintenance, and recreational development. Smaller tracts of habitat are owned by private entities and contain a small amount of residential and recreational development. Wildfire and climate change are the primary ongoing threats to habitat within this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with California State Route 178 and other roads, forest management, recreational development, residential development, and grazing. This unit includes all the physical or biological features. This unit is considered occupied.

Unit 4: Kern Canyon Tributaries and Connecting Creeks

This unit encompasses 57 ac (23 ha) within Kern County in the Kern Canyon and along segments of Bodfish Creek and Erskine Creek to the south of the Kern Canyon. This unit includes habitat along streams and small tributaries that feed into the Kern River and associated riparian habitat within a narrow area in the Kern Canyon. This unit also contains the segment of Bodfish Creek from the confluence of the creek and the Kern River to Bodfish Creek river mile 3.5 (5.6 km from the confluence of Bodfish Creek and the Kern River) and a narrow area of riparian habitat associated with the creek. This unit also contains the segment of Erskine Creek from the confluence of the creek with the Kern River to Erskine Creek river mile 2.8 (4.6 km from the confluence of Erskine Creek and the Kern River) and a narrow area of riparian habitat associated with the creek. The mainstem of the Kern River is not considered to be habitat for the Kern Canyon slender salamander within this unit. The majority of the land within this unit in the Kern Canyon is under Federal landownership (USFS and BLM). General land use activities on these Federal lands include forest management (for example, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, highway maintenance, and recreational development. The segments of Bodfish Creek and Erskine Creek included in this unit pass through smaller tracts of land that are owned by private entities and contain residential and commercial development. Wildfire and climate change are the primary ongoing threats to habitat within this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with forest management, California State Route 178 and other roads, recreational development, residential development, and grazing. This unit includes the physical or biological features of aquatic habitat required by the species (seeps, springs, and streams; riparian habitat; and prey) as well as corridors of aquatic habitat that provide connectivity between patches of occupied habitat. This unit is considered unoccupied but is essential for the conservation of the species because it contains aquatic and riparian features that support connectivity between occupied habitat at lower elevations in the Kern Canyon and occupied habitat at higher elevations along Bodfish and Erskine Creeks.

Proposed Critical Habitat Designation for the Relictual Slender Salamander

We are proposing three units as critical habitat for the relictual slender salamander, for a total of approximately 2,685 ac (1,087 ha). The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the relictual slender salamander. The three areas we propose as critical habitat are: (1) Kern Canyon Tributaries, (2) Lucas Creek, and (3) Mill Creek. Table 4 shows the proposed critical habitat units and the approximate area of each unit. Unit 1 overlaps with proposed critical habitat for the Kern Canyon slender salamander.

TABLE 4—PROPOSED CRITICAL HABITAT UNITS FOR THE RELICTUAL SLENDER SALAMANDER

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Land ownership by type	Size of unit	Occupied?
1. Kern Canyon Tributaries	Federal Unclassified/Private	713 ac (289 ha) 10 ac (4 ha)	No.
2. Lucas Creek	Federal Unclassified/Private	761 ac (308 ha) 2 ac (1 ha)	Yes.
3. Mill Creek	Federal Unclassified/Private	1,190 ac (481 ha) 9 ac (4 ha)	Yes.
Total		2,685 ac (1,087 ha)	

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the relictual slender salamander, below.

Unit 1: Kern Canyon Tributaries

This unit encompasses 723 ac (293 ha) within Kern County in the Kern Canyon within Sequoia National Forest. This unit includes segments of small streams and associated riparian habitat on the south side of the Kern Canyon. The mainstem of the Kern River is not considered to be habitat for the relictual slender salamander within this unit. Some habitat within this unit is fragmented by a highway (California State Route 178), single-lane roads, and recreational development. The majority of habitat in this unit is federally owned by the USFS, and a small area of habitat is privately owned. General land use activities on Federal lands within this unit include forest management (for example, fuels reduction, hazard tree management), grazing, highway maintenance, and recreational development. Wildfire and climate change are the primary ongoing threats to habitat in this unit. This unit

includes aquatic habitat and riparian habitat for the relictual slender salamander, including seeps, springs, and streams. This unit is considered unoccupied as the relictual slender salamander is thought to be extirpated from all sites in the Kern Canyon (Jennings and Hayes 1994, p. 22; Lannoo 2005, p. 688; Jockusch et al. 2012, p. 17). This unit is essential for the conservation of the species because it encompasses historically occupied habitat that previously supported multiple occurrences of the species and reestablishment of the species in the habitat within this unit is needed to increase the redundancy of the species.

Unit 2: Lucas Creek

This unit encompasses 763 ac (309 ha) within Kern County to the south of the Kern Canyon in Sequoia National Forest. This unit extends south from the Kern Canyon along Lucas Creek and two unnamed tributaries to Lucas Creek on Breckenridge Mountain. Land within this unit is largely undeveloped and only sparsely fragmented by single-lane roads, recreational development, and small parcels that contain residential development. Most of the habitat in this unit is federally owned by the USFS. General land use activities on Federal lands within the unit include forest management (for example, fuels reduction, timber harvest, hazard tree management, forest restoration, prescribed fire), grazing, road maintenance, and recreational development. Wildfire and climate change are the primary ongoing threats to the habitat in this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with forest management, roads, recreational development, residential development, and grazing. This unit includes all the physical or biological features. This unit is considered occupied.

Unit 3: Mill Creek

This unit encompasses 1,199 ac (485 ha) within Kern County to the south of the Kern Canyon in Sequoia National Forest. This unit extends south from the Kern Canyon along Mill Creek and an unnamed tributary to Mill Creek on Breckenridge Mountain. Land within this unit is largely undeveloped and only sparsely fragmented by single-lane roads and some recreational development. The majority of habitat in this unit is federally owned by the USFS, and a small area of habitat is owned by private entities. General land use activities on Federal lands within this unit include forest management (for example, timber harvest, fuels reduction, hazard tree management, forest restoration, prescribed fire), grazing, road maintenance, and recreational development. Wildfire and climate change are the primary ongoing threats to the habitat in this unit. Physical or biological features in this unit may require special management considerations or practices to protect them from impacts associated with forest management, roads, recreational development, and grazing. This unit includes all the physical or biological features. This unit is considered occupied.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final rule revising the definition of destruction or adverse modification on February 11, 2016 (81 FR 7214). Although we also published a revised definition after that (84 FR 44976, August 27, 2019), the 2019 definition was subsequently vacated by the court in *CBD* v. *Haaland*. Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat—and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency—do not require section 7 consultation.

Compliance with the requirements of section 7(a)(2) is documented through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define ''reasonable and prudent alternatives'' (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Service Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation: (a) if the amount or extent

of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.

In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but the regulations also specify some exceptions to the requirement to reinitiate consultation on specific land management plans after subsequently listing a new species or designating new critical habitat. See the regulations for a description of those exceptions.

Application of the ''Destruction or Adverse Modification'' Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the designated critical habitat in a way that appreciably diminishes the value of the critical habitat for the conservation of the listed species. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that we may, during a consultation under section 7(a)(2) of the Act, consider likely to destroy or adversely modify critical habitat include, but are not limited to: Construction or maintenance of roads, maintenance of recreation sites and trails, and land development that require clearing, digging, and/or otherwise altering suitable habitat. Clearing of vegetation and digging could remove vegetation, alter hydrology of seeps, springs, or streams, and remove rocks or woody debris, which would contribute to losses of shelter, prey, ability to thermoregulate, and conditions for a cool, moist microhabitat. Additionally, development, roads, and construction projects can fragment tracts of suitable habitat, and may inhibit dispersal of the Kern Canyon slender salamander and the relictual slender salamander between remaining areas of suitable habitat. Activities that are not expected to destroy or adversely modify critical habitat include alteration of flows within the Kern River, as faster moving parts of the river do not contain the physical or biological features that support the Kern Canyon slender salamander or the relictual slender salamander (see *Space for Individual and Population Growth and for Normal Behavior* above).

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to an integrated natural resources management plan (INRMP) prepared under section 101 of the Sikes Act Improvement Act of 1997 (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. No DoD lands with a completed INRMP are within the proposed critical habitat designation for either the Kern Canyon slender salamander or the relictual slender salamander.

Consideration of Impacts Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (hereafter, the ''2016 Policy''; 81 FR 7226, February 11, 2016), both of which were developed jointly with the National Marine Fisheries Service (NMFS). We also refer to a 2008 Department of the Interior Solicitor's opinion entitled ''The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under Section 4(b)(2) of the Endangered Species Act'' (M–37016). We explain each decision to exclude areas, as well as decisions not to exclude, to demonstrate that the decision is reasonable.

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise discretion to exclude the area only if such exclusion would not result in the extinction of the species. In making the determination to exclude a particular area, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. We describe below the process that we undertook for taking into consideration each category of impacts and our analyses of the relevant impacts.

Consideration of Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both ''with critical habitat'' and ''without critical habitat.''

The ''without critical habitat'' scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (*e.g.,* under the Federal listing as well as other Federal, State, and local regulations). Therefore, the baseline represents the costs of all efforts attributable to the listing of the species under the Act (*i.e.,* conservation of the species and its habitat incurred

regardless of whether critical habitat is designated). The ''with critical habitat'' scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct a discretionary 4(b)(2) exclusion analysis.

Executive Orders (E.O.s) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. Section 3(f) of E.O. 12866 identifies four criteria when a regulation is considered a ''significant'' rulemaking and requires additional analysis, review, and approval if met. The criteria relevant here is whether the designation of critical habitat may have an economic effect of greater than $100 million in any given year (section 3(f)(1)). Therefore, our consideration of economic impacts uses a screening analysis to assess whether a designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander is likely to exceed the economically significant threshold.

For this particular designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander (IEc 2022, entire). We began by conducting a screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographic areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. In particular, the screening analysis considers baseline costs (that is, absent critical habitat designation) and includes any probable incremental economic impacts where land and water use may already be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. The presence of the listed species in occupied areas of critical habitat means that any destruction or adverse modification of those areas will also jeopardize the continued existence of the species. Therefore, designating occupied areas as critical habitat typically causes little if any incremental impacts above and beyond the impacts of listing the species. Therefore, the screening analysis focuses on areas of unoccupied critical habitat. If there are any unoccupied units in the proposed critical habitat designation, the screening analysis assesses whether any additional management or conservation efforts may incur incremental economic impacts. This screening analysis combined with the information contained in our IEM constitute what we consider to be our draft economic analysis (DEA) of the proposed critical habitat designation for the Kern Canyon slender salamander and the relictual slender salamander; our DEA is summarized in the narrative below.

As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander, first we identified, in the IEM dated March 1, 2022, probable incremental economic impacts associated with the following categories of activities: fuels management, recreation, utilities management, roads, and grazing. We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat affects only activities conducted, funded, permitted, or authorized by Federal agencies. If we list these species, in areas where the Kern Canyon slender salamander or the relictual slender salamander is present, Federal agencies would be required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect these species. Moreover, if we finalize the proposed critical habitat designations, our consultations would include an evaluation of measures to avoid the destruction or adverse modification of critical habitat.

In our IEM, we attempted to clarify the distinction between the effects that would result from the species being listed and those attributable to the critical habitat designation (that is, the difference between the jeopardy and adverse modification standards) for the Kern Canyon slender salamander's and the relictual slender salamander's critical habitat. Because the designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander is being proposed concurrently with the listing, it has been our experience that it is more difficult to discern which conservation efforts are attributable to the species being listed and those which will result solely from the designation of critical habitat. However, the following specific circumstances in this case help to inform our evaluation: (1) The essential physical or biological features identified for critical habitat are the same features essential for the life requisites of the species, and (2) any actions that would likely adversely affect the essential physical or biological features of occupied critical habitat are also likely to adversely affect the species itself. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation for the Kern Canyon slender salamander totals 2,051 ac (830 ha) in four units, one of which is unoccupied. The proposed critical habitat designation for the relictual slender salamander totals 2,685 ac (1,087 ha) in three units, one of which is unoccupied.

The screening analysis concluded that, for all occupied areas, the economic costs of critical habitat designations will most likely be limited

to additional administrative efforts to consider adverse modification in section 7 consultations, as the listing of both species is happening concurrently with critical habitat designation, and all occupied units would still need to undergo section 7 consultation due to listing regardless of critical habitat designation. For occupied units, we anticipate that recommendations to avoid adverse modification would be similar to those recommendations to avoid jeopardizing the species. For the unoccupied units, section 7 consultations would not occur if not for the presence of critical habitat, so additional costs would occur (IEc 2022, p. 9). The screening analysis forecasts a total of nine consultations per year for the relictual slender salamander (two formal and seven informal) and seven consultations per year for the Kern Canyon slender salamander (all informal). Including additional costs for consultation in unoccupied critical habitat, the total cost is anticipated to be $86,600 per year for the relictual slender salamander and $45,000 per year for the Kern Canyon slender salamander (IEc 2022, exhibit 9). Overall, the additional administrative burden is anticipated to fall well below the $100 million annual threshold for each species.

We are soliciting data and comments from the public on the DEA discussed above, as well as on all aspects of this proposed rule and our required determinations. During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts we receive during the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19. We may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of these species.

Consideration of National Security Impacts

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (*e.g.,* a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), then national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of ''critical habitat.'' However, the Service must still consider impacts on national security, including homeland security, on those lands or areas not covered by section 4(a)(3)(B)(i) because section 4(b)(2) requires the Service to consider those impacts whenever it designates critical habitat. Accordingly, if DoD, the Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns, or we have otherwise identified national-security or homeland-security impacts from designating particular areas as critical habitat, we generally have reason to consider excluding those areas.

However, we cannot automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, we must conduct an exclusion analysis if the Federal requester provides information, including a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If we conduct an exclusion analysis because the agency provides a reasonably specific justification or because we decide to exercise the discretion to conduct an exclusion analysis, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander are not owned or managed by the DoD or DHS, and, therefore, we anticipate no impact on national security or homeland security. However, if through the public comment period we receive information regarding impacts on national security or homeland security from designating particular areas as critical habitat, then as part of developing the final designation of critical habitat, we will conduct a discretionary exclusion analysis to determine whether to exclude those areas under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Consideration of Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security discussed above. To identify other relevant impacts that may affect the exclusion analysis, we consider a number of factors, including whether there are permitted conservation plans covering the species in the area—such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs)—or whether there are non-permitted conservation agreements and partnerships that may be impaired by designation of, or exclusion from, critical habitat. In addition, we look at whether Tribal conservation plans or partnerships, Tribal resources, or government-to-government relationships of the United States with Tribal entities may be affected by the designation. We also consider any State, local, social, or other impacts that might occur because of the designation.

We have not identified any areas to consider for exclusion from critical habitat based on other relevant impacts because there are no HCPs or other management plans for the Kern Canyon slender salamander or the relictual slender salamander that may be impaired by designation of or exclusion from critical habitat, and the proposed designation does not include any Tribal lands or trust resources. However, during the development of a final designation, we will consider all information currently available or received during the public comment period that we determine indicates that there is a potential for the benefits of exclusion to outweigh the benefits of inclusion. If we evaluate information regarding a request for an exclusion and we do not exclude, we will fully describe our rationale for not excluding

in the final critical habitat determination. We may also exercise the discretion to undertake exclusion analyses for other areas as well, and we will describe all of our exclusion analyses as part of a final critical habitat determination.

Summary of Exclusions Considered Under 4(b)(2) of the Act

In preparing this proposal, we have determined that no HCPs or other management plans for the Kern Canyon slender salamander or the relictual slender salamander currently exist that may be impaired by designation of or exclusion from critical habitat, and the proposed designation does not include any Tribal lands or trust resources or any lands for which designation would have any economic or national security impacts. Therefore, we anticipate no impact on Tribal lands, partnerships, or HCPs from this proposed critical habitat designation and thus, as described above, we are not considering excluding any particular areas on the basis of the presence of conservation agreements or impacts to trust resources.

During the development of a final designation, we will consider any additional information received through the public comment period regarding other relevant impacts to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2), our implementing regulations at 50 CFR 424.19, and the joint 2016 Policy.

Required Determinations

Clarity of the Rule

We are required by E.O.s 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:

(1) Be logically organized;

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

(3) Use clear language rather than jargon;

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

(5) Use lists and tables wherever possible.

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

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the Nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The Executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this proposed rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.,* small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine whether potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term ''significant economic impact'' is meant to apply to a typical small business firm's business operations.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies would be directly regulated if we adopt the proposed critical habitat designation. The RFA does not require evaluation of the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the Service certifies that, if made final as proposed, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that, if made final, the proposed critical habitat designation would not have a significant economic impact on a substantial

number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare statements of energy effects when undertaking certain actions. Some utility infrastructure exists in the proposed designation for critical habitat, including communication sites in the Lower Kern River Canyon and on Breckenridge Mountain and transmission lines and an electrical subunit in the Lower Kern River Canyon within Sequoia National Forest. In our economic analysis, we did not find that this proposed critical habitat designation would significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no statement of energy effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following finding:

(1) This proposed rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or Tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding,'' and the State, local, or Tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments. The lands being proposed for critical habitat designation are owned by Kern County, BLM, and the U.S. Forest Service. None of these government entities fits the definition of ''small governmental jurisdiction.'' Therefore, a small government agency plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Kern Canyon slender salamander and the relictual slender salamander in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed for the proposed designation of critical habitat for the Kern Canyon slender salamander and the relictual slender salamander, and it concludes that, if adopted, this designation of critical habitat does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the proposed rule does not have substantial direct effects either on the States, or on the relationship between the Federal Government and the States, or on the distribution of powers and responsibilities among the various levels of government. The proposed designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary for the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist State and local governments in long-range planning because they no longer have to wait for case-by-case section 7 consultations to occur.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require

approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule would not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this proposed rule identifies the physical or biological features essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

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

It is our position that we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (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).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), E.O. 13175 (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. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the Kern Canyon slender salamander or the relictual slender salamander, so no Tribal lands would be affected by the proposed designation.

References Cited

A complete list of references cited in this proposed rulemaking is available on the internet at *https://www.regulations.gov* and upon request from the Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Sacramento Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

Signing Authority

Martha Williams, Director of the U.S. Fish and Wildlife Service, approved this action on September 14, 2022, for publication. On September 30, 2022, Martha Williams authorized the undersigned to sign the document electronically and submit it to the Office of the Federal Register for publication as an official document of the U.S. Fish and Wildlife Service.

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.

■ 2. Amend § 17.11 in paragraph (h) by adding entries for ''Salamander, Kern Canyon slender'' and ''Salamander, relictual slender'' to the List of Endangered and Threatened Wildlife in alphabetical order under AMPHIBIANS to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
*	*	*	*	*
Amphibians				
*	*	*	*	*
Salamander, Kern Canyon slender.	*Batrachoseps simatus*	Wherever found	T	[**Federal Register** citation when published as a final rule]; 50 CFR 17.43(h); 50 CFR 17.95(d).[CH]

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* *	*	* *	*	* *
Salamander, relictual slender ...	*Batrachoseps relictus*	Wherever found	E	[**Federal Register** citation when published as a final rule]; 50 CFR 17.95(d).CH
* *	*	* *	*	* *

■ 3. Amend § 17.43 by adding paragraph (h) to read as follows:

§ 17.43 Special rules—amphibians.

* * * * *

(h) Kern Canyon slender salamander (*Batrachoseps simatus*).

(1) *Prohibitions.* The following prohibitions that apply to endangered wildlife also apply to the Kern Canyon slender salamander. Except as provided under paragraph (h)(2) of this section and §§ 17.4 and 17.5, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or cause to be committed, any of the following acts in regard to this species:

(i) Import or export, as set forth at § 17.21(b) for endangered wildlife.

(ii) Take, as set forth at § 17.21(c)(1) for endangered wildlife.

(iii) Possession and other acts with unlawfully taken specimens, as set forth at § 17.21(d)(1) for endangered wildlife.

(iv) Interstate or foreign commerce in the course of a commercial activity, as set forth at § 17.21(e) for endangered wildlife.

(v) Sale or offer for sale, as set forth at § 17.21(f) for endangered wildlife.

(2) *Exceptions from prohibitions.* In regard to this species, you may:

(i) Conduct activities as authorized by a permit under § 17.32.

(ii) Take, as set forth at § 17.21(c)(2) through (c)(4) for endangered wildlife.

(iii) Take as set forth at § 17.31(b).

(iv) Possess and engage in other acts with unlawfully taken wildlife, as set forth at § 17.21(d)(2) for endangered wildlife.

(v) Take if that take is incidental to an otherwise lawful activity and is caused by fuels management activities that:

(A) Are expected to have negligible impacts to the Kern Canyon slender salamander and its habitat, as long as the activities are conducted or authorized by the Federal agency with jurisdiction over the land where the activities occur. This exception includes fuels management activities developed by a Federal, State, county, or other entity to reduce the risk or severity of fire in Kern Canyon slender salamander habitat and to protect and maintain habitat that supports the species. These activities should be in accordance with established and recognized fuels management plans that include measures to minimize impacts to the species and its habitat.

(B) Occur on private lands where there is no Federal nexus. This exception applies to those situations, whether currently existing or that may develop in the future, where fuels management activities are essential to reduce the risk of catastrophic wildfire, and when such activities will be carried out in accordance with an established and recognized fuels or forest management plan that includes measures to minimize impacts to the species and its habitat.

4. Amend § 17.95 in paragraph (d) by adding entries for ''Kern Canyon Slender Salamander (*Batrachoseps simatus*)'' and ''Relictual Slender Salamander (*Batrachoseps relictus*)'' after the entry for ''Jollyville Plateau Salamander (*Eurycea tonkawae*)'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(d) *Amphibians.*

* * * * *

Kern Canyon Slender Salamander (*Batrachoseps simatus*)

(1) Critical habitat units are depicted for Kern County, California, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of the Kern Canyon slender salamander consist of the following components:

(i) Aquatic habitat consisting of seeps, springs, and streams.

(ii) Riparian habitat consisting of terrestrial areas adjacent to seeps, springs, and streams that contain:

(A) Sufficient refugia consisting of woody debris, leaf litter, and rocks with abundant interstitial spaces to facilitate safe resting, foraging, and movement;

(B) Suitable prey to allow for survival, growth, and reproduction; and

(C) Riparian vegetation that provides shade cover contributing to cool and moist surface conditions for maintaining homeostasis, foraging opportunities, and physical structure for predator avoidance.

(iii) Corridors of aquatic habitat or riparian habitat that provide connectivity between patches of occupied habitat to allow for movement of individuals.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [EFFECTIVE DATE OF RULE].

(4) Data layers defining map units were created using the National Hydrography Dataset and California Natural Diversity Database occurrence records, and critical habitat units were then mapped using Universal Transverse Mercator Zone 11N coordinates. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at *https://www.regulations.gov* at Docket No. FWS–R8–ES–2022–0081, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

Figure 1 to Kern Canyon Slender Salamander (*Batrachoseps simatus*) paragraph (5)

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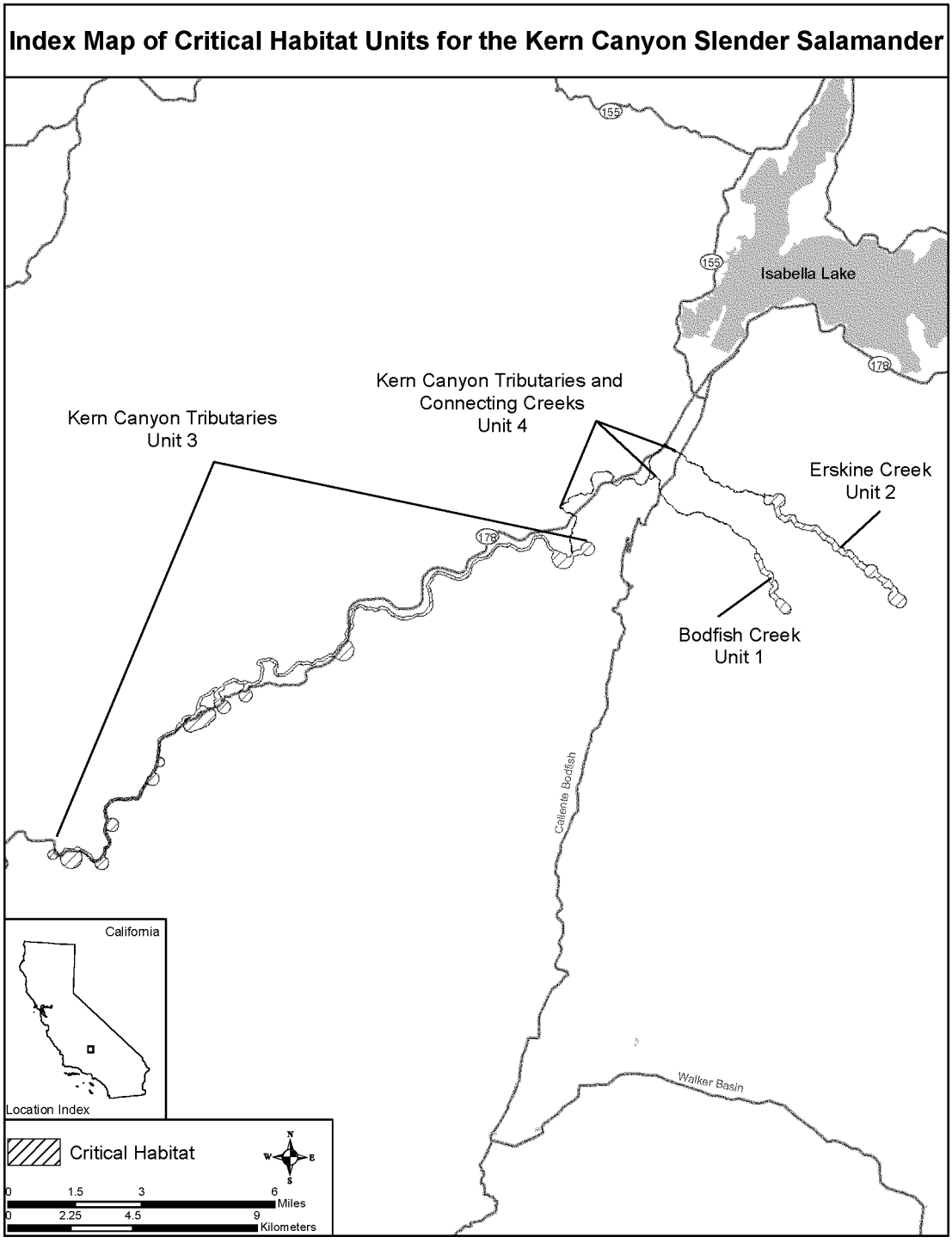

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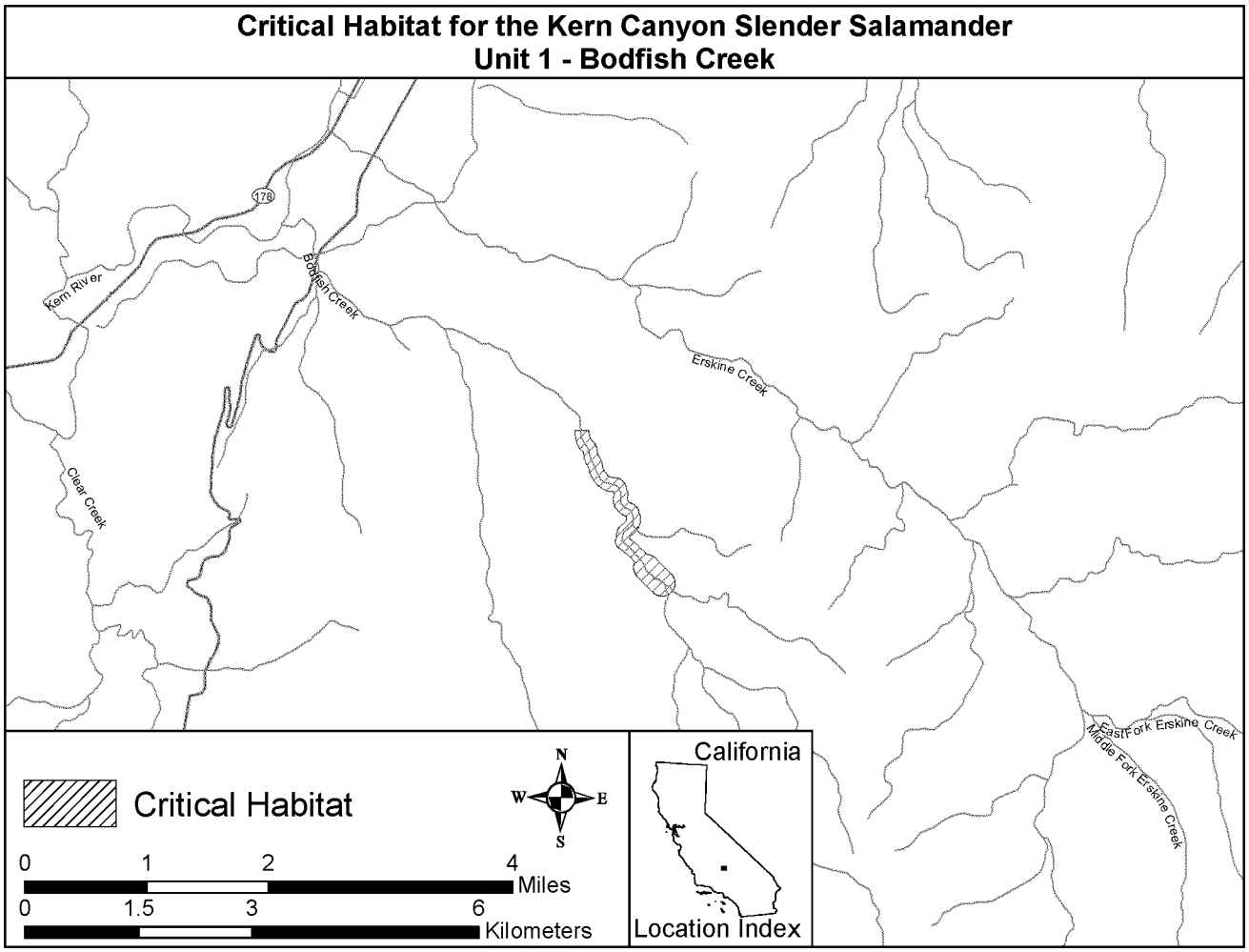
(6) Unit 1: Bodfish Creek, Kern County, California.

(i) Unit 1 consists of 144 ac (58 ha) in Kern County, California. The majority of land (125 ac (50 ha)) is owned by the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). A small portion of the southern part of the unit is within the boundaries of Sequoia National Forest.

(ii) Map of Unit 1 follows:

Figure 2 to Kern Canyon Slender Salamander (*Batrachoseps simatus*) paragraph (6)(ii)



(7) Unit 2: Erskine Creek, Kern County, California.

(i) Unit 2 consists of 441 ac (178 ha) in Kern County, California, south of the Isabella Lake Reservoir. The majority of land (259 ac (105 ha)) is owned by private entities, and the remainder (182 ac (74 ha)) is owned by BLM.

(ii) Map of Unit 2 follows:

Figure 3 to Kern Canyon Slender Salamander (*Batrachoseps simatus*) paragraph (7)(ii)

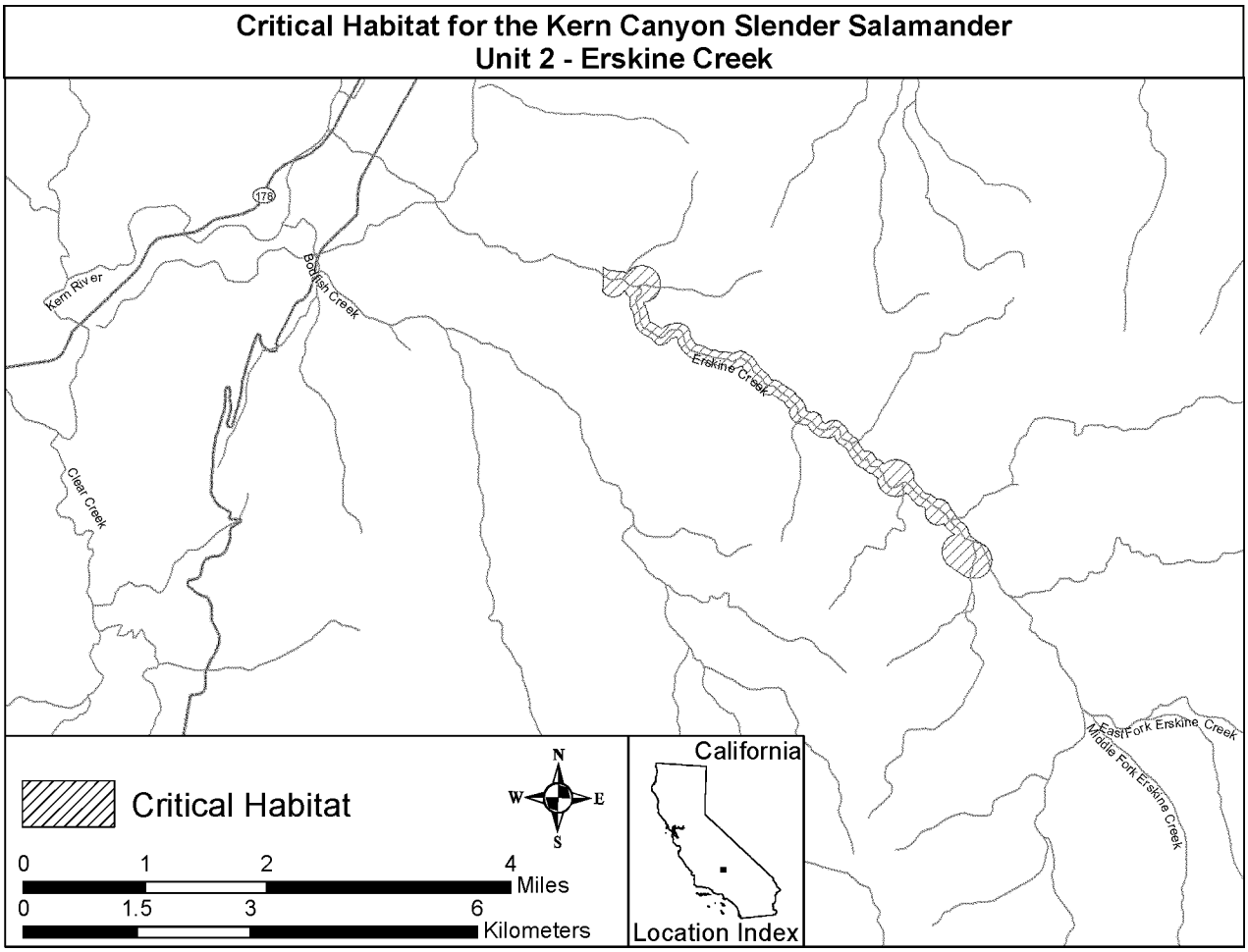
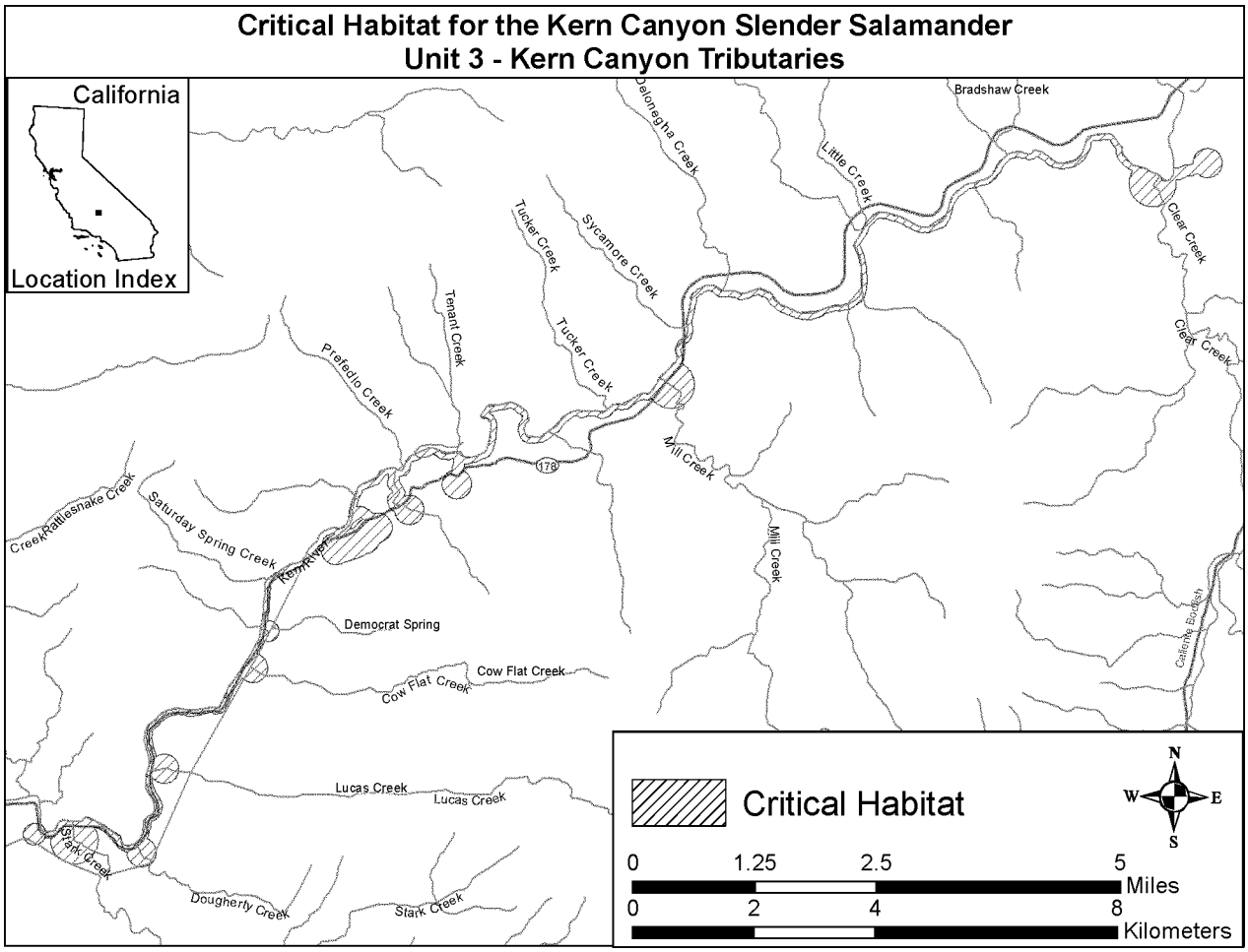


Figure 4 to Kern Canyon Slender Salamander (*Batrachoseps simatus*) paragraph (8)(ii)

(8) Unit 3: Kern Canyon Tributaries, Kern County, California.

(i) Unit 3 consists of 1,409 ac (570 ha) in Kern County, California. Nearly all land in the unit (1,377 ac (557 ha)) is owned by USFS (in Sequoia National Forest) and BLM, and the remainder is owned by private entities. This unit includes land along the southern bank of the Kern River from river mile 45.6 to 64.2.

(ii) Map of Unit 3 follows:

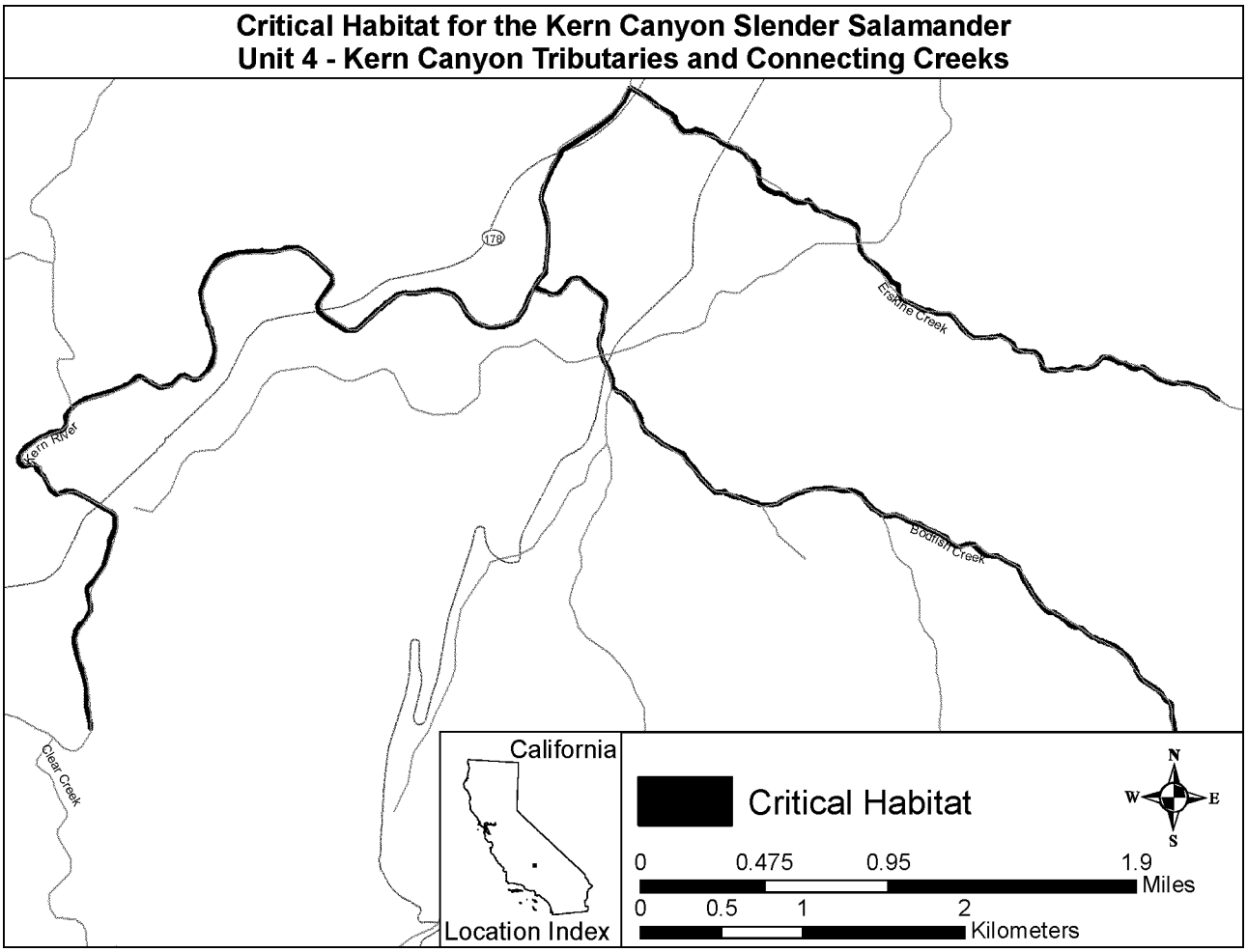


(9) Unit 4: Kern Canyon Tributaries and Connecting Creeks, Kern County, California.

(i) Unit 4 consists of 57 acres (23 ha) in Kern County, California. In total, 25 ac (10 ha) is owned by USFS and BLM, and the remainder is owned by private entities. This unit includes segments of the Kern River, Bodfish Creek, and Erskine Creek.

(ii) Map of Unit 4 follows:

Figure 5 to Kern Canyon Slender Salamander (*Batrachoseps simatus*) paragraph (9)(ii)



Relictual Slender Salamander (*Batrachoseps relictus*)

(1) Critical habitat units are depicted for Kern County, California, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of the relictual slender salamander consist of the following components:

(i) Aquatic habitat consisting of seeps, springs, and streams.

(ii) Riparian habitat consisting of terrestrial areas adjacent to seeps, springs, and streams that contain:

(A) Sufficient refugia consisting of woody debris, leaf litter, and rocks with abundant interstitial spaces to facilitate safe resting, foraging, and movement;

(B) Suitable prey to allow for survival, growth, and reproduction; and

(C) Riparian vegetation that provides shade cover contributing to cool and moist surface conditions for maintaining homeostasis, foraging opportunities, and physical structure for predator avoidance.

(iii) Corridors of aquatic habitat or riparian habitat that provide connectivity between patches of occupied habitat to allow for movement of individuals.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [EFFECTIVE DATE OF RULE].

(4) Data layers defining map units were created using the National Hydrography Dataset and California Natural Diversity Database occurrence records, and critical habitat units were then mapped using Universal Transverse Mercator Zone 11N coordinates. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at *https://www.regulations.gov* at Docket No. FWS–R8–ES–2022–0081, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

Figure 1 to Relictual Slender Salamander (*Batrachoseps relictus*) paragraph (5)

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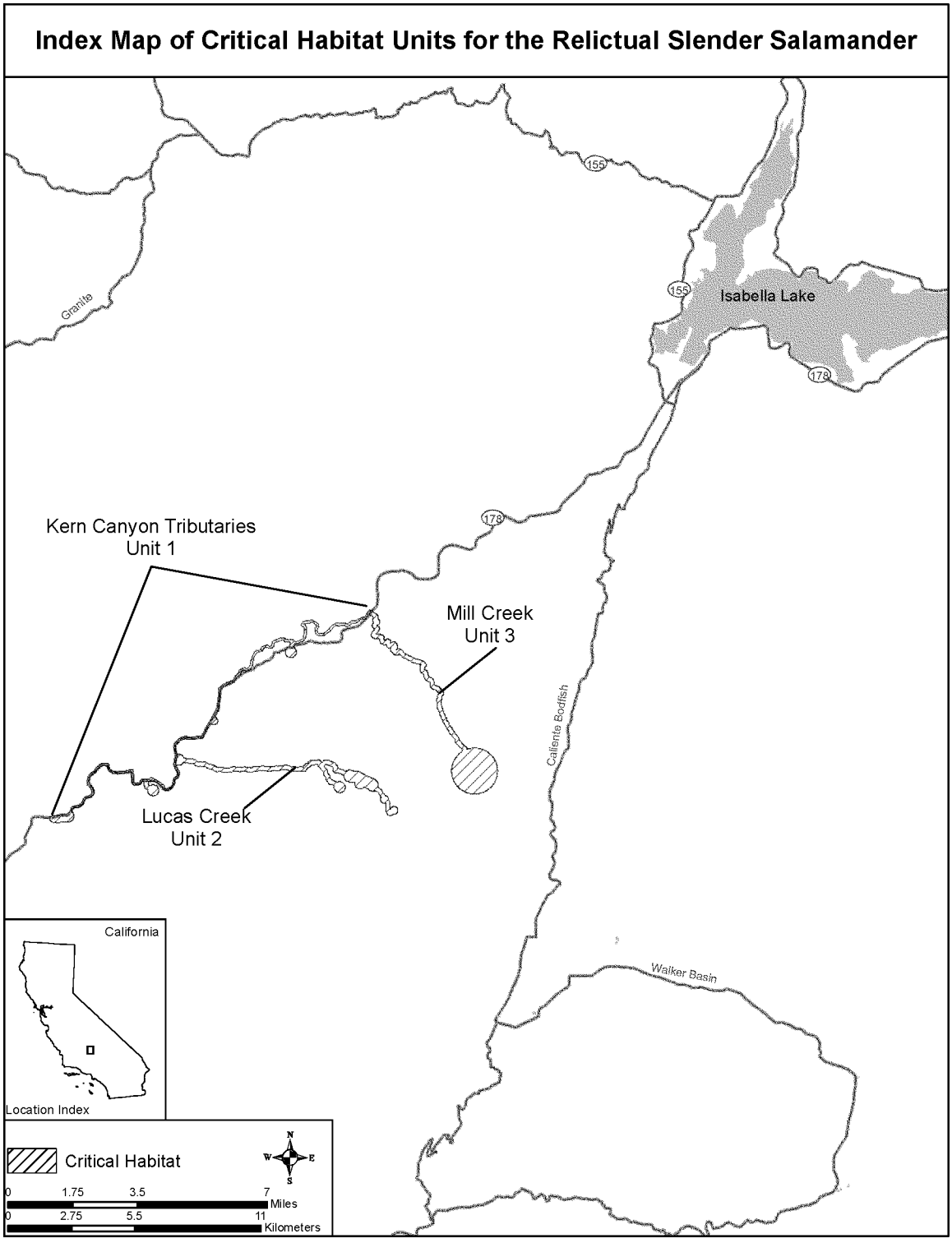

Figure 2 to Relictual Slender Salamander (*Batrachoseps relictus*) paragraph (6)(ii)

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(6) Unit 1: Kern Canyon Tributaries, Kern County, California.

(i) Unit 1 consists of 723 ac (293 ha) in Kern County, California. Nearly all of the land (713 ac (289 ha)) is within the boundaries of Sequoia National Forest, and a small area is privately owned.

(ii) Map of Unit 1 follows:

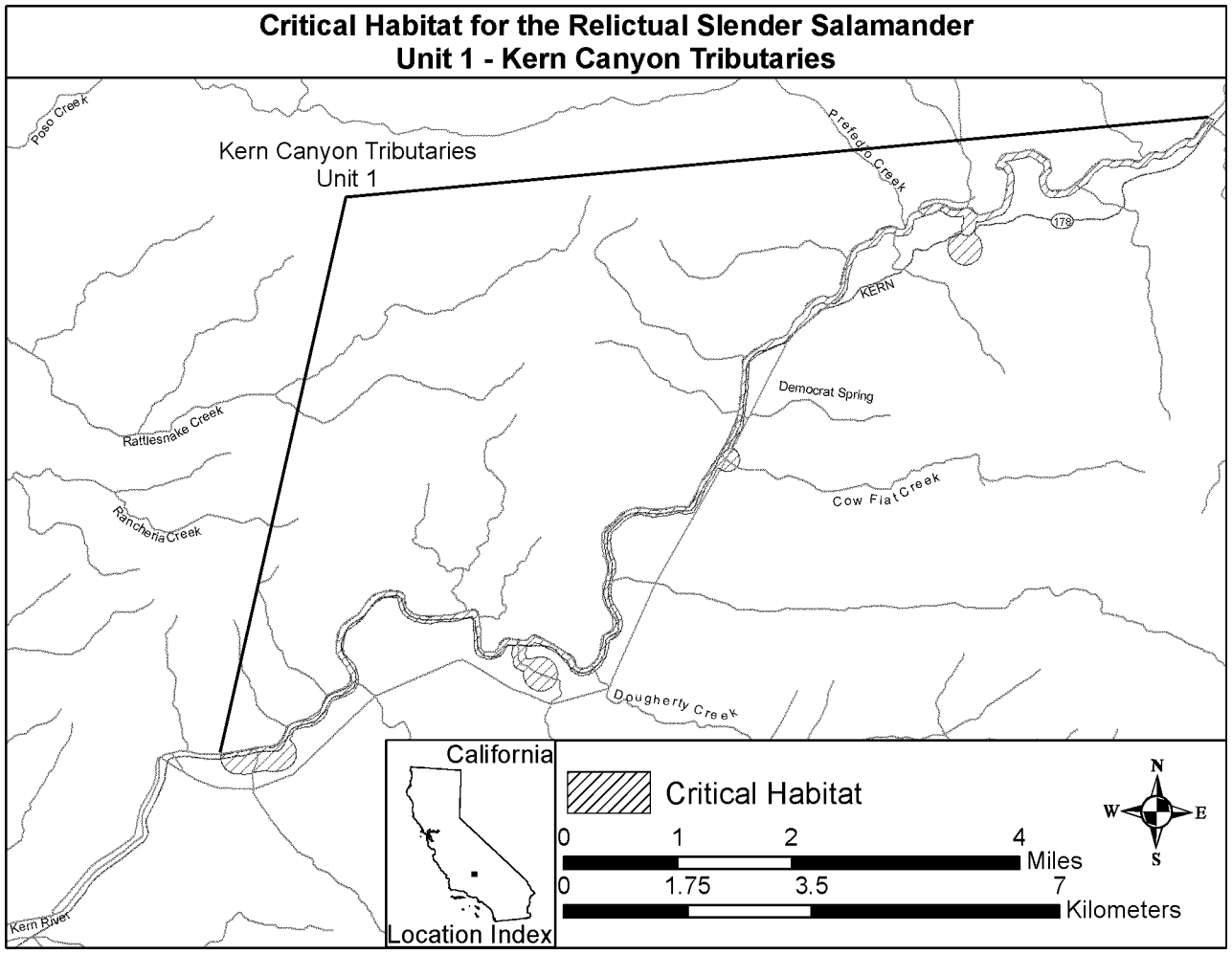
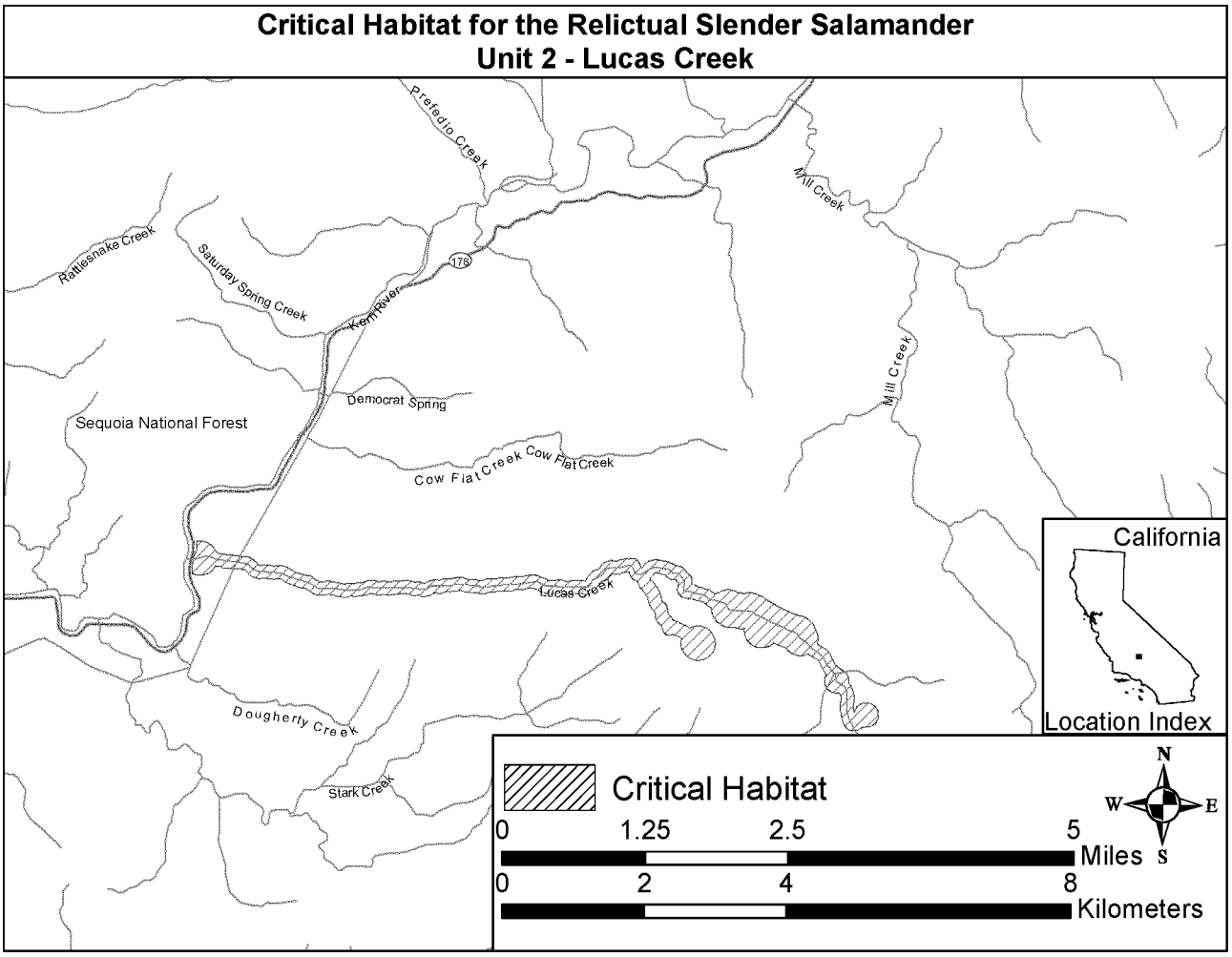


Figure 3 to Relictual Slender Salamander (*Batrachoseps relictus*) paragraph (7)(ii)

(7) Unit 2: Lucas Creek, Kern County, California.

(i) Unit 2 consists of 763 ac (309 ha) in Kern County, California. Nearly all of the land (761 ac (308 ha)) is within the boundaries of Sequoia National Forest, and a small area is privately owned. This unit extends south from the lower Kern River Canyon along Lucas Creek and two unnamed tributaries to Lucas Creek on Breckenridge Mountain.

(ii) Map of Unit 2 follows:

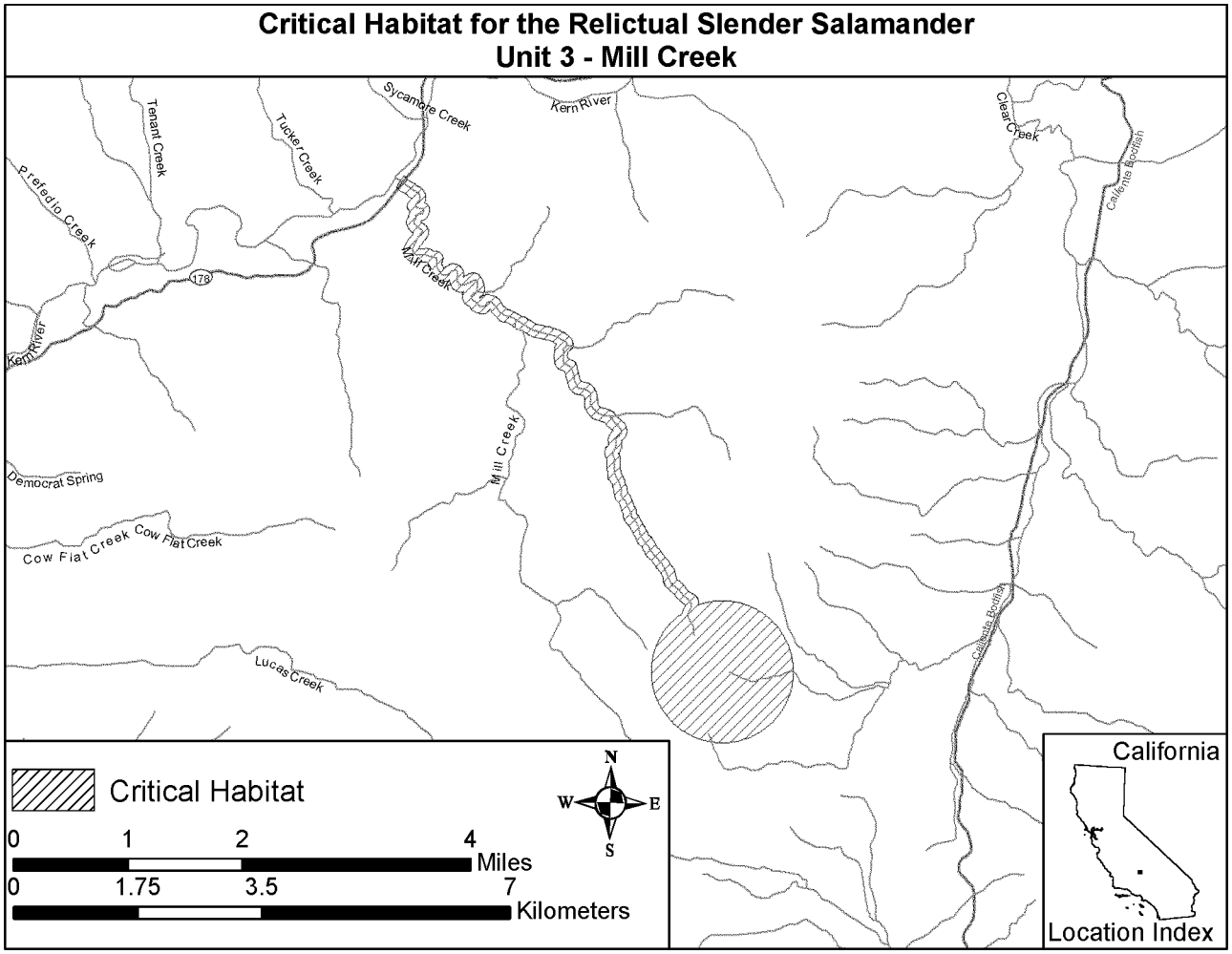


(8) Unit 3: Mill Creek, Kern County, California.

(i) Unit 3 consists of 1,199 ac (485 ha) in Kern County, California. The majority of land (1,190 ac (481 ha)) is within the boundaries of Sequoia National Forest, and a small area is privately owned. This unit extends south from the lower Kern River Canyon along Mill Creek and an unnamed tributary to Mill Creek on Breckenridge Mountain.

(ii) Map of Unit 3 follows:

Figure 4 to Relictual Slender Salamander (*Batrachoseps relictus*) paragraph (8)(ii)



* * * * *

Madonna Baucum,

Chief, Policy and Regulations Branch, U.S. Fish and Wildlife Service.

[FR Doc. 2022–21661 Filed 10–17–22; 8:45 am]

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