



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2019–0006; 4500030113]

RIN 1018–BC62

Endangered and Threatened Wildlife and Plants; Endangered Status for the Sierra Nevada Distinct Population Segment of the Sierra Nevada Red Fox

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the Sierra Nevada Distinct Population Segment (DPS) of the Sierra Nevada red fox (*Vulpes vulpes necator*) as an endangered species under the Endangered Species Act (Act). This DPS of the Sierra Nevada red fox occurs along the highest elevations of the Sierra Nevada mountain range in California. If we finalize this rule as proposed, it would extend the Act's protections to this DPS. The effect of this rule will be to add this DPS to the List of Endangered and Threatened Wildlife.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]. Comments submitted electronically using the Federal eRulemaking Portal (see

ADDRESSES below) must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

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

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter FWS–R8–ES–2019–0006, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2019–0006, U.S. Fish and Wildlife Service, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

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

FOR FURTHER INFORMATION CONTACT: Jennifer Norris, Field Supervisor, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W–2605, Sacramento, California, 95825; telephone 916–414–6700. If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, if we determine that a species may be an endangered or threatened species throughout all or a significant portion of its range,

we are required to promptly publish a proposal in the *Federal Register* and make a determination on our proposal within 1 year. To the maximum extent prudent and determinable, we must designate critical habitat for any species that we determine to be an endangered or threatened species under the Act. Listing a species as an endangered or threatened species and designation of critical habitat can only be completed by issuing a rule.

What this proposed rule does. This document proposes listing the Sierra Nevada DPS of the Sierra Nevada red fox (*Vulpes vulpes necator*; hereafter referred to as the Sierra Nevada red fox) as an endangered species; we determined that designating critical habitat is not prudent. The Sierra Nevada red fox is a candidate species for which we have on file sufficient information on biological vulnerability and threats to support preparation of a listing proposal, but for which development of a listing rule was previously precluded by other higher priority listing activities. This proposed rule reassesses (since the 2015 12-month finding (October 8, 2015, 80 FR 60990)) the best available information regarding the status of and threats to the Sierra Nevada red fox.

The basis for our action. Under the Act, we can determine that a species is an endangered or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. The Sierra Nevada red fox faces the following threats: (1) Deleterious impacts associated with small population size, such as inbreeding depression and reduced genomic integrity (Factor E); (2)

hybridization with nonnative red fox (Factor E); and possibly (3) reduced prey availability and competition with coyotes (Factor E) resulting from reduced snowpack levels. Existing regulatory mechanisms and conservation efforts do not address the threats to the Sierra Nevada red fox to the extent that listing the DPS is not warranted.

Peer review. In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270) and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of five appropriate specialists regarding the Species Status Assessment (SSA) report, which informed the listing portion of this proposed rule. The purpose of peer review is to ensure that our listing and critical habitat determinations are based on scientifically sound data, assumptions, and analyses. The peer reviewers have expertise in red fox biology, habitat, and stressors to the species. We received responses from two of the five peer reviewers, which we took into account in our SSA report and this proposed rule.

Information Requested

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 concerned governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. Because we will consider all comments and information we receive during the comment period, our final determinations may differ from this proposal. We particularly seek comments concerning:

- (1) The Sierra Nevada red fox's 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;
 - (d) Historical and current population levels, and current and projected trends; and
 - (e) Past and ongoing conservation measures for the species, its habitat, 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 this DPS and existing regulations that may be addressing those threats.
- (4) Additional information concerning the historical and current status, range, distribution, and population size of this DPS, including the locations of any additional populations of the Sierra Nevada red fox.

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

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments **only** by

the methods described in **ADDRESSES**.

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. All comments submitted electronically via <http://www.regulations.gov> will be presented on the website in their entirety as submitted. For comments submitted via hard copy, we will post your entire comment—including your personal identifying information—on <http://www.regulations.gov>. You may request at the top of your document that we withhold personal information such as your street address, phone number, or e-mail address from public review; however, we cannot guarantee that we will be able to do so.

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

Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests for public hearings must be received by the date specified in **DATES** at the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing.

Species Status Assessment

A team of biologists prepared an SSA report for the Sierra Nevada red fox. The SSA team was composed of Service biologists, in consultation with other species experts, including coordination with the California Department of Fish and Wildlife (CDFW). The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the Sierra Nevada red fox, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. The SSA report underwent independent peer review by scientists with expertise in red fox biology, habitat management, and stressors (factors negatively affecting the DPS) to the species. The SSA report and other materials relating to this proposal can be found at <http://www.regulations.gov> under Docket No. FWS-R8-ES-2019-0006, and at the Sacramento Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Previous Federal Actions

On April 27, 2011, we received a petition dated April 27, 2011, from the Center for Biological Diversity, requesting that Sierra Nevada red fox be listed as an endangered or threatened species, and that critical habitat be designated under the Act. The petition also requested that we evaluate populations in the Cascade and Sierra Nevada mountain ranges as potential DPSs. On January 3, 2012, we published a positive 90-day finding (77 FR 45) that the petition presented substantial information indicating that listing may be warranted.

Following a stipulated settlement agreement requiring our completion of a status review of the species by September 30, 2015, we issued a 12-month finding (80 FR

60990) on October 8, 2015. We concluded at that time that there were two valid DPSs for the Sierra Nevada red fox: the Southern Cascades DPS and the Sierra Nevada DPS. We determined and reaffirm here that both the Southern Cascades and Sierra Nevada segments of the Sierra Nevada red fox's range are both discrete and significant based on marked physical separation (discreteness) and genetic variation/characteristics (discreteness and significance). Please see the 12-month finding (80 FR 60990) for a complete discussion of our DPS Policy and rationale for meeting the discreteness and significance criteria. Additionally, our September 30, 2015, 12-month finding concluded that: (1) Listing the Sierra Nevada red fox across its entire range was not warranted; (2) listing the Southern Cascades DPS was not warranted; and (3) listing the Sierra Nevada DPS was warranted, but temporarily precluded by higher priority listing actions.

I. Proposed Listing Determination

Background

A thorough review of the taxonomy, life history, ecology, and overall viability of the Sierra Nevada red fox is presented in the SSA report (Service 2018; available at <http://www.regulations.gov>). This report summarizes the relevant biological data and a description of past, present, and likely future stressors, and presents an analysis of the potential viability of the Sierra Nevada red fox. The SSA report documents the results of the comprehensive biological status review for the Sierra Nevada red fox, provides an evaluation of how potential threats may affect the species' viability both currently and into the future, and provides the scientific basis that informs our regulatory decision regarding whether this species should be listed as an endangered or threatened species under the Act, as well as the risk analysis on which the determination is based (Service

2018, entire). The following discussion is a summary of the SSA report.

Species Information

Red foxes (*Vulpes vulpes*) are small, slender, doglike carnivores, with elongated snouts, pointed ears, and large bushy tails (Aubry 1997, p. 55; Perrine 2005, p. 1; Perrine et al. 2010, p. 5). The Sierra Nevada red fox is one of 10 North American subspecies of the red fox (Hall 1981, p. 938; Perrine *et al.* p. 5). Diagnostic features, by which red foxes can be distinguished from other small canines, include black markings on the backs of their ears, black shins, and white tips on their tails (Statham *et al.* 2012, p. 123).

Sierra Nevada red foxes average about 4.2 kilograms (kg) (9.3 pounds (lb)) for males and 3.3 kg (7.3 lb) for females, as compared to the general North American red fox average of about 5 kg (11 lb) for males and 4.3 kg (9.5 lb) for females (Perrine *et al.* 2010, p. 5).

The Sierra Nevada red fox is characterized by what appears to be specialized adaptations to cold areas (Sacks *et al.* 2010, p. 1524). These apparent adaptations include a particularly thick and deep winter coat (Grinnell *et al.* 1937, p. 377), longer hind feet (Fuhrmann 1998, p. 24), and small toe pads (4 millimeters (mm) (0.2 inch (in)) across or less) that are completely covered in winter by dense fur, which may facilitate movement over snow (Grinnell *et al.* 1937, pp. 378, 393; Fuhrmann 1998, p. 24; Sacks 2014, p. 30). The Sierra Nevada red fox's smaller size may also be an adaptation to facilitate movement over snow by lowering weight supported by each footpad (Quinn and Sacks 2014, p. 17), or it may simply result from the reduced abundance of prey at higher elevations (Perrine *et al.* 2010, p. 5).

Genetic analyses indicate that red foxes living near Sonora Pass, California, as of

2010 are descendants of the Sierra Nevada red fox population that was historically resident in the area (Statham *et al.* 2012, pp. 126–129). This is the only population known to exist in the Sierra Nevada mountain range, and is thus the last known remnant of the larger historical population that occurred along the upper elevations of the Sierra Nevada mountain range from Tulare to Sierra Counties. The only other known Sierra Nevada red fox population in California is located near Lassen Peak, in the southern Cascade mountain range, and shows clear genetic differences from the Sonora Pass population (Statham *et al.* 2012, pp. 129–130) (see also DPS discussion in our October 8, 2015, 12-month finding (80 FR 60990)).

Range and Habitat

The current range, which is significantly contracted from the historical range, runs near the Sierra crest from about Arnot Peak and California State Highway 4 south to Yosemite National Park (Cleve *et al.* 2011, entire; Sacks *et al.* 2015, pp. 10, 14; Eyes 2016, p. 2; Hiatt 2017, p. 1; Figure 1), and then jumps approximately 48 mi (77 km) southeast per two new sightings (photographs; unknown if one or more individuals) noted during summer 2018 near the intersection of Fresno/Mono/Inyo Counties (Quinn 2018a, attachments; Stermer 2018, p. 1).

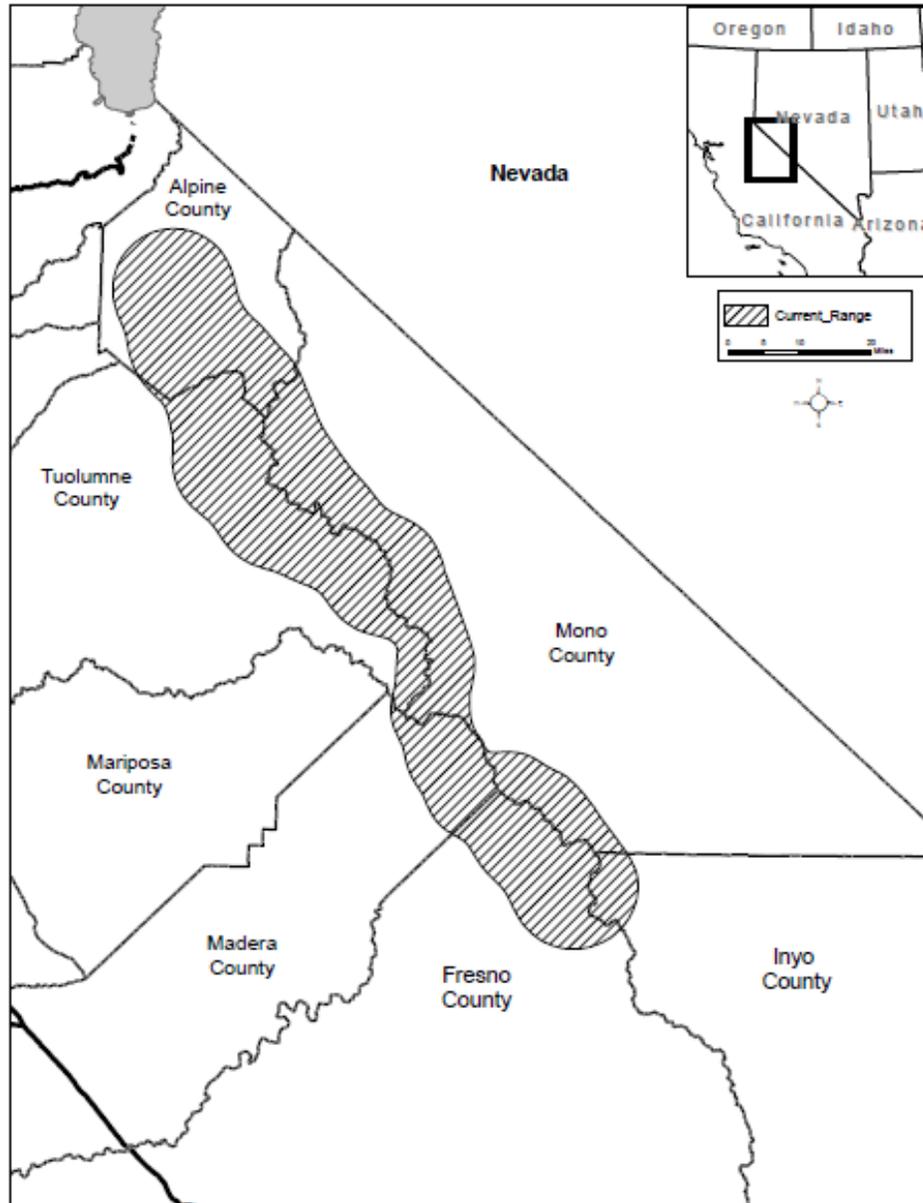


Figure 1—Approximate current range of the Sierra Nevada DPS of Sierra Nevada red fox. The range follows the Sierra Crest (the north-to-south ridgeline of the Sierra Nevada mountain range), and includes known sighting locations and nearby high-quality habitat (Cleve *et al.* 2011, entire; Eyes 2016, attachments; Hiatt 2017, attachment; Quinn 2018a, attachments; Quinn 2018a, attachments; Stermer 2018, p. 1).

Sierra Nevada red fox sightings have consistently occurred in subalpine habitat at elevations ranging from 2,656 to 3,538 meters (m) (8,714 to 11,608 feet (ft)) (based on average elevation reported, plus or minus three standard deviations) (Sacks *et al.* 2015, pp. 3, 11). In the Sonora Pass area used by the Sierra Nevada red fox, subalpine habitat is characterized by a mosaic of high-elevation meadows, rocky areas, scrub vegetation, and woodlands (largely mountain hemlock (*Tsuga mertensiana*), whitebark pine (*Pinus albicaulus*), and lodgepole pine (*Pinus contorta*)) (Fites-Kaufman *et al.* 2007, p. 475; Sacks *et al.* 2015, p. 11; Quinn 2017, p. 3). Snow cover is typically heavy, and the growing season lasts only 7 to 9 weeks (Verner and Purcell 1988, p. 3). Forested areas are typically relatively open and patchy (Verner and Purcell 1988, p. 1; Lowden 2015, p. 1), and trees may be stunted and bent (krumholtzed) by the wind and low temperatures (Verner and Purcell 1988, p. 3; Sacks *et al.* 2015, p. 11).

Feeding

Individuals of the Sierra Nevada red fox are opportunistic predators of small mammals such as rodents (Perrine *et al.* 2010, pp. 24, 30, 32–33; Cross 2015, p. 72). Leporids such as snowshoe hare (*Lepus americanus*) and white-tailed jackrabbit (*Lepus townsendii*) are also an important food source for the Sierra Nevada red fox, particularly in winter and early spring (Aubry 1983, p. 109; Rich 2014, p. 1; Quinn 2017, pp. 3–4; Sacks 2017, p. 3). Whitebark pine seeds may also be an important food source during some years, particularly in winter (Sacks *et al.* 2017, p. 2).

Life History

Little information exists regarding Sierra Nevada red fox reproductive biology; it

is likely similar to other North American red fox subspecies (Aubry 1997, p. 57). Other subspecies are predominantly monogamous and mate over several weeks in the late winter and early spring (Aubry 1997, p. 57). The gestation period for red fox is 51 to 53 days, with birth occurring from March through May in sheltered dens (Perrine *et al.* 2010, p. 14). Members of the Sierra Nevada red fox use natural openings in rock piles at the base of cliffs and slopes as denning sites (Grinnell *et al.* 1937, p. 394). Additionally, they may dig earthen dens, similar to Cascade red foxes (*Vulpes vulpes cascadenis*), though this has not been directly documented in the Sierra Nevada red fox (Aubry 1997, p. 58; Perrine 2005, p. 153). Litter sizes of two to three pups appear to be typical (Perrine 2005, p. 152). Reproductive output is generally lower in montane foxes than in those living at lower elevations, possibly due to comparative scarcity of food (Perrine 2005, pp. 152–153; Sacks 2017, p. 2).

Demographics

The population size of the Sierra Nevada red fox is estimated between 10 to 50 adults, including some young adults forgoing potential breeding to help their parents raise their siblings (Sacks 2015, p. 1; Sacks *et al.* 2015, p. 14). This estimate includes hybrids, which recent information suggests comprise the majority of known individuals sighted within one study area of the population (Sacks *et al.* 2015, pp. 15, 17, 29–30).

The average lifespan, age-specific mortality rates, sex ratios, and demographic structure of Sierra Nevada red fox populations are not known, and are not easily extrapolated from other red fox subspecies because heavy hunting and trapping pressure on those other subspecies likely skew the results (Perrine *et al.* 2010, p. 18). However, three individuals within the Southern Cascades DPS (in the Lassen area) lived at least 5.5

years (CDFW 2015, p. 2), and an additional study within the Sierra Nevada red fox (Sonora Pass area) found the average annual adult survival rate to be 82 percent, which is relatively high for red foxes (Quinn and Sacks 2014, pp. 10, 14–15, 24).

Summary of Biological Status and Threats Affecting the DPS

The Act directs us to determine whether any species is an endangered species or a threatened species because of any factors affecting its continued existence. We completed a comprehensive analysis of the biological status of the Sierra Nevada red fox, and prepared an SSA report, which provides a thorough assessment of the potential threats that may affect the species' viability both currently and into the future. We define viability here as the ability of the species to persist over the long term and, conversely, to avoid extinction. In this section, we summarize that assessment, which can be accessed on the Internet under Docket FWS–R8–ES–2019–0006 on <http://www.regulations.gov>.

To assess Sierra Nevada red fox viability, we used the three conservation biology principles of resiliency, representation, and redundancy (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency supports the ability of the species to withstand stochastic events—for example, significant variations to normal demographic or environmental conditions (e.g., significant drops in population growth rate, extreme weather events, 100-year floods); representation supports the ability of the species to adapt over time to changing environmental conditions (such as measured by the breadth of genetic or environmental diversity within and among populations); and redundancy supports the ability of the species to withstand large-scale, catastrophic events (for example, multi-year droughts). In general, the more redundant and resilient a species is and the more representation and redundancy it has, the more likely it is to sustain populations over

time, even under changing environmental conditions. Using these principles, we identified the subspecies' ecological requirements for survival and reproduction, and described the beneficial and risk factors influencing the DPS's viability.

Resiliency

Resiliency describes the ability of a species (or DPS) to withstand stochastic disturbance. For the Sierra Nevada red fox to maintain viability, its population(s) or some portion thereof must be resilient. Environmental stochastic disturbances that affect the overall reproductive output of the population are reasonably likely to occur infrequently, but if they do, they would likely be of a magnitude that can drastically alter the ecosystem where they happen. Classic examples of environmental stochastic events include drought, major storms (e.g., hurricanes), fire, and landslides (Chapin *et al.* 2002, pp. 285–288), and examples of demographic stochastic events include variations in sex ratio, birth/death rates, etc. The best available information at this time suggests that the Sierra Nevada red fox population needs to be larger, to a currently unknown degree, to ensure its viability into the future. Given the uncertainties surrounding the adequate population size and growth rates for the Sierra Nevada red fox, the best available information indicates that the proxies for these indices of abundance appear to be diminished; therefore, we assume a diminished resiliency for the DPS.

Given the lack of information on adequate population size for subalpine red fox, an example of a resilient population size for an island fox subspecies—Santa Catalina Island fox (*Urocyon littoralis catalinae*)—is roughly 150 or more adult individuals (based on information presented by Kohlmann *et al.* (2005, p. 77), assuming habitat conditions are adequate to support a population of this size. Although this example is not

a one-to-one crosswalk for considering the minimum viable population size for the Sierra Nevada red fox, it is a reference that provides related information for another fox's demographic needs. The information for this island fox subspecies suggests that this minimum population size likely allows it to survive chance deleterious events, whereas stochastic events become an increasing risk to viability as population numbers dip below 150.

Redundancy

Redundancy describes the ability of a species (or DPS) to withstand catastrophic events. Currently, there is only one small, isolated population of Sierra Nevada red fox known within the Sierra Nevada mountain range. In general, given the low number of foxes currently known within this DPS and the limited range they inhabit, the DPS appears to have a low ability to withstand catastrophic events should they occur. Additionally, there do not appear to be any other populations within the range of this DPS to serve as a source to recover from a catastrophic loss of individuals.

Representation

Representation describes the ability of a species (or DPS) to adapt to changing environmental conditions over time. It is characterized by the breadth of genetic and environmental diversity within and among populations. The Sierra Nevada red fox historically occurred throughout the high elevations of the Sierra Nevada. The current, small population has been experiencing genetic challenges, including inbreeding depression, as well as hybridization with non-Sierra Nevada red fox individuals, which can lower survivorship or reproductive success by interfering with adaptive native genes or gene complexes (Allendorf *et al.* 2001, p. 617; Frankham *et al.* 2002, pp. 386–388).

Having broad genetic and environmental diversity could help the DPS withstand environmental changes. However, at this time, the Sierra Nevada red fox does not have this broad diversity. Additionally, regarding hybridization, the best available information does not suggest that hybridization has negatively affected the DPS's ability to adapt to changing environmental conditions.

Summary of Existing Regulatory Measures and Voluntary Conservation Efforts

The U.S. Forest Service (USFS) identifies the Sierra Nevada red fox as a sensitive species and has done so since 1998. Sensitive species receive special consideration during land use planning and activity implementation to ensure species viability and to preclude population declines (USFS 2005, section 2670.22). The USFS included Sierra Nevada red fox-specific protection measures in the *Sierra Nevada Forest Plan Amendment (SNFPA) Standards and Guidelines* given the extensive overlap of suitable and in some cases occupied habitat for the Sierra Nevada red fox with Forest Service lands. These specific protection measures require the USFS to conduct and analyze potential impacts of activities within 5 mi (8 km) of a verified Sierra Nevada red fox individual sighting (USFS 2004, p. 54). The protection measures also limit the time of year that certain activities may occur to avoid adverse impacts to Sierra Nevada red fox breeding efforts, and require 2 years of evaluations following activities near sightings that are not associated with a den site (USFS 2004, p. 54).

The National Park Service prohibits hunting and trapping in Yosemite National Park and manages natural resources to “preserve fundamental physical and biological processes, as well as individual species, features, and plant and animal communities” (NPS 2006, p. 26). The land management plan for Yosemite National Park (as well as

Sequoia National Park, which is not known to currently contain Sierra Nevada red fox individuals but does occur within the DPS's historical range) does not contain specific measures to protect the Sierra Nevada red fox or the subspecies' habitat. However, areas not developed specifically for recreation and camping are managed toward natural processes and species composition, and the best available information indicates that the National Park Service would maintain the subspecies' habitat.

The Department of Defense recently completed an Integrated Natural Resources Management Plan (INRMP) for the U.S. Marine Corps Mountain Warfare Training Center (MWTC), which is a facility and training area that falls within the Sierra Nevada red fox range, including overlap with some known sightings. The INRMP includes provisions prohibiting disturbance within 330 ft (100.6 m) of Sierra Nevada red fox den sites from January 1 to June 30 (MWTC 2018, p. 3-26). Additionally, the INRMP states that the MWTC must implement "measures to prevent habituation to human food, an education program on these measures, and avoid activities from January 1 to June 27 within 0.25 mi (0.4 km) of den sites" (MWTC 2018, p. 3-67).

On October 2, 1980, the State of California listed the Sierra Nevada red fox as a threatened species. The designation prohibits possession, purchase, or "take" of threatened or endangered species without an incidental take permit, issued by the California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game). Additionally, red foxes in general are protected by the State from hunting and trapping (14 C.C.R. 460).

A conservation effort currently is underway by the Sierra Nevada Red Fox Working Group (SNRFWG). This working group was formed in 2015 by representatives

of Federal and State wildlife agencies, state universities, and nongovernmental conservation organizations (SNRFGW 2015, p. 1; SNRFGW 2016, p. 1). In addition to continued monitoring of the Sierra Nevada red fox, the SNRFGW proposes to develop a conservation strategy, which would include a genetic management plan and a feasibility assessment. This conservation strategy would assist in addressing possible translocations of Sierra Nevada red fox from area(s) within the Southern Cascades DPS to the Sierra Nevada (SNRFGW 2016, pp. 2–6). Managed Sierra Nevada red fox translocations would reduce impacts associated with inbreeding depression and counter introgression of nonnative alleles by introducing, in a controlled and monitored manner, new (i.e., native) alleles into the Sierra Nevada red fox population(s). These new alleles would be more likely to code for native local adaptations than would alleles originating in other subspecies of red fox (SNRFGW 2016, p. 3). To date, these conservation goals are not significantly advanced, and are not factored into this analysis (and discussed here primarily for informational purposes). However, if carried out in the near future, these actions could address significant negative influences currently acting upon the subspecies (i.e., reduced genomic integrity and inbreeding depression as a result of small population size; hybridization with nonnative red fox).

Risk Factors Affecting the Sierra Nevada DPS of Sierra Nevada Red Fox

Our SSA considered a variety of environmental and demographic characteristics important to the viability of the Sierra Nevada red fox, taking into consideration both current and potential future conditions that may impact the DPS. The environmental characteristics we considered were: (1) Extent of subalpine habitat (with low temperatures and short growing seasons), (2) deep winter snow cover, (3) rodent and

leporid (rabbits and hare) populations, and (4) presence of whitebark pine. The best available information suggests that the first two characteristics are likely important because the Sierra Nevada red fox appears adapted to them. Fox develop dense, fur-covered toe pads during the winter (Grinnell *et al.* 1937, pp. 378, 393; Fuhrmann 1998, p. 24; Sacks 2014, p. 30), allowing them to better use sites with deep snow cover that coyotes cannot access, thus reducing competition for food. The remaining two characteristics are important in that rodents and leporids are known prey items of the Sierra Nevada red fox, and caches of whitebark pine seeds were found to be an important winter food source for Rocky Mountain montane foxes in some years. The demographic characteristics we considered important to the viability of the Sierra Nevada red fox include: (1) Genomic integrity (extent of hybridization or inbreeding depression), (2) population size, and (3) number of populations.

Risk factors affecting the environmental characteristics that the subspecies relies on include changing climate conditions (i.e., drought, warming temperatures that may affect snowpack levels), which promote coyote presence (and thus competition with the Sierra Nevada red fox) in high-elevation areas, and potential threats to whitebark pine such as rust disease and mountain pine beetles. Risk factors affecting the demographic characteristics include deleterious impacts associated with small population size, including inbreeding depression (as a consequence of population reduction and a lack of other populations) and reduced genomic integrity, and levels of hybridization with nonnative red foxes. Our evaluation of the best available information indicates there is no evidence of significant adverse impacts specifically associated with the Sierra Nevada red fox's habitat. We presented several potential causal connections between habitat

conditions and their importance to the Sierra Nevada red fox, as well as scenarios related to possible future trajectories of the risk factors that could affect those habitat conditions. As we analyzed these potentialities, we determined that the relative importance of potential causal connections was lower than presented in some scenarios, and that the most likely scenario of future conditions would exhibit a lower overall risk to the DPS's habitat. As such, we conclude that there are not any current or future significant habitat-based threats. The best available information suggests that threats to the subspecies directly (as opposed to habitat) are of greatest concern. Below is a summary of the factors influencing the species viability, provided in detail in the SSA report (Service 2018) and available on the Internet at www.regulations.gov, Docket No. FWS-R8-ES-2019-0006.

Subalpine Habitat Suitability, Snowpack Levels, and Coyote Presence

Over the past 100 years, average temperatures in alpine regions have increased by 0.3 to 0.6 °C (Perrine *et al.* 2010, p. 30). In the Lake Tahoe region (northern Sierra Nevada mountain range in California), the average number of days per year for which the average temperature was below-freezing has decreased from 79 in 1910 to about 51 in 2010 (Kadir *et al.* 2013, p. 102). These increased average temperatures coupled with periodic drought conditions can result in changed habitat conditions in subalpine habitat. For example, direct measurements of primary productivity in a subalpine meadow in Yosemite National Park have shown that mesic (medium wet) and hydric (wet) meadows both tend to increase productivity in response to warmer, drier conditions (Moore *et al.* 2013, p. 417). Xeric (dry) meadows tend to increase productivity due to warmth, but decrease due to drier conditions (Moore *et al.* 2013, p. 417). A comparison of tree

biomass and age in subalpine forests now and about 75 years ago also points to increased productivity over time (Kadir *et al.* 2013, p. 152). Specifically, small trees with comparatively more branches increased by 62 percent, while larger trees decreased by 21 percent, resulting in younger, denser stands (Kadir *et al.* 2013, p. 152). This overall increase in biomass occurred consistently across the subalpine regions of the Sierra Nevada mountain range and across tree species. The primary cause was an increase in the length of the growing season (Kadir *et al.* 2013, p. 152).

Increasing average temperatures and periodic drier conditions during drought years may have increased the productivity of high-elevation areas, thus likely supporting higher prey abundance levels that (at least in some years) in turn could support more coyotes in spring and summer months. The best available information suggests that coyotes are present in the Sonora Pass area at the same elevations as the Sierra Nevada red fox during summer months, also outnumbering the Sierra Nevada red fox individuals in that area (Quinn and Sacks 2014, pp. 2, 11, 12, 35). Additionally, several coyotes were found to be related, suggesting they were establishing territories and raising pups (Quinn and Sacks 2014, p. 12). As a result of this information, coyote densities appear to have increased in this area relative to historical levels, thus resulting in increased coyote competition with the Sierra Nevada red fox. This increased coyote presence (and potentially density) on a given landscape can lead to decreased density of Sierra Nevada red foxes (Sargeant *et al.* 1987, p. 288; Harrison *et al.* 1989, p. 185) (see also additional discussion in section 3.1 of the SSA report (Service 2018, pp. 15–16). Also, the increased coyote presence may in part result from increased productivity of food sources due to changing climate conditions, although snowpack levels were low during much of

the monitoring period due to drought, and this increased productivity may also have affected coyote densities (Kadir *et al.* 2013, p. 152) (see below).

In the central portion of the Sierra Nevada mountain range, average current April 1 snowpack levels in Yosemite National Park (which overlaps a portion of the known Sierra Nevada red fox sightings) have been just above 23.6 in (60 cm) (Curtis *et al.* 2014, p. 9). To date, all Sierra Nevada red fox individuals sighted within the park have been in the areas of highest snowpack (Eyes 2016, p. 2).

While snowpack conditions vary by year and location, the best available information suggests that the areas where Sierra Nevada red fox occur have been maintaining high snowpack during winter and spring most years, regardless that snowpack appears to be decreasing in some areas across the mountain range (see section 4.1 of the SSA report (Service 2018, pp. 22–23)). Therefore, the current condition for deep winter snow appears adequate, noting some years have and will continue to result in drought conditions and thus lower snowpack levels.

Prey Availability

Rodent population numbers in subalpine areas have likely increased due to an increase in primary productivity (Service 2018, pp. 21, 24). Despite several factors that may limit their availability (e.g., increased presence of coyotes, compaction of snow from snowmobile activity), the general landscape appears adequate for rodents.

Adequate leporid population numbers may be of concern given that both white-tailed jackrabbits and snowshoe hares are considered species of special concern across the Sierra Nevada by CDFW (CDFW 2017, p. 51), a designation meaning they are potentially vulnerable to extirpation in California (CDFW 2017, p. 10). Regardless of

rangewide leporid abundance, the best available information does not suggest that leporid abundance is inadequate in the vicinity of the majority of known Sierra Nevada red fox sighting locations (i.e., Sonora Pass area); leporids appear currently to be relatively common and present all year in the Sonora Pass area (Rich 2014, p. 1).

Deleterious Effects Associated With Small Populations

Within the DPS area, the Sierra Nevada red fox is currently known from a single population extending along the Sierra Nevada crest near Sonora Pass (State Route 108), with species experts providing an overall estimate of about 10 to 50 adults residing in the center of the DPS's historical range (Sacks 2015, p. 1; Sacks *et al.* 2015, p. 14). Two new (2018) Sierra Nevada red fox sightings are now known from about 32 mi (51 km) southeast of the previously known southern sightings (i.e., eastern edge of Yosemite National Park) of the population (Stermer 2018a, p. 1). It is unclear whether these 2018 sightings are of the same or different foxes (Stermer 2018b, p. 1), or whether that fox or foxes dispersed from the Sonora Pass area. Our estimate of population numbers includes an unknown number of hybrids, which in 2014 comprised 8 of 10 non-immigrant individuals sighted (Sacks *et al.* 2015, pp. 17, 29). No evidence of reproduction of pure Sierra Nevada red fox was observed at a 50-mi² (130-km²) study site for the 2011 to 2014 breeding seasons (Sacks *et al.* 2015, pp. 3, 15, 30). This finding is consistent with low reproductive success due to inbreeding depression (Sacks *et al.* 2015, p. 15). Given this population information, the current condition of the Sierra Nevada red fox likely includes inbreeding depression and a population size lower than necessary to reduce risks associated with stochastic events (i.e., a portrayal of low resiliency).

Genomic Integrity

Prior to spring of 2013, no reproduction between native individuals of the Sierra Nevada red fox and nonnative immigrant red fox was known to have occurred (Sacks *et al.* 2015, p. 9; Sacks 2017, p. 4). However, two nonnative male red foxes with a mixture of montane (*V. v. macroura*) and fur-farm ancestry arrived at the Sonora Pass area in 2012 and by 2014 had produced a total of 11 hybrid pups (Sacks *et al.* 2015, pp. 3, 10, 29–30). These constituted the only known pups produced in the Sonora Pass area (i.e., the only area/population of the Sierra Nevada red fox within the DPS area) during the four breeding seasons from 2011 to 2014 (Sacks *et al.* 2015, pp. 3, 15, 30). A third nonnative male was sighted (once) in 2014, bringing the known individuals in that year to three nonnatives, eight hybrids, and two native Sierra Nevada red fox individuals (Sacks *et al.* 2015, pp. 17, 22, 29). While the hybrid pups assist in helping the Sierra Nevada red fox experience less inbreeding depression at the current point in time when the overall population is small, the best available scientific and commercial information suggests that the current condition with regard to maintaining high genomic integrity is poor, and thus, species representation is considered low. Additionally, low representation is further characterized by this DPS's single, small population, which is spread in a relatively constricted geographic arrangement and not indicative of a resilient or redundant mammalian population to withstand stochastic or catastrophic events.

Current Condition Summary

Overall, the current small population size is a direct result of decades of heavy hunting and trapping pressure across its range prior to the State of California's prohibition of "take" and designation of the Sierra Nevada red fox as a threatened species in 1980. Since that time, the remaining small population has experienced pressures from

competition for prey resources by coyotes, deleterious impacts associated with small population size, including inbreeding depression (as a consequence of population reduction and a lack of other populations) and reduced genomic integrity, and levels of hybridization with nonnative red foxes. At this time, the best available scientific and commercial information suggest that the most significant threats to the Sierra Nevada red fox within this DPS are those Factor E stressors that directly affect the few individuals on the landscape (i.e., deleterious effects associated with small population size that are resulting in low reproductive success (inbreeding depression) and genomic integrity).

Potential Future Conditions

We evaluated three future scenarios over a 50-year timeframe. This time period was chosen because it is within the range of the available hydrological and climate change model forecast information (IPCC 2014, pp. 10, 13), and coincidentally encompasses roughly 25 generations of the subspecies (Perrine *et al.* 2010, p. 15). The three scenarios included improved viability and conditions into the future, the persistence of current conditions into the future, and a decreased viability scenario where current conditions worsen into the future. The SSA report contains a full description of the projected future scenarios and potential outcomes (Service 2018, pp. 29–30).

Risks to the future viability of the Sierra Nevada red fox appear high given the small size and limited distribution of the current population and the factors that are negatively influencing the subspecies currently and into the future, which include deleterious effects associated with small population size (genomic integrity and inbreeding depression), hybridization with nonnative red fox, and possibly reduced prey availability (given observations of scarce leporid observations in some subalpine areas)

and competition with coyotes for both leporid and rodent prey due to reduced snowpack levels. Redundancy is likely to remain poor into the future until such time as the current, isolated small population increases in size or an additional population provides protection against a catastrophic event eradicating the whole subspecies. Resiliency will likely remain low given continued periodic drought conditions and temperature increases that reduce snow depth and consequently may cause increased competition with coyotes. Rodent population sizes will likely increase if primary productivity of the subalpine habitat increases in the future; however, red fox access to rodents could be limited due to coyote competition. Leporid and whitebark pine populations may decrease or become less dependable.

The recent increase in pup production is encouraging (although minimizing future hybridization would be preferable); however, representation is low and likely to remain so due to the small size and genetic integrity of the population, which would likely remain susceptible to inbreeding depression if the population(s) fails to increase sufficiently. Additionally, the geographic range of the population(s) is limited (even though suitable habitat is not) especially when compared to the historical extent within the Sierra Nevada. In total, these threats (i.e., deleterious impacts associated with small population size (including inbreeding depression and genomic integrity), hybridization concerns, and possibly reduced prey availability and competition with coyotes) currently leave the DPS susceptible to stochastic or catastrophic effects, both currently and in the future.

Proposed Determination

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50

CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, we may list a species based on (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. The Sierra Nevada red fox faces the following threats: Deleterious impacts associated with small population size (including inbreeding depression and reduced genomic integrity) (Factor E), hybridization with nonnative red fox (Factor E), and possibly reduced prey availability and competition with coyotes (Factor E)) resulting from reduced snowpack levels. Existing regulatory mechanisms and conservation efforts do not address the threats to the Sierra Nevada red fox to the extent that listing the DPS is not warranted.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Sierra Nevada DPS of the Sierra Nevada red fox. The Act defines an endangered species as any species that is “in danger of extinction throughout all or a significant portion of its range” and a threatened species as any species “that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.”

We considered whether the DPS is presently in danger of extinction and determined that proposing endangered status is appropriate. We have shown that there are negative influences on the DPS, including deleterious impacts associated with small population size, including (but not limited to) inbreeding depression. Since 2015, the

best available information indicates that additional nonnative red fox hybridization has occurred, which has resulted in documented hybrid red fox pups. Although this hybridization may adversely affect the genetic integrity of the DPS, it likely has prevented further decreases in the size of the Sierra Nevada red fox population. Regardless, the DPS' size and distribution remain critically low such that resiliency, redundancy, and representation are insufficient and place the DPS in danger of extinction throughout all of its range.

Although production of pups in monitored areas appears to have increased in 2013 and 2014 due to hybridization as compared to previous years (Sacks *et al.* 2015, p. 29), and two additional sightings of individuals of the Sierra Nevada red fox have recently (December 2017) extended the known current range of the Sierra Nevada red fox in the Sierra Nevada DPS to the vicinity of Mt. Hopkins (approximately 30 mi (48 km) south of Yosemite and about 70 mi (113 km) from the southern end of the Sonora Pass area) (Stermer 2018a, p. 1), these few new individuals have not increased the population size or extent to the degree that the subspecies is not in danger of extinction, including from potential stochastic or catastrophic events.

The primary threats to the DPS, described above, are likely to become exacerbated in the future. Given current and future decreases in resiliency, the population has become more vulnerable to extirpation from stochastic events, and subsequent loss of representation and redundancy. The range of future scenarios of the DPS's environmental and demographic conditions suggest current danger of extirpation throughout the Sierra Nevada mountain range. Under the current condition analysis as well as the potential future scenarios presented in the SSA report, the best available

information suggests that the Sierra Nevada red fox has such low resiliency, redundancy, and representation that it is in danger of extinction currently.

Our analysis of the DPS's current and future environmental and demographic conditions, as well as consideration of existing regulatory mechanisms and initiation of conservation efforts with partners (as discussed under "Available Conservation Measures," above), show that the factors used to determine the resiliency, representation, and redundancy for the Sierra Nevada red fox will likely continue to decline. Therefore, the Sierra Nevada DPS of the Sierra Nevada red fox is likely in danger of extinction currently throughout all of its range.

Determination of 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. Because we have determined that the Sierra Nevada DPS of the Sierra Nevada red fox is in danger of extinction throughout all of its range, we find it unnecessary to proceed to an evaluation of potentially significant portions of the range. Where the best available information allows the Services to determine a status for the species rangewide, that determination should be given conclusive weight because a rangewide determination of status more accurately reflects the species' degree of imperilment and better promotes the purposes of the Act. Under this reading, we should first consider whether the species warrants listing "throughout all" of its range and proceed to conduct a "significant portion of its range" analysis if, and only if, a species does not qualify for listing as either an endangered or a threatened species according to the "throughout all" language. We note that the court in *Desert Survivors v. Department*

of the Interior, No. 16-cv-01165-JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018), did not address this issue, and our conclusion is therefore consistent with the opinion in that case.

Therefore, on the basis of the best available scientific and commercial information, we propose to list the Sierra Nevada DPS of the Sierra Nevada red fox as an endangered species throughout all of its range in accordance with sections 3(20) and 4(a)(1) of the Act.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, 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 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. Subsection 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival

and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed and preparation of a draft and final recovery plan. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery plan also identifies recovery criteria for review of when a species may be ready for reclassification (such as “downlisting” from endangered to threatened) or removal from the Federal Lists of Endangered and Threatened Wildlife and Plants (“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. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. When completed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our website (<http://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 (e.g., 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 we list the Sierra Nevada red fox, 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 DPS. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>.

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

II. 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.

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 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 consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement

reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

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.

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. The regulations at 50 CFR 424.12(a)(1) state that the Secretary may, but is not required to, determine that a designation would not be prudent in the following circumstances:

- (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;
- (ii) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat

stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(iii) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available

The best available scientific and commercial information suggests that designating critical habitat is not prudent because we have determined that the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the Sierra Nevada red fox. Habitat also does not appear to be a limiting factor for the species (see **Proposed Determination**, above); there is abundant, protected adjacent habitat for Sierra Nevada red fox populations to expand into, should their population numbers rebound. Where the Sierra Nevada red fox currently occur, none of the threats we identified (small population size, hybridization, competition with coyotes) fall in the category of present or threatened destruction, modification, or curtailments of the fox's habitat. Overall, we conclude that there are not any current or future significant habitat-based threats, and the best available information suggests that threats to the subspecies directly (i.e., deleterious effects associated with small population size and genomic integrity) are of greatest concern.

In addition, for those potential habitat-based stressors we evaluated (see Current and Future Conditions sections of the SSA report for additional discussion), the best

available information indicates some changes to high elevation, subalpine areas may be occurring both currently and in the future with continued changing climate conditions (e.g., less snowpack in some years with potential for increased primary productivity, potential for rust disease and wildfire (see sections 4.1 and 5.1 in the SSA report)). However, those changes are not currently expected, nor in the future projected, to result in significant negative influences on the viability of the DPS.

Because we assessed that the present or threatened destruction, modification, or curtailment of the Sierra Nevada red fox's habitat is not a significant threat to the species, we have determined that designating critical habitat is not prudent at this time.

III. Required Determinations

Clarity of the Rule

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

- (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 the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are

too long, the sections where you feel lists or tables would be useful, etc.

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

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

References Cited

A complete list of references cited in this rulemaking is available on the Internet at <http://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 rulemaking are the staff members of the U.S. Fish and Wildlife Service Species Assessment Team and Sacramento Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, we 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; 4201–4245, unless otherwise noted.

2. Amend § 17.11(h) by adding an entry for “Fox, Sierra Nevada red [Sierra Nevada DPS]” under “MAMMALS” to the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
MAMMALS				
* * * * *				
Fox, Sierra Nevada red [Sierra Nevada DPS]	<i>Vulpes vulpes necator</i>	U.S.A. (CA)— Sierra Nevada	E	[<i>Federal Register</i> citation when published as a final rule].
* * * * *				

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Dated: November 26, 2019

Margaret E. Everson

Principal Deputy Director,

U.S. Fish and Wildlife Service,

Exercising the Authority of the Director,

U.S. Fish and Wildlife Service.

Billing Code 4333–15

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