failure (M.C. Smith 1968, pp. 308–309; Finley 1969, all; Steele and Koprowski 2001, p. 67). Placement of these middens tends to be on gentler, non-southerly-facing slopes in healthier, older forested areas with higher canopy closure, basal area, and number of large live trees (Finley 1969, p. 237; Zugmeyer and Koprowski 2009, p. 179; Hatten 2014, p. 111). This type of placement allows specific moisture levels to be maintained within the midden, thereby creating prime storage conditions for cones and other food items, such as mushrooms, acorns, and bones (Finley 1969, p. 237; Brown 1984, pp. 66–67; USFWS 1993, pp. 5–7; Zugmeyer and Koprowski 2009, p. 179). They also seem to prefer areas with snags, piles and tangles of downed timber, and a higher volume of logs that provide cover and safe travel routes, especially in winter, when open travel across snow exposes them to increased predation, as the species does not hibernate. Wood et al. (2007, p. 2362) determined that midden site selection occurs not only at the microclimate level (where conditions are appropriate for cone storage), but also on a larger scale that encompasses other features found on the landscape, usually in areas with a high number of healthy trees and correspondingly high seedfall. There appears to be no differentiation in selection of midden sites based on sex (Alanen et al. 2009, pp. 204–205).

Within their territory, Mount Graham red squirrels build nests in hollow trees, in hollow snags, in hollow logs, outside trees in nests of grass or foliose lichens (called dreys or bolus nests), or in holes in the ground (C.C. Smith 1968, p. 58; Leonard and Koprowski 2009, p. 132). Nests may be built in natural hollows or abandoned cavities made by other animals, such as woodpeckers, and enlarged by squirrels (USFWS 1993, p. 11). Nest site selection by Mount graham red squirrels is strongly influenced by stand composition, particularly density of corkbark fir, mature (large) trees, and decaying logs (Merrick et al. 2007, p. 1961). The availability of larger snags and cavity-containing trees, especially aspen, is of particular importance for this population, as they provide preferred nesting locations (Merrick et al. 2007, p. 1961).

Critical Habitat

Current Critical Habitat Designation

On January 5, 1990, we published a final rule (55 FR 425) designating critical habitat for the Mount Graham red squirrel as mature spruce-fir forest in:

1. Hawk Peak-Mount Graham Area. The area above the 10,000-ft (3,048-m) contour surrounding Hawk Peak and Plain View Peak, plus the area above the 9,800-ft (2,987-m) contour that is south of lines extending from the highest point of Plain View Peak eastward at 90° (from true north) and southwestward at 225° (from true north).

2. Heliograph Peak Area. The area on the north-facing slope of Heliograph Peak that is above the 9,200-ft (2,804-m) contour surrounding Heliograph Peak and that is between a line extending at 15° (from true north) from a point 160 ft (49 m) due south of the horizontal control station on Heliograph Peak and a line extending northwestward at 300° (from true north) from that same point.

3. Webb Peak Area. The area on the east facing slope of Webb Peak that is above the 9,700-ft (2,957-m) contour surrounding Webb Peak and that is east of a line extending due north and south through a point 160 ft (49 m) due west of the horizontal control station on Webb Peak.

12-Month Determination

Pursuant to the provisions of the Act regarding revision of critical habitat and petitions for revision, we now publish notice of how we intend to proceed with the requested revision. As described below under *How the Service Intends to Proceed,* we intend to assess potential revisions to the subspecies' critical habitat after a species status assessment (SSA) and a revision of the Mount Graham red squirrel's recovery plan are complete.

How the Service Intends To Proceed

Section 4(b)(3)(D)(ii) of the Act states that if we find that a petition presents substantial information indicating that a revision to critical habitat may be warranted, then within 12 months of receiving the petition we are to indicate how we intend to proceed with the requested revision and promptly publish a notice of our intention in the **Federal Register**. We intend that any revisions to critical habitat for the Mount Graham red squirrel be as accurate and comprehensive as possible. Therefore, completing the SSA and a revised recovery plan will inform any future revisions to critical habitat for the red squirrel. Once the SSA and revised recovery plan are complete, a rulemaking process will be initiated if revisions to the subspecies' critical habitat are determined to be appropriate.

The currently designated critical habitat, as well as areas that support the subspecies but are outside of the current critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act. Actions affecting the Mount Graham red squirrel or its designated critical habitat are subject to the regulatory protections afforded by section 7(a)(2) of the Act, which requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat.

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 Arizona Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Author

The primary authors of this document are the staff members of the Arizona Ecological Services Field Office, U.S. Fish and Wildlife Service.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Martha Williams,

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

[FR Doc. 2021–16247 Filed 8–2–21; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2019–0006; FF09E21000 FXES11110900000 212]

RIN 1018–BC62

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

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), determine endangered species status under the Endangered Species Act of 1973 (Act), as amended, for the Sierra Nevada Distinct Population Segment (DPS) of the Sierra Nevada red fox (*Vulpes vulpes necator*) (hereafter referred to in

this rule as the Sierra Nevada DPS). The Sierra Nevada red fox is a small mammal occurring in California and Oregon, with the Sierra Nevada DPS of this broader taxon inhabiting the highest elevations of the Sierra Nevada mountain range in California. This rule adds the Sierra Nevada DPS of Sierra Nevada red fox to the List of Endangered and Threatened Wildlife.

DATES: This rule is effective September 2, 2021.

ADDRESSES: This final rule is available on the internet at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2019–0006. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2019–0006.

FOR FURTHER INFORMATION CONTACT: Michael Fris, 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. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act, a species may warrant protection through listing if it is endangered or threatened throughout all or a significant portion of its range. Listing a species as an endangered or threatened species can only be completed by issuing a rule.

What this document does. This rule will finalize listing the Sierra Nevada DPS of the Sierra Nevada red fox (*Vulpes necator*) (Sierra Nevada DPS) as an endangered species under the Endangered Species Act. This rule adds the Sierra Nevada DPS to the List of Endangered and Threatened Wildlife in title 50 of the Code of Federal Regulations at 50 CFR 17.11(h).

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 Sierra Nevada DPS 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 resulting from reduced snowpack levels (Factor E). Existing regulatory mechanisms and conservation efforts do not address the threats to the Sierra Nevada DPS to the extent that listing the DPS is not warranted (Factor D).

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. In this case, we have found that the designation of critical habitat for the Sierra Nevada DPS is not prudent.

Peer review and public comment. During the proposed rule stage, we sought the expert opinions of five appropriate specialists regarding the species status assessment (SSA) report. We received responses from two specialists, which informed our determination. We also considered all comments and information received from the public during the comment period.

Previous Federal Actions

On January 8, 2020, we published a proposed rule in the **Federal Register** (85 FR 862) to list the Sierra Nevada DPS as an endangered species under the Act (16 U.S.C. 1531 *et seq.*). Please refer to that proposed rule for a detailed description of previous Federal actions concerning this DPS, which we refer to as a ''species'' or ''subspecies'' in this rule, in accordance with the Act's definition of ''species'' at 16 U.S.C. 1532(16).

Summary of Changes From the Proposed Rule

In preparing this final rule, we reviewed and fully considered comments from the public on the proposed rule. We did not make any substantive changes to this final rule after consideration of the comments we received. We did update some biological and threats information based on comments and some additional information provided, as follows: (1) We made several nonsubstantive clarifications and corrections (including addition of information related to potential snowmobiling impacts) in the Species Information and *Summary of Biological Status and Threats* sections of this rule in order to ensure better consistency, clarify some information, and update or add new references; (2) we included additional information we received regarding observations of Sierra Nevada DPS detections and population size across its range; and (3) we added a summary discussion of the threat of habituation to humans and human-based food sources in this rule, which was based on additional information provided by a commenter. However, the information we received during the comment period for the proposed rule did not change our previous analysis of the magnitude or severity of threats facing the DPS.

Supporting Documents

A species status assessment (SSA) team prepared an SSA report for the Sierra Nevada DPS (Service 2018, entire). The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the DPS, 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 peer review of the SSA report. The Service sent the SSA report to five independent peer reviewers and received two responses. The purpose of peer review is to ensure that our listing determinations are based on scientifically sound data, assumptions, and analyses. The peer reviewers have expertise in the biology, habitat, and threats to the species. The Service also sent the SSA report to five agency partners and three Tribes, including scientists with expertise in the Sierra Nevada DPS, conservation biology, and forest management, for review. We received reviews from five partners: The fish and wildlife agencies of California and Nevada, the National Park Service, the U.S. Forest Service (USFS), and the U.S. Marine Corps.

Final Listing Determination

Background

A thorough review of the taxonomy, life history, ecology, and overall viability of the Sierra Nevada DPS 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 viability of the Sierra Nevada DPS. The SSA report documents

the results of the comprehensive biological status review, provides an evaluation of how potential threats may affect the species' viability both currently and into the future, and provides the scientific basis that informed our regulatory decision regarding whether this DPS should be listed as an endangered or threatened species under the Act, as well as the risk analysis on which the determination was 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.* 2010, 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 analysis in our October 8, 2015, 12-month finding (80 FR 61011)). The population near Lassen Peak is part of another population segment, whose range also includes the Cascade Mountains of Oregon. We determined that listing the Southern Cascades population segment was not warranted in 2015 (80 FR 60989).

Range and Habitat

Based on known detections, as well as what is known regarding high-quality habitat, we consider the current range of the Sierra Nevada DPS to run southeast along the Sierra crest from just south of California State Highway 88 to a few miles north of Kings Canyon National Park (Figure 1). The range includes the easternmost portion of Yosemite National Park (hereafter referred to as ''Yosemite''), in Tuolumne and Madera Counties, as well as additional portions of those counties, and of Alpine, Mono, Fresno and Inyo Counties (Cleve *et al.* 2011, entire; Sacks *et al.* 2015, pp. 10, 14; Eyes 2016, p. 2; Hiatt 2017, p. 1; Figure 1; Quinn 2018a, attachments; Stermer 2018, p. 1).

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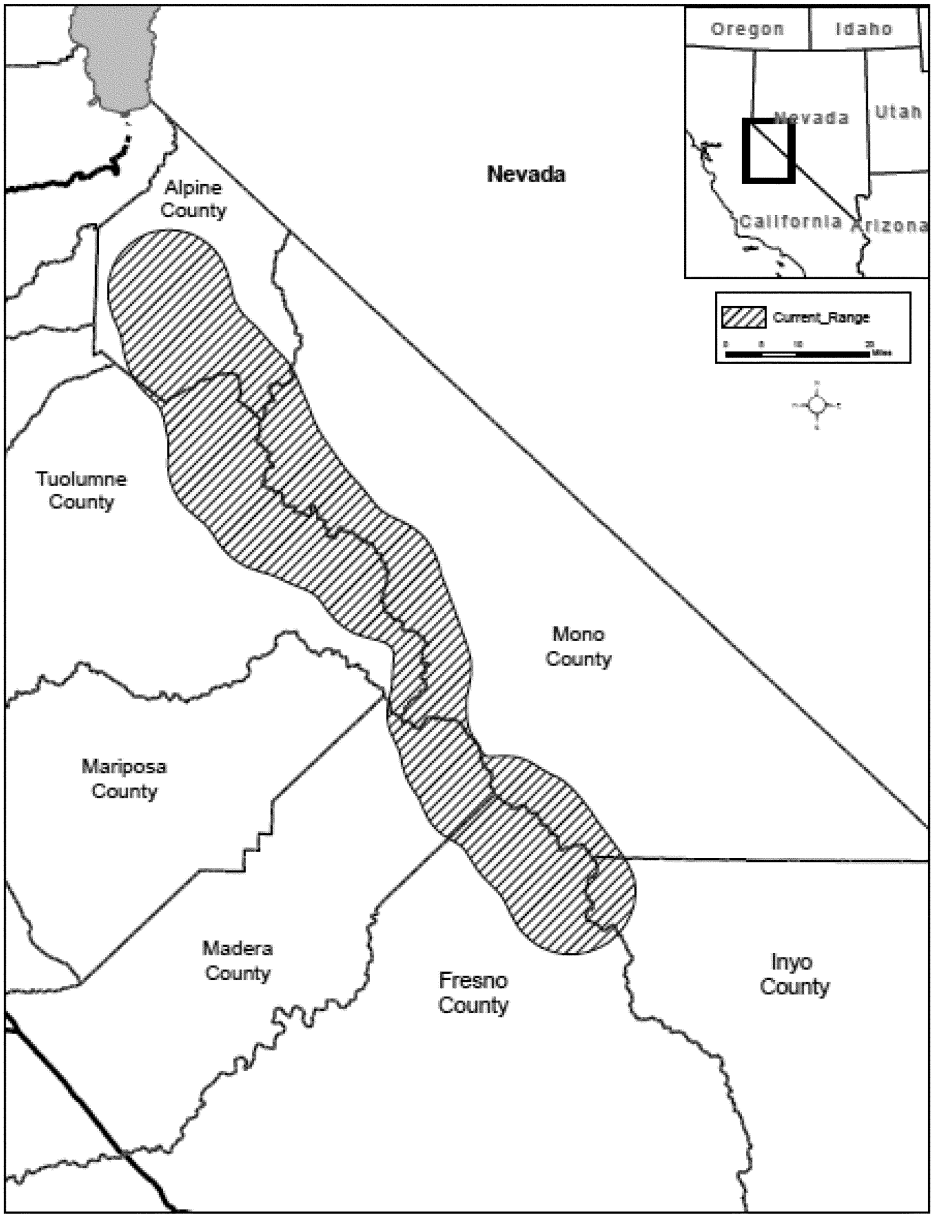

Figure 1—Approximate current range of the Sierra Nevada DPS of Sierra Nevada red fox. The range follows the Sierra crest (the north-to-south ridgeline of the Sierra Nevada mountain range), and includes known sighting locations and nearby high-quality habitat (Cleve *et al.* 2011, entire; Eyes 2016, attachments;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

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Sierra Nevada DPS sightings have consistently occurred in subalpine habitat and high-elevation conifer areas at elevations ranging from 2,469 to 3,538 meters (m) (8,100 to 11,608 feet (ft)) (Sacks *et al.* 2015, pp. 3, 11; Dunkelberger 2020, p. 3). Four detections (out of more than 750 scat or hair samples that have been obtained since 2011) have occurred at lower elevations (from 6,805 to 7,059 ft (2,074 to 2,152 m)), but these outliers appear to be from three individuals that were in the process of dispersing (Quinn 2020, p. 1). In the Sonora Pass area used by the Sierra Nevada DPS, 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 DPS 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 DPS, particularly in winter and early spring (Aubry 1983, p. 109; Rich 2014, p. 1; Quinn 2017, pp. 3–4; Sacks 2017, p. 3).

Life History

Although information regarding Sierra Nevada DPS reproductive biology is limited, it is likely similar in many ways to other North American red fox subspecies (Aubry 1997, p. 57). Other subspecies are predominantly monogamous, with a gestation period of 51 to 53 days (Perrine *et al.* 2010, p. 14). Based on information from both the Sierra Nevada and Southern Cascades populations, Sierra Nevada DPS foxes likely mate in mid-February to early March, with births occurring in April and early May (Dunkelberger 2020, p. 1; Sacks and Quinn 2020, p. 3). This is somewhat later than lowland subspecies, possibly as an adaptation to the later growth of spring vegetation at higher elevations (Quinn and Sacks 2020, p. 3). Members of the Sierra Nevada DPS use natural openings in rock piles or crevices in exposed bedrock as denning sites (Grinnell *et al.* 1937, p. 394). Individual foxes from the Southern Cascades population in both Oregon and California have also recently been found to dig earthen dens (Dunkelberger 2020, p. 2; Sacks and Quinn 2020, p. 3), suggesting that Sierra Nevada DPS foxes do as well. Dens are used by foxes in the Southern Cascades population (and likely in the Sierra Nevada DPS) to raise the young from early spring through early fall, and they are often reused from year to year (Dunkelberger 2020, pp. 1–3). A 7-year study of the Sierra Nevada DPS found litter sizes of 2.3 pups on average (9 litters and 21 pups, not counting one purely nonnative litter) (Quinn and Sacks 2018, p. 38). This is within the range of two to three pups per litter that appear to be typical in the Southern Cascades population (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

In our proposed listing rule (85 FR 862, p. 866), we estimated the population size of the Sierra Nevada DPS at 10 to 50 adults. Based on comments received, we now revise that estimate to approximately 18 to 39 individuals, of which 10 to 31 are north of Yosemite (Sacks and Quinn 2020, p. 1), about 5 are in or just east of Yosemite (Central Sierra Environmental Resource Center (CSERC) *et al.* 2020, pp. 2–3, California Department of Fish and Wildlife (CDFW) 2020, p. 4), and 3 have been identified south of Yosemite in the general area of Mono Creek (CDFW 2020, p. 3). All detections, including new detections mentioned in comments to the proposed rule, have been within the approximate current range (Figure 1). Population density north of Yosemite is estimated at approximately 4 foxes per 100 sq km (square kilometers) (about 1 fox per 10 sq mi (square miles)) (Sacks and Quinn 2020, p. 1).

The average lifespan, age-specific mortality rates, sex ratios, and demographic structure of the Sierra Nevada DPS 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 individual Sierra Nevada red fox within the Southern Cascades population (in the Lassen area) lived at least 5.5 years (CDFW 2015, p. 2), and a study of the Sierra Nevada DPS (in the Sonora Pass area) found the average annual adult survival rate to be about 70 percent, which is relatively high for red foxes (Sacks and Quinn 2020, p. 2).

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an ''endangered species'' or a ''threatened species.'' The Act defines an endangered species as a species that is ''in danger of extinction throughout all or a significant portion of its range,'' and a threatened species as a species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The Act requires that we determine whether any species is an ''endangered species'' or a ''threatened species'' because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

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

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

Analytical Framework

The SSA report documents the results of our comprehensive biological status review for the DPS, including an assessment of the potential threats to the species. The SSA report does not represent a decision by the Service on whether the species should be listed as an endangered or threatened species

under the Act. It does, however, 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–2019–0006 on *http://www.regulations.gov* and on the Sacramento Fish and Wildlife Office's website at *https://www.fws.gov/sacramento/.*

To assess the Sierra Nevada DPS's 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. This process 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

The summary below of our analyses represents an evaluation of the biological status of the DPS, based upon our assessment of the effects anticipated from each of the identified threats. We also consider the cumulative impact of all effects anticipated from the identified threats, and how that cumulative impact may affect the Sierra Nevada DPS's continued existence currently and in the future. We used the best available scientific and commercial information, and the expert opinions of the analysis team members. The threats identified as having the greatest potential to act upon the DPS include: (1) Deleterious impacts associated with small population size, such as inbreeding depression and increased effects of deleterious stochastic events (Factor E); (2) over-hybridization with nonnative red fox (Factor E); and possibly (3) competition with coyotes (Factor E) resulting from reduced snowpack levels. We also evaluated the existing regulatory mechanisms (Factor D) and implementation of conservation efforts.

The environmental characteristics that are most important for Sierra Nevada DPS population resiliency include cold subalpine habitat with low primary productivity, high snowpack, and rodent and leporid prey (Service 2018, pp. 14–20). Additional demographic characteristics contributing to the species' redundancy and representation include (1) Either a single large or multiple populations, which would help insure that large portions of the DPS remain even after a catastrophic loss over a large area; (2) a population(s) situated to include habitat variations occurring from northern to southern portions of the range (rather than clustering in one general area); and (3) representative genetic diversity to avoid genetic swamping and loss of the species' adaptive native genes, which could result from continuing and overbroad levels of interbreeding with nonnative red fox subspecies.

The best available scientific and commercial information at this time indicates that the Sierra Nevada DPS population size needs to be larger to help ensure its viability into the future. The minimum population size necessary for the Sierra Nevada DPS to maintain viability is unknown, but that number has been estimated at about 150 individuals for the Santa Catalina Island fox (*Urocyon littoralis catalinae*) (Kohlmann *et al.* 2005, p. 77), which has a small range compared to suitable habitat available for the Sierra Nevada DPS. Lacking better data, we use this number as an example of what the minimum viable population size for the Sierra Nevada DPS could be. The current estimated population size of 18 to 39 individuals is well below that number, meaning that the population is likely vulnerable to stochastic disturbance (in addition to other threats discussed below).

When considering redundancy, there is currently only one small, isolated population of Sierra Nevada DPS 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.

When considering the breadth of genetic and environmental diversity within and among populations (representation), the Sierra Nevada DPS 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 potentially 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 would help the DPS withstand environmental changes. However, at this time, the Sierra Nevada DPS does not have this broad diversity.

Summary of Existing Regulatory Measures and Voluntary Conservation Efforts

Since 1998, the USFS have identified the Sierra Nevada DPS as a sensitive species where it occurs on National Forest lands. The current range of the DPS includes portions of the Stanislaus, El Dorado, Humboldt-Toiyabe, Inyo, and Sierra National Forests. 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 USFS lands. These specific protection measures require the USFS to conduct and analyze potential impacts of activities within 8 km (5 mi) 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 management policies prohibit hunting, trapping, and snowmobiling in Yosemite and manage natural resources to ''preserve fundamental physical and biological processes, as well as individual species, features, and plant and animal communities'' (NPS 2006, p. 26). Land management plans for Yosemite and Sequoia National Parks (the latter of which is not known to currently harbor Sierra Nevada DPS foxes but are within the DPS's historical range) do not contain specific measures to protect the Sierra Nevada DPS individuals or habitat. However, areas not developed specifically for recreation and camping are managed toward natural processes and species composition, and the best available scientific and commercial information indicates that the National Park Service would maintain the DPS's 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 DPS's range, including overlap with some known sightings. The INRMP includes provisions prohibiting disturbance within 100.6 m (330 ft) of Sierra Nevada red fox den sites from March 1 to June 30 (MWTC 2018, p. 4–37). The INRMP also establishes food storage and trash clean-up provisions to prevent habituation (MWTC 2018, p. 4–38). A table in the INRMP incorrectly identifies the dates during which disturbance of den sites must be avoided as January 1 to June 30 (MWTC 2018, p. 3–26), but the MWTC's 2020 Annual Operating Plan supports the March 1 to June 30 dates (MWTC 2019, p. 24).

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 CDFW. 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. This working group was formed in 2015 by representatives of Federal and State wildlife agencies, State universities, and nongovernmental conservation organizations (Sierra Nevada Red Fox Working Group 2015, p. 1; 2016, p. 1). In addition to continued monitoring of the Sierra Nevada red fox across its range, including the Sierra Nevada DPS, the working group is currently developing a conservation strategy, which will include a genetics management plan. While the Sierra Nevada DPS population remains low, careful monitoring and genetics management will be key in identifying and responding appropriately to any downward trends in population numbers.

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 DPS, 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, (2) deep winter snow cover, (3) and rodent and leporid (rabbit and hare) populations. Subalpine habitat is important because its lower primary productivity and short growing season leave it unable to support as many prey animals as typically occur at lower elevations (Verner and Purcell 1988, p. 2). This makes subalpine habitat more ''marginal'' for supporting mid-sized carnivores, such as coyotes and foxes. Red foxes tend to avoid competition with coyotes by relocating to marginal habitats that coyotes find less attractive (Cross 2015, p. 38). Several studies have found this tendency can result in elevational stratification, with red foxes relegated to the poorer habitat at higher elevations (Perrine 2005, p. 84).

The smaller size and furred feet of Sierra Nevada DPS foxes also improve their chances relative to coyotes at catching leporids running over deep snow (Grinnell *et al.* 1937, pp. 395–396; Perrine 2005, p. 81), and let them travel over snow more easily to reach productive hunting areas (Grinnell *et al.* 1937, p. 393; Fuhrmann 1998, p. 24; Perrine 2005, p. 81). Mule deer carrion (*Odocoileus hemionus*) is an important non-winter food source for both red foxes and coyotes at high elevations in and around Lassen Volcanic National Park, but deer in Lassen typically descend to lower elevations in winter, avoiding heavy snow (Perrine 2005, p. 30). Mule deer are also present in the range of the Sierra Nevada DPS, but a camera survey found none in the area during winter months (Sacks *et al.* 2015, p. 24). The low productivity and heavy snows of the Sierra Nevada DPS's high-elevation range therefore appear to discourage coyotes from occupying the area in winter to the same extent as at lower elevations, thereby leaving Sierra Nevada DPS foxes to occupy the area with less direct competition from coyotes (Sacks 2017, p. 2).

The remaining environmental characteristic, rodent and leporid population levels, is important to consider separately because prey population numbers can change for reasons unrelated to primary productivity or snowpack depth.

The demographic characteristics we considered important to the viability of the Sierra Nevada DPS 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 DPS relies on include changing climate-related conditions, such as primary production levels and snowpack, which can affect coyote presence (and thus competition with Sierra Nevada DPS individuals) in high-elevation areas; prey availability; and potential impacts of habituation to humans and human-provided food sources. 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 scientific and commercial information indicates the Sierra Nevada DPS's resiliency is not significantly adversely affected by impacts specifically associated with its habitat. We presented several potential causal connections between habitat conditions and their importance to the Sierra Nevada DPS, 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 scientific and commercial 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 75 years, average annual temperatures in the Sierra National Forest (which overlaps the southwestern portion of the Sierra Nevada DPS's range) have increased by about 1.0 to 1.5 °C (Meyer *et al.* 2013, p. 2). 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 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).

A study of coyotes and montane red foxes in the Lassen area of California found that coyotes moved out of high elevation areas during the winter, possibly due to deep snow (Perrine 2005, p. 74). Red foxes also moved to somewhat lower elevations in winter, but tended to remain at higher elevations than coyotes (average 1,878 m (6,161 ft) versus average 1,690 m (5,545 ft) for coyotes) (Perrine 2005, p. 96). Studies in Alberta and Maine have also documented elevational separation of coyotes and red foxes (Perrine 2005, p. 84). A study of coyotes in Sonora Pass, however, where Sierra Nevada DPS foxes occur, found that coyotes outnumber DPS foxes during the summer in the high elevation areas most used by Sierra Nevada DPS foxes, and also found several coyotes that were occupying the high-elevation areas year-round (Quinn and Sacks 2014, p. 12; Quinn 2017, pp. 6–7). Areas unoccupied by coyotes may serve as refugia for red foxes (Perrine 2005, p. 84), so the coyotes occupying high elevation areas near Sonora Pass during the winter may be negatively impacting Sierra Nevada DPS foxes by restricting them from hunting areas or den sites, by the threat of direct predation on adult foxes or cubs, and by generally reducing the carrying capacity of the area available for the foxes (Quinn and Sacks 2018, p. 18). The extent of the impact is of course unclear, but given the current small estimated size of the Sierra Nevada DPS population, any death or reproductive failure resulting largely from coyote presence could affect the overall viability of the DPS as a whole.

In the central portion of the Sierra Nevada mountain range, average recent April 1 snowpack levels in Yosemite (which overlaps a portion of the known Sierra Nevada DPS sightings) have been just above 60 cm (23.6 in) (Curtis *et al.* 2014, p. 9). To date, all Sierra Nevada DPS 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 scientific and commercial information suggests that the areas where the Sierra Nevada DPS occurs have been maintaining high snowpack during winter and spring most years (see section 4.1 of the SSA report (Service 2018, pp. 22–23)). Therefore, the current condition of the snowpack depth appears adequate for the DPS's needs, except during drought years such as occurred in California and other western states from 2012 to 2017 (Kim and Lauder 2017, pp 2–45).

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), 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 scientific and commercial information does not indicate that leporid abundance is inadequate in the vicinity of the majority of known Sierra Nevada DPS 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).

Habituation

Based on new information received, habituation of Sierra Nevada DPS foxes to humans and human food sources may expose Sierra Nevada DPS fox individuals to harm or injury, such as from dog attacks, dog diseases, and vehicle collisions (Dunkelberger 2020, p. 2). Sierra Nevada red foxes in the Southern Cascades population have been exhibiting begging behavior at the Lassen Peak parking lot (Perrine 2005, p. 150). A female from that population was killed by a dog in 2002 after having previously exhibited begging behavior (Perrine 2005, p. 135). The death occurred less than 175 m (600 ft) from a ski chalet.

Other indicators of habituation have also been noted in the range of the Sierra Nevada DPS. The Humboldt-Toiyabe National Forest has several photographs of Sierra Nevada DPS foxes closely approaching hikers and snowmobilers, presumably in hopes of obtaining food (Dunkelberger 2020, p. 2). Hikers within the DPS's range have also posted photographs on social media showing themselves feeding Sierra Nevada DPS foxes. Although we have no reports of Sierra Nevada DPS foxes approaching soldiers at the MWTC, trash has occasionally been left after training exercises, and tracks from Sierra Nevada red foxes, as well as fox scat containing food wrappers have been found in these debris areas (Dunkelberger 2020, p. 2). The recently completed INRMP commits the MWTC to implement measures that prevent habituation of foxes, including an education program for military personnel on these measures (MWTC 2018, p. 3–67). As a result of these actions, we do not expect habituation on MWTC lands to significantly affect the population of the DPS. We have no information indicating loss of Sierra Nevada DPS foxes due to habituation. Overall, the best available information suggests that habituation of individual foxes may occur, but is expected to be restricted to a few individuals over time.

Deleterious Effects Associated With Small Populations

Sierra Nevada DPS population numbers are currently low (18 to 39 individuals spread across the Sonora Pass, northern Yosemite, and Mono

Creek areas) (Sacks and Quinn 2020, p. 1; CSERC *et al.* 2020, pp. 2–3, CDFW 2020, pp. 3–4) and appear to have been low for many years. Sightings fell considerably in the mid-1900s, for instance, as compared to trapping data reported by Grinnell *et al.* (1937, p. 389) (Schempf and White 1977, p. 44). The low numbers make this DPS more susceptible to deleterious stochastic events such as major fires or diseases. Loss of a few individuals due to stochastic events would mean the loss of a relatively large proportion of the small Sierra Nevada DPS population.

Additionally, the Sierra Nevada DPS's low population numbers make it vulnerable to inbreeding depression. Inbreeding depression is caused by the chance loss of beneficial gene variants (alleles) in small populations, leaving deleterious alleles as the only remaining variants of a given gene (Soulé 1980, pp. 157–158). It can result in lowered reproductive ability, congenital defects, and lowered disease resistance (Soulé 1980, pp. 157–158; Gilpin 1987, p. 132; O'Brien 2003, pp. 62–63). To avoid inbreeding depression, a population typically requires an ''effective'' population size of at least 100 reproducing adults (Frankham *et al.* 2014, p. 58). The ''effective size'' of a population is generally smaller than the actual size, and refers to the number of breeding individuals that would be necessary to produce the level of genetic diversity observed in the population if the members of the population interbred in a manner that was ideal for maximizing genetic diversity (Lande and Barrowclough 1987, pp. 88–89). So for instance, a population in which few individuals bred, and in which they chose mates from among their geographical neighbors, would have a smaller effective size than a population in which almost all adults bred and chose mates from among the entire population.

The Sierra Nevada DPS's actual population size of 18 to 39 individuals is already well below 100, but (based on samples taken from 2015 to 2017) its effective population size was only 6.1 prior to the immigration into the population of two nonnative males in 2012 (CDFW 2020, p. 3). Thus, the same level of genetic diversity could have been produced by only about six breeding individuals in an ''ideal'' population in which breeding practices maximized diversity. This means the Sierra Nevada DPS had likely been suffering from inbreeding depression prior to the arrival of two Great Basin foxes in 2012 (Sacks *et al.* 2015, pp. 3, 10, 29–30) (see Genomic Integrity, below). Additional support for this conclusion is provided by preliminary results of a study that estimated the inbreeding coefficient of a Sierra Nevada DPS fox that was born prior to the arrival of the Great Basin immigrants (Sacks and Quinn 2020, p. 2). The inbreeding coefficient was found to be above 0.4, which is at the high end of the range found in Isle Royal wolves, a population with demonstrated severe inbreeding depression (Sacks and Quinn 2020, p. 2).

These data indicate that lowered reproductive success from inbreeding depression may be primarily responsible for the complete lack of pup production documented in the Sonora Pass area from 2011 through 2017 by mated pairs of pure Sierra Nevada DPS foxes (Quinn *et al.* 2019, p. 571). It is thus likely to have constituted a limiting factor on population size in recent years (Sacks and Quinn 2020, p. 3). And while recent interbreeding with foxes from the Great Basin appears to have increased reproductive success, we have no information regarding the extent of other potential effects that are typically associated with inbreeding depression, such as congenital defects and lowered disease resistance, nor whether these potential effects may also have been alleviated. The population also remains small at present, and thus potentially susceptible to renewed impacts from inbreeding depression (Quinn *et al.* 2019, p. 573), or from deleterious chance events such as drought or fire. If inbreeding depression does return, the impacts would likely be worse due to the addition of new alleles from the Great Basin into the population (Quinn *et al.* 2019, p. 573).

Genomic Integrity

Prior to spring of 2013, no reproduction between native individuals of the Sierra Nevada DPS 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 Great Basin montane (*V.* v. *macroura*) and fur-farm ancestry arrived at the Sonora Pass area in 2012 (Sacks *et al.* 2015, pp. 3, 10, 29–30). By 2014, they had produced a total of 11 hybrid pups (Sacks *et al.* 2015, pp. 29–30), and by 2017, the hybrids had interbred and produced 13 additional pups (Quinn *et al.* 2019, p. 571). These 24 pups, all with a mixture of Sierra Nevada DPS and Great Basin montane fox ancestry, are the only pups known to have been produced in the population since 2011 (Quinn *et al.* 2019, p. 571; Sacks and Quinn 2020, p. 2). A third nonnative male was sighted (once) in 2014, and a fourth in 2017 (Sacks and Quinn 2020, p. 2), although we have no information to indicate whether either of these produced young.

While the hybrid pups assist in helping the Sierra Nevada DPS experience less inbreeding depression (as discussed above), there remains the possibility that so many immigrants might enter the population and produce young that the unique heritable characteristics of the Sierra Nevada DPS are lost (Sacks *et al.* 2015, pp. 17–18; Quinn *et al.* 2019, p. 573). This loss of genes representative of the diversity of the DPS would initially mean a loss of representation (*i.e.,* a diminished ability to adapt to long-term changes due to the lost genes). If such genetic replacement continued to the point where the DPS as a whole was facing replacement by nonnative foxes, then that would represent a loss of resiliency (*i.e.,* the inability of remaining members of the DPS in the population to recover from stochastic events). For instance, if the last remaining individuals considered members of the DPS were of an older generation because their pups were all too hybridized to qualify as Sierra Nevada DPS, then any stochastic event that eliminated the last of the older DPS individuals would also eliminate the DPS as a whole, despite the continuing existence of non-DPS foxes in the area.

The current demographic circumstances of the DPS as a single, small population is also likely to result in low representation, because unique adaptations and genetic variations that DPS members in other portions of the historical range may once have had are likely to be lost now that the DPS no longer includes those areas. The historical range (as sketched by Grinnell *et al.* (1937, p. 382)) stretched for roughly 460 km (285 mi) from the northern to the southern Sierra Nevada mountains. The estimated current range, at only about 188 km (117 mi) long, and about half as wide, only covers portions of the central Sierras. Examples of differing ecological characteristics across the historical range include a north to south pattern of decreasing annual precipitation, increasing temperatures for a given elevation, and increasing maximum elevations (Fites-Kaufman *et al.* 2007, p. 458). Vegetation differences also follow this gradient, with whitebark pine more dominant in the north, but limber pine (*Pinus flexilis*) becoming more prominent in the central Sierras and foxtail pine (*Pinus balfouriana*) in the south (Fites-Kaufman *et al.* 2007, 475).

Cumulative or Synergistic Effects

As discussed above, both rodent population numbers and the incidence

of droughts affecting snowpack levels have been affected by climate change in ways that have likely increased coyote numbers in the DPS's range. It is possible that a gradual increase in coyote numbers during the mid 1900's was one of the factors causing the DPS's numbers to drop. Whatever the cause, this drop in population size eventually led to inbreeding depression, which would have tended to lower the population size even more. The recent instances of hybridization with immigrant males from the Great Basin appears to have helped alleviate the most obvious reproductive impacts of inbreeding depression, but (as discussed above) risks from inbreeding depression and deleterious chance events remain so long as the population remains small.

Current Condition Summary

We considered several risk factors involving both environmental and demographic characteristics affecting the Sierra Nevada DPS. The available information does not show that any environmental risk factors are currently threatening the DPS's viability. Increased primary productivity in high elevation areas due to climate change may have increased coyote numbers in the fox's range, but we lack evidence of the extent of increase or of resulting impacts. Important prey species remain generally available, and we lack evidence of population-level impacts resulting from habituation.

Several demographic risk factors do appear to constitute current threats to the viability of the Sierra Nevada DPS. The DPS currently consists of a single known population of fewer than 50 individuals. This small size leaves the DPS susceptible to serious impacts from relatively common stochastic changes in the environment, such as drought or wildfire. The resiliency and redundancy of the DPS—its ability to survive and quickly rebound from both common stochastic changes and more serious catastrophes—is thus low. Since this one small population is the last representative of a DPS that was once much larger, the representation of the DPS is also threatened by the population's small size and susceptibility to extirpation.

The small size of the population has also led to inbreeding depression in the recent past, which in turn likely contributed to further contractions in size due to lowered reproductive success. Population size appears to have begun increasing again since the arrival and interbreeding of two nonnative male foxes in 2011, but it is too early to determine if previous impacts from inbreeding depression have been ameliorated. Additionally, renewed inbreeding depression remains a possibility so long as the population size remains low. Thus, inbreeding depression also constitutes an apparent threat to the resiliency, redundancy, and representation of the DPS.

Finally, the DPS is currently at risk of genetic swamping due to ongoing interbreeding with nonnative immigrant foxes. The extent of this risk cannot be precisely determined because it depends on currently unknown factors, such as the extent to which ongoing immigration and interbreeding will continue into the future.

Critical Habitat

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 a species is determined to be an endangered or threatened species. In the proposed rule (85 FR 862, January 8, 2020), we determined that designation of critical habitat was not prudent because the present or threatened destruction, modification, or curtailment of habitat or range is not a threat to the Sierra Nevada DPS, and habitat does not appear to be a limiting factor for the species.

Summary of Comments and Recommendations

In the proposed rule published on January 8, 2020 (85 FR 862), we requested that all interested parties submit written comments on the proposal by March 9, 2020. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. Newspaper notices inviting general public comment were published in the Fresno Bee. We did not receive any requests for a public hearing. All substantive information received during the comment period has either been incorporated directly into this final determination or addressed below. We did not receive comments from Tribes.

Peer Reviewer Comments

In accordance with our joint policy on peer review published on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought peer review of the SSA report. We sent the SSA report to five independent peer reviewers and received two responses. The purpose of peer review is to ensure that our listing determinations are based on scientifically sound data, assumptions, and analyses. The peer reviewers have scientific expertise that included familiarity with the Sierra Nevada DPS and its habitat, biological needs, and threats.

We incorporated the peer reviewers' comments into the final SSA report (Service 2018, entire). The changes consisted of adjustments and additions regarding average litter size; certainty regarding the genetic basis of local adaptations; the importance of coyotes, leporids, and snowmobiles; the extent to which snowpack level may affect coyote presence; and the extent to which ongoing hybridization may constitute a potential benefit or threat. The peer reviewers' comments did not change our determination that this DPS meets the definition of an endangered species under the Act.

Federal Agency Comments

(1) Comment: The USFS requested that we work closely with the Sierra Nevada Red Fox Conservation Advisory Team, an informal recovery planning organization with representative members from numerous State and Federal agencies, universities, and environmental organizations. They noted that the Conservation Advisory Team is currently drafting a Conservation Strategy for the Sierra Nevada red fox subspecies, and asked us to update our Sierra Nevada red fox SSA report with new information from the Conservation Strategy.

Our Response: We participate as members of the Sierra Nevada Red Fox Conservation Advisory Team and will continue to work closely with them. We consider the SSA report a living document, and will update it as substantive new information becomes available and as funding permits. We will consider all such information as we proceed with recovery-related actions for the species.

(2) Comment: The USFS stated that our range map and habitat description do not reflect recent data made available by the Sierra Nevada Red Fox Working Group, and that the lower elevational limit for detections is 2,469 m (8,100 ft) rather than 2,743 m (9,000 ft). They also noted that the range map should show a higher resolution, and it should show elevation, spatial references, and landmarks.

Our Response: We recognize that the range map included in our proposed listing rule is not at a high resolution nor as finely detailed as the commenter would prefer, rather it is just intended to give the public an understanding of where the DPS generally occurs. Species

ranges are not hard and fast boundaries beyond which individuals cannot go, so range maps are our best attempt to capture where the species is likely to occur, based on available information. For the Sierra Nevada DPS, our range map was based both on detections known at this time and on Sierra Nevada DPS preferred habitat features identified by Cleve *et al.* (2011, entire). Our range map was not based on elevational contour lines; however, we note that the range map includes several areas below 2,469 m (8,100 ft), and so comports with the commenters point about Sierra Nevada red fox detections.

We have confirmed that all but three Sierra Nevada DPS detections are within the mapped range. The three foxes not within the mapped range were found within one fifth of a mile of State Highway 395 (Quinn *in litt.* 2020, unpublished data), and presumably reflect use of that highway as a dispersal corridor. Two of the three were scat detections (both from the same individual) near the highway in the town of Lee Vining, and the third was a road-killed individual on State Highway 395 just south of the junction with State Highway 108 (Quinn *in litt.* 2020, p. 1). These three detections were at elevations ranging from 2,074 to 2,152 m (6,805 to 7,059 ft) (Quinn *in litt.* 2020, unpublished data). A fourth detection below 2,469 m (8,100 ft) (specifically at 2,311 m (7,581 ft)) occurred in the valley of the West Walker River, just south of the MWTC and within the mapped range (Quinn *in litt.* 2020, unpublished data). All other detections were above 2,469 m (8,100 ft).

More detailed GIS mapping information is available from the Sacramento Fish and Wildlife Office on request. The range map is also available on the internet at *https://ecos.fws.gov/ecp.*

(3) Comment: The USFS noted that recent detections of Sierra Nevada DPS foxes near Dunderberg Peak and Virginia Lakes change the extent of the gap in detections mentioned in the proposed rule from 77.2 km (48 mi) to 19.3 km (12 mi).

Our Response: The detections are north of the gap, but we have removed discussion of the gap in order to avoid possible confusion regarding the estimated range (which does not have gaps) versus the location of Sierra Nevada DPS detections.

Comments From States

(4) Comment: The CDFW provided information on the Lassen population of Sierra Nevada red foxes, noting in particular that the population is highly inbred and so cannot be used for translocations to help solve genetic issues in the Sierra Nevada DPS until it recovers.

Our Response: Our listing analysis did not extend to the status of the Lassen population (see the 12-month finding (October 8, 2015, 80 FR 60990) regarding the range of the Southern Cascades DPS), but we will incorporate this information (and all other pertinent information received) into our recovery plan for the Sierra Nevada DPS.

Comments From Local Governments

(5) Comment: Two county boards of supervisors requested that, if the Sierra Nevada red fox is listed as endangered, we seek interagency coordination and public review prior to completing a recovery plan. One county board was concerned that a recovery plan would not allow important fuels reduction or forest health projects to proceed.

Our Response: While we explain further below that recovery plans are not intended, nor do they have the regulatory force, to disallow projects, we first note that fuels reduction or forest health actions typically take place below the elevational range of the Sierra Nevada DPS.

Recovery plans delineate reasonable actions that are determined necessary for the recovery and protection of listed species. Recovery plans do not obligate other parties to undertake (or refrain from undertaking) specific actions, and are not regulatory documents. When developing recovery plans, our process includes seeking public comment prior to finalizing them. We also coordinate with stakeholders and interested parties during the recovery planning process. We also participate in the Sierra Nevada Red Fox Working Group (discussed under *Summary of Existing Regulatory Measures and Voluntary Conservation Efforts,* above), which is an interagency organization.

(6) Comment: One county board of supervisors noted that snowmobile impacts in the Bridgeport Winter Recreation Area may be minimal due to lack of trail grooming, minimum snow depth requirements, date restrictions on use, and permit requirements for snowmobile users. These points were also raised by the USFS.

Our Response: We acknowledge the information provided indicates snowmobiling in the BWRA is unlikely to have population-level impacts on Sierra Nevada DPS foxes. We will consider any additional information that may come to light when writing the recovery plan for the species, and as otherwise necessary in consultation with Federal agencies.

(7) Comment: Two county boards of supervisors requested input into any restrictions on snowmobile operations that might result if the species is listed as endangered.

Our Response: The USFS will work with us in accordance with Act requirements (16 U.S.C. 1536(a)(2)) to ensure that their policies do not jeopardize the species. Any changes to current land management practices will involve public comment as required by applicable environmental laws.

(8) Comment: A county board of supervisors stated that there is not enough information regarding Sierra Nevada DPS viability to know whether listing would help the species thrive.

Our Response: The Act requires our listing determination to be based solely on whether the best scientific and commercial information indicates the species meets the definitions of an endangered or threatened species (see Determination section, below) (16 U.S.C. 1533(b)(1)(A); 50 CFR 424.11(b)). The purpose of listing is to provide the regulatory protections needed to prevent further decline on a trajectory toward extinction. Although the listing itself is not intended to ''help the species thrive,'' subsequent components of the Act (*e.g.,* recovery plans) may provide the necessary mechanisms for the species to thrive and recover.

(9) Comment: One county board of supervisors noted the large degree of variation that exists in our initial estimate of 10 to 50 adult Sierra Nevada DPS foxes in the population, and also noted the possibility of other undiscovered populations. The board stated that knowledge of population numbers is insufficiently precise to support listing.

Our Response: We have revised population estimates in this final rule to an estimate of 18 to 39 individuals based on additional information that has been made available through the public comment process (Sacks and Quinn 2020, p. 1; CSERC *et al.* 2020, pp. 2–3; CDFW 2020, pp. 3–4; See *Demographics,* above). This estimate includes the results of camera trapping and scat searches throughout the DPS's range. Additionally, as discussed under *Deleterious Effects Associated With Small Populations,* the Sierra Nevada DPS appears to have been subject to inbreeding effects in the recent past, which is consistent with known information on small population size effects (Quinn *et al.* 2019, pp. 559–560, 571; Sacks and Quinn 2020, p. 2). Therefore, the best available scientific and commercial information indicates that fewer than 50 individuals currently remain in the DPS. While the exact

number remains unknown, and is also subject to change with new births and deaths, it is well below population levels that would provide resiliency, redundancy, and representation to the population. We discuss this issue in greater depth above, under *Deleterious Effects Associated With Small Populations.*

(10) Comment: One county board of supervisors indicated concern that listing would interfere with activities such as hiking and snowmobiling. They asked for an analysis of potential economic impacts prior to listing, and requested an opportunity to review any economic analyses conducted.

Our Response: As described below in Determination, the Act requires us to determine whether a species is endangered or threatened ''solely on the basis of the best scientific and commercial data available'' (16 U.S.C. 1533(b)(1)(A); 50 CFR 424.11(b)). We are not allowed to consider economic impacts in our determination on whether to list a species under the Act. However, at this time we have no information to indicate that public hiking or snowmobile use in accordance with applicable regulations is impacting the Sierra Nevada DPS.

Public Comments

(11) Comment: One commenter noted that snowmobiles would be allowed in two near-natural roadless areas (Pacific Valley and Eagle) in the Stanislaus National Forest within the Sierra Nevada DPS's range if a proposed change to the Forest Plan is approved. The commenter indicated that compaction of snow by snowmobiles could increase ease of access to a given area for coyotes, which do not move over uncompacted snow as efficiently as Sierra Nevada DPS foxes. The commenters also stated that snow compaction may impact subnivean (under-snow) rodent populations by lowering the temperature and decreasing the oxygen content in the compacted area. The commenter stated that this is one of the few types of potential impacts to the Sierra Nevada DPS that government institutions have the power to prevent.

Our Response: The potential change to existing snowmobile restrictions in the areas mentioned is part of the best available scientific and commercial information we must consider for our listing determination (16 U.S.C. 1533(b)(1)(A)). The best available information does not suggest that snowmobiling and its potential to compact snow is a risk factor to the DPS, although we note that the resulting impacts associated with the proposal depend on several variables, including the likelihood that the proposed changes would be adopted, the number of snowmobiles allowed and Sierra Nevada DPS foxes in the two areas, and the extent of resulting snow compactions. This, at this time, the best available information does not suggest that this proposed regulatory change constitutes a threat to the population. However, because we are listing the Sierra Nevada DPS as an endangered species based on other information (see Risk Factors Affecting the Sierra Nevada DPS of Sierra Nevada Red Fox, above), we anticipate consulting with the USFS under section 7 of the Act to minimize effects should that agency change snowmobile regulations, thus insuring the continued existence of the species is not jeopardized (as required by the Act under 16 U.S.C. 1636(a)(2)).

(12) Comment: One commenter stated that poachers take more Sierra Nevada DPS foxes than recorded, and also indicated that Wildlife Services personnel (wildlife pest and predator removers from the Animal and Plant Health Inspection Service) impact the species. Another commenter stated that indiscriminate use of m–44 cyanide anti-predator devices threatens the Sierra Nevada DPS. No further information was provided by either commenter regarding these statements.

Our Response: Our review of the best available scientific and commercial information does not indicate these sources are a threat to the DPS. If the commenters, or other interested parties, have additional information that might indicate otherwise, we would appreciate receiving it.

(13) Comment: One commenter asked us to work with other agencies to recover the Sierra Nevada DPS and restore its role in the ecosystem. The commenter also suggested we seek additional information regarding why the Sierra Nevada DPS appears to have such low population numbers.

Our Response: We are working with State and Federal agencies, academics, environmental groups, and other interested parties as part of the Sierra Nevada Red Fox Working Group to develop a conservation strategy and recovery plan. We also will consult with Federal agencies under section 7 of the Act to avoid actions that jeopardize the species, and will work with non-Federal agencies and individuals who wish to initiate recovery actions or habitat management plans in accordance with section 10 of the Act.

Regarding reasons for the current small size of the population, new information submitted by commenters, based on research supported in part by us, shows that the population was likely inbred prior to the arrival of immigrants from the Great Basin (see *Deleterious Effects Associated With Small Populations,* above). Inbreeding depression may therefore be the primary reason the population has been so small recently. It remains unclear, however, when and why the population became so low that inbreeding depression became an issue.

(14) Comment: One commenter stated that the Sierra Nevada DPS is threatened by logging and farming of livestock and fish. The commenter also stated that Sierra Nevada DPS numbers had diminished to as low as 10 to 15 in the 1990s, and that no action was taken at that time.

Our Response: In our 12-month finding published on October 8, 2015 (80 FR 60990), we investigated logging, livestock grazing, and fish stocking as potential threats to Sierra Nevada red fox in both the Sierra Nevada and Southern Cascades DPSs. The best available scientific and commercial information indicates that these activities have more potential for negative impacts to the Southern Cascades DPS, as foxes in the Sierra Nevada DPS typically occur at elevations above those used for grazing or logging. Additionally, as discussed in our 12-month finding (80 FR 60990), fish stocking might affect foxes in the Southern Cascades DPS because the stocked fish can potentially transmit a parasite deadly to canines that eat them; the parasite has not been found within the range of the Sierra Nevada DPS.

The best available information does not include the population size of the Sierra Nevada DPS in the 1990s. This population was rediscovered by scientists in 2010 (Statham *et al.* 2012, p. 122), and a rough population estimate (of 14 to 50 adults) was not available until 2015 (Sacks *et al.* 2015, p. 14).

(15) Comment: One commenter mentioned that according to an Oregon Department of Fish and Wildlife website (*i.e., https://www.oregonconservationstrategy.org/strategy-species/sierra-nevada-red-fox/*), fires are a potential threat to the species, while actions that promote recruitment and maintenance of high-elevation conifer forests are beneficial. The commenter also mentioned that radio-collaring foxes to learn more about them would be beneficial.

Our Response: The Oregon website information is specific to the Southern Cascades DPS, as opposed to the Sierra Nevada DPS that is addressed in this rule. We agree that available information on the Southern Cascades DPS may be helpful to consider when

we develop a recovery plan. For example, we agree that radio-collaring can provide important information, and at least one fox in the Sierra Nevada DPS has been radio-collared since publication of our proposed listing rule (Stock and Eyes 2017, p. 21). We will take this and other information into consideration when we coordinate with partners and species experts, including the Sierra Nevada Working Group, to develop a conservation strategy for the entire subspecies and a recovery plan for the Sierra Nevada DPS.

(16) Comment: One commenter indicated concern regarding the impact of listing the Sierra Nevada DPS on Federal timber sales conducted for fire management.

Our Response: We do not expect listing the Sierra Nevada red fox to have a significant impact on Federal timber sales conducted for fire management because most such sales are outside the range of the DPS. Most of that range is designated wilderness, where logging is not permitted. Most is also in alpine and subalpine habitats, where the scattered tree stands, thin soils, and small amounts of litter accumulation produce a relatively low fire risk (Fites-Kaufman *et al.* 2007, p. 475). In contrast, most Federal and state fuels reduction efforts are conducted at lower elevations closer to urban areas (van Wagtendonk *et al.* 2018, p. 271). Finally, any fuel reduction projects that do occur in the range of the DPS are likely to take place during summer months, after most of the snow has melted, and are thus less likely to impact springtime denning and pup raising. For any timber sales within the range of the Sierra Nevada DPS, we will coordinate with the Federal action agency through section 7 consultations to ensure projects minimize effects to the species while meeting fuels reduction goals.

(17) Comment: One commenter stated that existing regulatory mechanisms, including hunting and trapping restrictions and USFS sensitive species status, are adequate to protect the Sierra Nevada DPS.

Our Response: The Sierra Nevada DPS faces several threats that existing regulatory mechanisms are unlikely to adequately address, including inbreeding depression, loss of genetic distinctiveness through hybridization, impacts of deleterious events to small populations, and competition with coyotes. Existing regulatory mechanisms include:

- Identification of the Sierra Nevada red fox (including the Sierra Nevada DPS) as a sensitive species by the USFS;
- Inclusion of Sierra Nevada red fox protection measures in the Standards and Guidelines for the Sierra Nevada Forest Plan Amendment;
- Prohibition of hunting and trapping in Yosemite;
- Management of Yosemite and other national parks to ''preserve fundamental physical and biological processes, as well as individual species, features, and plant and animal communities'' (NPS 2006, p. 26);
- Completion of an INRMP for the MWTC, with provisions to minimize disturbance or habituation of Sierra Nevada DPS foxes;
- Listing of the Sierra Nevada red fox as a threatened species under the California Endangered Species Act, which prohibits ''take'' of protected species; and
- Protection of red foxes throughout California from hunting and trapping (14 C.C.R. 460).

Many of these protections have been in place for decades throughout California, but the Sierra Nevada DPS has nevertheless experienced low population numbers, currently estimated at 18 to 39 individuals (see *Demographics,* above).

Determination of Sierra Nevada DPS Status

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of ''endangered species'' or ''threatened species.'' The Act defines an ''endangered species'' as a species that is ''in danger of extinction throughout all or a significant portion of its range,'' and a ''threatened species'' as a species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The Act requires that we determine whether a species meets the definition of ''endangered species'' or ''threatened species'' because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence.

Status Throughout All of Its Range

The Sierra Nevada DPS faces the following threats: Deleterious impacts associated with small population size (including inbreeding depression and increased susceptibility to deleterious stochastic events) (Factor E), genetic swamping due to over-hybridization with nonnative red fox (Factor E). Existing regulatory mechanisms and conservation efforts do not address the threats to the Sierra Nevada DPS to the extent that listing the DPS is not warranted.

After evaluating these threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, and consideration of comments and new information received (including updated population estimate information), we continue to determine that the Sierra Nevada DPS of the Sierra Nevada red fox is presently in danger of extinction throughout its range, and that endangered status is therefore appropriate. The threats discussed above, particularly threats associated with small population size, leave the DPS in danger of extinction throughout all of its range at the present time rather than likely to become endangered in the foreseeable future. The DPS thus meets the definition of an endangered species rather than a threatened species.

The DPS is likely to face additional potential threats in the future. Climate projections indicate a continuing loss of snowpack depth (Curtis *et al.* 2014, p. 9) and of the general subalpine habitat to which the Sierra Nevada DPS has adapted (Lenihan *et al.* 2008, pp. S 219, S 221). This will likely lead to increased numbers of coyotes in high-elevation areas, and to increased competition between coyotes and Sierra Nevada DPS foxes. White-tailed jackrabbit populations, an important food source, appear to be declining (Simes *et al.* 2015. p. 506), and, if the trend continues, the resiliency of the Sierra Nevada DPS is likely to suffer. Numbers of both white-tailed jackrabbit and snowshoe hare also tend to fluctuate (Simes *et al.* 2015, pp. 493, 505), which would tend to exacerbate the negative effects of deleterious chance events if those events coincide with periods of prey scarcity. As discussed above, recent interbreeding with immigrants from the Great Basin has helped alleviate low pup production that had resulted from inbreeding depression. However, the population remains small so renewed inbreeding depression remains a threat, as does the increased susceptibility of small populations to deleterious stochastic events.

Our analysis of the DPS's current and future environmental and demographic conditions, as well as consideration of existing regulatory mechanisms and continued coordination with partners on conservation efforts (as discussed under Available Conservation Measures, below), show that the factors used to determine the resiliency, representation,

and redundancy for the Sierra Nevada DPS will likely continue to decline. Thus, after assessing the best available scientific and commercial information, we determine that the Sierra Nevada DPS of the Sierra Nevada red fox is in danger of extinction throughout all of its range.

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. We have determined that the Sierra Nevada DPS of Sierra Nevada red fox is in danger of extinction throughout all of its range, and accordingly, did not undertake an analysis of any significant portions of its range. Because we have determined that this DPS warrants listing as endangered throughout all of its range, our determination is consistent with the decision in *Center for Biological Diversity* v. *Everson,* 2020 WL 437289 (D.D.C. Jan. 28, 2020), in which the court 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'' (79 FR 37578; July 1, 2014) that provided the Services do not undertake an analysis of significant portions of a species' range if the species warrants listing as threatened throughout all of its range.

Determination of Status

Our review of the best available scientific and commercial information indicates that the Sierra Nevada DPS of Sierra Nevada red fox meets the definition of an endangered species. Therefore, we are listing this DPS 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, 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. 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 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 consists of preparing draft and final recovery plans, beginning with the development of a recovery outline and making it available to the public within 30 days of a final listing determination. 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 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. 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.

Following publication of this final rule, 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 (and Nevada if surveys indicate the species occurs there) will 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.*

Please let us know if you are interested in participating in recovery efforts for the Sierra Nevada DPS of Sierra Nevada red fox. 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**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of any endangered or threatened 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 consultation as described in the preceding paragraph include: 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 maintenance of roads or highways by the Federal Highway Administration; and management actions or activities taken by the NPS, USFS, or Department of Defense that occur in the high elevation habitat of the DPS and that may affect individual DPS foxes.

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. There are also certain statutory 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 final listing on proposed and ongoing activities within the range of a listed species. Based on the best available information, the following actions are unlikely to result in a violation of section 9, if these activities are carried out in accordance with existing regulations and permit requirements; this list is not comprehensive:

(1) Normal agricultural and silvicultural practices, including pesticide use;

(2) Vehicular travel within the range; and

(3) Hiking and backpacking.

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

Activities that the Service believes could potentially harm the Sierra Nevada DPS individuals and result in ''take'' include, but are not limited to:

(1) Unauthorized pursuit, capture, or injury of members of the species;

(2) Unauthorized destruction or modification of den sites;

(3) Unauthorized feeding of members of the species, or unauthorized food disposal within the species' range, in a manner likely to cause habituation;

(4) Rodenticide applications within the species' range in violation of label restrictions;

(5) Activities that, due to negligence or intent, cause wildfire within the species' range; and

(6) Unauthorized importation into the species' range of nonnative foxes or coyotes.

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**).

Required Determinations

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

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act, need not be prepared in connection with 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).

Government-to-Government Relationship With Tribes

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

In development of the SSA, the proposed and final listing rules, and recent efforts in developing a conservation strategy for the species, we coordinated with Tribes by sending them notification letters. The Tribes we coordinated with were those with lands in the general area of the DPS (noting that no Tribal lands actually occur within the range of the DPS). We did not receive comments from Tribes. We will continue to consult on a government-to-government basis with Tribes as necessary.

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 final rule are the staff members of the Fish and Wildlife Service's Species Assessment Team, and the Sacramento and Reno Fish and Wildlife Offices.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

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

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

■ 2. Amend § 17.11 in paragraph (h) by adding an entry for ''Fox, Sierra Nevada red [Sierra Nevada DPS]'' to the List of Endangered and Threatened Wildlife in alphabetical order under Mammals to read as set forth below:

§ 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].	*Vulpes vulpes necator*	U.S.A. (CA)—Sierra Nevada.	E	86 FR [Insert **Federal Register** page where the document begins], 8/3/2021.
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* * * * *

Martha Williams,

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

[FR Doc. 2021–16249 Filed 8–2–21; 8:45 am]

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