Billing Code

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R2-ES-2020-0123; FXES11130200000-223-FF02ENEH00]

RIN 1018–BD61

Endangered and Threatened Wildlife and Plants; Revision of a Nonessential Experimental Population of Black-footed Ferrets (*Mustela nigripes*) in the Southwest

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (USFWS), are revising the regulations for the nonessential experimental population of the black-footed ferret (*Mustela nigripes*; ferret) in Arizona. We established the Aubrey Valley Experimental Population Area (AVEPA) in 1996 in accordance with section 10(j) of the Endangered Species Act of 1973, as amended (ESA). This rule allows the introduction of ferrets across a larger landscape as part of a nonessential experimental population and includes the AVEPA within a larger "Southwest Experimental Population Area" (SWEPA), which includes parts of Arizona and identified contiguous Tribal lands in New Mexico and Utah. This revision provides a framework for establishing and managing reintroduced populations of ferrets that will allow greater management flexibility and increased landowner and manager cooperation. The best available data indicate that additional reintroductions of the ferret into more widely distributed habitat in the SWEPA is feasible and will promote the conservation of the species.

DATES: This rule is effective [INSERT DATE 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: This final rule, an environmental assessment (EA), and a finding of no

significant impact (FONSI) are available at the following website: *https://www.regulations.gov* in Docket No. FWS-R2-ES-2020-0123. Comments and materials received, as well as supporting documentation used in the preparation of this rule, will also be available for public inspection, by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 2500 South Pine Knoll Drive, Flagstaff, AZ 86001; telephone 928–556–2001.

FOR FURTHER INFORMATION CONTACT: Heather Whitlaw, Field Supervisor, Phone: 602–242–0210. Direct all questions or requests for additional information to: BLACK-FOOTED FERRET QUESTIONS, U.S. Fish and Wildlife Service, Arizona Ecological Services Office, 9828 North 31st Avenue, Suite C3, Phoenix, AZ 85051. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Background

Black-footed ferrets (*Mustela nigripes*; ferrets), medium-sized members of the weasel family (Mustelidae), are carnivorous, extremely specialized predators that are highly dependent on prairie dogs (*Cynomys* spp.) for food and shelter (Hillman 1968, p. 438; Sheets et al. 1972, entire; Campbell et al. 1987, entire; Forrest et al. 1988, p. 261; Biggins 2006, p. 3). Because ferrets are dependent on prairie dogs in this way, occupied prairie dog habitat is considered synonymous with ferret habitat (USFWS 2019, pp. 5–6). The USFWS listed the ferret as an endangered species in 1967 under the Endangered Species Preservation Act of 1966, which was the predecessor to the current Endangered Species Act (ESA; 16 U.S.C. 1531 et seq.) (32 FR 4001, March 11, 1967). With the passage of the ESA, we incorporated the ferret into the Lists of Endangered and Threatened Wildlife under the ESA, found at 50 CFR 17.11 (39 FR

1175, January 4, 1974).

The 1982 amendments to the ESA included the addition of section 10(j), which allows for the designation of reintroduced populations of listed species as "experimental populations." Our implementing regulations for section 10(j) of the ESA are in 50 CFR 17.81. These regulations state that the USFWS may designate as an experimental population a population of endangered or threatened species that we will release into habitat that is capable of supporting the experimental population outside the species' current range. Hereafter in this document, we refer to a species-specific rule issued under section 10(j) of the ESA as a "10(j) rule."

This Rulemaking Action

On June 25, 2021, we published a proposed rule to expand the existing Aubrey Valley Experimental Population Area (AVEPA) to encompass a larger area, the "Southwest Experimental Population Area" (SWEPA), which includes parts of Arizona and identified contiguous Tribal lands in New Mexico and Utah (86 FR 33613). The proposed rule provided a framework for establishing and managing reintroduced populations of ferrets in this area that will allow for greater management flexibility and increased landowner cooperation. The best available data indicate that additional reintroductions of the ferrets into more widely distributed habitat in the proposed SWEPA is feasible and will promote the conservation of the species.

We sought comments on the proposed rule and on a draft environmental assessment of the potential environmental impacts of the proposed rule until August 24, 2021. We received 20 comment submissions by that date. In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270, July 1, 1994), and our August 22, 2016, memorandum updating and clarifying the role of peer review, we also sought the expert opinion of six appropriate independent specialists regarding the scientific data and interpretations contained in the proposed rule. The purpose of such peer review is to ensure that we base our decisions on scientifically sound data, assumptions, and analyses. This final rule incorporates, and addresses comments received during the public comment and peer review processes.

Under 50 CFR 17.81(b), before authorizing the release as an experimental population of any population of an endangered or threatened species, the USFWS must find by regulation that such release will further the conservation of the species. In making such a finding, the USFWS shall use the best scientific and commercial data available to consider:

(1) Any possible adverse effects on extant populations of a species as a result of removal of individuals, eggs, or propagules for introduction elsewhere (see "*Possible Adverse Effects on Wild and Captive-Breeding Populations*" below);

(2) The likelihood that any such experimental population will become established and survive in the foreseeable future (see "*Likelihood of Population Establishment and Survival*" below);

(3) The relative effects that establishment of an experimental population will have on the recovery of the species (see "*Effects of the SWEPA on Recovery Efforts for the Species*" below);

(4) The extent to which the introduced population may be affected by existing or anticipated Federal, Tribal, or State actions or private activities within or adjacent to the experimental population area (see "*Actions and Activities that May Affect the Introduced Population*" below); and

(5) When an experimental population is being established outside of its historical range, any possible adverse effects to the ecosystem that may result from the experimental population being established.

Furthermore, under 50 CFR 17.81(c), any regulation designating experimental populations under section 10(j) of the ESA shall provide:

(1) Appropriate means to identify the experimental population, including, but not limited to, its actual or proposed location, actual or anticipated migration, number of specimens released or to be released, and other criteria appropriate to identify the experimental population(s) (see "*Identifying the Location and Boundaries of the SWEPA*" below);

(2) A finding, based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild (see "*Is the Experimental Population Essential or Nonessential?*" below);

(3) Management restrictions, protective measures, or other special management concerns of that population, which may include but are not limited to, measures to isolate, remove, and/or contain the experimental population designated in the regulation from nonexperimental populations (see "*Management Restrictions, Protective Measures, and Other Special Management*" below); and

(4) A process for periodic review and evaluation of the success or failure of the release and the effect of the release on the conservation and recovery of the species (see "*Review and Evaluation of the Success or Failure of the SWEPA*" below).

Under 50 CFR 17.81(e), the USFWS consults with appropriate State fish and wildlife agencies, affected Tribal governments, local governmental entities, affected Federal agencies, and affected private landowners in developing and implementing experimental population rules. To the maximum extent practicable, 10(j) rules represent an agreement between the USFWS, affected Tribal governments, State and Federal agencies, local governments, and persons holding any interest in land or water that may be affected by the establishment of an experimental population.

Under 50 CFR 17.81(f), the Secretary may designate critical habitat as defined in section 3(5)(A) of the ESA for an essential experimental population. The Secretary will not designate critical habitat for nonessential populations. The term essential experimental population means an experimental population the loss of which would be likely to appreciably reduce the likelihood of the survival of the species in the wild. We classify all other experimental populations as nonessential (50 CFR 17.80).

Under 50 CFR 17.82, we treat any population determined by the Secretary to be an

experimental population as if we had listed it as a threatened species for the purposes of establishing protective regulations with respect to that population. The protective regulations adopted for an experimental population will contain applicable prohibitions, as appropriate, and exceptions for that population, allowing us discretion in devising management programs to provide for the conservation of the species.

Under 50 CFR 17.83(a), for the purposes of section 7 of the ESA, we treat nonessential experimental populations as threatened when located in a National Wildlife Refuge or unit of the National Park Service (NPS), and Federal agencies follow conservation and consultation requirements per paragraphs 7(a)(1) and 7(a)(2) of the ESA, respectively. We treat nonessential experimental populations outside of a National Wildlife Refuge or NPS unit as species proposed for listing, and Federal agencies follow the provisions of paragraphs 7(a)(1) and 7(a)(4) of the ESA. In these cases, nonessential experimental population designation provides additional flexibility, because it does not require Federal agencies to consult under section 7(a)(2). Instead, section 7(a)(4) requires Federal agencies to confer (not consult) with the USFWS on actions that are likely to *jeopardize* the continued existence of a species proposed to be listed. A conference results in conservation recommendations, which are discretionary. Because the nonessential experimental population is, by definition, not essential to the continued existence of the species in the wild, the effects of proposed actions on the population will generally not rise to the level of "jeopardy." As a result, Federal agencies will likely never request a formal conference for actions that may affect ferrets established in the SWEPA. Nonetheless, some Federal agencies voluntarily confer with the USFWS on actions that may affect a species proposed for listing.

Legal Status

We listed the ferret as an endangered species in 1967 under the Endangered Species Preservation Act of 1966 (32 FR 4001, March 11, 1967). We later codified this list in part 17 of title 50 in the U.S. Code of Federal Regulations (CFR) (35 FR 16047, October 13, 1970). With the passage of the ESA in 1973 (16 U.S.C. 1531 et seq.), we incorporated those species

previously listed in the CFR into the Lists of Endangered and Threatened Wildlife and Plants under the ESA, found at 50 CFR 17.11 and 17.12 (39 FR 1175, January 4, 1974).

In 1996, we designated the population of ferrets established via reintroduction in Aubrey Valley as a nonessential experimental population (61 FR 11320, March 20, 1996). The AVEPA includes parts of Coconino, Mohave, and Yavapai Counties in northwestern Arizona. At the time of its designation, the AVEPA consisted of 22 percent State lands, 45 percent lands of the Hualapai Tribal Nation, and 33 percent deeded lands owned by the Navajo Nation.

We treated ferrets as an endangered species outside the AVEPA, and the provisions and exceptions of the experimental population designation did not apply. In 2013, the USFWS developed a rangewide programmatic Safe Harbor Agreement (SHA) to encourage non-Federal landowners to voluntarily undertake conservation activities on their properties to benefit the ferret (USFWS 2013b, entire) (see "*Historical Range*" below). Through certificates of inclusion, we enrolled willing landowners in our SHA through enhancement of survival permits issued under section 10(a)(1)(A) of the ESA. Through the SHA, incidental take of ferrets outside of the AVEPA by participating landowners and nonparticipating neighboring landowners was permissible.

Under state law, general provisions of Arizona Revised Statutes, title 17, protect all of Arizona's native wildlife, including federally listed threatened and endangered species. Under Navajo Nation law, it is unlawful for any person to take ferrets. All wildlife on the Hopi Reservation is the property of the Hopi Tribe, and Hopi Tribal law provides for take (see "Management Restrictions, Protective Measures, and Other Special Management" below, for more information on State and Tribal legal status).

Biological Information

Species Description

The ferret is a medium-sized member of the weasel family (Mustelidae) weighing approximately 1.4 to 2.5 pounds (645 to 1125 grams) and measuring approximately 19 to 24

inches (480 to 600 millimeters) in total length. Its body color includes yellowish-buff, occasionally whitish, upper parts, and black feet, tail tip, and "mask" across the eyes (Hillman and Clark 1980, p. 1; Anderson et al. 1986, pp. 15–16).

Ecology/Habitat Use/Movement

Ferrets are carnivorous, extremely specialized predators highly dependent on prairie dogs (*Cynomys* spp.) (Hillman 1968, p. 438; Biggins 2006, p. 3). Ferrets prey predominantly on prairie dogs (Sheets et al. 1972, entire; Campbell et al. 1987, entire), occupy prairie dog burrows, and do not dig their own burrows (Forrest et al. 1988, p. 261). Ferrets select areas within prairie dog colonies that contain high burrow densities and thus high densities of prairie dogs (Biggins et al. 2006, p. 136; Eads et al. 2011, p. 763; Jachowski et al. 2011a, pp. 221–223; Livieri and Anderson 2012, pp. 201– 202). Given their obligate tie to prairie dogs, ferret populations associated with larger, highly connected prairie dog colonies are more likely to be resilient and less likely to be extirpated by stochastic events compared to those associated with smaller, isolated colonies (Miller et al. 1994, p. 678; Jachowski et al. 2011b, entire). Resiliency is the ability of populations to tolerate natural, annual variation in their environment and to recover from periodic or random disturbances (USFWS 2019, p. 2). Such stochastic events include epizootics, such as sylvatic plague (plague), and extreme weather or climate, including drought.

The last naturally occurring wild ferret population, in Wyoming, averaged approximately 25 breeding adults throughout intensive demographic studies from 1982 to 1985 (USFWS 2019, p. 10). Based on this and population modeling, the USFWS considers 30 breeding adults a minimum for a population of ferrets to be self-sustaining (USFWS 2013a, p. 70). Ferrets require large, contiguous prairie dog colonies to meet their individual needs, with colonies no more than approximately 4.35 miles (7 kilometers [km]) apart (Biggins et al. 1993, p. 78). A conservative estimate of habitat requirements to support one female ferret is 222 acres (ac) (90 hectares [ha]) of black-tailed prairie dog (*C. ludovicianus*) colonies, or 370 ac (150 ha) of Gunnison's prairie

dog (*C. gunnisoni*) colonies (USFWS 2013a, p. 73). Assuming a two-to-one female-to-male sex ratio and overlapping male and female home ranges (Biggins et al. 1993, p. 76), we estimate that a population of 30 breeding adult ferrets may require 4,450 ac (1,800 ha) of black-tailed prairie dog colonies, or approximately 7,415 ac (3,001 ha) of Gunnison's prairie dog colonies (USFWS 2013a, p. 74).

Natal dispersal, defined as a permanent movement away from the birth area, occurs in the fall months among the young-of-the-year, although adults occasionally make permanent moves (Forrest et al. 1988, p. 268). Newly released captive-born ferrets have dispersed up to approximately 30 miles (48 km) (Biggins et al. 1999, p. 125), and wild-born ferrets more than approximately 12 miles (19 km) (USFWS 2019, p. 7). Males tend to move greater distances than females.

Historical Range

The black-footed ferret is the only ferret species native to the Americas (Anderson et al. 1986, p. 24). Before European settlement, ferret occurrence coincided with the ranges of three prairie dog species (black-tailed, white-tailed [*C. leucurus*], and Gunnison's), which collectively covered about 100 million ac (40.5 million ha) of Great Plains, mountain basins, and semi-arid grasslands extending from Canada to Mexico (Anderson et al. 1986, pp. 25–50; Biggins et al. 1997, p. 420). This amount of habitat could have supported 500,000 to one million ferrets (Anderson et al. 1986, p. 58). We have records of ferret specimens from Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming in the United States and from Saskatchewan and Alberta in Canada (Anderson et al. 1986, pp. 25–50). Ferrets likely additionally occurred in Mexico, based on the proximity of a specimen to Mexico, fossil records, and prairie dog distribution (USFWS 2019, p. 42). A rancher discovered the last wild population of ferrets (from which all existing ferrets descend) near Meeteetse, Wyoming, in 1981, after they were presumed extinct (Lockhart et al. 2006, p. 8). By 1987, the USFWS and partners removed all known surviving wild ferrets (18

individuals) from this area to initiate a captive-breeding program following disease outbreaks (Lockhart et al. 2006, p. 8). Since then, no naturally occurring wild populations have been located, despite extensive and intensive rangewide searches; it is unlikely any undiscovered natural wild populations remain. For these reasons, the USFWS considers the ferret to be extant in reintroduced populations and extirpated throughout the rest of its historical range (USFWS 2017, p. 2).

In the Southwest, in Arizona, Colorado, New Mexico, and Utah, ferrets occurred within the historical range of Gunnison's prairie dogs (Hillman and Clark 1980, entire); and in New Mexico, Mexico, and likely southeastern Arizona they occurred within the historical range of black-tailed prairie dogs (Hillman and Clark 1980, entire; Hoffmeister 1986, p. 194). In Arizona, historical ferret collections (1929–1931) come from three locations in Coconino County (Belitsky et al. 1994, p. 29). In 1967, U.S. Department of Agriculture Federal Animal Damage Control personnel (now known as Wildlife Services) reported seeing ferret sign while poisoning prairie dogs (pers. comm. 1993, as cited in Belitsky et al. 1994, p. 2). Anderson et al. (1986, p. 25) speculated that prairie dog populations of sufficient size to support ferrets may have existed in northeastern Arizona on the Navajo Nation; however, the ferret currently is not present in that area (Navajo Nation 2020, n.p.). Prairie dogs currently occur in substantial numbers on Hopi (Johnson et al. 2010, entire) and Hualapai Tribal lands, the latter of which the AVEPA partially overlaps.

Dramatic historical declines in prairie dogs, coupled with prevalence of plague throughout the ferret's historical range, and the failure to locate new wild ferrets, suggests the species is extirpated in Arizona except where it has been reintroduced (USFWS 2017, p. 2). The date of historical ferret extirpation in the Southwest is unknown; in Arizona, we have no verified reports for ferrets from 1931 through 1995, after which we initiated reintroduction efforts in the AVEPA. We consider the historical range of the ferret in Arizona to coincide with the historical ranges of the Gunnison's and black-tailed prairie dogs.

Threats/Causes of Decline

Ferret populations decreased historically for three main reasons. First, major conversion of native range to cropland, primarily in the eastern portion of the species' range, began in the late 1800s. Second, widespread poisoning of prairie dogs to reduce perceived competition with domestic livestock for forage began in the early 1900s. Third, in the 1930s, plague began to appreciably adversely affect both prairie dogs and ferrets (Eskey and Hass 1940, p. 62). By the 1960s, prairie dog occupied habitat reached a low of about 1.4 million ac (570,000 ha) in the United States (Bureau of Sport Fisheries and Wildlife 1961, n.p.). For these reasons, ferret numbers declined to the point of perceived extinction. These threats resulted in a substantial loss of prairie dogs, which led to an even greater decline in ferret populations due to the species' dependence on prairie dog colonies (Lockhart et al. 2006, p. 7). Such population bottlenecks can result in loss of genetic diversity and fitness and can manifest following even a temporary loss of habitat (USFWS 2013a, p. 23).

In Arizona, the combined effects of prairie dog poisoning and plague decreased the area occupied by Gunnison's prairie dogs from about 6.6 million ac (2.7 million ha) historically to about 445,000 ac (180,000 ha) in 1961 (Bureau of Sport Fisheries and Wildlife 1961, n.p.; Oakes 2000, pp. 169–171). Estimates of historical black-tailed prairie dog habitat in Arizona range from 650,000 ac (263,000 ha) to 1,396,000 ac (565,000 ha) (Van Pelt 1999, p. 1; Black-footed Ferret Recovery Foundation 1999, n.p.). Extirpation of black-tailed prairie dogs in Arizona probably occurred around 1960 (Van Pelt 1999, pp. 3–4). As with the rangewide effects, these prairie dog losses also resulted in the loss of ferrets, and by the 1960's, ferrets were considered extirpated in Arizona (Lockhart et al. 2006, pp. 7–8).

Cropland Conversion

Major conversion of native range to cropland eliminated millions of acres of ferret habitat in the eastern portion of the ferret's range, particularly black-tailed prairie dog colonies (USFWS 2013a, p. 23). Land conversion caused far less physical loss of Gunnison's prairie dog

habitat, because outside of riparian corridors and proximate irrigated lands, much of the habitat occupied by this species is not suitable for crops (Lockhart et al., 2006, p. 7). Knowles (2002, p. 12) noted displacement of prairie dogs from the more productive valley bottomlands in Colorado and New Mexico, but not in Arizona. Instead of converting native rangeland to irrigated crop and pasture lands, land-use of the range in Arizona was and continues to consist primarily of cattle grazing, with relatively minimal crop development. Cropland conversion in Arizona, while affecting ferrets locally, was not a major cause of decline in the State.

Prairie Dog Poisoning

Poisoning was a major cause of the historical declines of prairie dogs and subsequently ferrets (Forrest et al. 1985, p. 3; Cully 1993, p. 38; Forrest and Luchsinger 2005, pp. 115–120). Similar to other threats limiting ferret recovery, poisoning affects ferrets through inadvertent secondary effects, poisoning caused by consumption of poisoned prairie dogs, or indirectly, through the loss of the prairie dog prey base.

In Arizona, from 1916 to 1933, rodent control operations treated 4,365,749 ac (1,766,756 ha) of prairie dog colonies (Oakes 2000, p. 179). A 1961 Predator and Rodent Control Agency report showed a 92 percent decline in occupied prairie dog habitat in Arizona since 1921, with Gunnison's prairie dogs occupying 445,370 ac (180,235 ha). Only 9,956 ac (4,029 ha) of prairie dog colonies in the 1961 surveys were located on non-Tribal lands. The 1961 Predator and Rodent Control Agency report also documented the extirpation of black-tailed prairie dogs from Arizona. This historical prairie dog poisoning was a major cause of decline of ferrets in Arizona.

Plague

Sylvatic plague is the most significant challenge to ferret recovery (USFWS 2019, p. 21), with the USFWS classifying it as an imminent threat of high magnitude (USFWS 2020, p. 5). Plague is an exotic disease, caused by the bacterium *Yersinia pestis*, transmitted by fleas, which steamships inadvertently introduced to North America in 1900. Because it was foreign and

unknown to their immune systems, both prairie dogs and ferrets were and continue to be extremely susceptible to mortality from plague (Barnes 1993, entire; Cully 1993, entire; Gage and Kosoy 2006, entire). Plague can be present in a prairie dog colony in an epizootic (swift, large-scale die-offs) or enzootic (persistent, low level of mortality) state. Most of the information we have about the effects of plague is from epizootic events. Although its effects are not as dramatic as an epizootic outbreak, enzootic plague may result in negative growth rates for prairie dog and ferret populations and hinder ferret recovery (USFWS 2013a, pp. 33, 100). Other factors that reduce prairie dog numbers and fitness (e.g., shooting, poisoning, and drought) increase the flea-to-individual host ratio, and thus may contribute to plague epizootic events (Biggins and Eads 2019, p. 7).

The first confirmation of plague in Gunnison's prairie dogs in Arizona occurred in 1932, but we have limited historical data on the extent of its effects (Wagner and Drickamer 2003, p. 5). In 2003, Wagner et al. (2006, p. 337) reported that in the previous 7 to 15 years, there had been a large reduction in the number of active Gunnison's prairie dog colonies in Arizona, primarily due to outbreaks of plague, which they said was the dominant negative effect on Arizona prairie dog populations. Prairie dogs in northern Arizona will likely continue to experience effects from enzootic plague and epizootic plague outbreaks (Biggins and Eads 2019, pp. 6–8; Wagner et al. 2006, p. 337).

Other Impediments to Recovery

To recover ferrets, purposeful management of prairie dog populations is needed to provide habitat of sufficient quality and in a stable spatial configuration suitable to support and maintain new populations of reintroduced ferrets. Unfortunately, current management efforts for the species are failing to meet these conservation objectives, rangewide (USFWS 2013a, pp. 46, 58, table 6; USFWS 2020 p. 5). The keys to correcting current management inadequacies are active plague management and ongoing widespread partner involvement (USFWS 2013a, pp. 46–48) to facilitate establishment of new ferret reintroduction sites and

appropriately manage the quality and configuration of ferret habitat and potential ferret habitat within the species' range.

In addition, consideration of other factors that may act alone or in concert with threats is necessary when planning and implementing recovery efforts. For example, canine distemper, a disease endemic to the United States, posed a challenge to early ferret reintroduction efforts (Wimsatt et al. 2006, pp. 249–250). Today, however, the use of commercial vaccines deployed in captive and wild ferret populations has minimized the threat of catastrophic population losses due to canine distemper (USFWS 2013a, pp. 29–30). As discussed in the Black-Footed Ferret Recovery Plan and Species Status Assessment Report (USFWS 2013a, pp. 53–55; USFWS 2019, pp. 25, 68), we anticipate that climate change will alter and reduce prairie dog habitat and influence plague outbreaks. We also discuss prairie dog shooting and Federal and non-Federal actions and activities in "*Actions and Activities that May Affect the Introduced Population*" below.

Recovery, Captive Breeding, and Reintroduction Efforts to Date

Recovery Strategy and Criteria

The goal of the Black-footed Ferret Recovery Plan (Recovery Plan) is to recover the ferret to the point at which it can be reclassified to threatened status (downlisted) and ultimately removed (delisted) from the List of Endangered and Threatened Wildlife (USFWS 2013a, pp. 5, 59). The strategy of the Recovery Plan is to involve many partners across the historical range of the species in order to establish multiple, widely spaced populations, within the range of all three prairie dog species. Such distribution will safeguard the ferret, as a whole, from the widespread chronic effects of plague as well as other periodic or random disturbances that may result in the loss of a population in one or more given areas. Partner involvement is critical for the development of new reintroduction sites and their long-term management because not only the USFWS, but also our partners, have the authority to manage prairie dogs and prairie dog habitat on respective State, Tribal, Federal, or privately owned lands. Although ferret habitat is

substantially decreased relative to historical times, if potential habitat is appropriately managed to support ferret reintroductions, a sufficient amount of habitat remains to support ferret recovery (USFWS 2013a, p. 5). The Recovery Plan provides objective, measurable criteria to achieve downlisting and delisting of the ferret.

Recovery Plan downlisting and delisting criteria include managing a captive-breeding population of at least 280 adults as a source population to establish and supplement free-ranging populations and repopulate sites in the event of local extirpations. Downlisting criteria include establishing at least 1,500 free-ranging breeding adults in 10 or more populations, in at least 6 of 12 States in the species' historical range, with no fewer than 30 breeding adult ferrets in any population, and at least 3 populations in colonies of Gunnison's and white-tailed prairie dogs. Delisting criteria include at least 3,000 free-ranging breeding adults in 30 or more populations, in at least 9 of 12 States in the species' historical range. There should be no fewer than 30 breeding adults in any population, and at least 10 populations with 100 or more breeding adults, and at least 5 populations in Gunnison's and white-tailed prairie dog colonies. We must meet these population objectives for at least 3 years prior to downlisting or delisting. Habitat-related recovery criteria include maintaining 247,000 ac (100,000 ha) of prairie dog colonies at reintroduction sites for downlisting, and 494,000 ac (200,000 ha) for delisting (USFWS 2013a, pp. 61–62).

Additionally, for each State in the historical range of the species, the Recovery Plan includes State-level recovery guidelines proportional to the amount of prairie dog habitat historically present to equitably help support and achieve the overall recovery strategy and criteria (USFWS 2013a, p. 69). Guidelines for Arizona's contribution to downlisting are 74 free-ranging breeding adult ferrets on 17,000 ac (6,880 ha) of Gunnison's prairie dog occupied habitat; delisting guidelines are 148 breeding adults on 34,000 ac (13,760 ha) (USFWS 2013a, table 8). The guidelines for New Mexico and Utah are 220 and 25 breeding adult ferrets for downlisting, respectively, and 440 and 50 breeding adults for delisting; most of these

individuals would occur in black-tailed or white-tailed prairie dog habitat.

Captive Breeding

The USFWS and partners established the ferret captive-breeding program from 18 ferrets captured from the last known wild population at Meeteetse, Wyoming, from 1985 to 1987 (Lockhart et al. 2006, pp. 11–12). Of those 18 ferrets, 15 individuals, representing the genetic equivalent of 7 distinct founders (original genetic contributor, or ancestor), produced a captive population that is the foundation of present recovery efforts (Garelle et al. 2006, p. 4). All extant reintroduced ferrets descended from those seven founders. The purpose of the captive-breeding program is to maintain a secure and stable ferret population with maximum genetic diversity, to provide a sustainable source of ferrets for reintroduction to achieve recovery of the species (USFWS 2013a, pp. 6, 81). The captive-breeding population of ferrets is the primary repository of genetic diversity for the species. There are currently six captive-breeding facilities maintained by the USFWS and its partners: the USFWS National Black-footed Ferret Conservation Center near Wellington, Colorado; the Cheyenne Mountain Zoological Park, Colorado Springs, Colorado; the Louisville Zoological Garden, Louisville, Kentucky; the Smithsonian's National Zoo and Conservation Biology Institute, Virginia; the Phoenix Zoo, Phoenix, Arizona; and the Toronto Zoo, Toronto, Ontario, Canada. The combined population of all 6 facilities is currently about 300 ferrets (USFWS 2020, p. 2).

The USFWS and our partners manage the demography and genetics of the captive population consistent with guidance from the Association of Zoos and Aquariums (AZA) Black-footed Ferret Species Survival Plan (SSP®). This includes maintaining a stable breeding population of at least 280 animals with a high level of genetic diversity and providing a sustainable source of ferrets for reintroduction. The captive-breeding facilities produce about 250 juvenile ferrets annually and have produced about 9,300 ferrets in total (Graves et al. 2018, p. 3; Santymire and Graves 2020, p. 12). The distribution of ferrets across six widespread facilities protects the captive population from catastrophic events. Currently, we retain about 80

juveniles annually in AZA SSP® facilities for continued captive-breeding purposes. We consider the remaining juveniles genetically redundant and excess to the AZA SSP®, and available for reintroductions (USFWS 2013a, p. 81).

Each year the USFWS solicits proposals for allocations of ferrets to establish new reintroduction sites or augment existing sites, or for educational or scientific purposes (e.g., plague vaccine research). The limited number of ferrets available for release each year requires that we efficiently allocate ferrets to the highest priority sites first (see "*Ferret Allocations*" below for allocation and prioritization protocols). A ranking procedure developed by Jachowski and Lockhart (2009, pp. 59-60) with recent modifications to the factors evaluated and application of weighted values (Black-footed Ferret Recovery Implementation Team 2014, Table 1) is used by the USFWS to guide allocation of ferrets to reintroduction sites. Ranking criteria include project background and justification, involved agencies/parties, habitat conditions, ferret population information, predator management, disease monitoring and management, contingency plans, potential for preconditioning of released ferrets, veterinary and husbandry support, and research contributions. Members of the Black-footed Ferret Recovery Implementation Team review the proposals and the USFWS's rankings of the proposals (USFWS 2013a, pp. 87–88).

Each year, the USFWS allocates 150 to 220 ferrets for reintroduction into the wild from the captive-breeding population; from 1994 to August 2022, we allocated 5,533 ferrets for release rangewide (J. Hughes, USFWS, pers. comm., August 4, 2022). The number of ferrets we allocate to a site depends on site size and prey density (USFWS 2016a, pp. 1, 21). It also depends on purpose and needs; for example, whether the purpose is to initiate establishment of a population or augment a site, which may entail multiple releases in a year. Although a release can involve a single ferret, for initial releases, the USFWS typically recommends releasing up to 20 to 30 individuals (P. Gober, USFWS, pers. comm., March 4, 2018).

Rangewide Reintroduction Efforts to Date

To date, the USFWS and partners have reintroduced ferrets at 31 sites in the western United States, Canada, and Mexico. In the United States, we have conducted 11 ferret reintroductions through experimental population designations under section 10(j) of the ESA, 17 under section 10(a)(1)(A), and 1 under section 7 of the ESA (J. Hughes, USFWS, pers. comm., December 13, 2021). Additionally, there has been one reintroduction each in Chihuahua, Mexico, and Saskatchewan, Canada. In our Species Status Assessment Report for the Black-footed Ferret (*Mustela nigripes*) (USFWS 2019, table 11; SSA), we evaluated the current condition of 29 reintroduction sites (2 sites were initiated after we began the SSA). We estimated a wild population of about 340 individuals in those sites, of which 254 occurred on 4 sites (USFWS 2019, table 3). The USFWS determined 2 of the reintroduction sites were in high condition (high resiliency) and 8 were in moderate condition (moderate resiliency) (USFWS 2019, table 11). We estimated 240,173 ac (97,197 ha) of occupied prairie dog habitat on all sites combined (USFWS 2019, p. 45). Currently, 18 sites are considered active; the other 13 sites are considered extirpated, primarily due to plague (J. Hughes, USFWS, pers. comm., December 13, 2021; USFWS 2019, p. 43).

Arizona-specific Reintroduction Efforts to Date

The USFWS and our partners have carried out multiple ferret reintroductions and augmentations in northern Arizona. In 1996, we reintroduced ferrets to the AVEPA in cooperation with the Arizona Game and Fish Department (AZGFD), the Hualapai Tribe, and the Navajo Nation (61 FR 11320, March 20, 1996). The AVEPA was the fifth ferret reintroduction site in the United States and the first reintroduction site in a Gunnison's prairie dog population (USFWS 2013a, figure 1). In 2012, ferrets were observed outside of the AVEPA, including on the adjacent Double O Ranch, presumably dispersing from the AVEPA. We now consider the AVEPA and the Double O Ranch one reintroduction site. In 2012, the number of breeding adults at the Aubrey Valley/Double O Ranch site was 123. Both the number of ferrets at the site and the amount of occupied prairie dog habitat (about 65,500 ac [26,500 ha] in 2018) exceeded the

numbers in the Recovery Plan recommended downlisting guidelines for Arizona (USFWS 2013a, table 2, table 8). Since then, substantially fewer ferrets have been documented over several years (AZGFD 2016, p. 3; USFWS 2019, p. 45). The USFWS suspects that enzootic plague may have caused this decline; however, we do not know if the observed trend is cyclical, meaning plague reoccurs from time to time, or linear, meaning that plague is constant through time. Despite lower numbers, we consider the Aubrey Valley/Double O Ranch population to be persistent (J. Hughes, USFWS, pers. comm., December 13, 2021).

In 2007, the USFWS established the Espee Ranch (a.k.a. Allotment) reintroduction site in Arizona under a section 10(a)(1)(A) research and recovery permit in cooperation with Babbitt Ranches, LLC, the U.S. Geological Survey, and AZGFD. The status of the Espee Ranch population is currently unknown but likely extirpated due to plague (AZGFD, unpub. data). The extirpation of the Espee Ranch population and the decline of the Aubrey Valley/Double O Ranch population emphasize the need for additional ferret reintroduction sites in Arizona to guard against stochastic or catastrophic events at any given site.

The Babbitt Ranches, LLC, for the Espee Allotment (the existing Espee Ranch reintroduction site), and Seibert Land Company LLC, for the Double O Ranch, enrolled in the programmatic ferret SHA with the USFWS in 2014 and 2016, respectively. The figure at the end of this rule identifies these SHA lands in the SWEPA. The Aubrey Valley/Double O Ranch reintroduction site contains the only known ferrets currently occurring in the SWEPA.

Plague Mitigation Efforts

Researchers continue making advances to address plague, even as it remains the most substantial challenge to ferret recovery. Rocke et al. (2006, entire) developed a vaccine (F1–V) to prevent plague in ferrets; all ferrets provided for reintroduction receive the vaccine (Abbott and Rocke 2012, p. 54). Another vaccine developed is the sylvatic plague vaccine (SPV), which is delivered via treated baits to wild prairie dogs. SPV has been effective in a laboratory setting (Rocke et al. 2010, entire; Abbott and Rocke 2012, pp. 54–55), and a broad-scale experiment to

test efficacy in the field found it prevented prairie dog colony collapse where plague epizootics were documented (Rocke et al. 2017, p. 443). A recent study, however, found SPV applied in the field might not provide sufficient protection for prairie dog populations to support a ferret population (Matchett et al. 2021, entire). In addition to vaccines, the powder form of the insecticide deltamethrin is applied at prairie dog burrows to control fleas and manage both enzootic and epizootic plague (Seery et al. 2003, entire; Seery 2006, entire; Matchett et al. 2010, pp. 31–33; USFWS 2013a, p. 101). However, the application of insecticidal dust is costly and labor-intensive, and there are concerns about the development of deltamethrin resistance in fleas. Therefore, the USFWS continues to work with our partners to improve the application and efficacy of the insecticide deltamethrin and to research other pesticides, such as fipronil, a systemic pulicide (insecticide effective on fleas) that is incorporated into grain baits for prairie dog consumption (Poché et al. 2017, entire; Eads et al. 2019, entire; Eads et al. 2021, entire).

Summary

Ferret recovery is a dynamic process, requiring long-term active management (e.g., plague control) and involving reintroduced populations rangewide in various stages of suitability and sustainability—with some populations undergoing extirpation concurrently as others are established or reestablished after extirpation. The AVEPA population illustrates the dynamic nature of ferret recovery and conservation, which at one point exhibited ferrets dispersing outside of the experimental population area but subsequently experienced a substantial population decline, presumably due to plague, in 2013. Therefore, ferret recovery is dependent on the establishment of additional, spatially distributed populations of reintroduced ferrets in Arizona to contribute to species recovery, which establishment of the SWEPA will help to achieve.

Experimental Population

We revise and replace the existing nonessential experimental population designation for black-footed ferrets in Arizona (the AVEPA) with the SWEPA, under

section 10(j) of the ESA. We base the boundaries of the 40,905,350-ac (16,554,170-ha) SWEPA on the historical range of Gunnison's and black-tailed prairie dogs, which coincides with the presumed historical range of ferrets in Arizona. The only ferrets currently occurring within the SWEPA are within the AVEPA and adjacent areas and constitute a single population. Therefore, the SWEPA, which will encompass the AVEPA, will be wholly geographically separate from other populations (see "*Actual or Anticipated Movements*" below). Currently, scattered throughout the SWEPA there are approximately 358,000 ac (144,880 ha) of prairie dog colonies (H. Hicks, AZGFD, pers. comm., January 26, 2018; Johnson et al., 2010, p. iv) inhabiting about 0.875 percent of the area. The SWEPA encompasses all potential ferret habitat within the boundaries of the State of Arizona, including the Hopi Reservation (excluding Hopi Villages within District 6), the Hualapai Reservation, and the Navajo Nation in its entirety, which includes the Navajo Nation's contiguous areas in New Mexico and Utah (see the figure entitled "Southwest Nonessential Experimental Population Area (SWEPA) for the black-footed ferret" below). Land ownership within the SWEPA includes Federal, private, State, and Tribal lands.

Potential Release Sites

We consider all potential habitat within the SWEPA as possible experimental population reintroduction locations, as we currently lack information about the distribution of habitat to appropriately identify all prospective reintroduction sites. Some portions of the SWEPA may become suitable for ferrets in the future with appropriate management, and ferrets may disperse from successful reintroduction sites as observed previously with the AVEPA. By including all potential habitat within the SWEPA where ferrets may be reintroduced or may disperse, this experimental population designation will extend regulatory flexibility across all areas in which ferrets might occur.

Because potential ferret habitat is, by definition, not yet suitable for ferrets, and the

USFWS is not solely responsible for the management of wildlife outside of the National Wildlife Refuge System, we rely on partnerships with landowners or those responsible for wildlife management on their respective lands or based on their legal authorities to contribute to conservation necessary for ferret reintroduction and recovery. As the primary management agency for wildlife in Arizona, excluding Tribal lands, AZGFD's efforts and commitment to prairie dog conservation and management are key in identifying potential ferret reintroduction sites in Arizona. AZGFD developed an Interagency Management Plan for Gunnison's Prairie Dogs in Arizona, with the purpose of identifying and implementing management strategies to conserve Gunnison's prairie dogs (Underwood 2007, p. 24), and a Management Plan for the Black-footed Ferret in Arizona (AZGFD 2016, entire; Management Plan) to further their commitment to meeting the USFWS Recovery Plan guidelines for Arizona (USFWS 2013a, table 2, table 8). The USFWS reviewed and commented on the AZGFD Management Plan, ensuring that it complements the USFWS Black-footed Ferret Recovery Plan by incorporating current research and techniques that the USFWS uses to guide ferret recovery rangewide.

Within the SWEPA, the USFWS anticipates the need for at least five ferret reintroduction sites to buffer against plague or other stochastic or catastrophic events and to reliably meet Recovery Plan guidelines for Arizona in support of the rangewide recovery criteria (USFWS 2022a, n.p.). Currently six areas are considered to be established or potential reintroduction sites. The active Aubrey Valley/Double O Ranch and inactive Espee Ranch, which is being actively managed for prairie dogs, are established reintroduction sites in which future releases may occur. Four potential reintroduction sites have also been identified (see AZGFD 2016 pp. 8–10) and occur on: (1) Kaibab National Forest, Williams/Tusayan Ranger Districts; (2) CO Bar Ranch; (3) Petrified Forest National Park; and (4) Lyman Lake (see "*Identifying the Location and Boundaries of the SWEPA*" below for more information on these sites). These potential reintroduction sites currently lack sufficient prairie dog occupied acreage and require management to improve prairie dog populations before they can support ferrets. The

USFWS is working with partners to encourage and implement purposeful prairie dog management and to identify additional potential reintroduction sites within the SWEPA.

Ferret Allocations

The USFWS approves sites for ferret reintroductions and allocates ferrets to those sites through an annual process (see *"Captive Breeding"* above), giving greater consideration to sites that have plague management and monitoring plans (USFWS 2022b, p. 2). To qualify for the annual application and ranking process, States, Tribes, and/or other land managers develop annual site-specific reintroduction plans and submit them to the USFWS by mid-March for consideration. Site-specific reintroduction plans may require implementation of plague management (e.g., applying Delta Dust® [deltamethrin]) at the proposed reintroduction site, as determined by the USFWS and partners.

The USFWS allocates ferrets to proposed reintroduction sites that contain sufficient prairie dog occupied habitat. The USFWS estimates sufficient prairie dog occupied habitat for Gunnison's prairie dogs as typically equating to 7,415 ac (3,000 ha), and for black-tailed prairie dogs, typically 4,450 ac (1,800 ha); (USFWS 2013a, pp. 73–74; USFWS 2019, p. 10). Our estimates, based in part on data from the Conata Basin/Badlands site in South Dakota, are likely on the high end of ferrets' actual habitat needs (USFWS 2013a, pp. 73–74). The actual amount of prairie dog occupied habitat needed varies across the ferret's range, depending on site conditions such as the density of prairie dogs. In Arizona, available research and prairie dog density data from Aubrey Valley suggests that a minimum of 5,540 ac (2,242 ha) of Gunnison's prairie dog occupied habitat is needed to consider a site potentially suitable for a ferret reintroduction (AZGFD 2016, pp. 6–7, 15). We may adjust our area estimates in the future, if further monitoring suggests that ferrets require a smaller area of habitat than our conservative estimates suggest (USFWS 2013a, p. 74). For more information about allocations, see "*Possible Adverse Effects on Wild and Captive-Breeding Populations*" below.

Release Procedures

The USFWS and partners release ferrets according to the guidance on release techniques in the Black-footed Ferret Field Operations Manual (USFWS 2016a, entire; Operations Manual), allowing for adjustments to the techniques according to USFWS-approved management plans. All captive-reared ferrets receive adequate preconditioning in outdoor pens at the National Black-footed Ferret Conservation Center, or other USFWS-approved facility, prior to release. Ferrets exposed to preconditioning exhibit higher post-release survival rates than non-preconditioned ferrets (Biggins et al. 1998, pp. 651–652; Vargas et al. 1998, p. 77). Captive ferrets receive vaccines for canine distemper and plague, and passive integrated transponder (PIT) tag implants for later identification, prior to release. Ferrets are released from August to November, which is when young-of-the-year ferrets disperse in the wild (USFWS 2016a, p. 16). Typically, the USFWS transports the ferrets to the site and releases them directly into suitable habitat without protection from predators, known as a "hard release."

Reintroduction Site Management

The USFWS is involved in the planning and decision-making processes, implementation of reintroductions, and management and monitoring of all reintroduction sites. Our partners contribute their commitment, resources, and legal authorities as wildlife managers to the management of reintroduction sites. The USFWS will partner with AZGFD on Federal, State, and private land reintroduction sites within the SWEPA, or the appropriate Tribal wildlife authority on Tribal lands, for reintroduction site management. The USFWS currently partners with AZGFD on two established reintroduction sites in Arizona. AZGFD has demonstrated their commitment to the partnership and to ferret recovery through 26 years of experience with ferret reintroductions in Arizona, development of Arizona-specific management plans for ferrets and prairie dogs (AZGFD 2016, entire; Underwood 2007, entire), and contribution of permanent and annual field staff to accomplish necessary field activities.

On non-Tribal lands in Arizona, the USFWS Operations Manual and Arizona's Management Plan guide the management of ferret reintroduction sites. On Tribal lands, the

USFWS Operations Manual and any appropriate Tribal ferret management plan and other site-specific plans and procedures guide management of reintroduction sites. Partners, in conjunction with the USFWS and landowner or manager, develop a site-specific management plan, which includes monitoring and adaptive management. All involved parties follow all applicable laws regulating the protection of ferrets (see "Management Restrictions, Protective Measures, and Other Special Management" below).

How Will the Experimental Population (SWEPA) Further the Conservation of the Species?

As cited above, under 50 CFR 17.81(b), before authorizing the release as an experimental population, the USFWS must find by regulation that such release will further the conservation of the species. We explain our rationale for making our finding below. In making such a finding, we must consider effects on donor populations, the likelihood of establishment and survival of the experimental population, the effects that establishment of the experimental population will have on recovery of the species, and the extent to which the experimental population will be affected by Federal, State, or private activities.

Possible Adverse Effects on Wild and Captive-Breeding Populations

Our regulations at 50 CFR 17.81 require that we consider any possible adverse effects on extant populations of a species as a result of removal of individuals, eggs, or propagules for introduction elsewhere. We know of no naturally occurring wild populations of ferrets throughout the historical range of the species (see "*Historical Range*" above). The USFWS considers the ferret extirpated in the wild except for reintroduced populations (i.e., all ferrets in the wild are the result of reintroductions). We consider all ferrets used to establish populations at reintroduction sites that come from the captive-bred population or, occasionally, from self-sustaining reintroduced populations as surplus, meaning they are genetically redundant within the source population and their removal from the source population will not affect the source population's persistence. If animals are translocated from other reintroduction sites, only wild-born kits from self-sustaining reintroduced populations are considered for translocation into new

or non-self-sustaining reintroduction sites (Lockhart, 2000–2007, as cited in USFWS 2013a, p. 27, P. Gober, USFWS, pers. comm., August 5, 2022).

The USFWS uses ferrets from the captive-bred population or a self-sustaining wild population to establish populations at reintroduction sites. In conformance with the USFWS allocation process, after we approve a reintroduction site for ferret allocations, the USFWS recommends the release of up to 20 to 30 captive-raised or wild-translocated ferrets during the first year of the reintroduction. Subsequent annual supplemental releases are expected until the population at a given reintroduction site becomes self-sustaining.

We anticipate no adverse effects on existing populations of ferrets, whether captive or wild, due to the removal of individuals from those populations for the purpose of reintroducing and establishing new populations in the SWEPA. We base this conclusion on the purpose for and the management of the captive-bred population (see "*Captive Breeding*" above), the management of other sites to achieve and maintain self-sustaining status for recovery purposes, and the USFWS's allocation process, which prioritizes reintroducing the limited number of surplus ferrets to sites with high chances of success. In summary, ferrets released at reintroduction sites will be genetically redundant individuals from populations that will remain self-sustaining despite the removal of those individuals.

Likelihood of Population Establishment and Survival

In our findings for designation of an experimental population, we must consider if the reintroduced population will become established and survive in the foreseeable future. The term "foreseeable future" appears in the ESA in the statutory definition of "threatened species." However, the ESA does not define the term "foreseeable future." Similarly, our implementing regulations governing the establishment of experimental populations under section 10(j) of the ESA use the term "foreseeable future" (50 CFR 17.81(b)(2)) but do not define the term. Our implementing regulations at 50 CFR 424.11(d), regarding factors for listing, delisting, or reclassifying species, set forth a framework for evaluating the foreseeable future on a case-by-

case basis. The term foreseeable future extends only so far into the future as we can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions as it relates to life history of the species and its response to threats. While we use the term "foreseeable future" here in a different context (to determine the likelihood of experimental population establishment and to establish boundaries for identification of the experimental population), we apply a similar conceptual framework. Our analysis of the foreseeable future uses the best scientific and commercial data available and considers the timeframes applicable to the relevant effects of release and management of the species and to the species' likely responses in view of its life-history characteristics.

In considering the likelihood of establishment and survival of populations of ferrets reintroduced in the SWEPA, we consider whether causes of the species' extirpation have been addressed. We also consider availability of suitable habitat and our previous experience with reintroduction efforts to inform our assessment of the likelihood of success of reintroductions in the SWEPA.

Addressing Causes of Extirpation Within the Experimental Population Area

Understanding the causes of the extirpation of ferret populations is necessary to sufficiently address threats to the species in the SWEPA so that reintroduction efforts are likely to be successful. Ferrets depend on prairie dog populations for food, shelter, and reproduction. Historical ferret declines resulted from: (1) widespread prairie dog poisoning; (2) adverse effects of plague on prairie dogs and ferrets; and (3) major conversion of habitat (see "*Threats/Causes of Decline*" above).

Widespread Poisoning of Prairie Dogs

Poisoning of prairie dogs no longer occurs to the extent and intensity that it did historically; the current use of poison to control prairie dogs occurs in limited and selective ways. Although land-use and ownership patterns in Arizona have not changed much since past

poisoning campaigns, poisoning became less common in the 1970s because prairie dog populations had been reduced by over 90 percent and use of rodenticides became more closely regulated than it had been historically (USFWS 2013a, pp. 49–51). State and Federal agencies have limited involvement in control of prairie dogs on private lands unless they pose a threat to human safety or health (e.g., plague transmission in an urban setting). Where State and Federal agencies have involvement, control methods have largely shifted to nonlethal techniques. For example, translocation as a method of prairie dog control is becoming more common, while lethal control seems to be declining (Seglund et al. 2006, p. 49). In addition, landowners and managers have expressed interest in managing prairie dogs specifically for ferret reintroductions, as evidenced by the number of current and potential reintroduction sites (see "*Identified Reintroduction Sites*" below).

Landowners and managers have used zinc phosphide as a registered rodenticide for prairie dog control since the 1940s (Erickson and Urban 2004, p. 12). In the early 2000s, manufacturers started promoting use of the anticoagulant rodenticides chlorophacinone (Rozol®) and diphacinone (Kaput®). These chemicals pose a much greater risk than zinc phosphide of secondary poisoning to nontarget wildlife that prey upon prairie dogs, such as ferrets (Erickson and Urban 2004, p. 85). In 2009, the U.S. Environmental Protection Agency (EPA) authorized use of Rozol® throughout much of black-tailed prairie dog range via a Federal Insecticide, Fungicide, and Rodenticide Act section 3 registration. However, the EPA labeled Rozol® and Kaput-D® only for the control of black-tailed prairie dogs, not Gunnison's, and the labels do not allow use in Arizona or the taking of "endangered species." The EPA has also established additional restrictions through the Endangered Species Protection Bulletins that ban the use of Rozol® in ferret recovery sites. These bulletins are an extension of the pesticide label, and it is a violation of Federal and State law to use a pesticide in a manner inconsistent with the label.

In Arizona, the use of poison to control prairie dogs may occur on State, Federal, and

private lands with the appropriate permit. Products registered for prairie dog control by the EPA require a pesticide applicators license, which an applicator can obtain only through a formal process with the Arizona Department of Agriculture (Underwood 2007, pp. 23–24). The extent of poisoning in Arizona is extremely limited in area compared to historical poisoning. For example, from 2013 through 2018, the Animal and Plant Health Inspection Service's (APHIS) Wildlife Services treated prairie dogs with zinc phosphide at three private properties totaling 56 ac (23 ha) of colonies, for livestock and property protection on pasture and farmland near rural communities (C. Carrillo, pers. comm., APHIS, October 23, 2019). None of these treatments occurred in or near current or proposed reintroduction areas. Given the limited use of prairie dog poisons in Arizona, and partnerships with landowners and managers willing to manage prairie dogs for ferrets, poisoning should not affect the establishment or success of reintroduced populations of ferrets.

Adverse Effects of Plague

As previously noted, plague can adversely affect ferrets directly via infection and subsequent fatality, and indirectly by decimating prairie dog populations, the ferret's prey. Management to reduce plague has improved, including dusting prairie dog burrows with insecticide to control fleas and vaccinating ferrets. The development of fipronil baits to control fleas in prairie dogs is also underway. In Colorado, black-tailed prairie dog survival improved when researchers applied the insecticide deltamethrin as a prophylactic treatment to control fleas in prairie dog burrows (Seery et al. 2003, p. 443; Seery 2006, entire). Based on management implementation at various reintroduction sites through the efforts of our partners, we expect the threat from plague to be managed by monitoring, dusting, vaccinating, and maintaining more and widely spaced reintroduction sites (USFWS 2013a, p. 78).

In Arizona, plague management includes best management practices and adaptive management to respond to changing conditions and incorporating new techniques as researchers develop them (AZGFD 2016, p. 19, appendices E and F). In addition, AZGFD, the USFWS, and

the U.S. Geological Survey are conducting an intensive plague study in the AVEPA to determine whether plague is present at an enzootic level that current plague surveillance is not detecting (H. Hicks, AZGFD, pers. comm., February 5, 2022). Plague will be an ongoing challenge to ferret recovery, but with current management tools, promising new treatments, the commitments of our partners, and the benefit of being able to establish widely spaced populations across the SWEPA, we will manage this threat sufficiently to support the conservation of the ferret at a landscape level.

Conversion of Habitat

Currently, rangewide conversion of prairie dog habitat is not significant relative to historical levels, although it may affect some prairie dog populations locally (USFWS 2013a, pp. 24–25). We do not expect agricultural land conversion and urbanization to have a measurable effect on the current condition of ferrets at the species level, because sufficient rangeland, including federally managed land, persists rangewide (USFWS 2019, pp. 27, 35). In Arizona, cropland currently covers almost 1.3 million ac (526,000 ha), or about one to two percent of the landscape (USDA 2019, p. 7), predominantly in central and southern Arizona, outside of the range of the Gunnison's prairie dog. Within the range of Gunnison's prairie dog in Arizona, agricultural development affects 31,449 ac (12,727 ha), and urban development affects 78,673 ac (31,838 ha), both of which, combined, constitute less than one percent of the range of the Gunnison's prairie dog (Seglund 2006, p. 15). There are about 22 million ac (8,900,000 ha) of agricultural activity in Arizona in the form of pastures for livestock grazing (USDA 2019, p. 19). These non-cultivated agricultural lands may represent habitat for the prairie dog and ferret in Arizona (Ernst et al. 2006, p. 91). Routine livestock grazing and ranching activities are largely compatible with maintaining occupied prairie dog habitat capable of supporting ferrets (USFWS 2013b, p. 20) (see discussion about grazing in "*Actions and Activities that May Affect the Introduced Population*" below).

Reintroduction Expertise

The USFWS and its partners have considerable experience establishing reintroduced ferret populations. Since 1991, we have initiated ferret reintroductions at 31 sites, including 2 in Arizona (J. Hughes, USFWS, pers. comm., December 13, 2021). These sites have had varying degrees of success, but they have all contributed to our understanding of the species' needs and effective management toward establishing reintroduced populations. The USFWS and our partners continually apply adaptive management principles through monitoring and research to ensure that the best available scientific information is used to develop new tools (e.g., fipronil baits), update strategies and protocols, and identify new reintroduction sites, to progress towards recovery (USFWS 2016a, entire; AZGFD 2016, p. 19).

The USFWS and our partners have developed and refined reintroduction techniques. These include advancements and improvements in management and oversight of the captive-breeding program, veterinary care and animal husbandry (USFWS 2016a, entire), the preconditioning program (Biggins et al. 1998, entire; USFWS 2016a, pp. 34–37), release techniques, and disease and plague management, including ferret vaccination programs at individual reintroduction sites. With respect to disease management, vector control (i.e., dusting and/or fipronil grain baits) and vaccination use in concert with vigilant plague epizootic monitoring may be the most effective way to reduce the rangewide effects of plague (Abbott and Rocke 2012, pp. 54–55; Tripp et al. 2017, entire). However, plague remains an ongoing issue (Scott et al. 2010, entire; Rohlf et al. 2014, entire) requiring ongoing management to maintain both the captive and reintroduced populations (USFWS 2019, p. 65).

In Arizona, the USFWS and our partners refine management strategies and field techniques through adaptive management practices to enhance reintroduction efforts. For example, when ferrets did not appear to be breeding at Aubrey Valley after 5 years of releases, release strategies were modified to incorporate pen breeding and springtime releases, and wild-born kits were documented the following year (AZGFD 2016, p. 5). The USFWS also continually adapts and refines recommended plague monitoring and management. At Espee

Ranch, for example, we learned that plague was present only after we released ferrets despite the use of pre-release plague surveillance and management protocols. Subsequently, AZGFD incorporated the latest disease monitoring protocols and adaptive management into its Management Plan (AZGFD 2016, p. 19, appendices E and F). In addition, at Espee Ranch, the USFWS and AZGFD participated in trials of the experimental SPV, the results of which have contributed to both the national effort to investigate SPV as a management tool as well as our understanding of local plague conditions. Given the USFWS's 31 years of experience reintroducing ferrets across their historical range, and the USFWS's and AZGFD's 26 years of experience in Arizona, developing and refining reintroduction and management techniques, we are likely to be successful in establishing and managing new populations of ferrets in the SWEPA.

Habitat Suitability

The likelihood of establishing ferret populations largely depends on adequate habitat. Although there was a significant decline of prairie dog occupied habitat on non-Tribal lands in Arizona historically, there has been a 10-fold increase in occupied habitat since 1961 (Seglund 2006, p. 16). Outside of Navajo and Hopi lands, Arizona currently has more than 108,000 ac (43,707 ha) of occupied prairie dog habitat (H. Hicks, AZGFD, pers. comm., January 26, 2018), a portion of which is located on lands of the Hualapai Tribe. Lands of the Navajo Nation and the Hopi Tribe collectively may contain about 250,000 ac (101,174 ha) of occupied prairie dog habitat (Johnson et al., 2010, p. iv). With purposeful management, this amount and distribution of prairie dog occupied habitat would be capable of supporting multiple ferret reintroduction sites.

In addition to the amount of habitat available in the SWEPA, individual reintroduction sites need to be of sufficient size to support reintroduced ferrets. Two sites in Arizona currently exceed or have exceeded the USFWS's and AZGFD's estimated Gunnison's prairie dog occupied acreage (7,415 ac [3,000 ha] and 5,540 ac [2,242 ha], respectively) to reintroduce

ferrets: Aubrey Valley/Double O Ranch and Espee Ranch (AZGFD 2016, p. 6). In 2018, Aubrey Valley/Double O Ranch contained about 65,500 ac (26,500 ha) of occupied prairie dog habitat and 264,000 ac (106,850 ha) of potential acreage (USFWS 2019, table 3). In 2007, prior to ferret reintroduction, Espee Ranch contained approximately 29,000 ac (11,736 ha) of occupied prairie dog habitat. Ferret monitoring and prairie dog management and monitoring continue to occur at Aubrey Valley/Double O Ranch, and prairie dog management and monitoring continue to occur at Espee Ranch. In addition to these two established reintroduction sites, four potential reintroduction sites have been identified (AZGFD 2016, entire). AZGFD has a management plan to conserve and maintain viable prairie dog populations and the ecosystems they inhabit statewide (Underwood 2007, entire). The acreage area criteria, along with implementation of management plans for viable prairie dog populations and ferrets and their habitats, will ensure that any sites selected for reintroduction have sufficient quantity and quality of habitat to support establishment of ferret populations.

Additional occupied prairie dog habitat is necessary before ferrets are released at additional sites within the SWEPA. Ferret reintroduction sites are relatively large, and their management requires coordination with multiple partners. AZGFD and other partners are currently implementing activities to monitor and manage prairie dog habitat in potential reintroduction sites in support of future ferret reintroductions. This 10(j) rule will facilitate new partnerships with private landowners and encourage voluntary management of prairie dog habitat in anticipation of future ferret reintroductions by providing regulatory flexibility regarding incidental take associated with activities deemed compatible with ferret recovery (50 CFR 17.84(g)). The 10(j) rule will also allow for regulatory consistency across different land management agencies or authorities. For these reasons, we consider the SWEPA an important step toward increasing the number of ferret reintroduction sites and our contribution toward ferret recovery.

Increased Prey Stability

Prairie dog populations in Arizona have increased from historical lows in the 1960's, and the State is managing them for long-term viability. The potential for continued expansion of occupied prairie dog habitat across Arizona through prairie dog conservation and disease management, coupled with past success of ferret reintroductions in Arizona and across the species' range, suggests that ferret-occupied areas can expand through additional reintroductions and dispersal. Reintroduction of ferrets in the larger SWEPA will contribute to achieving the USFWS ferret Recovery Plan guidelines for Arizona and contribute to ferret recovery across the species' range (USFWS 2013a, p. 77).

Summary

The USFWS and our partners have considerable experience reintroducing ferrets rangewide and in Arizona. We have guidelines for selecting suitable reintroduction sites (USFWS 2013a, entire. pp. 73–74; USFWS 2016a, pp. 1–10; AZGFD 2016, p. 7) and developed protocols and management plans for those sites (USFWS 2016a, entire; AZGFD 2016, appendices). The SWEPA contains a sufficient quantity and distribution of habitat to support reintroductions at additional sites with continued and additional prairie dog management. Additionally, the causes of extirpation of ferrets in Arizona have been or are being addressed; the widespread poisoning of prairie dogs is no longer occurring, the USFWS and partners continue to develop plague management techniques, and the conversion of habitat into cropland is not occurring at a significant scale. Lastly, the demonstrated success of existing reintroduced ferret populations in Arizona indicates that additional reintroduction efforts in the SWEPA will be successful in establishing and sustaining additional ferret populations, required for species recovery.

Effects of the SWEPA on Recovery Efforts for the Species

The USFWS's recovery strategy for the ferret range-wide requires establishment of numerous, spatially dispersed populations of ferrets within the range of all three prairie dog species to reduce the risk of stochastic events affecting multiple populations (e.g., plague),

increase management options, and maintain genetic diversity (USFWS 2013a, table 7) (see "Recovery, Captive Breeding and Reintroduction Efforts to Date" above). Delisting criteria for the species include 30 populations in 9 of 12 States within the species' historical range and distributed among the ranges of 3 prairie dog species (USFWS 2013a, p. 6). To implement this recovery strategy and achieve recovery criteria, additional successful reintroductions of ferrets are necessary (USFWS 2013a, p. 7). We will accomplish this by encouraging new partnerships with landowners and managers and the voluntary purposeful prairie dog management needed to support ferret populations via regulatory flexibilities.

Participation by numerous partners is critical to achieve the ferret's delisting criteria of multiple spatially dispersed populations and support the species redundancy, representation, and resiliency necessary for recovery. To achieve this strategy, the Recovery Plan suggests recovery guidelines for each State within the historical range of the species for the number of ferrets and prairie dog habitat acreages (proportional to the historical amount of prairie dog habitat) to contribute to meeting recovery criteria (USFWS 2013a, p. 69). These recovery guidelines by State are intended to improve risk management and ensure equity of recovery responsibilities across State boundaries (USFWS 2013a, table 8). The USFWS collaborated with AZGFD, the Navajo Nation, the Hualapai Tribe, and private landowners to initiate one of the early ferret reintroduction sites and the first in a Gunnison's prairie dog population.

The USFWS's Recovery Plan downlisting and delisting criteria guidelines for Arizona are 74 free-ranging breeding adult ferrets on 17,000 ac (6,880 ha) of Gunnison's prairie dog occupied habitat, and 148 breeding adults on 34,000 ac (13,760 ha), respectively. The guidelines for New Mexico and Utah are 220 and 25 breeding adult ferrets for downlisting, respectively, and 440 and 50 breeding adults for delisting (USFWS 2013a, table 8). Delisting criteria for the entire range include five ferret populations in colonies of both Gunnison's and white-tailed prairie dogs (USFWS 2013a, p. 6). About 27 percent of the Gunnison's prairie dog range occurs in Arizona (Seglund et al. 2006, p. 70), so establishing additional ferret populations in

Gunnison's prairie dog habitat within the SWEPA will contribute to meeting this criterion.

Currently, there are two established ferret reintroduction sites in Arizona. As of 2013, we considered the Aubrey Valley/Double O Ranch site one of the four most successful reintroduced populations throughout the species' range; it had a population that exceeded the recommended downlisting criteria for Arizona and we considered it self-sustaining (USFWS 2013a, pp. 5, 22, 77). However, the population declined appreciably, for which we suspect that plague may be the cause. Although plague has likely extirpated ferrets at the other established reintroduction site, Espee Ranch, efforts to control plague and restore habitat for ferrets continue. The SWEPA will include all potential ferret habitat in Arizona and on participating Tribal lands, including Hualapai Tribal lands, a portion of Hopi Tribal lands, and Navajo Nation lands in Arizona, New Mexico, and Utah (see "Experimental Population" above). Establishing additional populations within the SWEPA will reduce the vulnerability of extirpation of the species. Additionally, the widely distributed reintroduction sites identified, and the potential for other reintroduction sites (e.g., on the Navajo Nation) will reduce the effects of localized or stochastic events on overall recovery efforts, by reducing the likelihood that all individuals or all populations would be affected by the same event. Reintroducing viable ferret populations in the New Mexico and Utah portions of the Navajo Nation would not only aid in recovery of the species but also in meeting the Recovery Plan's recovery guidelines for those States (USFWS 2013a, p. 77).

The significant threat of plague to ferret populations emphasizes the need for several spatially dispersed reintroduction sites across the widest possible distribution of the species' historical range (USFWS 2013a, p. 70), supporting the value of a statewide approach to reintroductions. Establishment of the SWEPA will facilitate ferret reintroductions across a large geographic area and will result in establishment of several populations that will persist over time, thus, contributing to recovery of the species.

Actions and Activities That May Affect the Introduced Population

Classes of Federal, State, Tribal, and private actions and activities that may currently affect ferret viability, directly or indirectly, across the species' range are urbanization, energy development, agricultural land conversion, range management, and recreational shooting and poisoning of prairie dogs (USFWS 2019, p. 13). Actions and activities that affect prairie dogs may also indirectly affect ferrets, given the ferret's dependency on prairie dogs as a food source and their burrows for shelter.

In Arizona, land ownership within the range of Gunnison's prairie dog is approximately as follows: Tribal–49.05 percent; private–21.62 percent; Federal–16.80 percent; State–12.53 percent; city/county–0.01 percent (Seglund 2006, table 3).

Although urbanization may adversely affect local prairie dog colonies, effects across the range of the species in Arizona are not substantial due to the small amount of urban land, and the rural settings of the ferret reintroduction sites. Similarly, oil and gas and other types of mineral exploration and extraction development cover less than one percent of the prairie dog range in Arizona (Underwood 2007, p. 10), and this development is not associated with established or potential ferret reintroduction sites. Solar and wind energy development has expanded in recent years but also comprises a very small part of the landscape. In Arizona**,** most solar power facilities are located in the southern and far western part of the State, outside of the range of Gunnison's prairie dog (U.S. Energy Information Administration 2022, n.p.). To date, there have been a number of wind projects in the range of Gunnison's prairie dog, but none currently constructed within established or potential reintroduction sites, and the existing infrastructure of wind projects occupies less than 0.005 percent of the ferret's potential range (USFWS 2019, p. 40). As discussed above, agricultural development affects less than one third of one percent of the range of Gunnison's prairie dog (Seglund 2006, p. 16). We do not expect agricultural land conversion to have a measurable effect on the future condition of the ferret in Arizona based on a 20-year analysis (USFWS 2019, p. 56).

There are about 22 million ac (8,900,000 ha) of rangeland, used predominantly for

grazing, in Arizona across Tribal, private, Federal, and State lands (USDA 2019, p. 19), and these lands represent potential habitat for both the prairie dog and ferret (Ernst et al. 2006, p. 91). Livestock grazing became a prominent activity on the Arizona landscape in the 1880s and peaked in intensity around the late 1890s and early 1900s (Milchunas 2006, p. 7). Grazing in arid and semiarid areas can alter species composition of plant communities, disrupt ecosystem functions, and alter ecosystem structure (Fleischner 1994, p. 631). Available literature reveals a wide range of potential effects of livestock grazing on ecosystems that vary with site-specific characteristics, including habitat type, grazing intensity, and history of grazing (Jones 2000, entire; Milchunas and Lauenroth 1993, entire; Milchunas 2006, entire).

Few studies have examined the effects of grazing on prairie dogs. Cheng and Ritchie (2006, p. 550) observed lower growth rates in Utah prairie dogs (*C. parvidens*) in plots treated to simulate grazing in a sagebrush steppe habitat. Conversely, forage in simulated grazed plots had higher nutrition and greater digestibility, and the prairie dogs showed preference for those patches (Cheng and Ritchie 2006, pp. 549–550). Ponce-Guevara et al. (2016, pp. 5, 7) found that black-tailed prairie dog populations increased in areas of a desert grassland where cattle grazing reduced woody encroachment. The potential for competitive effects of large grazing herbivores on prairie dog populations likely depends on site-specific factors, such as habitat productivity and herbivore densities (Cheng and Ritchie 2006, p. 554). Despite the potential for competition, prairie dogs remained prominent on rangelands in Arizona during the period of heaviest livestock grazing and did not begin declining until the time of systematic prairie dog eradication programs (Oakes 2000, pp. 169–171). This long history of prairie dog persistence with livestock grazing in Arizona and the persistence of ferrets at the AVEPA lead us to conclude that livestock grazing and ranching activities can be compatible with maintaining occupied prairie dog habitat capable of supporting ferrets.

Depending on intensity, recreational shooting of prairie dogs can negatively affect local prairie dog populations through direct fatality of individuals (Vosburgh and Irby 1998, entire;

Keffer et al. 2001, entire; Knowles 2002, pp. 14–15). The resulting decrease in prey base negatively affects ferrets, and it is likely this activity could occur on ferret reintroduction sites (Reeve and Vosburgh 2006, entire). Recreational shooting reduces the number of prairie dogs in a colony, thereby decreasing prairie dog density (Knowles 1988, p. 54), occupied acreage (Knowles and Vosburgh 2001, p. 12), and reproduction (Stockrahm and Seabloom 1979, entire). Recreational shooting could also cause direct fatality to prairie dog-associated species such as ferrets (Knowles and Vosburgh 2001, p. 14; Reeve and Vosburgh 2006, pp. 120–121). Although we do not have documentation of incidental take of ferrets by prairie dog shooters, direct ferret fatality due to accidental shooting is possible. Lastly, recreational shooting of prairie dogs also contributes to the environmental issue of lead accumulation in wildlife food chains (Knowles and Vosburgh 2001, p. 15; Pauli and Buskirk 2007, entire). Killing large numbers of animals with lead bullets and not removing carcasses from the field may present potentially dangerous amounts of lead to scavengers and predators of prairie dogs, such as ferrets. We have not documented ferret ingestion of lead to date (USFWS 2013a, p. 28). To address these recreational shooting conservation issues, AZGFD implements prairie dog annual shooting closures on public lands from April 1 to June 30 to reduce potential effects on prairie dog reproduction (USFWS 2019, p. 29). In addition, in the event of prairie dog population declines in an established reintroduction site for any reason, the AZGFD Commission may close prairie dog shooting until the population recovers (AZGFD 2016, p. 15).

Poisoning of prairie dogs has the potential to occur within both Gunnison's and black-tailed prairie dog habitat and can affect ferrets through loss of prey and inadvertent secondary poisoning for some poisons. In recent years, the extent of prairie dog poisoning has been closely regulated, limited in area, and confined to specific needs compared to historical poisoning. From 2013 through 2019 in Arizona, APHIS treated prairie dogs with zinc phosphide at three private properties, totaling 56 ac (23 ha) of colonies, for livestock and property protection on pasture and farmland near rural communities (C. Carrillo, pers. comm., APHIS, October 23, 2019).

None of these treatments were in or near current or proposed ferret reintroduction areas.

Certain activities associated with prairie dog recreational shooting and poisoning have the potential to result in incidental ferret fatality. For example, use and establishment of roads within prairie dog and ferret habitat may result in ferret road kills and increase human access for prairie dog shooting (Gordon et al. 2003, p. 12). However, we have no information to suggest that incidental fatalities have a significant effect on ferret population viability.

When the USFWS established the AVEPA, we determined existing and foreseeable land use practices within the AVEPA to be compatible with sustaining ferret viability (61 FR 11320, March 20, 1996). These practices include grazing and related activities (including existing and foreseeable levels of prairie dog control), big game hunting, prairie dog shooting, and the trapping of furbearers and predators. Other land uses include transportation and rights-of-way (e.g., for utilities). Our success in reintroducing ferrets in the AVEPA over 26 years supports that finding. Similarly, in the USFWS's establishment of the statewide nonessential experimental population of ferrets in Wyoming, we found that land use activities currently occurring across that State, primarily livestock grazing and associated ranch management practices, recreation, residential development, and mineral and energy development, are compatible with ferret recovery and that there is no information to suggest that foreseeable similar future activities would be incompatible with ferret recovery (80 FR 66821, October 30, 2015). Based on previous successes with other experimental ferret populations in areas influenced by similar land use activities and actions, including the AVEPA within Arizona, we conclude that the effects of Federal, State, Tribal, and private actions and activities will not pose a substantial threat to ferret establishment and persistence within the SWEPA and that SWEPA establishment will benefit the conservation of ferrets.

Experimental Population Regulation Requirements

Our regulations at 50 CFR 17.81(c) include a list of what the USFWS provides in regulations designating experimental populations under section 10(j) of the ESA. We explain

what our regulations include and provide our rationale for those regulations below.

Means To Identify the Experimental Population

Our regulations require that we provide appropriate means to identify the experimental population, which may include geographic locations, number of individuals to be released, anticipated movements, and other information or criteria.

Identifying the Location and Boundaries of the SWEPA

The 40,905,350-ac SWEPA occurs in the State of Arizona and on sovereign lands of the Hopi Tribe, Hualapai Tribe, and the Navajo Nation, including Navajo Nation lands in New Mexico, and Utah (see "Experimental Population" above); we delineate the boundaries below in the figure titled "Southwest Nonessential Experimental Population Area (SWEPA) for the ferret." These boundaries are based on various grasslands and parts of biotic communities in which grasslands are interspersed, with which prairie dogs are associated, including Plains and Great Basin Grassland, Great Basin Conifer Woodland, Great Basin Desertscrub, and Petrane Montane Conifer Forest biotic communities (AZGFD 2016, pp. 8–10) (Brown et al. 1979, entire), and represent a 184-fold increase in area from the AVEPA (USFWS 2021, p. 7, figure 2). State political subdivisions include portions of Apache, Cochise, Coconino, Gila, Graham, Mohave, Navajo, Pima, Pinal, Santa Cruz, and Yavapai Counties of Arizona; Cibola, McKinley, Rio Arriba, Sandoval, and San Juan Counties of New Mexico; and San Juan County, Utah.

The SWEPA consists of two separate areas: (1) northeast and northcentral Arizona, the southeast corner of Utah, and northwest New Mexico on the Navajo Nation, and (2) southeastern Arizona.

The SWEPA will encompass and replace the AVEPA. In addition, two areas enrolled in the programmatic SHA under certificates of inclusion, the Espee Allotment and Double O Ranch, are within the SWEPA. Although this experimental population designation can overlay SHAs, we contacted enrollees to assess interest in replacing their certificates of inclusion with the provisions of this 10(j) rule. We propose phasing out the SHA certificates of inclusion in the

future for interested landowners. As a result, the USFWS would conduct future reintroductions of ferrets within the SWEPA under the experimental population designation regulation.

Number of Anticipated Ferret Releases

The number of ferrets released at a given reintroduction site depends on multiple variables and can vary extensively between sites. In the AVEPA, for example, the USFWS and AZGFD released 35 ferrets over 5 years without documenting wild reproduction, which is necessary for a site to become self-sustaining. We continued releasing ferrets until the population appeared to be self-sustaining. After 4 years, the population appeared to be faltering, and we resumed ferret releases. Over a span of 11 years, from 1996 to 2006, we released 354 ferrets at the AVEPA. After 2011, we released an additional 112 excess kits from breeding facilities into the AVEPA. We added 41 ferrets at the Double O Ranch over 4 years (2016–2019) for research purposes after ferrets from AVEPA naturally dispersed there. We released 99 ferrets at Espee Ranch over a span of 3 years (2007 to 2009). The USFWS recommends initially releasing up to 20 to 30 ferrets at new reintroduction sites in the SWEPA, with the total number of ferrets released across multiple years at new reintroduction sites likely similar to the established reintroduction sites in Arizona.

Actual or Anticipated Movements

Understanding ferret movement patterns and distances will ensure accurate identification of ferrets associated with the SWEPA. Researchers have documented newly released captive-born ferrets dispersing up to 30 miles (49 km) from the release site (Biggins et al. 1999, p. 125), and wild-born ferrets more than 12 miles (20 km) (USFWS 2019, p. 7). AZGFD documented ferrets up to 15 miles outside the AVEPA starting in 2012, 16 years after initial releases (J. Cordova, AZGFD, pers. comm., November 22, 2022).

While dispersal of ferrets depends on variables such as competition within a given population and the availability of adjacent habitat and prey, we would expect a pattern of ferret dispersal from new reintroduction sites in the SWEPA to be similar to those observed

in the AVEPA. Outside of the SWEPA, the closest current reintroduced population of ferrets is Coyote Basin, Utah, which is about 200 mi (320 km) away, substantially greater than documented ferret dispersal distances. Therefore, we will consider any ferret found in the wild within the boundaries of the SWEPA to be part of the experimental population.

Reintroduction Sites

The USFWS recommends the establishment of at least five ferret reintroduction sites in the SWEPA to buffer against stochastic or catastrophic events and reliably meet Recovery Plan recovery guidelines (USFWS 2022a). Federal and State public lands in Arizona and Tribal and private lands currently support large expanses of grasslands with varying sizes of Gunnison's prairie dog colonies (AZGFD 2016, figure 1). Reintroduction sites may include those discussed below or additional sites where there are willing landowners and managers, and suitable prairie dog habitat exists.

Established Reintroduction Sites Within the SWEPA

(1) Aubrey Valley/Double O Ranch—The AVEPA encompasses 221,894 ac (89,800 ha) of private, Tribal, State, and Bureau of Land Management (BLM) managed lands and is located about 5 miles northwest of Seligman in Coconino, Yavapai, and Mohave Counties. The adjacent Double O Ranch encompasses 236,792 ac (95,828 ha) of private, State, and USFS managed lands south of the AVEPA. Together, these sites contain 264,016 ac (106,846 ha) of grasslands. AZGFD mapped an average of 52,455 ac (21,228 ha) of Gunnison's prairie dog colonies in the AVEPA between 2007 and 2016 (AZGFD 2016, p. 8) (H. Hicks, AZGFD, pers. comm., January 26, 2018). In 2014 and 2016, respectively, Gunnison's prairie dogs occupied 7,074 and 6,313 known ac (2,863 and 2,555 ha) on Double O Ranch (AZGFD 2016, p. 7; H. Hicks, AZGFD, pers. comm., January 26, 2018). Plague is likely present in the AVEPA.

(2) Espee Ranch—The Espee Allotment encompasses 145,644 ac (58,941 ha) of private and State lands about 17 miles northeast of Seligman, in Coconino County, Arizona. There are 139,255 ac (56,356 ha) of grasslands (AZGFD 2016, pp. 8–9). In 2007, prior to

release of ferrets, approximately 29,000 ac (11,736 ha) of occupied prairie dog habitat was mapped (AZGFD 2007, p. 1). Since then, the number of prairie dog occupied acres has fluctuated greatly, with 3,228 occupied ac (1,306 ha) in 2014 and 21,771 occupied ac (8,811 ha) in 2018 (J. Cordova, AZGFD, pers. comm., August 18, 2022). Plague is present on the Espee Ranch and is the suspected reason for the lack of recent ferret observations despite multiple releases.

Potential Reintroduction Sites Within the SWEPA

The four areas described below do not currently meet the minimum necessary Gunnison's prairie dog occupied acreage to support ferrets. However, active management, such as translocations of prairie dogs, and dusting for plague or administration of a plague vaccine, along with annual monitoring of prairie dog populations, may provide for the needed acreage of occupied prairie dog habitat in these areas (AZGFD 2016, p. 9).

(1) Kaibab National Forest, Williams/Tusayan Ranger Districts—These areas cover over 613,000 ac (248,078 ha) of USFS, Department of Defense, private, and State managed lands surrounding the city of Williams in Coconino and Yavapai Counties. There were 96,954 ac (39,237 ha) of grasslands with 4,984 ac (2,017 ha) of known Gunnison's prairie dog occupied area in 2015 (AZGFD 2016, p. 9).

(2) CO Bar Ranch—This ranch encompasses 263,758 ac (106,741 ha) of private, State, BLM, and Tribal lands and is located about 24 miles north of Flagstaff in Coconino County. There were 184,815 ac (74,794 ha) of grasslands with 870 ac (352 ha) of known Gunnison's prairie dog occupied area in 2015 (AZGFD 2016, p. 9).

(3) Petrified Forest National Park—This area encompasses 223,027 ac (90,258 ha) of NPS, State, Tribal, BLM, and privately managed lands east of Holbrook in Navajo and Apache Counties. There were 214,135 ac (86,659 ha) of grasslands with 87 ac (35 ha) of known Gunnison's prairie dog occupied area in 2015 (AZGFD 2016, p. 10).

(4) Lyman Lake—This area encompasses 316,958 ac (128,271 ha) of private,

State, AZGFD, BLM, and USFS lands south of St. Johns in Apache County. There were 273,227 ac (110,573 ha) of grasslands with 2,045 ac (828 ha) of known Gunnison's prairie dog occupied area in 2015 (AZGFD 2016, p. 10).

Black-tailed prairie dog habitat exists in southeastern Arizona (Cockrum 1960, p. 76; figure 1). In 2008, the AZGFD reintroduced this species into a small portion of its historical range via translocations from wild populations in New Mexico (W. Van Pelt, AZGFD, pers. comm, July 6, 2022). This new black-tailed prairie dog population occurs on the BLM-administered Las Cienegas National Conservation Area. Surveys in 2021 estimated that a minimum of 210 black-tailed prairie dogs occupied 28 ac (11.3 ha) (J. Presler, AZGFD, pers. comm., February 7, 2022). It would likely take many years to reach enough black-tailed prairie dog occupied acreage with a stable population to support a reintroduction of ferrets. However, efforts to expand black-tailed prairie dog colony acreage would offer opportunities to re-create habitat for ferrets (USFWS 2013a, p. 51).

We will consider reintroduction sites on Tribal Lands if Tribes are interested and where suitable prairie dog habitat exists. Forty-nine percent of the land within the range of Gunnison's prairie dog in Arizona is under Tribal ownership (Seglund et al. 2006, table 3). The Navajo Nation is the largest owner of Gunnison's prairie dog habitat (Johnson et al. 2010, p. 6). Working with the Hopi Tribe, Hualapai Tribe, and Navajo Nation, we may be able to identify other potential sites for ferret reintroduction on their Tribal sovereign lands. All three Tribes have expressed interest in working with the USFWS in ferret recovery (J. Nystedt, USFWS, pers. comm., March 23, 2022; Navajo Nation 2017, entire; D. Clarke, Hualapai Tribe, pers. comm., March 26, 2018; Hopi Tribe 2021, entire). The Hualapai and Hopi reservations and Hopi-owned ranches coincide entirely with Arizona (i.e., their lands are wholly within the borders of the State), whereas the Navajo Nation also coincides with parts of the States of New Mexico and Utah, within which the Navajo Nation has sovereign authority to manage wildlife.

Surveys of prairie dog populations on Tribal lands, in addition to other information such as

incidence of plague, are needed as part of the process of considering these lands for ferret reintroduction. The Navajo Nation and Hopi Tribe, in collaboration with Natural Heritage New Mexico, conducted a remote survey of Gunnison's prairie dogs on the lands of both Tribes in 2010. The technique used, involving standard photo-interpretation to identify disturbance in potential habitat on digital orthophoto quarter quads, estimated the total area of occupied Gunnison's prairie dog habitat on the Navajo Nation and Reservation of the Hopi Tribe at 253,562 ac (102,615 ha) (Johnson et al. 2010, pp. iv, 18).

The Navajo Nation recently received a USFWS Tribal Wildlife Grant to investigate areas for future ferret reintroductions, including prairie dog habitat mapping, disease monitoring, and development of a ferret reintroduction plan for the Navajo Nation. As mentioned previously, we originally included some lands of the Hualapai Tribe and deeded lands owned by the Navajo Nation when we designated the AVEPA, and the Tribes have worked cooperatively with the USFWS and AZGFD on ferret recovery. The Hopi Tribe has expressed interest in ferret recovery activities on a portion of their lands, including ranches and part of their Reservation. They requested excluding District 6 of their Reservation, so we have excluded that area from the SWEPA.

Is the Experimental Population Essential or Nonessential?

When we establish experimental populations under section 10(j) of the ESA, we must determine whether such a population is essential to the continued existence of the species in the wild. This determination is based solely on the best scientific and commercial data available. Our regulations state that an experimental population is considered essential if its loss would be likely to appreciably reduce the likelihood of survival of that species in the wild (50 CFR 17.80(b)). All other populations are considered nonessential. .

The ESA states that, prior to any release "the Secretary must find by regulation that such release will further the conservation of the species" (49 FR 33893, August 27, 1984). Reintroductions are, by their nature, experiments, the fate of which is uncertain. However, it is

always our goal for reintroductions to be successful and contribute to recovery. The importance of reintroductions to recovery does not necessarily mean these populations are "essential" under section 10(j) of the ESA. In fact, Congress' expectation was that "in most cases, experimental populations will not be essential" (H.R. Conference Report No. 835 supra at 34; 49 FR 33888, August 27, 1984). The preamble to our 1984 publication of ESA 10(j) implementing regulations reflects this understanding, stating that an essential population will be a special case, and not the general rule (49 FR 33888, August 27, 1984).

In our final rule establishing the nonessential experimental population in Aubrey Valley, the USFWS found the AVEPA to be "nonessential" because the captive-breeding population is both the secure source for all reintroductions, and the primary repository of genetic diversity for the species (61 FR 11320, March 20, 1996). We considered all reintroduced ferrets to be in excess to the captive population, and we could replace any deceased reintroduced animals through captive breeding (61 FR 11323, March 20, 1996).

The USFWS did not anticipate changing the nonessential designation for the AVEPA unless the experiment failed or until the ferret recovered (61 FR 11323, March 20, 1996). However, because this final rule will replace the AVEPA through incorporation into the SWEPA, an evaluation as to whether the new SWEPA experimental population is essential to the continued existence of the species in the wild is appropriate.

As discussed above, we expect the SWEPA to further the conservation of the species by contributing to the establishment of multiple, widespread populations that will persist over time and contribute to achieving recovery goals for the species. However, we consider the SWEPA nonessential because there are now a number of reintroduced ferret populations in the wild, across the range of the species. There are 18 active reintroduction sites across the ferret's historical range (J. Hughes, USFWS, pers. comm., December 13, 2021), consisting of a minimum of 340 ferrets in 2018, with a minimum of 254 at the 4 most successful reintroduction sites (Rocky Mountain Arsenal National Wildlife Refuge, Colorado; Conata Basin/Badlands,

South Dakota; and Shirley Basin and Meeteetse, Wyoming) (USFWS 2019, table 3). In the black-footed ferret SSA (USFWS 2019, pp. 43–83), we used the conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, entire) to assess how the populations at the active sites contribute to the current and future species condition to address the ferret's viability in the wild across its range.

Resiliency indicates a population's ability to withstand environmental and demographic stochasticity. We assessed the resiliency of each ferret population across the species' range based on the 5-year mean number of breeding adults, habitat suitability, annual plague management, annual ferret vaccinations, ferret population persistence, and level of prairie dog conservation. Of the 14 sites active at the time of our assessment, we considered 2 in high-resiliency condition and 8 in moderate-resiliency condition (USFWS 2019, table 11). We estimated that in 20 years, if management and threats remain at current levels, the two high-resiliency populations will remain in that condition, seven of the eight moderate-resiliency populations will remain in that condition, and one of the moderate-resiliency populations will become low-resiliency.

Redundancy is the ability of a species to withstand catastrophic events, via the number and distribution of populations. Representation, or ecological or genetic diversity across a species' range, enables a species to better respond to changes in the environment. Current and future high- and moderate-resiliency populations occur in the wild across six States, including Wyoming, South Dakota, Kansas, Colorado, Utah, and Arizona. This broad distribution of ferret populations across the Western United States protects against catastrophic events affecting all wild ferret populations simultaneously, and it allows for a variety of physical and biological conditions in which the species may express adaptive capacity going forward. Additionally, captive-breeding efforts continue to support the establishment of more populations throughout the species' range. Loss of the SWEPA would not affect these remaining populations of ferrets in the wild.

The current ferret population in Arizona, while contributing incrementally to conservation in concert with other sites, is a relatively small portion of the total number and distribution of ferret populations needed for species recovery. The Recovery Plan's delisting criteria for ferrets calls for 30 or more populations, with at least 1 population in each of at least 9 of 12 States within the historical range of the species, and at least 5 populations within colonies of Gunnison's and white-tailed prairie dogs. About 27 percent of Gunnison's prairie dog range occurs in Arizona. This equates to about 9 to 14 percent of all prairie dog occupied habitat (i.e., the range of all 3 prairie dog species) (USFWS 2013a, p. 24). In Arizona, the relative recommended contribution of habitat to ferret delisting is about seven percent (USFWS 2013a, table 8, p. 77).

The SWEPA will further the recovery of the ferret by allowing us to establish multiple wild populations within the species' historical range. We conclude that the loss of all reintroduced ferrets within the SWEPA is not likely to appreciably reduce the likelihood of survival of the species in the wild due to maintenance of the captive population for additional reintroductions into the wild, the number of reintroduction sites and established populations rangewide, and the expected incremental contribution of Arizona to the recovery of the ferret. Furthermore, the SWEPA covers a relatively small portion of potential ferret habitat rangewide: about seven percent; thus, the potential size of the experimental population within the SWEPA will be small relative to the potential number of ferrets rangewide. Therefore, as required by 50 CFR 17.81(c)(2), we determine the SWEPA experimental population is not essential to the continued existence of the species in the wild, and we designate the SWEPA experimental population as nonessential.

Management Restrictions, Protective Measures, and Other Special Management

We are applying the experimental population designation and regulations to the entire SWEPA; thus, a single set of statutes and regulations and a single management framework will apply to all non-Federal and Federal lands containing potential ferret habitat within the

designated SWEPA boundary. This approach will extend regulatory assurances to all areas where ferrets could potentially establish, including the current properties covered by the SHA. There are no significant differences between the terms and conditions of the SHA and 10(j) regulations in terms of how landowners operate their ranches with respect to ferret recovery.

The USFWS will undertake SWEPA reintroductions in cooperation with current and future partners. Existing management plans or those that wildlife managers develop in cooperation with us and other partners and stakeholders will guide management of ferret populations in the SWEPA (e.g., USFWS 2016a, AZGFD 2016).

As discussed in the "*Actions and Activities that May Affect the Introduced Population,*" Federal, State, Tribal, and private actions will not pose a substantial threat to ferret establishment and persistence in the SWEPA because land management activities, such as agricultural land conversion, recreational shooting of prairie dogs, poisoning of prairie dogs, urbanization, and energy development, currently occurring or anticipated to occur at prospective reintroduction sites in Arizona are very limited in scope. In addition, as discussed in "*Addressing Causes of Extirpation within the Experimental Population Area"* above, due to the low demand for and regulatory restrictions on prairie dog poisoning, we do not anticipate any change in prairie dog control efforts that would reduce prairie dog occupied habitat to the extent that they would compromise the viability of any potential ferret population. The best available information indicates that future range and ranching activities will remain compatible with ferret recovery because they do not limit essential ferret behavior such as feeding, breeding, or sheltering. We base this assessment on 26 years of ferret reintroductions and management at the AVEPA and Espee and Double O Ranches in Arizona, and at other reintroduction sites throughout the range of the species (80 FR 66826, October 30, 2015).

The AZGFD, BLM, USFS, NPS, Tribes, and private landowners manage sites with high potential for ferret establishment, and these areas receive protection through the following legal mechanisms:

Legal Mechanisms

(1) Federal Land Policy and Management Act of 1976 (FLPMA; 43 U.S.C. 1701 et seq.)—The BLM's mission is set forth under the FLPMA, which mandates that the BLM manage public land resources for a variety of uses, such as energy development, livestock grazing, recreation, and timber harvesting, while protecting the natural, cultural, and historical resources on those lands. The BLM manages listed and sensitive species under guidance provided in the BLM Manual Section 6840—Special Status Species Management. The Manual directs the BLM to conserve ESA-listed species and the ecosystems upon which they depend, ensure that all actions authorized or carried out by the BLM comply with the ESA, and cooperate with the recovery planning and recovery of listed species. The BLM has experience in managing the ferret at four reintroduction sites in four States that occur at least in part on BLM lands. Therefore, we anticipate appropriate management by the BLM on future ferret reintroduction sites that include BLM lands.

(2) National Forest Management Act of 1976, as amended (16 U.S.C. 1600 et seq.)—This law instructs the USFS to strive to provide for a diversity of plant and animal communities when managing USFS lands. The USFS identifies species listed as endangered or threatened under the ESA, including the ferret, a Category 1 species at risk based on rangewide and national imperilment. The USFS has experience managing the ferret on one reintroduction site that occurs at least in part on USFS lands. Therefore, we anticipate appropriate management by the USFS on future ferret reintroduction sites that include USFS lands.

(3) Organic Act of 1916, as amended (16 U.S.C. 1–4)—This law requires the NPS to conserve National Park resources, consistent with the established values and purposes for each park. In addition, the Organic Act instructs the NPS "to conserve the scenery and the natural and historical objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future

generations." NPS management policies require them to conserve ESA-listed species and to prevent detrimental effects on these species. The NPS has experience managing the ferret at two National Parks in South Dakota, where the NPS protects ferrets and their habitats from large-scale loss or degradation, per their mandate. Management of these reintroduction sites would need to continue regardless of the species' listing status. Therefore, we anticipate appropriate management by the NPS on any future ferret reintroduction sites that include NPS lands.

(4) Navajo Nation Law—Navajo Nation Code (NNC), title 17, chapter 3, subchapter 21, provides protections for ferrets. Title 17 NNC section 507 makes it unlawful for any person to take wildlife on either of the following lists, as quoted from the code:

(a) "The list of wildlife indigenous to the Navajo Nation that they determine to be endangered by regulation of the Resources Committee of the Navajo Nation Council." The Navajo Nation added the ferret to this list pursuant to Resources Committee Resolution RCF–014–91.

(b) The U.S. lists of endangered native and foreign fish and wildlife, as set forth in section 4 of the Endangered Species Act of 1973 as endangered or threatened species, to the extent that the Resources Committee adopts these lists. Navajo Nation Code (17 NNC section 504) also makes it unlawful for any person to take or possess a fur-bearing animal, which includes ferrets by definition (17 NNC section 500), except as permitted by the Director, Navajo Nation Department of Fish and Wildlife.

(5) Hopi Tribal Law—Tribal Ordinance 48 (Wildlife) documents the Tribe's exclusive jurisdiction to regulate and adjudicate all matters pertaining to wildlife found on the Hopi Reservation. All wildlife found on the Reservation, whether resident or migratory, native or introduced, is the property of the Hopi Tribe, and Tribal Law provides the times and manner of allowable take.

(6) Arizona State Law—General provisions of Arizona Revised Statutes, title 17, protects all of Arizona's native wildlife, including federally listed threatened and endangered

species.

(7) Endangered Species Act—The ESA will continue to provide protection to ferrets in the SWEPA through section 10 by requiring certain management entities to obtain an enhancement of survival permit from the USFWS under section 10(a)(1)(A) for any intentional taking of a ferret that is prohibited by section 9 of the ESA and not exempted through this rule. The authorities of section 6 of the ESA and 50 CFR 17.21, 17.31, and 17.84(g) cover AZGFD's management activities. Section 7(a)(1) of the ESA also requires all Federal agencies to use their authorities to further the purposes of the ESA.

Other Protections and Management Restrictions

Other protections and management restrictions and measures in the SWEPA include:

(1) Incidental take: ESA 10(j) experimental population rules contain specific prohibitions and exceptions regarding take of individual animals. These rules are compatible with most routine human activities in the expected reestablishment area. Section 3(19) of the ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under 50 CFR 17.3, "harass" means an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns that include, but are not limited to, breeding, feeding, or sheltering. And "harm" means an act that actually kills or injures wildlife, including significant habitat modification that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. The regulations further define "incidental take" as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. This nonessential experimental population designation rule will allow most incidental take of ferrets in the experimental population area, provided the take is unintentional and not due to negligent conduct. However, if there was evidence of intentional take, we would refer the matter to the appropriate law

enforcement entities for investigation. This is consistent with regulations for areas currently enrolled in the SHA and in the AVEPA where we do not allow intentional take.

(2) Special handling: In accordance with 50 CFR 17.21(c)(3), any employee or agent of the USFWS or of a State wildlife agency may, in the course of their official duties, handle ferrets to aid sick or injured ferrets, salvage dead ferrets, and conduct other activities consistent with 50 CFR 17.84(g), their section 6 work plan, and 50 CFR 17.31. Employees or agents of other agencies would need to acquire the necessary permits from the USFWS for these activities.

(3) Arizona promulgation of regulations and other management for the conservation of the ferret as well as other species that, in turn, would benefit ferret recovery: For example, the AZGFD includes the ferret on the Species of Greatest Conservation Need Tier 1A (AZGFD 2012, p. 216). The list provides policy guidance on management priorities only, not legal or regulatory protection. The State also implements annual prairie dog shooting closures on public lands from April 1 to June 30.

(4) Coordination with landowners and managers: We discussed this rule with potentially affected State and Federal agencies, Tribes, local governments, private landowners, and other stakeholders in the SWEPA. These agencies and landowners and managers have indicated either support for, or no opposition to, this revision to the AVEPA. In advance of our developing the original rule for AVEPA, the AZGFD determined that designation of a nonessential experimental population was necessary to achieve landowner support to make a ferret reintroduction project viable (AZGFD 2016, p. 2; 61 FR 11325, March 20, 1996). To receive the same public support for their Management Plan, the AZGFD recommended expanding the AVEPA (AZGFD 2016, p. 2). Following consideration of their recommendation, we coordinated with AZGFD and the Navajo, Hopi, and Hualapai Tribes to develop the SWEPA.

(5) Public awareness and cooperation: We informed the public of the importance of the

SWEPA for the recovery of the ferret through the proposed rule and requested public comment. The replacement of the AVEPA to establish the SWEPA under section 10(j) of the ESA as a nonessential experimental population increases reintroduction opportunities and provides greater flexibility in the management of the reintroduced ferret. The nonessential experimental population designation will facilitate cooperation of the State, Tribes, private landowners, and other interests in the affected area.

(6) Potential effects to other species listed under the ESA: There are four federally listed species with distributions that overlap the SWEPA and with habitat requirements that could overlap the grassland habitats that support prairie dogs (table 1). However, we have not documented any of these species in current or potential ferret reintroduction sites and/or these species are unlikely to occur or compete with ferrets for resources. We do not expect ferret reintroduction efforts to result in adverse effects to these species.

TABLE 1—FEDERALLY LISTED SPECIES IN THE SWEPA

Species	Current Status in Arizona Under the ESA
Mexican wolf (*Canis lupus baileyi*)	Nonessential experimental
California condor (*Gymnogyps californianus*)	Nonessential experimental, Endangered
Northern aplomado falcon (*Falco femoralis septentrionalis*)	Nonessential experimental
Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*)	Endangered

Measures To Isolate or Contain the Experimental Population from Nonexperimental Populations

There are no naturally occurring wild populations of ferrets. Outside of reintroduced populations, the ferret is extirpated throughout its historical range, including in Arizona, New Mexico, and Utah (USFWS 2017, entire) (see "*Historical Range*" above). Therefore, we do not need any measures to isolate or contain reintroduced ferrets in the SWEPA from other populations of black-footed ferret.

Review and Evaluation of the Success or Failure of the SWEPA

Monitoring is a required element of all ferret reintroduction projects. Reintroduction

projects will conduct the three following types of monitoring:

(1) Reintroduction Effectiveness Monitoring: Reintroduction partners will monitor ferret population demographics and potential sources of fatality, including plague, annually for 5 years following the last release using spotlight surveys, snow tracking, other visual survey techniques, or possibly radiotelemetry of some individuals following AZGFD's Management Plan and the USFWS's Operations Manual (USFWS 2016a, pp. 25–59) or similar procedures identified in a management plan developed for a specific reintroduction site. Thereafter, partners will complete demographic surveys periodically to track population status. Surveys will incorporate methods to monitor breeding success and long-term survival rates, as appropriate. The USFWS anticipates that AZGFD, Tribes, and/or other participating partners will conduct monitoring, and they will include monitoring results in their annual reports.

(2) Donor Population Monitoring: We will acquire ferrets from the captive-breeding population or from another viable reintroduction site. The USFWS and our partners manage ferrets in the captive-breeding population in accordance with the AZA SSP® (Graves et al. 2018, entire). The AZA SSP® Husbandry Manual provides up-to-date protocols for the care, propagation, preconditioning, and transportation of captive ferrets, and all participating captive-breeding facilities use it.

The USFWS may translocate ferrets from other reintroduction sites, provided their removal will not negatively affect the extant population, and appropriate permits are issued in accordance with current regulations (50 CFR 17.22) prior to their removal. Population monitoring, following any removals for translocation, will occur under guidance of the USFWS-approved management plan for the donor site.

(3) Monitoring Effects to Other Listed Species and Critical Habitat: We do not expect adverse effects to other federally listed species or critical habitat (see "*Other Protections and Management Restrictions*" number 6, above).

Findings

Based on the above information and using the best scientific and commercial data available (in accordance with 50 CFR 17.81), we find that releasing ferrets into the SWEPA will further the conservation of the species and that these reintroduced populations are not essential to the continued existence of the species in the wild.

Summary of Changes from the Proposed Rule

Below, we highlight some of the changes made in the preamble to this final rule as a result of comments and additional analysis:

- Added information that suggests that reductions in prairie dog numbers and fitness may contribute to plague epizootics (see "Threats/Causes of Decline" above).
- Added the number of new reintroduction sites we intend to establish in the SWEPA (see "Experimental Population" above).
- Edited and added information in our discussion about the effects of grazing on prairie dogs to emphasize the complexity of the interactions and the site-specific variation of effects (see "How Will the Experimental Population (SWEPA) Further the Conservation of the Species?" above).
- Added information about the resiliency, redundancy, and representation of the ferret from the SSA to further support our experimental population designation of nonessential (see "How Will the Experimental Population (SWEPA) Further the Conservation of the Species?" above).
- Clarified language associated with the minimum occupied prairie-dog acreage for Gunnison's prairie dogs related to ferret reintroductions (see "Experimental Populations" above).

This final rule also incorporates minor, non-substantive clarifying edits (e.g., citation clarification, resolution of numerical or other inconsistencies, etc.) and the incorporation of additional information based on the public and peer review comments we received. However, the information we received during the comment period for the proposed rule did not change our

findings or the species-specific regulations that apply to this experimental population of ferrets.

Summary of Comments and Recommendations

In the proposed rule published on June 25, 2021 (86 FR 33613), we requested that all interested parties submit written comments on the proposal by August 24, 2021. In addition, in accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and updated guidance issued on August 22, 2016 (USFWS 2016b, entire), we solicited peer review of our proposed rule from six knowledgeable individuals with scientific expertise in ferret ecology and management. We received responses from four peer reviewers. We also contacted appropriate Federal and State agencies, Tribes, scientific experts and organizations, and other interested parties and invited them to comment on the proposal.

We reviewed all comments received from the public, States, Tribes, and peer reviewers for substantive issues and new information regarding the revision of an experimental population of ferrets in Arizona. Substantive comments are addressed in the following summary and have been incorporated into the final rule as appropriate.

Summary of Comments

Comment: One peer reviewer commented that we should include literature suggesting that other factors that reduce prairie dog numbers and fitness (e.g., grazing, shooting, poisoning, and drought) may contribute to triggering a plague epizootic.

Response: We added text and cited additional literature accordingly (see "Threats/Causes of Decline" above).

Comment: Two peer reviewers suggested that we update the text to incorporate recent research on SPV.

Response: We added text and cited an additional study accordingly (see "Recovery, Captive Breeding, and Reintroduction Efforts to Date" above).

Comment: One peer reviewer and several commenters asked us to elaborate as to why we consider the reintroduction in the AVEPA successful, considering the recent decline in ferret

numbers. Three commenters specifically expressed concerns that current land use practices and drought may have influenced the recent declines in the AVEPA.

Response: The population in the AVEPA increased to a minimum of 123 ferrets in 2012, and the population continues to persist following the subsequent decline. Because land management activities have been relatively consistent in the AVEPA since the first reintroduction in 1996, we conclude that those activities are unlikely to have caused the declines we observed in the AVEPA after 2012. Based on positive tests for plague in the area, plague is the most probable cause for the declines. Plague remains the most significant challenge to ferret population resiliency rangewide, and we will continue to require multiple management tools to lessen its effects on ferret populations. Accordingly, we expect the number of ferrets in each population to fluctuate over time, decreasing during plague outbreaks and increasing when plague is effectively controlled at a site. This scenario emphasizes the importance of having multiple, widely spaced populations to safeguard the species from the widespread chronic effects of plague as well as other periodic or random disturbances that may result in decreased population size or the loss of a population in one or more given areas.

Comment: Several commenters requested that we expand the experimental population area to include all of New Mexico, because potential habitat occurs there. Another commenter inquired about our inclusion of a portion of New Mexico.

Response: The proposed 10(j) rule included only portions of New Mexico that coincide with Navajo Nation lands. We have clarified this point in the final rule text. We developed the proposed boundary of the SWEPA in close coordination with our partners in Arizona—AZGFD, the Navajo Nation, the Hualapai Tribe, and the Hopi Tribe—to include the areas for which they would manage the field operations of a reintroduced ferret population. We acknowledge that there are other areas in New Mexico, and throughout the ferret's historical range, that may provide new reintroduction opportunities. Legal mechanisms are available to support ferret reintroductions at these sites, including, for example, the 2013 rangewide programmatic SHA and proposal of

additional experimental populations under section 10(j). We will identify and apply the appropriate mechanism to reintroduce ferrets on a site-specific basis after close coordination with partners in those areas.

Comment: Two commenters stated that the expansion of the experimental population over such a large area is unnecessary, because that larger area is not needed to meet the guidelines for Arizona specified in the ferret Recovery Plan. One commenter stated that the successful reintroduction at Aubrey Valley resulted in a ferret population in 2012 that exceeded the number of ferrets in the recovery guidelines for Arizona. The other commenter stated that the amount of prairie dog habitat in the AVEPA currently exceeds the amount of habitat in the recovery guidelines for Arizona.

Response: We provided State-specific guidelines in the rangewide Recovery Plan to assist planning needs and encourage broader recovery support across the ferret's historical range. The Recovery Plan states that the downlisting or delisting criteria may be fulfilled if they are met by some configuration other than that in the State-specific guidelines. Moreover, while we have acknowledged the success in Aubrey Valley, the recent decline in the ferret population at that site emphasizes the importance of having multiple, widely distributed populations to safeguard the species from the widespread chronic effects of plague as well as other periodic or random disturbances that may result in the loss of a population in one or more given areas. Establishing additional ferret populations in Arizona will help to ensure Arizona's contribution to the species' recovery over the long term.

Comment: One commenter was concerned that, by not explicitly identifying any specific suitable areas in the proposed rule, the proposed SWEPA is likely including more acreage than necessary for reintroduction.

Response: The SWEPA includes habitats associated with prairie dogs; that is, various grasslands and biotic communities in which grasslands are interspersed. We acknowledge that the entire SWEPA does not consist entirely of habitat suitable for ferrets, and we will reintroduce

ferrets only into areas that meet the criteria for reintroductions. In addition to the two active reintroduction areas in the SWEPA, there are four potential reintroduction areas, which will require active management before they can support a ferret population. In addition to these sites, we may identify other reintroduction sites in the SWEPA in the future. Furthermore, the SWEPA includes areas into which ferrets could potentially disperse from a reintroduction site; inclusion of these areas provides regulatory certainty to the landowners and managers in those potential dispersal areas.

Comment: One commenter was concerned that the large area of the proposed SWEPA will mean that ferrets may be introduced anywhere in that area but will not receive actual protections of the ESA.

Response: We have determined that establishing the proposed SWEPA is necessary to achieve widespread landowner support for viable ferret reintroduction projects in Arizona. The biggest hurdle to securing support of ferret reintroductions is overcoming partner fear of liability associated with section 9 prohibitions on take under the ESA. Relaxing section 9 incidental take prohibitions through the flexibilities afforded via section 10(j) of the ESA will facilitate ferret reintroductions throughout the species' range in Arizona. Based on ferret reintroductions at Aubrey Valley/Double O Ranch, existing land use practices can be compatible with ferret recovery. Section 9 prohibitions of the ESA will still apply to intentional or negligent conduct that results in take.

Comment: Four commenters discussed the effects of ferret reintroductions on cattle grazing. Two commenters expressed concern that managing landscapes for ferrets, specifically prairie dog habitat, in other areas has resulted in poorly managed, less resilient ecosystems and are concerned about this happening in the SWEPA, especially in conjunction with drought as an additional stressor. One commenter extended this concern to grazing wildlife in addition to livestock.

Response: Prairie dogs, an important component of grassland ecosystems, are native to the

area included within the proposed SWEPA. Managing for prairie dog colonies within the SWEPA will potentially restore beneficial ecosystem functions in managed areas. Prairie dogs positively affect ecosystem processes, resulting in increased soil mixing and nitrogen levels, for example, and affect vegetation composition, resulting in increased habitat heterogeneity on the landscape (Kotliar 1999, p. 178). Research has associated increases in plant nutritional levels and digestibility with prairie dog colonies (Detling and Whicker 1987, pp. 24–25). Livestock grazing occurs in and adjacent to the two established reintroduction sites in Arizona and has been compatible with ferret recovery. Future reintroduction sites will be selected based on their potential to support ferret reintroductions. Landowner and manager participation in activities directed at improving or maintaining habitat capable of supporting a ferret population is strictly voluntary. Prior to a ferret reintroduction, we will work with our partners to conduct outreach to landowners and affected stakeholders. AZGFD has a history of developing good working relationships with the livestock industry, notably landowners of the Aubrey Valley/Double O and Espee Ranch reintroduction sites, to initiate ferret reintroductions and conduct ongoing monitoring and maintenance at those sites.

Comment: One commenter expressed concern that, although agricultural crops do not represent a significant portion of the proposed SWEPA, management for prairie dog colonies could have negative effects on lands used for growing crops.

Response: We, in collaboration with our partners, identify potential reintroduction sites where there is landowner interest, and where current or desired land use practices are compatible with ferrets. Participation is voluntary. If reintroduced ferrets disperse from a reintroduction site, the 10(j) designation will allow for incidental take of ferrets (e.g., take that could happen from livestock grazing, farming, prairie dog control) in those additional areas in the SWEPA. We, in collaboration with our partners, would coordinate with landowners and managers affected by dispersing ferrets about available options, including voluntary participation in ferret recovery or potential removal of the ferrets from their land.

Comment: One commenter thought it seemed unwarranted to include the area in southeastern Arizona in the SWEPA at this time, because the population of prairie dogs in that area is not native, and it will take many years to establish a stable prairie dog population large enough to support the reintroduction of ferrets in this area.

Response: According to Hoffmeister (1986, p. 194), black-tailed prairie dogs are native to southeastern Arizona and occurred there until approximately 1938. We added this reference to the text within the rule (see "Biological Information" above). AZGFD reintroduced black-tailed prairie dogs in southeastern Arizona and manages those reintroductions. Though these prairie dog populations are currently too small to support a ferret population, we included the black-tailed prairie dog historical range in southeastern Arizona in the proposed SWEPA to increase opportunities for potential future ferret reintroductions.

Comment: One commenter pointed out that we state the total number of reintroduction sites as both 29 and 30 in different places in the proposed rule.

Response: We currently consider the Conata Basin/Badlands as 1 site; thus, we referenced 29 reintroduction sites in the proposed rule. In another place in the proposed rule, we inadvertently counted the Conata Basin/Badlands site as two sites. We initiated two additional reintroduction sites in 2021 that we had not included in the proposed rule. We thus modified the text in this final rule to state the number of currently active sites as 31.

Comment: One commenter stated that our determination that enzootic plague caused the ferret declines in the AVEPA is not wholly accurate and asked us to remove the reference to plague as the cause of the decline until we have information that is more conclusive.

Response: The ferret population in the AVEPA was increasing through 2012 when 123 breeding adults were documented. However, following 2012, the population has declined, despite consistent site management practices. Because of this and the recent detection of plague in coyotes and badgers in the Aubrey Valley, plague is the most likely cause of ferret decline in the AVEPA.

Comment: AZGFD requested that we include that the primary purpose of some of the ferrets released in Aubrey Valley was to place excess kits from propagation facilities, and the primary purpose for the ferrets we released at Double O Ranch was for research purposes.

Response: We adjusted the text accordingly in this final rule (see "Experimental Population Regulation Requirements" above).

Comment: One commenter asked about benefits to landowners that participate in ferret reintroductions and specifically asked about financial compensation. Another commenter expressed that financial compensation to participating landowners would improve the ferret reintroduction program.

Response: While the 10(j) rule does not describe a specific plan to compensate participating landowners, governmental and nongovernmental organizations have provided incentives to Tribes and private landowners associated with some ferret reintroductions in the past. Site-specific management plans will include details of any applicable compensation programs.

Comment: Three commenters expressed concerns that the large area of the SWEPA would expand the regulatory area and put more regulatory burden and potential penalties under the ESA on landowners. One commenter specifically expressed concern that a landowner without an SHA would experience increased regulatory burden if a ferret dispersed onto their property from an adjacent reintroduction site.

Response: The AVEPA reduced regulatory requirements by allowing most incidental take of ferrets. Applying the 10(j) rule to the SWEPA benefits the landowners within the entire SWEPA by providing them the same regulatory certainty and flexibilities of the existing programmatic SHA but without having individually to enroll their land in the SHA. If reintroduced ferrets disperse from a reintroduction site, the 10(j) designation will allow for incidental take of ferrets (e.g., take that could happen from livestock grazing, farming, prairie dog control) in those additional areas in the SWEPA. We, in collaboration with our partners, would

also coordinate with landowners affected by dispersal about available options, including voluntary participation in ferret recovery or potential removal of the ferrets from their land.

Comment: One commenter recommended that we retain the option for private landowners to enter into SHAs if they chose to assist in ferret recovery efforts.

Response: SHAs are compatible with 10(j) populations. Private landowners are not required to terminate an existing SHA, and new certificates of inclusion for the current programmatic SHA are not prohibited. SHAs remain an option for participating landowners; however, there are no significant differences between the terms and conditions of the SHA and 10(j) regulations related to how landowners operate their lands with respect to ferret recovery.

Comment: Two commenters stated that we should reintroduce ferrets to a site only after consent of all affected landowners, including landowners adjacent to and in the ferret dispersal range of a reintroduction site.

Response: Reintroduction sites are selected based on their potential to support ferret reintroductions and where there are willing landowners and managers. Prior to a ferret reintroduction, we will work with our partners to conduct outreach to landowners and affected stakeholders. The SWEPA includes areas into which ferrets could potentially disperse from a reintroduction site. We, in collaboration with our partners, will coordinate with landowners and managers affected by dispersing ferrets about available options, including voluntary participation in ferret recovery or potential removal of the ferrets from their land.

Comment: Two commenters stated that management for prairie dogs or ferret reintroductions on Federal land should occur only with the consent of grazing permittees using those lands. One commenter suggested that we set limits to livestock grazing on public lands.

Response: We will coordinate with other Federal agencies to support ferret reintroductions in ways that are compatible with their missions. Federal land management agencies have their own laws, policies, and regulations outlining how they manage lands under their authorities.

Comment: One commenter stated that the proposed rule clearly identifies and considers

prairie dog control methods in Arizona, but fails to do so for New Mexico and Utah, and is concerned that establishing the 10(j) rule will ultimately lead to new and challenging conflicts between Federal and State authorities.

Response: The area of the proposed SWEPA that extends into New Mexico and Utah is entirely within the Navajo Nation. The Navajo Nation manages wildlife resources within their boundaries independent of the States. We did not propose to include any land in New Mexico or Utah outside of the Navajo Nation.

Comment: Several commenters expressed concern about negative effects of livestock grazing to prairie dog populations. One commenter specifically requested that the final EA include additional information about the effects of livestock grazing on prairie dog colonies and ferret reintroductions.

Response: We have considered the effects that livestock grazing, and other activities may have on establishing an experimental population of ferrets. Livestock grazing became a significant feature on the Arizona landscape in the 1880s and peaked in intensity around the late 1890s and early 1900s (Milchunas 2006, p. 7). Grazing in arid and semiarid areas can alter species composition and communities, disrupt ecosystem functions, and alter ecosystem structure (Fleischner 1994, p. 631). Despite these effects, prairie dogs remained prominent on rangelands in Arizona during the period of heaviest grazing and did not begin declining until the time of systematic prairie dog eradication programs (Oakes 2000, pp. 169–171). Available literature reveals a wide range of potential effects of livestock grazing on ecosystems and considers some negative and some beneficial (Milchunas 2006, entire; Jones 2000, entire). Effects vary with site-specific characteristics and management, including habitat type, grazing intensity, and history of grazing (Milchunas 2006, entire; Jones 2000, entire; Milchunas and Lauenroth 1993, entire). The long history of prairie dog persistence with livestock grazing in Arizona and persistence of ferrets at the AVEPA lead us to conclude that livestock grazing and ranching activities can be compatible with maintaining occupied prairie dog habitat capable of supporting ferrets. We added text in this

final rule to support this conclusion (see "How Will the Experimental Population (SWEPA) Further the Conservation of the Species?" above). We do not evaluate effects of livestock grazing outside of the context of ferret reintroductions, because that consideration is beyond the scope of the evaluation necessary to establish an experimental population. In the draft EA, we do not evaluate the effects of livestock grazing on the affected environment, because the NEPA process requires us to consider the consequences of our proposed action. Livestock grazing currently occurs in the proposed SWEPA and is not part of our proposed action.

Comment: One commenter stated that we did not define "well-managed grazing" in the proposed rule or elsewhere and noted that some of the references we cited described "an overgrazed condition." The commenters asked that we clarify what we consider "well-managed grazing."

Response: The terminology "well-managed grazing" and "overgrazing" that we used and cited in the proposed rule was qualitative and relative. We have edited the text in this final rule not to rely on terms describing relative grazing intensity. The effects of livestock grazing on prairie dog populations and their habitat are complicated and depend on the habitat quality and quantity and other conditions at each specific site. Based on the persistence of ferrets at Aubrey Valley/Double O Ranch, rangelands managed for livestock grazing can support prairie dog populations. Prior to introducing ferrets in the SWEPA, we will assess prairie dog populations to determine if the site will support a ferret population.

Comment: One commenter stated that we should not require the removal of ferrets that leave the experimental population area, because such dispersal would further species recovery.

Response: The SWEPA includes all potential ferret habitat within Arizona and the Navajo Nation, excluding the Hopi Villages in District 6. All currently identified potential reintroduction sites within the SWEPA are far from the borders of the SWEPA. Thus, we expect ferret dispersal outside of the SWEPA to be unlikely. In the unlikely event that a ferret occurs outside of the SWEPA, regardless of origin, we will work closely with affected landowners and managers to

ensure that we develop applicable conservation measures cooperatively and to the benefit of landowners, managers, and ferrets. The rule allows for, but does not require, removal of ferrets outside of the SWEPA.

Comment: One commenter stated that reintroduction efforts should be primarily focused on how best to manage plague in prairie dog populations, not only regarding the effects on ferret reintroduction, but also to other species in the area and local communities. Another commenter stated that the rule should include proactive measures to bring potential reintroduction sites into the condition necessary to host ferret populations of sufficient size and resilience to contribute towards recovery. This commenter further stated that the rangewide decline in the ferret population since about 2007 "appears to be that reintroduction sites are generally too small to support ferret populations through plague outbreaks."

Response: Plague management is currently, and will continue to be, a management focus at existing and potential future ferret reintroduction sites, which will also benefit other species and local communities. The factors responsible for the eruption of epizootics and the maintenance of enzootic plague are currently not fully understood; research has identified multiple influential factors (USFWS 2019, p. 17). Because plague may persist in an enzootic state at several existing and potential reintroduction sites, and the social nature of prairie dogs facilitates plague transmission, larger colony size is not a safeguard against the spread of plague. A more effective strategy now is having multiple, widely spaced populations to buffer plague transmission.

Comment: One commenter seemed to interpret the purpose of ferret reintroduction as a form of prairie dog control.

Response: Our responsibility under the ESA is to conserve threatened and endangered species and the ecosystems upon which they depend. Our purpose in establishing the SWEPA is to promote the recovery of the ferret by establishing viable ferret populations. Viable ferret populations depend on persistent prairie dog populations. We are willing to work with landowners and managers amenable to maintaining prairie dog populations on their property to support a

reintroduced ferret population. Outside of reintroduction areas, we, in collaboration with our partners, will work with landowners to avoid or minimize any adverse effects to ferrets that could occur from prairie dog control.

Comment: One commenter stated that the proposed rule understated the effects of current prairie dog poisoning. The commenter specifically pointed out that we list prairie dog poisoning as a concern in the Recovery Plan and recommended more protective regulations to improve opportunities for ferret reintroductions.

Response: The Recovery Plan describes the historical effect of poisons on the decline of prairie dogs and ferrets and assesses the effects of prairie dog poisoning to ferrets rangewide. The current use of poison to control prairie dogs is much reduced from historical use, and the current level of threat varies across the ferret's range. In the proposed rule, we considered the threat of prairie dog poisoning to ferrets in Arizona and concluded that prairie dog poisoning within the State is relatively minimal compared to historical use. For example, black-tailed prairie dogs were extirpated from southeastern Arizona by the late 1930's due to widespread indiscriminate poisoning for all small burrowing mammals (Hoffmeister 1986, p. 196). Comparatively, from 2013 through 2019, the Animal and Plant Health Inspection Service's (APHIS) Wildlife Services treated prairie dogs with zinc phosphide at three private properties totaling 56 ac (23 ha) of prairie dog colonies (C. Carrillo, pers. comm., APHIS, October 23, 2019). In addition, the poisons that pose the greatest risk to ferrets, anticoagulants, are banned in Arizona. Other poisons have the potential to affect ferrets by affecting prairie dog populations. In past ferret reintroductions in Arizona, we worked with partners to identify landowners and managers willing to manage prairie dogs on their properties for ferrets. We will take a similar approach for future ferret reintroductions.

Comment: Three commenters expressed concerns about the effects of shooting on prairie dog populations at ferret reintroduction sites. Two commenters thought that we had not adequately considered the effects of prairie dog shooting. One commenter mentioned specific

research about the effects of shooting on prairie dog populations and requested that the EA incorporate that research. All three commenters asked for increased restrictions on prairie dog shooting to support ferret reintroductions. One commenter additionally expressed concern about potential lead poisoning from shooting prairie dogs.

Response: We considered the potential for effects of prairie dog shooting on ferret reintroductions in the SWEPA in this 10(j) rule. We referenced relevant studies about effects of shooting on prairie dog populations (see "*Actions and Activities that May Affect the Introduced Population*"). These effects vary across sites and with intensity of shooting. Based on current prairie dog monitoring data, we do not think that shooting is having substantial population-level effects on prairie dogs in established reintroduction sites in the SWEPA or in the potential reintroduction sites that are being monitored. Prairie dog monitoring will inform the suitability of a potential ferret reintroduction site and indicate whether additional management is needed to maintain prairie dog populations in support of ferrets. AZGFD regulates prairie dog hunting in most of Arizona, and as described in their Management Plan, they may close areas to prairie dog hunting at ferret reintroduction sites if monitoring shows a greater than 15 percent decline in prairie dog occupied acreage over a 3-year period. Tribes regulate prairie dog hunting on their respective lands. To the extent requested, we will assist any Tribe interested in reintroducing ferrets to address prairie dog management at potential reintroduction sites.

We did not evaluate the effects of prairie dog shooting on ferrets in the EA, because that type of a consideration is outside of the scope of an EA (40 CFR 1501.5). In the EA we are required to evaluate how the proposed action will affect the condition of the proposed SWEPA. In our evaluation of the social and economic conditions, we considered the effects of the proposed action to natural resource-based recreation, including prairie dog shooting.

While lead contamination is a potential threat resulting from prairie dog shooting, we have not documented any lead poisoning of ferrets. This species may be less susceptible to chronic lead poisoning than are longer lived predators (Pain et al. 2009, p. 107).

Comment: One commenter stated that our discussion of environmental consequences in the EA should include Tribal prairie dog shooting regulations in addition to the State regulations we included.

Response: As sovereign nations, each Tribe has the authority to regulate hunting on their lands. When reintroduction sites contain Tribal land, we do and will work with Tribes to ensure that measures to manage prairie dogs are compatible with ferret reintroductions.

Comment: One commenter asked about the extent to which ferret prey bases are being sustained by supplemental feeding, a strategy listed in AZGFD's Management Plan.

Response: AZGFD lists prairie dog supplemental feeding as a potential management strategy for specific circumstances; it is not a long-term strategy (AZGFD 2016, p. 15). We will reintroduce ferrets only at sites that have demonstrated persistent prairie dog populations at levels necessary to support ferrets.

Comment: One commenter asked that we address the potential threat of feral dogs to ferrets.

Response: Prior to a ferret reintroduction, we will assess potential site-specific threats. We expect feral dogs to pose a similar threat at ferret reintroduction sites as do coyotes. Coyote predation was a concern at early ferret reintroduction sites. Increased preconditioning of captive-born ferrets through outdoor pen rearing in recent years facilitates learning of important natural predator-avoidance behaviors and has led to increased survival rates following ferret releases into the wild (Biggins et al. 1998, pp. 647–648). In addition, like coyotes, feral dogs are a potential carrier of disease. We vaccinate all ferrets for canine distemper before reintroductions, continue disease management at all reintroduction sites, and expect that our current practices would minimize the potential threat that feral dogs, like coyotes, may pose at a reintroduction site.

Comment: One commenter suggested that we need to assess the effects of land management activities (e.g., livestock grazing, off-highway vehicle use, and other recreational activities) at black-tailed prairie dog sites.

Response: Currently, the SWEPA does not contain enough occupied black-tailed prairie dog habitat to support a ferret reintroduction. Management may increase black-tailed prairie dogs in the future. When a black-tailed prairie dog population becomes large enough to support a ferret reintroduction, we will assess the threats to a ferret population and address those threats in a site-specific management plan.

Comment: One commenter expressed concern about effects of human–wildlife interactions on ferrets and pointed out the lack of data informing appropriate distances between ferret populations and human residential areas.

Response: We are not aware of effects of a reintroduction site's proximity to a human residential area on ferrets. Reintroduction sites are typically relatively remote and distant from large residential developments. The potential reintroduction sites identified in the proposed SWEPA are not within or adjacent to areas with high human densities.

Comment: One commenter stated that the 10(j) rule should commit to proactive management measures to bring potential reintroduction sites into the condition necessary to support ferret populations of sufficient size and resilience to contribute towards recovery.

Response: The establishment of the SWEPA to support future reintroductions promotes ferret recovery. Existing management plans or plans we develop in cooperation with our partners and stakeholders will guide management of ferret populations at individual reintroduction sites in the SWEPA. We remain committed to working with partners to encourage and implement proactive prairie dog management at current and potential reintroduction sites within the SWEPA.

Comment: One commenter, in response to a statement about the negative consequences of fragmented prairie dog colonies in the preamble of the proposed rule under "Ecology/Habitat Use/Movement", stated: "An argument could be made that black-footed ferret populations that are associated with Gunnison's prairie dogs, which are extremely fragmented and less dense than black-tailed prairie dogs, could be more resilient to stochastic events than what is inferred."

Response: The less dense spatial distribution of Gunnison's prairie dogs could increase

resiliency by buffering the population against the spread of plague and other stochastic events. However, prairie dog colonies that exist in smaller, isolated configurations are likely to have reduced resiliency because the smaller populations are more vulnerable to extirpation, and the isolation limits immigration and genetic exchange. We changed the wording in this final rule to clarify our description of the spatial distribution of prairie dog habitat (see "Threats/Causes of Decline" above).

Comment: One commenter suggested that we add "availability of prey" as a factor influencing ferret dispersal in our discussion of "Actual or Anticipated Movements."

Response: We edited the text accordingly in this final rule. We previously incorporated prey into our consideration of habitat in the proposed rule, however, we agree that explicitly identifying it in our discussion of actual or anticipated movements improves clarity.

Comment: One commenter asked what the estimated sustained population level is for the ferret.

Response: The Recovery Plan identifies the number of populations necessary rangewide to downlist the ferret from endangered to threatened and to remove the ferret from listing under the ESA: at least 10 and at least 30 populations, respectively. The Recovery Plan criteria indicate that each of those populations consist of at least 30 breeding adults, and it details our methodology for establishing these criteria. We expect the number of ferrets in each population to fluctuate over time, decreasing during plague outbreaks and increasing when plague is effectively controlled at a site. This assumption emphasizes the importance of having multiple, widely spaced populations to safeguard the species from the widespread chronic effects of plague as well as other periodic or random disturbances that may result in the loss of a population in one or more given areas.

Comment: Two commenters noted the discrepancy between the acreage of Gunnison's prairie dog habitat identified by the USFWS and AZGFD needed to support a ferret population: 7,415 and 5,540 ac (3,000 and 2,242 ha), respectively. One commenter expressed concern that this discrepancy has implications for reducing the success of reintroductions.

Response: The two different numbers identified by us and AZGFD represent two different estimates, not requirements, of the amount of Gunnison's prairie dog habitat needed to support a ferret population. The USFWS acknowledges in this final rule that the actual amount of prairie dog habitat needed will vary across the ferret's range. We allocate ferrets for reintroductions based on the best information available about the proposed site. While this information includes the total acreage of prairie dog habitat, we also consider other site-specific factors to assess a site's overall ability to support a ferret population. We have edited the text in this final rule to clarify that these numbers are estimates, and not requirements, to guide ferret reintroduction site selection (see "Experimental Population" above).

Comment: One commenter stated that the USFWS cannot make an essentiality determination for a proposed 10(j) population if there is no specific proposed reintroduction. The commenter further stated that, even if making a determination were appropriate, the proposed rule failed to justify a nonessential designation for the SWEPA, because we did not adequately address the species' viability in the wild or consider the status of other ferret populations in the wild.

Response: When we authorize the reintroduction of an endangered species outside of its current range as an experimental population, we are required to make a finding, based solely on the best scientific and commercial data available, and the supporting factual basis, on whether the experimental population is, or is not, essential to the continued existence of the species in the wild. We are not required by either the ESA or applicable regulations to postpone making this determination until we have made a decision regarding a "specific proposed reintroduction." We have made the essentiality determination in this rule in accordance with the ESA and applicable regulations. We have addressed species' viability in the wild across its range to make an essentiality determination for the proposed SWEPA. We used the conservation biology principles of resiliency, redundancy, and representation to assess current and future species viability (Shaffer and Stein 2000, entire) in our SSA (USFWS 2019, pp. 43–83); we summarize that assessment in the "Is the Experimental Population Essential or Nonessential?" portion of the preamble to the

proposed rule.

Given the current and anticipated future numbers of ferret populations and their distribution in the wild, there is no indication that populations established in the SWEPA could be described as those "whose loss would be likely to appreciably reduce the likelihood of survival of the species in the wild." Loss of the SWEPA would not affect the remaining populations of ferrets in the wild. For these reasons, a nonessential determination for the SWEPA is valid. Additionally, captive-breeding efforts continue to support the establishment of more populations throughout the species' range.

Comment: One commenter stated that the draft EA fails to disclose that all the reintroduced ferret populations are listed as 10(j) nonessential and that the USFWS cannot rely on other "nonessential" populations to designate the SWEPA population as nonessential.

Response: Not all the ferret populations in the wild are nonessential experimental populations; we have used a variety of other regulatory mechanisms, including section 10(a)(1)(A) permits and SHAs, to reintroduce ferrets. Of the 18 currently active ferret reintroduction sites, 5 are nonessential experimental populations. The remainder occur under section 10(a)(1)(A) permits and SHAs. In 2019, active reintroduction sites were evaluated in the SSA; two were considered to be in high-resiliency condition and eight to be in moderate-resiliency condition (USFWS 2020, pp. 63–64). All the aforementioned regulatory mechanisms remain available to facilitate future ferret reintroductions across the species' range. Subpart H, part 17, of title 50 of the Code of Federal Regulations does not limit consideration of any population of a species when making an essentiality determination and requires an evaluation of the species as a whole, including all populations captive and wild.

Comment: One commenter expressed concern that we made our essentiality determination out of convenience to landowners and managers. The commenter specifically cited text in the proposed rule: We prefer applying the experimental population designation and regulations to the entire proposed SWEPA, because a single set of statutes and regulations and a single management

framework would then apply to all lands, non-Federal and Federal, containing potential ferret habitat within the designated SWEPA boundary.

Response: The cited text is from the portion of the preamble pertaining to management restrictions, protective measures, and other special management and not from the portion pertaining to whether the proposed experimental population is essential or nonessential. We did not consider the cited text within the context of our essentiality determination. Rather, the cited text refers to the use of a single regulatory mechanism, the 10(j) rule, rather than multiple regulatory or permitting mechanisms, within the SWEPA.

Comment: One commenter expressed concern that "a broad nonessential designation divests Federal land managers of important tools to protect the species, including the obligation to formally consult to prevent jeopardy under ESA section 7(a)(2), and the ability to designate critical habitat." The commenter expressed concern that there would never be an obligation to evaluate the potential for cumulative management actions to result in jeopardy.

Response: Under 50 CFR 17.83(a), for the purposes of section 7 of the ESA, we treat a nonessential experimental population as if it were a threatened species when located in a National Wildlife Refuge or unit of the National Park Service (NPS), and Federal agencies follow conservation and consultation requirements per sections 7(a)(1) and 7(a)(2) of the ESA, respectively. We treat nonessential experimental populations outside of a National Wildlife Refuge or NPS unit as species proposed for listing, and Federal agencies follow the provisions of sections 7(a)(1) and 7(a)(4) of the ESA. Section 7(a)(4) requires Federal agencies to confer with us on actions that are likely to jeopardize the continued existence of a species proposed to be listed. Because the nonessential experimental population is, by definition, not essential to the continued existence of the species in the wild, the effects of proposed actions on the population will generally not rise to the level of "jeopardy." Nonetheless, some Federal agencies voluntarily confer with us on actions that may affect a species proposed for listing. Ferrets were listed under the ESA prior to the 1978 critical habitat amendments; therefore, designation of critical habitat for

this species even outside of nonessential experimental population areas is at the discretion of the Secretary (50 CFR 424.12(e); USFWS 2013a, p 13).

Comment: One commenter stated that the EA should consider additional action alternatives, including an alternative that exempts federally managed lands from the SWEPA and an alternative that does not extend nonessential status to federally managed lands in the SWEPA. One commenter noted that, while the EA addresses the need of a 10(j) rule to garner support from private landowners on private lands, it does not specifically analyze the viability of ferret reintroductions on federally managed lands where there are regulatory mandates to further the conservation of imperiled species.

Response: In the EA, we evaluated the alternatives that we think are reasonable and feasible. Future reintroduced ferret populations will likely cross boundaries of land ownership. The potential sites identified in the rule contain private, Federal, State, and Tribal lands. Having a single regulatory mechanism for the entire experimental population will simplify management of the population. We did not consider an alternative that does not extend nonessential status to federally managed land, because land ownership is not a consideration of an essentiality determination.

Comment: One commenter stated that, rather than addressing management in the SWEPA, we deferred to the plan that AZGFD developed specifically for the AVEPA, not the SWEPA.

Response: AZGFD developed their Management Plan for the Black-footed Ferret in Arizona based on the best available science, including information in USFWS documents, such as the Recovery Plan and the Operations Manual, to guide ferret management statewide. We reviewed and commented on the AZGFD's Management Plan in its development, and it complements the USFWS Recovery Plan and the Operations Manual. For potential reintroduction sites on Tribal lands, we will offer our cooperation and assistance in the development of applicable management plans.

Comment: One commenter noted that the draft EA and proposed rule do not set

timeframes or other commitments for reintroductions and provide only vague plans for ferret reintroduction in the SWEPA. The commenter further stated that the 10(j) rule must commit to management efforts to ensure successful reintroductions.

Response: Neither section 10(j) of the ESA nor the 10(j) regulations found at 50 CFR 17.81 require the USFWS to set timeframes or other commitments for reintroductions. In the proposed rule, we included the information necessary to identify the experimental population, as required by regulation. The potential reintroduction sites require additional management before site conditions could support a ferret population. We will work with our partners to develop site-specific management plans that include specific details regarding reintroductions, when site conditions can support ferret populations. Identifying these details in the future will allow us to take advantage of future opportunities as they arise. Our regulations require us to consider the likelihood that the experimental population will become established and survive in the foreseeable future but do not require commitment to specific management actions. In the proposed rule, we considered the potential for appropriate management for the ferret and its habitat in Arizona. Given the AZGFD's past commitment to ferret reintroduction and its development of a Management Plan for ferret reintroduction throughout its range in Arizona, and interest from the Hopi Tribe, Hualapai Tribe, and the Navajo Nation in reintroductions of and management for ferrets on their Tribal lands, we have a high level of confidence in implementation of management to support ferret populations in the SWEPA.

Comment: One commenter stated that the proposed rule lacks concrete, enforceable mechanisms to prevent unsustainable levels of take.

Response: Neither the ESA nor the 10(j) regulations found at 50 CFR 17.81 require concrete, enforceable mechanisms to prevent unsustainable levels of take. In accordance with 50 CFR 17.82, we have identified special rules for ferret nonessential experimental populations in 50 CFR 17.84(g). These allow most forms of incidental take of ferrets in the experimental population area, if the take is unintentional and not due to negligent conduct. Intentional and negligent take

within the experimental population area is still prohibited and unlawful pursuant to section 9 of the ESA. The persistence of ferrets in the AVEPA/Double O Ranch has demonstrated that these same take provisions for the AVEPA/Double O Ranch have not meaningfully affected that population. We will work with our partners and stakeholders to apply existing management plans or develop site-specific management plans for future reintroduction sites. We addressed the sustainability of the ferret population in the "Likelihood of Population Establishment and Survival" portion of the preamble to the proposed rule.

Comment: One commenter was concerned that the USFWS is abdicating Federal authority of the reintroduction program to AZGFD. The commenter further stated that the rule should make clear that the USFWS holds primary responsibility for ferret recovery, has the authority to conduct and manage reintroductions even when parties such as permittees and State agencies oppose such efforts, and that the USFWS and other Federal agencies are under a constant duty pursuant to ESA section 7(a)(1) to utilize their authority in furtherance of ferret conservation.

Response: The USFWS has in no way abdicated its Federal authority regarding the ferret reintroduction program to AZGFD. Our final 10(j) rule revising the current nonessential experimental population of the black-footed ferrets is a responsible use of our authority under the ESA. Section 6 of the Act specifically states that, in carrying out the programs authorized by the ESA, the Secretary shall cooperate to the maximum extent practicable with the States and that the Secretary may enter into agreements with any State for the administration and management of any area established for the conservation of endangered species or threatened species. The USFWS is active in the management of all current and future potential ferret reintroduction sites. Additionally, we are responsible for allocating captive-bred ferrets and ensuring that reintroduction sites are suitable for supporting ferret populations. Our regulations in 50 CFR 17.81(d) require us to consult with AZGFD in developing and implementing this 10(j) rule, which we have done. This rule, to the maximum extent practicable, represents an agreement between the USFWS, affected Tribes, State and Federal agencies, and persons holding any interest in land that

the establishment of an experimental population may affect. The mission of the USFWS directs us to work with others to conserve, protect, and enhance wildlife and their habitats. The USFWS Recovery Plan for the Black-footed Ferret additionally states that the development of partnerships with private landowners and Tribes is essential to recovery of the species.

The AZGFD has demonstrated its commitment to ferret conservation through their long-term active involvement in ferret conservation, including the development of the Management Plan for the Black-footed Ferret in Arizona. AZGFD has also demonstrated a commitment to our scientific understanding of ferret ecology and husbandry techniques and to developing relationships with private landowners essential for ferret conservation. The feasibility of future reintroductions will depend on such relationships with private landowners. Given these factors, we partner with AZGFD on ferret reintroductions on non-Tribal lands in Arizona.

In addition to private lands, all four future potential reintroduction sites identified in the proposed rule include Federal lands. We will coordinate with our Federal partners to use their authorities to further ferret recovery. We will also offer our cooperation and assistance to Tribes in the development of applicable management plans on Tribal lands.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866, 13563, and 14094)

Executive Order 14094 reaffirms the principles of E.O. 12866 and E.O. 13563 and states that regulatory analysis should facilitate agency efforts to develop regulations that serve the public interest, advance statutory objectives, and are consistent with E.O. 12866, E.O. 13563, and the Presidential Memorandum of January 20, 2021 (Modernizing Regulatory Review). Regulatory analysis, as practicable and appropriate, shall recognize distributive impacts and equity, to the extent permitted by law. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this final rule in a manner consistent with these requirements.

E.O. 12866, as reaffirmed by E.O. 13563 and E.O. 14094, provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB) will review all significant rules. OIRA has determined that this rule is not significant.

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

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

The affected area includes release sites in Arizona, Tribal lands that coincide with Arizona, lands of the Navajo Nation that coincide with Arizona, New Mexico, and Utah, and adjacent areas into which ferrets may disperse, which over time could include significant portions of the SWEPA. Because of the regulatory flexibility for Federal agency actions provided by the nonessential experimental designation and the exemption for incidental take in the special rule, this rule is not expected to have significant effects on any activities on Federal, State, Tribal, or private lands in the revised area. Concerning section 7(a)(2), we treat the population as proposed for listing outside of NPS and USFWS-managed National Wildlife Refuge lands, and we do not require Federal action agencies other than NPS and USFWS

National Wildlife Refuges to consult with us on their activities. Section 7(a)(4) requires other Federal agencies to confer (rather than consult) with the USFWS on actions that are likely to jeopardize the continued existence of a species proposed for listing. However, because a nonessential experimental population is, by definition, not essential to the survival of the species, we will likely never require a conference for the ferret populations in the SWEPA. Furthermore, the results of a conference are advisory in nature and do not restrict Federal agencies from carrying out, funding, or authorizing activities. In addition, section 7(a)(1) requires Federal agencies to use their authorities to carry out programs to further the conservation of listed species, which will apply on any lands in the revised area. As a result, and in accordance with these regulations, some modifications to proposed Federal actions in the SWEPA may occur to benefit the ferret, but we do not expect implementation of these regulations to halt or substantially modify proposed projects.

This revision includes the same authorizations provided in the AVEPA for incidental take of the ferret but over a larger landscape, the SWEPA. The regulations implementing the ESA define "incidental take" as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity such as agricultural activities and other rural development, camping, hiking, hunting, vehicle use of roads and highways, and other activities that are in accordance with Federal, Tribal, State, and local laws and regulations. This rule does not authorize intentional take of ferrets for purposes other than authorized data collection or recovery purposes. Intentional take for research or recovery purposes would require a section 10(a)(1)(A) recovery permit under the ESA.

The principal activities on private property in or near the revised nonessential experimental population area are livestock grazing and associated ranch management practices (e.g., fencing, weed treatments, water developments, and maintenance). Ferret presence will not affect these land uses because there will be no new or additional economic or regulatory restrictions imposed upon States, non-Federal entities, or members of the public due to the

presence of the ferret, and Federal agencies will have to comply with sections 7(a)(1) and 7(a)(4) of the ESA only in these areas. Therefore, we do not expect this rulemaking to have any significant adverse impacts to activities on private lands in the SWEPA.

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

In accordance with this act:

(1) This rule will not "significantly or uniquely" affect small governments because it will not place additional requirements on any city, county, or other local municipalities. The USFWS determined that this rule will not impose a cost of $100 million or more in any given year on local or State governments or private entities. Therefore, this rule does not require a small government agency plan.

(2) This rule is not a "significant regulatory action" under this act; it will not produce a Federal mandate of $100 million or more in any year. The revised nonessential experimental population area for the ferret will not impose any additional management or protection requirements on the States or other entities.

Takings (E.O. 12630)

In accordance with E.O. 12630, this rule does not have significant takings implications. It allows for the take, as defined in the ESA, of reintroduced ferrets when such take is incidental to an otherwise legal activity, such as livestock grazing, agriculture, recreation (e.g., off-highway vehicle use), and other activities that are in accordance with law and regulation. Therefore, the revision of the AVEPA to encompass a larger area, the SWEPA, will not conflict with existing or proposed human activities or hinder public land use.

This order does not require a takings implication assessment because this rule: (1) will not effectively compel a property owner to suffer a physical invasion of property, and (2) will not deny economically beneficial or productive use of the land. The rule substantially advances a legitimate government interest (conservation and recovery of a listed species) and does not present a barrier to reasonable and expected beneficial use of private property.

Federalism (E.O. 13132)

In accordance with E.O. 13132, we have considered whether this rule has significant federalism effects and determined we do not need to conduct a federalism assessment. It does not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government. In keeping with Department of the Interior policy, we requested information from and coordinated development of this rule with the affected resource agencies. Achieving the recovery goals for this species would contribute to the eventual delisting of the ferret and its return to State management. We do not expect any intrusion on State administration or policy, change in roles or responsibilities of Federal or State governments, or substantial direct effect on fiscal capacity. The rule operates to maintain the existing relationship between the State and the Federal Government, and we will implement it in coordination with the State of Arizona. Therefore, this rule does not have significant federalism effects or implications to warrant preparation of a federalism assessment under the provisions of E.O. 13132.

Civil Justice Reform (E.O. 12988)

In accordance with E.O. 12988, the Office of the Solicitor has determined that this rule will not unduly burden the judicial system and will meet the requirements of sections (3)(a) and (3)(b)(2) of the Order.

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

This rule does not contain any new collection of information that requires approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). OMB has previously approved the information collection requirements associated with reporting the taking of experimental populations (50 CFR 17.84) and assigned control number 1018–0095 (expires 09/30/2023, and in accordance with 5 CFR 1320.10, an agency may continue to conduct or sponsor this collection of information while the submission

is pending at OMB). The USFWS may not collect or sponsor and may not require response to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.)

In compliance with all provisions of the National Environmental Policy Act of 1969 (NEPA), we have analyzed the impact of this final rule. In cooperation with the AZGFD, the Hopi Tribe, Hualapai Tribe, and the Navajo Nation, we have prepared an environmental assessment and a FONSI for this action and have made them available for public inspection (see **ADDRESSES**).

Government-to-Government Relationships with Tribes

In accordance with the Executive Memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951, May 4, 1994), E.O. 13175 (65 FR 67249, November 9, 2000), and the Department of the Interior Manual Chapter 512 DM 2, we have considered possible effects of this rule revision on federally recognized Indian Tribes. We determined that the SWEPA overlaps or is adjacent to Tribal lands. Potential reintroduction sites identified in this revision, the CO Bar Ranch and Petrified Forest National Park, are near or adjacent to Tribal lands, as is the existing AVEPA where a reintroduced ferret population exists. We offered government-to-government consultation to nine Tribes: the Havasupai, Hopi, Hualapai, San Carlos Apache, San Juan-Southern Paiute, White Mountain Apache, and Yavapai-Prescott Tribes, Navajo Nation, and the Pueblo of Zuni. We met with the Hualapai, Hopi, and White Mountain Apache Tribes and the Navajo Nation about the proposed revision. Participation in ferret recovery is voluntary. If suitable habitat for ferret recovery is available on their lands, Tribes may choose either not to participate, or to participate through authorities under section 10(j), section 10(a)(1)(A), or the SHA (USFWS 2013b, entire). If we introduce ferrets onto non-Tribal lands adjacent to Tribal lands and any ferrets disperse onto Tribal lands, the aforementioned authorities will provide more regulatory flexibility under the ESA through allowances for incidental take.

Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (E.O. 13211)

E.O. 13211 requires agencies to prepare statements of energy effects when undertaking certain actions. We do not expect this rule to have a significant effect on energy supplies, distribution, and use. Because this action is not a significant energy action, this order does not require a statement of energy effects.

References Cited

A complete list of all references cited in this final rule is available online at *https://www.regulations.gov* at Docket Number FWS-R2-ES-2020-0123, or upon request from the Arizona Ecological Services Field Office (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this rule are staff members of the USFWS Arizona Ecological Services Field Office (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

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

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

2. In § 17.11 in paragraph (h), amend the List of Endangered and Threatened Wildlife under "MAMMALS" by revising the entries for "Ferret, black-footed" and adding

seven new entries for the “Ferret, black-footed” to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
MAMMALS				
* * * * * * *				
Ferret, black-footed	*Mustela nigripes*	Wherever found, except where listed as an experimental population	E	32 FR 4001, 3/11/1967; 35 FR 16047, 10/13/1970.
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of WY (Shirley Basin/Medicine Bow Management Area); see § 17.84(g)(9)(i))	XN	56 FR 41473, 8/21/1991; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of SD (Conata Basin/Badlands Reintroduction Area); see § 17.84(g)(9)(ii))	XN	59 FR 42682, 8/18/1994; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of MT (Northcentral Montana Reintroduction Area); see § 17.84(g)(9)(iii))	XN	59 FR 42696, 8/18/1994; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of AZ, NM, UT (Southwest Experimental Population Area), see § 17.84(g)(9)(iv))	XN	61 FR 11320, 3/20/1996; 88 FR [INSERT *FEDERAL REGISTER* PAGE WHERE THE DOCUMENT BEGINS], [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of CO, UT (Northwestern Colorado/Northeastern Utah Experimental Population Area), see § 17.84(g)(9)(v))	XN	63 FR 52824, 10/1/1998; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of SD (Cheyenne River Sioux Tribe Reintroduction Area), see § 17.84(g)(9)(vi))	XN	65 FR 60879, 10/13/2000; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (parts of SD (Rosebud Sioux Reservation Experimental Population Area), see § 17.84(g)(9)(vii))	XN	68 FR 26498, 5/16/2003; 50 CFR 17.84(g).[10j]
Ferret, black-footed	*Mustela nigripes*	U.S.A. (most of WY (Wyoming Experimental Population Area), see § 17.84(g)(9)(viii))	XN	80 FR 66821, 10/30/2015; 50 CFR 17.84(g).[10j]
* * * * * * *				

3. Amend § 17.84 by revising paragraphs (g)(1), (g)(6)(iv), and (g)(9)(iv), and removing the fourth map (depicting the Aubrey Valley Experimental Population Area) and adding in its place Map 4 to paragraph (g) to read as follows:

§ 17.84 Special rules—vertebrates.

* * * * *

(g) * * *

(1) The black-footed ferret populations identified in paragraphs (g)(9)(i) through (viii) of this section are nonessential experimental populations. We will manage each of these populations, and each reintroduction site in the Southwest and Wyoming nonessential experimental populations, in accordance with their respective management plans.

* * * * *

(6) * * *

(iv) Report such taking in the Southwest Experimental Population Area (SWEPA) to the Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, Phoenix, Arizona (telephone: 602–242–0210).

* * * * *

(9) * * *

(iv) We consider the Southwest Experimental Population Area (SWEPA) to be the area shown on a map following paragraph (g)(12) of this section. The SWEPA includes the core recovery areas for this species in Arizona. The boundary of the northern section of the SWEPA is those parts of Apache, Coconino, Gila, Mohave, Navajo, and Yavapai Counties, Arizona, that include the northern area as delineated on the map, excluding Hopi District 6. The northern section also includes portions of Cibola, McKinley, Rio Arriba, Sandoval, and San Juan Counties, New Mexico, and San Juan County, Utah, that coincide with Navajo Nation lands. The boundary of the southern section of the SWEPA is those parts of Cochise, Pima, Pinal, Graham, and Santa Cruz Counties, Arizona, that include the southern area as delineated on the map. After

the first breeding season following the first year of black-footed ferret release, we will consider any black-footed ferret found in the SWEPA as part of the nonessential experimental population. We would not consider a black-footed ferret occurring outside of the Arizona, New Mexico, and Utah portions of the SWEPA a member of the nonessential experimental population, and we may capture it for genetic testing. We may dispose of the captured animal in the following ways:

(A) If an animal is genetically determined to have originated from the experimental population, we may return it to the reintroduction area or to a captive-breeding facility.

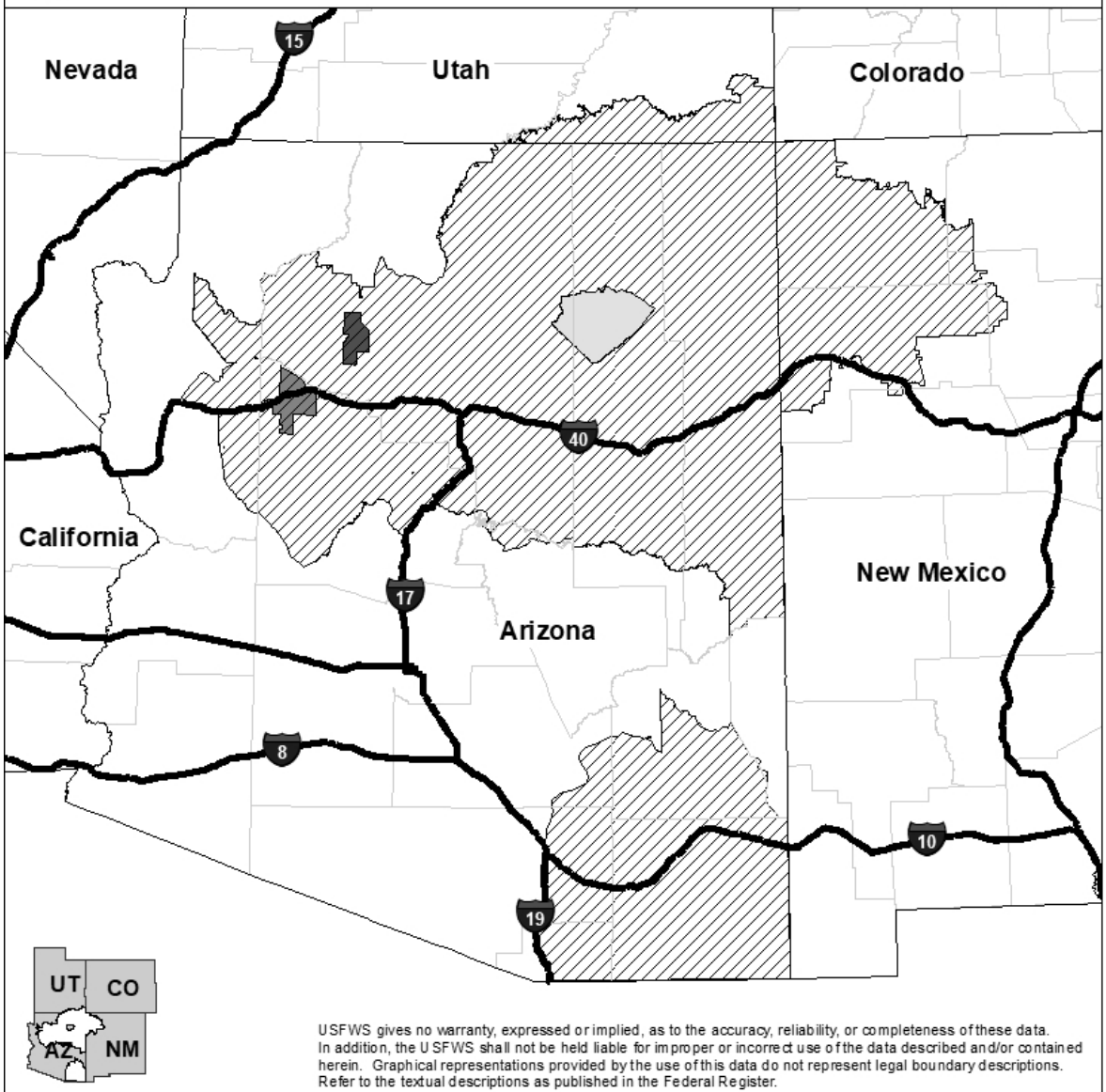
(B) If an animal is determined to be genetically unrelated to the experimental population, we will place it in captivity under an existing contingency plan.

* * * * *

Map 4 to paragraph (g) – Southwest Nonessential Experimental Population Area (SWEPA) for the black-footed ferret

US Fish and Wildlife Service

Southwest Nonessential Experimental Population Area (SWEPA) for the black-footed ferret



USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. In addition, the USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. Graphical representations provided by the use of this data do not represent legal boundary descriptions. Refer to the textual descriptions as published in the Federal Register.

Projection:
UTM 12N
Datum:
NAD 83

0 30 60 90 120 Mi

0 30 60 90 120 Km

- SW Nonessential Experimental Population Area (SWEPA)
- Double O Ranch SHA
- Espee Ranch SHA
- Hopi District 6 (excluded)

* * * * *

Martha Williams,
Director,
U.S. Fish and Wildlife Service.

[FR Doc. 2023-21978 Filed: 10/4/2023 8:45 am; Publication Date: 10/5/2023]