Environmental Assessment
for the
Translocation of Mexican Wolves Throughout the Blue Range Wolf Recovery Area in Arizona and New Mexico

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INTRODUCTION AND PROPOSED ACTION

The United States Fish and Wildlife Service (FWS) proposes to translocate previously released Mexican gray wolves (*Canis lupis baileyi*) within the Secondary Recovery Zone of the Blue Range Wolf Recovery Area (BRWRA) for management purposes. Translocation in this analysis means the federal action of capturing Mexican wolves previously reintroduced into the Primary Recovery Zone and subsequent relocation to other areas within the BRWRA. The BRWRA is located in east-central Arizona and west-central New Mexico, and encompasses approximately 7,000 square miles of National Forest System lands within the Apache and Gila National Forests (see Figures 1 and 2). The FWS Regional Director, Southwestern Region, is the responsible official for issuing the final decision.

Previous Analysis and Authorities: The presence of wolves throughout the entire BRWRA, with all anticipated associated impacts, were analyzed in detail in the 1996 Environmental Impact Statement (EIS) on the *Reintroduction of the Mexican Gray Wolf within its Historic Range in the Southwestern United States.* Direct release of wolves from captivity was authorized only for the Primary Recovery Zone in the southern portion of the Apache National Forest, entirely within Arizona. Wolves released in the Primary Recovery Zone are allowed to disperse on their own throughout the entire BRWRA, including both the Apache National Forest, and Gila National Forest in New Mexico. A federal rule, under the authority of section 10(j) of the Endangered Species Act (ESA) of 1973, as amended, designated the *Establishment of a Nonessential Experimental Population of the Mexican Gray Wolf in Arizona and New Mexico* (63 FR 1752; January 12, 1998) (50 CFR 17.84(k)) which provides for administrative and management flexibility under the ESA by relaxing prohibitions on take, and allowing for active management of wolves, including translocation of previously released wolves, throughout the entire BRWRA for management purposes.

Current Analysis: Translocation of wolves is a management action discussed in general terms in the EIS and associated Notice of Record of Decision (ROD) and Statement of Findings. The management flexibility provided through translocation allows for an additional management option to quickly respond to conflict situations which, in the past, have resulted in the death of livestock and wolves, and the recapture and return to captivity of other wolves. Translocation can benefit wolves and human activities by limiting conflicts with people and livestock, avoiding wolf losses, and aiding in the dispersal of wolves into suitable locations throughout the BRWRA. Having two years of experience with the Mexican wolf reintroduction program, the FWS is analyzing the environmental consequences of translocation, as disclosed in this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA), to determine whether the additional federal action of translocation for management purposes creates significant new impacts beyond those analyzed in the EIS (40 CFR 1502.9 (c)(1)). This analysis also discloses the environmental impacts related to not conducting wolf translocation. The presence of wolves throughout the BRWRA has already been considered under previous NEPA analysis documents to which this EA is tiered, pursuant to 50 CFR 1508.20 and 1508.28, and as such, the contents of the EIS are incorporated herein by reference. This EA addresses only the translocation of wolves within the BRWRA that were previously released in the Primary Recovery Zone. The FWS does not have the authority for direct release of wolves from captivity into the Secondary Recovery Zone, which would require an amendment to the nonessential experimental population rule (FWS intends to propose such an amendment).

Translocation Procedures and Site Selection Process: Wolves to be translocated would, in most instances, be held in temporary enclosures for acclimation to the site prior to release. Criteria have been established for the selection of translocation areas and pen placement (see Appendix A for a description of the "Mexican Wolf Translocation Techniques, Procedures, and Site Selection Criteria"). Translocation sites would be selected in coordination with the land management agency, state wildlife agency, and interagency field team. Sites would be selected that: (1) minimize potential wolf interactions with human activities, habitations, and major recreation sites; (2) eliminate adverse impacts to various resource values (e.g., archeological, soils, wilderness, threatened and endangered species, etc.); (3) consider permitted livestock use and the presence and timing of livestock within pastures; (4) provide for the biological needs of the wolf (e.g., prey base, presence of other wolf packs, potential matings, expected duration within the acclimation pens); (5) address the management concern for which the translocation is taking place; and (6) contain wolves within the BRWRA.

The Forest Service is responsible for permitting the occupancy and use of National Forest System lands for the site specific placement of holding pens. To address the current wolf management situation, four candidate translocation sites in the Gila Wilderness Area, New Mexico, have been discussed with the Forest Service as potential release areas. The FWS will request authorization from the Gila National Forest to occupy the translocation sites if the proposed action is implemented.

Background

Status and Recovery Planning: The Mexican gray wolf was extirpated from the wild in the United States due to intensive predator control efforts. The last recorded Mexican wolf taken in the United States was in 1970. There have been no confirmed records of wild wolves in Mexico since 1980. In 1976, the Mexican wolf was listed as endangered under the ESA. The ESA establishes the policy (section 7(a)(1)) that all Federal agencies "...shall utilize their authorities in furtherance of the purposes of this Act [ESA]," which includes the recovery of listed species. The ESA also requires the Secretary of the Interior to "...develop and implement plans ...for the conservation and survival of endangered species." In 1978, FWS, in cooperation with the Mexican government, captured five wolves from northern Mexico and brought them to the United States to begin a captive breeding program to prevent extinction of the subspecies. A recovery plan was completed in 1982 that called for maintenance of a captive population and reintroduction of the subspecies into suitable habitat within historic range. The specific recovery objective for the Mexican wolf is "...to conserve and ensure the survival of *Canis lupis baileyi* by maintaining a captive breeding program and re-establishing a viable, self-sustaining population of at least 100 Mexican wolves in the middle to high elevations of a 5,000-square-mile area within the Mexican gray wolf's historic range."

Analyzed in the EIS, the ROD and nonessential experimental population rule authorize the direct release of captive-raised Mexican wolves into the Primary Recovery Zone of the BRWRA, and occupancy of the entire BRWRA by wolves (which include the Apache and Gila National Forests in Arizona and New Mexico).

Reintroduction Program and Current Status: Supported by a successful captive breeding program, the first captive-reared Mexican wolves were reintroduced into the Primary Recovery Zone of the BRWRA within the Apache National Forest beginning in January, 1998. Prior to release or subsequent translocation within the Primary Recovery Zone, pairs or individual family groups were held at the release site in temporary pens of either chain-link or pliable mesh fencing for one day to several months for acclimation to the area and/or pair bond formation. While pens were occupied by wolves, temporary closures of up to a one mile radius around each pen were usually in effect. The size of released groups has ranged from two (a mated pair without pups) to eight (the dominant pair, one yearling, and five pups). Released wolves are monitored by radio telemetry. Wolves are allowed to disperse into the adjoining Secondary Recovery Zone, and occasionally enter New Mexico.

In 1998, 13 individuals in three family groups were released. Of the 13, five were shot, one disappeared and is presumed dead, and three were returned to captivity for management purposes. One pup born in the wild was observed, but disappeared after its mother was killed.

In 1999, 22 new individuals were released, including 10 adults and subadults, and 12 pups that were born in acclimation pens. In addition, six pups were born in the wild (Pipestem Pack). Two mortalities of adults/subadults occurred: one was hit by a car; another was killed by a mountain lion. Five pups did not survive (2 of the 12; 3 of the 6). One pack of six animals was

recaptured because of livestock depredation (Pipestem Pack), and one remaining individual of a seven members pack (Gavilan Pack) is yet to be captured.

The death of three pups of the Pipestem Pack was caused by parvovirus. The pups died shortly after their return to captivity. Two other pups of another litter held at the same captive facility also died of parvovirus. Parvovirus is naturally occurring and widely distributed. It is potentially fatal to canids, particularly pups. The virus is easily transmitted, and infects coyotes and domestic dogs as well as reintroduced wolves. It is typical that when a litter of pups contract the virus, half or more will die. A vaccine provides an effective immunity to the virus. Wolves in the reintroduction program are vaccinated for parvovirus prior to release, or for wild-born animals, upon capture if necessary for other purposes.

As of February 9, 2000, a total of 42 individual wolves (35 released animals and 7 wild-born pups) have been included in the wild population as part of six family groups within the BRWRA, and eight wolves remain in the wild, including one for which recapture efforts are on-going. Eleven wolves that have been recaptured for management purposes are priority candidates for translocation. Six others (including one that has not yet been recaptured) are under evaluation for possible translocation, and four have been permanently removed from the wild.

Livestock Depredation: Eight confirmed livestock (cattle and horses) depredations have occurred through January 2000. Six of these involved fatal attacks on livestock. Only one instance occurred during 1998, and this involved a non-fatal attack on a miniature horse colt. All other depredations occurred in 1999 by two wolf packs sustaining relatively large numbers of young pups (five pups in one pack, six in the other). These depredations also occurred in areas where deer were the primary native prey species, and cattle are grazed on a year-round basis. To date, no cattle depredations have occurred where elk are the primary native prey, and cattle are grazed seasonally. As of February 9, 2000, there are 16 wolves being held (and one more targeted for recapture) for possible translocation, contingent on the proposed site selection process, into areas where management conflicts and interaction with livestock would be greatly reduced.

Interactions with People and Pets: Another potential management conflict for wolves is interaction with people and pets near human activity centers. In 1998, a single female wolf spent about two weeks in the vicinity of the town of Alpine, Apache County, Arizona. The wolf was frequently observed by residents, but raised no problems with people or pets, though it apparently killed two chickens and a duck. The interagency field crew closely monitored the wolf's activities. The wolf was trapped and returned to captivity. Another wolf spent several days near the village of Nutrioso, Apache County, Arizona., without incident. Other wolves passed thru communities or campgrounds at other times without incident. In early 2000, there have been frequent reports of a wolf near the community of Alma, Catron County, New Mexico. The field crew conducted frequent ground and aerial radio telemetry surveys, and to date, no wolf has been confirmed in the area.
Interactions between wolves and domestic dogs during the wolf breeding season (March through May) have resulted in the death of one dog, serious injury to another, and minor injury to a third.

During the breeding season, wolves are very territorial and protective of their mate. The attacks on dogs occurred only during the breeding season and, it is believed, were by male wolves. This is a very similar pattern to what other wolf management programs have experienced.

Status of Reintroduction Efforts: In the EIS it was predicted that it would take nine years to achieve the wolf population goal of 100 animals within the BRWRA. At a population of 100, it was assumed in the EIS that wolves would be well distributed throughout the BRWRA. To date, the Mexican wolf reintroduction project has just completed its second year of implementation. It was anticipated in the EIS that there would be 14 wolves in the wild in the BRWRA by the end of the second year of wolf reintroduction. As of February 9, 2000, there are eight wolves in the wild of which one is to be recaptured. Of the 16 wolves being held for re-release, one is to be re-released in the Primary Recovery Zone by mid-February 2000, and 10 more are considered prime candidates for re-release. As of February 9, 2000, the wolf reintroduction program is behind the pace of that estimated in the EIS. This somewhat less than anticipated success rate during the first two years of Mexican wolf reintroduction is very similar to the initial phases of most reintroduction programs releasing captive-reared animals (e.g., red wolf). However, if management options are utilized for translocation into the Secondary Recovery Zone during the first quarter of 2000 (the time frame needed as defined by the breeding status of wolf pairs), the Mexican wolf population in the BRWRA could likely meet or exceed the wild population estimated in the EIS to be 23 by the end of the third year.

PURPOSE OF AND NEED FOR ACTION

The purpose of the proposed action is to facilitate the recovery of the Mexican gray wolf, consistent with existing authority, by avoiding management conflicts with the added benefit of facilitating wolf dispersal throughout the BRWRA. Translocation provides for responsive actions to accommodate other land management activities, averts the possible loss of individual wolves as a result of these conflicts, and allows for management flexibility.

Management Flexibility and Translocation: Management flexibility for translocation of previously released Mexican wolves, on an as-needed basis, is required in order to quickly minimize wolf management conflicts. Some of the most likely reasons for relocating wolves include: conflicts with livestock or other domestic animals; dispersal of wolves into inappropriate areas; replacement of a lost mate; or genetic management of the wild population. For example, if wolves need to be moved because of conflicts with livestock, a location where livestock are not present or nearby would be preferred.

Translocation of wolves outside of the Primary Recovery Zone would allow wolves to disperse throughout the BRWRA quickly, thereby increasing the probability that the wolf population goals may be attained. Quality Mexican wolf habitat generally consists of remote areas with sufficient native prey densities and limited livestock presence. Much of the best wolf habitat within the Primary Recovery Zone is already occupied by wolf family groups. In other portions of the Primary Recovery Zone there have been wolf-livestock conflicts and concerns related to

the availability of native prey. Dispersal of wolves from the Primary to Secondary Recovery zones has occurred, and one wolf has dispersed 35+ miles into New Mexico. The Gila Wilderness Area provides over one-thousand square miles of remote, mid- to high elevation country with good populations of large native ungulates (stable elk numbers, though depressed deer herd) and no permitted livestock. However, for wolves to reach the best habitat within the Secondary Recovery Zone, they must pass through areas where they are exposed to increased risk (e.g., active livestock management areas, residential areas, and roads). Translocation of wolves to avoid management conflicts would also aid the dispersal of wolves into the historically high quality Mexican wolf habitat found within the Gila Wilderness.

Candidates for Translocation: Recent incidences of depredation of livestock by wolves in the Primary Recovery Zone has led to the recapture and confinement of the wolves from two packs (Pipestem and Gavilan). Many of the recaptured animals remain candidates for re-release to the wild. In the early stages of the reintroduction program, wolves experienced with hunting in the wild, maintaining a home range, and successful denning and raising of pups, have considerable value to the program. Some of the recaptured animals are of particular value because of their degree of relatedness to other members of the wild population.

Related Decisions

The Final EIS addressed all anticipated effects due to the presence of wolves throughout the entire BRWRA from a successful wolf recovery program (i.e., a population of approximately 100 wolves). By signing the ROD, the Secretary of the Interior and Secretary of Agriculture authorized the reintroduction of Mexican wolves into portions of Arizona and New Mexico via direct release of wolves into the Primary Recovery Zone of the BRWRA. In a decision by the Federal District Court on October 28, 1999 (New Mexico Cattle Growers *et al.* v. U.S. Fish and Wildlife Service *et al.*, Civ. No. 98-367M/JHG), the court ruled that FWS complied with the ESA, NEPA, and Administrative Procedures Act regarding the final rule for the Mexican Wolf Recovery Program.

The EIS, ROD, and nonessential experimental population rule discussed management flexibility at length, and allowed for certain management options:

> "The FWS and the cooperating agencies will use a flexible "adaptive management" approach based on careful monitoring, research, and evaluation throughout the release phase" (EIS p. 21-11).
>
> "Post-release management will follow an interagency cooperative management plan. The interagency management plan will cover issues such as release pen siting, veterinary management, depredation control, capture and relocation, research,..." (ROD p. 12; EIS p. 2-16).
>
> "The Service and its cooperators will monitor, research, evaluate, and actively manage the wolves, including translocation or removing wolves that disperse

> outside the wolf recovery area (s) or that cause problems, consistent with the provisions of the experimental population rule." (ROD p. 15; EIS p. 2-5).

Also, the nonessential experimental population rule specifically provides for the translocation of wolves into the Secondary Recovery Zone (which includes New Mexico):

> "Secondary recovery zone means an area adjacent to a primary recovery zone in which the Service allows released wolves to disperse, where wolves captured in the wild for authorized management purposes may be translocated and released, and where managers will actively support recovery of the reintroduced population" (50 CFR 17.84(k)(15)).

The translocation of previously released wolves into the Secondary Recovery Zone was allowed to create, in part, the required management flexibility. In addition, the ROD provided for future translocation of wolves outside of the Primary Recovery Zone, including areas within New Mexico.

> "Wolf reintroduction . . . Does not directly conflict with Catron and Sierra counties' ordinances that prohibit the release of wolves into those counties because no wolves will be released there. Nevertheless, releasing wolves in nearby counties with foreseeable dispersal into Catron and Sierra counties, as proposed here, does appear to conflict with the goals of these .ordinances; and wolves may be relocated into these counties in the future" (ROD pp. 9 and 10; 63 FR 1755).

However, aspects of these future management options are subject to review under other authorities at such time when those management options are needed:

> "The Forest Service and Fish and Wildlife Service agree that site specific placement of release pens and other improvements to facilitate wolf releases will need appropriate NEPA analysis and documentation" (ROD-USDA p. 20).

The Forest Service would address the site specific effects of the pen installation.

Public Involvement

On January 14, 2000, FWS issued a letter of intent to prepare this EA, addressing the effects of Mexican wolf translocation into the Secondary Recovery Zone of the BRWRA. This letter was distributed to approximately 1,000 interested members of the public, including individuals and organizations. News releases were also distributed requesting input on wolf translocation into the Secondary Recovery Zone of the BRWRA. In addition, FWS and Forest Service personnel personally contacted many local ranchers, outfitter/guides, and neighboring land owners, and meet with several special interest organizations. Scoping comments on the proposed action were accepted through February 4, 2000. This proposed project was also discussed at the Mexican

Wolf Interagency Management Team meetings; membership includes representatives from FWS, Gila National Forest, Apache-Sitgreaves National Forest, Arizona Game and Fish Department, New Mexico Department of Game and Fish, USDA Wildlife Services, Catron County, Sierra County, and Grant County.

A total of 728 responses were received to the request for scoping comments, representing 691 individuals and 37 organizations. Copies of these comments are on file with the Mexican Wolf Recovery Coordinator at FWS Regional Office, Albuquerque.

The FWS reviewed all letters and comments received during the scoping process to determine significant issues. Factors considered during the screening process included:

1. Did the comment express context and intensity?
2. Was the comment based on scientific findings or conjecture?
3. Was the comment a vote?
4. Was the comment within the scope of the analysis?
5. Was the comment previously addressed in another analysis?

The majority of comments received were not carried forward in this analysis in that: (1) they either lacked context or intensity (site-specificity); (2) were based on opinion rather that scientific fact; (3) expressed simply approval or disapproval of the proposed action; (4) were outside the scope or decision making parameters of this analysis; or (5) were addressed under a previous environmental analysis. Appendix B provides categorization of the comments received. After careful review of all scoping comments, the FWS identified three topics that merited further disclosure in this EA: (1) impacts on prey (wildlife)species; (2) impacts due to livestock depredation; and (3) impacts on new local ordinances and resolutions.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Alternative A (Proposed Action): Translocation of Wolves Throughout the BRWRA with Temporary Public Access and Land Use Restrictions at Pen Sites

Under Alternative A, translocation of previously released wolves would be allowed within the Secondary Recovery Zone of the BRWRA to address specific management problems. Temporary restriction of public access and "disturbance-causing land use activities" (as provided for in the Mexican wolf nonessential experimental population rule, Section 17.84(k)(15); 63 FR 1771, and discussed below) of up to a one mile radius around the holding pens may be applied while wolves occupy the site. The FWS and cooperating agencies would take steps that provide the greatest likelihood of successful reintroduction of wolves.

Translocation Procedures: Wolves identified for translocation due to a specific management issue would be re-released using either a "hard release" or "soft release" technique. A hard release involves releasing the wolves directly from transport crates. A simple, temporary visual

barrier such as opaque nylon cloth wrapped around a series of trees may be used to help ensure that the wolves remain in the area long enough to become aware of the presence of their packmates. Soft release methods involve the installation of a temporary holding pen (approximately 0.33 acres in size or smaller) using either chain-link fencing or heavy-duty coated nylon mesh material. The purpose of the pens is to confine the translocated wolves in order to more fully acclimate them and increase their affinity for the area. At the appropriate time, as determined by FWS, the gates would be opened and the wolves allowed to leave. The type of pen to be used would be dictated by the biological needs of the wolf and the resource considerations at the selected translocation site. Generally, chain-link pens would be employed where an acclimation period of up to several months is anticipated, especially if there is a newly forming pair bond, or a sick or injured animal needs time to heal. Nylon mesh fencing or similar material would be preferred when wolves are anticipated to be held for less than 30 days. Any pens used concurrently would be separated by at least several miles. The same pen site may be used several times throughout the reintroduction program, or new sites selected. Reasons for retaining or relocating pen sites in subsequent years may include: pen security, location of wolf pack territories, prey distribution and density, water access, and changes in livestock distribution and pasture use schedules.

Translocation Sites: The actual translocation areas and pen sites to be used under this alternative would be selected on an as-needed basis. Translocation sites would be selected in coordination with the land management agency, state wildlife agency, and interagency field team. Sites would be selected that: (1) minimize potential wolf interactions with human activities, habitations, and major recreation sites; (2) eliminate adverse impacts to various resource values (e.g., archeological, soils, wilderness, threatened and endangered species, etc.); (3) consider permitted livestock use and the presence and timing of livestock within pastures; (4) provide for the biological needs of the wolf (e.g., prey base, presence of other wolf packs, potential matings, expected duration within the acclimation pens); (5) address the management concern for which the translocation is taking place; and (6) contains wolves within the BRWRA.

Public Access and Land Use: The FWS and Forest Service would restrict public access and "disturbance-causing land use activities" from an area immediately surrounding pen sites. Closures may extend for up to a one-mile radius around the pens--approximately three square miles (about 2,000 acres). Any restrictions would be the minimum necessary to avoid disturbance of the wolves. In many cases a lesser distance would be adequate, and in certain circumstances no closure may be needed. The proposed closures or use restrictions would be flexible and on an as-needed basis to protect wolves from harm. Pen sites would be selected where access and use restrictions would minimize impacts to human activities. Access to private property would not be restricted. Temporary closures around pens would only be necessary when the pens are occupied and for the short period after release when the wolves may still be occupying the immediate pen area. Public information efforts would advise people in the BRWRA of any temporary, limited restrictions on public access and disturbance-causing land uses associated with the pen locations.

The Mexican wolf nonessential experimental population rule provides for temporary closures and restrictions on disturbing-causing land use activities around release pens. The FWS would collaborate with the Forest Service to execute closures. Section 17.84(k)(15) of that rule (63 FR 1771) defines:

> "Disturbance-causing land use activity... [is] any land use activity that the Service determines could adversely affect reproductive success, natural behavior, or survival of Mexican wolves. These activities may be temporarily restricted within a 1-mile radius of release pens, active dens, and rendezvous sites. Such activities may include, but are not limited to—timber or wood harvesting, management-ignited fire, mining or mine development, camping outside designated campgrounds, livestock drives, off-road vehicle use, hunting, and any other use or activity with the potential to disturb wolves. The following activities are specifically excluded from this definition—(1) legally permitted livestock grazing and use of water sources by livestock; (2) livestock drives if no reasonable alternative route or timing exists; (3) vehicle access over established roads to private property and to areas on public land where legally permitted activities are ongoing if no reasonable alternative route exists; (4) use of lands within the national park or national wildlife refuge systems as safety buffer zones for military activities; (5) prescribed natural fire except in the vicinity of release pens; and (6) any authorized, specific land use that was active and ongoing at the time wolves chose to locate a den or rendezvous site nearby."

Alternative B: Translocation of Wolves Throughout the BRWRA Using Only Hard Release Techniques (no pens, no closures)

Under Alternative B, translocation of previously released wolves would be allowed within the Secondary Recovery Zone of the BRWRA using only hard release techniques (as discussed above under Alternative A). Wolves would be released directly from transport containers. Holding pens would not be installed; public access would not be restricted; and "disturbance-causing land use activities" (as provided for in the Mexican wolf nonessential experimental population rule) would not be restricted. Translocation would only be conducted when there is a specific management need (e.g., relocation of animals away from livestock; replacement of mate). The actual sites for translocation to be used under this alternative would be selected in compliance with the site selection criteria (see "Introduction and Proposed Action" above) and based on the resolution of the management need.

Alternative C: No Action: No Wolves Would Be Translocated Into the Secondary Recovery Zone

Translocation of wolves for management purposes would not occur within the Secondary Recovery Zone of the BRWRA under Alternative C. Release pens would not be installed or used; public access would not be denied; and land use restrictions would not be imposed.

AREA DESCRIPTION

A description of the BRWRA is found in the "Affected Environment" section of the EIS, as incorporated herein by reference. That description addresses the following topics: geography, climate, water, vegetation, animals, land ownership and management, agency and local government plans and policies, land development, livestock grazing, forestry, mining and other natural resource extraction, public access and recreation, and the regional economy, employment and population. Some changes in that description have occurred since the 1996 EIS, but those changes do not significantly alter the nature of the affected environment. Some additional relevant site-specific information about the Secondary Recovery Zone and certain potential translocation sites is included within this EA in the "Environmental Consequences" section**.**

ENVIRONMENTAL CONSEQUENCES

The presence of wolves, *per se*, is addressed through this EA and tiered to the EIS. For an accurate assessment of the environmental impacts due to the presence of wolves, the entire BRWRA must be included, recognizing: (1) the ability of the wolf to travel great distances in a relatively short period; (2) that prey populations and distribution changes seasonally and yearly; and (3) young wolves may disperse away from the pack.

The following discussion discloses the direct, indirect, and cumulative impacts related to each alternative outlined in the "Alternatives" section.

Consequences of Alternative A: (Proposed Action) Translocation of Wolves Throughout the BRWRA with Temporary Public Access and Land Use Restrictions at Pen Sites

In the EIS, it was predicted that it would take nine years to achieve the wolf population goal of 100 animals within the BRWRA. The EIS displayed the accumulated impacts as they may be expected to occur after the recovery goal has been reached for a period of five years (i.e., 14 years from the initiation of reintroduction efforts). With a population of 100, it was assumed in the EIS that wolves would be well distributed throughout the BRWRA. In the EIS analysis, wolves would disperse from the Primary Recovery Zone into the Secondary Recovery Zone. Under this translocation alternative, wolves may be moved into the Secondary Recovery Zone to address specific management needs.

Wild Prey: The wolves released into the Primary Recovery Zone over the past two years have been documented as killing and feeding on native wild prey species, primarily elk and deer. The number of wolves currently in the wild have not had a measurable level of affect on native prey populations. Evaluated in the EIS was the cumulative effects to prey species' populations due to the presence of wolves after five years of fully meeting the recovery population goal of 100 animals (i.e., 14 years from the initiation of reintroduction efforts). The New Mexico

Department of Game and Fish reports (memorandum of April 6, 1999, from Luis Rios to Darrel Weybright; and electronic mail of September 22, 1999, from Darrel Weybright to Tod Stevenson) that elk populations included within the Secondary Recovery Zone (game management units 15, 16, and 24) have remained basically stable while increasing hunt permits over the past several years, though there are continuing substantive declines of deer. No information has been presented suggesting that the original estimates in the EIS addressing impacts from wolves to prey species and related hunting activities are unrealistic or are otherwise no longer valid. Wolf prey abundance, as represented primary by elk, remains suitable to support wolves as described in the EIS.

Livestock: The EIS clearly discloses that wolves are expected to kill some free-ranging domestic livestock, mostly calves. In the EIS it is calculated that, with a population of 100 wolves, livestock losses are projected to be between one and 34 cattle per year. This number represents approximately one-twentieth of one percent (0.05 percent) of all cattle present in the BRWRA. Current estimates of livestock losses on the Apache and Gila National Forests from other predators is approximately one percent of permitted numbers. The small projected increase in livestock losses due to wolves is not expected to have more than a marginal impact on the viability of ranching in the BRWRA (EIS pp. 4-4 through 4-9).

Depredation is addressed in the EIS as including both fatal and non-fatal wolf attacks on livestock, acknowledging that each has financial impacts to the rancher. However, in modeling the predicted "livestock losses" in the analysis of environmental consequences in the EIS, only depredation events resulting in death of livestock were included, and additionally, only depredation events which involve livestock legally present on the allotment are considered valid. The actual livestock depredation events by wolves in the BRWRA through January 31, 2000, are presented below, compared to the accumulated total number of wolf days (one wolf present in the wild for one day), and calculated to represent depredation events per 100 wolves per year. For comparison purposes, annual rates of depredations per 100 wolves are provided for all known wolf attacks on livestock (see Table 1).

Table 1. Livestock depredation by wolves in the BRWRA through January 31, 2000, and calculated to represent depredation per 100 wolves per year, based on a total of 7,409 actual wolf days in the BRWRA (equivalent to 20.3 wolves present for one year).

Depredations	Actual	Calculated Annual Livestock Kills per 100 Wolves
Total depredation events (includes injury and fatal attacks)	8	39.4
Total livestock losses	6	29.5
Depredation on authorized livestock	5	24.6
Losses of authorized livestock	3	14.8

A total of eight livestock depredation events (three deaths of authorized livestock; three deaths of unauthorized livestock; and two non-lethal attacks which resulted in injury of unauthorized livestock) occurred in the first two years of wolf reintroduction into the BRWRA. This represents 0.01 percent of the total livestock present in the area (approximately 82,000 cattle are permitted, although with recent herd reductions throughout the Gila National Forest actual numbers on allotments are less, reportedly by as much as 30 percent). When all depredation events are calculated to represent annual depredation per 100 wolves, the result is a value of 39.4; annual losses of authorized livestock due to depredation per 100 wolves is 14.8. The estimate in the EIS of one to 34 livestock losses per year is comparable to the actual losses represented at 14.8. Regardless of the definition of depredation applied, the actual effect of wolves on livestock in the BRWRA remains consistent with the effects analyzed in the EIS. With additional management flexibility, as proposed here through the translocation of wolves for management purposes, wolves involved in depredation incidents can be relocated to areas where there are fewer or no livestock present, and so interactions with livestock may be less likely, thereby potentially reducing the impacts of wolves on livestock operations.

Impacts on Agency, Tribal, and Local Government Policies and Plans: The county commissions of both Catron and Sierra counties, New Mexico, have passed local ordinances that prohibit the release of wolves into those counties. In addition, the county commissions of Catron and Grant counties, New Mexico, each recently passed resolutions (December 20, 1999, and January 13, 2000, respectively) specifically condemning/prohibiting the relocation of those wolves with a proven record of preying on domestic animals into those counties.

The EIS, though specifically not addressing wolf releases in New Mexico, disclosed the presence and impacts of wolves throughout the BRWRA, including dispersal into New Mexico. The ROD and nonessential experimental population rule further addressed wolf translocation into the Secondary Recovery Area (including New Mexico) (see "Related Decisions" above). The FWS has committed to work to resolve wolf management conflicts, and the more flexibility and management options available to FWS, the better the resolution of those conflicts. When there are persistent, unresolvable problems, the FWS has some discretion in designating a "problem wolf," within the parameters defined within the nonessential experimental population rule and interagency management plan. Under certain circumstances, those animals repeatedly involved in livestock depredation would be considered "problem wolves" and would be permanently removed from the wild population in accordance with the rule and plan. Wolf translocation throughout the Secondary Recovery Zone (including portions of Catron, Grant, and Sierra counties, New Mexico) may provide important management options to resolve wolf and livestock conflicts. The ability to actively manage wolves through translocation provides opportunities to reduce conflicts with human activities and land uses (including livestock grazing). The ESA, Mexican wolf nonessential experimental population rule, and other Federal authorities adopted pursuant to them preempt conflicting local ordinances and resolutions.

Consequences of Alternative B: Translocation of Wolves Throughout the BRWRA Using Only Hard Release Techniques (no pens, no closures)

Impacts due to the presence of wolves in the Secondary Recovery Zone from hard release translocation would be the same as discussed under Alternative A, however, it may take somewhat longer to reach wolf population goals than under Alternative A. By not providing wolves to be translocated an acclamation opportunity, there would be an increased likelihood that: (1) the wolves would disperse rapidly out of the selected release area; (2) pairs and/or family groups would become separated at release; and (3) multiple translocation may be needed to address the same management problem (e.g., replacement of lost mate).

Consequences of Alternative C: No Action

Ultimately, the effects from wolves in the BRWRA would be the same as those discussed under Alternative A and as assessed in the EIS, as wolves would eventually disperse throughout the Secondary Recovery Zone. However, it would take longer to reach the population recovery goal of 100 wolves within the BRWRA than under either Alternative A or B. The reintroduction program would incur greater expense due to additional direct releases into the Primary Recovery Zone to accommodate wolf losses due to unresolved management conflicts and long-distance dispersal into the Secondary Recovery Zone. In addition, captive holding facilities may become over-crowded with re-captured wolves removed from the BRWRA due to management conflicts which could not be resolved on-site.

The impacts from wolves on native prey populations would be the same as under Alternative A and assessed in the EIS, as wolves would eventually disperse throughout the entire BRWRA.

Without the management option to translocate wolves away from conflict situations into the Secondary Recovery Zone, there may likely be increased livestock depredation by wolves. As more wolves occupy the Primary Recovery Zone, there would be fewer and fewer potential locations for wolf translocation within the Primary Recovery Zone, where there are no or limited livestock present.

Apparent conflicts with local ordinances remain due to wolf dispersal from neighboring areas into Catron, Grant, and Sierra counties, New Mexico. However, since translocation of wolves for management purposes would not occur under this alternative, wolves would not be released into these counties, including no wolves known to have been involved in the depredation of livestock, thus, there would not be a direct conflict with the ordinances and/or proclamations of those counties.

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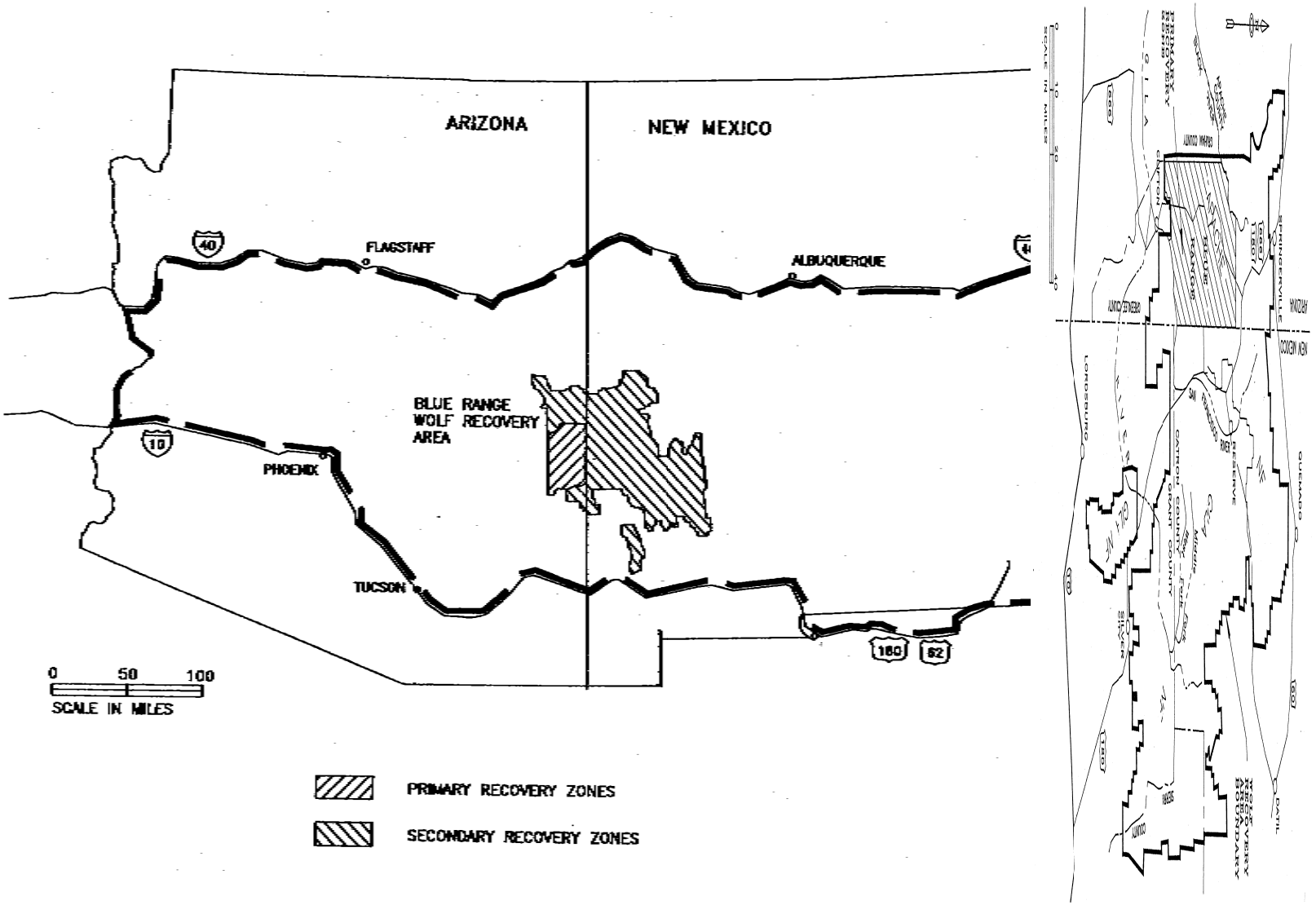
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FLAGSTAFF
ALBUQUERQUE
PHOENIX
TUCSON
BLUE RANGE
WOLF RECOVERY
AREA
40
10
180
82
0
50
100
SCALE IN MILES
PRIMARY RECOVERY ZONES
SECONDARY RECOVERY ZONES

Appendix A

Mexican Wolf Translocation Techniques, Procedures, and Site Selection Criteria

This appendix presents the protocol for locating Mexican wolf translocation sites and subsequent pen locations throughout the BRWRA. The FWS has discussed with the Gila National Forest the use of four candidate translocation sites within the Gila Wilderness Area, contingent on the final decision regarding wolf translocation into the Secondary Recovery Zone of the BRWRA. The Gila National Forest must authorize occupancy of these sites.

Translocation Site Selection Criteria and Placement of Holding Pens

The following criteria were established to identify candidate translocation and pen sites, and to ameliorate potential effects to the natural and human environment. These criteria were used to identify four candidate translocation sites in the Gila Wilderness.

1. Translocation site selection would be determined in coordination with the National Forest Service, state wildlife agency, and interagency wolf field team. The primary objectives in the selection of these sites are to provide a temporary, safe, secure environment for wolves during acclimation, and to give wolves the best opportunity for success (minimize potential for conflicts) upon release.

2. Translocation sites would be located adequate distances from recovery area boundaries, human habitations, and other translocation sites.

3. Translocation sites, holding pens, and associated facilities would be located away from human habitations, heavily-used trails, recreation areas, and roads by geographic distance and appropriate timing to minimize impacts to National Forest users. The Forest Service may coordinate with Forest permittees to determine specific activities such as livestock grazing, timber harvest, or commercial recreational use occurring in the area to minimize potential restrictions on these activities *(applies to both translocation and pen site selection).*

4. Translocation sites and holding pens would be placed in areas where minimum public access and land use restrictions would be needed to avoid disturbance of the wolves. Public information efforts would be made to advise people of any temporary, limited restrictions on public access and disturbance-causing land uses associated with the pen locations *(applies to both translocation and pen site selection).*

5. Translocation sites and pen locations would be located in areas which minimize exposure of wolves to humans and disturbance-causing land uses during acclimation and upon release *(applies to both translocation and pen site selection).*

Should the Forest Service approve the translocation sites, any needed pen and field camp site selection would be subject to the following criteria.

1. Pen locations would be selected to minimize exposure of wolves to livestock during acclimation and upon release. Areas withdrawn from livestock grazing or by timing releases outside seasonal livestock use periods, and within areas of adequate native prey would be utilized. For pen sites in pastures within active livestock allotments, wolves would be released at least 30 days prior to livestock entry into that particular pasture.

Construction or occupation of pens or field crew camps near important habitat use features such as nests, roost areas, and stream beds would be avoided to minimize impacts to other species listed under the ESA. If a pen may affect a listed species, the New Mexico Ecological Services Office or Arizona Ecological Services Office, as appropriate, would be consulted.

No temporary structures or occupying field crew camps would be installed on archaeological sites.

Forest Service personnel would assist the field crew in determining the exact location of the pens to assure that the pens are not placed where there would be adverse impacts on sensitive resources. The pen sites would not be visible from major trails, or if in designated Wilderness Areas, would not degrade wilderness values.

For pen sites within designated Wilderness Areas, Primitive Areas, or Roadless Areas, only "hard release" or "soft release" techniques using flexible nylon fencing or similar material would be employed (i.e., chain-link fencing would not be used). Pens would not be visible from major trails. In Wilderness Areas, pens sites would be occupied by wolves for no more than 30 days. Only "leave no trace" camping techniques would be used by the field crew, and aerial telemetry flights would be conducted at an elevation of at least 2,000 feet above the ground.

Holding Pen Specifications

Chain-link Holding Pens: Each chain-link holding pen would occupy approximately 0.33 acres. These would be used for translocation on an as-needed basis. Pens would be constructed of 10' x 10' pre-constructed, self-supporting panels of heavy-gauge chain link fence with an inward 2' overhang. Panels would be connected above ground; no post holes would be dug. A 4' wide apron of chain link would extend from the bottom of the fence inward, to prevent wolves from digging out, and a battery-powered electric fence would deter animals from entering or escaping from the pen.

Chain-link pens would not be used in designated Wilderness Areas, Primitive Areas, or Roadless Areas. All chain-link pens would be located near existing roads or trails, and vehicle traffic would be confined to these roads as much as possible during and after construction. Construction

of these pens may be at different times of the year depending on the management issues being addressed by the translocation. Each pen would require approximately three to seven days of construction work, with crews of five to ten people. Expected impacts from pen construction include minor surface disturbance from vehicle and foot traffic.

Approximately 500 linear feet of surface compaction would result from the actual placement of each of the chain-link pens. Soil within the pens would also be compacted, and the constant presence of wolves confined to a small area would cause the temporary loss of some vegetation. Wolves are expected to create trails or paths for patrolling their pens, which would concentrate and limit their impacts.

Wolves would generally occupy chain-link pens for six to twelve weeks during the acclimation period, which may vary by pen and by year, as determined by the biological/behavioral needs of the translocated wolves. Each pen would accommodate a family group (mated pair plus offspring) of three to eight wolves. Wolves would be outfitted/re-fitted with radio collars, as necessary, before entering pens. Field personnel would access the area to deliver wild game carcasses, both while the wolves are in the pens and after release, until FWS determines the animals are successfully hunting on their own.

After the wolves are released, the pens may be maintained for a short period until the wolves leave the pen area. Then, the pen gates and one or more fence panels would be removed, which would allow free access through them by wildlife or cattle. Pens may be completely taken down shortly after release, or may remain for several months or longer. This would vary by pen site. If the pen site is needed for translocation of other wolves to that same area, all equipment that might be subject to vandalism or theft would be removed, leaving only the chain-link fence. All pens would be completely removed when FWS determines that they are no longer necessary.

Field personnel camps would generally be established at sites approximately 0.25 to 1.0 miles from the pens, and would consist of wall tents and, possibly, a camp trailer. Sanitation would be provided by portable toilets. Camps would be designed to accommodate daily use by two to four people, with occasional use by up to ten. Camping would be low impact and all equipment would be promptly removed after release of the wolves. Field personnel would provide basic husbandry (food, water, etc.) and protection from disturbance for the wolves in pens. To the extent possible, wolves would be fed on the carcasses of road-killed wild game, which may need to be hauled into the sites by truck, all-terrain vehicles, or snow machines. Until fed to wolves, carcasses would be stored at facilities well away from the pens to prevent attracting other predatory animals. If not available at the site, water would be hauled in storage containers.

Nylon Mesh Holding Pens: Nylon mesh pens are designed to hold from one to several wolves, and would be constructed of pliable mesh fencing or similar material which can be transported with pack animals. Pen installation would minimally disturb the ground surface and vegetation. The mesh fencing would be secured using existing trees and small diameter steel posts to create enclosures approximately 0.3 acres or smaller. No post-holes would be dug. The steel posts would be placed along the hem of the mesh fencing to anchor the pens to the ground. The mesh

fencing may be reinforced with electric wire, activated by solar panels and batteries, to reduce the likelihood of wolf escapes. If employed within designated Wilderness Areas, pens would be occupied by wolves for less than 30 days and removed from the site when no longer needed.

For release sites within designated Wilderness Areas, wolves would be transported to the holding pens by pack stock in specially designed panniers. Wolves would be placed in the pen with enough food for several days to a week, allowing them to settle down and begin to acclimate to the area. One or two field crew members would camp nearby, employing "leave no trace" camping techniques. They would monitor the wolves' acclimation progress (a period of less than 30 days). Following release of the wolves, pens would be removed from the site using pack stock, and the field crew would abandon the camp associated with the pens. The field crew would continue to monitor the wolves intermittently from the ground and approximately twice a week from the air. Aerial telemetry flights over designated Wilderness Areas would be conducted at an elevation of at least 2,000 feet above the ground. Ground telemetry would be conducted by foot or horse travel. If necessary, supplemental feeding may be conducted following the wolves' release. Food would be transported by pack stock.

Proposed Translocation Sites

The four translocation sites proposed for use in the Gila Wilderness were selected by an interagency team in accordance with the site selection criteria described above. A request for use of these sites has been submitted to the Forest Service. These four sites would be used immediately, pending the conclusion of the translocation analysis and approval of the Gila National Forest.

1. McKenna Park: Catron County, between the West Fork of the Gila River and East Fork Mogollon Creek, west of the Diablo Mountains (T11S, R15W, Sections 20 or 29).

2. Chicken Coop / Creel Canyons: Catron County, between the West Fork and Middle Fork Gila River, east of Lily Mountain (T11S, R15W, Sections 20 or 29).

3. Miller Springs: Grant County, between Turkey Creek and the Gila River, south of Granite Peak and northwest of Granny Mountain (T13S, R15W, Section 27 or NE 1/4 corner of Section 36).

4. Halfmoon Park: Catron County, Near White Creek, northeast of Snow Park and Mogollon Baldy (T12S, R17W, Section 1).

Nylon mesh pens would be used to hold wolves for acclimation to the area prior to release. Fencing materials, other supplies, and wolves would be transported into the Gila Wilderness Area with pack animals. A temporary closure restricting public access and "disturbance-causing land use activities" would be in effect for up to a one-mile radius around each pen while the wolves occupy the pen. Major trails within the Wilderness Area would not be affected, though camping and use of some other trails may be restricted. Public information efforts would advise

people of any temporary, limited restrictions on public access and of any disturbance-causing land uses associated with the pen locations in the Gila Wilderness Area.

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