Mexican Wolf Reintroduction
Annual Report 3

Reporting Period: January 1 – December 31, 2000

Prepared by:
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U.S. Fish and Wildlife Service
Region 2

Cooperators:
Arizona Game and Fish Department
New Mexico Department of Game and Fish
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Mexican wolves were extirpated from the wild in the United States by 1970. A captive breeding program, managed under a Species Survival Plan (SSP) for the U.S. Fish and Wildlife Service (FWS) by 41 zoos and wildlife sanctuaries in the United States and Mexico, now contains approximately 192 animals. The Secretary of the Interior signed a record of decision in March 1997, which implemented the USFWS's preferred alternative in an environmental impact statement on the reintroduction of wolves to a portion of their historic range in Arizona and New Mexico. In January 1998, the first Mexican wolves were transferred to acclimation pens on the Apache National Forest in preparation for their release into the wild. This report summarizes project information and activities from January 1 - December 31, 2000.

Abbreviations used in this document:

Packs and/or acclimation pen sites:

CB = Campbell Blue
CN = Cienega
ES = Engineer Springs
FR = Francisco
GV = Gavilan
HN = Hawks Nest
MP = Mule Pack
PS = Pipestem
TC = Turkey Creek

Wolf age and sex:

M = adult male	(> 2 years old)
F = adult female	(> 2 years old)
m = subadult male	(< 2 > 1 years old)
f = subadult female	(< 2 > 1 years old)
mp = male pup	(< 1 year old)
fp = female pup	(< 1 year old)

Methods

Release candidate wolves were selected by the SSP and acclimated prior to release in Service-approved facilities. These included the Ladder Ranch Captive Management Facility managed by the Turner Endangered Species Fund (Ladder Ranch), the Sevilleta Captive Management Facility managed by the FWS at Sevilleta National Wildlife Refuge (Sevilleta), and the Wolf Haven Captive Management Facility managed by Wolf Haven International (Wolf Haven). Wolves were either bred at one of these facilities, or transferred to them for evaluation and acclimation before being released to the wild. Contact between wolves and humans was

minimized and carcasses of road-killed native prey species (mostly deer and elk) supplemented their routine diet of processed canine food. Genetically and socially compatible breeding pairs were established and evaluated for physical, reproductive, and behavioral suitability for release. Some pairs produced pups in captivity before release, and their pups and occasionally yearlings were included in the release group.

Wolves selected for release were radio collared and moved to smaller pens at release locations. Caretaker camps were established approximately 0.5 miles away from pen sites. Carcasses of native prey and fresh water were provided as needed. When necessary, security was maintained by posted U.S. Forest Service (USFS) closures of an area of approximately 0.5 mi radius around each pen.

We used one 0.33-acre chain link pen in 2000 for acclimation and release of wolves at the Engineer Springs site (Figure 1). We used temporary soft mesh pens at the Bear Wallow, Lilly Park, Halfmoon Park, and Steeple Creek sites. In addition, we used a hard-release technique for the first time. The CB wolves were translocated to the Meon site in the Gila Wilderness and released directly from their crates (Figure 1). When necessary to access remote wilderness sites, wolves were transported in specially designed panniers carried by mules.

Wolves were monitored by radio telemetry from the ground and typically twice a week from the air. Monitoring was most intensive during the initial weeks after release to determine when wolves began hunting. If we found wolves were near roads or other areas of human activity we hazed them by chasing on foot, horseback, or all-terrain vehicles. When necessary, we also used rubber bullets, cracker shells, and slingshots to encourage a flight response to humans.

All wolves were provided with supplemental road-killed elk and deer, or occasionally commercially produced "meat logs" for wild carnivores after release. The duration of supplemental feeding varied depending on whether wolves had previous experience in the wild, the time of year, availability of vulnerable prey, and whether pups were present. Supplemental feeding was discontinued when wolves began killing prey.

Suspected wolf depredation on livestock was investigated by USDA Wildlife Services specialists. Results of all investigations were reported to the Defenders of Wildlife, a non-profit organization that compensates livestock owners for confirmed wolf depredation.

Range maps in this document were generated using Arc View software, based on radio telemetry and occasional confirmed visual sightings of individuals. Polygons generated were based on 90% of all verified locations and a "buffer" of either 3 or 5 miles, depending upon the number of locations used > 20 or ≤ 20, respectively. This method was based on the definition of occupied wolf range in the Federal rule for the nonessential experimental Mexican wolf population. The maps were intended to describe the range and movements of wolves after release, and in some cases, movements in response to management actions or other significant events, such as the death of a mate. They were not intended as formal analysis of home range size.

Reintroduced Population Status

At least 13 wolves were free ranging at the beginning of the reporting period and six others (all uncollared pups of the year) were fate unknown (see Annual Report 2). Between January 1 and December 31, 2000, we released 27 wolves including 11 adults, 12 subadults, and four pups. Of these, 15 wolves representing three family groups were released for the first time from captivity, including six adults, five subadults, and four pups (Table 1). Twelve released wolves were translocations (wolves that had been previously free ranging and were captured and released at different locations).

Breeding was confirmed in three packs, and two wild-born pups were observed. One of these was radio-collared in August and survived through the reporting period. The status of other pups was unknown at the end of the reporting period (Table 1).

Twelve wolves were returned to captivity. Seven members of one pack were recaptured because of livestock depredation, three wolves were returned because of inappropriate or nuisance behavior, and three were recaptured after they dispersed outside recovery area boundaries.

Four wolves died in the wild (two hit by vehicles, one shot, and one from a brain tumor). Two additional wolves died from distemper in after being returned to captivity for livestock depredation.

As of December 31, 2000, 15 radio-collared wolves were free ranging, two radio-collared wolves were missing and fate unknown, and seven (two yearlings, five pups) were uncollared and fate unknown (Table 1). Recent evidence existed that the latter seven animals were alive. The fates of six wolves from 1999 and two from 1998 were also unknown. However, all but one of these were pups of the year when they disappeared and there is no recent evidence of their existence. Therefore, the number of free ranging wolves at the end of this reporting period was between 15 and 30, with our best estimate being approximately 22.

Monitoring and Management

Campbell Blue Wolves (M166, F518, F522, f592,f594)

The CB male M166 was trapped and placed in the ES pen (Figure 1) with F522 on December 18, 1999 in an attempt to re-pair him after his second mate (F482) was killed by a mountain lion (Annual Report 2). M166 and F522 were released together on January 5. F522 did not stay with the male, and was immediately located at a hunter's camp interacting with their dogs. She was recaptured and held in the ES pen until hunting season ended. M166 stayed near the pen area until she was again released on February 6. F522 continued to exhibit a predilection to gravitate towards human habitation and domestic animals, and did not respond to 166's overtures to her. We returned her to captivity on February 16 (Table 1).

On February 19, we transferred to the ES pen another female wolf (F518) and her two female pups

(f592, f594) born at Sevilleta in 1999. The captive mate of F518 had been euthanized after a crippling accident the previous spring. The adult female was released on March 9, while the two pups were held in the pen to facilitate bonding between the adult wolves. The pair stayed together, occasionally returning to pen. We released the two pups (now yearlings) on April 11, and they began traveling with the adults. On April 14, the pack was involved in an incident with a Forest permittee on horseback, riding with six dogs in the Eagle Creek area. The wolves began fighting with three of the dogs. The rider was able to frighten the yearlings off immediately. The adult pair remained in the area, and the female wolf exhibited extremely bold behavior toward the horse, bumping it with her shoulder and front feet. The wolves followed the rider and his dogs until they took refuge in a shack about one mile away. Neither the horse nor rider was injured, however one dog had minor injuries that did not require veterinary attention. Because of the bold behavior exhibited by the wolf towards the horse and rider, we captured and returned F518 to captivity. We returned the yearling females to the ES pen in hopes of facilitating a bond with the alpha male, as they were not genetically related. Yearling f592 dug out of the pen after the male visited on May 1, and we released f594 on May 31.

F592 and M166 remained together. In early June, they began expanding their range to the west, spending time on the San Carlos Apache Reservation outside recovery area boundaries (Figure 2). At the request of the San Carlos Apache Tribe, F592 and M166 were trapped and removed from the Reservation on July 24 and 26, respectively, and returned to captivity until another suitable release site could be found. The range of CB wolves 166, 518, and 592 encompassed approximately 460 square miles around the ES pen (Figure 2).

Yearling f594 separated from the others, and moved first to the San Carlos Reservation and then north, eventually dispersing over 200 miles. She evaded efforts to trap her and was struck and killed by a vehicle on October 7, 12 miles north of I-40 near Flagstaff, AZ (Figure 3).

Because of the remote locations and restricted access to the areas used by the CB wolves, only one prey site was investigated in 2000. A buck mule deer was found on February 9 that had been fed on by the wolves, but likely died of other causes (Table 2).

On October 13, f592 was discovered to have broken her front leg in the pen at Sevilleta. The leg was surgically treated and f592 was deemed sufficiently recovered for release. We hard–released the pair on Tom Moore Mesa in the Gila Wilderness, near the USFS Meon Work Station on December 5 (Figure 1). The pair remained close to the release site until December 17. They began traveling together, became separated on December 27, and remained separated at the end of this reporting period.

Cienega Pack M194, F487, m619, m620, f621

The CN pack, consisting of a mated pair (M194, F487) and their three pups born the previous spring (m619, m620, f621) was transferred from Wolf Haven to a soft mesh pen at Steeple Creek on March 14 (Figure 1). The wolves were carried in on mules. Four of the wolves chewed out of their pen almost immediately, only m620 remained inside the pen until March 21. The other wolves stayed near the pen until m620 exited on March 21. Unfortunately, M620 was stuck and killed on Highway 191 just north of Hannagan Meadow on March 25.

The CN pack was supplementally fed for about 2 months. We determined from monitoring that they began independently finding food within several weeks, and confirmed they had killed an adult elk on July 14. Biologists located five CN pack prey sites between June 25 and October 5, 2000. All were elk (one calf, four adults). One adult cow elk was over 14 years old, two adults were prime age, and one cow was unknown age. Three animals were female, two were unknown sex.

Biologists were unable to determine whether the alpha female F487 denned in 2000. An uncollared wolf was observed with the pack on two occasions in October, but it is unknown whether this was a pup or perhaps a yearling from the HN Pack.

The pair established a range of approximately 298 square miles around their release pen (Figure 4). The yearlings stayed with the adults until late October, when they began making exploratory movements together and alone away from the alpha pair (Figure 4). On December 11, the male yearling m619 was located with the alpha female of the HN pack. The alpha male from this pack had died in November. CN m619 and HN F486 remained together at the end of this reporting period.

Francisco Pack (M509, F511, f587, m590, fp644, mp643, mp642, mp641

The FR pair consisted of a naïve male reared in captivity at Sevilleta (509) and a female F511 from the original 1998 CB pack release. F511 had been recaptured as a yearling in 1998 after dispersing from the recovery area (see Annual Report 1). The two were paired in captivity and produced four pups in 1999 and four in 2000. Two of the 1999 pups died of parvo virus introduced in the facility from the Pipestem Pack recapture. The alpha pair, remaining two yearlings, and four pups comprised the pack released July 14 (Table 1).

The wolves were transferred to a soft mesh pen on the edge of the Bear Wallow Wilderness on July 13 when the pups were approximately 10 weeks old. The pen was opened to release the wolves on July 14 after we observed a single pup outside the pen.

The wolves stayed near their release site, and were determined to be self-sustaining by the end of August. Biologists located 6 FR prey sites between August 30 and September 18 (Table 2). One was a confirmed wolf kill and 5 were probable kills. All were adult elk between one and 8 years old, four were females and two were unknown sex.

The pack utilized a range of approximately 440 square miles, however, most of their activities were concentrated in a much smaller area that included their release site (Figure 5). Part of their range overlapped significantly with that of the CN pack (Figures 4, 5). Biologists documented at least two instances when the two packs were located together, on October 13 and November 3. Between October 19- 21, the FR yearlings were located separately from the rest of the FR pack. However, the yearlings returned and all 8 wolves were observed on November 3 near the CN pack. On November 9, all 8 members were again observed, this time chasing an uncollared wolf believed to be a yearling from the HN pack. Yearling m590 was located with the HN pack Nov 24-26. In early December, he began exploring extensively, moving north and west into New Mexico for the

second time in several weeks (Figure 5). On December 18, m590 was found shot to death near Aragon, NM. The case remained under investigation at the end of this reporting period.

Eight wolves were observed with the FR pack on December 4, even though M590 was not with them at the time. It was again postulated that the extra animal was an uncollared HN yearling. It appeared that with the exception of m590, shot in New Mexico, all of the FR wolves, including uncollared pups, survived to the end of the reporting period.

Gavilan Pack (M183, F168, m555, mp583, mp584, mp585, fp586, mp587)

The GV pack, released in Coalson Canyon in May 1999, were involved in four cattle depredations near the Arizona/New Mexico border in 1999. The fourth occurred on December 26, 1999 (see Annual Report 2). In an attempt to break the cycle of cattle depredation, we initiated trapping in early January with intent of removing the alpha male and up to two male pups. However, before we could trap any individuals, the pack was involved in a fifth depredation on January 12. We then initiated trapping to remove all of the wolves, with the exception of yearling m555. This yearling had begun dispersing from his pack and was not involved in the last two depredations. All members of the pack except yearling m555 and mp586 were captured and returned to captivity by February 8 (Table 1). The fifth pup mp586 had not been observed since October 31, 1999, and its fate remained unknown.

We separated alpha male M183 from his pack and permanently removed him from the release pool. Two of the pups, m582 and f585, died in captivity. They were euthanized on February 25 and August 15, respectively, because of incapacitating cases of distemper. The alpha female F168 and two male offspring m583 and m584 remain candidates for re-release.

The yearling M555 moved south and east into New Mexico. He was observed by field staff attacking a cow elk on February 12. Wildlife Services investigated a complaint of an injured domestic cow in the same area, possibly caused by this wolf, however, the depredation was not confirmed (Table 3). The wolf's radio collar signal could not be located after this time (last confirmed location February 12). We received a creditable citizen report in the Datil, NM area on March 23, and field staff found large canid tracks following elk tracks in the area but no radio signal. The fate of this animal remained unknown at the end of this reporting period (Table 1).

Hawks Nest Pack (M131, F486, mp674 + < 3 yearlings, genders unknown)

The HN M131 was one of two remaining wolves from the first wolf release in March 1998, and the only remaining member of his original pack of six (see Annual Report 1). He was trapped and re-released from the CB pen (Figure 6) with a new mate (F486) and their three 5 week-old pups in June 1999. Two uncollared wolves, believed to be the pups, were consistently seen with the pair through the end of 1999 (see Annual Report 2).

The HN pack utilized an area of approximately 743 square miles in 2000 (Figure 6). The area includes the HN and CB release pens used in 1998 and 1999, respectively, and expanded territory used by HN wolves since March 1998.

The HN pack continued to obtain its own food throughout this reporting period. Field staff investigated five HN prey sites in 2000 (Table 2). Two were confirmed kills made by the pack, two were probable kills, and one was hit by a car and fed on by the wolves. All were elk. Three were calves, one adult, and one unknown age. One was male, one female, and two were unknown sex.

Although a den site was not discovered, the pair raised at least one male pup (mp674) in 2000. The pup was captured on August 19 during unsuccessful efforts to trap and collar the HN yearlings. This pup was the first wild-conceived and wild-born Mexican wolf pup in the program, and represented a second year of successful reproduction for the HN pack. Radio-collaring this pup allowed us to document his survival through the end of this reporting period. Two additional uncollared wolves, probably HN yearlings, were observed with the pack on September 29, and at least one of those was observed through the end of the year.

On October 26 alpha male M131 was located away from the rest of the pack. Field personnel investigated and observed M131 on October 27 and 28 moving slowly and appearing disoriented. We captured him using a dart gun on October 29, and brought him in for veterinary evaluation. The wolf was treated for possible infection, and various tests were conducted but the cause of his illness could not be determined. His condition deteriorated and M131 was euthanized on November 1. The remains were sent to the National Wildlife Health Laboratory in Madison, Wisconsin for immediate evaluation. Results showed the wolf had developed a malignant brain tumor. This successful animal was seven and one/half years old, and had been free ranging since March 1998, rearing two generations of pups in the wild.

Female 486 and mp674 remained together within their territory through November and early December. They were observed with an uncollared wolf, probably a HN yearling, on December 7-8. Shortly thereafter, F486 was located with CN yearling m619 on the Campbell Blue drainage, separated from her the pup. F486 and m619 remained together within the HN territory for the remainder of the reporting period. The pup began traveling south into the territories of the CN and FR packs. Track evidence suggested he was traveling with a larger wolf, probably one of the HN yearlings.

The Mule Pack (M190, F189, m578, m580)

The MP was released with four young pups in April 1999, however, only two pups were observed after July 1999 (see Annual Report 2). Four members of the MP were free ranging in the area of Four Bar Mesa in the southwestern portion of the recovery area in early January 2000. Project biologists observed few fawns in the deer herd and the wolves did not seem to be preying on adult mule deer, the primary native prey of the area. Livestock were numerous. After observing the MP scavenging on a dead horse in January, we decided to trap the pack and relocate it to an area with better prey densities above the Mogollon Rim. The Steeple Creek site was approved for the release and we constructed a mesh pen for that purpose (Figure 1). The alpha pair and two pups (m578 and m580) were captured in January. Unfortunately, a trap monitor failed to work properly and F189 sustained serious frostbite to a front foot, resulting in a need to amputate the foot. The entire group was placed in captivity in Sevilleta until she recovered and her ability to compensate for her

injury could be evaluated.

The USFWS undertook an Environmental Assessment (see Outreach section, page) to evaluate and clarify the ability of the Mexican wolf project to translocate wolves to New Mexico for management purposes. After approval of the proposed action, two sites were selected for translocation of the MP and PS packs to the Gila Wilderness.

The MP female adapted well to her injury and bred again with M190 in captivity. On March 23, the wolves were transferred by mules approximately 20 miles into the Gila Wilderness and placed in a soft mesh pen near Lilley Park (Figures 1, 7). The pack dug out of their pen within 24 hours, and localized around the release site for approximately one week. The female localized at a den site near the pen. On April 13, M190 and the two yearlings were located on a private ranch east of the town of Cliff, NM, and some 25 air miles from their release site (Figure 7). We initiated trapping efforts at the request of the ranch owner and M190 and m580 were captured in good health on May 1. Yearling 578 began traveling extensively after the others were trapped. He dispersed outside the recovery area and was captured in a helicopter darting operation south of Silver City on May 21 (Figure 7). All of the wolves were in good health when captured and had not depredated livestock, however they were using private lands outside the recovery areas and landowners requested their removal.

We returned M190 to the pen near where his mate appeared to be denning on June 6. They remained together until July 20, and appeared to be tending pups in a den. They then separated, and both wolves began traveling extensively, returning to the release area on occasion. There were two reports of observations of M190 with an uncollared wolf, which might have been a MP pup. In early August, M190 was located in the Gila Wilderness with F191 and her yearling offspring f628 from the PS pack, which no longer had an alpha male (see Pipestem Pack, below). M190 and F191 were siblings reared in captivity. They remained together for the remainder of this reporting period and appeared to be establishing a pair bond. They established a range that included the release sites of both the MP and PS wolves (Figures 1, 7, 8). It was unknown whether any MP pups accompanied the male or survived to the end of this reporting period.

The MP F189 traveled widely after she and her mate split up, moving in and out of the wilderness and as far west as her original release site in Arizona, where she remained at the end of this reporting period (Figure 7). She was observed by project personnel and private citizens during the fall and winter and appeared healthy in spite of her single status and missing foot. She was located near her mate and the PS wolves near Snow Lake on October 30, but was alone again thereafter. The MP male remained with the PS wolves (Figures 7, 8). It appeared that M190 and F189 had permanently parted, and the M190 was becoming the alpha male of the PS pack.

No prey sites were investigated by project personnel for MP wolves during this period (Table 2). The wide-ranging movements of F189, and the wilderness use by M190 made discovery of such sites problematic. Most monitoring of wolves in the wilderness was by aerial telemetry only.

<u>The Pipestem Pack (M208, F191, f562, f624, m627, f628)</u>

The PS wolves were all recaptured in 1999 after the pack was involved in livestock depredation and fighting with dogs (See Annual Report 2). Three wild born pups survived from a litter of six (f624, m627, f628). Our objective in 2000 was to relocate the wolves in a remote area far from human dwellings and livestock. After the proposed action in the translocation EA was approved, a site was selected for a soft mesh pen in the Gila Wilderness above White Creek, near Half-Moon Park (Figure 1).

Five members of the PS Pack (M208, F191, f624, m627, and f628) were carried by mule to the Half Moon pen on April 4. On April 15, field personnel opened the gate and released the pack in the wilderness. The female was pregnant, and the pack localized around the pen site. By April 27, however, yearling f624 dispersed and became solitary. This wolf was trapped on June 1 to avert her from an area around a calving operation in New Mexico. She was re-released near the wilderness boundary on the same day. She did not return to the problem area, however, she began traveling and dispersed outside recovery area boundaries, so she was captured and returned to captivity on July 16 (Table 1, Figure 9).

In late May, yearling m627 also dispersed from his pack and began traveling alone south of the Gila wilderness. This wolf was last observed near Hurley, NM on July 2 and its fate is unknown at the end of this reporting period (Figure 9).

The alpha pair and yearling f628 remained near the release area, and the alpha female denned near White Creek. One pup was observed by field staff at the den on May 22, and a closure was placed around the den to protect the pups and prevent interactions between the wolves and hiker's traveling with dogs. However, beginning in mid-May, the wolves traveled over 15 miles on several occasions to the village of Gila Hot Springs. Nine incidents of interactions between the PS wolves, humans, dogs, and livestock were investigated between early May and mid- June, (Table 3). Between May 16 and May 23, the PS wolves were involved in two separate incidents of following individuals with dogs and fighting with the dogs. Three additional incidents involving wolves in remote camps or campgrounds were reported, two of these resulted in minor loss of property. Dispersing yearling f624 was reported as a nuisance causing unconfirmed damage, and dispersing yearling m627 was reported on private property. Two incidents of livestock loss were reported involving the alpha pair and one of these (a lamb) was confirmed.

Throughout this period, project personnel monitored the wolves intensively and harassed them when they were located near human activity. The wolves would return to the den site in the wilderness, but one or more pack members would soon make another foray to the village. After the lamb was attacked by the wolves on June 15, we trapped the alpha male in Gila Hot Springs and returned him to captivity, leaving the two females to raise any surviving pups. After the male was removed, the females were not involved in any further incidents. The same had been true in 1999 after we removed the alpha male and yearling female from the PS territory where depredation was occurring (see Annual report 2).

F191 and f628 were located together and separately during monitoring during June and July. In early August, F191 and M190 from the MP were located together. The three wolves were thereafter consistently located together, suggesting that M190 was assuming the role of the alpha male of the PS pack. The wolves established the release areas of the PS and Mule Packs within the

Gila Wilderness as part of their core range, traveling within and north of the wilderness boundary (Figures 8, 9).

One prey site investigation was conducted for the PS pack. Field staff found an old cow elk (10 +) that had been fed on and probably killed by the wolves on July 8 (Table 2). Locating kills in the wilderness is problematic, however, a graduate study on fecal analysis of the reintroduced Mexican wolves began in 1999. Results should provide greater insight into the food habits of wolves throughout the reintroduction area.

Occupied Wolf Range

Wolves occupied approximately 9,696 square miles in year 2000, based on all known locations plus a 3 mile buffer (Figure 10). This calculation excluded the linear dispersal movements of CB f594, however it included the locations of wolves that were located temporarily on or outside designated wolf recovery boundaries.

Wolf/Livestock, Wolf/Pet, and Wolf/Human Interactions

Project personnel, primarily Wildlife Services, responded to 36 reports of wolf incidents in 2000 (Table 3). Twenty were confirmed as involving wolves, three were possibly wolf-related, nine were attributed to other causes, and four could not be confirmed.

Five of twenty confirmed incidents involving wolves resulted in loss or damage (Table 3). Two were livestock depredation. The first was the confirmed loss of a bull to the Gavilan pack. All pack members involved in this depredation were removed from the wild. The other involved the PS wolves attacking a lamb on private property and severely injuring it, resulting in the loss of the lamb. The PS M208 was removed from the wild after this incident.

One confirmed incident resulted in a minor injury to a dog, which occurred during an interaction between the CB wolves, dogs, and a horse and rider (described on page 3.) CB female 518 was removed from the wild as a result of this incident (Table 3).

Finally, two minor losses of property (socks and a shoe insole, and a rope) were confirmed and attributed to PS wolves (Table 3).

Fifteen confirmed wolf incidents in which no damage or loss occurred included (Table 3):

- five incidents of wolves being observed in or near camps (one of these also involved fighting with a dog);
- five incidents of wolves interacting with dogs (three of these also involved humans that accompanied the dogs) not resulting in injury or loss to the dog or human (one of these at a camp);
- Three incidents of wolves localizing on or near private property;
- two incidents of wolves causing nuisance by frequenting a ranch area.

The three incidents classified as possible wolf all involved livestock depredation in which there

was not enough evidence to confirm the cause of death, but wolves had been in the area (Table 3).

The nine incidents attributed to other causes all involved livestock depredation, and were attributed to accidents (4), coyotes (4) bear (1) (Table 3).

The cause of the remaining four incidents could not be confirmed because of a lack of evidence regarding the incident or evidence that wolves were in the area.

Interagency Coordination

On January 4 the field team met with AGFD Commissioner D. Manning to discuss recent and pending wolf management issues.

B. Arroyo, B. Kelly, and J. Antonio for FWS met with the San Carlos Apache Tribal Council on July 17 to discuss wolf dispersal on San Carlos lands.

A. Armistead attended the USDA Wildlife Services Annual State Meetings in NM and AZ during the weeks of July 24 and July 31, respectively. He presented to approximately 35 people.

W. Brown, C. Buchanan, and B. Kelly represented the USFWS at the 2000 Mexican Wolf Species Survival Plan meeting in El Paso, Texas July 20.

The Interagency Field Team and USFWS supervisors participated in a two day team building workshop conducted by the National Conservation Training Center October 3-5 in Kingston, NM.

A. Armistead and W. Brown worked with staff from the Red Wolf Program in North Carolina to exchange information on program implementation and field techniques November 13-20.

Dr. Ole Alcumbrac provided a training lecture in chemical immobilization to project staff and volunteers November 27.

W. Brown and B. Kelly met with D. Groebner and R. Remington to discuss interagency issues on November 29.

Biologists from USFWS, AGFD, and White Mountain Apache Tribe met in Springerville on December 19 to discuss a pending wolf biologist-trainee position on the White Mountain Reservation. The individual in this position would ultimately monitor and manage wolves on the reservation.

Outreach

The USFWS issued a proposal in 1999 to the US Forest Service (USFS) to translocate wolves to the Gila National Forest in New Mexico for management purposes (see Annual Report 2). Translocation of wolves was authorized in the federal rule established for the nonessential experimental population of Mexican wolves completed in 1998. However, the USFWS proceeded with a National Environmental Policy Act (NEPA) process in 2000 to evaluate whether there were

any significant effects associated with the translocation of wolves that were not addressed in the 1998 Environmental Impact Statement. The USFWS issued a notice of intent to conduct an Environmental Assessment (EA) on January 10 to approximately 1,000 interested parties. Many local community members and organizations were personally contacted by field staff. Scoping comments (728) were received through February 4 (728). The USFWS distributed the EA on February 10. Written comments on the EA were accepted through March 15, and public hearings were conducted on the issue in Reserve and Silver City, NM on March 1 and 2, respectively. Over 850 people attended the hearings, and over 9,000 comments were received and analyzed. On March 17, the USFWS Regional Director for Region 2 signed a Finding of No Significant Impact, approving the translocation of wolves throughout the secondary recovery zone.

V. Asher, A. Armistead, W. Brown, and N. Smith participated in an information meeting hosted by the Gila Rod and Gun Club, the People for USA, and the Grant County Cattle Growers on January 25 in Silver City. Thirty-five people attended.

The Gila Wilderness District hosted a public information meeting on the wolf reintroduction at the Gila Cliff Dwellings on June 27. N. Smith and W. Brown represented the interagency team. C. Miller from Defenders of Wildlife gave a brief overview of the livestock compensation program.

W. Brown and N. Smith attended the Catron County Citizen Advisory Committee meetings on March 27, June 26, and December 11.

A. Armistead participated in "Ranch Days" in Glenwood, NM on April 19-20.

W. Brown participated in a panel discussion and workshop on the Mexican wolf translocation process sponsored by the Alternative Dispute Resolution and Natural Resources Conference in Tucson, AZ on May 19.

B. Kelly attended the Southwest Strategy Meeting in Silver City on May 31.

W. Brown, B. Kelly, D. Groebner, C. Hayes and A. May met with citizens from Sierra County at a meeting sponsored by the Sierra County Commission in Truth or Consequences, NM on May 23.

Project updates were posted locally approximately every 2 weeks in the wolf recovery area in various places such as post offices, libraries, and USFS offices. Field updates are also provided on the USFWS Mexican wolf web site. The address is: http://mexicanwolf.fws.gov.

A Mexican Wolf Interagency Reporting Hotline, 1-888-459-WOLF (9653), was maintained for citizens to report sightings, harassment, or taking of Mexican wolves, or to report livestock depredations.

Project personnel contacted campers, hunters, and other recreationists in the wolf-occupied recovery area and delivered information about the Mexican wolf project.

Notices were sent to all hunters who drew permits to hunt big game in the wolf recovery area. These notices advised hunters of the potential for encountering wolves, provided general

recommendations for camping and hunting in wolf-occupied areas, and explained the legal provisions of the nonessential, experimental population rule. Additionally, a special mailing providing information about Mexican wolves was sent to hunters in Arizona and New Mexico.

Project Personnel gave presentations on the Mexican wolf program to the following groups during this reporting period:

January 26 – Northern Arizona University Student Chapter of the Wildlife Society, Flagstaff, AZ.
February 22 – Minnesota Zoo, Apple Valley, MN.
February 23 – International Union for the Conservation of Nature Wolf Specialist Group, Duluth, MN.
February 24 – "Beyond 2000" International Wolf Conference. Oral presentation given by W. Brown, and poster session on soft mesh pens by V. Asher, N. Smith, S. Naftal, Duluth, MN.
March 7 – Round Valley Primary School, Springerville, AZ.
April 8 – American Zoo and Aquarium Conference, El Paso, TX.
April 11 – U.S. Forest Service, Silver City.
April 12 – Interagency Wolf Conference, Chico, MT.
April 12 – US Forest Service, Gila Cliff Dwellings, NM.
April 18 – U.S. Forest Service Southwest Biology Conference, Albuquerque, NM.
April 25 - New Mexico Cattle Growers, Albuquerque, NM.
May 25 – Sonoran Chapter of the Audubon Society, Phoenix, AZ.
June 9 – Tempe Arizona students, Alpine, AZ.
June 11 - Forest Guardians Conference, Kingston, NM.
June 12 – Society for Conservation Biology Conference, Missoula, MT
July 11 - Native American Natural Resources Workshop, Ladder Ranch, NM.
August 5 – Big Lake Campground, Apache National Forest, AZ.
August 6 – Hoyer Campground, Apache National Forest, AZ.
August 19 – Big Lake Campground, Apache National Forest, AZ.
August 23 - Beaver Creek Ranch, Arizona.
August 26 – Fools Hollow State park, AZ.
September 1 – Prescott College students, Alpine, AZ.
September 2 – Canyon Point Campground, Apache National Forest, Arizona.
September 15 – Sevilleta National Wildlife Refuge Open House, NM
September 22 – Rio Grande Nature Center, Albuquerque, NM
September 27 – Navajo Nation Game and Fish Department, Pinetop, AZ.
October 6 – Gila Rod and Gun Club, Silver City, NM.
November 14 – Blue Ridge High School, Pinetop, AZ.
November 18 – Bosque Del Apache Festival of Cranes.

Many newspapers and local television stations covered the wolf program, especially during the public participation and implementation phases of the translocation of wolves to the Gila Wilderness. Special media events included the following:

- National television program 60 Minutes II aired a twelve minute segment on the wolf program on March 12.

- Albuquerque public television station KNME aired a half hour interview with W. Brown on their In Focus program on March 24-26.

- Roundabout Productions began filming for a one hour documentary of the wolf program scheduled to air on Animal Planet in 2001.

- Turner Industries submitted a proposal and began preliminary work on a celebrity hosted one-hour documentary scheduled to air on TBS in 2001.

Law Enforcement

James Michael Rogers was sentenced for his admitted killing of Mexican gray wolf HN f493 on October 18, 1998, failing to report the shooting, and transporting the animal's body across state lines. USFWS Special Agent Doug McKenna led the investigation, and Assistant U.S. Attorney Camille Bibles handled the prosecution. The defendant received 4 months in Federal prison, 6 months house arrest, and 50 hours of community service. The successful prosecution was the first to be completed for the four Mexican wolves shot and killed during fall 1998. Three cases (CB F174, HN M531, and HN M532) remained open.

Law enforcement officers responded to the shooting death of FR590 near Aragon, NM on December 18, 2000. The case remained under investigation.

USFWS agents conducted systematic law enforcement patrols throughout the public hunting seasons in occupied wolf range in Arizona and New Mexico. State wildlife officers provided valuable support.

Litigation

The 10th Circuit Court issued a decision upholding the USFWS position regarding the Yellowstone and Idaho wolf reintroduction on Jan 13.

In January, plaintiffs in the New Mexico Cattle Growers' Association, et al. V. U.S. Fish and Wildlife Service, et al., filed an appeal regarding the 10th Circuit Court's October 28, 1999 decision upholding the USFWS position on the reintroduction program.

Personnel

The following personnel served during this reporting period. Brian Kelly led the program April – December 2000). Most individuals collected field data or provided other information used in this report. Colleen Buchanan, Dan Groebner, and Maggie Dwire assisted with data summary.

Staff

U.S. Fish and Wildlife Service

Brian Kelly, Mexican Wolf Recovery Leader (April – January 2000)
Wendy Brown, Mexican Wolf Field Coordinator (Acting Recovery Leader October 1999 – April 2000)
Colleen Buchanan, Mexican Wolf Captive Management Biologist
Dan Stark, Mexican Wolf Field Biologist (after October 2000)
Bruce Palmer, Biologist (detailed to program, November 1999 – April 2000)
Patty Hoban, Biologist (detailed to program, December 1999 – January 2000)
Leif Bang, student intern (January – November 2000)
Sherry Hoff, Office Assistant March – November 2000)
Theresa Olecksiew, Office Assistant (after December 2000)

Arizona Game and Fish Department

Dan Groebner, Regional Nongame Specialist and AGFD Wolf Project Leader
Val Asher, AGFD Field Team Leader (through April 2000)
Stephanie Naftal, AGFD Wolf Technician (January – July 2000)
AGFD Field Team Leader (July – December 2000)
Alexis Watts, AGFD Wolf Technician
Tim Pool, summer intern

New Mexico Department of Game and Fish

NMGFD Wolf Biologist

USDA Wildlife Services

Alan Armistead, Wolf Management Specialist

Volunteers

Kendall Brown
Scott Cassidy
Christina Chavez
Cari Common
Maggie Dwire
Tamar Friedner
David Grandmaison
Jason Hawley
Krista Jones
Grant Merrill
Joe Savage (Defenders of Wildlife intern)
Nahum Sanchez (Defenders of Wildlife intern)
Dan Stark
Jeffery Stephens
Manolo Victor
Jamie Winan

Table 1. Status and fates of reintroduced Mexican wolves January 1 – December 31, 2000. Table includes only those wolves reintroduced or believed to be alive in the wild during this period, – refer also to Annual Reports 1, 2).

* Indicates uncollared animal

WOLF ID	PACK	2000 RELEASE DATE (s) (FIRST RELEASE DATE)	STATUS/FATE
M166	CB	1/5/00, 12/5/00 (3/29/98)	free ranging
F522	CB	1/5/00, 2/6/00	recaptured (inappropriate behavior) 2/16/00
F518	CB	3/9/00	recaptured (inappropriate behavior) 4/23/00
f592	CB	4/11/00, 5/1/00, 12/5/00	free ranging
f594	CB	4/1//00, 5/31/00	dead (hit by car) 10/7/00
M194	CN	3/14/00	free ranging
F487	CN	3/14/00	free ranging
m619	CN	3/14/00	free ranging
m620	CN	3/14/00	dead (hit by car) 3/4/00
f621	CN	3/14/00	free ranging
M509	FR	7/15/00	free ranging
F511	FR	7/15/00 (3/29/98)	free ranging
f587	FR	7/15/00	free ranging
m590	FR	7/15/00	dead (shot) 12/18/00
mp641 *	FR	7/15/00	fate unknown (all pups observed with pack on 12/4/00)
mp642 *	FR	7/15/00	fate unknown (all pups observed with pack on 12/4/00)
mp643 *	FR	7/15/00	fate unknown (all pups observed with pack on 12/4/00)
fp644 *	FR	7/15/00	fate unknown (all pups observed with pack on 12/4/00)
M183	GV	none (5/22/99)	recaptured (livestock depredation) 1/25/00

Table 1, continued. Status and fates of reintroduced Mexican wolves January 1 – December 31, 2000. Table includes only those wolves reintroduced or believed to be alive in the wild during this period, – refer also to Annual Reports 1, 2).

* Indicates uncollared animal

WOLF ID	PACK	2000 RELEASE DATE (s) (FIRST RELEASE DATE)	STATUS/FATE
F168	GV	none (5/22/99)	recaptured (livestock depredation) 1/22/00
m555	GV	none (5/22/99)	fate unknown (last location 2/12/00)
m582 *	GV	none (5/22/99)	dead (recaptured for livestock depredation 2/8/00, euthanized in captivity due to distemper) 2/25/00
m583 *	GV	none (5/22/99)	recaptured (livestock depredation) 2/3/00
m584 *	GV	none (5/22/99)	recaptured (livestock depredation) 1/25/00
f585 *	GV	none (5/22/99)	dead (recaptured for livestock depredation1/23/00, euthanized due to distemper) 8/15/00
M131	HN	none (3/29/98)	dead (brain tumor) 11/1/00
F486	HN	none (12/11/98)	free ranging
p674	HN	none (wild born)	free ranging
not assigned *	HN	none (6/3/99, at 5 weeks old)	fate unknown (2 uncollared wolves observed with pack 9/29/00)
not assigned *	HN	none (6/3/99, at 5 weeks old)	fate unknown (2 uncollared wolves observed with pack 9/29/00)
M190	MP	3/24/00 (5/24/99)	free ranging
F189	MP	3/24/00, 6/6/00, (5/24/99)	free ranging
m578	MP	3/24/00 (5/24/99)	recaptured (dispersed outside recovery area) 5/21/00
m580	MP	3/24/00 (5/24/99)	recaptured (dispersed outside recovery area) 5/01/00
M208	PS	4/16/00 (3/15/99)	recaptured (nuisance behavior) 6/16/00
F191	PS	4/16/00 (3/15/99)	free ranging

Table 1, continued. Status and fates of reintroduced Mexican wolves January 1 – December 31, 2000. Table includes only those wolves reintroduced or believed to be alive in the wild during this period, – refer also to Annual Reports 1, 2).

* Indicates uncollared animal

WOLF ID	*PACK*	*2000 RELEASE DATE (s) (FIRST RELEASE DATE)*	*STATUS/FATE*
f624	PS	4/16/00 (wild born 4/99)	recaptured (dispersed outside recovery area) 7/16/00
m627	PS	4/16/00 (wild born 4/99)	fate unknown (last located 7/2/00)
f628	PS	4/16/00 (wild born 4/99)	free ranging
not assigned *	PS	none (wild born 4/2000)	fate unknown (observed at den, May 2000)

Table 2. Summary of Mexican gray wolf prey site investigations January 1 - December 31, 2000.

PACK	*DATE*	**STATUS*	*COMMENTS*	*SPECIES*	*SEX*	*AGE*
HN	1/27/00	F	hit by car	elk	unknown	unknown
HN	2/8/00	C		elk	female	calf
CB	2/9/00	F	unknown causes	mule deer	male	unknown
Unknown	2/22/00	P		elk	unknown	unknown
HN	6/12/00	C		elk	unknown	calf
CN	6/25/00	P		elk	unknown	2 years
CN	6/30/00	P		elk	unknown	calf
PS	7/8/00	P		elk	female	10 +
CN	7/14/00	C		elk	female	14 +
Unknown	7/20/00	F	coyote kill	mule deer	unknown	fawn
CN	8/9/00	C		elk	female	5
HN	8/18/00	P		elk	unknown	3 months
FS	8/30/00	P		elk	female	1 - 2
FS	8/30/00	P		elk	female	2 - 3
FS	9/6/00	P		elk	unknown	2 - 4
FS	9/14/00	C		elk	female	5
FS	9/14/00	P		elk	unknown	8
FS	9/18/00	P		elk	female	4
CN	10/5/00	C		elk	female	unknown
Unknown	11/7/00	P		elk	unknown	unknown
HN	12/11/00	P		elk	male	2

* Status: C = Confirmed wolf kill
P = Possible wolf kill
F = Fed on by wolves – cause of death unknown or other

Table 3. Reported Mexican wolf incident investigations in 2000.

DATE	*REPORTED INCIDENT*	*DAMAGE/ LOSS*	*VERDICT*	*WOLVES INVOLVED*
1/5/00	wolf near camp	none	confirmed wolf	522
1/11/00	livestock depredation	dead bull	confirmed wolf	183, 168, 582, 583, 584, 585
2/6/00	wolf eating cats	missing cat	unconfirmed	none
2/16/00	wolf interacting with dogs	none	confirmed wolf	522
2/22/00	injured cow	ears chewed on cow	possible wolf	555
3/20/00	dead calf	calf	confirmed coyote	none
3/26/00	dead cow	cow	accident	none
3/28/00	dead calf	calf	confirmed coyote	none
4/9/00	dead calf	calf	confirmed coyote	none
4/14/00	aggressive encounter with horse/rider/dogs	injured dog	confirmed wolf	166, 518
4/15/00	wolves localized on private property	none	confirmed wolf	190, 578, 580
5/5/00	wolves in camp	saddle pads and rope chewed	confirmed wolf	Pipestem - specific individual unknown
5/12/00	wolf in campground	none	confirmed wolf	208
5/16/00	jogger/ dog encounter with wolves	none	confirmed wolf	208, 191
5/22 - 523/00	wolf in camp, following hiker with dog, fighting with dog	none	confirmed wolf	Pipestem - specific individuals unknown
5/26/00	recurring damage/nuisance	none	confirmed wolf	624

Table 3, continued. Reported Mexican wolf incident investigations in 2000.

DATE	REPORTED INCIDENT	DAMAGE/ LOSS	VERDICT	WOLVES INVOLVED
5/27/00	wolf in camp	socks and shoe insole chewed	confirmed wolf	Pipestem – specific individual unknown
5/29/00	dead cow	cow	accident	none
6/9/00	wolf on private property	none	confirmed wolf	627
6/1200	two dead calves	two calves	possible wolf	208, 191
6/15/00	injured lamb	lamb (euthanized)	confirmed wolf	208, 191, 628
6/23/00	dead calf	calf	accident	none
6/24/00	dead calf	calf	confirmed coyotes	none
7/4/00	wolf stalking calf	none	unconfirmed	624
7/28/00	dead ewe	ewe	confirmed bear	none
8/4/00	wolves on private property	none	confirmed wolf	190
8/20/00	wolves running toward man with dog	none	confirmed wolf	511, 509, 587, 590
8/24/00	dead calf	calf	possible wolf/coyote	unknown
8/24/00	wolves in camp	none	confirmed wolf	511, 509, 587, 590
9/1/00	wolf interacting with dog	none	confirmed wolf	511, 509, 587, 590
9/15 – 9/18	wolves in camp acting aggressively	none	unconfirmed, possible hybrids	none
9/25/00	wolf in camp	none	confirmed wolf	590
9/29/00	wolves in camp	none	confirmed wolf	511, 509, 587, 590

Table 3, continued. Reported Mexican wolf incident investigations in 2000.

DATE	*REPORTED INCIDENT*	*DAMAGE/ LOSS*	*VERDICT*	*WOLVES INVOLVED*
10/1/00	wolf on porch eating dog food	none	unconfirmed	none
12/18/00	injured calf	injured calf	accident	none
12/19/00	wolves frequenting ranch	none	confirmed wolf	166, 592