

Ladder Ranch Reserve 2021 Wolf Translocation Plan

The U.S. Fish and Wildlife Service in conjunction with Ted Turner & the Turner Endangered Species Fund, proposes the translocation of one adult pair of Mexican wolves with dependent pups ~ 6 weeks old on the Ladder Ranch – Turner Reserve Property located adjacent to the Gila National Forest in New Mexico. This translocation will occur in the Zone 2 Management Area of the Mexican Wolf Experimental Population Area (MWEPA). This pack is composed of genetically valuable wild Mexican wolves M1693 and F1728 and their dependent pups.

With seven unrelated founders, the Mexican wolf has experienced a genetic bottleneck necessitating management actions to retain remaining gene diversity. Specifically, the captive population is carefully managed to maintain gene diversity by establishing breeding pairs through a process that considers mean kinship¹ (MK) and avoidance of inbreeding². Conversely, breeding pairs in the wild population are not prescribed, but typically establish through natural dispersal and pack formation. Thus, to manage gene diversity in the wild population, it is important to ensure the population as a whole is genetically diverse, increasing the probability that wolves pairing naturally have a low MK.

Background:

From 2012 to 2020, the wild population's MK has hovered around 0.25. This means that, on average, individuals within the population are as related to one another as full siblings produced by unrelated parents. Thus, there is limited potential for natural pair formation among wild wolves to have a low MK now or in the future, which naturally leads to inbreeding accumulation. Through 2020, the Mexican Wolf Recovery Program has released fifty cross-foster pups³ from captivity into the wild in a concerted effort to improve the genetic diversity of the wild population. During the 2021 breeding season, the IFT documented forty-four packs of Mexican wolves in the MWEPA. So far, five of these packs have breeding wolves originating from cross-foster releases. Retaining these adult, genetically diverse wolves in the wild population is important to decreasing the overall relatedness among wolves in the MWEPA, and to meet the objectives of the 2017 Mexican Wolf Recovery Plan, First Revision.

The Mexican Wolf Experimental Population Area - Initial Release and Translocation Proposal for 2021 states that translocations of wild wolves will be considered on a case by case basis in an effort to increase gene diversity in the wild population. In March 2021, the U.S. Fish and Wildlife Service authorized the translocation of M1693 and F1728 and their dependent pups in order to minimize livestock conflicts and maximize the opportunity for this pack to remain in the wild and

¹ Mean kinship (MK) is an individual's degree of relatedness to the population. A wolf with low MK is less genetically represented in the population, and a breeding event by this animal would decrease the overall relatedness of the population. A wolf with higher MK is genetically well represented in the population, and a breeding event by this animal would increase the overall relatedness of the population. Because MK of an individual animal is relative to the current population, it is constantly changing. For example, an individual's MK will increase each time that animal successfully produces and raises offspring in the population.

² Inbreeding is the mating of closely related individuals, which tends to increase the number of individuals in the population that are homozygous for a trait which can reduce adaptive potential.

³ A cross foster pup is a captive born Mexican wolf pup that is placed into a wild den with similarly aged pups to be raised by wild Mexican wolves.

contribute towards increasing the genetic diversity in MWEPA. The January 2015 Revision to the Regulations for the Nonessential Experimental Population Area of the Mexican Wolf states, the Service "may develop and implement management actions to benefit Mexican wolf recovery in cooperation with willing private landowners, including initial release and translocation of Mexican wolves onto such lands in Zones 1 or 2 if requested by the landowner and with the concurrence of the State game and fish agency." Ted Turner and the Turner Endangered Species Fund have requested the translocation of an adult pair of wolves with dependent pups on the Ladder Ranch a Turner Reserve Property located in Zone 2 of the MWEPA. This property is contiguous to occupied Mexican wolf range.

Proposed Translocation Wolves: M1693 and F1728 and dependent pups

M1693 was born at the Endangered Wolf Center and was placed in a wild den as a cross-foster pup (< 15 days old) to increase the genetic diversity of the wild Mexican wolf population. M1693's genetic MK ranks him as one of the most valuable male wolves in the wild population. His inbreeding coefficient is .1302 which compares favorably to the average inbreeding coefficient of the wild population of .2020. While F1728 was born in the wild population and her genetic contribution reflects the MK and inbreeding of the average wild wolf, when paired with M1693, they provide pups that favorably impact the inbreeding level of the wild population. Both M1693 and F1728 were born in 2018 and have likely been together since the winter of 2020. This pair is currently being housed at the Sevilleta Wolf Management Facility (SWMF) in New Mexico, awaiting translocation following the birth of pups in early May.

Proposed Translocation Site:

The Ladder Ranch Reserve encompasses ~ 156,000 acres and contains a broad array of wildlife diversity. The property is a mix of ecosystems, including grasslands and pine forests in the foothills of the Black Range adjacent to the Gila National Forest. The Animas, Seco, and Palomas streams bisect the ranch, and their restored riparian zones provide a rich habitat for wildlife, including bison, elk and deer herds. The release site will be determined using several factors, including but not limited to: prey density, distance from year-round human residences, towns, and livestock grazing.

The proposed translocation site is:

- Approximately 5 miles from active livestock grazing on the Gila National Forest;
- Approximately 10 miles from BLM lands;
- Approximately 5 miles from State lands;
- Approximately 9 miles from the closest year-round residences, which are located on the Ladder Ranch;
- Approximately 14 miles from closest town (Hillsboro, NM);
- Situated along North Seco Creek in a gentle valley surrounded by rolling hills. The area is utilized year-round by elk, deer, and bison herds;
- Located in close proximity to a resident elk herd living on the western side of the Ladder Ranch; the 2018 elk population on the Ladder Ranch (New Mexico Department of Game and Fish) was estimated at 538 total animals; cow elk traditionally calve in areas associated

with the lower Animas, upper and middle Seco, and the upper Palomas drainages on the Ladder Ranch;

- U.S. Forest Service allotments to the west of Ladder Ranch are held by the Ladder Ranch – Turner Reserve Property and are vacant of livestock.

Proposed Translocation:

The wolves will be placed in a hard-sided, chain-link, remote release pen on the Ladder Ranch when the pups are 4 weeks old to prevent wolves from immediately escaping. The wolves will remain in the release pen for 2 weeks in order to facilitate acclimation to the translocation area and hold wolves in the area longer. By translocating the pack when the pups are very young, the adult wolves will naturally establish a home range near the translocation area due to the restricted mobility of the small pups. Furthermore, the timing of the translocation will coincide with local elk calving in the Seco Creek drainage providing the wolves with a vulnerable prey source nearby. Supplemental food caches of road-killed native prey (elk and deer) or bison carcasses will be established and maintained as needed during denning and rendezvous season (June – September). This management activity will encourage the pack to remain in the Seco Creek drainage and establish a core use area for rearing pups.

