



Mexican Wolf Recovery Program Quarterly Update

Fourth Quarter 2023 (October, November, December)

The following is a summary of Mexican Wolf Recovery Program activities in the Mexican Wolf Experimental Population Area (MWEPA) in Arizona, including the Fort Apache Indian Reservation (FAIR), San Carlos Apache Reservation (SCAR), and New Mexico. Additional Program information can be obtained by calling (928) 339-4329 or toll free at (888) 459-9653, or by visiting the Arizona Game and Fish Department website at azgfd.gov/wolf or by visiting the U.S. Fish and Wildlife Service website at fws.gov/southwest/es/mexicanwolf. For information on the FAIR, call (928) 338-4385 ext. 226 or visit wmatoutdoor.org. Past updates may be viewed at these websites. Interested parties may [sign up](#) to receive this update electronically by visiting azgfd.com and clicking on the E-news Signup tab on the top left corner of the webpage. This update is a public document and information in it can be used for any purpose. The Mexican Wolf Recovery Program is a multi-agency cooperative effort among the Arizona Game and Fish Department (AZGFD), New Mexico Department of Game and Fish (NMDGF), USDA Forest Service (USFS), USDA-Animal and Plant Health Inspection Service, Wildlife Services (WS), U.S. Fish and Wildlife Service (USFWS), White Mountain Apache Tribe (WMAT), Bureau of Land Management (BLM), and the U.S. National Park Service (NPS).

To view semi-monthly wolf location information please visit <https://arcg.is/bLyPO>

Please report any wolf sightings or suspected livestock depredations to: the Alpine wolf office (928) 339-4329, Pinetop wolf office (928) 532-2391 or toll free at (888) 459-9653. For sightings or suspected depredations on the FAIR, please call the WMAT wolf office in Whiteriver at (928) 338-4385 ext. 226. To report incidents of take or harassment of wolves, please call the AZGFD 24-hour dispatch (Operation Game Thief) at (800) 3520700.

Overall Mexican Wolf Recovery Program Quarterly Updates

The AZGFD distributed approximately 350 more “Know the Difference – wolf vs. coyote” informational flyers during the fourth quarter to additional businesses and US Forest Service Ranger District Offices in local communities in Eastern Arizona in proximity to areas where Mexican wolves have been documented in efforts to raise awareness of Mexican wolf identification among hunters. Overall, more than 1,500 flyers were distributed to local businesses, US Forest Service Ranger District offices, AZGFD Regional offices and big game hunters in Arizona during the third and fourth quarters of 2023, as part of Mexican Wolf Recovery Program efforts to reduce wolf mortality. The Arizona Sportsman for Wildlife Conservations emailed the informational flyer to approximately 15,000 individuals in the month of November in support of AZGFD efforts.

In November, the AZGFD celebrated the 25th anniversary year since Mexican wolves were reintroduced to the wild in Arizona and New Mexico by sharing wolf recovery videos, podcasts, articles and hosting events at the Phoenix Zoo and the Southwest Wildlife Conservation Center. To view the news release and the related resources shared by AZGFD click [here](#).

Numbering System: Mexican wolves are given an identification number recorded in an official studbook that tracks their history. Capital letters (M = Male, F = Female) preceding the number indicate adult animals 24 months or older. Lower case letters (m = male, f = female) are used to indicate wolves younger than 24 months. A lowercase letter “p” preceding the number is used to indicate a wolf pup born in the most recent spring. The capital letter “A” preceding the letter and number indicates breeding wolves.

Definitions: A “wolf pack” is defined as two or more wolves that maintain an established territory. In the event that one of the two breeding (dominant) wolves dies, the remaining breeding wolf, regardless of pack size, retains the pack status. The packs referenced in this update contain at least one wolf wearing a radio telemetry collar. The Interagency Field Team (IFT) recognizes that wolves without radio telemetry collars may also form packs. If the IFT confirms that wolves are associating with each other and are resident within the same home range, they will be referenced as a pack.

CURRENT POPULATION STATUS

The end of year count for 2022 generated a minimum abundance of 242 Mexican wolves in the wild (105 in AZ and 137 in NM). This was a 23% increase in the population from the 2021 end of year count. At the end of 2022, there were a minimum of 59 packs documented (19 in AZ and 40 in NM). Annual counts are conducted in the winter as this is when the population experiences the least amount of natural fluctuation (i.e., the population increases dramatically in the spring with the birth of new pups and declines throughout the summer and fall as pup mortality generally occurs in this period). Thus, the IFT summarizes the total number of counted wolves in winter. Counting the population at the end of each year

allows for comparable year-to-year trends at a time of year when the Mexican wolf population is most stable. **The end of year census for 2023 started on November 1, 2023 and is currently underway. Census results for end of year 2023 will be available by March 2024.**

WOLF PACK UPDATES:

For each documented wolf pack in the table below, wolves fitted with functioning collars at the end of the quarter are listed by studbook number. Studbook numbers of wolves without collars or with non-functioning collars are not listed in the pack updates. Not all wolves in the population are collared or have assigned studbook numbers. Captures, mortalities, removals, and food caching are listed in the corresponding column for the given time period. If a pack was food cached at any time within the quarter, the food cache column will indicate the type of food cache. The primary reason for food caching will be noted with “S” for supplemental and “D” for diversionary; the reason for a food cache may change over time. If a wolf dies, becomes fate unknown, or is removed in the current time period, its studbook number will be removed from the pack column in the following quarterly report. After three months of consistent dispersal behavior away from pack territory, a dispersing wolf is no longer considered a member of its originating pack and will be added to a new row as a single wolf or member of a different pack. Packs that have raised pups in the quarter will be listed as “Yes” in the “Raising pups” column. This will remain for the calendar year if the pack was documented rearing pups in the period of April through September. Any fields that require further comment will be annotated with “*” and further comments are listed in the “Comments” column.

ARIZONA:

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Bear Canyon AM2563, AF1823	0	0	0	0	Yes	No	
Castle Rock M1921, f2632	0	0	0	0	No	No	
Eagle Creek M1477*, F1548	0	0	0	0	No	No	M1477, previously fate unknown, was documented alive and traveling with F1548 in November.
Elk Horn AM1838, AF1866, fp2865	0	0	0	D	Yes	No	

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Fantasia AF2759, AM2873*	1*	0	0	0	Yes	No	In October, the IFT captured, collared, and released AM2873.
Firebox AM1881	0	0	0	0	No	No	
Hoodoo M1789, M1893, AF2752, fp2868	0	0	0	D	Yes	No	
Juniper Bench AF1920, mp2859	0	0	0	D	Yes	No	
Pancho Spring AF1889, AM2770, mp2870*	1*	0	0	D	Yes	No	In October, the IFT captured, collared, and released mp2870.
Panther Creek AF1683*	0	1*	0	0	Yes	No	In October, AF1683 was found dead in Arizona. The mortality is under investigation.
Prime Canyon m2848, f2849	0	0	0	0	Yes	No	
Rocky Prairie AM1383, m2762, f2769, mp2863, fp2864	0	0	0	0	Yes	No	
Rose AM1704	0	0	0	0	Yes	No	
Saffel AM1854, AF1939, M1852	0	0	0	D	Yes	No	
Sierra Blanca AF1550, AM1571	0	0	0	0	Yes	Yes	
Warm Springs F1938, M2545	0	0	0	0	No	No	
Single m2766*	0	0	0	0	No	No	m2766 dispersed from the Tsay-O-Ah pack in September and became a Single in December.
Single AF1686*	0	0	0	0	No	No	AF1686, formerly the alpha female of Castle Rock, dispersed from the pack in September and became a Single in December.

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Single F2536*	0	1*	0	0	No	No	F2536 dispersed from the Rocky Prairie pack and became a Single in October. In December, F2536 was found dead in Arizona. The mortality is under investigation.
Single m2722	0	0	0	0	No	No	
Single m2774*	1*	0	1*	0	No	No	In November, the IFT captured and removed m2774 to captivity to be paired with F1828 and to be translocated back into the MWEPA in March 2024.
Single M1857*	1*	0	0	0	No	No	In October, the IFT captured, recollared, and released M1857. The wolf had previously been considered fate unknown after its collar battery died.
Single m2709	0	0	0	0	No	No	

FAIR:

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food Cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Baldy AM1347, f2767	0	0	0	0	Yes	No	
Tsay-O-Ah AM2698, AF1283	0	0	0	0	No	No	
Tu dil hil AM1338, AF1679, f2758	0	0	0	0	Yes	No	
Single F2871*	0	1*	0	0	No	No	In October an uncollared wolf, F2871, was found dead in Arizona. The mortality is under investigation.

Total number of wolf packs in Arizona at end of the quarter: 19

NEW MEXICO:

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food Cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Agua Frio AF1936, AM1875	0	0	0	0	Yes	No	
Aldo AM2561	0	0	0	0	Yes	No	
Beaver Point AM1949, AF2753	0	0	0	0	Yes	No	
Burnt Peaks M2557	0	0	0	0	No	No	
Buzzard Peak AF1726, f2713, AM1831*	0	1*	0	0	Yes	No	In December, AM1831 was found dead in New Mexico. The mortality is under investigation.
Canovas Creek AM1584, m2862*	0	1*	0	0	Yes	No	In December, m2862 was found dead in New Mexico. The mortality is under investigation.
Centerfire AF1916*, AM2697	0	1*	0	D	Yes	No	In November, AF1916 was found dead in New Mexico. The mortality is under investigation.
Chimney Canyon M2636	0	0	0	0	Yes	No	
Cimmaron Mesa AF1705, AM2702	0	0	0	0	Yes	No	
Colibri M1856	0	0	0	0	Yes	No	
Cottonwood Canyon AF2503, AM1859	0	0	0	0	Yes	No	
Dark Canyon AM1354, AF1456, f2741, f2743*	1*	0	0	0	Yes	Yes	In October, the IFT captured, collared, and released f2741. In September, f2743 dispersed and became a single in October.
Dillon Mountain AF1865	0	0	0	0	Yes	No	

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food Cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
El Torro F2861	0	0	0	0	No	No	
Frieborn AF1443, AM2765	0	0	0	0	Yes	No	
Gallinas Canyon AF2588, AM2700	0	0	0	0	Yes	No	
Hail Canyon AF2690, AM2764, mp2821*	1*	0	0	0	Yes	Yes	In October the IFT captured, collared, and released mp2821, a captive born pup that was fostered into the Hail Canyon pack in 2023.
Iron Creek AF1278, M2549, F2756, f2746	0	0	0	0	Yes	Yes	
Leon AM1824, AF1578, f2763, mp2809*	0	0	0	0	Yes	Yes	In October, the IFT documented that mp2809 slipped its collar and is now considered fate unknown.
Leopold AF1346, AM1855	0	0	0	0	Yes	No	
Lonesome AF2694, AM2755	0	0	0	0	Yes	No	
Luna AF1487, M2567	0	0	0	0	No	No	
Manada del Arroyo F1828*	1*	0	1*	0	No	No	In November, the IFT captured and removed F1828 to captivity to be paired with m2774 and to be translocated back into the MWEPA in March 2024.
Mangas f2775	0	0	0	0	Yes	No	
Milligan Gulch AF2688, AM2687	0	0	0	0	Yes	No	
Noble Mountain AF1918	0	0	0	0	Yes	No	
Pitchfork Canyon AF1853, AM2566	0	0	0	0	Yes	Yes	
Point of Rocks AM1717, AF2515	0	0	0	0	Yes	Yes	

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food Cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Potato Canyon M2590*	0	1*	0	0	No	No	In November, M2590 was found dead in New Mexico. The mortality is under investigation. M2590 was the only remaining member of the Potato Canyon pack which is now defunct.
Saddle Mountain F2540	0	0	0	0	No	No	
San Mateo AF1399	0	0	0	0	No	No	
Sawtooth M2704, F2593*	0	0	0	0	No	No	In October, F2593 was documented traveling with M2704 for a period of 3 months and is now a member of the Sawtooth pack.
Shepherders Baseball Park (SBP) AF1553, AM2703	0	0	0	0	Yes	No	
Squirrel Springs AF1788*	0	1*	0	0	Yes	No	In November, AF1788 was found dead in New Mexico. The mortality is under investigation. AF1788 was the only remaining member of the Squirrel Springs pack which is now defunct.
Sunflower Mesa F2860*	0	1*	0	0	No	No	In December, F2860 was found dead in New Mexico. The mortality is under investigation. F2860 was the only remaining member of the Sunflower pack which is now defunct.
Wagontongue AM1946, m2773	0	0	0	0	Yes	No	
Whiskey Creek AM1842, m2760	0	0	0	0	Yes	Yes	
Whitewater Canyon m2719	0	0	0	0	No	No	
Willow Creek AF1890, M2867, m2772	0	0	0	0	No	No	

Wolf Pack Collared Wolves	Captures	Mortalities	Removals	Food Cache	Raising pups (April – Sept)	Foster (April/May)	*Comments
Single M1888	0	0	0	0	No	No	
Single M2847	0	0	0	0	No	No	
Single f2742	0	0	0	0	No	No	
Single f2743	0	0	0	0	No	No	
Single F2754	1*	0	1*	0	No	No	In December, the IFT captured and removed F2754 to captivity after it dispersed and remained north of I-40 in New Mexico. F2754 will be released back into the wild in 2024, but release plans are still being developed. F2754 is in the pens with two males and its release date and location depends on successful breeding.

Total number of wolf packs in New Mexico at end of the quarter: 39

MORTALITIES

Nine Mexican wolf mortalities were documented in the fourth quarter (3 in AZ and 6 in NM), which brings the total number of documented mortalities in 2023 to 30 (13 in AZ and 17 in NM). Of the 30 documented mortalities this year, cause of death for 11 of the 30 are either known or suspected to be from illegal take. Cause of death for each mortality will be reported in the 2023 annual report when all of the necropsies are finalized. The impact of these mortalities is uncertain but based on the 2017 Population Viability Assessment (PVA) completed for recovery planning purposes, continued population growth is again expected in 2023. The number of documented mortalities per 100 Mexican wolves, using the annual total of documented mortalities compared with the final minimum population count for the past three years is as follows: 16 mortalities / 100 wolves in 2020, 13 mortalities / 100 wolves in 2021 and 5 mortalities / 100 wolves in 2022. Mortalities per 100 wolves for 2023 will be calculated after the population count is finalized.

GENETIC MANAGEMENT

Captive pups fostered (since 2016)	Captive pups fostered in 2023	^a Fosters documented alive at the end of the quarter	^a Documented mortalities of fosters	^a Fosters surviving to breeding age	^a Fosters documented producing pups	^a Documented litters produced by fosters
99	16	14	12	15	10	21

^aThese are only **MINIMUM** values that have been documented by the IFT. The IFT does not affix radio collars on pups at the time of the foster, as the pups are still too small. Pups are collared opportunistically when fostered wolves are captured later in the year or in subsequent years. Not all fosters that survive are captured and collared.

INCIDENTS

The following are investigations of livestock depredations conducted by Wildlife Services during the quarter that were determined to be caused by wolves. Investigations of dead and injured livestock conducted by Wildlife Services during this time period that were determined to be from causes other than wolves (i.e., vehicle strike, illness, coyote predation, bear predation, or unknown cause) are not listed in this quarterly update.

DEPREDATIONS

	Confirmed Wolf (Current Quarter)		Yearly Total Confirmed Wolf Killed or Died from Injuries	Probable Wolf (Current Quarter)		Yearly Total Probable Wolf by State
	Killed or Died from Injuries	Injured		Killed or Died from Injuries	Injured	
Arizona	5	1	36	0	0	1
New Mexico	7	0	75	4	0	12

2023 Total		111		13
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Unshaded cells contain totals for the given time period, gray cells contain totals for the year.

The yearly total number of confirmed wolf depredation incidents in 2023 (111) was down from the yearly total of confirmed wolf depredation incidents in 2022 (137). The number of depredations per 100 Mexican wolves, using the yearly total confirmed wolf depredations (killed or died from injuries) compared with the final minimum population count for the past three years is as follows: 86 depredations / 100 wolves in 2020, 63 depredations / 100 wolves in 2021 and 56 depredations / 100 wolves in 2022. Depredations per 100 wolves for 2023 will be calculated after the population count is finalized.

PUBLIC INCIDENTS

On November 6, 2023, the IFT received a call about a wolf displaying unacceptable behavior on a hiking trail near Lake Mary in Arizona. The Reporting Party (RP) stated they were walking their dogs on the trail when they noticed a large canine that was not afraid of them, seemed curious and followed the hikers and their dogs down the trail for a short distance. The RP yelled at the animal but it did not respond. The animal eventually left on its own. The IFT was able to determine based on description from the RP that the animal was not a wolf.

On November 29, 2023, the IFT received a report of a collared wolf that was observed attacking a goat at a private property in Eagar, AZ. The IFT responded to the area, listened for VHF signals from collared wolves but did not detect any. Upon further investigation of the incident, the IFT determined the animal responsible for attacking the goat was a domestic dog.

On December 4, 2023, the IFT received a delayed report of a wolf near private property in Alpine, AZ. The RP stated on November 27, 2023 they observed from inside their residence their dog barking at a wolf approximately 80 yards from the house in the tree line. The dog reportedly chased after the wolf but was found unharmed. The RP stated the animal had not been seen again as of the date of the report. The IFT determined there were no GPS locations from collared wolves in the area on the date of the incident. Based on the RP's description of the animal, the IFT determined that the animal was likely a wolf.

On December 16, 2023, the IFT received a report of two dogs that were attacked (1 killed and 1 injured) on the porch of a ranch house approximately 10 miles southwest of Old Horse Springs in New Mexico. Wildlife Services investigated and reported finding a single wolf track at the scene. There were no GPS locations in the area at the time of the incident. WS determined the incident was a confirmed wolf depredation. The incident was assigned to an uncollared wolf. Based on information provided by WS, the IFT determined that the wolf had likely moved on and was no longer a threat.

PROACTIVE MANAGEMENT

State	Hazing efforts (separate attempts to locate wolves to haze)	Hazing events (successful hazing of a wolf)	Diversionary food caches maintained	Carcasses removed	Proactive equipment projects (RAG boxes, fox lights, fladry)
Arizona	73	21	5	7	3
New Mexico	19	10	1	0	0
2023 Totals	415	145	16	102	8

Unshaded cells contain totals for the given time period, gray cells contain totals for the year.

**Includes supplemental food caches, as these also served as diversionary food caches this year.*

PROGRAM PERSONNEL

In November, Tristan Young joined the IFT as a Range Rider for the Arizona Game and Fish Department. Welcome, Tristan!

REWARDS OFFERED

The USFWS is offering a reward of up to \$50,000, the AZGFD Operation Game Thief is offering a reward of up to \$1,000, and the NMDGF is offering a reward of up to \$1,000 for information leading to the conviction of the individual(s) responsible for the shooting deaths of Mexican wolves. A variety of non-governmental organizations and private individuals have pledged additional funding for a total reward amount of up to \$37,000, depending on the information provided.

Individuals with information they believe may be helpful are urged to call one of the following agencies: USFWS Special Agents in Pinetop, Arizona, at (346) 254-0515; the WMAT at (928) 338-1023 or (928) 338-4385; AZGFD Operation Game Thief at (800) 352-0700; or NMDGF Operation Game Thief at (800) 432-4263. Killing a Mexican wolf is a violation of state law and the Federal Endangered Species Act and can result in criminal penalties of up to \$50,000, and/or not more than one year in jail, and/or a civil penalty of up to \$25,000.