

To: Regional Director, Region 6, Denver, CO
From: Scott Becker, Northern Rocky Mountain Wolf Coordinator
Subject: Service Review of the 2017 Wolf Population in Wyoming
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In 2012, gray wolves were delisted in Wyoming (77 FR 55530, September 10, 2012); however, on September 24, 2014, the U.S. District Court for the District of Columbia vacated the U.S. Fish and Wildlife Service's (Service) 2012 delisting rule and reinstated the April 2, 2009 final rule (74 FR 151123) to govern management of gray wolves in Wyoming. On December 1, 2014, the Department of Justice, on behalf of the Service, appealed the District Court's decision to the U.S. Court of Appeals for the District of Columbia Circuit. On March 3, 2017, the U.S. Court of Appeals, in a unanimous opinion, reversed the ruling of the U.S. District Court and on April 25, 2017 issued a final mandate reversing the vacatur of the 2012 final rule for wolves in Wyoming. In order to comply with this mandate, the Service published a final rule (82 FR 20284, May 1, 2017) which officially removed Endangered Species Act protections for wolves in Wyoming and reverted management authority back to state, tribal, and other federal agency authority dependent upon jurisdictional boundaries.

In the 2012 rule to delist wolves in Wyoming (77 FR 55530, September 10, 2012), the Service committed to monitor the status of the wolf population in Wyoming and assess any potential threats to the population for at least 5 years post-delisting and to make that review available for public inspection. The Service's obligation to monitor delisted species is set forth in the Endangered Species Act, 16 U.S.C. § 1533(g).

Wyoming is required under post-delisting rules to submit an annual report to the Service which summarizes wolf monitoring and management in the state during each year of the post-delisting monitoring period. The Service reviewed the Wyoming Gray Wolf Monitoring and Management 2017 Annual Report (Wyoming Game and Fish Department [WGFD] et al. 2018; <https://wgfd.wyo.gov/Wildlife-in-Wyoming/Large-Carnivore/Wolves-in-Wyoming>) to make this analysis and determination. This memorandum constitutes the Service's review of the status of the 2017 Wyoming wolf population and our determination of any possible threats to it.

Wolf Population: In 2017, the wolf population in Wyoming remained above the recovery goals of at least 10 breeding pairs and at least 100 wolves (with a management objective of at least 15 breeding pairs and 150 wolves) established by U.S. Fish and Wildlife Service. At least 347 wolves in ≥53 packs (including ≥23 breeding pairs) inhabited Wyoming on December 31, 2017. Of the total, there were ≥97 wolves and ≥11 packs (including ≥3 breeding pairs) in Yellowstone National Park (YNP), ≥12 wolves and ≥2 packs (≥1 breeding pair) on the Wind River Reservation (WRR), and ≥238 wolves and ≥40 packs (including ≥19 breeding pairs) in Wyoming outside YNP and the WRR.

Wolf Mortality: A total of 168 wolf mortalities were documented in Wyoming in 2017. Of these mortalities, 162 occurred in Wyoming outside YNP and WRR, 5 were documented in YNP, and 1 was documented on the WRR. Causes of mortality included legal harvest = 76 ($n = 43$ within the Wolf Trophy Game Management Area [WTGMA]; $n = 33$ in predatory animal area), conflict control (agency and private) = 62, natural causes = 12, miscellaneous human-caused = 12 ($n = 8$ illegal take; $n = 2$ vehicle collisions; $n = 1$ capture-related; $n = 1$ wounding loss), and unknown causes = 6.

Wolf Depredations: Although confirmed depredations result in a relatively small proportion of all livestock losses, wolf damage can result in significant losses for some livestock producers. In 2017, total confirmed depredations caused by wolves in Wyoming included 113 cattle, 81 sheep, and 1 dog. An additional 5 cattle were confirmed to have been injured by wolves but survived. Twenty-eight of 49 known packs (57%) that existed at some point in 2017 in Wyoming outside of YNP were involved in at least 1 confirmed livestock depredation. Most confirmed cattle depredations occurred on private property (51%) while all confirmed sheep depredations occurred on public grazing allotments. Similar to past years, seasonal trends in confirmed livestock depredations saw a slight spike in spring with a peak occurring during July and August.

Post-Delisting Monitoring: The Wyoming Game and Fish Department (WGFD), in coordination with YNP and WRR, has committed to using traditional monitoring techniques (e.g., capture, radio collar, telemetry, ground and aerial surveys) to estimate a known minimum number of wolves that exist in Wyoming at the end of each calendar year (Wyoming Game and Fish Commission 2012). All wolves that are documented in Wyoming, whether they occur inside the WTGMA or in the predatory animal area, will be counted toward the minimum known number. Although traditional monitoring techniques became less effective for estimating minimum populations in Idaho and Montana as the wolf population grew and expanded, the distribution and number of Wyoming's wolf population has remained at levels where traditional monitoring techniques continue to be effective at providing accurate estimates. The Service used these techniques to estimate minimum numbers in Wyoming while they were federally listed and we are confident that these methods will continue to adequately document minimum estimates post-delisting.

The 2012 rule to delist wolves in Wyoming (77 FR 55530, September 10, 2012) included a list of scenarios that could lead the Service to conduct a status review to determine if relisting is warranted. These scenarios include:

- 1) If the wolf population falls below the minimum recovery level of 10 breeding pairs or 100 wolves in Wyoming statewide (including YNP and WRR) at the end of any 1 year.
 - Service response: recovery level was exceeded in Wyoming at the end of 2017.
- 2) If the wolf population segment in Wyoming excluding YNP and WRR falls below 10 breeding pairs or 100 wolves at the end of the year for 3 consecutive years.
 - Service response: a minimum of 10 breeding pairs and 100 wolves was confirmed in Wyoming (outside YNP and WRR) at the end of 2017.
- 3) If the wolf population in Wyoming falls below 15 breeding pairs or 150 wolves, including YNP and WRR, for 3 consecutive years.
 - Service response: management level was exceeded in Wyoming at the end of 2017.
- 4) If a change in state law or management objectives would significantly increase the threat to the wolf population in Wyoming.
 - On February 22, 2013, the Service reviewed changes to State laws in Wyoming that affected wolf hunting and determined that it did not pose a significant threat to the Wyoming wolf population (Jimenez 2013).

Conclusion: No threats to the Wyoming wolf population were identified in 2017. When evaluating potential threats to the Wyoming wolf population, in addition to the above scenarios, the Service also considers (1) the present or threatened destruction, modification, or curtailment of its habitat or range;

(2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; and (5) other natural or man-made factors affecting its continued existence that could threaten the Wyoming wolf population in the foreseeable future.

The Service understands the objective of WGFD is to achieve an overall reduction in wolf numbers in Wyoming, but we remain confident that WGFD will adaptively manage the population in such a way that wolves will remain fully recovered in the State and a status review will not be necessary. Wolf populations in Wyoming do not occur in a vacuum, rather, they are part of a larger metapopulation of wolves that occur throughout the remainder of the northern Rocky Mountains (NRM). Documented dispersal of radio collared wolves and effective dispersal (dispersal and subsequent documented reproduction) of wolves between states in the NRM as determined through genetic analysis further substantiates that the metapopulation structure of the NRM has continued to be maintained solely through natural means. The continued management of a recovered wolf population remains in the best interest of the State and will allow wildlife managers (i.e., WGFD, Eastern Shoshone and Northern Arapaho Tribal Fish and Game, National Park Service, and the Service) the ability to continue to evaluate and implement a cost-effective, efficient, and sustainable monitoring and management program to ensure the long-term perpetuation of a sustainable wolf population into the foreseeable future.