

To: Regional Director, Region 6, Denver, CO.

From: Mike Jimenez, Wolf Management and Science Coordinator for the NRM

Subject: Service Review of the 2013 wolf population in the NRM DPS

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In the 2009 rule to delist wolves in the Northern Rocky Mountains (NRM) Distinct Population Segment (DPS), except Wyoming, (74 FR 151123, April 2, 2009) and the 2012 rule to delist wolves in Wyoming (77 FR 55530, September 10, 2012) the U.S. Fish and Wildlife Service (Service) committed to monitor the status of the NRM DPS wolf population and any potential threats to it for at least 5 years post delisting and 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). We reviewed the 2013 Interagency Annual Report to make this analysis and determination (U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Montana Fish, Wildlife & Parks, Wyoming Game and Fish Department, Nez Perce Tribe, National Park Service, Blackfeet Nation, Confederated Salish and Kootenai Tribes, Wind River Tribes, Colville Tribe, Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, Utah Department of Natural Resources, and USDA Wildlife Services. 2014. Northern Rocky Mountain Wolf Recovery Program 2013 Interagency Annual Report. M.D. Jimenez and S.A. Becker, eds. USFWS, Ecological Services, 585 Shepard Way, Helena, Montana, 59601, <http://westerngraywolf.fws.gov>). This memorandum constitutes the Service's review of the status of the 2013 wolf population in the NRM DPS and our determination of any possible threats to it.

Wolf Population: In 2013, the NRM DPS minimum wolf population estimate remained essentially unchanged from 2012. States and Tribes documented $\geq 1,691$ wolves in ≥ 320 confirmed packs (groups of ≥ 2 wolves with territories inside the NRM DPS that persisted until December 31, 2013). At least 78 packs met the definition of a breeding pair (packs containing ≥ 1 adult male, ≥ 1 adult female, and two or more pups on December 31, 2013). MT recorded ≥ 627 wolves in ≥ 152 packs (including ≥ 28 breeding pairs); ID recorded ≥ 659 wolves in ≥ 107 packs (including ≥ 20 breeding pairs); WY recorded ≥ 306 wolves in ≥ 43 packs (including ≥ 23 breeding pairs); WA recorded ≥ 38 wolves in ≥ 10 packs (including ≥ 3 breeding pairs), and OR recorded ≥ 61 wolves in ≥ 8 packs (including ≥ 4 breeding pairs). No packs were documented in UT. The minimum recovery goal of an equitably distributed wolf population containing at least 300 wolves and 30 breeding pairs in MT, ID, and WY for at least 3 consecutive years (managed to maintain over 150 wolves and 15 breeding pairs in each state) has been exceeded in the NRM DPS since 2002.

Wolf Depredations: Although confirmed depredations result in a comparatively small proportion of all livestock losses in the NRM DPS, wolf damage can be significant to some livestock producers in areas where wolves are present. Total confirmed depredations by wolves in 2013 included 143 cattle, 476 sheep, 6 dogs, 1 horse, 3 ponies, and 3 goats. From 2008 through 2012, an average of 199 cattle depredations occurred each year (ranged=193-214). An average of 397 sheep depredations occurred each year (ranged=162-749). Seventy-one of 369 (~19%) known

NRM DPS wolf packs that existed at some point in 2013 were involved in at least 1 confirmed depredation. Of these packs, 51 packs were involved in ≥ 1 cattle depredation and 8 packs were involved in ≥ 1 sheep depredation.

Control of Problem Wolves: For strictly comparative purposes, we estimated the absolute minimum number of wolves alive in 2013 by combining the 2013 NRM DPS minimum population estimate of 1,691 wolves with all known mortalities from all causes ($n=922$). This yields an absolute minimum NRM DPS estimate of 2,613 wolves known to be alive at some point in 2013 (MT=962, ID=1,132, WY=415, WA=40, and OR=64). The absolute minimum estimate was only used to compare relative rates of the various causes of mortality to NRM wolves. In 2013, a total of 202 wolves (~8% of the absolute minimum NRM DPS) were killed in control actions in the NRM including 75 wolves in MT (~8% of the absolute minimum MT estimated population), 94 wolves in ID (~8% of the absolute minimum ID estimated population), and 33 wolves in WY (~8% of the absolute minimum WY estimated population). No wolves were removed in control actions in WA or OR.

Public Harvest of Wolves: Legal harvest removed 650 wolves (~25% of the absolute minimum NRM DPS estimated wolf population). Two hundred and thirty-one wolves were legally harvested in MT (~24% of the absolute minimum MT estimated wolf population), 356 wolves in ID (~31% of the absolute minimum ID estimated population), 62 wolves in WY (~15% of the absolute minimum WY estimated population), and 1 wolf in WA (~3% of the absolute minimum WA estimated population). No wolves were harvested in OR.

Human-Caused Mortality: When all forms of human-caused mortality were combined (control, harvest, and other human-caused mortality), 900 wolves (~34% of the absolute minimum NRM DPS estimated wolf population) were removed due to human causes. Three hundred and thirty-two wolves were killed in MT (~35% of the absolute minimum MT estimated population), 466 wolves in ID (~41% of the absolute minimum ID estimated population), 99 wolves in WY (~24% of the absolute minimum WY estimated population), 2 wolves in WA (~5% of the absolute minimum WA estimated population), and 1 wolf in OR (~2% of the absolute minimum OR estimated population).

Total Mortality: We recorded the mortalities of 922 wolves in the NRM DPS (35% of the absolute minimum NRM population) in 2013 from causes including natural, misc. human-caused, unknown, harvest, and control (Table 1).

Table 1. Causes of mortality in the NRM wolf population in 2013. The numbers in parentheses represent the percentage of the absolute minimum estimated wolf population of states and the NRM DPS removed by human-caused mortality.

Area	Natural	Human	Unknown	Harvest	Control	Total Human-caused	Total
MT	1	26	2	231	75	332 (35%)	335
ID	0	16	7	356	94	466 (41%)	473
WY	8	4	2	62	33	99 (24%)	109
OR	2	1	0	0	0	1 (2%)	3
WA	0	1	0	1	0	2 (5%)	2
NRM	11	48	11	650	202	900 (34%)	922

Wolf Population Recovery: By every biological measure the NRM DPS wolf population is fully recovered and remains secure under State management. Resident packs have saturated suitable habitat in the core recovery areas and the population has exceeded recovery goals for 13 consecutive years. Dispersing wolves routinely travel between NRM and Canada and successfully breed, demonstrating that the 3 subpopulations function as a single large NRM meta-population.

Data collected in 2013 describing wolf distribution, numbers, packs, breeding pairs, livestock depredations, compensation, wolf control, impacts on ungulates, and regulated public hunting suggest that the NRM wolf population remained essentially the same as 2012 levels. We expect the wolf population to stabilize at some yet undetermined lower equilibrium based on natural carrying capacity in suitable habitat and human social tolerance.

Post Delisting Monitoring: As the NRM DPS wolf population has grown larger, our minimum population estimates have become less precise. However, after reviewing field methods used by Montana Fish, Wildlife and Parks, Idaho Fish and Game, the Nez Perce Tribe, and the Wyoming Dept. of Game and Fish to monitor the wolf population in their respective states (Jimenez and Cooley 2012), the Service is confident that wolves in Montana, Idaho, and Wyoming far exceeded recovery goals at the end of 2013, and monitoring methods adequately documented this.

The 2009 rule to delist wolves in the NRM DPS, except Wyoming (74 FR 151123, April 2, 2009) and 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:

1. If the wolf population falls below the minimum NRM wolf population recovery level of 10 breeding pairs of wolves or 100 wolves in either MT, ID, or WY at the end of the year.
 - Recovery level was exceeded in MT, ID, and WY at the end of 2013.
2. If the wolf population segment in MT, ID, or WY falls below 15 breeding pairs or 150 wolves at the end of the year in any one of those States for 3 consecutive years.
 - A minimum of 15 breeding pairs and 150 wolves was confirmed in MT, ID, and WY at the end of 2013.
3. If a change in State law or management objectives would significantly increase the threat to the wolf population.
 - On August 24, 2011, the Service reviewed Idaho Department of Fish and Game wolf hunting and trapping regulations. The review determined that the regulations did not meet the threshold of a “significant threat” because they were consistent with a Service-approved plan, harvest limits were imposed in areas where genetic connectivity is a concern, and mandatory hunter and trapper reporting an adequate regulatory mechanism (Cooley 2011).
 - On August 17, 2012, the Service reviewed changes in the 2012-2013 Idaho wolf hunting season and determined they did not represent any significant threat to the Idaho wolf population (Cooley 2012). The Service decided that annual reviews of state wolf hunting seasons may not necessarily occur every year but will be done on a year-by-year basis.

- On November 19, 2012, the Service concluded that changes in Montana's 2012-2013 Wolf Hunting Regulations did not present significant threats to the MT wolf populations, thus a full status review was not initiated (Sartorius 2012).
- On February 22, 2013, the Service concluded that changes in State laws that affected wolf hunting in WY and MT did not represent significant threats to the MT and the WY portions of the NRM wolf population (Jimenez 2013).
- On April 18, 2014, the Service reviewed changes in the Idaho Department of Fish and Game 2014-2015 wolf hunting and trapping regulations, and concluded that the changes did not represent a significant threat to the Idaho wolf population (Cooley 2014).

To summarize, none of the status review criteria have been met.

Conclusion: The overall wolf population in the NRM DPS remained essentially unchanged in 2013. The status of the wolf population in the NRM DPS has consistently exceeded recovery goals since 2002 (as demonstrated by pack distribution and the number of wolves, packs, and breeding pairs in 2013). Documented dispersal of radio collared wolves and effective dispersal of wolves between recovery areas determined through genetic research further substantiate that the metapopulation structure of the NRM DPS has been maintained solely by natural dispersal. No threats to the NRM wolf population were identified in 2013. Potential threats include: A. The present or threatened destruction, modification, or curtailment of its habitat or range; B. Overutilization for commercial, recreational, scientific, or educational purposes; C. Disease or predation; D. Inadequacy of existing regulatory mechanisms; and E. Other natural or man-made factors affecting its continued existence (including public attitudes, genetic considerations, climate changes, catastrophic events, and impacts to wolf social structure) that could threaten the wolf population in the NRM DPS in the foreseeable future. Delisting the NRM DPS wolf population enables the States, Tribes, National Park Service and Service to implement more efficient, sustainable, and cost-effective wildlife programs that will allow them to maintain a fully recovered wolf population while attempting to minimize conflicts. Delisting has not jeopardized the NRM DPS wolf population nor increased any risk to it. Biologically, wolves in the NRM DPS remain recovered.