

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

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



Subject: Service Review of the 2012 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) 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. We reviewed the 2012 Interagency Annual Report to make this analysis and determination (U.S. Fish and Wildlife Service, Idaho Dept. of Fish and Game, Montana Fish, Wildlife and Parks, Nez Perce Tribe, National Park Service, Blackfeet Nation, Confederate Salish and Kootenai Tribes, Colville Tribe, Washington Dept. of Fish and Game, Oregon Dept. of Fish and Wildlife, Utah Dept. of Natural Resources, and USDA Wildlife Services. 2013. Northern Rocky Mountain Wolf Recovery Program 2012 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 review of the status of the 2012 wolf population in the NRM DPS and our determination of any possible threats to it (Service et al. 2013).

Wolf Population: In 2012, the NRM DPS minimum wolf population estimate decreased (as expected) by ~7% from 2011 population estimates. We documented $\geq 1,674$ wolves in ≥ 321 confirmed packs (groups of ≥ 2 wolves with territories inside the NRM DPS that persisted until December 31, 2012). At least 103 packs met the definition of a breeding pair (packs containing ≥ 1 adult male, ≥ 1 adult female, and two or more pups on December 31, 2012). Montana (MT) recorded ≥ 625 wolves in ≥ 147 packs (including ≥ 37 breeding pairs); Idaho (ID) recorded ≥ 683 wolves in ≥ 117 packs (including ≥ 35 breeding pairs); Wyoming (WY) recorded ≥ 277 wolves in ≥ 43 packs (including ≥ 21 breeding pairs); Washington (WA) recorded ≥ 43 wolves in ≥ 7 packs (including ≥ 4 breeding pairs), and Oregon (OR) recorded ≥ 46 wolves in ≥ 7 packs (including ≥ 6 breeding pairs). No packs were documented in Utah (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 2012 included 194 cattle, 470 sheep, 6 dogs, and 4 other (i.e. horse, llama, goat). From 2007 through 2011, an average of 191 cattle depredations occurred each year (ranged=180-214). An average of 339 sheep depredations occurred each year (ranged=162-721). Ninety-nine of 352 (~28%) known NRM DPS wolf packs that existed at some point in 2012 were involved in at least 1 confirmed cattle or sheep depredation. Of these packs, 68 packs were involved in at least 1 cattle depredation and 31 packs were involved in at least 1 sheep depredation.

Control of Problem Wolves: For strictly comparative purposes, we estimated the absolute minimum number of wolves alive in 2012 by combining the 2012 NRM DPS minimum population estimate of 1,674 wolves with all known mortalities from all causes ($n=895$). This sums to an absolute minimum NRM DPS estimate of 2,569 wolves known to be alive at some point in 2012 (MT=949, ID=1,108, WY=413, WA=52, and OR=47). The absolute minimum estimate was only used to compare relative rates of the various causes of mortality to NRM wolves. In 2012, 231 wolves were killed in livestock control actions in the NRM DPS (MT=108, ID=73, WY=43, WA=7, and OR=0). Control removed ~9% of the absolute minimum NRM DPS estimated wolf population in 2012. By state, within the NRM DPS, control removed ~11% of the absolute minimum MT estimated wolf population, 7% in ID, 10% in WY, and 13% in WA. No wolves were removed in control actions in OR.

Public Harvest of Wolves: Legal harvest removed 175 wolves in MT (~18% of the absolute minimum MT estimated wolf population), 329 wolves in ID (~30% of the absolute minimum ID estimated population), and 66 wolves in WY (~16% of the absolute minimum WY estimated population). No wolves were harvested in WA and OR. Harvest removed ~22% of the absolute minimum NRM DPS estimated wolf population.

Human-Caused Mortality: When all forms of human-caused mortality were combined (control, harvest, and other human-caused mortality) a total of 314 wolves were removed in MT (~33% of the absolute minimum MT estimated population), 418 wolves in ID (~38% of the absolute minimum ID estimated population), 120 wolves in WY (~29% of the absolute minimum WY estimated population), 8 wolves in WA (~15% of the absolute minimum WA estimated population), and 1 wolf in OR (~2% of the absolute minimum OR estimated population). Overall, ~34% of the absolute minimum NRM DPS estimated wolf population was removed due to human-causes.

Wolf Population Recovery: By every biological measure the NRM DPS wolf population is fully recovered. Resident packs have saturated suitable habitat in the core recovery areas and the population has exceeded recovery goals for 11 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. Consequently, genetic diversity in the NRM remains very high.

Data collected in 2012 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 has declined ~7% from 2011 levels and the wolf population may be stabilizing 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. 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, the Service is confident

that wolves in MT, ID, and WY far exceeded recovery goals at the end of 2012, and monitoring methods adequately documented this.

The 2009 rule to delist wolves in the NRM DPS, except Wyoming (74 FR 151123, April 2, 2009) includes a list of three 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 and 100 wolves in either MT, ID, or WY at the end of the year.
 - Recovery level was met in MT, ID, and WY at the end of 2012.
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 2012.
3. If a change in State law or management objections would significantly increase the threat to the wolf population.
 - On August 24, 2011, the Service reviewed Idaho Dept. 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 provided an adequate regulatory mechanism (Cooley 2011).
 - 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 population, 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).

Conclusion: The overall wolf population in the NRM DPS declined (as expected) ~7% in 2012. 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 2012). Documented dispersal of radio collared wolves and effective dispersal of wolves between recovery areas determined through genetic research further substantiate that the meta-population structure of the NRM DPS has been maintained solely by natural dispersal. No threats to the NRM wolf population were identified in 2012. Potential threats include: A. The presence 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. Adequacy or inadequacy of existing regulatory mechanisms; and E. Other natural or man-made factors affecting its continued existence (including public attitudes, genetic considerations, climate change, 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 threatened the NRM DPS wolf population nor increased any risk to it.