

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

From: Mike Jimenez, NRM Wolf Management and Science Coordinator

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Subject: Service Review of the 2014 wolf population in the NRM.

Date: April 13, 2015

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. The Service's obligation to monitor delisted species is set forth in the Endangered Species Act, 16 U.S.C. § 1533(g).

On September 10, 2012, the Service delisted wolves in Wyoming 2012 (77 FR 55530, September 10, 2012). Wolves in Wyoming were managed by the WGFD for most of 2014; however, on September 23, 2014, the U.S. District Court for the District of Columbia vacated and remanded the Service's rule to delist wolves in Wyoming. As a result of that decision, the wolf was listed as an endangered species throughout the entire State of Wyoming and wolves are currently managed by the Service under the 1994 10(j) rule, 50 CFR Part 17.84(i).

States are required by post-delisting rules to submit an annual report to the Service. We reviewed the Northern Rocky Mountain 2014 Interagency Annual Report (USFWS et al. 2015) (which can be viewed at <http://westerngraywolf.fws.gov>) to make this analysis and determination. This memorandum constitutes the Service's review of the status of the 2014 wolf population in the NRM and our determination of any possible threats to it.

Wolf Population: In 2014, the NRM wolf population continued to expand west from the original NRM DPS boundary in eastern OR and WA into the ESA listed portions of those states. The entire wolf population (including all of OR and WA) was 1,802 wolves in 313 packs (groups of  $\geq 2$  wolves living in a defined home range that persisted until December 31, 2014). At least 98 packs met the definition of a breeding pair (packs containing  $\geq 1$  adult male,  $\geq 1$  adult female, and two or more pups on December 31, 2014). The wolf population in MT, ID, and WY (hereafter referred to as NRM states) was  $\geq 1,657$  wolves in  $\geq 282$  packs (including  $\geq 85$  breeding pairs) (Table 1). The minimum recovery goal of an equitably distributed wolf population containing at least 300 wolves and 30 breeding pairs in the NRM states for at least 3 consecutive years (managed to maintain over 150 wolves and 15 breeding pairs in each state) has been exceeded since 2002.

Table 1. NRM states, OR, and WA estimated wolf populations in 2014.

| Area       | # Wolves | # Packs | # Breeding Pairs |
|------------|----------|---------|------------------|
| ID         | 770      | 104     | 26               |
| MT         | 554      | 134     | 34               |
| WY         | 333      | 44      | 25               |
| NRM states | 1,657    | 282     | 85               |

| Area      | # Wolves | # Packs | # Breeding Pairs |
|-----------|----------|---------|------------------|
| OR        | 77       | 15      | 8                |
| WA        | 68       | 16      | 5                |
| OR and WA | 145      | 31      | 13               |

| Area                         | # Wolves     | # Packs    | # Breeding Pairs |
|------------------------------|--------------|------------|------------------|
| NRM States                   | 1,657        | 282        | 85               |
| OR and WA                    | 145          | 31         | 13               |
| <b>Total Wolf Population</b> | <b>1,802</b> | <b>313</b> | <b>98</b>        |

Wolf Mortality: For strictly comparative purposes, we estimated the absolute minimum number of wolves known to be alive in the NRM states by combining the 2014 minimum population estimate of 1,657 wolves with all known mortalities from all causes ( $n=744$ ). This sum represented an absolute minimum estimate of 2,401 wolves known to have been alive at some point in the NRM states during 2014 (MT=860, ID=1,130, and WY=411). The absolute minimum estimate was only used to compare relative rates of the various causes of mortality to wolves in the NRM states.

We recorded the mortalities of 744 wolves in the NRM states (~31% of the absolute minimum NRM population) in 2014 from causes including natural, misc. human-caused, unknown, harvest, and control. When only human-caused mortality (control, harvest, and other human-caused mortality) was included, 706 wolves (~29% of the absolute minimum NRM estimated wolf population) died due to human-causes (Table 2).

Table 2. Causes of mortality in the NRM states, OR, and WA in 2014. The numbers in parentheses represent the percentage of the absolute minimum estimated wolf population of states and the NRM removed by human-caused mortality.

| Area       | Natural | Misc. Human | Unknown | Harvest | Control | Total Human-Caused | Total |
|------------|---------|-------------|---------|---------|---------|--------------------|-------|
| MT         | 1       | 30          | 5       | 213     | 57      | 300 (35%)          | 306   |
| ID         | 2       | 19          | 16      | 256     | 67      | 342 (30%)          | 360   |
| WY         | 7       | 15          | 7       | 12      | 37      | 64 (16%)           | 78    |
| NRM States | 10      | 64          | 28      | 481     | 161     | 706 (29%)          | 744   |

| Area      | Natural | Misc. Human | Unknown | Harvest | Control | Total Human-Caused | Total |
|-----------|---------|-------------|---------|---------|---------|--------------------|-------|
| OR        | 0       | 0           | 0       | 0       | 0       | 0                  | 0     |
| WA        | 3       | 4           | 2       | 0       | 1       | 5                  | 10    |
| OR and WA | 3       | 4           | 2       | 0       | 1       | 5                  | 10    |

Wolf Depredations: Although confirmed depredations result in a comparatively small proportion of all livestock losses, wolf damage can be significant to some livestock producers. Total confirmed depredations by wolves in 2014 included 140 cattle, 172 sheep, 4 dogs, 1 horse, and 1 donkey (Table 3). From 2008 through 2013, an average of 189 cattle depredations (range=143-214) and 410 sheep depredations (range=162-749) occurred each year. Sixty-two of 355 (~17%) known wolf packs that existed at some point in 2014 were involved in at least 1 confirmed livestock depredation. One pack killed 59 sheep and was responsible for 34% of the total number of confirmed sheep depredations in 2014.

Table 3. Confirmed livestock depredations in the NRM states, OR, and WA in 2014.

| Area       | Cattle | Sheep | Dog | Other    |
|------------|--------|-------|-----|----------|
| Idaho      | 43     | 100   | 3   | 1 horse  |
| Montana    | 37     | 8     | 1   | 1 donkey |
| Wyoming    | 56     | 6     | 0   | 0        |
| NRM States | 136    | 114   | 4   | 2        |

| Area      | Cattle | Sheep | Dog | Other |
|-----------|--------|-------|-----|-------|
| OR        | 2      | 30    | 0   | 0     |
| WA        | 2      | 28    | 0   | 0     |
| OR and WA | 4      | 58    | 0   | 0     |

| Area                      | Cattle     | Sheep      | Dog      | Other    |
|---------------------------|------------|------------|----------|----------|
| NRM States                | 136        | 114        | 4        | 2        |
| OR and WA                 | 4          | 58         | 0        | 0        |
| <b>Total Depredations</b> | <b>140</b> | <b>172</b> | <b>4</b> | <b>2</b> |

Wolf Population Recovery: By every biological measure the NRM wolf population is fully recovered and remains secure under State management. Data collected in 2014 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 saturated suitable habitat in the core recovery areas and the population has exceeded recovery goals since 2002. Dispersing wolves routinely travel between recovery areas and successfully breed, demonstrating that the 3 subpopulations function as a single large NRM meta-population.

Post Delisting Monitoring: As the NRM 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 2014, and monitoring methods adequately documented this.

The 2009 rule to delist wolves in the NRM DPS, except Wyoming (74 FR 151123, April 2, 2009) 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 2014.
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 2014.
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 MT did not represent significant threats to the MT portion 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 status of the wolf population in the NRM has consistently exceeded recovery goals since 2002 (as demonstrated by pack distribution and the number of wolves, packs, and breeding pairs in 2014). 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 has been maintained solely by natural dispersal. No threats to the NRM wolf population were identified in 2014. Delisting wolves in MT, ID, eastern OR, and eastern WA has not jeopardized the NRM wolf population nor increased any risk to it. Biologically, wolves in the NRM remain biologically recovered.