Updated Biological Status Review for the Gray Wolf in Oregon and Evaluation of Delisting Criteria

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Overview

- Wolf Plan
- Oregon ESA
- Biological Status of Wolves
- Evaluation of OESA Delisting Criteria
Wolf Plan

- Adopted in 2005, Updated in 2010

- Phased population objective approach
  - Phase I = Conservation
  - Phase II = Buffer (move toward management, prevent declines)
  - Phase III = Management

- Phase II prompts consideration of delisting from ESA
Wolf Plan and Delisting

- **Page 10:** “…successful conservation should lead to delisting and strive to ensure that future relisting is unnecessary”

- **Page 16:** “A conservation approach for wolves was designed to satisfy delisting criteria while encouraging human tolerance for wolves and ensuring distribution of wolves across the Oregon landscape.”

- **Page 26:** “The rulemaking process to consider delisting will be initiated when the conservation population objective for eastern Oregon is met.”
Oregon Endangered Species Act (OESA)

- Enacted in 1987, wolves were grandfathered onto the List of Endangered Species

- Oregon ESA requires conservation of gray wolves, and defines “conservation” as “…the use of methods and procedures necessary to bring a species to the point at which the measures provided under ORS 496.171 to 496.182 are no longer necessary”

- OESA requires the Commission to base any delisting decision on scientific criteria related to the species’ biological status in Oregon and to use documented and verifiable scientific information
Population

- Wolves re-established in NE Oregon in 2008, and annual counts began in 2009.
- Population increasing with a growth rate of 1.43
- 81 wolves in 2014 in 15 packs or groups
- Minimum-observed count method
Reproduction and Survival

- 9 successful breeding pairs in 2014
  - 8 in east zone
  - 1 in west zone

- Estimated pup survival rate of .61
  - Slightly lower, but within range of other reported survival values.
  - Oregon uses minimum-observed pup counts – likely underestimates pup survival.
Resident Wolves occur in 5,105 mi² of Oregon
19 collared-wolf dispersals
Mean dispersal distance (n=14) was 100 Mi
Habitat

- Wolves are habitat generalists and use many land cover types if prey is available.
- Wolves in Oregon use mostly forested area.
- Seasonal habitat shifts to open areas usually reflect prey distribution shifts.
- Wolves use both private and public land, but to date most data locations and den sites have been on National Forest lands.
Wolf Health

- Few diseases documented in Oregon wolves
- Parvovirus documented in 2013
- Mange not detected in Oregon
- Lice detected on one wolf to date
Human-caused Mortality Factors

Most documented Oregon wolf deaths have been human-caused (2000-July 2015)

- Illegal take (5)
- ODFW control action (4)
- Vehicle collision (1)
- Capture-related (1)
The species is not now (and is not likely in the foreseeable future to be) in danger of extinction in any significant portion of its range in Oregon.
What We Considered

- Historical Range – Most of Oregon
- Contracted Range – Areas no longer suitable
- Potential Range – Where wolves could live (habitat, prey, human factors)
- Currently Occupied Range – Where wolves are now
- Extinction Risk
Occupied Wolf Range

- Wolf Management Zone Boundary
- Areas of Known Wolf Activity
- Potential Range
- Overlap Areas
Conclusion for Criteria 1

- Current areas of known wolf activity include about 12% of the state’s potential wolf range
- Wolves are represented over a large geographic area of Oregon
- Nothing is preventing wolves from occupying additional portions of the West Zone
- Observed dispersal and movement patterns indicate connectivity
- Wolves not likely to become extinct
Criterion 2: Population Viability

(Page 14)

The species’ natural reproductive potential is not in danger of failure due to limited population numbers, disease, predation, or other natural or human-related factors affecting its continued existence.
Population Viability Model

- Individual based model using conservative inputs such as survival, emigration, territory establishment, immigration, human-caused mortality, and reproduction

- Assessed two measures of population viability – biological extinction and conservation-failure

- Validated model by comparing to count data. Results indicates our model is appropriately cautious
Model Results

- Wolf population projected to increase at a minimum rate of 1.07 (± 0.17 SD) annually
- Overall probability of extinction is low
  - <1% probability of biological extinction
  - Baseline Model: 5% probability of reaching conservation-failure threshold
  - No simulations fell below conservation level when using Oregon observed data
Important Model Factors

- Starting population size is important in our model and risk of failure is highest in early years.

- Human caused mortality also important. Probability of failure was low when human-caused mortality rates (as implemented in our model) are kept below .10.

- Other factors considered were disease, predation, connectivity, and genetic health of Oregon wolves.
Genetic Health

- Northern Rocky Mountain (NRM) wolves in Idaho as diverse as their source population
  - 1995 – 15 wolves from 7 packs near Hinton, Alberta
  - 1996 – 20 wolves from 9 packs near Ft. St. John, BC

- Genetic variation within NRM is high

- Demonstrated ability to disperse long distances (OR7 & OR25) and select unrelated mates

- Genetic bottlenecking a threat if Oregon becomes separated from NRM population
Conclusion for Criterion 2

- Analysis predicts a growing wolf population
- Very low probability of population failure
- Rates of disease, predation, and human-caused mortality has been relatively low
- Wolves are part of a larger, genetically healthy population and no barriers to connectivity were identified
Most populations are not undergoing imminent or active deterioration of range or primary habitat.
Criterion 3: Range Deterioration

- Wolves were extirpated because of eradication effort, not because of range or habitat loss.
- Wolves are now expanding their range in Oregon.
- Occur in 5,105 Sq Mi in two geographic regions.

![Map of Oregon Wolves and Areas of Known Wolf Activity](image-url)
Criterion 3: Habitat Deterioration

- Human population increase not likely to affect
  - Wolves prefer forest cover, mountainous terrain
  - Future human growth is projected to occur in areas less suitable for wolves
- Public land ownership – land use and forest protection regulations
- Prey populations are highly regulated under other state plans
Criterion 4: Overutilization
(Page 21)

Over-utilization of the species or its habitat for commercial, recreational, scientific, or educational purposes is not occurring or likely to occur

- Current protective framework (Wolf Plan) does not change as a result of any delisting decision
  - Capture/collaring will continue
  - Phase I-III

- Delisting does not allow any additional commercial, recreational, or scientific activities
Criterion 5: Adequate Protection Programs

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Existing state or federal programs or regulations are adequate to protect the species and its habitat.

- Wolf Plan
  - Phase II in East Zone
  - Phase I in West Zone
- Federal ESA
Effects of Delisting

- Near term – little change
  - Wolf Plan phases based on zone population

- Allows full implementation of Phase III

- Will not significantly effect Western WMZ because Plan calls for continuing ESA-like protections (i.e., Phase I)
Option 2
Evaluation of OESA Delisting Criteria – Eastern Wolf Management Zone (WMZ) Only

Areas of Known Wolf Activity
Eastern Wolf Zone

Washington

Western Wolf Zone

Idaho

Map showing the areas of known wolf activity in the Eastern Wolf Management Zone.
Criteria 1: Geography
(Page 28)

- 76 (89.4%) of known adult wolves in Eastern WMZ
- Wolves occur on 4,368 mi² of Eastern WMZ
- 31.6% of potential range within Eastern WMZ
- Extinction risk is low (addressed in Criterion 2)
Criteria 2: Population Viability
(Page 30)

- Results of Eastern WMZ viability model are in Appendix B, Page 33
- Projected to increase at a mean population growth rate of 1.06 (± 0.17 SD)
- No simulated populations dropped below the biological-extinction threshold
- 6% probability of the population reaching the conservation-failure threshold
- Risk of conservation-failure was slightly higher, but not significantly different than statewide level (0.06 vs. 0.05)
Criterion 3: Deterioration of Range or Habitat

(Page 30)

- Analysis and findings similar to statewide
  - Expanding their range within the Eastern WMZ
  - Primary habitat (forest) secure
  - Human population will affect similarly to statewide
Criteria 4 & 5: Overutilization and Adequate Protection Programs

For each of these criteria there are no factors specific to the eastern WMZ which differ from the statewide analysis.
Conclusion: Eastern WMZ Delisting

- The eastern WMZ analysis essentially replicates the statewide analysis – very low probability of population failure

- Delisting will not affect management changes in the near term – Plan & Phases already in effect

- Would allow full implementation of Plan in Phase III (in federally delisted area)

- Expect western WMZ delisting process in future
Criterion 1: Geography
- Wolves will continue to expand and increase, likely at a rate between current observed annual growth (1.43) and long-term projected rate (1.07)

Criterion 2: Population Viability
- Reduction of viability risk is minimal -- risk of reproductive failure is nearly eliminated when starting population surpasses 100
- Risk of lower public support for Wolf Plan and lower public tolerance for wolves
Option 3

- **Criterion 3: Deterioration of Range or Habitat**
  - There are no factors specific to this option which differ from the statewide analysis

- **Criterion 4&5: Overutilization and Adequate Protection Programs**
  - Potential loss of adaptive management opportunities in Phase III
Summary Conclusions

- Oregon wolves are healthy and the wolf population is increasing and is projected to continue to increase.
- The likelihood of population failure is very low.
- Wolf range is expanding and is projected to continue to expand – wolves now occur in both east and west zones.
- There are no known conditions which prevent connectivity between existing populations and currently unused habitats.
- The Wolf Plan will continue to provide conservation and protections for wolves in Oregon.
Questions?