# Summary of Significant Changes Made to the Wolf Plan Resulting from Peer Review

## Chapter 1

None

# Chapter 2

An estimate is provided of the wolf population size in Washington before Euro-American settlement.

A new summary is given of wolf breeding pair status in Washington during the 1990s.

Additional material is provided on the Lookout Pack and the new unnamed pack in Pend Oreille County.

Additional material is given on the population management goals in Idaho, Montana, and Wyoming.

A new Figure 2 is presented.

A new subsection is provided on general habitat use of wolves.

New material is given on the federal recovery goals for the Northern Rocky Mountains DPS. Updated information is provided on the federal process to delist wolves in the Northern Rocky Mountains DPS.

## Chapter 3

Section A ("Scientific Basis for Conservation Planning") is largely rewritten, with considerably more background information added on 1) population viability, 2) genetic diversity, 3) distribution and potential suitable habitat, 4) landscape connectivity and dispersal, and 5) similarities between the northern Rocky Mountain states and Washington for wolves.

A statement has been added that the plan recognizes that the long-term viability of Washington's wolf population "will be, in part, dependent on maintaining its connectivity to the broader regional wolf metapopulation comprising Idaho, Montana, British Columbia, and Oregon."

Three new figures depicting estimated suitable habitat for wolves in Washington have been added and Figure 4 is changed to show a 50% probability of occurrence rather than a 75% probability of occurrence.

Much of Section B, Subsection "Numbers and Distribution," has been expanded, rewritten, or restructured.

A statement is added that the objectives presented in the plan are not entirely science-based, but instead are an attempt to be "both biologically and socially acceptable."

- A fourth recovery region, known as the Pacific Coast Region, was added to the recovery objectives. This region was split off from the Southern Cascades Region. These two regions previously comprised the Southern Cascades and Northwest Coast Region.
- Recovery objectives were changed to reflect the inclusion of a fourth recovery region, as follows:
  - to achieve downlisting to threatened status, at least 2 successful breeding pairs distributed in the Southern Cascades Region or Pacific Coast Region, or in a combination of these two regions
  - to achieve downlisting to sensitive status, at least 5 successful breeding pairs distributed in the Southern Cascades Region or Pacific Coast Region, or in a combination of these two regions
  - to achieve delisting, at least 5 successful breeding pairs distributed in the Southern Cascades Region or Pacific Coast Region, or in a combination of these two regions
- An estimate of the numbers of wolves present in Washington at the time that 6, 12, and 15 successful breeding pairs are reached has been added (see text and Table 3).
- Acknowledgement is given that more conservation tools exist than those that were presented in Section B, Subsection "Conservation Tools." Some of these other tools are mentioned, with cross reference given to the part of the plan where they are best described.
- The translocation subsection has been expanded, with more information appearing on translocation planning and use of translocation to increase genetic diversity of isolated wolf populations.
- The objectives of translocation are expanded to "establish new populations in recovery regions that wolves have failed to reach through natural dispersal, augment small populations, or increase the genetic diversity of isolated populations."
- A statement is added telling that "Translocation out of a recovery region will be implemented only after the region has exceeded the target population objectives for delisting and removal of wolves would not cause the region's populations to fall below those objectives."
- The Olympic Peninsula and Willapa Hills were added as potential areas to be considered for translocation.
- The feasibility assessment and implementation planning were combined into a single planning process.
- The relocation subsection has been expanded, with more information appearing on the outcomes and limitations of relocations in the northern Rocky Mountain states.
- Section C ("Management after Delisting") has been reorganized. Rather than recommending that wolves be reclassified to game animal status after delisting, the plan now states that wolves could be reclassified to either game animal or protected status, depending on the public process of Commission action. The topic of relisting was moved to this section.
- All of Section D ("Wolf Working Group Discussions") has been moved to Appendix G.

- Section C is rearranged and expanded, with more information provided on lethal removal and mention given to other management measures such as compensation, relocation, purchasing of grazing rights, and promotion of predator friendly marketing approaches.
- Under Section E and Table 7, providing wolf location information to livestock producers is changed to say that WDFW will notify livestock producers if wolves are living near their operations and will update them, as needed.
- Under Section E and Table 7, use of non-lethal injurious harassment is changed to say that this tool will be allowed only by state or federal agents during the endangered phase. The previous draft allowed this tool to be used by private citizens with a permit from WDFW during this phase.
- Under Section E and Table 7, relocation of wolves is added as a tool for managing wolf depredation of livestock.
- Under Section E and Table 7, use of lethal take of wolves involved in repeated depredation by livestock owners with a permit is changed, as follows: 1) the term "chronic depredation" and its definition have been replaced with "repeated depredation," 2) this activity is no longer allowed by livestock owners with a permit during threatened status, and 3) clarification is added that only livestock owners (including family members and authorized employees) can perform this activity with a permit on land they own or lease during the sensitive and delisted phases.
- Under Table 7, use of lethal take of wolves in the act of attacking (biting, wounding, or killing; not just chasing or pursuing) is changed, as follows: 1) use is allowed at all distances, not just within 150 yards of the residence, 2) clarification is added that only livestock owners (including family members and authorized employees) can use this activity with their livestock on private land they own or lease during endangered, threatened, and sensitive phases, and on private and public land they own or lease during the delisted phase, and 3) rescinding of this tool would occur, if needed, during the endangered and threatened phases rather than in all phases.
- Under Table 7, a provision has been added allowing the use of lethal take of wolves in the act of attacking (biting, wounding, or killing; not just chasing or pursuing) domestic dogs by any private citizen on private and public land during the sensitive and delisted phases.

Information on Substitute House Bill 1778 is added.

Compensation for confirmed and probable livestock losses is changed as follows: 1) payment of higher compensation rates for confirmed and probable losses of livestock on land parcels of 100 or more acres is changed to cover cattle only, with sheep and other livestock now excluded, and 2) payment of "1.5 times the current market value" for the probable loss of livestock on land parcels of 100 or more acres is changed to say that the owner will receive

- payment for "two animals [cattle only] at half the current market value" for each loss of this type.
- The section on compensation for unknown losses is changed to say that development of such a program is recommended and that WDFW work with a multi-interest stakeholder group to establish the program.
- The proposal to establish a Washington Compensation Review Board is deleted from this chapter. Possible formation of a "multi-interest review board" is now mentioned in Chapter 12 under Task 4.4.5.

- A statement is added that wolf predation has the potential to threaten small populations of ungulate prey.
- More information is provided on the impacts of wolves on ungulate populations in neighboring states.
- A new section is added stating that Chapter 14 contains estimates of the predicted losses of elk and deer in Washington at several population sizes of wolves.
- Section D has been changed and now primarily discusses wolf-ungulate interactions at winterfeeding sites and fenced locations.

## Chapter 6

A statement is added that the ecological effects of wolves are likely density dependent, with less dense wolf populations creating fewer impacts than populations at carrying capacity.

New material is added on the impacts of wolves on mountain caribou in British Columbia.

A statement is added that the ecological effects of wolves may not be as evident in less pristine areas (e.g., outside of national parks).

# Chapter 7

A new Section D has been added regarding the management of wolf-domestic dog conflicts. The plan has been altered to allow private citizens to kill a wolf that is "in the act" of attacking (defined as biting, wounding, or killing; not just chasing or pursuing) domestic dogs on private and public land when wolves are sensitive and delisted.

#### Chapter 8

#### None

None

Chapter 10

None

Chapter 11

None

## Chapter 12

Substantial rearrangement and reworking of tasks has occurred.

- New information is added to Task 2.2.1 on the desirability of placing some constraints on the use of lethal control to minimize negative impacts on recolonizing wolf populations, as recommended by Brainerd et al. (2008).
- Tasks 3.2 and 3.3 for a feasibility assessment and implementation planning, respectively, were combined into a single task.
- A new task (3.6) is added to conduct, if needed, occasional translocations of individual wolves within Washington to enhance the genetic diversity of isolated populations confirmed to have low diversity.
- A new task (4.2.4) is added to work with land management agencies administering grazing permits to provide permittees with information on resolving wolf-livestock conflicts.
- A new task (4.2.7) is added to purchase the grazing rights and permanently retire public grazing allotments experiencing chronic wolf-livestock conflicts and lethal wolf control.
- A new task (4.2.8) is added to explore opportunities to develop new approaches for reducing wolf-livestock conflicts (e.g., predator-friendly marketing of livestock products).
- A new task (5.3) is added to manage wolf-ungulate conflicts at winterfeeding stations and sites with game fencing.
- A new task (6.2.2) is added to work with land management agencies on actions to reduce the chances of wolves becoming habituated to humans.
- New tasks (7, 7.1, 7.2, and 7.3) are added to preserve and enhance habitat connectivity for wolves in Washington.
- A new task (9.2.2) is added to provide livestock producers with information on actions that they may take to protect their livestock from wolves.

An implementation schedule replaces the previous Table 9. It lists conservation and management tasks from Chapter 12 and gives task priorities, responsible parties, and estimates of annual expenditures for fiscal years 2010-2015.

# Chapter 14

A statement is added indicating that a regional economic accounting approach focusing on expenditures and market prices was used in this chapter to evaluate the economic impacts of wolves returning to Washington. It does not use a full benefit-cost framework where the net benefits and costs to society as a whole are examined.

Revisions were made to the average fall value of cattle and to the total estimated value of cattle depredations and all livestock depredations per year.

Revisions were made to the estimated numbers of ungulate prey killed by various wolf population sizes per year, with a range of values now presented.

### Literature Cited

Fifty-seven new references were added to the plan. Five older references were removed.

### **Appendices**

A new Appendix G is inserted, which summarizes the Wolf Working Group's discussions related to the conservation/recovery objectives presented in the plan. This material was previously part of Chapter 3.