



**Meeting Report
Wolf Conservation Stakeholder Subgroup
April 9, 2014**

CDFW Headquarters Building
1416 9th Street, Room 1341
Sacramento, CA 95814



Photo courtesy of Bruce Bohlander

California Department of Fish and Wildlife

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1.0 Introduction

On April 9, 2014 the Wolf Conservation Subgroup (WCS) of the California Wolf Stakeholder Working Group (SWG) convened in the Conference Room of the California Department of Fish and Wildlife's Office of General Counsel. This was the third meeting of the WCS, which was established to help the California Department of Fish and Wildlife (CDFW, Department) develop a consensus-driven framework of strategies for wolf conservation and management in California.

2.0 Meeting Objectives and Mechanics

The purpose of the meeting was to continue discussion of potential topics for inclusion in a Wolf Conservation chapter in the California Wolf Plan.

Objectives of the meeting as initially planned were:

1. Introductions and Housekeeping
2. Updates on Western States' 2013 information for wolf populations and facilitator contract status
3. Presentation on distinctions between white-tailed and mule deer
4. Review and discuss specific elements of Chapter 3 on Wolf Conservation in the Washington Wolf Conservation and Management Plan
5. General discussion on California strategy
 - Potential landscape management units
 - Conservation (population) objectives
 - i. Carrying capacity of potential suitable habitat in CA
 - ii. Considerations of connectivity
 - iii. Genetic exchange between metapopulations
 - iv. Immigration
 - v. Limiting factors (such as human-caused mortality and avoidance of developed landscapes)
 - Phasing/timing
 - Regulatory component
6. Planning
 - Are there other areas of inquiry (joint fact-finding) that we should pursue?
7. Public questions

The meeting was attended in person by six stakeholders and four CDFW staff, with two additional stakeholders attending via conference line. Appendix A provides a list of participants, their affiliations, and their contact information, and Appendix B contains the meeting agenda.

3.0 Meeting Outputs

Updates

- Annual wolf reports from western states to U.S. Fish and Wildlife Service are now available and have been consulted to update Figure 1 in the CDFW's State-by-State Comparison of Management Strategies Document (See highlighted text in Appendix C).
- The facilitation contract process has been completed internally, and the contract is now out to Kearns and West for their signature. The Department is hoping to have facilitation for the next full Stakeholder Group meeting on April 30, 2014. They will facilitate the full meetings, the subgroup meetings, and the two public meetings planned for after the draft plan is released.

Mule Deer/White-tailed Deer Distinctions

Mr. Stopher asked Mr. Springer and Mr. Fletcher to provide some basic information to the group about mule deer and white-tailed deer, since their differences affect our ability to consider wolf interactions with deer in other regions where white-tails predominate.

White-tailed deer occur to the east and north of California, and spend time in low lying, riverine and woodland habitats. In general they occur in large densities, sometimes up to 100 animals per square mile, and are therefore more prone to disease than mule deer. They have few predators so they are becoming overpopulated in some areas of their range. White-tail fawns born in spring can reproduce their first fall, and may birth twins so they have the ability to increase their populations at a much higher rate than mule deer. When escaping predators they tend to run, so are probably susceptible to predation by wolves where they co-occur. There are some small populations of white-tailed deer in Oregon and Washington, but none occur in California.

Mule deer occur in the western part of North America and overlap with white-tails in some areas. Their population densities are in the range of 15 to 20 animals per square mile. They occur in more mountainous regions than white-tails, but tend to migrate to lower elevations in winter, although black-tailed deer, a subspecies of mule deer that occur in California's coastal region, tend to behave more like white-tails and remain in the same area year-round. To escape predation mule deer tend to bounce downhill (known as stotting) instead of running across open country.

Review/Discuss Specific Elements of Washington Wolf Conservation and Management Plan (Chapter 3)

This part of the meeting consisted of a brief discussion of some elements of Chapter 3 in the Washington wolf plan. This chapter was selected as a primer for what a conservation

strategy may look like, although California is not required to adopt federal recovery criteria as is Washington. However we can utilize a similar approach to considering wolf population viability in California, which is supported by habitat. Suitable habitat as it pertains to wolves should include considerations for social tolerance of the species, ungulate densities, landscape connectivity and permeability, and human development including roads, all of which may be then used to estimate California's biological carrying capacity for wolves. For example California's Central Valley is an example of an area described on page 54 of the Washington plan as likely unsuitable due to its extensive agricultural tracts and rangelands. Page 58 of the Washington plan defines their wolf recovery objectives in terms of numbers of breeding pairs and describes the parameters used to measure their success. On page 64 the plan lays out wolf recovery objectives based on breeding pair success, and their approach to delisting is discussed on page 68. Mr. Stopher pointed out that because Washington and other western states have much larger ungulate populations and much smaller human populations than California, our wolf population may be much smaller, and our management approach is likely to differ.

General Discussion of California Strategy

Potential landscape management units

Mr. Stopher next asked the group to discuss their thoughts about the concept of using wolf management zones as suggested by Oregon's and Washington's approach, and as presented for stakeholder consideration for California by Mr. Steve Torres in a previous meeting. The advantages of such an approach would be the ability to develop distinct wolf objectives and management approaches for each zone based on the ungulate populations and potential for conflicts in the zones. Concerns expressed were that the Sierra or "remainder of the state" zone would be a biological "sink" in which it would be difficult to maintain a population without translocations; and that California may not be able to support any prescribed wolf population objectives and therefore such management zones may tie our hands further should wolves be listed. Mr. Stopher pointed out that should wolves be CESA listed the Department would be under policy direction to manage the species so that future protections are not required, and that would entail considering wolf population and distribution, which will be affected by ungulate and human distribution.

Time ran out for discussing the other proposed topics which were tabled for a future meeting.

Planning

At this point Mr. Stopher asked the group to propose other areas of fact finding they feel would be of value to developing California's wolf conservation strategy. Suggestions were to investigate the effects of human-caused mortality on wolf populations; how other states

developed their wolf population objectives; quantifying the cost of wolf management to states; including a chapter on the economics of wolf management including costs and benefits; and bringing in biological expertise from other states to talk with the group at a future meeting. The meeting concluded with a reminder that the next meeting is scheduled for April 29th.

Action Items:

- Consider how to address stakeholder requests for additional fact-finding efforts.

**APPENDIX A
WORKSHOP PARTICIPANTS**

| Name | Affiliation | Email |
|---|--|--|
| Stakeholders | | |
| Noelle Cremers | California Farm Bureau | ncremers@cfbf.com |
| John McNerney | The Wildlife Society – Western Section | jmcnerney@cityofdavis.org |
| Jerry Springer | CA Deer Association | jerry@westernhunter.com |
| Kirk Wilbur | CA Cattlemen’s Association | kirk@calcattlemen.org |
| Amaroq Weiss | Center for Biological Diversity | aweiss@biologicaldiversity.org |
| Rich Fletcher | Mule Deer Foundation | richfletcher@sbcglobal.net |
| Damon Nagami | Natural Resources Defense Council | dnagami@nrdc.org |
| Pamela Flick | Defenders of Wildlife | pflick@defenders.org |
| California Department of Fish and Wildlife Staff | | |
| Karen Converse | Environmental Scientist – Wolf Program | karen.converse@wildlife.ca.gov |
| Mark Stopher | Senior Policy Advisor – CDFW | mark.stopher@wildlife.ca.gov |
| Pete Figura | Environmental Scientist – Region 1 | pete.figura@wildlife.ca.gov |
| Karen Kovacs | Wildlife Program Manager – Region 1; Wolf Management Planning Lead | karen.kovacs@wildlife.ca.gov |

APPENDIX B - AGENDA

Conservation Objectives Subgroup
9-12 April 9, 2014
Room 1341, 1416 Ninth Street, Sacramento
Teleconference Line 888-379-9287, Participant Code: 476990

Proposed Agenda

1. Housekeeping and Introductions
2. Updates: [20 minutes]
 - Western states 2013 information for wolf populations
 - Facilitator contract status
3. Mule deer/white-tailed deer distinctions – Morrison {15 minutes}
4. Review/discuss specific elements of Chapter 3 (Wolf Conservation) of the Washington Wolf Conservation and Management Plan [Please bring a copy]. [30 minutes]
5. General discussion of California strategy [90 minutes]
 - Potential landscape management units
 - Conservation (population) objectives
 1. Carrying capacity of potential suitable habitat in CA
 2. Considerations of connectivity
 3. Genetic exchange between metapopulations
 4. Immigration
 5. Limiting factors (such as human-caused mortality and avoidance of developed landscapes)
 - Phasing/timing
 - Regulatory component
6. Planning [10 minutes]
 - Are there other areas of inquiry (joint fact-finding) we should pursue?
 -
7. Public questions (last 10 minutes)

APPENDIX C
TABLE 1 OF STATE-BY-STATE COMPARISON OF
WOLF MANAGEMENT STRATEGIES

Table 1. Detailed Data by State for Cattle and Sheep Depredation, Wolf Populations and Wolf Mortalityⁱ

| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|------------------------|-------------|-------------|-------------|-------------|-------------|-------------------|-------------|
| Cattle depredation | Oregon | 0 | 0 | 1 | 8 | 13 | 4 | 5 |
| | Washington | 0 | 0 | 0 | 0 | 0 | 7 | 1 |
| | Idaho | 53 | 96 | 75 | 75 | 71 | 73 | 39 |
| | Montana | 75 | 77 | 97 | 87 | 74 | 67 | 50 |
| | Wyoming | 55 | 41 | 20 | 26 | 35 | 44 | 41 |
| | Totals | 183 | 214 | 193 | 196 | 193 | 195 | 136 |
| Sheep depredation | Oregon | 0 | 0 | 28 | 0 | 0 | 8 | 6 |
| | Washington | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | Idaho | 170 | 218 | 324 | 148 | 121 | 312 | 404 |
| | Montana | 27 | 111 | 202 | 64 | 11 | 37 | 24 |
| | Wyoming | 16 | 26 | 195 | 33 | 30 | 112 | 33 |
| | Totals | 213 | 355 | 749 | 245 | 162 | 470 | 467 |
| Wolves (min # at year end) | Oregon | ? | ? | 14 | 21 | 29 | 46 | 64 |
| | Washington | ? | ? | 5 | 19 | 27 | 51 | 52 |
| | Idaho | 732 | 846 | 870 | 705 | 746 | 722 ⁱⁱ | 659 |
| | Montana | 422 | 497 | 524 | 566 | 653 | 625 | 627 |
| | Wyoming | 359 | 302 | 320 | 343 | 328 | 277 | 306 |
| | Totals | 1513 | 1645 | 1733 | 1654 | 1783 | 1721 | 1708 |
| Wolf Packs (min # at year end) | Oregon | 0 | 1 | 2 | 2 | 5 | 6 | 8 |
| | Washington | 0 | 1 | 2 | 3 | 5 | 9 | 13 |
| | Idaho ⁱⁱⁱ | 83 | 88 | 94 | 87 | 101 | 124 | 107 |
| | Montana | 73 | 84 | 101 | 108 | 130 | 147 | 152 |
| | Wyoming | 36 | 42 | 44 | 45 | 48 | 43 | 43 |
| | Totals | 192 | 216 | 236 | 245 | 289 | 330 | 323 |
| # Breeding Pairs | Oregon | ? | ? | 1 | 2 | 1 | 6 | 4 |
| | Washington | ? | 1 | 1 | 1 | 3 | 5 | 5 |
| | Idaho ^{iv} | 59/43 | 60/39 | 65/49 | 54/46 | 63/40 | 66/35 | 49/20 |
| | Montana | 39 | 34 | 37 | 35 | 39 | 37 | 28 |
| | Wyoming ^v | 14 | 16 | 21 | 19 | 19 | 15 | 23 |
| | Yellowstone | 10 | 6 | 6 | 8 | 8 | 6 | 8 |
| Average Pack Size^{vi} | Idaho | 7.7 | 8.3 | 7.8 | 7.1 | 6.5 | 5 | 5.4 |
| | Montana | 5.7 | 6.0 | 6.0 | 6.0 | ≈6.5 | ≈6.5 | ? |
| | Wyoming ^{vii} | 6.9 | 5.7 | 7 | 6.8 | 6.1 | 5.5 | 5.8 |
| | Yellowstone | 14.2 | 9.3 | 7.1 | 8.3 | 10.2 | 10 | 8.6 |
| Lethal control wolf mortality^{viii} | Oregon | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| | Washington | 0 | 0 | 0 | 0 | 0 | 7 | 0 |
| | Idaho | 50 | 108 | 93 | 80 | 63 | 73 | 94 |
| | Montana | 73 | 110 | 145 | 141 | 64 | 108 | 75 |
| | Wyoming | 63 | 46 | 31 | 40 | 36 | 43 | 33 |
| | Totals | 186 | 264 | 271 | 261 | 165 | 231 | 202 |

| | | | | | | | | |
|---|-----------------------|----|-----|-----|----|-----|-----|-----------------|
| Hunting & trapping wolf mortality | Oregon | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Washington | 0 | 0 | 0 | 0 | 0 | 0 | 1 ^{ix} |
| | Idaho | 0 | 0 | 134 | 46 | 200 | 329 | 356 |
| | Montana | 0 | 0 | 68 | 0 | 121 | 175 | 231 |
| | Wyoming | 0 | 0 | 0 | 0 | 0 | 66 | 62 |
| | Totals | 0 | 0 | 202 | 46 | 321 | 570 | 650 |
| Other known wolf mortality^x | Oregon | 1 | 0 | 0 | 1 | 0 | 1 | 3 |
| | Washington | 0 | 0 | 0 | 1 | 0 | 2 | 4 |
| | Idaho | 28 | 45 | 45 | 18 | 33 | 23 | 23 |
| | Montana | 29 | 51 | 42 | 38 | 31 | 41 | 29 |
| | Wyoming ^{xi} | 18 | 50 | 19 | 27 | 25 | 26 | 14 |
| | Totals | 76 | 146 | 106 | 85 | 89 | 93 | 71 |

Table 2. Summary Data: Western states (Wyoming, Idaho, Montana, Washington, Oregon)

| | |
|---|-------|
| Minimum # wolves determined alive in 2012 | 2615 |
| Minimum # wolves determined alive in 2013 | 2633 |
| Year-end population 2012 | 1721 |
| Year-end population 2013 | 1708 |
| Total known 2013 mortality | 926 |
| % mortality in 2013 | 35.2% |
| % year-end change 2012-2013 | -0.9% |

Table 3. Summary Data: Wyoming, Idaho and Montana only)

| | |
|---|-------|
| Minimum # wolves determined alive in 2012 | 2508 |
| Minimum # wolves in determined alive 2013 | 2510 |
| Year-end population 2012 | 1624 |
| Year-end population 2013 | 1592 |
| Total known 2013 mortality | 918 |
| % mortality in 2013 | 36.6% |
| % year-end change 2012-2013 | -2.2% |

^{i i} Data sources were USFWS annual interagency reports <http://www.fws.gov/mountain-prairie/species/mammals/wolf/>, annual reports for individual states and updated information available on individual state websites. Where data discrepancies between the USFWS and state reports existed, the most recent state data was used. Such discrepancies were minor. These data reflect confirmed cattle and sheep depredation. Wolf population and mortality data reflect the best efforts of state and federal agencies to document populations which are dynamic and are minimum counts of wolves and wolf packs. There is inherent uncertainty when designating wolves and wolf packs as resident in one state or another when home ranges are near a state line. Dispersing uncollared wolves are difficult to count and detection of all wolves or wolf mortality is impossible. Actual numbers of depredated cattle and sheep, wolf packs and wolves are all likely greater than presented. These data are most useful as indicating trends, rather than absolute numbers.

ⁱⁱ Idaho 2012 data for packs and population is corrected for wolves based on 2013 evidence that wolves not counted in 2012 were actually present.

ⁱⁱⁱ Packs are generally counted when the SWA can document two animals using a defined home range. Idaho uses a threshold of four animals to define a pack, though once a pack is diminished below four animals it may still be counted as a pack

^{iv} ^{iv} Idaho reports the # of wolf packs known to have reproduced as well as the number qualifying as breeding pairs. For Idaho, the data are presented as “# known reproducing packs/# known breeding pairs”

^v The portion of Wyoming outside of Yellowstone NP

^{vi} Estimated by a subset of documented packs where this can be determined with confidence. These are reported as average pack size with no statistical confidence interval. There are wide variations in pack size from 2 – 20+.

^{vii} The portion of Wyoming outside of Yellowstone NP

^{viii} Includes agency control and legal take of depredating wolves by the public

^{ix} Wolf was taken legally on the Spokane Indian Reservation

^x There are several components to this category, including, but not limited to, vehicle road kill, illegal harvest, disease (e.g. mange, parvovirus, distemper), intraspecific aggression, malnutrition and unknown causes.

^{xi} Accounting for mortality in Wyoming is relatively more difficult than other western states because (1) data for Yellowstone NP, the balance of the state, and sometimes the Wind River Reservation, are accounted for separately, (2) Wyoming has a predator management area and in some years this mortality has been included in agency control actions, in other years as “other”, and (3) Yellowstone NP does not report known mortality of pups in the summer and Wyoming presumably does.