



**Meeting Report
Wolf Conservation Stakeholder Subgroup
February 19, 2014**

Yolo Bypass Wildlife Area Conference Room
45211 County Road 32B,
Davis, CA 95618



Photo courtesy of Bruce Bohlander

California Department of Fish and Wildlife

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1.0 Introduction

On February 19, 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 Yolo Bypass Wildlife Area in Davis. This was the first 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 initiate 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. Review/discuss western states summary table, particularly the State wolf population objectives and the driving factors for those specific objectives
3. Review/discuss western states population data table
4. Review and discuss Oregon and Washington strategies, and components of those strategies
5. Discuss next steps
6. Public questions (last ten minutes)

The meeting was attended in person by six stakeholders and three CDFW staff, with one additional CDFW staff attending via conference line. Appendix A provides a list of participants, their affiliations, and their contact information. Other attendees included one legislative representative as shown in Appendix B. The agenda for the meeting is captured in Appendix C.

The meeting began with introductions led by Mr. Mark Stopher, who serves as chair of the Wolf Conservation Subgroup (WCS), and housekeeping items. Mr. Stopher then presented two documents which were derived from work by the Wolf-Livestock Interactions Subgroup to summarize demographics (Appendix D) and some background information (Appendix E) in five other western states currently managing wolves.

Mr. Stopher then projected a slide on the screen with a list of preliminary considerations for California Wolf Conservation Objectives for discussion by the WCS (Appendix F). After some discussion of those considerations, Mr. Stopher asked the group to begin listing what things they needed to know more about in order to begin developing California's wolf conservation objectives. The meeting concluded with a request for

talking points for Director Bonham's address to the larger SWG group at their next meeting.

3.0 Meeting Outputs

Introductions and Housekeeping

With respect to the contract for the facilitator: the low bidder continues to submit questions that delay our progress; we are no closer today than our last update to you.

Western States Background Information for Gray Wolf Conservation (2/12/2014) and Summary Table for Gray Wolf Populations in the Western United States (2/12/2014)

Mr. Stopher began the meeting by explaining that the two tables he presented to the group are extractions from documents developed by the Wolf-Livestock Interactions Subgroup for their work. He pointed out to the group that row 4 of the Western States Background Information table contains the state's wolf population objectives, and for Montana, Idaho, and Wyoming the numbers are driven by the federal threshold for initiating relisting. While those states are very interested in avoiding reaching that threshold, they have not developed specific buffers above which to manage. At their current wolf population levels their strategies are essentially ones of game management. It will be incumbent upon the WCS to delve into how Oregon and Washington developed their wolf conservation/recovery objectives. To clarify what the purpose of the wolf conservation chapter is Mr. Stopher and Dr. Eric Loft explained that the chapter on wolf conservation will contain conservation objectives for wolves, and that, while those objectives will be driven to some extent by the ungulate objectives, the discussion about ungulate population objectives will be contained in those species' management plans. The Summary Table of Gray Wolf Populations in particular is a requisite set of information for discussing wolf conservation objectives for California.

Preliminary Considerations for California Wolf Conservation Objectives

Mr. Stopher next displayed a slide which listed preliminary considerations for California wolf conservation objectives. These considerations generated discussion in the group, and the following questions and answers:

- How many breeding pairs equal how many wolves total? *STOPHER: The table on pg 65 of the Washington plan is an attempt to estimate that. For each breeding pair there are approximately 14 wolves. That can be one pack with 1 breeding pair and 14 wolves, or 1 pack of 5 plus one breeding pair and seven dispersers, or some other configuration.*

- How will we determine wolf population objectives when we have so many factors to consider such as their affects on prey populations and other carnivore species? *LOFT: there will be a section in the wolf plan that discusses biomass relationships, i.e. how many prey it takes to support X number of wolves. STOPHER: suggest you have a look at the Washington plan in which they discuss the effects of different levels of wolves on ungulates. We do need to integrate a variety of considerations. A habitat suitability model will also consider things like road density.*
- Will wolves eat all of some prey in an area and then move on because they prefer a certain food item? *STOPHER: I don't know that there is evidence for that in other areas. A 2010 Idaho Pittman-Robertson report characterizing their elk herds during wolf recolonization showed that most of their herds were increasing.*
- Is the wolf density lower where there are more deer than elk? *STOPHER: one factor that confounds that is that in northwest Montana where deer are more abundant than elk, wolves underwent natural recolonization as opposed to the reintroduction areas where elk are more abundant, so it's difficult to compare what happened between the two areas.*
- Why do you think it would be difficult for wolves to cross the Central Valley? *STOPHER: using the Washington example, wolves are still concentrated in the northeast. Their modeling suggested wolves would have a difficult time navigating around the Seattle/Tacoma area. We also saw that OR7 didn't like to cross I-5 with one exception. Models also indicate you won't find them in intensive agriculture areas like the Magic Valley in Idaho, there are no wolves there. KOVACS: the housing density in the Redding area where OR7 visited is pretty low; I suspect established packs will be more limited by these areas and by I-5 than dispersers will be.*
- When I read the Washington plan, I wondered if California can ever have a viable population. Has the Department thought about that because if we don't have the prey base our wolf population may just be an extension of the Oregon population? One of the concerns around listing is that you get locked into a situation that because of the habitat we have as a state we're severely limited with management options. *LOFT: I showed the Director this map of wolves in northeastern Oregon. We've hypothesized that packs will move slowly down Oregon, and eventually reach California. OR7 made a beeline but pack establishment will be slower. STOPHER: if wolves get listed, it may be that we can never support enough wolves to delist them. LOFT: one of the problems we have as managers is what the theory says versus what actually happens in practice in terms of calculating what a viable population is, and we get listing petitions that say we don't have a viable population based on what the theory says. And with CESA the problem is*

we can't consider the viability of the species across its range, only what it's doing in California.

- Oregon's plan assumes there will be a source population from Idaho. As the Idaho population is reduced from hunting that source will slow its dispersal into Oregon and thus the dispersal into California. *LOFT: Consider the distance that wolves moved from Idaho to Oregon, as opposed to the movement of OR7 to California which was much greater.*
- If I remember correctly, both Oregon and Washington allow for take while the wolf is still listed. Do you know if that provision is within their existing endangered species acts, or did they make changes specifically for wolves?
- The Oregon ESA states that the Commission can authorize take if it serves conservation purposes for a species so they have to make a specific finding, so rules had to be written to make that finding for wolves. In Washington their act is different; I don't know exactly what it says. *STOPHER: in California Section 1001 gives the Department authority to take any animal: Nothing in this code or any other law shall prohibit the Department from taking for scientific propagation or public health and safety, or relief from suffering, or for law enforcement purposes fish, amphibians, reptiles, mammals, birds, and nests or eggs thereof, or any other form of plant or animal life.*
- That answers a question from earlier in the matrix that had the exception for CDFW. *STOPHER: we did have that discussion earlier (in the Wolf-Livestock Interactions Subgroup) whether the Department would have that flexibility, and I suggest we develop under what criteria that would be – how we could get there*
- Do you not consider take of a deer herd to be conflict – for example when mountain lions were taken to prevent take of Sierra Nevada bighorn sheep? *Loft: remember that there is very specific legislation that allows protection of that herd because they are endangered. STOPHER: in the Northern Rockies they are implementing take of wolves ostensibly to limit effects on native ungulates. In my opinion they're doing it more in response to public demand than any data. There may be some cases where in order to enable recovery of an ungulate population which is limited, at least in part, by predation, it may be appropriate, but I think we're a way off from that. If it's true that we will never have a population big enough to delist at least from threatened, the wolf population will not be large enough to depress ungulates.*
- I'd like to see what effect wolves will have in one area before we consider translocation to another area. If the effect is negative then you may create problems in both areas. *STOPHER: In Washington they have 3 recovery zones; because connectivity is not homogenous, the zones may not reach their wolf population targets evenly so translocation is one way to reach statewide objectives sooner which would provide for greater management flexibility for both the*

livestock and native ungulate communities. I'm not arguing for the concept, just suggesting we consider it and be able to provide justification for whatever direction we go.

At this point in the meeting, Mr. Stopher asked the group to begin listing what things they need to know more about in order to begin developing California's wolf conservation objectives. The documents discussed today were intended to be an overview of principles for setting objectives. He again suggested reading both the Oregon and Washington plans, with more emphasis on Washington since it is newer and more comprehensive, and then consider whether California should model its plan on one of those, or if we should start from scratch.

- What effect will wolves have on the ungulate populations? How far down the state should wolves go? If we want to limit them to the northern part of the state how do we keep them there? How many deer is a wolf going to eat? *LOFT: you can generate an estimate on a per-animal basis of what their energetic needs are.*
- What happens if you estimate tags based on hunter take and now you have another hunter with no bag limits, you see the numbers change, what do you do?
- That hits on abundance and distribution of native ungulates; we know deer are in decline without wolves. It's hard to tease out the causes, so if wolves come will we just point the finger at them for the declines? We need to know the abundance and distribution of the ungulates.
- It will be important to inform the public about the history of deer populations in California. What I read is that the peak of deer was in the 50s and 60s and that it was way higher than historically before we wiped out the carnivores. We need to look at the long-term history of our forest practices and the deer herds to have an accurate picture of what constitutes good deer and wolf management. *LOFT: we've been living with the mountain lion as a surrogate for the wolf for a long time; it's been blamed for the woes of the deer. The scale of long-term ecological change and deer are a product of disturbance, that period is a culmination of all that disturbance. The deer were high because of all that disturbance.*
- It would be helpful to know the deer and elk populations and where they occur that's relevant (i.e. not necessarily in Kern County). Also with the consideration that wolves don't necessarily follow the habitat models, it would be useful to compare our road densities with those in areas where wolves are expanding in Oregon and Washington. *LOFT: the reviewers of the status review did talk about road density; the greater the road density the greater the threat because of the access from humans to hunt them; but in terms of making it otherwise suitable habitat I don't know or if the threats in California are the same as in Montana or Idaho. STOPHER: most people carrying firearms in fall are on roads so the risk of*

human caused mortality is higher with higher road density; you see the same negative correlation with elk distribution and roads.

- Carlos Carroll looked at whether things will stay the same in terms of the current rate of development and roads versus 25 yrs from now, at the same rate of development versus 25 yrs from now if you reduce development and decommission some roads.
- Did he look at the different classes of roads such as paved versus a 4 wheel drive road versus something jeep could barely crawl over? *LOFT: I wondered that too.*
- The matrices have been very helpful. Looking at the Oregon and Washington chapters on conservation I wonder if it would be worthwhile to have their objectives side by side. We know that they both went with a zone approach and phases of recovery. We may not have a recovery trajectory depending on what the Commission decides in April; I don't know if that would drive this more than if we don't have those requirements. *STOPHER: I'm willing to look at whether their plans lend themselves to that. We can consider zones based on aggregations of potentially suitable habitat with some connectivity; Steve Torres will address habitat modeling in next meeting. LOFT: suitable habitat usually means a habitat type; I think we're talking suitable landscapes; it's a much larger scale than habitat and that's an important concept – while wolves operate at a landscape scale, ungulates will operate at a habitat scale; not sure how to deal with it; but connectivity is a landscape level feature*
- If we don't want to translocate wolves, having a zonal approach may not be necessary; with the added layer that they aren't listed so no recovery strategy; we may not need to move them around; in Oregon and Washington they had delisting phases and recovery objectives
- In Oregon and Washington the zones are designed to see wolves distributed across their prior range; in California we probably won't do that so what is the purpose for your ideas for zones? Going back to the objectives in our Operating Principles I wondered why the goal was so much lower for California than for Oregon or Washington and you said because they are state listed there. So listing in California may change some of the parameters for our discussion and objectives for this chapter. *LOFT: Why couldn't it be the same objective whether listed or not; both would be a sustainable population? KOVACS: we struggled a lot over these words; recover implies a listed species whereas conserve is broader. STOPHER: conserve is within CESA, it means to use and the use of all methods and procedures which are necessary to bring any endangered or threatened species to the point at which the measures pursuant to this chapter are no longer necessary (section 2061; not sure how meaningfully different that is than self-sustaining. I'd argue that if you got to that point then you've met the definition of conserve.*

- If Commission lists, will our plan be gone? Fish and Game will manage how they always manage anything that's listed. *STOPHER: even if the Commission doesn't list this spring it's fair to assume we will face the same thing down the road. Fast forward to say 2019 and we have a resident wolf population. They may come to a different decision. The work we are doing has durability; it should have a breadth of scope to account for each of those circumstances; we're better off for having planned for the different sets of possibilities.*
- I see the constraints for why you don't have the ungulate numbers, but when you look at goals for wolves, you don't know if you will set them high enough to have a significant negative effect on ungulates, because you don't know what the prey source is. *STOPHER: a caution: when we're done we won't have precise ungulate numbers; if we say we need specific numbers we won't be able to get to a wolf plan. LOFT: there are a number of models for predicting estimates of wolves say based on biomass energetics, what their distribution is, and the number of deer needed to sustain X number of wolves using data from elsewhere*
- Can you not say over time the feedback tells us we can adjust up or down without saying we fixed it; like a 5 year plan and review after a year? *STOPHER: you're asking if we can use adaptive management. The Wolf-Ungulate chapter and subgroup should include a good literature review and a description of what the literature shows.*
- About the different models, it would be helpful to know of population estimate ranges of ungulates, and the energy needs of wolves, and a growth model; e.g. how many deer per week, what is the replacement rate for the deer; if it's correct in the Rockies that there hasn't been a change there is some level of consumption that is replaceable. *LOFT: the problem is it would be simplistic to say that because we will be saying they will not take other species besides those large ungulates; wolves are adaptable and can consume rabbits, etc, horses. STOPHER: are the effects of 200 wolves in CA even measureable given the numbers of lions, bears, and coyotes we have? Any literature to apply would be useful.*
- What about a document that lists what's known about road densities, energy needs, and other such info from other states - here's what the models predicted and here's what actually happened? *STOPHER: I'd be glad to try that; that was worthwhile; some joint fact finding to agree on what the information says and doesn't say.*

Finally, Mr. Stopher concluded the meeting with a request to the group to send him some suggested talking points for Director Bonham to cover at next week's larger SWG meeting. He will address the group at the beginning of the meeting, and all public comments will be held until the end of the meeting.

Action Items

- Mr. Stopher will send the group the Idaho PR report that characterizes the history of their elk herds.
- Mr. Stopher will construct a matrix comparing the Washington and Oregon objectives, and the lessons learned so far from applying the strategies toward meeting those objectives.
- The group members will send Mr. Stopher suggestions for talking points for Director Bonham in his address to the SWG next week.

**APPENDIX A
WORKSHOP PARTICIPANTS**

Name	Affiliation	Email
Stakeholders		
Noelle Cremers	California Farm Bureau	ncremers@cfbf.com
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California Department of Fish and Wildlife Staff		
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Karen Converse	Environmental Scientist – Wolf Program	karen.converse@wildlife.ca.gov
Mark Stopher	Senior Policy Advisor – CDFW	mark.stopher@wildlife.ca.gov

**APPENDIX B
PUBLIC PARTICIPANTS AND COMMENTS**

Legislative Representatives		
Name	Affiliation	Email
Erin Ryan	Congressman La Malfa's Office	erinmarie.ryan@house.ca.gov

No comments or questions were presented.

APPENDIX C – PROPOSED AGENDA

PROPOSED AGENDA

Wolf-Livestock Subgroup
9-12 AM February 19, 2014
Yolo Bypass Wildlife Area Headquarters
Teleconference Line 916.574.0259 no passcode required

PROPOSED AGENDA

Conservation Objectives Subgroup
1-4 PM February 19, 2014
Yolo Bypass Wildlife Area Headquarters
Teleconference Line 916.574.0259 no passcode required

1. Introductions and Housekeeping
2. Review/discuss western states summary table, particularly the State wolf population objectives and the driving factors for those specific objectives
3. Review/discuss western states population data table
4. Review and discuss Oregon and Washington strategies, and components of those strategies
5. Discuss next steps

Public questions (last ten minutes)

APPENDIX D
SUMMARY TABLE FOR GRAY WOLF POPULATIONS IN THE
WESTERN UNITED STATES (FEB. 12, 2014 VERSION)

Summary Table for Grey Wolf Populations in the Western United States. Version February 12, 2014.

		2007	2008	2009	2010	2011	2012
Wolves (min # at year end)	Oregon	?	?	14	21	29	46
	Washington	?	?	5	19	27	51
	Idaho	732	846	870	705	746	683
	Montana	422	497	524	566	653	625
	Wyoming	359	302	320	343	328	277
	Totals	1513	1645	1733	1654	1783	1682
Wolf Packs (min # at year end)	Oregon	0	1	2	2	5	6
	Washington	0	1	2	3	5	9
	Idaho ⁱ	83	88	94	87	101	117
	Montana	73	84	101	108	130	147
	Wyoming	36	42	44	45	48	43
	Totals	192	216	236	245	289	323
# Breeding Pairsⁱⁱ	Oregon	?	?	1	2	1	6
	Washington	?	1	1	1	3	5
	Idaho ⁱⁱⁱ	59/43	60/39	65/49	54/46	63/40	66/35
	Montana	39	34	37	35	39	37
	Wyoming ^{iv}	14	16	21	19	19	15
	Yellowstone	10	6	6	8	8	6
Average Pack Size^v	Idaho	7.7	8.3	7.8	7.1	6.5	5
	Montana	5.7	6.0	6.0	6.0	~6.5	~6.5
	Wyoming ^{vi}	6.9	5.7	7	6.8	6.1	5.5
	Yellowstone	14.2	9.3	7.1	8.3	10.2	10
Agency lethal control wolf mortality	Oregon	0	0	2	0	2	0
	Washington	0	0	0	0	0	7
	Idaho	50	108	93	80	63	73
	Montana	73	110	145	141	64	108
	Wyoming	63	46	31	40	36	43
	Totals	186	264	271	261	165	231
Hunting & trapping wolf mortality	Oregon	0	0	0	0	0	0
	Washington	0	0	0	0	0	0
	Idaho	0	0	134	46	200	329
	Montana	0	0	68	0	121	175
	Wyoming	0	0	0	0	0	66
	Totals	0	0	202	46	321	570
Other known wolf mortality^{vii}	Oregon	1	0	0	1	0	1
	Washington	0	0	0	1	0	2
	Idaho	28	45	45	18	33	23
	Montana	29	51	42	38	31	41
	Wyoming ^{viii}	18	50	19	27	25	26
	Totals	76	146	106	85	89	93

ⁱ 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

ⁱⁱ A breeding pair is defined as ≥ 1 adult male and ≥ 1 adult female in a pack producing ≥ 2 pups that survive through December 31.

ⁱⁱⁱ Idaho reports the # of wolf packs known to have reproduced as well as the number qualifying as breeding pairs. The data are presented in this table as # known reproducing packs/# known breeding pairs

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

^v 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+.

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

^{vii} 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.

^{viii} 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.

APPENDIX E
WESTERN STATES BACKGROUND INFORMATION FOR
GRAY WOLF CONSERVATION (FEB. 12, 2014 VERSION)

Western States background information for grey wolf conservation 02122014

Row	Element/State	Montana	Idaho	Wyoming	Oregon	Washington
1	Federal Listing Status	Not listed	Not listed	Not listed	Endangered in western 2/3 of the state. Unlisted in eastern Oregon (east of Hwys 395/78/95)	Endangered in western 2/3 of the state. Unlisted in eastern Washington
2	State Listing Status	Designated as a "Species in need of Management"	Designated as a big game species	Trophy game animal in NW part of State. Predatory animal in balance of State (some seasonal overlap exists)	Special Status Game Mammal and Endangered Oregon Plan divides state into eastern and western management zones defined by Hwys 97/20/395	Endangered
3	Approximate Wolf Population Size (Jan 1, 2013)	625 (minimum) with ≥ 147 packs 37 breeding pairs. ⁱ	Estimated at 683 with ≥ 117 packs ⁱⁱ 35 breeding pairs.	277 (minimum) with ≥ 43 packs Breeding pairs: Yellowstone NP = 6 Balance of state = 15	46 (minimum) in 6 known packs. 6 breeding pairs.	51 (minimum) in 9 known packs. Estimated population is 101 wolves. 5 breeding pairs.
4	State wolf population objectives	Minimum Objectives: Population: 150 Breeding Pairs:	Minimum Objectives: Population: 150 Breeding Pairs:	Minimum Objectives: Yellowstone NP and Wind R.	Phase 1 – Conservation Population Objective: 4	Established 3 recovery regions (RR). Reclassify to

Row	Element/State	Montana	Idaho	Wyoming	Oregon	Washington
		15	15	Reservation: Population: 50 Breeding Pairs: 5 Balance of State: Population: 100 Breeding Pairs: 10 ⁱⁱⁱ	breeding pairs for three consecutive years in both E. and W. Oregon. Phase II - Management Population Objective (delisted) 7 breeding pairs for three consecutive years in both E. and W. Oregon Phase III – maintenance objective: TBD ^{iv}	Threatened: 2 breeding pairs in each RR for 3 consecutive years. Reclassify to Sensitive: 4 breeding pairs in each RR for 3 consecutive years. Delist: 4 breeding pairs in each RR for 3 consecutive years, and 3 more breeding pairs anywhere. ^v

ⁱ A breeding pair is ≥ 1 adult male and ≥ 1 adult female in a pack producing ≥ 2 pups that survived through December 31.

ⁱⁱ Idaho determines a pack based on four animals using a defined home range, other states use a threshold of two animals

ⁱⁱⁱ In Wyoming, the State and Yellowstone NP are separately responsible for meeting their respective population and pack objectives.

^{iv} If delisted based on meeting the standard in the eastern part of the State, wolves in western Oregon will be managed as if they were listed until the western Oregon wolf population reaches four breeding pairs.

^v Washington has established an alternative set of objective for delisting from state sensitive, which is met by 4 breeding pairs in each of the three recovery regions and 6 additional breeding pairs anywhere in the state. Under the alternative delisting criteria, the 3 consecutive year criterion is not required.

**APPENDIX F
PRELIMINARY CONSIDERATIONS FOR CALIFORNIA
WOLF CONSERVATION OBJECTIVES**

Preliminary Considerations for California Wolf Conservation Objectives

- Distribution and abundance of suitable habitat
- Distribution and abundance of wild ungulates
- Population levels scaled to habitat and prey
- Habitat connectivity
- Population viability
- Public policy (e.g. CESA, Fish and Game Code, etc.)
- Conflicts