Meeting Report
Wolf-Ungulate Stakeholder Subgroup
March 19, 2014

CDFW Wildlife Branch Conference Room
1812 9th Street,
Sacramento, CA 95811

California Department of Fish and Wildlife

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1.0 Introduction

On March 19, 2014 the Wolf-Ungulate Interactions Subgroup (WUIS) of the California Wolf Stakeholder Working Group (SWG) reconvened in Sacramento. This was the second meeting for the WUIS, having been formed during the August 29, 2013 general SWG meeting to help the Department develop a consensus-driven framework of management strategies for addressing potential wolf impacts on California's native ungulate populations. The purpose of the March WUIS meeting was to continue striving toward consensus on such strategies through discussion of a draft Wolf-Ungulate Interactions chapter in the wolf plan.

2.0 Meeting Objectives and Mechanics

The meeting was conducted in the conference room at the California Department of Fish and Wildlife's (CFDW) Wildlife Branch in Sacramento.

Objectives of the meeting as initially planned were:

1. Housekeeping, Introductions, and Updates
2. Update from discussion of wolf-ungulate relationships at the Wolf-Livestock Group meeting – emphasis on Idaho
3. Review/discuss draft wolf-ungulate section
4. Review/discuss future addressing/handling of ungulate-wolf interactions (impact) to try and capture most current information; assessment of "managed" systems versus Yellowstone ecosystem example and how to address the differences
5. Wolf-ungulate relationships in Oregon, Washington, Wyoming, and Montana examples as appropriate
6. Bighorn sheep/Desert mule deer and Mexican wolf. How to handle this one.
7. Planning
8. Public questions

The meeting was attended in person by five stakeholders, and seven CDFW staff, with one stakeholder attending via conference line. Appendix A provides a list of participants, their affiliations, and their contact information.

The meeting began with introductions led by Wildlife Branch Chief Dr. Eric Loft, who serves as chair of the Wolf-Ungulate Subgroup. Dr. Loft then read over the Agenda (Appendix B), stressing the importance of incorporating the most up-to-date information on wolf-ungulate interactions in other locations into the California plan. He also informed the group that he is considering developing a matrix, similar to the approach used by the Wolf-Livestock Interactions Subgroup, as a method for comparing and contrasting the growing body of information coming out of research in various locations on these

interactions. Dr. Loft then introduced Mr. Mark Stopher, who presented information from Idaho on wolf and ungulate densities, wolf impacts on ungulates, and management objectives for both groups. The purpose of Mr. Stopher's presentation was to provide the group with the actual data underlying the wolf-ungulate landscape in Idaho, as opposed to the stories they may hear about it in the grey literature. His PowerPoint slides are captured in Appendix C.

The bulk of the remainder of the meeting consisted of discussing the first draft of the Wolf-Ungulate Interactions chapter for the Wolf Plan. The group went through each section of the draft and provided comment or asked questions on some of the sections. The meeting concluded with discussion about when this group should meet next.

3.0 Meeting Outputs

Major Issues Discussed:

Based on tables from the elk PR Report from Idaho Dept. of Fish and Game (IDFG), population objectives and trends for eight elk management zones in Idaho demonstrate that, while some management zones are experiencing declines in elk herds as popularly reported, other zones are experiencing increases, and yet others appear stable. In some cases elk populations are well above the objectives for their respective zones. A graph, also from the IDFW elk PR Report, displays the causes of mortality for cow elk in eleven elk management zones. Of these, six zones included mortalities from wolves, only two of which were below the target survival threshold of 85%. Of the five zones not including wolf predation, two were below the 85% survival threshold, both of which experienced harvest. In particular, the Island Park Zone, which is adjacent to Yellowstone National Park where significant wolf populations occur, the majority of elk mortalities were attributed to harvest. The take home message was that, while wolves do appear to contribute to elk declines in some areas of Idaho, elk declines in other areas are attributed to other causes. Further, not all areas where wolf predation on elk occurs are experiencing elk declines below their target survival thresholds. Finally, it is important to consider the underlying information when considering wolf impacts on ungulates.

Sections of the first draft of the Wolf-Ungulate Interactions chapter were discussed. Because this was the first draft, the comments, questions, and recommendations made by the group were mostly general in nature, and included the following:

- Will there be a difference in wolf objectives on public lands as opposed to those private lands that manage for elk habitat?

- This chapter should include some discussion on feral horse and burro locations and their potential as prey for wolves.
- Additional information on specific causes of mortality in elk and deer is needed. Since predation on calves seems important, can estimating cow-calf ratios at different times of year one way to detect predation impacts on population? In particular, a fawn mortality study will provide important information.
- Because the plan will be a strategy for the state, the discussion should cover the whole state, but in the early planning most effort should focus on where early wolf occupation is likely to occur (i.e. Northern California).
- This chapter needs to include discussion of the effect wolves will have on reproductive rates (i.e. indirect effects) of ungulates, prey-switching, and compensatory vs additive mortality.
- The information provided for deer should be similar to that provided for elk; it should reflect population estimates, objectives, harvest history.
- The chapter needs to provide more information in tables and figures; that would make it easier to display the information and range of possibilities; as opposed to so much text.
- More information on wolf pack energetics is needed to potentially develop a model for California that could provide estimates of the numbers of different prey wolves may utilize.
- It will be of value to talk with wolf biologists from Oregon and Washington to find out what studies they've been conducting on wolf impacts on their ungulates.
- It would be of value to try again to engage the federal land management agencies (U.S.D.A. Forest Service, Bureau of Land Management) with respect to managing habitat for ungulates.

On March 21st, 2014, follow-up comments were presented by members of the Wolf-Ungulate Interactions Subgroup. Those members requested that the Department stress to the larger SWG that the Subgroup was not yet satisfied with the content of the draft chapter, especially from pages 19 forward, and that the draft does not represent the Department's position at present.

Summary and Wrap-up

The meeting concluded with discussion about when the next meeting of this subgroup should be. The group agreed that after the next Fish and Game Commission meeting on April 16th would be desired. The next full SWG meeting is on Weds. April, 30th, and there is a Wolf Conservation Subgroup meeting scheduled for the afternoon of April 29th, so Mr. Stopher proposed the morning of April 29th. Some time the following week may also work and Dr. Loft will email the proposed dates to the group.

Action Items

- WUIS members will provide Ms. Converse with their suggestions for further information they consider of value to include in the chapter, as well as any potential strategies they would like the Department to consider with respect to wolf-ungulate interactions
- Department will email proposed dates for the next meeting to members of the WUIS.

APPENDIX A. WORKSHOP PARTICIPANTS

Name	Affiliation	Email
Stakeholders		
Mike Ford	Rocky Mountain Elk Foundation	mford@rmef.org
Jerry Springer	California Deer Association	jerry@westernhunter.org
Rich Fletcher	Mule Deer Foundation	richfletcher@sbcglobal.net
Bill Gaines	California Houndsmen for Conservation	billgaines1@sbcglobal.net
Marilyn Jasper	Sierra Club	marilyn.jasper@mlc.sierraclub.org
Rob DiPerna	Environmental Protection Information Center	rob@wildcalifornia.org
California Department of Fish and Wildlife Staff		
Mark Stopher	Senior Policy Advisor	mark.stopher@wildlife.ca.gov
Eric Loft	Wildlife Branch Chief	eric.loft@wildlife.ca.gov
Karen Converse	Environmental Scientist – Lands Program	karen.converse@wildlife.ca.gov
Mary Sommer	Environmental Scientist – Deer Program	mary.sommer@wildlife.ca.gov
Joe Hobbs	Senior Environmental Scientist – Elk Program	joe.hobbs@wildlife.ca.gov
Craig Stowers	Game Program Manager	craig.stowers@wildlife.ca.gov
Steve Torres	Wildlife Investigations Lab Program Manager	steve.torres@wildlife.ca.gov

APPENDIX B.

PROPOSED AGENDA

California Department of Fish and Wildlife, Wolf Planning
Wolf-Ungulate Subgroup
9:30am-2:00 PM March 19, 2014
1812 Ninth Street, Sacramento
Call in number: 877 214-5010 Participant Code: 585148

Proposed Agenda

1. Housekeeping, Introductions and Updates (10 minutes)

   Balance of the day: 9:40-1:40 with breaks for meters and lunch as needed:

2. Update from discussion of wolf-ungulate relationships at the Wolf-Livestock Group meeting-Emphasis on Idaho (Mark).

3. Review/discuss draft wolf-ungulate section (walk-through draft).

4. Review/discuss future addressing/handling of ungulate-wolf interaction (impact) to try and capture most current information. Assessment of “managed” systems versus Yellowstone ecosystem example and how to address the differences.

5. Wolf-ungulate relationships in Oregon, Washington, Wyoming, and Montana examples as appropriate.

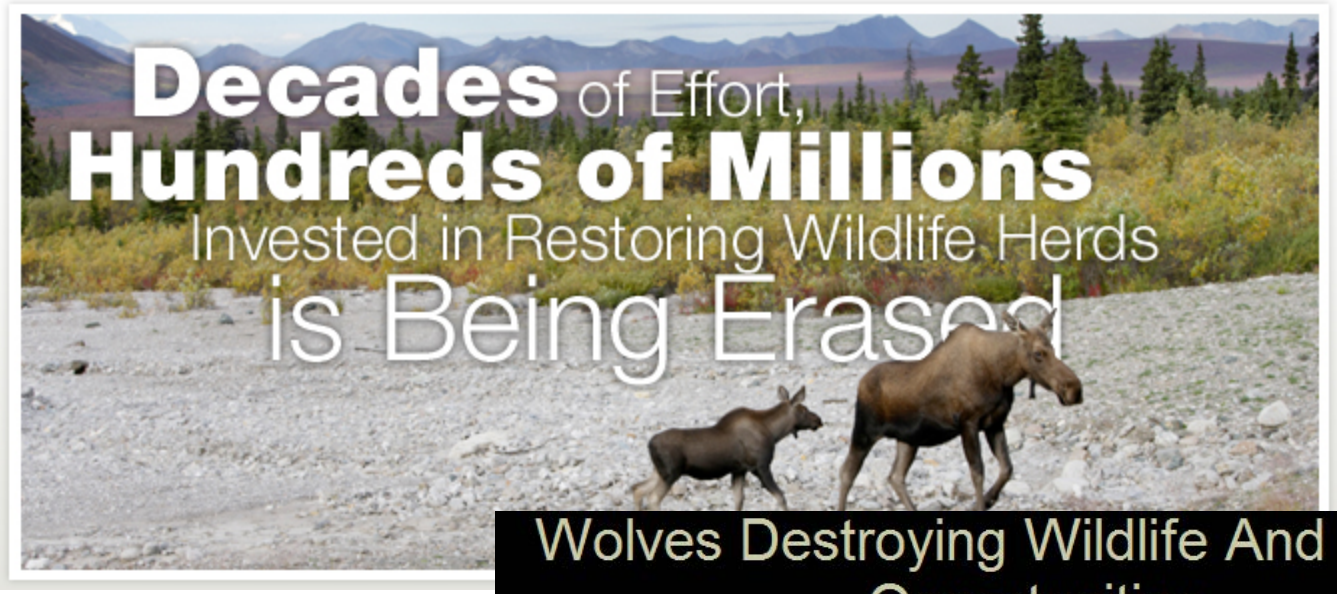
6. Bighorn sheep/Desert mule deer and Mexican wolf. How to handle this one.

7. Planning [10 minutes]

8. Public questions (last 10 minutes)

APPENDIX C
POWERPOINT SLIDES PRESENTED

Idaho Elk-Wolf Example



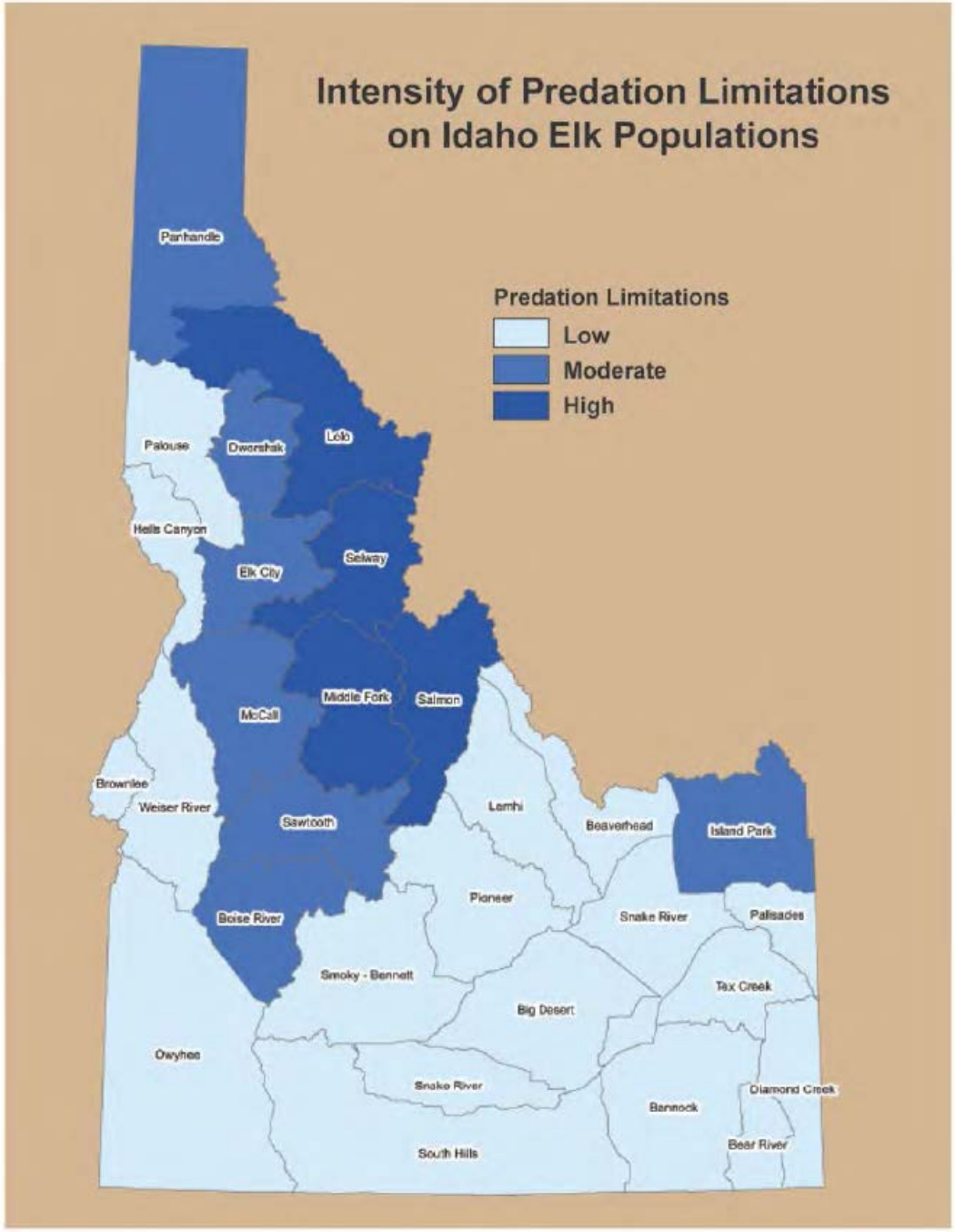
How does existing information inform this issue?

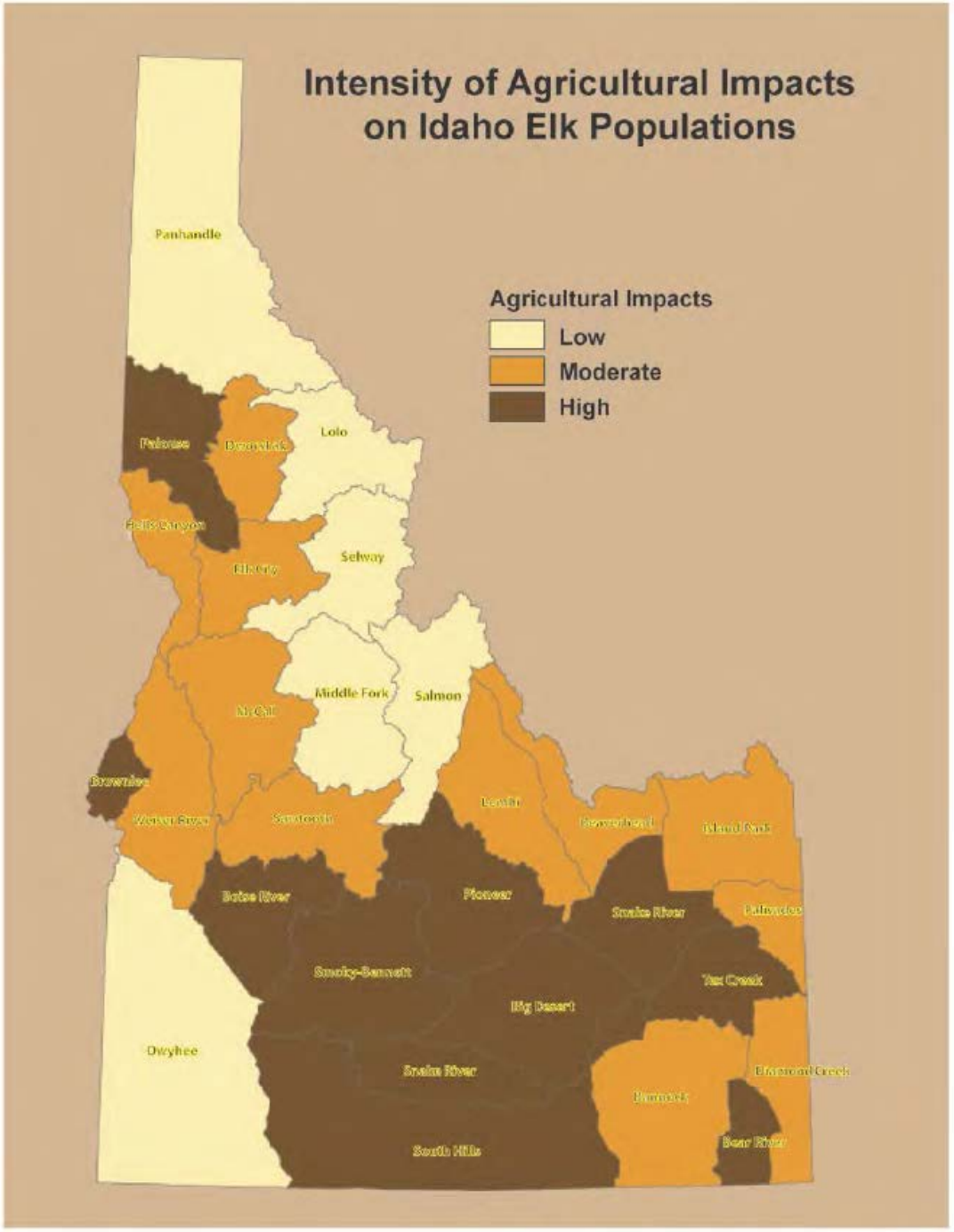
Idaho Elk Management Plan

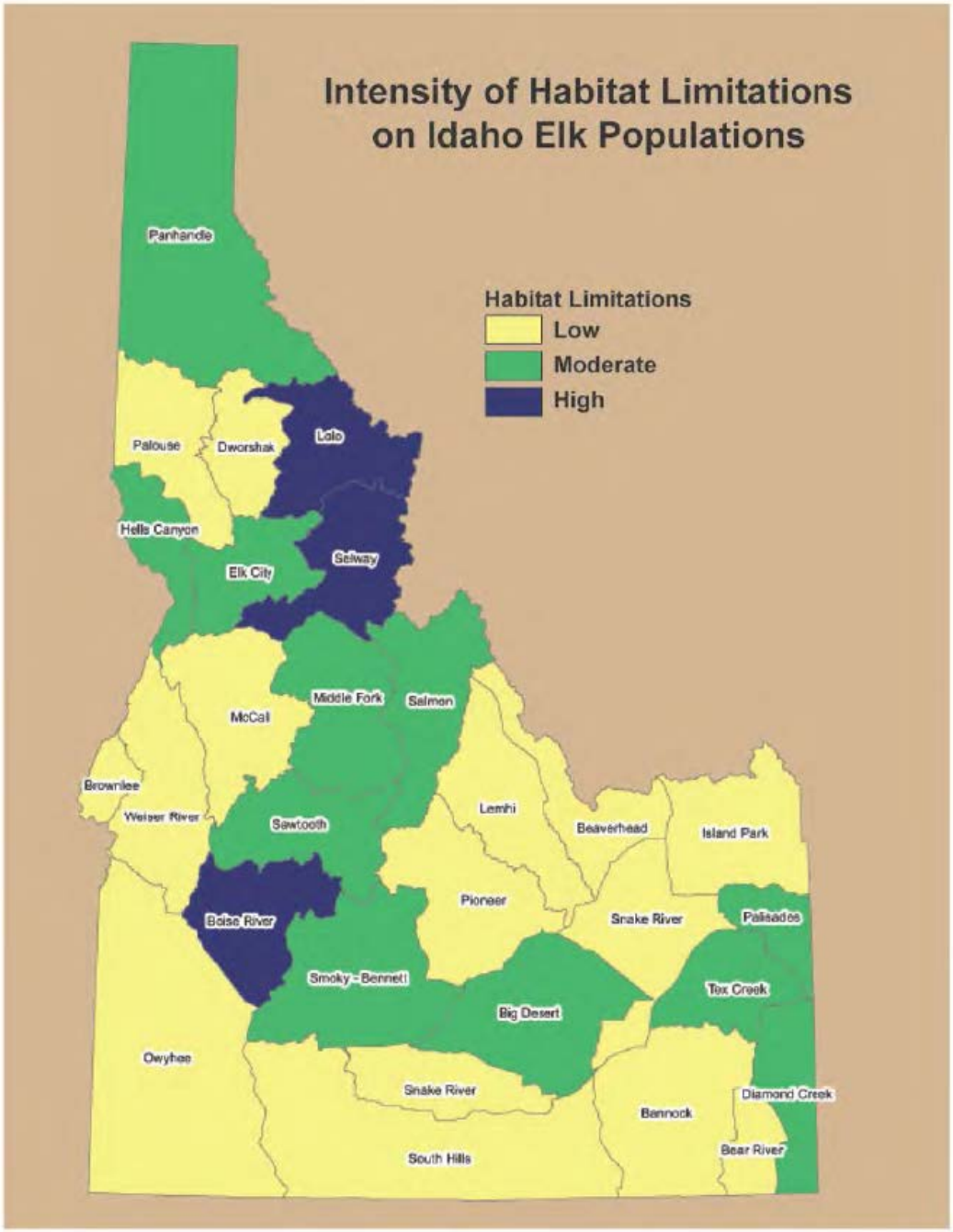
2014-2024

Idaho Department of Fish and Game
January 2014

https://collaboration.idfg.idaho.gov/WildlifeTechnicalReports/Forms/AllItems.aspx


Intensity of Predation Limitations
on Idaho Elk Populations
Predation Limitations
Low
Moderate
High
Panhandle
Palouse
Dworshak
Lolo
Hells Canyon
Selway
Elk City
Middle Fork
Salmon
McCall
Brownlee
Weiser River
Sawtooth
Lemhi
Beaverhead
Island Park
Pioneer
Boise River
Snake River
Palisades
Smoky - Bennett
Tax Creek
Big Desert
Owyhee
Snake River
Diamond Creek
Bannock
Bear River
South Hills


Intensity of Agricultural Impacts
on Idaho Elk Populations
Agricultural Impacts
Low
Moderate
High
Panhandle
Lolo
Selway
Middle Fork
Salmon
Owyhee
Pioneer
Smoky-Bennett
Big Desert
South Hills


Intensity of Habitat Limitations
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Habitat Limitations
Low
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Panhandle
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Sawtooth
Lemhi
Beaverhead
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Boise River
Pioneer
Snake River
Palisades
Smoky - Bennett
Big Desert
Tex Creek
Owyhee
Snake River
Diamond Creek
Bannock
Bear River
South Hills

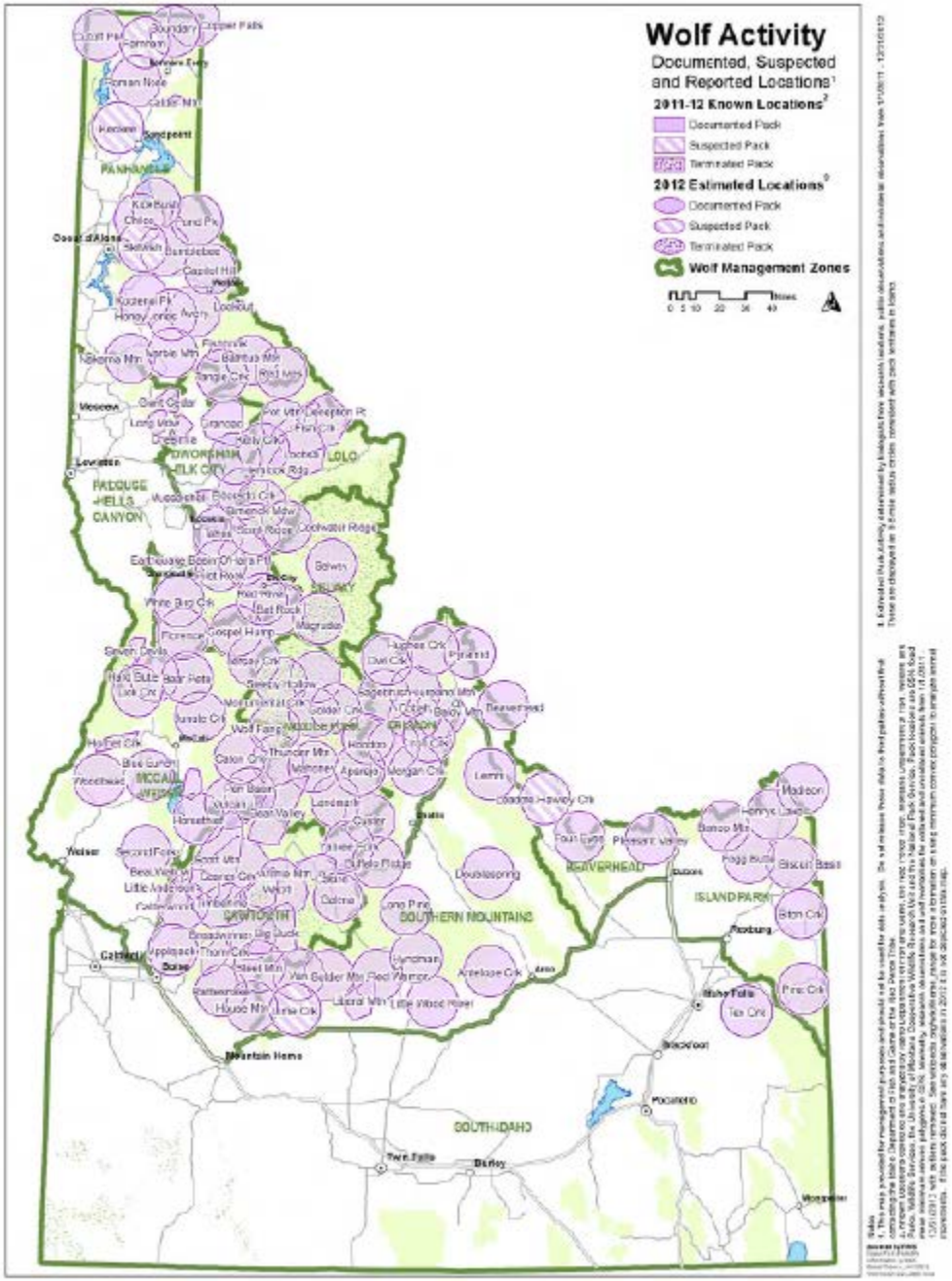


Figure 6. Distribution of documented and suspected wolf packs in Idaho, 2012.

Elk Herd examples – how were they selected?

- Elk present
- Wolves present
- Poster child example – “The Lolo Zone”
- One of Stopher’s favorite places
- Yellowstone adjacency (Island Park)
- Five more samples within elk distribution – no insider or particular knowledge

Lolo Zone Factors

- Habitat maturation and fire suppression
- New roads – 1900 miles of new roads for management & recreation in 1/3 of the zone
- Loss of major winter ranges
- Catastrophic winter loss 1996-97 (30-48%)
- Predation by lions and bears (lions↓ bears↑)
- Predation by wolves beginning in mid 90's

Lolo Zone

Game Management Units 10, 12

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Increase the zone's elk population.

Long-term Population Objectives

Objective		
Cows	Bulls	Adult Bulls
6100-9100	1300-1900	725-1200

The Lolo Zone elk population is limited by habitat conditions and predation. Elk numbers in this zone peaked in the late 1980s and have since been on a long-term decline. Lack of early successional stage forest was a primary factor behind the initiation of this decline. Since then, the decline has been severely exacerbated by high elk predation rates by black bears, mountain lions, and most recently wolves. Restoring this elk population will require liberal predator harvest through hunting and trapping seasons, and control actions in addition to improvements in elk habitat at a landscape level.

Lolo Zone Population Surveys

Survey 1 - 2006				Survey 2 - 2010			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
3254	979	865	5098	1358	594	182	2134
	30*	27*			44*	13*	
*per 100 cows							

Short-term goals are to stabilize this elk population and then begin to realize a positive growth rate. Retaining the population objectives from the previous plan as long-term goals (despite the current greatly reduced elk population) represent a desire to ultimately restore this population to levels achieved in the 1990s.

Lolo Zone Elk Harvest

Palouse Zone

Game Management Units 8, 8A, 11A

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Maintain bull elk population within proposed objectives;
- Decrease cow elk population within proposed objectives.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
1125-1725	115-415	

The Palouse Zone elk herd is highly productive and has shown substantial growth over the past decade. Habitat conditions are favorable to elk due to timber harvest and high quality agricultural crops.

Palouse Zone Population Surveys

Survey 1 - 2004				Survey 2 - 2009			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
1814	148	706	2668	2153	411	676	3240
	8*	39*			19*	31*	
*per 100 cows							

Elk population growth in the Palouse Zone is limited by social tolerance and agricultural impacts. Addressing these impacts will require the continuation of long elk hunting seasons to maintain dispersed pressure on elk in agricultural areas. Developing mutually acceptable approaches between Fish and Game staff and area landowners to deal with elk depredation problems will also be emphasized.

Elk population objectives represent an increase in cow numbers over the previous elk plan but are lower than current levels. The priority management goal for the zone is to maintain high harvest rates and to address social tolerance issues.

Palouse Zone Elk Harvest

Middle Fork Zone

Game Management Units 20A, 26, 27

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

• Stabilize/maintain the elk population; long-term objective is to increase elk numbers towards eventual recovery.

Long-term Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
3850-5750	690-1030	390-810

Middle Fork Zone Population Surveys

Survey 1 - 2006				Survey 2 - 2011			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
5137	834	1007	6978	3341	462	420	4223
	16*	20*			14*	13*	
*per 100 cows							

The Middle Fork Zone elk population is limited by predation. Elk numbers in this zone were higher in the 1990s and early 2000s and have since declined. Likely the decline has been exacerbated by high elk predation rates. Restoring this elk population will require liberal predator harvest through hunting and trapping seasons, and control actions. Recent fires in this zone could provide a boost of nutrition if habitat response is favorable to elk.

Short-term management goals involve stabilizing the elk population, followed by steps to realize positive growth rates. Retaining similar population objectives from the previous plan as long-term goals (despite the current greatly reduced elk population) represents a desire to ultimately restore this population to levels achieved in the 1990s. The bull/cow and adult bull/cow ratios have been adjusted to 18 to 24/100 and 10 to 14/100 respectively during this recovery process.

Weiser River Zone

Game Management Units 22, 32, 32A

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Decrease cow elk population within proposed objectives;
- Maintain bull elk population within proposed objectives.

Population objectives for the Weiser River Zone involve reducing overall elk numbers in areas where agricultural concerns are high while continuing to provide a broad range of hunting opportunity.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
3300-5000	670-1000	325-500

Weiser River Zone Population Surveys

Survey 1 - 2007				Survey 2 - 2013			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
5372	909	1571	7852	7461	1116	1894	10471
	17*	29*			15*	25*	
*per 100 cows							

Beaverhead Zone

Game Management Units 30, 30A, 58, 59, 59A

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Maintain the elk population within proposed objectives.

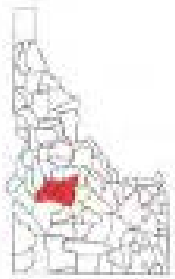
Proposed population objectives for the Beaverhead Zone provide a necessary balance between hunter opportunity, hunter success and crop/property damage concerns on agricultural lands.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
2050-3075	555-830	330-485

Beaverhead Zone Population Surveys

Survey 1 - 2005				Survey 2 - 2009			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
2467	706	797	3970	3257	862	1333	5452
	29*	32*			26*	41*	
*per 100 cows							



Sawtooth Zone

Game Management Units 33, 34, 35, 36

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Increase the elk population from current levels.

Elk population objectives in the Sawtooth Zone remain the same because this population has responded favorably to management actions the last three years. It is anticipated that this herd will continue to increase and ultimately meet objectives. Fish and Game is managing for a robust elk population with general hunt opportunity near a large human population center, while keeping the elk population within the carrying capacity of a limited winter range, and limiting agricultural crop and property damage complaints on private land during winter.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
3000-4500	630-945	360-540

Sawtooth Zone Population Surveys

Survey 1 - 2009				Survey 2 - 2013			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
2696	251	509	3456	2396	324	926	3646
	9*	19*			14*	38*	
*per 100 cows							

Sawtooth Zone

- Ground zero for Idaho wolf reintroduction
- Elk population about 2,000 in 1950's
- Elk pop. peaked early 1990's at about 7,200
- High road densities in part of zone
- Sheep grazing habitat impacts (MF Payette R)
- Supplemental feeding for elk (2 out of 5 years)
- Black bear, wolf and lion predation documented

Lemhi Zone

Game Management Units 29, 37, 37A, 51

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Maintain the elk population within proposed objectives.

Population objectives are designed bring elk populations within social carrying capacity near existing levels.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
1850-2950	600-960	370-590

Lemhi Zone Population Surveys

Survey 1 - 2007				Survey 2 - 2011			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
3262	1442	1201	5905	2753	1005	1206	4964
	44*	37*			37*	44*	
*per 100 cows							

Island Park Zone

Game Management Units 60, 60A, 61, 62, 62A

Population Objectives • Current Status • Harvest Information

Proposed 10-year Management Direction:

- Add unit 62 from the dissolved Teton zone;
- Maintain the elk population within proposed objectives.

The Island Park Zone will now include unit 62 from the dissolved Teton Zone. The unit 62 elk herd is small and shares part of its range with some current Island Park Zone elk. The addition of the unit 62 elk herd will allow better management of the entire Island Park Zone elk population, while providing better hunter opportunity.

Proposed population objectives for the Island Park Zone balance hunter opportunity and hunter success with crop and property damage on agricultural lands.

Proposed Zone Population Objectives

Objective		
Cows	Bulls	Adult Bulls
1200-1800	400-575	250-375

Island Park Zone Population Surveys

Survey 1 - 2006				Survey 2 - 2010			
Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
1069	315	364	1748	1476	313	722	2512
	29*	34*			21*	49*	
*per 100 cows							

Island Park Zone Elk Harvest

Island Park Zone

- Elk population hard to monitor (migratory into MT and Yellowstone)
- Pop peaked in 1999-2000
- 1970's >50% pine beetle infestation and loss
- Increased timber harvest and roads improved access and reduced habitat value
- Large domestic elk ranching operations in last ten years impacting elk winter range
- Predation not a major threat in PR report

The fate of cow elk by management zone in Idaho are depicted as a percent of total cow elk, 2005-2008.