

Update on Efforts Associated with Addressing At-Risk Deer and Elk Populations in Washington



Washington Department of
FISH and WILDLIFE

Brock Hoenes
Ungulate Section Manager, Game Division
Wildlife Program

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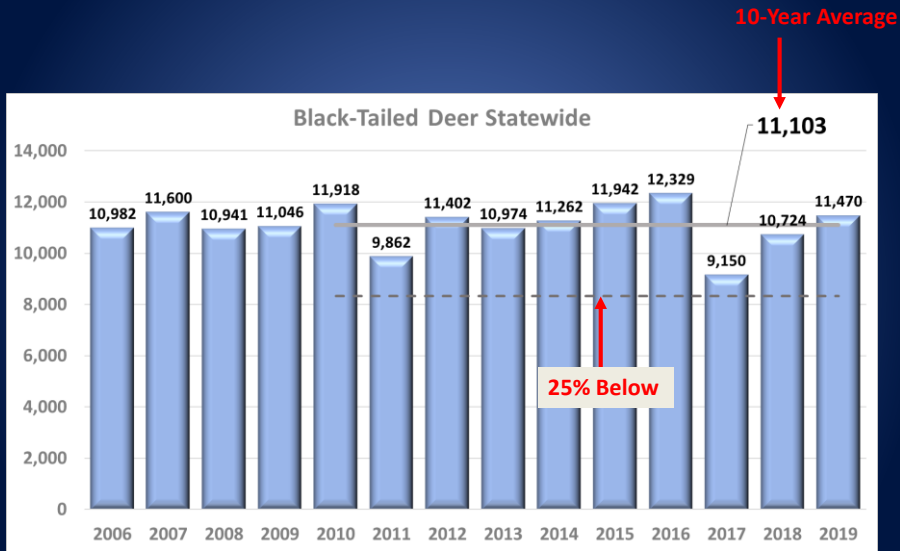
1. Limited to deer and elk
2. Criteria used to define an at-risk population
3. Predator-prey guidelines
4. Status review and next steps
 1. White-tailed
 2. Mule deer
 3. Elk
5. Questions



At-Risk Ungulate Population

“ At-risk ungulate populations are any that are federal or state listed as threatened or endangered (e.g., Selkirk Mountain woodland caribou, Columbian white-tailed deer). An at-risk population would also include any ungulate population which falls 25% below its population objective for two consecutive years or if the harvest decreases by 25% below the 10-year average harvest for two consecutive years.”

At-Risk Ungulate Population



Predator-Prey Management Guidelines

1. Guiding Principles

2. Action Consideration

3. Assumptions

4. Strategies

- a) Define the problem and rationale for a proposed action
- b) Risk assessment
- c) Develop proposed action
- d) Public review



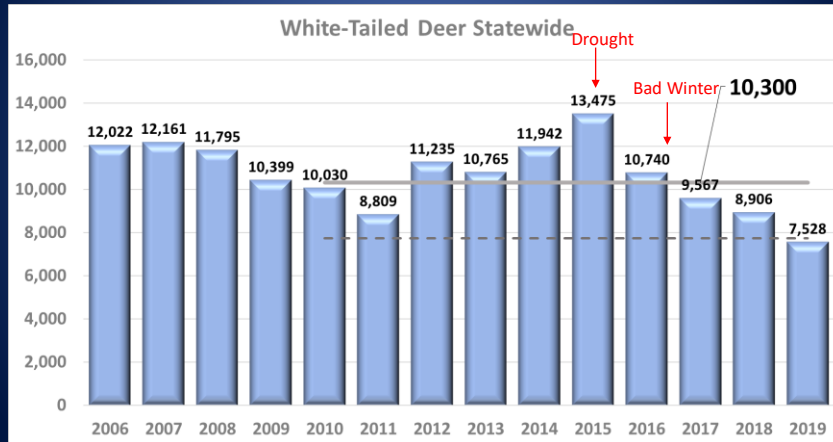
White-Tailed Deer

- 6 management zones
- No numeric population objectives
- Populations most strongly affected by 2015 drought
- General season harvest (antlered and antlerless) used to assess at-risk status
- No zones currently meet the criteria of an at-risk ungulate population
- Harvest estimates in 2019 dropped more than 25% below the 10-year average in 3 zones



We used both antlered and antlerless harvest during general seasons to conduct at-risk assessment to be consistent with what we did in the 2015 ungulate assessment.

White-Tailed Deer General Season Harvest 2006-2018



At-Risk Ungulate Populations

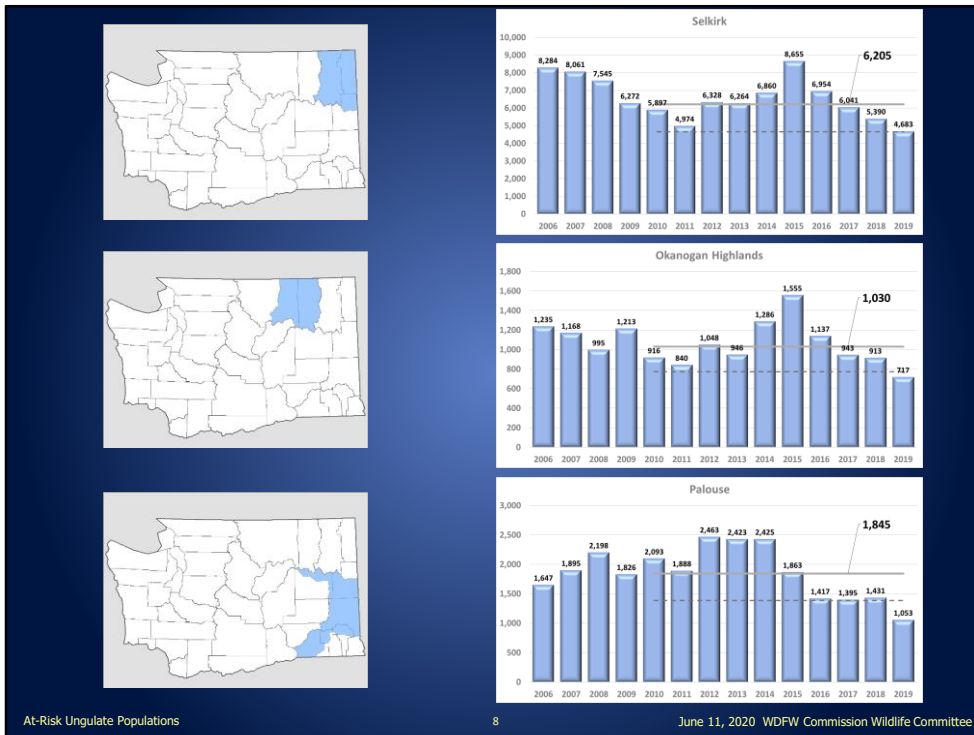
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June 11, 2020 WDFW Commission Wildlife Committee

Most substantial decline occurred in 2016 following the 2015 drought.

Using both antlered and antlerless harvest is something we want to revisit when we update the predator-prey guidelines in the GMP because general season buck harvest is probably a better indicator of population trend.

For example, we eliminated all recreational antlerless opportunity in GMUs 101-121 in 2019. In 2018, that accounted for 943 deer. Thus, if we would have had similar opportunities in 2019, harvest estimates would have been higher, and it is unlikely we would have dropped more than 25% below the 10-year average at the statewide level.



Harvest across these 3 zones in 2019 was 6,453 or 86% of all WTD harvest

White-Tailed Deer

- Selkirk/Okanogan Highlands
 - Eliminated recreational doe harvest in GMUs 101-121 in 2019
 - Findings from predator-prey study will be used to inform the decision of whether to implement predator-prey guidelines
- Palouse
 - Bisected by the Snake River (North and South)
 - Proposing new zonal boundaries in updated white-tailed deer management plan
 - Not 25% below 10-year average in south half
 - Still have numerous opportunities for hunters to harvest antlerless deer in north half
 - Reducing antlerless harvest in the north half may be discussed, but with consideration given to agricultural damage issues

At-Risk Ungulate Populations

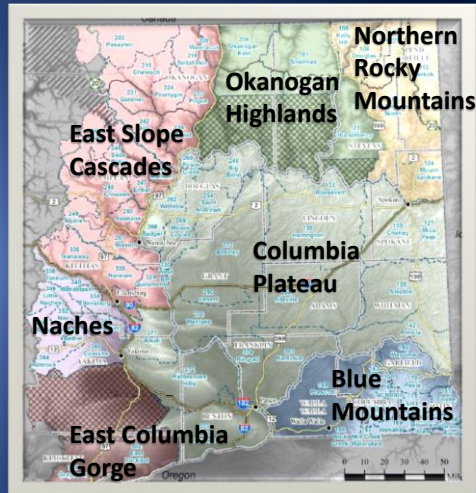
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Observed slight increase in buck harvest in District 1 in 2019 and expect that trend to continue if favorable weather conditions persist

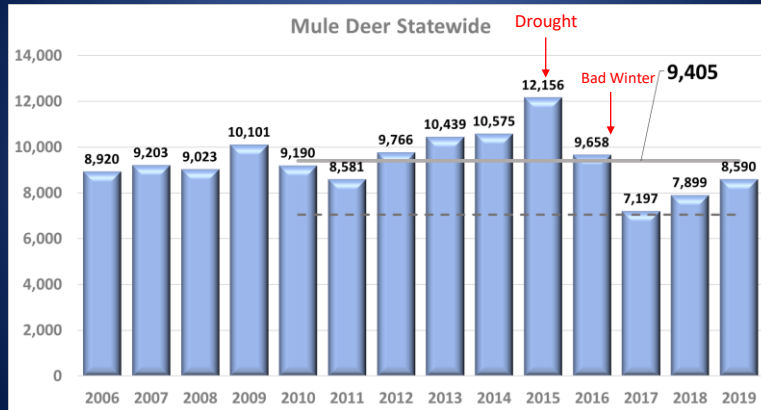
Mule Deer

- 7 management zones
- No numeric population objectives, but periodic abundance estimates
- Populations were strongly affected by 2015 drought and 2016/2017 winter
- General season harvest (antlered and antlerless) used to assess at-risk status
- 5 zones currently do not meet the criteria of an at-risk ungulate population
- 2 zones met the criteria of an at-risk ungulate population in 2017 and 2018, have increased in recent years, but only slightly



Have formal monitoring programs for mule deer and estimate abundance in many of the zones, but we do not have numerical objectives related to the number of deer in each zone. Instead, we manage for stable or increasing herds.

Mule Deer General Season Harvest 2006-2018

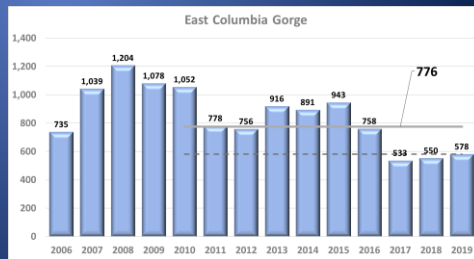


At-Risk Ungulate Populations

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Overall, we reduced opportunities to harvest antlerless mule deer in response to the drought of 2015 and winter of 2016/2017 and populations have been recovering in most zones

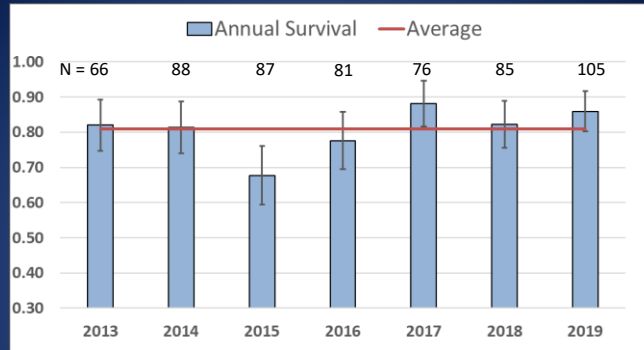


Mule Deer

- East Columbia Gorge
 - Hairloss syndrome
 - Documented adenovirus outbreak in 2017
 - Began to reduce recreational doe harvest in 2019
 - May consider further reductions during 2021-2023 season setting process
 - Will radio-collar 80-90 adult female mule deer this coming winter and will use findings from that monitoring effort to inform the decision of whether to implement predator-prey guidelines
- Naches
 - Hair loss syndrome
 - Recreational opportunities to harvest antlerless deer have not been allowed since 2006
 - Muckleshoot Indian Tribe has been monitoring radio-collared adult mule deer since 2012
 - Will collaborate with the Muckleshoot Indian Tribe and use preliminary findings from their work to inform the decision of whether to implement the predator-prey guidelines

Still have general season archery and youth permit opportunities for antlerless in ECG. Resulting harvest in 2019 was 35-40 does.

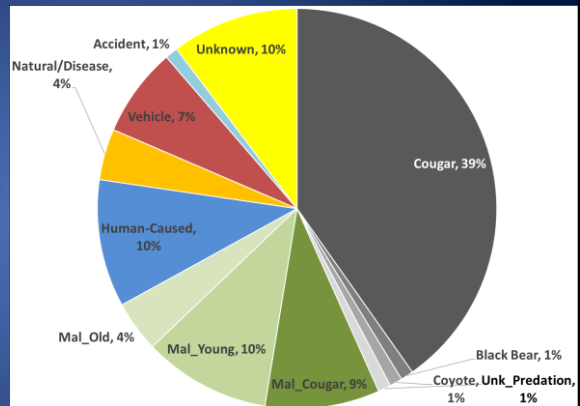
Muckleshoot Indian Tribe Study



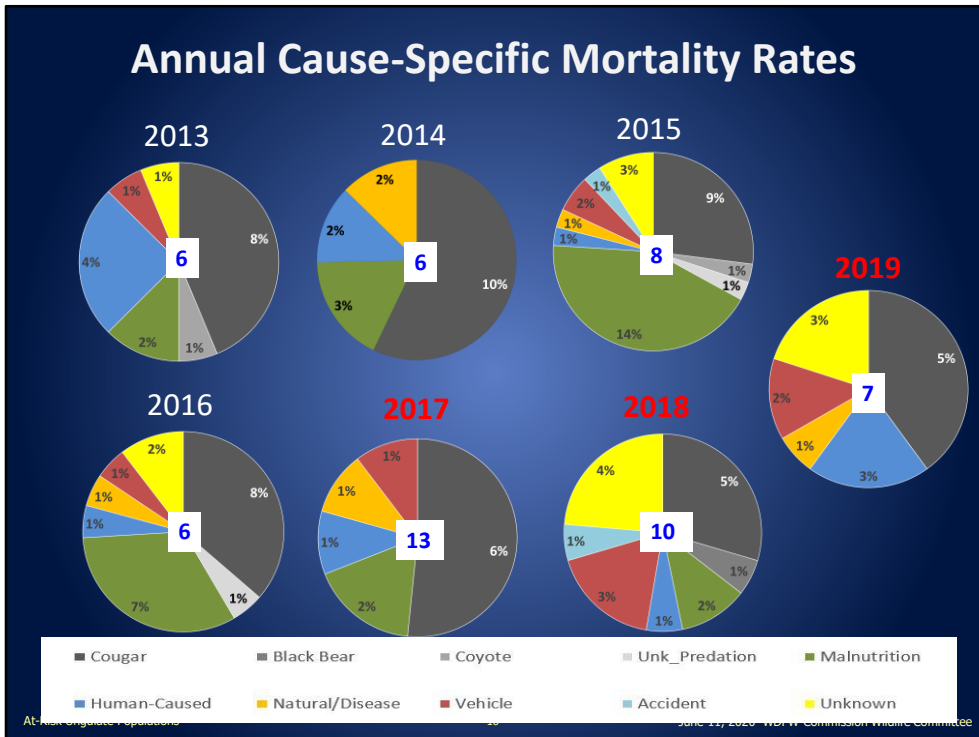
- Annual survival rates have varied, but differences are not statistically significant
- Have averaged 81% across study years
- Were lowest in 2015 (drought) and 2016 (bad winter)
- Would expect survival rates to be $\geq 85\%$

Muckleshoot Indian Tribe Study

- Cougars have been the leading cause of mortality and accounted for 39% of mortalities to date
- Other predators have only accounted for 3% of the mortalities
- Causes of mortality also indicate deer are nutritionally stressed with 23% of mortalities being attributed to malnutrition
- Human-caused mortalities accounted for 10% (illegal harvest (5), tribal harvest (8), wounding loss (1))
- All other causes of mortality accounted for 1-7%



Will primarily stick to the bulleted points, but will also elaborate on the nuances for the malnutrition category (e.g. old (12+) deer versus young deer (<12), etc.)



Although cougar predation has been the leading cause of mortality in most years, malnutrition was the leading cause of mortality in 2015 and similar to cougar predation in 2016.

Recreational cougar harvest during seasons established by the Department is indicated by the number in bold blue text in the center of the pie chart. Cougar harvest by MIT tribal hunters also increased substantially 2017-2019

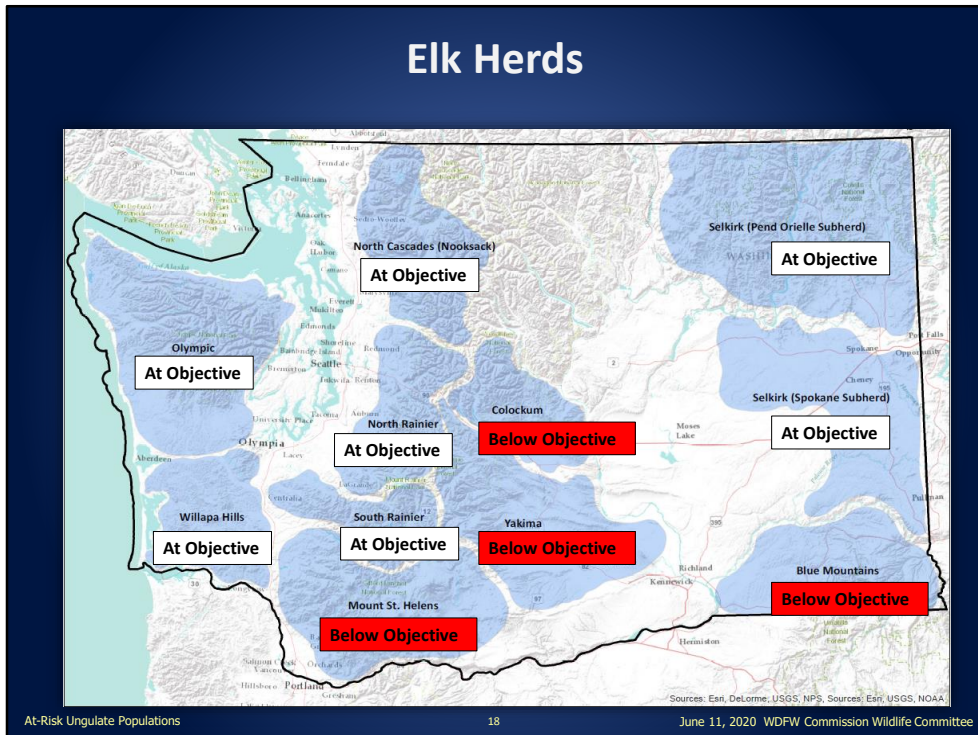
Cause-specific mortality rates associated with cougar predation indicate a declining trend in response to increased cougar harvest, but preliminary analyses indicate that trend is not statistically significant

Muckleshoot Indian Tribe Study

- Important to emphasize these results are preliminary and have not undergone any rigorous analyses
- Preliminary findings indicate cougar predation and nutritional limitations are the 2 primary factors influencing the survival of adult female mule deer in this herd
- Information related to fawn recruitment is lacking, which is a substantial limitation
- Next steps will be to facilitate discussions internally and in consultation with MIT

Will point out a big unknown for this herd is information related to fawn recruitment and the limitations we face because of overlap with black-tail that makes classifying fawns from a helicopter difficult. I will also highlight this is important because if this deer population is experiencing nutritional limitations it will be reflected in reduced survival of juveniles before adults—the fact we are seeing some indication of that in adults makes it likely our fawn recruitment isn't doing well either and it's unknown to what degree, if any, increased cougar harvest has improved fawn recruitment.

Elk Herds



We formally recognize and manage 10 elk herds

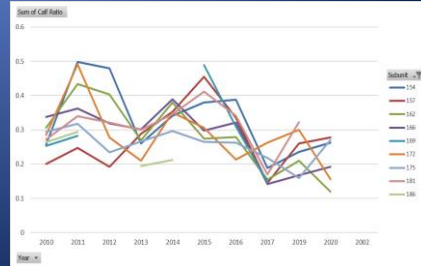
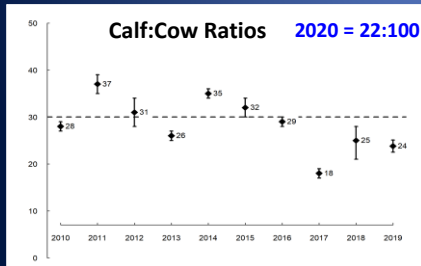
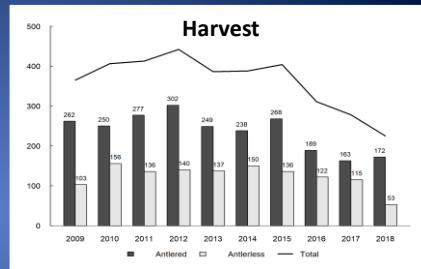
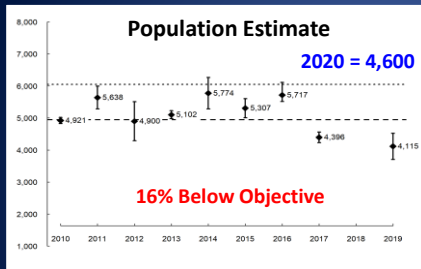
The Colockum, Yakima, Blue Mountains, and Mount St. Helens elk herds are currently below objective

Have substantially reduced antlerless harvest in the Colockum and Yakima and will wait to see what benefit that has before we proceed with any discussion related to implementing the predator-prey guidelines.

Have no intentions to initiate discussion related to the implementation of the predator-prey guidelines at Mount St. Helens because of effects of elk hoof disease and the fact our recent study did not indicate predation was a key factor.



Blue Mountains Elk Herd



At-Risk Ungulate Populations

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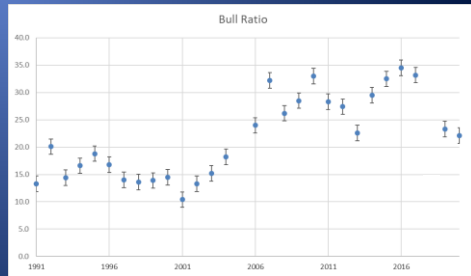
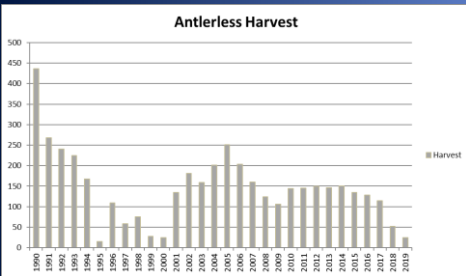
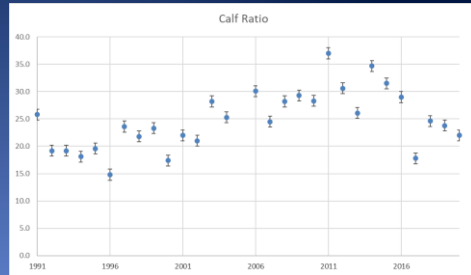
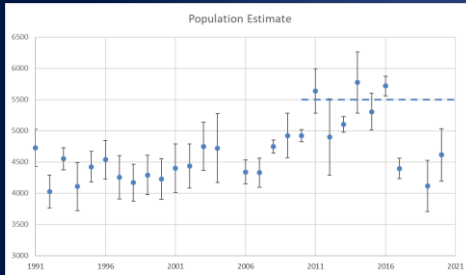
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Herd was 25% below objective in 2019. Increase in 2020 was partially related to a group of elk being in the survey area that also spends time in Oregon and was not observed in 2019.

Although we do not meet the criteria of an at-risk ungulate population, we are concerned about the GMUs with calf:cow ratios below 20:100, albeit we did see ratios rebound in some parts of the herd area.

Will also discuss our concerns regarding summer ratios compared to winter ratios (i.e., seem to indicate we are losing quite a few calves between September and March), while acknowledging the limitations of those data (most notably, ground vs. aerial, sample size, etc.)

Blue Mountains Elk Herd



These slides will be used to cover the more historical perspective (i.e., we aren't completely in uncharted territory) and discuss the past studies that were conducted.

Blue Mountains Elk Herd

1. Define the problem and rationale for a proposed action.
 1. Biological status (prey and predators)
 2. Assess evidence
 3. Assess other ecological factors
 4. Determine whether population or individual level management actions are appropriate
2. Risk assessment—Assess the effect of proposed management actions on:
 1. Predators, prey, and other species
 2. Habitat
 3. Recreational opportunity
 4. Landowners
 5. Stakeholder who might be for or against actions
3. Develop Proposed Action
4. Public Review

We are adhering to the process outlined in the GMP and have completed our first draft that defines the problem and rationale for a proposed action.

Next Steps

Will continue development of a formal assessment and hope to have that completed by late summer

Evaluating the need for additional monitoring (e.g., radio-collaring calves (\$80-\$100k annually), late-summer flights (\$30-\$40k annually), etc.)

Questions?

