

“GREEN SHEET”

Meeting: October 7-8, 2011

Agenda Item 4: Ungulate Population Objectives - **Briefing**

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Background:

Department staff will address the Fish and Wildlife Commission’s request to explain how population objectives are set for deer, elk, moose, mountain goat, and bighorn sheep.

Overall, the Department attempts to manage for stable game population levels within habitat and environmental constraints, including human impacts and expectations. We recognize that many factors influence big game populations, and we have very limited control over most of those factors. Weather in the form of drought or severe winters can cause declines. Disease, extensive fires, land use practices, habitat loss to human development, and the level of conflicts and property damage that people are willing to tolerate are all examples of population level influences over which the Department has limited control. Some of these factors are short-term and some are chronic. However, we do attempt to address some of these human-controlled factors mainly through outreach to property owners and managers, providing financial incentives, and working with conservation partners to protect and enhance key habitats.

The one factor that we can directly manage is harvest by hunters. Harvest strategies are designed for sustained yield that does not cause unplanned population declines and can be adjusted in response to other factors that result in declines.

As described above, the objective for many deer and elk populations is to maximize recreational opportunity, but not cause a decline due to hunting. This is particularly important for populations where monitoring or estimating numbers is difficult or expensive. Examples of species for which monitoring or estimating numbers might be difficult include black-tailed deer, white-tailed deer, and elk populations that live in heavily forested environments. However, because most of our harvest strategies target the male segment of the population and only allow very controlled harvest of females, the risk of causing an unplanned decline is relatively low.

In situations where populations are difficult to measure, we often use indices or specific population parameters as population objective measurements to monitor the population trends. These indices include harvest trends, ratios of young to adults and males to females, proportion of males in the pre-hunt and/or post-hunt population, proportion of mature males in the population, number of animals observed per unit of effort in replicated surveys, survival rates, etc.

For deer and elk populations that can be monitored with some precision, such as many eastern Washington elk populations, we try to develop population objectives based on those numerical estimates. However, even when estimates are achievable, objectives are generally developed using a combination of additional factors, such as harvest history and trend, current harvest levels, currently occupied range, condition of available forage, land use practices, property damage complaint levels, overall landowner tolerance, hunter satisfaction, and public preferences.

All game population objectives are reviewed and discussed through an extensive public involvement process at six year intervals as part of the Game Management Plan. In addition, in developing elk herd plans and in the recently completed white-tailed deer plan, those objectives are reviewed and discussed through more focused public involvement.

The recreational objective for moose, bighorn sheep, and mountain goat populations is to maximize recreational opportunity, but not cause a decline due to hunting.

The population objective for moose is to manage for stable populations. The harvest levels that maximize recreational opportunities, while not causing declines, are managed through three indices for population stability, which are bull-cow ratios, calf-cow ratios, and median age of harvested bulls.

The population objective for bighorn sheep is to manage for stable populations within each herd. Stability for bighorns includes staying within a specific population size range (identified in the Game Management Plan) that seeks to balance bighorn abundance with land use practices, human development, agricultural damage, and risk of disease. To achieve these population objectives, bighorn herds are intensively monitored, and harvest is allocated based on four indices to maintain population stability, which are percentage of mature rams in the population, population size, ram-ewe ratios, and number of sub-adult rams in the population.

With mountain goat populations, we have recently completed a major research project. A part of that project identified mountain goat habitat, delineating annual population levels and harvest rates that would ensure stable or increasing goat populations. The current objective for mountain goats is to manage for stable populations, with the exception of managing for a detectable increasing trend in goat abundance in the North Cascades by 2015. Harvest rates to achieve these objectives are set at 1-4 percent of the population for goat populations exceeding 100 animals.

The briefing provided by the Department will review the current deer, elk, moose, mountain goat, and bighorn sheep populations across the state at appropriate geographic scales. Staff will provide current population estimates or trends, describe the population objectives identified in their plans, and explain how the objectives were developed and whether we think we are meeting those objectives.

Policy Issue(s) you are bringing to the Commission for consideration:

None - briefing only.

Public involvement process used and what you learned:

N/A

Action requested (identify the specific Commission decisions you are seeking):

None - briefing only.

Draft motion language:

N/A

Justification for Commission action:

N/A

Communications plan:

- 2009-2015 Game Management Plan
 - Elk Herd Plans
 - White-tailed Deer Plan
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