

Agenda Item Summary

BACKGROUND

The Department has been conducting research on a variety of big game wildlife species for decades. Information from these studies has helped shape agency management programs, collected biological population parameters for many of Oregon's big game species, and provided scientifically valid data for creating agency policy. Current research involves black-tailed and mule deer, elk, cougar and wolves.

PUBLIC INVOLVEMENT

Results of previous research has been communicated to members and leadership of Oregon's sport groups and the general public via numerous presentations, publication of results in popular articles/news releases, and posting of scientific manuscripts onto the Agency's website (<http://www.dfw.state.or.us/wildlife/research/index.asp>).

ISSUE 1

MULE DEER RESEARCH -- SOUTH-CENTRAL STUDY

ANALYSIS

The first use of GPS collars on mule deer in Oregon was completed between 2005-2011. Over 500 mule deer were marked (GPS and VHF collars combined) and more than one million location points were obtained. Additional analysis continues, especially on documenting the habitat resources used by the marked deer.

Thus far, three publications have resulted from the study:

1. A thesis examining survival rates and cause specific mortality
2. A Wildlife Society Bulletin publication that combined migration data and deer vehicle collisions on major highways in the study area
3. A comparison of marked deer location during the normal population survey time versus where those deer were at during the rifle hunting season

(Thesis abstract and publications can be reviewed at <http://www.dfw.state.or.us/wildlife/> ODFW Wildlife Division Hot Topics)

ISSUE 2

BLACK-TAILED DEER RESEARCH – WESTERN OREGON

ANALYSIS

A thesis has been recently completed that examined historical black-tailed deer survival rates and cause specific mortality from data collected in the Cascades Mountains. This analysis is a significant baseline comparison to the current study being conducted in four Wildlife Management Units of western Oregon. The current study (initiated in 2010) is the first use of GPS collars on black-tailed deer in Oregon and is essential to developing appropriate management practices. Currently, data on 308 deer (GPS and VHF collars combined) has provided new population parameters as well as allowing the evaluation of a new population survey methodology.

(Thesis abstract and publications can be reviewed at <http://www.dfw.state.or.us/wildlife/> ODFW Wildlife Division Hot Topics)

ISSUE 3

HUNTER-ATV-ELK-MULE DEER INTERACTIONS – STARKEY EXPERIMENTAL FOREST

ANALYSIS

In a collaborative study with the U.S. Forest Service, we have engaged in an eight year study to investigate the effects of All-Terrain Vehicles (ATV) and archery and rifle hunters on elk and mule deer movements. Simultaneous information on ATV, hunter, and deer and elk movements has been collected. Preliminary analyses to determine attributes of successful and unsuccessful hunters have been completed. Future analyses will investigate real time interactions of archery and rifle hunters on elk and mule deer movements. Results from this study will help influence hunting season designs and structure to meet harvest goals, escapement goals, and recreational experience goals (five year summary of East Region Wildlife Research program can be reviewed at <http://www.dfw.state.or.us/wildlife/> ODFW Wildlife Division Hot Topics)

ISSUE 4

WOLF-COUGAR RESEARCH – NORTHEAST OREGON

ANALYSIS

Cougars occur at high densities and have been identified as the primary source of mortality of elk calves in northeast Oregon. Furthermore, cougars were identified as a primary factor limiting population growth rates of elk. Wolves are recolonizing much of Oregon and are commonly thought to prey primarily on elk. It is unknown if wolves will be an additional mortality factor on elk or if wolves will reduce cougar numbers, distributions, or prey use patterns in such a way that fewer elk are killed even as an additional predator is added to the system. We are currently conducting a research project to document wolf diets and the potential effects of wolves on cougar populations. Information from this research will be useful in determining the joint effect of a recovered carnivore population on prey population dynamics.

ISSUE 5

MULE DEER RESEARCH – STARKEY EXPERIMENTAL FOREST

ANALYSIS

Mule deer populations throughout the Intermountain West, including Oregon, have declined over the past decade. Among the compelling hypotheses for the decline in mule deer populations include decrease in quality of winter and summer ranges, predation by a suite of carnivores, climate changes, and competition with elk. We have just begun a collaborative research project with U.S. Forest Service and several universities to implement a 10 year study to identify the potential effects of competition with elk on mule deer. Additionally, we will investigate the effects of nutrition and predation on mule deer population dynamics.

Our ongoing research involves three main sub-projects:

1. Documenting survival, pregnancy, and fetal rates of does and survival and causes of mortality of fawns
2. Developing maps of nutritional conditions of mule deer habitat and assess competition between deer and elk for high quality nutritional resources
3. Estimate carnivore populations and determine effects of native carnivores on mule deer population dynamics

To date, we have conducted two years of monitoring mule deer vital rates and will begin field work on mule deer nutrition and estimating carnivore populations in summer 2016

OPTIONS

**STAFF
RECOMMENDATION**

N/A – Informational only

DRAFT MOTION

N/A

EFFECTIVE DATE