



## Mule Deer Migrations and Mortalities

For Release: July 15, 2016

Mule Deer populations in the Kootenay region have gone through significant declines in recent years: one occurred following the severe winter of 1996-97 and a second one around 2005. Understanding their migration patterns, and identifying causes of death, will go a long way toward developing actions to increase population abundance. And that is exactly what biologists with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) are planning to achieve with an ongoing Mule Deer monitoring project.

Year two of the planned five-year project has just been completed, with funding from the Fish & Wildlife Compensation Program (FWCP) under the Upper Kootenay Ecosystem Enhancement Plan (UKEEP), which is a partnership between the FWCP and the Columbia Basin Trust. Other project funders are the Habitat Conservation Trust Foundation and Southern Guides & Outfitters. The biologists have already uncovered some interesting findings after tracking 88 female Mule Deer fitted with GPS collars in four separate areas: Wigwam/Grasmere, Newgate, Dutch Findlay, and West Kootenay.

First is that the different populations are exhibiting very distinct migration patterns. The Mule Deer on the east side of Koocanusa Reservoir, for example, are moving huge distances, much longer than those in the others areas. These deer are typically travelling up to 60 kilometres and some have even gone into Alberta and back.

"This is probably related to quality of habitat," said project lead and FLNRO wildlife biologist, Patrick Stent. "The deer on the east side have access to a lot of highly productive summer range habitat, including regenerating burns and sub-alpine terrain, and will use it, while those on the west side are limited to a rolling, low elevation forested landscape and are more restricted. It did surprise us that the Grasmere/Wigwam deer were crossing multiple big drainages to spend their summer in specific sites."

Since the study began, there have been 19 Mule Deer mortalities; the causes were from cougars (7), wolves (5), vehicle collisions (3), illegal poaching (1), an unknown predator (1), natural causes (1), and unknown (1).

"These causes of mortality are not surprising and survival rates are within the ranges reported in other Mule Deer populations in the northwest US," added Stent. "It is possible that the project started after the population decline occurred and mule deer populations may just now be recovering. We hope to continue the project over the long-term so we can gain a better understanding of factors that contribute to declines when they occur."

While doe survival rates are average, there is more positive news on population growth. Likely due to a relatively high number of fawns being produced, combined with the last two mild winters, models suggest modest population growth in both the Mule Deer herds east and west of Koocanusa Reservoir. Currently, there is insufficient data from the other herds to report any initial findings.

There are proposed ecosystem restoration activities, such as prescribed burns, close to where some of the Mule Deer were collared, so the biologists will be able to monitor use of enhancement areas pre-and post-treatment.

"And finally there is a positive spin-off of doing this work right now because of the pilot project currently being implemented to relocate Mule Deer from some urban areas to areas where resident populations have declined," said Stent. This is another project that is benefiting from funding under UKEEP. "We can directly compare survival rates and movement between those collared urban deer released into our study area, and those deer we have collared."

During the urban deer translocation project that has moved a total of 60 deer, 29 were released with GPS radio collars. Of those, eight have died, mostly from cougar predation.

"That's just over 25 per cent mortality which is better than many people thought the urban deer would suffer," said project coordinator Ian Adams of VAST Resource Solutions. "The big surprise is that their movements have varied considerably – some moving over 300 kilometres, and others have stayed very close to their release site."

The combination of these two projects present a very valuable and unique comparison of movement and survivorship of two groups of mule deer – non-urban and urban. Having collars on non-urban mule deer in the same places at the same time provides an invaluable control population against which to compare the movement and survival data of the translocated urban deer.

For the non-urban deer project, more will be collared this year, especially in the West Kootenay, and there will also be an assessment of migration barriers and identification of opportunities for habitat restoration.

The Fish & Wildlife Compensation Program is a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations and Public Stakeholders to conserve and enhance fish and wildlife impacted by BC Hydro dams. For more about this Mule Deer project, and other projects being funded by the FWCP, visit [fwcp.ca](http://fwcp.ca).

30

For more information contact:

Lynne Betts  
Communications, FWCP  
Tel: 250-352-6881  
Email: [Lynne.betts@bchydro.com](mailto:Lynne.betts@bchydro.com)