

## **6. Bighorn sheep response to ecosystem restoration at Radium Hot Springs, BC**

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### *Bighorn sheep near Radium Hot Springs*

Bighorn sheep use of residential areas, golf courses, and roadside habitats in and near the Village of Radium Hot Springs makes the Radium herd highly vulnerable to animal-vehicle collisions on roadways. Between 2003 and 2009 we conducted a series of restoration treatments within historic winter range at Redstreak Mountain for the purpose of providing habitat options that are safe from highways. We monitored bighorn sheep response to these treatments by deploying GPS radio collars on 10 sheep each year from 2002 to 2009 and collecting daily location points for each animal. Study animals increased their use of the treated area from 1.0% of daily locations in 2002 (pre-treatment) to an average of 4.8% of daily locations in 2004 through 2009 (post-treatment). Use of the treated areas was mostly in March through May and in October, suggesting that bighorn sheep used the area as transitional range between winter and summer ranges. Our results point to the need for additional restoration work on south and west facing slopes within or close to escape terrain. Bighorn monitoring has also identified specific seasonal migration corridors that are strong candidates for prescribed burning to reverse forest encroachment trends over the past several decades.

### *Biographical notes*

Alan is the Wildlife Specialist for the Lake Louise, Yoho, and Kootenay Field Unit of the Parks Canada Agency, where he has responsibility for a program of wildlife research, monitoring, restoration and human-wildlife conflict management. Recent research projects include road ecology studies on the Trans-Canada Highway and Highway 93S, caribou habitat and recovery in Banff National Park, and bighorn sheep habitat and response to restoration at Radium Hot Springs, BC. Alan holds a B.Sc. from UBC and an M.Sc. in Wildlife Spatial Ecology from the University of Calgary. He has worked for the Resource Conservation program of Parks Canada since 1982 in Banff, Waterton Lakes, Yoho, Kootenay, Glacier, and Mount Revelstoke National Parks.