

**Montana Department
of
Fish, Wildlife & Parks**



Tom Lemke
406 Chestnut Lane
Livingston, MT 59047
May 10, 2005

Mr. Darrell Geist
P.O. Box 7941
Missoula, MT 59807

Dear Mr. Geist:

Attached please find a copy of the report entitled "Wildlife Habitat and Wildlife Use On and Near the Royal Teton Ranch" together with associated maps. I wrote this report for Montana Fish, Wildlife & Parks in July, 1997 as part of an interagency evaluation of the wildlife habitat values of the Royal Teton Ranch, located in the Gardiner Basin.

Sincerely,

Tom Lemke
Wildlife Biologist

MONTANA FISH, WILDLIFE & PARKS

Wildlife Habitat and Wildlife Use On and Near the Royal Teton Ranch

July 7, 1997

The following is a brief summary of wildlife habitat and wildlife use associated with lands on and near the Royal Teton Ranch (RTR), Park County, Montana. Information is based on wildlife surveys, wildlife studies and general observations made from 1986-1997. Attached maps identify important wildlife habitat for five ungulate species.

Mule Deer: Mule deer are found on the RTR throughout the year, however, summer/early fall densities are relatively low. Much of the RTR is critical winter range for a large migratory mule deer population that occupies the Gardiner Basin from November/December to early May. Deer travel from a large area to include the Absaroka/Beartooth Wilderness, Cooke City, Mill Creek, Big Sky, West Yellowstone and Lake Yellowstone to winter in the basin. Deer that winter on the RTR side of the Yellowstone seldom if ever cross the river. These deer summer to the west and southwest in the Gallatins, Madison Range and inside YNP.

Based on spring helicopter surveys the wintering mule deer population has ranged from 1,616-2,544 deer for the period 1986-1997. On average the RTR winters 33% of the mule deer population (19-44%; or 307-1,075 mule deer/year). Since 1986 the Cutler Lake and Beattie Gulch count units on the RTR have consistently been in the top 5 out of the 15 mule deer count units in terms of mule deer numbers. The Cutler Unit has had up to 600 deer and the Beattie Gulch Unit up to 445 mule deer.

General and heavy use mule deer winter range is marked on the attached map. Mature sagebrush/grassland communities on the RTR (located on river benches and steep hill sides) provide important winter habitat. Irrigated hay meadows on the RTR also provide valuable early spring forage for large numbers of mule deer. Hay meadows are the first areas to "green-up" each spring and attract heavy use.

Elk: Resident elk inhabit the upper elevations of Beattie Gulch, Mol Heron Creek and Cinnabar Basin throughout the summer and fall. These elk are joined by migratory elk which summer in YNP. Most of the RTR is located within the northern Yellowstone elk winter range. Three out of the four migratory elk survey units west of the Yellowstone and north of YNP occur on the RTR.

Since 1989, maximum annual winter elk counts on the units west of the Yellowstone have ranged from 190-835; typically 300-500 elk use this area each winter (most are on the RTR). Compared to the east side of the Yellowstone, relatively few elk winter on the west side. Typically 5-10% of the elk migrating north of YNP occur in

this area.

Migrant elk arrive in mid to late December and stay until late April to early May. Heavy use occurs in several locations (see map). General season elk hunting on the RTR is restricted to paying clients and some RTR employees. Portions of the ranch are open to free public hunting during the Gardiner Late Elk Hunt. Outfitting during the late hunt also occurs on other portions of the RTR. Several large bull elk are taken each year during the general and late hunting seasons.

Antelope: Antelope use of the RTR varies directly with changes in the total population size. These antelope are part of the relatively small, isolated Upper Yellowstone antelope population that winters west of the Yellowstone River from Mammoth to Mol Herin Creek. Some studies indicate possible evidence of genetic isolation. When antelope numbers are high (400-550) up to 100-120 antelope may use the RTR, when total numbers are low (<300) fewer than 50 may be present. Antelope use typically occurs from late summer to early winter. During population highs antelope have occurred on the RTR year long, having fawns at the base of Cinnabar Mountain.

Antelope numbers are currently low (spring 1997 survey, 210 antelope). Irrigated hay meadows adjacent to YNP (Reese Creek) are heavily used by and important to antelope, particularly when numbers are high. Antelope from this population sporadically turn up at Cutler Lake and north of Yankee Jim Canyon between Tom Miner and Rock Creek. Small isolated groups may summer in these areas.

To address game damage problems on the RTR, an early antelope season (September 1-October 2) was created in the early 1990's. Permit numbers have varied from 5-25, depending on population levels. Antelope hunters are provided free access. The early antelope season was designed to avoid late season depredation hunts which often harvested late migrants that did not cause game damage problems. Irrigated crops and healthy sagebrush/grassland communities on the RTR are important to this small, vulnerable antelope population. The RTR provides higher quality winter habitat than adjacent antelope winter range in YNP (Stephens and Reese Creek).

Bighorn Sheep: Bighorn sheep are found seasonally on historic winter ranges on the RTR from Beattie Gulch to north of Mol Heron Creek and occasionally in Cinnabar Basin. The area is collectively known as the Cinnabar Mountain bighorn winter range. Data from radio-collared sheep indicate sporadic movements between sheep populations on Cinnabar, Mt. Everts, Tom Miner and Point of Rocks winter ranges. Interactions involving Cinnabar sheep may be important in terms of genetic diversity and disease ecology for bighorns in the Upper Yellowstone.

Bighorn sheep on Cinnabar, like populations on neighboring winter ranges, have declined over the last 10-15 years. In the 1970's,

prior to the Yellowstone Clamydia (pink-eye) die off, over 100 bighorns wintered on Cinnabar. Based on spring helicopter surveys initiated in 1992, sheep numbers on Cinnabar have declined from 58 in 1992 to 30 in 1997. Lamb recruitment in recent years has been particularly low.

Bighorns arrive on Cinnabar in mid to late October and remain until early May. Most of the sheep summer in YNP near Electric Pk and Sepulcher Mountain. During the fall and winter this population is easily viewed from the county road at the base of Cinnabar. It is a popular wildlife viewing area for photographers and the general public.

Sheep hunting occurs in this Unit (H.D. 300) during an early "unlimited hunt" from Sept. 1-6. In September sheep are hunted primarily in Tom Miner Basin and Rock Creek. The Cinnabar population is basically unhunted due to lack of public access and their late arrival date.

Primary sheep habitat occurs in Beattie Gulch, on the Cinnabar Mountain face and along the Mol Heron Creek canyon (see attached map). Rutting occurs on the sagebrush bench at the base of Cinnabar Mountain. The RTR has planned a housing/campus complex in Spring Creek that would impact bighorn sheep use of the area.

Grizzly and Black Bears: Both species inhabit the higher elevation and more remote forested areas of the RTR and Cinnabar Basin. Riparian habitats that support berry crops and domestic orchards on and near the RTR provide important seasonal food supplies for bears in spring and fall. Grizzly bears are known to regularly den and raise their young in the Mol Heron Creek drainage. For the most part grizzlies and black bears remain relatively secretive, venturing into inhabited lower elevation areas at night during periods of food abundance. Increased human development, particularly in Mol Heron Creek could pose a threat to grizzly and black bear habitat.

Bison: The occurrence of bison on the RTR depends largely on winter forage conditions, population size and the management actions/efforts of several government agencies. Under natural conditions, in harse winters large bison migrations occur and several hundred bison can migrate onto the RTR. Irrigated hayland and sagebrush grassland habitats at low elevation are heavily used by bison. In some years with little human harassment bison have grazed as far north as Yankee Jim Canyon and beyond. Large concentrations much closer to the Park boundary are more common. Bison seem to prefer the narrow band of flat, low elevation habitat along the Yellowstone River. However, under undisturbed conditions bison movements up into Cinnabar Basin could be expected.

Comments on Agricultural Lands: The wildlife value of this property has been greatly enhanced by agricultural practices, particularly irrigated hay meadows. Agriculture has provided high quality wildlife forage for antelope, mule deer, elk and bison that would

not normally occur under natural conditions. Any future land management with respect to wildlife and winter range should consider the value of maintaining productive agricultural habitats.