

Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones

Wildlife Land Use Guidelines

The Key Wildlife and Biodiversity Zone will function in the same manner as Key Wildlife and Watercourse Areas or Ungulate Winter Areas or Moose zones, found on earlier versions of Area Wildlife Referral maps.

Rationale for Special Protection of Key Wildlife and Biodiversity Zones

The Key Wildlife and Biodiversity Wildlife Zones are considered to be a combination of key winter ungulate habitat and higher habitat potential for biodiversity. In some areas this zone consists of important riparian vegetation complexes that are important for biodiversity, while in other areas it indicates important winter ranges for ungulates. In North America, particularly at more northern latitudes, wildlife may enter a negative energy balance during the late fall and winter season. This is the result of lower quality and less accessible food resources combined with harsher environmental conditions, such as cold temperatures and deep or crusted snow. Drought and high wind chill may be compounding factors, particularly in the Montane Natural Regions of southern Alberta. This negative energy balance usually lasts until spring green-up when new plant growth becomes available.

The basic strategy for the majority of wildlife during the winter season is to minimize energy expenditures and use stored body fat reserves to supplement winter food resources of limited quantity and quality. Behavioral adaptations include:

- Selection of localized and familiar habitats that provide relatively high quality and abundant winter food resources in proximity to good thermal and security cover.
- Reduced movement, with increased amounts of time spent resting in locations that minimize body heat loss and energy expenditure.

Typically, Key Wildlife and Biodiversity Zones occur along major river valleys. These landforms contain the topographic variation and site productivity conditions that provide increased levels of biodiversity and good winter browse conditions in proximity to forest and topographic cover. Additionally, south-facing valley slopes have relatively lower snow accumulations and warmer resting sites for ungulate species. The valley landform itself provides protection from high wind chills.

Key Wildlife and Biodiversity Zones play a disproportionately large role in the landscape given their localized size and distribution, in maintaining the overall productivity of regional ungulate populations and source of biodiversity. These zones ensure that a significant proportion of the breeding population survives to the next year.

Industrial activity within and adjacent to Key Wildlife and Biodiversity Zones adds stress and increases energy drain for animals. Wildlife may be forced to move about more than normal and even relocate to less favorable habitat. This becomes an increasingly significant factor as winter progresses. Industrial activity may also create temporary and permanent access that exposes animals to additional non-industrial disturbances and to greater pressure from predators.

In the interest of maintaining areas of biodiversity and productive ungulate populations in Alberta, industrial land use guidelines must reflect an understanding of the wildlife biology and the importance of key winter ranges for ungulates. The Key Wildlife and Biodiversity Zone is intended to:

- protect the long term integrity and productivity of key ungulate winter ranges and river corridors where ungulates concentrate.
- protect locally and regionally-significant wildlife movement corridors.

- protect areas with rich habitat diversity and regionally-significant habitat types.
- protect key hiding and thermal cover for wildlife.

Primary strategies for protection in these zones are as follows:

- a) Protect vegetation from being cleared by minimizing all industrial activity. (This forest growth is essential for providing food and thermal protection for ungulates, and protecting the slopes from erosion and other degradation.)
- b) Minimize activity during winter months to avoid displacing wildlife.
- c) Reduce access and/or do not create new access.
- d) Follow general timing restrictions

The areas where these conditions apply will be illustrated as “Key Wildlife and Biodiversity Zones” within the Wildlife Sensitivity Layers that are consistent with the Landscape Analysis Tool and available at:

<http://esrd.alberta.ca/forms-maps-services/maps/wildlife-sensitivity-maps/default.aspx>

Guidelines

1. New permanent access development is not recommended. Where permanent access is essential, an access management plan and associated approval will be required to address the need to minimize disturbance to wildlife and degradation of associated habitat. Access control will be required to minimize public vehicle traffic on these roads. The highest priority should be to develop the option that uses temporary access and strives to access resources from outside the zone (e.g. directional drill, remote production)
2. Where temporary access is required, it should be designed and managed to minimize disturbance to wildlife and degradation of associated habitat.
3. The applicable timing restrictions on industrial activities are applicable and required for all upgraded access and/or seismic activity due to the impacts on wildlife. Timing restrictions (no activity) apply to activities occurring within Key Wildlife and Biodiversity Zones:
 - i. All areas identified as Key Wildlife and Biodiversity zones that are North of HWY #1; no construction between January 15th and April 30th
 - ii. All areas identified as Key Wildlife and Biodiversity zones that are South of HWY #1 and west of HWY #2; no construction between December 15th and April 30th
4. Guidelines will be applied in an equitable fashion for all industrial sectors within a region, recognizing that some flexibility is required for site/area-specific conditions and particular land use activities. The expectation is that all winter activities are planned to be completed prior to the timing restrictions. Relaxation from the timing restriction requires approval and is based on extenuating circumstance. For example,
 - i. Timing restrictions may be adjusted in exceptional and localized situations if other considerations are applied that still protect the wildlife resource.
 - ii. Where localized temporary valley crossings are required to access adjacent tableland areas outside of the Key Wildlife and Biodiversity Zones.