Foothills Fescue Grassland
Principles for Minimizing Surface Disturbance

Purpose

The purpose of this Information Letter is to minimize the surface disturbance of foothills fescue (Festuca campestris) grasslands. Alberta Sustainable Resource Development (SRD) has placed Protective Notations (PNT) on specified public lands known to include foothills fescue grassland. The location of public land parcels with Protective Notation can be determined by SRD Land System Automated Search.

The purpose of the PNT is not to restrict development but to alert industry to the environmental and economic risk. This Information Letter identifies the expectations for planning and development standards through key development principles for all potential surface disturbance related activity in foothills fescue grasslands. Potential surface disturbance related activity is defined to include all development activity that requires surface soil disturbance. This includes but is not limited to:

- oil and gas development including geophysical exploration;
- mineral exploration and development, including mines, quarry pits and associated infrastructure;
- forest industry timber extraction infrastructure;
- transportation infrastructure, including burrow pits;
- electric energy transmission lines and associated infrastructure;
- renewable energy development and associated infrastructure;
- communications related development and infrastructure;
- road access through public land for country residential development;
- recreational facilities and associated infrastructure;
- range improvement infrastructure required for livestock production.

The background document entitled: Industrial Activity in Foothills Fescue Grasslands, Guidelines for Minimizing Surface Disturbance is designed to alert industry to the sensitivities of foothills fescue grasslands within a multiple resource valued landscape; where land use practices must be carefully integrated. It details why they are particularly sensitive to surface soil disturbance with limited potential for restoration success.

As our knowledge increases, this information will be further expanded and updated in a comprehensive companion document to support this information letter.
Key Development Principles

These principles have been developed from minimum disturbance practices in native prairie grasslands and the emerging concepts of Integrated Land Management (ILM).

1) Early notification and consultation with the SRD Public Land Management Specialist responsible for the area is required prior to entry for survey.

2) The foothills fescue grasslands are susceptible to invasion by non-native plant species such as smooth brome, timothy, Kentucky bluegrass and weeds. Invasion can occur within soil disturbances, with the added potential to spread off site. Risk assessment during the planning process, minimizing surface soil disturbance, implementing control measures and post development monitoring are required to reduce the impact of non-native plant species invasion.

3) The key guiding principle is **avoidance** of foothills fescue grassland. Avoidance is accomplished by siting development within or adjacent to existing man-made disturbances or non-native cover areas. Avoidance is achieved through knowledge of the location and ecological status of foothills fescue plant communities. The site selection team is expected to include qualified rangeland professionals and experienced industrial construction personnel.

4) Industry is expected to consult the principles outlined in ERCB Information Letter IL2002-1 *Principles for Minimizing Surface Disturbance in Native Prairie and Parkland Areas*. Although the IL and guidelines were developed specifically for the petroleum industry, the principles and guidelines are applicable to all surface disturbance related activity proposed for foothills fescue grasslands.

5) Foothills fescue grasslands are located within more complex land forms than other native prairie grasslands. Industry is expected to take advantage of new technologies designed to reduce surface disturbance. Evaluating the success of new technology is essential to determining the most appropriate methods for reducing surface soil disturbance in foothills fescue grasslands.

6) Detailed development plans are required in digital and spatial format (shape files) to facilitate integrated land management within SRD. These plans must consider the footprint of the project’s full development potential early in the planning process and the surface disturbance required for the desired outcome. Integrated access management plans, developed in consultation with other area land use stakeholders, are required to reduce the impact of multiple land use activities. These principles are required for energy developments in ERCB IL93-9.

7) Foothills fescue grasslands play a significant role in the storage and release of groundwater resources. The engagement of a suitably qualified hydro-geologist in the development planning process is recommended.

8) Onsite environmental inspection by suitably qualified environmental professionals is recommended during development activity to ensure environmental protection measures are communicated, understood and implemented.

9) Timing of disturbance related activity is a key factor in reducing the impact to foothills fescue grasslands. Disturbance related activity should be planned to occur after the growing season, and must occur under suitably dry or frozen soil conditions.

10) Detailed restoration plans are required for all surface soil disturbances. The plans must include comprehensive monitoring and maintenance programs. Industry should be aware that the restoration of foothills fescue grassland requires considerable economic investment and long term commitment.

Further information: