1 Overview

On January 31, 2004, the *Forest and Range Practices Act* (FRPA) was enacted to replace the *Forest Practices Code of B.C. Act* by December 31, 2006. Under the new framework, government and industry will focus on results and resource protection.

What Remains the Same under FRPA

As your operations are also governed by **other legislation (8)**, you will probably continue with many of your past field activities the way you did before FRPA came into effect. You will also continue to work with the Ministry of Forests and Range (MFR) to ensure that interests of other resource users are addressed, as under previous legislation.

What is Different under FRPA

These requirements are new:

- **Planning**: You must develop a **Range Use Plan (9)** (RUP), or alternatively, a **Range Stewardship Plan (10)** (RSP), and get it **approved (12)**. Your plan may include actions and strategies that allow you to achieve the resource objectives set by government (right). Keep plans current through **amendments (12)** as required
- **Monitoring and Reporting**: You must **monitor (19)** impacts of your activities on Crown range, and provide reports to the MFR to show that the results specified in your plans are achieved in the field
- **Due Diligence**: Develop a systematic approach to daily activities including record keeping. This will form an accurate basis for monitoring, recording and reporting. **Due diligence (13)** is also one of three types of **defences (18)** in case of an alleged contravention
- **Professional Reliance**: Although not a legal requirement, it may be advisable that you involve qualified professionals such as Agrologists during the preparation of your plan or through their representation in **Advisory Committees (12)**.

Resource Objectives

Plans must be consistent with objectives set by government for

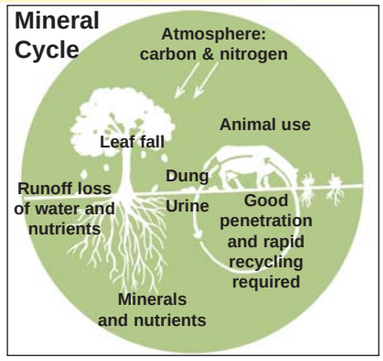
- **Soils (2)**
- **Forage (3)**
- **Water (4)**
- **Fish (5)**
- **Wildlife (6)**
- **Biodiversity (7)**

2 Objectives & Required Practices: Soils

Government Objectives for Soils

- Protect soil properties.
- Minimize erosion, compaction and undesirable disturbance to soils.
- Maintain a vigorous and diverse cover of desirable plant species with a variety of root depths sufficient to protect the soil.
- Re-establish ecologically suitable vegetation after disturbance occurs.
- Maintain ground cover, including sufficient litter and residual dry matter accumulation to protect soil.
- Minimize accelerated soil erosion and sealing of the soil surface.

Soil Organic Matter and Mineral Cycling



Grazing practices can increase carbon stored in the soil in the form of soil organic matter. Increased soil organic matter results in greater soil water retention, biological activity, and nutrient cycling. Improved **forage quality (3)** may reduce methane emissions from cattle.

Soil Compaction

Prevent soil compaction by avoiding grazing when soils are too wet. Damaged soils may not recover for decades from a breakdown of soil structure, reduced permeability, and increased surface crusting and erosion.

Ground Cover

Maintain a vigorous and diverse cover of desirable plant species to protect the soil from erosion and drying effects of wind and sun. Proper **stubble height (21)** helps to capture and retain snow for a slower release in the spring. A healthy ground cover also slows down overland water flow, and filters sediments and pollutants.


Healthy ground cover protects the soil

For further information, see Rangeland Health Brochure 3 "**Understanding Ecosystem Processes**" and "**Greenhouse Gas Mitigation Program for Canadian Agriculture**" www.jpcs.on.ca/biodiversity/ghg/index.html

2 Objectives & Required Practices: Soils

3 Objectives & Required Practices: Forage

Government Objectives for Forage and Associated Plant Communities

- Maintain or enhance healthy plant communities, including their vigour and cover.
- Maintain or enhance forage quality and quantity for livestock and wildlife.
- Recruit desirable plants, including through forage seeding; maintain or improve litter.
- Maintain a variety of age classes and structural characteristics within plant communities.
- Enable holders of grazing or haycutting rights to be vigorous, efficient and world competitive.

Livestock Turnout

Graze livestock on Crown range when:

- **Range readiness criteria (22)** are met
- Specified turnout dates are met if applicable, or
- You have the Minister's written authorization of a variance to turnout dates.

Livestock Removal

Remove livestock from Crown range when:

- Livestock removal date specified in the plan is reached
- Average stubble height if specified in the plan is reached
- Average **browse (14)** use level by livestock is 25%, or the percentage of annual growth as specified in the plan
- Continued grazing will deteriorate plant communities, or interfere with the establishment of a free-growing forest.

Forage Management during Drought Conditions

Develop a grazing management plan with a drought survival component; consider the options listed below.

Lower stocking rates to ensure that livestock needs are balanced with the forage supply.

Redistributing herd to a less used area

Delay turnout if possible. Grazing too early during droughts stresses plants further and increases the amount of rest needed before they can replenish their energy reserves.

Redistribute herd to unused forage. Try herding. Use salt, mineral or protein blocks. Truck in water for portable tanks. Install additional fencing.

Provide rest by not returning to an area until plants have recovered. Overgrazing often results in the loss of important forage species, increased bare ground and a corresponding increase of **invasive plants (23)**.

Maintain adequate residual cover from plants. This will facilitate plant recovery while adding to the litter layer.

For further information, see Rangeland Health Brochure 4 "**Considering Tools for Remediation**" and Brochure 7 "**Determining Available Forage**"

3 Objectives & Required Practices: Forage

4 Objectives & Required Practices: Water

Government Objectives for Water

- Maintain or improve water resources.
- Maintain or promote healthy riparian and upland areas.
- Maintain or promote riparian vegetation that provides sufficient shade to maintain stream temperature within the natural range of variability.
- Maintain or promote desired riparian plant communities.

Range Practices in Riparian Areas must not affect the ability of riparian areas to:

- Withstand normal peak flow events without accelerated soil loss, channel movement or bank movement
- Filter runoff, and store and safely release water.

Range Practices in Upland Areas must not substantially:

- Accelerate the rate of soil loss
- Diminish infiltration of water on the area
- Reduce moisture storage on the area
- Decrease stability of the area.

Range Practices and Water Quality: ensure that range practices do not:

- Allow material that is harmful to human health to be deposited in, or transported to, water that is diverted by a **licensed waterworks** (Glossary) for human consumption
- Damage the licensed waterworks, or alter the vegetation, soil or terrain around the licensed waterworks.

Water Quality Objectives in Community Watersheds

After a water quality objective is established for an area, your range practices must be consistent with the objective by the following January 1st.

Drought Management

Ensure that water for livestock is part of your drought management planning. Develop new long-term water sources such as wells, dug-outs or storage facilities. Remember that new **range developments (15)** must be approved by the Minister.

Removal of Dead Livestock

Remove dead livestock from within 100 m of a stream in a community watershed as soon as practicable after you become aware of it. Consider burial or liming of the dead animal(s) at least 100 m from the stream. Dead livestock can be an attractant for predators.

For further information, see Rangeland Health Brochure 1 “**Assessing Upland and Riparian Areas**”

4 Objectives & Required Practices: Water

5 Objectives & Required Practices: Fish

Government Objectives for Fish

- Conserve fish, fish habitat and aquatic ecosystems.
- Manage any adverse effect of deleterious material.

Protection of Fish and Fish Habitat

Ensure that range practices are conducted at a time and in a manner that is unlikely to:

- Harm fish or adversely affect fish passage
- Destroy, damage or harmfully alter **fish habitat** (Glossary).

Fisheries-sensitive Watersheds

The Minister responsible for the *Wildlife Act* (MOE) may identify a part of a watershed as a fisheries-sensitive watershed. This establishes objectives for its protection, and protects significant downstream fisheries values that may not be sufficiently protected otherwise.

Solid footing for fenced-off river access

Temperature-sensitive Streams

The Minister responsible for the *Wildlife Act* (MOE) may designate a stream portion as temperature-sensitive if trees and shrubs are important to manage water temperature to protect fish.

Water Intake Screens

If you draw water from open water bodies ensure that intakes are equipped with proper screen sizes. This prevents smaller fish from entering. Consult your licence or contact the local Fisheries and Oceans Canada (DFO) office for correct screening procedures.

Management of Riparian Areas

Controlling the impact of livestock in riparian areas helps to protect fish and **water resources (4)**. Consider the options listed below:

Fenced-off wetland (Ducks Unlimited)

Range practices: Use attractants like salt and mineral or protein blocks to draw livestock away from riparian areas. Herding and temporary electric fencing can also be effective.

Range developments: Fence sensitive habitual use areas to exclude livestock. Develop alternative off-stream water sources and install water troughs. Ensure that such **range developments (15)** are approved and maintained.

6 Objectives & Required Practices: Wildlife

Government Objectives for Wildlife

- Maintain or promote sustainable, healthy, viable, productive and diverse wildlife populations and their associated habitat.
- Minimize disturbance during periods critical to wildlife or to wildlife habitats.
- Manage the risk of interaction between predators and livestock.

General Wildlife Measures, Wildlife Habitat Areas and Ungulate Winter Range

The Minister responsible for the *Wildlife Act* (MOE) may establish general wildlife measures to protect a species and/or its habitat.

General Wildlife Measures Apply to:

- Wildlife habitat areas
- Ungulate winter ranges
- Specific areas for:
  - **Species at risk (16)**
  - Regionally important wildlife
  - Specified ungulate species

Badger (Tim McAllister)

The Minister (MOE) must allow for review and comment if an order affects a range agreement holder.

Wildlife Habitat Features

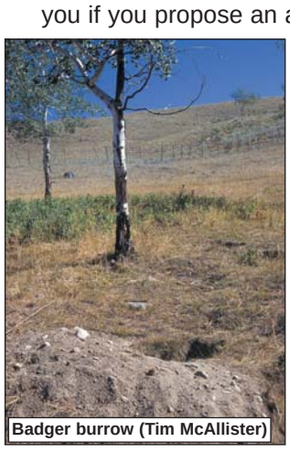
The Minister responsible for the *Wildlife Act* (MOE) may identify wildlife habitat features that are important localized features.

Range Practices Related to Wildlife

- Range practices must not affect the ability of a riparian area to conserve wildlife habitat values
- Once a general wildlife measure is established, range practices must be consistent with it by the following January 1st. The Minister (MOE) may exempt you if you propose an alternative and get it approved

Wildlife Habitat Features:

- Fisheries-sensitive features
- Marine-sensitive features
- Significant mineral licks and wallows
- Nests of Eagle, Osprey, Great Blue Heron
- Other localized features as identified by Minister (MOE)



Badger burrow (Tim McAllister)

- Once a wildlife habitat feature is identified, range practices must not damage or render ineffective the feature as of the following January 1st. The Minister (MOE) may exempt you from this in certain situations.

Disclosing Information

If wildlife habitat areas or wildlife habitat features are sensitive to damage or disturbance by others, you may be prohibited from disclosing their location.

7 Objectives & Required Practices: Biodiversity

Government Objectives for Biodiversity

- Conserve biodiversity.
- Maintain native plant community dynamics.
- Encourage the development of late-seral plant communities or other desired plant communities.
- Maintain plant communities consistent with natural successional stages on areas where forage seeding is carried out within transitory range areas.

Definitions

Biological Diversity (Biodiversity) means the diversity of plants, animals and other living organisms in all their forms and levels of organization. This includes the diversity of genes, species and ecosystems. It also includes the evolutionary and functional processes that link plants, animals and other living organisms.

Potential Natural Community (PNC) means a plant community that would establish on an ecological site if all successional sequences were completed without human interference under present environmental circumstances.

Seral Stage or **Successional Sequence** means a stage in the development of a plant community from a disturbed or unvegetated state to a self-sustaining Potential Natural Community (PNC) or climax community. Seral stages are defined by their percent similarity to the PNC as follows: early-seral (< 25 %); mid-seral (25 – 50 %); late-seral (50 – 75 %); and PNC (>75 %).

Range Practices

Biodiversity in range management means having a representative balance of seral stages across your agreement area. **Monitor (19)** how your range practices directly influence seral stages; for example, time of use **(3**, **22)**, level of use **(14**, **21)**, distribution of livestock, and **range developments (15)**.

For further information, see Rangeland Health Brochure 1 "**Assessing Upland and Riparian Areas**" and Brochure 3 "**Understanding Ecosystem Processes**"

7 Objectives & Required Practices: Biodiversity

8 Other Legislation Affecting Range

Drinking Water Protection Act – Ministry of Health (MoH)
Deals with drinking water protection and the operations of water supply systems.

Heritage Conservation Act – Ministry of Agriculture and Lands (MAL) and the Ministry of Tourism, Sports and Art
Deals with protection and conservation of heritage property in B.C. (e.g., sites with cultural heritage of First Nations and early settlers).

Integrated Pest Management Act – Ministry of Environment
Regulates the sale, use and handling of pesticides, and promotes an integrated pest management approach to managing pests.

Land Act – Administered by several Ministries
Covers how Crown land may be sold or leased, public roads designated, and road rights-of-way granted. MFR has the responsibility for grazing leases on Crown land.

Livestock Act – Ministry of Agriculture and Lands (MAL)
Deals with livestock at large, and the control measures and powers to capture and sell impounded animals that are at large.

Park Act – Ministry of Environment (MOE)
Activities under RUPs and RSPs within a park or protected area must be consistent with the Park Management Plan if one exists.

Range Act – Ministry of Forests and Range (MFR)
Contains information on grazing and haycutting licences and permits. The Range Regulation details the tenure application.

Trespass Act – Attorney General
Addresses fencing obligations between adjoining properties (including repair and maintenance), unauthorized entry, and allows for oral/posted notices to prohibit specified activities on private land.

Water Act – Ministry of Environment (MOE)
Concerns the property in, and the right to the use and flow of, all the water at any time in a stream in B.C.

Wildlife Act – Ministry of Environment (MOE)
Enables designation of critical wildlife areas and wildlife sanctuaries, and establishes **wildlife management areas (6)**. Funding may be available for conservation/enhancement projects.

Fisheries Act (Federal) – Fisheries and Oceans Canada (DFO)
Addresses the management and protection of fish and fish habitat, including obstructions to free passage of fish; harmful alterations, disruptions or destruction of fish habitat; and the deposition of deleterious substances. http://laws.justice.gc.ca/en/F-14/text.html

Species at Risk Act (Federal) – Admin'd by several Ministries
Aims to prevent endangered or threatened wildlife from becoming extinct or lost from the wild, and to manage species of special concern to prevent them from becoming endangered or threatened. www.sararegistry.gc.ca/default_e.cfm

Migratory Birds Convention Act (Federal) – Can. Wildlife Service
Protects migratory bird populations, their eggs and their nests. May affect areas under RUPs and RSPs adjacent to habitat with sanctuary status. http://laws.justice.gc.ca/en/M-7.01/text.html

Additional Sources of Information

For questions on federal legislation: 1-800-622-6232
For questions on provincial legislation: 1-800-663-7867
For printed copies of Acts, Regulations or information brochures, contact the Queen's Printer at 1-800-663-6105
Acts/Regulations: www.qp.gov.bc.ca/statreg/list_statreg_f.htm

8 Other Legislation Affecting Range

9 Range Plan Requirements

Range agreement holders must prepare and obtain the Minister's approval of a Range Use Plan (RUP) or **Range Stewardship Plan (10)** (RSP). This allows you to graze livestock or cut hay on Crown range.

Content of Range Use Plans (RUPs)

A Range Use Plan must include a map, grazing schedule, actions to deal with issues identified by the Minister relevant to your agreement area, and any **prescribed matters (11)**. Ensure that your plans are consistent with the objectives set by government for **soils (2)**, **forage (3)**, **water (4)**, **fish (5)**, **wildlife (6)** and **biodiversity (7)**. Ensure that your plans are also consistent with **other legal requirements (8)**.

If you are exempt from any plan requirements or other legal obligations, you must have exemptions in writing from the respective agencies.

Public Review and Comments

If your Range Use Plan, **Range Stewardship Plan (10)** and/or **amendment (12)** may affect others in a material way, the Minister may require a public review of the plan.

Public Review and Comment Process

- Publish a notice (e.g., newspaper ad) regarding the public review of the plan.
- Submit copies of the above-mentioned notice and the plan to the district manager.
- Provide a 30-day or longer review period (i.e., make the plan available to anyone interested in or affected by the plan).
- Consider any written comments relevant to the plan.
- Submit written comments received to the district manager.
- Describe changes made to the plan as a result of comments received.

Record Keeping for RUPs and RSPs

Keep a daily record of your activities and important issues such as gates left open or wildlife interactions or conflicts as they occur. Keep records as backup information for modifications to your plans or as evidence of your **due diligence (13)**.

9 Range Plan Requirements

10 Range Stewardship Plan Requirements

Range Use Plans versus Range Stewardship Plans

A Range Stewardship Plan is less prescriptive, provides options for more flexibility for experienced operators, and encourages innovation. You must demonstrate to the Minister your competence level in range management.

Demonstrating Competence

Considerations include:

- Past performance record.
- Condition of Crown range under the agreement.
- Prescribed matters:
  - Written submissions
  - Continuing education courses
  - Letters of recommendations
  - The use of an Agrologist for the plan preparation
  - Past compliance with RUP, RSP and other legislation
  - Investments to manage rangelands.

Level 1 RSPs

If you demonstrate to the Minister competence in the management of Crown range for at least two years, you may be authorized to prepare and submit a **Level 1 Range Stewardship Plan**.

Level 2 RSPs

With at least five years of experience, you may be authorized to prepare and submit a **Level 2 Range Stewardship Plan**. This allows you to specify intended results and strategies to achieve them.

Content of Range Stewardship Plans (RSPs)

A Range Stewardship Plan must include a map, issues identified by the Minister relevant to your agreement area, and any **prescribed matters (11)**. In addition, it requires a process for **monitoring (19)** and evaluating whether range practices are consistent with government objectives. If you propose an alternative (Level 2 RSP), you must provide a rationale for the alternative. Note **(11)** that a grazing schedule is not required for RSP approval, but must be submitted annually before livestock turnout.

Ensure that your plans are also consistent with **other legal requirements (8)**. Be prepared to take your plan through a public **review and comment (9)** process.

Annual Reporting for RSPs

On or before December 31, submit to the district manager an Annual Report with the following information:

- The number of livestock released onto Crown range
- The time period the livestock occupied the range
- Operational issues or events that affected or will affect your ability to manage the area under the plan.

10 Range Stewardship Plan Requirements

11 Plan Content Checklist

In addition to specific requirements for **RUPs (9)** and **RSPs (10)**, use the checklist below for your plan preparation.

PLAN CONTENT REQUIREMENTS			
RUP – Grazing	RUP – Haycutting	RSP Level 1 & 2	
✔	✔	✔	Include **map(s)** (scale and format satisfactory to the Minister) showing the boundaries for the agreement under the *Range Act* that pertains to the plan
✔	✔	✔	Specify locations and types of **range developments (15)** on the map
✔		✔	Delineate **pasture boundaries** on the map
✔		❀	Prepare a **grazing schedule** including each pasture, with livestock class, number of livestock and period of use (❀ must be submitted annually before turnout)
	✔		Specify **areas for haycutting** on the map
	✔		Describe, for areas to be used for haycutting, the average **stubble height (21)** and the period of haycutting
✔	✔	✔	Specify actions to be carried out to deal with **issues identified** by the Minister
✔	✔	✔	Conform to **prescribed matters** (below) if any
✔	✔	✔	Specify measures to prevent introduction and spread of **invasive plants (23)**
✔	✔	✔	Ensure **consistency with objectives** set by government and other objectives that are established under FRPA or the regulations, pertaining to all or part of area
✔	✔	✔	Ensure that plans or **amendments (12)** are **signed** by the person required to prepare the plan, or the individual(s) authorized to sign for the corporation
		✔	For a **Level 2 RSP (10)** you may propose actions or alternatives for results, strategies, or measures.

Prescribed Matters

The Minister may require a range agreement holder to include the following in their range use plan or range stewardship plan:

- Descriptions of plant communities and the proposed actions to establish or maintain them
- **Browse use levels (14)**
- **Stubble heights (21)**
- **Range readiness (22)**.

12 Approvals and Amendments

Approvals of Plans

- The Minister must approve your plan if it is consistent with your agreement under the *Range Act,* and it conforms to FRPA and its objectives
- The Minister or you (the person seeking approval) may refer a plan to an Advisory Committee if there is disagreement on plan content. The Minister **may** consider the Committee's recommendations
- The Minister must give reasons if a plan is not approved.

Advisory Committee Members

Have at least three persons:

- Registered Agrologist
- Person holding an RUP or RSP
- Government representative

Term of Plans

Plans are approved for up to five years, as specified by the Minister. You can request an extension for an additional five years, as long as your plan is still consistent, or is amended to be consistent, with **government objectives (1)**.

Mandatory Amendments Requiring Approval

Amendments are required when:

- You think actions specified in plans to deal with **issues identified by the Minister (11)** are no longer sufficient to deal with these issues
- Strategies specified in plans are no longer sufficient to achieve intended results in plans (Level 2 RSP)
- Government establishes or amends
  - an objective
  - an **Ungulate Winter Range (6)**
  - a **Wildlife Habitat Area (6)**
- Your agreement under the *Range Act* changes
- The Minister asks you to add or change an issue identified by the Minister, or a **prescribed matter (11)**.

Minor Amendments Not Requiring Approval

If you determine that your amendment conforms with all legislation and lets you achieve specified results, approval is not required. Send a copy of the amendment to the district manager as soon as possible.

However, if in the Minister's opinion your decision was wrongly made, they may declare the amendment without effect, and suspend the operation that you considered authorized under the minor amendment. As a result, approval of the amendment is required.

Moving cattle

13 Due Diligence

Due diligence means taking all reasonable care to ensure that you meet all **legal requirements (8)**. Therefore, applying the principles of due diligence in your daily work will help you to be in compliance in your operations.

Due Diligence Checklist (partial list only)

① Ensure that you, your employees and contractors know the rules and regulations that affect all daily activities

② Provide adequate supervision and training for employees and contractors, including training for yourself

③ Establish a process to track and pass on new legal requirements to co-workers, employees and contractors

④ Establish practices to support your grazing schedule; communicate with other resource users, post signs to keep gates closed, and check fence lines for damage

⑤ Ensure that everyone is qualified and knows the rules for storage and application of chemicals. Have emergency contact numbers available

⑥ Establish a process to record observations and activities, and to **monitor (20)** the conditions of the rangeland and the level of use. The records may be required as backup for your current activities or may provide the rationale for proposed changes to the plan

⑦ Remember to OBSERVE and RECORD; REPORT significant problems.

Recording Details of Meetings

Record as a minimum – add details as needed:

- Date and **Start** time of meeting "Friday, August 5, 2005, at 9:15."
- **Location** of the meeting: "Km 32 on Trout Creek Road."
- First and last **Names** of participants, and job function(s): "Doug Fir, MFR, Bob Plant, Agrologist, Tim Burr, A&B Logging Ltd., and Barb Wire, Fencing Contractor."
- **Issue(s)** discussed: "Site rehabilitation and new fence construction after Forest Service Road relocation ."
- **Details** of discussions and "next steps" if applicable:

  "Doug to take photographs and prepare site plan, Bob to determine details of fence location and revegetation, Barb to prepare fencing quote, Tim to prepare site preparation quote for fence line. Actions to be completed by Friday next week (August 12)."
- **End** time of meeting: "Meeting ended at 10:35."

13 Due Diligence

14 Browse and Other Legal Requirements

Browse

You must ensure that the average browse use level by livestock does not exceed specified limits. The limit is normally 25% of the annual growth but the Minister may specify a different percentage. You may also specify a different percentage in your **Range Stewardship Plan (10)**.

Interference with Free-to-grow Stand Establishment

If livestock significantly interfere with the establishment of a free-growing stand, you must remove livestock and prevent them from entering the area again. The Minister may allow cattle to return to the area if satisfied that sufficient measures have been taken to prevent recurring interference with the establishment of a free-growing stand.

Is grazing damaging terminal buds?

Authorization to Cut Crown Timber

You are authorized to cut, damage or destroy Crown timber while carrying out activities under a plan or authorization granted for **range developments (15)**. However, this authorization does not include the sale or removal of the cut, damaged or destroyed Crown timber.

Livestock Marking

You must mark your livestock with your registered brand or in another manner approved by the Minister. In addition, the Minister may require you to tag livestock (tags provided by the Minister). Report any lost tags to the district manager.

Resource Features:

- **Range developments (15)**
- Cultural heritage resources not under the *Heritage Conservation Act*
- Interpretive forest sites
- Recreational trails and sites
- Crown land used for research or experimental purposes
- Recreation features of significant recreational value

Resource Features

In addition to identified **wildlife habitat features (6)**, the Minister may identify resource features in a specified area if they require special management. Range practices must not damage or render ineffective a resource feature.

A recreational site near pasture

15 Range Developments on Crown Land

Approvals of Range Developments

Before you can store hay or carry out, construct, modify, remove, damage or destroy a range development, you need the Minister's approval. Consideration criteria include:

- Consistency with your plan
- Consistency with government objectives
- Protection and conservation of the range resource.

Range Developments Include:

- Fences and trails
- Cabins and corrals
- Water developments

or Activities such as

- Thinning and brushing
- Prescribed burning
- Forage seeding
- Fertilizing

The Minister may require you to submit a proposal and may request revisions during a **review and comment (10)** period. Advertising is not required unless specifically requested.

Restrictions on Range Developments

A range development planned within 50 m of a stream in a community watershed may be approved only if consistent with government objectives set for water and water quality.

A range development may not be approved if it would alter vegetation, soil or terrain in a manner that would jeopardize the objectives set by government for **soils (2)**, **forage (3)**, **water (4)**, **fish (5)**, **wildlife (6)** and **biodiversity (7)**.

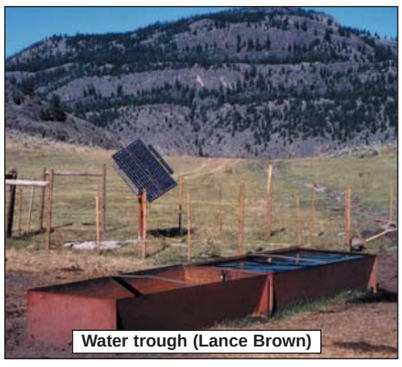
The Minister may still authorize the range development if there is no other practicable option for constructing the range development. Restore vegetation, soil or terrain to meet conditions of riparian and upland areas, and to protect fish, licensed waterworks, wildlife habitat features and resource features as they existed before the construction.

Maintenance of Range Developments

It is your responsibility to keep a range development in good working condition unless another person:

- Was given permission by the Minister to maintain it
- Is required to maintain it
- Has agreed with the Minister to develop, maintain or remove the range development

or unless the Minister is satisfied that it is not in the public interest to maintain it.



Water trough (Lance Brown)

Revegetation

Ensure that exposed soil at a newly constructed range development is revegetated with ecologically suitable species within two years after construction is completed.

The Minister may exempt you from the above if they are satisfied that a failure to revegetate is consistent with **objectives set for soils (2)**.

16 Species at Risk

Federal Listings

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) provides a formal designation for species. A decision is then made by the federal government on whether to list species under the *Species at Risk Act* (SARA) where they would receive legal protection. Obtain the SARA list at www.sararegistry.gc.ca.

Provincial Listings


Sharp-tailed Grouse (Ernest Leupin)

FRPA allows for the establishment of a category of species at risk. Species may also be listed under the *Wildlife Act* as "threatened or endangered," so that their residences, and critical habitat in wildlife management areas, can be protected. The Burrowing Owl is an example of a designated species.

Other Provincial Listings

The Conservation Data Centre (CDC) assesses the conservation status rank of species in B.C. The rankings are used as part of other listing processes (e.g., FRPA categories of species at risk and the *Wildlife Act*). Find additional information at http://srmwww.gov.bc.ca/cdc/index.html.

Range Practices Related to Species at Risk

Your range practices must be consistent with the **general wildlife measures (6)** approved for the species in your area. Practices must not damage or destroy the residence of an individual of a species at risk. It is also illegal to kill, harm, capture or take an individual, or to import or export an individual or traffic in their parts or meat.

Contact your district manager for a list of approved wildlife habitat areas and associated general wildlife measures in effect within your area. **Record (9)** and **report (13)** any sightings as required.

Examples of FRPA Species at Risk on B.C. Rangeland
Amphibians: Great Basin Spadefoot Toad, Tiger Salamander, Rocky Mountain Tailed Frog, Northern Leopard Frog, Cœur d'Alene Salamander.
Reptiles: Great Basin Gopher Snake.
Birds: Interior Western Screech-Owl, Burrowing Owl, Great Blue Heron, Flammulated Owl, Lewis's Woodpecker, Long-billed Curlew, Short-eared Owl, Yellow-breasted Chat, Sage Thrasher, White-headed Woodpecker.
Mammals: Fringed Myotis, Badger, Spotted Bat.
The list of "Species at Risk under FRPA" is updated annually. Ensure that you are aware of any additions to the list. Check http://srmwww.gov.bc.ca/atrisk/index.htm.

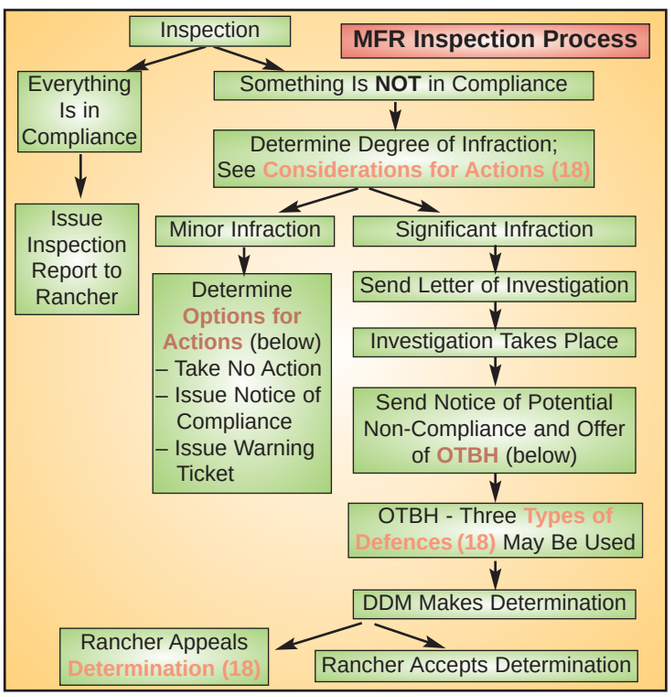
17 Compliance and Enforcement

The MFR Compliance and Enforcement (C&E) staff and agencies such as Fisheries and Oceans Canada (DFO) and the Ministry of Environment (MOE) will conduct inspections on Crown range tenures. Federal and/or provincial laws may be used depending on the inspecting agency.

The purpose of MFR C&E inspections is to promote compliance, and enforce statutory obligations with B.C. laws within MFR jurisdiction.

C&E staff work closely with Range staff and staff of other ministries to set inspection priorities and to benefit from their technical expertise.

Maintain good communications



Options for Actions

MFR staff have a choice of possible actions as a result of a contravention. An administrative penalty will not necessarily be imposed if it is felt that a contravention was minor and a penalty would not be in the public interest. In some cases, an order may be given with instructions to correct the contravention (e.g., an order to remove an unauthorized **range development (15)**).

The Opportunity To Be Heard (OTBH):

- This is your opportunity to tell your side of the story.
- You may be able to show that one or more of the **defences (18)** apply.
- OTBH may take place in person, by letter or phone.
- Format often agreed upon between you and the DDM, usually the district manager.

17 Compliance and Enforcement

18 Compliance and Enforcement

Defences

During the **Opportunity To Be Heard (17)** you may be able to show that one or more of the three defences demonstrates why you were not in non-compliance with legal requirements.

Three Types of Defences:

① **Due Diligence (13)** means the standard of care that a reasonable and prudent person should take to avoid a contravention of legal requirements.

② **Officially Induced Error** – acting on erroneous advice of a recognized official.

Example: you seek advice from a responsible government official on the legality of an intended course of action. You rely in good faith on that advice, which later turns out to be flawed.

③ **Mistake of Fact** – relying on a fact that was reasonably held to be true, but turns out to be false.

Example: a rancher wants to fence part of his property. He obtains the original legal land survey, uses it to locate steel pins and proceeds to put a fence between the pins.

However, in an inspection and subsequent investigation the fence is found to be located significantly on Crown land.

At the **OTBH (17)**, the rancher's mistake-of-fact defence was reasonable because the original survey he relied on, in good faith, was improperly done. Had the survey been accurate there would not have been non-compliance.

Considerations for Actions

When considering the range of penalties, the Delegated Decision Maker (DDM) must always consider the following:

- Do you have previous similar contraventions?
- What is the gravity and magnitude of the contravention?
- Was the contravention repeated or continuous?
- Was the contravention deliberate?
- Did you derive any economic benefit?
- Did you cooperate and try to correct the contravention?

Appealing Determinations

Appeals can be made to the Forest Appeals Commission. Appeal details are provided in the Determination Letter.

Forest Practices Board

The Board conducts audits and complaint investigations, and reports on findings publicly. If the Board finds apparent non-compliance it will be important that you can prove **due diligence (13)**.

19 Monitoring Requirements

Monitoring is the collection and analysis of repeated measurements or observations. It is used to assess changes in condition, to assess progress towards a management objective, or to support change or continuation of a management system. On rangelands, monitoring is a tool that assists in assessing the impacts of management, livestock use, and/or environmental variation over time.

Monitoring Procedures

There are many monitoring methods available; they can be tailored to address specific issues, questions and concerns.

The MFR developed a tiered monitoring system for use on Crown rangeland. In this system, the first tier (Tier One) is considered suitable as a minimum standard for monitoring. **Tier One Monitoring (20)** can address critical issues identified by the Minister, and **prescribed matters (11)**. It is also used to determine whether practices are consistent with objectives set by government. Tiers Two and Three require more detailed data collection by ranchers and government for rangeland health assessments and FRPA effectiveness evaluations.

Monitoring Requirements

Both Range Use Plan and Range Stewardship Plan holders are encouraged to monitor informally throughout the grazing season as a way of demonstrating that grazing practices are consistent with **objectives (1)** set by government and to show **due diligence (13)**. RSP holders have an obligation to carry out district manager–approved monitoring that addresses objectives set by government.

Monitoring Frequency

Formal Tier One Monitoring should take place during the first and fourth year of a five-year management plan, at a minimum. Collect baseline information during the first year and assess impacts during the fourth year of a plan. Make revisions to your grazing plan and practices as necessary.

MONITORING REQUIREMENTS			
RUP	RSP: Level 1	RSP: Level 2	– May be a plan requirement – May be requested by the Minister – May be required for a changed objective
			Monitor:
✔	✔	✔	– **Range readiness (22)** when applicable – **Stubble heights (21)** when applicable – **Browse use levels (14)** – Condition of Crown range – Other
	✔	✔	– Consistency of practices with objectives
		✔	– Results or strategies

20 Tier One Monitoring

Follow the step-by-step monitoring procedure below.

① Map Plant Communities

Management areas typically have several plant communities. Determine which of these plant communities are important to livestock and represent preferred grazing areas (primary or secondary range types). Delineate range types on a map.

② Select Key Areas

Within each range type in ①, select key area(s) and identify them on the range map. A key area is a representative portion of a management unit selected for monitoring.

③ Assess Plant Communities

Determine the dominant two or three plant species for each layer (grasses, broad-leaved flowering plants, shrubs and trees). Also list indicator species which may or may not be the same as the dominant species depending on the **seral stage (7)** of the plant community. Compare the current plant community with the reference plant community (available from district staff) for that range type. List any expected and/or desirable species or layers that are absent. Assess the invasive plants in the plant community. Compare the amount of litter present to the reference community.

④ Measure Stubble Height

For each dominant/indicator species in ③, take enough **stubble height (21)** measurements to get a good index of use. Calculate average stubble height (i.e., add heights measured and divide by number of plants measured).

⑤ Determine Utilization Class

Compare average height in ④ to the **threshold height (21)** for each species and assign a utilization class using the table below. Other threshold heights are available from Range staff and should be included in your RUP or RSP.

Class	Utilization Description
None to Slight (N)	Average stubble height is about equal to the ungrazed plants
Light (L)	Average stubble height is about midway between threshold height and ungrazed height
Moderate (M)	Average stubble height is about the same as the threshold height
Heavy (H)	Average stubble height is about one-half of the threshold height
Extreme (E)	Average stubble height is about one-quarter of the threshold height

⑥ Map Zones of Utilization

Apply utilization classes to range types in ①. Map out zones of utilization. While stubble height indicates when to rotate or remove livestock to avoid overuse, the zones of utilization help decide if livestock need further distribution.

See "**A Methodology for Monitoring Crown Range**." B.C. Ministry of Forests and Range, 2006.

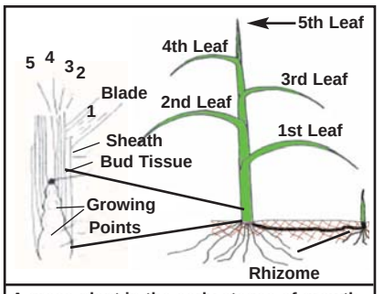
21 Stubble Height

Stubble Height
"The height of herbaceous plants remaining after grazing or mechanical harvesting."

Stubble height and level of use are important tools for managing the health and productivity of the range. Properly managed pasture increases grazing efficiency, ensures even selection and regrowth of plant species, and helps to filter sediment and pollutants, and to store and safely release water.

Considerations

- Species with low growing points (e.g., Bluegrasses), are more resistant to grazing than are species with elevated growing points
- Close grazing of large riparian sedges may damage their crowns
- Plants with rhizomes sharing carbohydrates are more resistant to grazing than are bunchgrasses
- Root growth stops when over 50 % of leaf area is removed
- Sod-forming and rhizomatous species are more resistant to hoof damage than are bunchgrasses.



A grass plant in the early stages of growth. Note that growing points are close to the ground and cannot be removed by grazing.

Using Stubble Height as a Management Tool

- Locate representative **key areas (20)** as monitoring sites
- Determine the one or two dominant/indicator grass species or the species most susceptible to grazing
- Walk across key area(s) and measure stubble heights (≈50 grass plants) at a set interval, usually several paces
- Move cattle when stubble height matches the threshold stubble height in your plan or in the table below.

Threshold Stubble Heights cm (inch) – Riparian Species					
Baltic rush	10	(4)	Bluegrasses	10	(4)
Bluejoint (Canada reedgrass)	12	(5)	Desert saltgrass	7	(3)
			Foxtail barley	10	(4)
Hairgrass, tufted	12	(5)	Kobresia	8	(3.5)
Sedges (large)	20	(8)	Spikerush	15	(6)
Threshold Stubble Heights cm (inch) – Upland Species					
Bluegrasses	8	(3.5)	Bromes (introduced)	10	(4)
Fescue, Altai	17	(7)	Fescue, creeping red	7	(3)
Fescue, Idaho	12	(5)	Fescue, rough	17	(7)
Needlegrasses	12	(5)	Orchardgrass	10	(4)
Pinegrass	15	(6)	Ricegrass, rough-leaved	8	(3.5)
Timothy, alpine	10	(4)	Timothy (domestic)	8	(3.5)
Wheatgrasses			Bluebunch W.	15	(6)
Crested W.	8	(3.5)	Northern W.	15	(6)
Slender W.	15	(6)	Western W.	12	(5)
Wildrye, blue	15	(6)			

For more information, see Rangeland Health Brochure 6 "**Applying Best Stubble Heights on Rangelands**"

22 Range Readiness

Traditionally, some range managers have used fixed dates for the start of spring grazing. However, **range readiness (3)** as determined by leaf development allows greater flexibility in spring turnout.

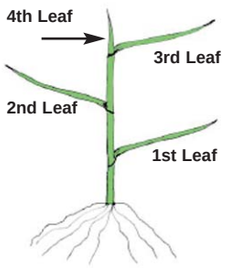
Range Readiness
"The defined stage of plant growth when grazing may begin under a specific management plan without permanent damage to vegetation or soils."

Measuring Leaf Development in Grasses

Using leaf development of common grasses as an indicator of range readiness accurately reflects the local soil moisture and growing conditions and the range's ability to recover from grazing.

① Count each new leaf as it appears at the growing point

② Describe/compare its length and form to a fully grown leaf; that is, leaf is fully developed when collar has formed; the next leaf will then begin to emerge.



Grass tiller at the 3.5 growth stage. The first three leaves have fully developed collars; the fourth leaf is about 50%.

Using Range Readiness as Defined by Leaf Development as a Management Tool

- Locate representative **key areas (20)** as monitoring sites
- Determine the one or two dominant/indicator grass species or the species most susceptible to grazing
- Walk across key area(s) and measure leaf development (≈50 grass plants) at a set interval, usually several paces
- Range is ready when leaf stage matches the table below.

Range Readiness as Defined by Leaf Development

Species	Leaf Stage	Species	Leaf Stage
Bluegrasses	2.5	Bluejoint (Canada reedgrass)	3.0
Bromes (introduced)	3.0	Fescue, Altai	4.5
Fescue, Idaho	4.0	Fescue, rough	4.5
Hairgrass, tufted	4.0	Needlegrasses	3.0
Orchardgrass	3.0	Pinegrass (at nodding)	2.25 – 2.5
Ricegrass (rough-leaved)	3.0		
Bluebunch Wheatgrass	4.0	Crested Wheatgrass	3.5
Northern Wheatgrass	5.5	Slender Wheatgrass	4.0
Western Wheatgrass	4.0	Wildrye, blue	4.0

On most native range except pinegrass, use 4.0 leaves/tiller as readiness criterion, 3.0 leaves/tiller on tame pastures.

For further information, see Rangeland Health Brochure 5 "**Using Range Readiness Criteria**"

23 Invasive Plants

Your practices must prevent the introduction and spread of invasive plants (weeds). Preventive practices are more cost-effective than treating affected areas. You may choose one or a combination of different practices for your operation.

Beneficial (Preventive) Management Practices

Communicate with Others: although you are responsible only for your own activities, **due diligence(13)** suggests that you notify other users (forest, oil and gas, and commercial recreation companies) of invasive plants in your operating area. Report infractions by others.

Revegetate Disturbed Areas: if native vegetation will not establish on its own after soil disturbances from **range developments (15)**, seed exposed soil with a suitable seed mix to prevent the establishment of invasive plants.

Keep Out of Infested Areas: stay away from infested areas with livestock/equipment. Avoid grazing areas where invasive plants are going to seed to prevent their spread.

Avoid Contaminated Materials: do not move soil and gravel contaminated with seed. Do not move contaminated hay into new areas. Use certified seed.

Remove Seed from Equipment and Livestock: wash weeds and soil containing seeds off ATVs, tractors, trailers and pickups after passing through infested areas. Remove seeds and plant parts from livestock coming from infested areas. Double-bag seeds and burn.

Treatment Tools

Biological Control: apply host-specific insects to invasive plants, graze when invasive plants are vulnerable, or seed suitable species to outcompete invasive plants.

Chemical Control: herbicides can be valuable in weed control, especially in early stages of infestation. Use selective herbicides to target undesirable plants. Observe required buffers for bodies of water during applications.

Mechanical Control: cut, mow or handpull invasive plants before they produce seed. Cut just before blooming as close to the ground as possible. Perennial plants may require several cuttings before energy in the roots is depleted.

Invasive Plants		
Anchusa	Baby's breath	Black knapweed
Blueweed	Brown knapweed	Bull thistle
Canada thistle	Common burdock	Common tansy
Dalmatian toadflax	Diffuse knapweed	Field scabious
Giant knotweed	Gorse	Hoary alyssum
Hoary cress	Hound's-tongue	Japanese knotweed
Leafy spurge	Marsh thistle	Meadow hawkweed
Meadow knapweed	Nodding thistle	Orange hawkweed
Oxeye daisy	Perennial pepperweed	Plumeless thistle
Puncture vine	Purple loosestrife	Rush skeletonweed
Russian knapweed	Scentless chamomile	Scotch broom
Scotch thistle	Spotted knapweed	St. John's wort
Sulphur cinquefoil	Tansy ragwort	Teasel
Yellow iris	Yellow starthistle	Yellow toadflax

www.invasiveplantcouncilbc.ca
www.for.gov.bc.ca/hfp/invasive/index.htm


Dalmatian Toadflax

Dalmatian Toadflax

INVASIVES

Creeping rooted perennial up to 1.2 m tall. Pale green waxy heart-shaped leaves are in contrast to the bright yellow "snapdragon-like" flowers 2.5 – 4 cm long.

Spotted Knapweed


Spotted Knapweed

Biennial to short-lived, taprooted perennial plant up to 1.5 m tall. It has deeply cut hairy leaves and purple, or white, flowers. Flowerhead bracts have a black-tipped fringe.

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"**Field Guide to Noxious Weeds And Other Selected Invasive Plants of British Columbia**"


Bluejoint Reedgrass

Bluejoint Reedgrass

FORAGE

Tufted, up to 2 .0 m tall native grass with creeping rhizomes and long, wide, lax leaves. Seed head is 10 – 25 cm long and nodding. Common in clearings in northern B.C.; very common in moist to wet forests and wetlands throughout the province.

Rough Fescue

Densely tufted, 60 – 100 cm tall native bunchgrass with narrow, stiff, rough leaves and a loose seed head. Often forms large clumps that are dominated by old plant stems. Found in dry to moist grasslands and open forests. Most abundant between 400 – 1200 m.


Rough Fescue


Bluebunch Wheatgrass

Bluebunch Wheatgrass

Erect, 60 – 130 cm tall native bunchgrass; many stems form clumps up to 150 cm wide. Leaves are light green to bluish green, flat to loosely rolled, and often persist from previous years. Very common on low to mid-elevation grasslands and open forests.

Pinegrass


Pinegrass

Erect, 60 – 100 cm tall native grass with creeping rhizomes, long, flat or rolled leaves and reddish stem bases with a tuft of hair at the leaf collar. Generally without seed heads except in openings. Common in dry to mesic lodgepole pine and Douglas-fir forests.

Range Plants Series (Central, Northern, Southern and Peace Region), Interactive Key for Grass Identification: www.livinglandscapes.bc.ca/grasses/,
e-Flora of BC: www.geog.ubc.ca/~brian/florae/floristics.html

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Range Management in B.C.

This infoflip is intended for people with an interest in the management of Crown rangeland in B.C.

It will help you recognize your legal requirements, liabilities and responsibilities under the *Forest and Range Practices Act* (FRPA). As part of **due diligence(13)**, use your Ministry contacts, publications and applicable websites to ensure that you are always up-to-date. It is your responsibility to ensure that you know, understand and fulfill your legal obligations, including obligations under **other legislation (8)**.

How to Use This Infoflip

This infoflip is divided into three components:

– Resource objectives set by government, and how they may affect your operation; this information is found in the left section

– Planning requirements; this information is found primarily in the middle section

– Practical information and field techniques, such as **Tier One Monitoring (20)**, to assist in daily decision-making

Use the coloured and numbered references to move to related sections.

If in doubt about any work practices, procedures or legal requirements, contact your employer, industry association, or the appropriate agencies listed on the back cover.

Contact Names and Phone Numbers

Police	_____
Fire	_____
Ambulance	_____
Forest Fire Reporting	1-800-663-5555
BC Cattlemen's Association	(250) 573-3611
Fisheries and Oceans Canada (DFO) Contact	_____
Guide Outfitters Association of BC	(604) 278-2688
Ministry of Agriculture and Lands (MAL) Contact	_____
Ministry of Environment (MOE) Contact	_____
Ministry of Forests and Range (MFR) Contact	_____
Ministry of Forests and Range C&E Contact	_____
Ownership Identification Inc. (OII)	(250) 314-9686
Other: _____	_____
Other: _____	_____