



**Forest
Practices
Board**

Range Planning under the Forest and Range Practices Act

Special Investigation

FPB/SIR/26

November 2009

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NOTE:

All photographs courtesy of Ministry of Forests and Range.

Executive Summary

In British Columbia, use of Crown range is regulated by the *Range Act* and the *Forest and Range Practices Act* (FRPA). The *Range Act* provides the authority to grant range agreements, including permits and licences. These agreements include things like the tenure area and the amount of forage that can be consumed by livestock on Crown land. Similar to the former Forest Practices Code, FRPA provides the necessary authority for government to manage the Crown land resource. This includes authority to require the agreement holder to prepare a range plan and follow practice requirements.

Previous range-related reports and investigations completed by the the Ministry of Forests and Range (MFR) and the Forest Practices Board (the Board) have involved assessments of range practices and, to a lesser extent, range planning. These reports and investigations identified some significant impacts to the Crown range resource, primarily as a result of season-long grazing and poor distribution of livestock. As a result, the Board felt it was timely to assess how well range plans

under FRPA guide the management of the Crown range resource.



Under FRPA, there are two types of range plans: 1) a range use plan (RUP) that includes both required content and content that is determined by the district manager; and, 2) a range stewardship plan (RSP) that includes some of the same content as a RUP, but provides the agreement holder with a certain amount of flexibility in meeting the content requirements prescribed by the legislation. Prior to submitting an RSP, agreement holders must be pre-approved by the MFR district manager and, in exchange for the increased

flexibility provided by RSPs, agreement holders must monitor their range practices.

The primary objectives of this investigation were to: 1) examine and describe the content of RUPs and RSPs; and 2) identify and analyze key issues and constraints in achieving effective range planning, supported by interviews with government, range agreement holders and others. The investigation included an assessment of 200 RUPs (100 in detail) and all of the approved RSPs (three have been approved to date).¹ However, as this investigation is focused solely on range planning, no field inspections of range tenures were undertaken.

The investigation identified a number of significant and pervasive weaknesses in range planning that may limit how effective the plans are in guiding the management of the Crown range resource. Many

¹ There are approximately 1,579 *Range Act* tenures that require an approved range use plan or range stewardship plan before grazing on Crown land is permitted. Source: Forest Tenure Administration System accessed on June 25, 2008.

RUPs do not include all of the basic content required by FRPA. Common omissions include the location of range pastures, or the number and type of livestock being grazed. In most cases, additional content requirements prescribed by district managers are unclear and the actions proposed by agreement holders to address the prescribed issues are not clear, measurable or enforceable. Unlike forest stewardship plans (FSPs) and woodlot licence plans, range plans (both RUPs and RSPs) are not required to identify resource values or designated areas within the tenure area, such as water intakes or wildlife habitat areas. As a result, there is an increased risk that such values may not receive appropriate protection from livestock grazing.

The three approved RSPs examined during the course of this investigation have some of the same weaknesses as RUPs, in that the actions or strategies in the plans are generally not clear, measurable or enforceable. As well, there are weaknesses in the documented process for monitoring and evaluating range practices, in that little information is provided on how the monitoring information will be evaluated and used to modify them. However, the RSPs provide better information than most of the RUPs for understanding how the agreement holder will meet government's objectives.

The following conclusions are drawn from the Board's assessment of range planning under FRPA:

1. For most RUPs:

- basic content is missing from the plans;
- the plans do not show how the agreement holder will ensure their practices are consistent with the objectives set by government for range;
- agreement holders appear to be having difficulty in applying range management concepts used in the *Range Planning and Practices Regulation* (RPPR) and FRPA; and,
- compliance and enforcement staff would have difficulty enforcing the plans because the actions and commitments are rarely measurable or enforceable.

2. For RSPs:

- plans generally contain more information than RUPs. This additional information better assists the district manager in assessing plan consistency with government's objectives;
- it is not always clear how the required process for monitoring and evaluating results, strategies and government's objectives will be used to modify range practices; and,
- similar to RUPs, compliance and enforcement staff will have difficulty enforcing the plans.

The findings of this investigation show that changes in the way FRPA is implemented are required to make range planning more meaningful to agreement holders and beneficial to the overall stewardship of the province's range resource. Government is currently working on revising range plan requirements in FRPA and the RPPR, providing a timely opportunity to make improvements to address many of the issues found in this investigation.

Board Commentary

Previous audits and investigations by the Board have identified specific concerns about the impact of livestock on sensitive areas (like riparian areas and native grasslands), on wildlife habitat and on drinking water quality. These impacts are mostly the result of over-grazing and poor distribution of livestock (see Introduction p.6).

The concerns about range practices, including public complaints to the Board, are persisting. This is one of the reasons the Board felt it was necessary to examine whether range planning was achieving its intended function under FRPA with regard to the management and use of the Crown range resource.

The Board's investigation found numerous shortcomings in range plans. Many did not meet the minimum content requirements of FRPA, but were approved anyway. Specifically, the Board found:

- Actions and measures were not clear, measurable or enforceable and did not always address known issues on range tenures.
- Plans were not required to identify sensitive or designated features, such as wildlife habitat areas.
- Government's objectives for range were not well understood by tenure holders or government range staff.

Collectively, these findings indicate that FRPA's range planning process is not effective or efficient and may not lead to achievement of government's objectives for the range resource.

As a result, the Board believes government ought to investigate the potential for a new framework for range planning that would eliminate range plans for lower risk range tenures and replace them with simpler practice requirements, combined with a map of tenure specific features and issues. For those qualified agreement holders who would like more flexibility in how they manage their livestock and the range resource, the option of preparing an RSP should be retained. However, the content and quality of those plans would have to be improved to address the issues identified in this investigation.

The investigation found that many MFR district range staff place a high priority on developing and maintaining long-term, working relationships with range agreement holders. MFR range staff strongly maintain that these relationships significantly influence how government can affect change on the ground. MFR range staff also say that simply stating government's objectives for range and expecting the agreement holder to manage tenure-specific issues on their own is not as effective as relationship-building. The Board agrees that maintaining good working relationships between range staff and agreement holders is important, but notes that it is imperative that the relationship not cloud the responsibility of range staff to ensure that agreement holders meet the minimum requirements of the legislation. Range plans that do not meet these requirements should not be approved, and when range staff become aware of issues on the ground, compliance and enforcement staff should be brought in to investigate.

Many of the people interviewed for this investigation suggested that more training around FRPA's planning and practice requirements would be beneficial. With regard to this, the Board is pleased to note that range-related training is now being delivered by the new Range Management School— a multi agency partnership with the cattle industry, government and non-government organizations. On-going range management training, delivered in a variety of formats, is critical to achieving effective range management.

With a more streamlined planning process focussing on ensuring sound range practices that address known or potential issues, and a stronger emphasis on achieving good range management and effectiveness monitoring by MFR staff, the Board is hopeful that we will start to see more improvement in range condition and fewer range issues in our work.

Recommendations

Recommendation 1

The investigation found that the current framework for range planning under FRPA is not working well for agreement holders, MFR range staff or for management of the range resource. First, there is widespread uncertainty about what the objectives for range mean and what is required to achieve them. Second, agreement holders are expected to write measurable and enforceable plans, yet may not have the necessary qualifications and experience to do so. Finally, the preparation and approval of RUPs is a time-consuming and challenging task for agreement holders and the MFR, and it is not clear if range planning is achieving any measurable benefit in managing the range resource.

- 1 a) The Board recommends that government explore the option of creating a more streamlined framework for range planning by replacing the RUP with a set of clear practice requirements and creating a defined approach for preparation of RSPs. A number of considerations would have to go into such a framework including:
 - What should the criteria be for determining who can follow practice requirements and who can prepare an RSP? Also, to what extent will the holder of an RSP be able to vary from the practice requirements?
 - How should the timing and amount of grazing be determined—through range readiness criteria and stubble heights? And who should make the determination?
 - How should tenure-specific issues be identified and addressed?
 - Who should have monitoring responsibilities and how should monitoring be set up to efficiently and effectively assess range condition and modify plans and practices to achieve continuous improvement?
- 1 b) For those agreement holders who prepare RSPs, their content and quality needs improvements, such as ensuring that:
 - Tenure-specific issues or problems are identified, and measures to address them are proposed in the plan.
 - Readiness criteria and period of use are specified in such a way that it is clear what is required so that over-grazing does not result.

- Issues and actions are measurable and enforceable.
- Designated features are identified on range tenure maps, and measures to protect those features from grazing impacts are proposed where appropriate.
- Adequate monitoring of the range resource is done to enable adaptive management and continuous improvement in range condition.

Recommendation 2

Many of the range plans approved by the MFR did not meet all of the necessary content requirements as set out in FRPA and the *Range Planning and Practices Regulation*.

2. The Board recommends that government ensure that all range plans being considered for approval fully meet the content requirements set out in legislation before they are approved.

Recommendation 3

The investigation found that many of MFR's range staff said they did not really understand government's objectives for range, or how they are supposed to be addressed in a range plan. Range agreement holders often lacked the necessary training to write a good range plan and to understand the requirements for range stewardship under FRPA.

3. The Board recommends that government invest in training to ensure agreement holders and range staff understand government's objectives for range and that agreement holders have sufficient knowledge to comply with the range plan and the range practice requirements.

The Board requests that the Ministry of Forests and Range notify the Board of the steps taken to implement these three recommendations by June 1, 2010.

Introduction

Purpose and Objectives

Previous range-related reports and investigations completed by the Board have found significant impacts to Crown range, primarily because of season-long grazing and poor distribution of livestock.

For example, in a 2002 investigation on the effects of cattle grazing near streams, lakes and wetlands, the Board found that 29 percent of riparian sites showed moderate to high levels of cattle-related impacts.² Also, in a 2007 investigation, the Board found that grasslands have been significantly altered by historical grazing and are slow to recover, even in the absence of grazing. Furthermore, recovery is even slower if grazing continues.³

Another conclusion from the 2007 report is that it was timely to examine the state of range use planning under FRPA because by 2008, as part of the transition to full FRPA implementation, all range agreement holders had to have FRPA-compliant RUPs or RSPs approved by MFR.

The primary objectives of this investigation were to: 1) examine and describe the content of RUPs and RSPs; and 2) identify and analyze key issues and constraints in achieving effective range planning, supported by interviews with government staff, range agreement holders and others.

Regulation of Range Use in BC

In British Columbia, use of Crown range is regulated by the *Range Act* and FRPA.

The *Range Act* grants the right, through licences and permits, to use Crown range⁴ for grazing cattle and for hay-cutting. The *Range Act* also provides MFR with authority to allocate the amount of forage livestock can consume within a given range tenure area.

Until 1995, provisions of the *Range Act* enabled the district manager to specify certain range practices by requiring an agreement holder to prepare a tenure management plan. In 1995, the *Forest Practices Code of British Columbia Act* and regulations (the Code) became the primary mechanism to regulate range planning and practices on Crown range. The Code required all *Range Act* agreement holders to have an approved RUP prior to grazing or hay-cutting on Crown range. These plans were either written by the agreement holder and approved by the district manager, or, more often, written by MFR district staff and given 'legal effect' by the district manager.

In 2004, government introduced the *Forest and Range Practices Act* (FRPA), which brought significant changes to the range planning and practices regulatory regime. FRPA requires *Range Act* agreement holders to prepare and submit their own range plan before grazing or hay-cutting on Crown range. FRPA also brought in a new type of range plan— the RSP, which government considers a benefit to those ranchers seeking increased flexibility and an avenue for innovation in range planning.

² Report available on the Forest Practices Board website :

<http://www.fpb.gov.bc.ca/assets/0/114/178/184/360/654b5e99-ce0b-4ad5-a70b-601e6f18ca7a.pdf>.

³ Report available on the Forest Practices Board website:

<http://www.fpb.gov.bc.ca/special/investigations/SIR19/SIR19.pdf>.

⁴ Crown range, or rangeland, is a term used to describe the portion of Crown land used for grazing livestock.

The option to prepare a RSP is offered to qualified agreement holders as determined by the MFR in accordance with criteria set out in FRPA. When FRPA was enacted in 2004, range agreement holders were required to prepare and submit a RUP or RSP by January 1, 2006. However, the deadlines were twice extended by government. As of January 1, 2008, all current agreement holders were required to have a FRPA-compliant RUP or RSP before grazing or hay cutting on Crown range.

Table 1: Content differences between a range use plan and range stewardship plan

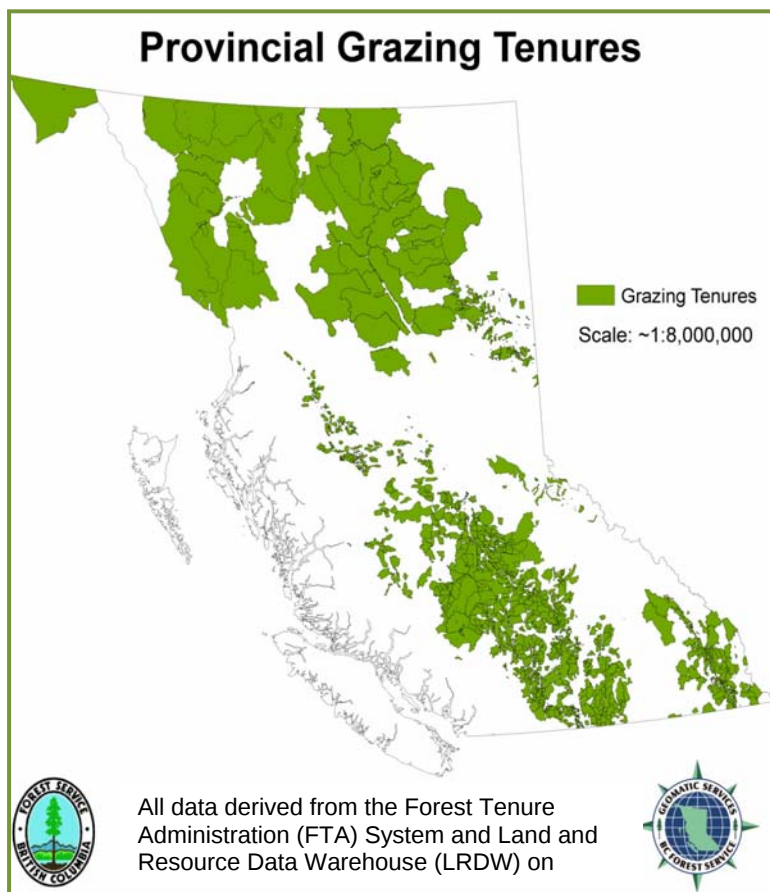
Plan item	Content	RUP	RSP
Map	The range plan must include a map of a scale and format satisfactory to the district manager that shows the: a) area for the agreement under the <i>Range Act</i> that pertains to the plan; b) location and type of range developments in that area; and, c) pastures that are in that area.	No difference between a RUP or RSP.	
Grazing schedule	Describes for each pasture to be used for grazing of livestock the: a) livestock class; b) number of livestock; and, c) period of use.	The schedule is submitted with the plan.	The schedule is submitted to MFR annually before grazing commences.
Issues & actions	The range plan must specify actions to be carried out in the area under the plan to deal with issues identified by the minister.	No difference between a RUP or RSP.	
Prescribed content	1. Descriptions of plant communities and of the actions that will be taken to establish or maintain them. 2. Range readiness criteria (note: the district manager may specify only range readiness criteria that are described in the Schedule [contained in the RPPR], or consistent with the objectives set by government). 3. Stubble heights and browse utilization limits (if less than 25 percent).	District manager may specify requirements (note: the district manager may specify only range readiness criteria that are described in the Schedule or consistent with the objectives set by government).	District manager may specify requirements or agreement holder may propose results or strategies to achieve them.
	Specify measures in the plan to prevent the introduction and spread of species of plants that are invasive plants under the <i>Invasive Plants Regulation</i> , if the introduction, spread, or both are likely to be the result of the person's range practices.	No difference between a RUP or RSP.	
Monitoring	A process for monitoring and evaluating government's objectives and the results or strategies that have been proposed.	Not required.	Required if results or strategies are proposed.

Content requirements for range plans

The differences between a RUP and RSP are identified in Table 1.

The RUP and RSP share some similar content, such as a map, actions to address issues identified by the minister and some content prescribed by regulation. However, the RSP provides agreement holders with a certain amount of flexibility in meeting the content requirements prescribed by FRPA and the RPPR. Prior to submitting an RSP, agreement holders must be pre-approved by the district manager and, in exchange for the increased flexibility provided by RSPs, agreement holders must monitor their range practices.

FRPA and its regulations give certain authority to the Minister of Forests and Range and, to a lesser extent, the Minister of Environment. The Minister of Forests and Range usually delegates authority to the district manager.



Current Extent of Range Use in BC

In British Columbia, Crown range used by livestock extends throughout the southern and northern interior regions and, to a much lesser extent, in coastal areas including Vancouver Island.⁵ Cattle make up approximately 95 percent of livestock on Crown range with the remaining 5 percent mainly horses and sheep.⁶

Approximately 34 million hectares (about one-third of the province) of Crown range is administered by MFR, with a total livestock animal unit month (AUM) allocation approaching one million⁷ (see Appendix 1 for a definition of AUM), and an annual hay harvest of 1,576 tonnes.

The authorized level of AUMs in BC has remained relatively unchanged over the past 10 years;⁸ however, actual use of

⁵ By forest region, the percentage of total provincial Crown range AUMs is: 79 percent in the Southern Interior; just under 21 percent in the Northern Interior; and, less than 1 percent for the Coast. [Source: Rangeland Health Brochure #12.](#)

⁶ [Source: Rangelands of British Columbia.](#)

⁷ [Source: Rangelands of British Columbia.](#)

⁸ Source: data obtained from MFR annual service plans and annual reports.

AUMs has declined approximately 15 percent in the past several years, due to poor market conditions and increased operational costs (BC Cattlemen's Association, personal communication).

There are approximately 1,579 *Range Act* agreements on Crown land that require an approved RUP or RSP prior to grazing livestock or cutting hay.⁹ These range tenures vary significantly in size from 2 to over 35,000 AUMs. Some of the largest tenures in area (square kilometres), but smallest in terms of AUMs, are mostly allocated to commercial guide-outfitter operations.

Approach

The information collected for this special investigation included an examination of RUPs and RSPs, and interviews with nearly 40 individuals including MFR Range Branch, MFR district managers,¹⁰ MFR district range staff, range agreement holders, representatives of the BC Cattlemen's Association, the BC Grasslands Conservation Council, the Ministry of Environment and the Ministry of Agriculture and Lands. As this investigation is focused solely on range planning, no field inspections of range tenures were undertaken.

RUP/RSP Sample Selection

For this investigation, RUPs and RSPs for grazing were examined. RUPs for hay-cutting on Crown range were not examined because the area of Crown range used for grazing far exceeds that used for hay-cutting.

Three RSPs have been approved in the province and all were included in the investigation. The majority of range tenures have an approved RUP, rather than an RSP. Therefore, the Board selected a sample of RUPs based on several pre-determined criteria. Grazing tenures were selected from the Forest Tenures Administration System¹¹ (FTAS) to represent the variability in size of tenures (authorized AUMs allocated), geographic distribution of tenures and dominance of grassland versus forested plant communities in the tenure area.¹²

RUPs from 200 range tenures were selected, covering 18 of the 24 MFR districts that administer Crown range tenures. The 200 range tenures represent approximately 13 percent of the 1,533 tenures¹³ within the 18 districts selected, and approximately 32 percent of the total net authorized AUMs across the 18 districts (292,288 of 900,774).

An initial review of the 200 RUPs revealed patterns of similar plan content. As a result, the total number of range plans assessed in detail was reduced from 200 to 100. The 100 RUPs were randomly

⁹ The total number of *Range Act* agreements on Crown land is subject to change as some tenures are relinquished and new tenures are awarded.

¹⁰ For most FRPA matters, the "Minister" delegates his or her authority to the Delegated Decision Maker (DDM) who is most often the district manager.

¹¹ FTAS accessed on June 25, 2008.

¹² Tenures having more than 25 percent of total authorized AUMs in non-use, were not selected.

¹³ Of the approximate 1,579 *Range Act* agreements, 1,533 are located within 18 MFR districts from which the sample of range plans were selected. The remaining 46 *Range Act* agreements occur within other MFR districts not included in the sample.

selected in roughly the same proportion as the number of RUPs that were selected for each MFR district. The 100 RUPs were assessed to verify the content requirements prescribed by FRPA (when numeric data are presented in this report, it refers to the 100 RUPs examined in detail). However, the overall findings and opinions are based on the content of the 200 RUPs selected for this investigation.

Assessment of Range Plans

Each range plan was assessed against the required content as defined in FRPA and the prescribed content established by the district manager.

For RUPs, the assessment of required content included examining both the grazing schedule and the range plan map. For RSPs, the assessment included looking at the range plan map. The grazing schedule for RSPs is viewed as a separate document because it is not required to be included in the plan, though it must be submitted each year to the district manager before grazing commences. Each required element of the grazing schedule and map was assessed and any omissions or deficiencies were noted.

Compliance with two elements of the range plan map was not fully verified. First, FRPA requires that the range plan map show the area for the agreement under the *Range Act*. The Board did not compare the area of the agreement as shown on the *Range Act* licence with the area of the agreement shown on the range plan map. Rather, the Board only noted whether or not the area of the agreement was shown on the range plan map.

Second, FRPA requires that the map show the location and type of range developments. The Board did not access MFR files or do on-the-ground inventories to determine the full extent of range developments within the tenure. Therefore, range plan maps were deemed to have met this requirement if the range developments referenced in the range plan were shown on the map.

For both RUPs and RSPs, the assessment of prescribed content included: 1) how the district manager decides what the prescribed content of a range plan will be; 2) the nature and appropriateness of issues and measures (e.g., range readiness and stubble heights) specified in range plans by the district manager; and, 3) whether applicable actions, measures, results or strategies were provided by agreement holders.^{14 15}

The assessment also considered:

- Whether issues, actions, measures, results or strategies were appropriate, measurable and enforceable.
- How range plans refer to or address government's objectives for range. This information was used to evaluate whether range plans contained sufficient information for a district manager

¹⁴ A range plan was deemed to have met the content requirements if an action, measure, result or strategy was provided, even if the action, measure, result or strategy was determined to be not measurable, not enforceable, or both.

¹⁵ Refer to the Boards Special Report titled, "A review of early Forest Stewardship Plans under FRPA," for an analysis of results and strategies including measurability and enforceability. Report web link: <http://www.fpb.gov.bc.ca/assets/0/114/178/184/360/6714ae7a-5035-4d19-9bfe-6251f9408f3f.pdf>

to reasonably establish plan consistency with government’s objectives— a key range plan approval test.

- The content of higher level plan (HLP) orders and their applicability to the range plans.
- The appropriateness of the process proposed in RSPs for monitoring and evaluating the plan’s consistency with objectives set by government and the results or strategies proposed by the agreement holder.
- The level of assistance, if any, that the MFR provides agreement holders in preparing their plans.

Findings and Discussion

Assessment of Range Use Plans

RUP map

Findings

There were 32 RUP maps missing required information, with the most common missing element being the location of pastures as described in the grazing schedule (see Table 2). Seven RUP maps were missing more than one required element.

With the exception of two districts, RUP maps were all prepared by the MFR. In these two districts, most agreement holders were provided with a base map showing the range agreement boundary and they had to manually update the map to show the location of range developments, pastures, etc.

Nine RUP maps did not show the location of range developments that were referred to in the corresponding range plan.



Range developments, like this off-channel watering trough for livestock, must be shown on the range plan map.

Table 2: Required elements missing from RUP maps

Required elements	No. of RUP maps missing the required element
Area for the agreement under the <i>Range Act</i>	2
Location and type of range developments	9
Pastures	28

Some of the range plans within the sample included tenures that had recently undergone prescribed fire treatments where the objective of the treatment was entirely or partially related to improving range condition, but information about the prescribed fire treatments was not shown on the RUP maps.

RUP grazing schedule

Background

FRPA requires that the grazing schedule show livestock class, number of livestock and period of use, but does not define the terms. However, the various classes of livestock are provided in association with the definition of “animal unit month” in the *Range Regulation* (a regulation under the *Range Act*) (refer to the definition of “animal unit month” in Appendix 1). For the purposes of this assessment, ‘period of use’ refers to either calendar dates or number of days to indicate the duration of livestock grazing in each pasture.¹⁶

Findings

There were 20 RUPs with grazing schedules that were missing required elements (see Table 3). Twelve RUPs had grazing schedules that were missing more than one element and two range plans did not include a grazing schedule at all.

Table 3: Required elements missing from RUP grazing schedules

Required elements	No. of grazing schedules missing the required element
Pastures	1
Livestock class	11
Number of livestock	9
Period of use	10

Discussion

Most grazing schedules included information that was not required content. In some cases, this additional information conflicted with other components of the range plan. For example, when range readiness criteria and stubble heights were included in the grazing schedule, they sometimes conflicted with separate range readiness criteria and stubble height tables contained in other parts of the plan.

Other grazing schedules identified the range readiness criteria and stubble heights for just one or two grass species, even though other parts of the plan included tables listing range readiness criteria and stubble heights for 15 to 20 grass species.

¹⁶ FRPA does not define period of use. However, reference to ‘period of use’ as a calendar date is made in Sections 28(2), and 29(1)(a) of the RPPR. Also, sample grazing schedule contained in MFR publications refer to period of use as calendar dates. See Ministry of Forests and Range, 2004. Range Use Plans and Range Stewardship Plans. Ministry of Forests and Range, Victoria.
www.for.gov.bc.ca/HRA/Publications/legislation_policy/RangeUseandRangeStewardshipPlans.pdf.

Both examples were confusing in terms of which readiness criteria and stubble heights applied. It is likely that this confusion would affect MFR compliance and enforcement staff as well.

Actions to Address Issues Identified by the District Manager

Background

If issues are identified in the plan, then the agreement holder must specify actions to address those issues. Although FRPA does not define what type of issues can be identified, the issues generally relate to resource values that might be affected by grazing, or specific range developments that require upgrading or maintenance.

Findings

Of the 100 RUPs examined, 66 included issues identified by the district manager and actions to address those issues. Thirty-four RUPs did not have any issues identified by the district manager and were not required to propose actions to address issues. Three forest districts accounted for 23 of the 34 plans that did not include issues identified by the district manager.



Heavy livestock use around this stream channel is an example of an issue that could be identified by the district manager.

Other findings identified by the Board include:

1. Some plans did not include actions to address an issue, or issues, identified by the district manager (i.e., in the table of the RUP where issues and actions are identified, the column that is available to document the actions was left blank).
2. The most common action provided by agreement holders was to restate existing requirements under FRPA (e.g., “will comply with stubble height requirements,” “will comply with the grazing schedule”).

Discussion

The assessment of issues identified by the district manager, and actions posed by agreement holders, has raised several concerns:

1. Many of the issues identified by the district manager were unclear, making it difficult to understand what the district manager was asking the agreement holder to achieve. Examples include:

“Support the management of wolf and bear populations at levels that do not seriously impact a viable ungulate population and your own cattle population.”¹⁷

¹⁷ This *issue* identified by the district manager could also be interpreted to require the agreement holder to control wolf and bear populations within the tenure. Doing so could result in the agreement holder being in violation of other statutes, such as the *Wildlife Act*.

“Recreational/visual values exist within your range area. Livestock use may have impacts on the other resource values.”

2. Actions were also sometimes unclear, and were often neither measurable nor enforceable. Examples include:

“If possible, salt blocks will be located 200m from water.”

“Will work with First Nations.”

3. If implemented, some of the approved actions may lead to a non-compliance with practice requirements in the RPPR. For example, some actions set limits on the amount of stream bank or riparian area that can be degraded (e.g., “livestock shall not degrade more than 50m length of a 500m length of stream bank, wetland edge or lake edge”). Degrading stream banks or riparian areas may result in non-compliance with the practice requirements in the RPPR.
4. In most MFR districts, range staff had to coach agreement holders to prepare actions to address the issues that had been identified. In some districts, this included providing agreement holders with a list of suggested actions that could be used to address issues. MFR range staff maintained that this coaching was necessary to get the draft plans to a suitable state because many agreement holders have difficulty in identifying and writing appropriate actions. In some cases, the suggested actions provided by the MFR are not measurable, not enforceable, or both. Examples include:

“No salting within 200m of a cutblock wherever possible.”

“Avoid displacement of mule deer by livestock.”

MFR and agreement holders identified several reasons why problems with the issues identified by the district manager and actions to address those issues persist:

- Little guidance is available about the nature or intent of both the actions and issues to be included in a range plan.
- MFR’s current frequency of monitoring range tenures (about 10-15 percent of tenures are monitored annually) does not provide the ability to identify tenure-specific issues that should be addressed by the agreement holder.
- Although many site-specific issues are known to MFR, there is a reluctance to document an issue in the range plan because, in some cases, it acknowledges that government is aware of a potentially non-compliant circumstance.
- Agreement holders do not have the necessary training to develop appropriate actions to address issues identified by the district manager. Actions written in a legally binding plan should be measureable and enforceable— for many agreement holders, this is well beyond their expertise.

The issues identified by the district manager and the actions identified by agreement holders to address those issues are important tools for range planning and are intended, under FRPA, to be results-based (i.e., government identifies the issues and agreement holders are accountable for achieving the specified results). However, if issues being identified by the government are unclear, and actions identified by agreement holders are neither measurable nor enforceable, then the results-based premise of FRPA is not functioning as intended.

Descriptions of Plant Communities and of the Actions that will be taken to Establish or Maintain them

Background

The RPPR enables the district manager to require the range plan to include a description of plant communities and actions to establish or maintain them.

Plant communities are certain combinations of grasses, trees and shrubs that occur together in an area (e.g., a plant community consisting of ponderosa pine, bluebunch wheatgrass, sagebrush and rough fescue). Plant communities change depending on the elevation, soil type and climate. Knowledge of the various plant communities that may occur within a range tenure is important because different plant communities produce varying quantities and qualities of forage for livestock and values for wildlife.

The description of plant communities also provides the necessary baseline information when the agreement holder or government agency wants to change the plant community. These changes might be desired to improve forage conditions for livestock or to return the plant community to a natural or pre-grazing condition, or both. Therefore, descriptions of plant communities might describe the following conditions:^{18 19}

1. Current plant community - the plant communities as they currently exist on the tenure.
2. Desired plant community - the type and proportion of grasses, shrubs and trees that are desired in the future.
3. Potential natural community - the plant communities that would be established if succession were allowed to be completed without further human interference.

Findings

Of the 100 RUPs, 63 included a description of either the current or desired plant communities. However, only 48 of the 63 RUPs also included actions to establish or maintain the plant communities. For the 15 RUPs that did not include actions to establish or maintain them, the MFR was not able to establish definitively why actions were not included in the plan.

For the 63 RUPs that included a description of plant communities, there was a high degree of variability among RUPs, both across and within districts, in terms of the detail used to describe them. For example, in some RUPs, the description was very detailed, comprising up to 12 pages of the RUP content, while in other RUPs, the description simply included the name of one or two plant species, which is too little detail to effectively describe what the plant community is.

Most RUPs described the desired plant community and did not include a description of the current plant community. In some RUPs, the desired plant community involves a conversion of some or all

¹⁸ Ministry of Forests, 2000. Range management and the Forest Practices Code. Ver. 3.0. Min. Forests, Victoria, BC. Available at: <http://www.for.gov.bc.ca/hfp/archives/range/FPC-OLD/RMFPC01.htm>

¹⁹ Ministry of Forests, 1995. Riparian management area guidebook. Ministry of Forests, Victoria, BC. Available at: <http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/RIPARIAN/Rip-toc.htm>

grass and shrub species to better suit conditions for livestock—plant communities that are much different than the potential natural community.

Discussion

The Board has a number of concerns in the way that plant community descriptions and the actions to establish or maintain them are applied in range plans:

1. When actions to establish or maintain plant communities were included in the RUP, the actions were generally not measurable or enforceable. Further, for most actions, it was not clear how the action would actually help to establish or maintain the plant community. These are some of the same types of issues that the Board identified in its assessment of ‘actions to address issues identified by the district manager’ (section 6.1.3).
2. The variability in the content of plant community descriptions (i.e., ranged from very detailed to descriptions that were too short to be meaningful) was due to a lack of a consistently applied method for describing plant communities.
3. The conversion of some plant communities to non-native grass species, for example, could affect the achievement of some of government’s objectives, such as biodiversity. However, during plan approval, district managers do not generally consider whether the planned conversion of plant communities is consistent with government’s objectives.
4. The area encompassing a plant community is not mapped. Therefore, unless the location of a defined area is known by both the agreement holder and government, it may not be possible to apply the actions or monitor their effectiveness.
5. Most RUPs included a description of the desired plant community only. When the desired plant community description is provided without the current plant community description, the ability to gauge the success of transitioning to the desired plant community is limited.



Range Readiness Criteria

Background

Range readiness is a term used to define a “stage of growth of a grass plant at which grazing may begin under a specific management plan without permanent damage to vegetation or soil.”²⁰

This bluebunch wheatgrass is ready for grazing because it has reached the leaf stage specified in the Schedule of the RPPR.

Under FRPA, leaf stage is used as the criterion that defines the stage of growth of a grass plant. The RPPR enables the district manager to specify range readiness criteria in the range plan for one or more portions of the area. However, if specified, the readiness criteria must be consistent with the

²⁰ Ministry of Forests and Range, 2008. Glossary of Forestry Terms in British Columbia. Web version accessed at www.for.gov.bc.ca. Note: definition modified by adding “of a grass plant” to clarify that range readiness applies to grasses.

Schedule in the RPPR. If criteria specified by the district manager are different than those in the Schedule, then the criteria must be consistent with objectives set by government for range.

Range readiness criteria are based on the growth characteristics of individual grass species. As grass grows, new leaves form. But the rate of leaf formation and the number of leaves that form are unique to a grass species or group of species.

If range readiness criteria are included in the range plan, then grazing cannot commence until the range readiness criteria are met for each specified grass species.

Findings

Range readiness criteria were specified for at least one grass species in 83 of the plans. Two MFR districts did not require range readiness criteria in any of the RUPs examined. In RUPs that specified range readiness criteria, the criteria were generally consistent with the Schedule in the RPPR. Some criteria included in RUPs were for grass species not included in the Schedule. None of the 83 RUPs specified readiness criteria for only a portion of the range tenure, as permitted by the RPPR.

The range readiness criteria in 14 RUPs deviated from the range readiness criteria in the Schedule. Ten of the 83 RUPs specified the height of certain grass species as the range readiness criteria. But height is not a good indicator of leaf stage for most grass species and may lead to grazing the grass before it is ready, possibly damaging the plant for the remainder of the growing season. In four RUPs, readiness criteria were the same as the Schedule in the RPPR, however, the RUPs state that the criteria are only required to be met on 70 percent of the specified grass species. When range plans did deviate from the readiness criteria in the Schedule, it was unclear if the district manager considered whether the specified readiness criteria were consistent with government's objectives for range.

In a number of the plans, range readiness criteria were presented in up to three different sections of the plan and the number of grass/forb species also differed between the three sections, making it difficult to establish which grass species the agreement holder is required to assess to determine range readiness.

In at least four RUPs, only pinegrass was included for range readiness criteria. However, the plant community descriptions and the table of stubble heights suggest that pinegrass is not the dominant grass species for these four tenures and therefore, may not be an appropriate species for determining range readiness.

Discussion

MFR district range staff said that some agreement holders are unable to identify the majority of grass species or to apply range readiness criteria. In some districts, range staff notify agreement holders when the range readiness criteria have been met to try and remedy this problem. However, some agreement holders would prefer that the timing of grazing be controlled by calendar dates only because that would provide certainty in gauging the quantity of feed that will be required during the winter when livestock are off the Crown range. The use of both dates and criteria in RUPs could cause confusion for agreement holders about when cattle are supposed to be on or off the range, and may result in overgrazing.

There is growing consensus amongst MFR district and Range Branch staff that the inclusion of both calendar dates and range readiness criteria in the RUP to control the commencement of grazing may be a problem.

Removal from Grazing: Stubble Heights

Background

FRPA includes two forage attribute criteria (stubble height and browse utilization) that, if specified by the district manager, direct when livestock must be removed from the range. Under the RPPR, either or both criteria can be included in range plans at the discretion of the district manager. If included in the plan, the criteria override the periods of use that are specified in the grazing schedule. Unlike for range readiness criteria, the RPPR does not include a schedule of stubble heights; however, the MFR has published suggested stubble heights for a variety of grass species.²¹

Findings

Findings identified by the Board include:

1. Seventy-two RUPs had stubble heights specified by the district manager for one or more grass species.
2. There is a high degree of variability both among and within MFR districts, in the number of grass species with specified stubble heights.
3. Three MFR districts account for 23 of the 28 RUPs that did not specify stubble heights.

Discussion

In the three districts that did not specify stubble heights in any of the RUPs, district range staff said stubble heights were not included because agreement holders have difficulty identifying grass species; the appropriate area to measure stubble height is difficult to determine; and, they prefer to graze cattle according to the dates specified in the range plan (note: this issue is somewhat similar to range readiness criteria).

All stubble heights were consistent with the stubble heights suggested by MFR except in one district where different stubble heights were consistently, and sometimes significantly, lower than those recommended by the ministry. RUPs are not required to provide a rationale for the lower stubble heights. However, in approving a RUP (or RSP), the district manager must ensure that it is consistent with government's objectives for range.



If specified by the district manager, the height of the grass determines when livestock must be removed from the range.

²¹ http://www.for.gov.bc.ca/hra/Publications/brochures/Rangeland_Health_Brochure6.pdf

Range Branch staff indicated that grazing to lower than the suggested stubble heights can harm the grass and reduce carry-over litter.²² A reduction of litter has implications for a variety of ecological processes including soil erosion, soil moisture retention and reduction of habitat for small mammals.

Removal from Grazing: Browse Utilization

Background

The RPPR sets the maximum browse utilization by livestock at 25 percent,²³ with the intent of leaving sufficient browse for wildlife and ensuring plant vigour during critical periods. The district manager may choose to set browse utilization standards that are lower than prescribed by regulation.

Findings

Eighteen RUPs included browse utilization limits that were more stringent than 25 percent; 17 RUPs included browse utilization limits of 10 percent and one plan included a limit of 15 percent for browse use within the riparian area only.



It is difficult to establish if this shrub was browsed by livestock or wildlife, or both.

One MFR district accounts for 12 of the 18 RUPs with browse utilization limits that were less than 25 percent. In that district, MFR reduced the browse utilization limit from 25 percent to 10 percent to provide more browse for wildlife on ungulate winter range, even though some of the affected range tenures did not include designated ungulate winter range.

Discussion

MFR district range staff said that browse utilization limits have little practical value because most MFR staff or agreement holders cannot distinguish between browse used by livestock versus browse used by wildlife.

²² http://www.for.gov.bc.ca/hra/Publications/brochures/Rangeland_Health_Brochure6.pdf

²³ There is no empirical evidence to suggest that 25 percent is an appropriate utilization benchmark to balance forage requirements between livestock and wildlife (*in* personal communication with Cindy Haddow, Range Specialist, Ministry of Environment).

Measures to Prevent the Introduction and Spread of Invasive Plants

Background

Range agreement holders say that invasive plants are one of the biggest threats to maintaining forage quality and animal health.

In preparing a RUP or RSP, range agreement holders are required to specify measures in the plan to prevent the introduction and spread of invasive plants, if the introduction, spread, or both are likely to be the result of the person's range practices.

Findings

All but 10 RUPs included measures for dealing with invasive plants. However, the measures specified in the RUPs were consistently vague, did not always address the introduction or spread of invasive plants and most were not measurable or enforceable. Examples include:

“Doing my best to stop the spread of invasive weeds.”

“Cut and burn hounds tongue.”

“Identify new species to MoF. Work with MoF to control or eradicate.”

The most common measure was a commitment by the agreement holder to comply with the terms of the RUP as well as the practice requirements.

Discussion

Ten RUPs did not include measures to prevent the introduction and spread of invasive plants. However, a RUP or RSP is only required to include such measures *if the introduction or spread of invasive plants is likely to be the result of a range practice*. It is possible these plans did not need to include that information, but the Board could not determine that from the plans.

It is not clear in the legislation or government policy if it is the agreement holder or government who determines whether the introduction or spread of invasive plants is likely to be the result of a person's range practices.

Assessment of Range Stewardship Plans

Background

When government introduced FRPA in 2004, it enabled agreement holders who met certain knowledge and experience criteria, to prepare and submit an RSP instead of an RUP. The RSP is intended to mirror the principles of forest stewardship planning and is, therefore, less prescriptive than a RUP. An RSP provides the agreement holder more opportunity for flexibility and innovation in range management.

The required content of an RSP is shown in Table 1 on page 7.

Findings

Very few range agreement holders have an approved RSP. Currently, of the approximately 1,579 range tenures requiring either a RUP or RSP, there are only 3 approved RSPs in 3 MFR districts.²⁴ Two of these tenures are small, with allocations of 96 and 73 AUMs, and one is a large tenure with an allocation of 8,164 AUMs. Two of the RSPs were prepared by a professional agrologist and one was prepared by a professional forester.

All three RSPs had a process for monitoring; however, none of them include a process for evaluating the results of the monitoring. Moreover, the process for monitoring and evaluation in the plans does not appear to be designed to determine whether the agreement holder's range practices are consistent with government's objectives or with the results or strategies contained in the RSP.

Similar to the Board's findings for RUPs, actions, measures and other commitments made in RSPs are generally not measurable or enforceable. In one RSP, the agreement holder often refers to an acceptable threshold of 0.5 hectares for soil compaction in riparian areas, but the RSP does not define how the threshold will be applied or measured. In some cases, the actions and measures stated in the plan might conflict with achieving government's objectives. For example, in the above noted RSP, it is not clear how the threshold of 0.5 hectares for soil compaction in riparian areas would be consistent with government's objectives for soil.

Two of the plans included range readiness criteria that were consistent with the Schedule in the RPPR. In the third plan, the range readiness criteria were not consistent with the Schedule in the RPPR; rather, the agreement holder included the height of three grass species as the range readiness criteria, but the required rationale for proposing alternative range readiness criteria was not included in the plan. (Concerns about using grass height for range readiness criteria have been previously identified.)

The maps included with the plans were prepared by the MFR, but two maps were missing at least one required element. One map did not include all of the range developments as identified in the plan and one was missing the location of pastures identified in the plan.

Discussion

Overall, the Board found that, while the content of RSPs did not always meet the specified requirements, the plans generally contained more information than RUPs. This additional information would better assist district managers in assessing plan consistency with government's objectives.

The MFR provides guidance material to assist agreement holders in monitoring range condition,^{25 26} and the monitoring plans in two of the three RSPs seemed to mostly follow this guidance. However,

²⁴ The range program in one of the MFR districts is administered by one of the other two districts.

²⁵ Ministry of Forests and Range, 2006. Range management in British Columbia under the Forest and Range Practices Act and other legislation. Available at <http://www.for.gov.bc.ca/HRA/frpa/index.htm>.

²⁶ Ministry of Forests and Range, 2006. A methodology for monitoring Crown range. Available at <http://www.for.gov.bc.ca/hfd/pubs/docs/Bro/Bro82.pdf>.

the guidance material does not describe how to develop a plan for monitoring and evaluating consistency of range practices with government objectives for range, or with specified results or strategies outlined in the plan.

The requirement for holders of an RSP to conduct monitoring and evaluation will likely help to improve their ability to comply with the terms and conditions of the plan and the practice requirements in the RPPR. Moreover, monitoring provides agreement holders with evidence to gauge how their range practices influence range condition and the management of the Crown range resource.

When asked about the future of RSPs in range planning, most MFR district range staff suggested that, in principle, it is beneficial for agreement holders to participate in range monitoring. However, some district range staff noted that the current level of monitoring required of RSP holders could exceed the level of monitoring that most agreement holders would be prepared to do.

Some district range staff suggested that the introduction of both the RUP and the RSP at the same time caused unnecessary confusion among agreement holders. The effect was a perception that an RSP is a plan that carries additional requirements and liabilities but few additional benefits.

Planning for the Protection of Designated Areas

Background

Under FRPA, the *Government Actions Regulation* (GAR) gives certain government ministers the authority to establish a variety of resource features and designated areas. Resource features may include things such as recreation areas, range reference installations and cultural heritage sites. Designated areas may be intended to protect values such as scenic areas, wildlife habitat and water quality.

Once a GAR Order is made, establishing a resource feature or designated area, the minister notifies all affected agreement and licence holders, including range agreement holders and forest licensees. The Order includes the type and location of the feature or designated area and may contain certain restrictions to ensure that forest or range practices do not negatively affect the area.

Holders of a forest stewardship plan or woodlot licence plan must include information about an Order in their operational plans. However, there is no similar requirement for a range agreement holder to include the information in their RUP or RSP, unless the district manager makes the information 'prescribed content' under the RPPR, and requires the information to be included in the plan. As a result, there is a high degree of variability both between districts and within districts as to whether range plans include resource features or designated areas.

This investigation considered the extent to which four types of designated areas (ungulate winter ranges, wildlife habitat areas, community watersheds and fisheries sensitive watersheds) occur within the sample range tenures and whether information about the designated areas is included in the range plans.

Findings

Within the sample of 100 RUPs, there were a total of 97 designated areas in 71 range tenures.²⁷ However, there were only 28 RUPs where one or more of the designated areas were identified on the RUP map, within the body of the RUP, or both (see Table 4).²⁸ For RSPs, no designated areas were established in the range tenures.

Table 4: No. of designated areas within the sample range tenures and no. of RUPs that identify the areas

FRPA designated area	No. of designated areas with the sample of 100 RUPs	No. of RUPs that refer to the designated area
Ungulate winter range (UWR)	62	20 (4 RUPs include the value on the map only and 12 RUPs include the value in the plan but not the map)
Wildlife Habitat Area (WHA)	18	2 (both RUPs refer to WHA, but for the incorrect species)
Community Watershed (CW)	13	6 (4 RUPs include the information on the map but not the plan)
Fisheries Sensitive Watershed (FSW)	4	0
Total	97 designated areas in 71 range tenures	28

Discussion

The Board has several concerns about how information pertaining to designated areas is communicated to agreement holders and what the limitations of not requiring such information within the RUP or RSP might be. These concerns are:

1. A potential gap exists between Code RUPs and FRPA RUPs and the processes that are in place to ensure agreement holders are aware of designated areas within range tenures. Since 2004, when FRPA came into force, range agreement holders have been notified about the location and type of GAR Orders, as well as any general wildlife measures and/or objectives that may apply. The gap exists because agreement holders may not be aware of the occurrence of areas designated within their tenures prior to 2004.
2. Often, range tenures are relinquished and reassigned to new agreement holders. However, there is no process in place to ensure that a former agreement holder or the Minister of Environment²⁹ provides the new agreement holder with the GAR Order. As a result, the new agreement holder may not be aware of the existence of a designated area within the tenure.

²⁷ Some range tenures included multiple designated areas while other tenures had none.

²⁸ Since the information about designated areas was included in the RUP, the Board assumes that the district manager required this information to be included.

²⁹ Under the GAR, the Minister of Environment has authority for establishing Ungulate Winter Ranges, Wildlife habitat Areas, Community Watersheds and Fisheries Sensitive Watersheds.

3. The RPPR includes certain practice requirements within areas designated by GAR Order or under the former Code. If agreement holders are not in possession of the Orders establishing those areas, then there is a risk of non-compliance with the practice requirements. An example includes Section 35 of the RPPR which requires the removal of dead livestock from near a stream in a community watershed.
4. For RUPs that did include designated areas, the reliability of the information was sometimes an issue. Two RUPs included information about a WHA. In both cases, the species associated with the WHA was incorrect. For example, in one RUP, the district manager identified a snake den WHA as an issue requiring actions by the agreement holder. The Board determined that no snake den WHA existed within the tenure—the WHA was designated for grizzly bear. Presumably the actions to address grizzly bear would be quite different than those necessary to address a snake den.
5. As part of considering a range plan for approval, the district manager must ensure that the plan is consistent with government's objectives. However, in assessing this, some district managers only consider information that is required plan content. As information about GAR Orders is not required plan content, they are not always included in the district manager's assessment. This creates a potential problem because the practices specified in a range plan may conflict with the need to protect certain values within the area included in the GAR Order.

Planning for the Protection of Water Quality

Background

The RPPR includes a number of practice requirements that identify certain resource values that must not be significantly impacted as a result of grazing livestock on Crown range. Examples of these resource values include fish habitat, riparian, upland and water quality.

Ensuring compliance with these practice requirements involves two things: 1) a willingness of the agreement holder to understand and comply with the practice requirements; and, 2) knowledge of where the practice requirements apply.

For some resource values, such as riparian and upland areas, their location is known through visual observation and does not require advanced inventories. However, resource values such as water quality and fish habitat are different. Compliance with these practice requirements relies on the provision of information about streams that support fish within the tenure, and the location of waterworks licensed by the Ministry of Environment under the *Water Act*.

For example, for the protection of water quality, section 33 of the RPPR requires the agreement holder to ensure that the range practice does not:

1. cause material that is harmful to human health to be deposited in, or transported to, water that is diverted for human consumption by a licensed waterworks
2. damage the licensed waterworks, or

3. alter the vegetation, soil or terrain around the licensed waterworks, if the alteration could materially increase the risk of subsequent damage to the licensed waterworks.

Section 32 of the RPPR defines the practice requirements for the protection of fish habitat.

Findings

There is a high degree of variability among and within MFR districts, about whether the location of licensed waterworks is identified in the RUP. For example, in one MFR district, the location of licensed waterworks is shown on the RUP maps, however, the information appears to be outdated. In another district, the body of the RUP identifies the presence of licensed waterworks but the RUP map does not show where they are located. None of the RSPs (in the plans or on the maps) refer to licensed waterworks, so it was assumed by the Board that this resource value does not occur within those tenures.

None of the RUP or RSP maps show the location of fish-bearing streams within the tenures.

Discussion

Effective protection of resource values, such as water quality and fish habitat, requires, in part, current knowledge of the location of the values within the tenure. For licensed waterworks, knowing the location, both within the tenure and outside of the tenure, is necessary if the agreement holder's range practices could impact them. Although the RPPR enables the district manager to require these values to be identified in range plans, few have elected to do so. As a result, it remains uncertain whether agreement holders are aware of licensed waterworks or fish streams in their tenures.

Range Plan Consistency with Objectives set by Government

Background

The FRPA regulatory model is results-based, with government setting the objectives for management of the range resource. In turn, range agreement holders and professionals are expected to conduct their planning and practices in a manner that is consistent with those objectives. (Note: see Table 5 for the subject of government's objectives and Appendix 3 for the full content of the objectives.).

Table 5: Subject of objectives set by government for range

Subject		Subject in relation to 'other objectives'
Soils	Water	Water quality
Biodiversity	Fish	Wildlife Habitat Area
Forage	Wildlife	Ungulate Winter Range

Objectives set by government that apply to range agreement holders can include those established by FRPA and those established by the *Land Act*.

Objectives established under the *Land Act* can be made to have ‘legal effect’ by declaring some or all of the objectives within a land and resource management plan (or other strategic land use plan) as a higher level plan. Currently, only one higher level plan includes objectives that pertain to range.

In 1995, government approved the Kamloops Land and Resource Management Plan³⁰ and in 1996, made an Order declaring the approximately 100 objectives in the LRMP as a higher level plan (HLP).

On January 23, 2006, the Order was repealed and a new Order was made establishing 26 of the former 100 objectives applicable to operational plans as legal objectives.

Of the 26 objectives in the new Order, only one pertains to range plans where the tenure is located within the general resource management zone:

“Minimize tree/grass/cattle conflicts through integrated management practices.”³¹

FRPA requires that the content of RUPs and RSPs be *consistent* with objectives set by government for range. For range tenures within the general resource management zone of the HLP (applies to the Kamloops Timber Supply Area), range plans must also be consistent with the objective in the HLP that pertains to range.

When a range plan is submitted for approval, the agreement holder declares that the plan meets the content requirements and is consistent with government’s objectives. Likewise, when the district manager considers a range plan for approval, there are several approval tests that must be applied, including plan consistency with the agreement under the *Range Act* and plan conformance with FRPA, the RPPR³² and additional objectives established under the *Land Act*. Integral to the approval test is range plan consistency with government’s objectives.

Findings

Fifteen RUPs include content that addresses each of government’s objectives for range. An additional three RUPs include content that indirectly addresses most of government’s objectives, but the plans do not refer to the term ‘objectives.’ The 18 RUPs that directly or indirectly relate to government’s objectives are for tenures administered in five MFR districts. However, fewer than half of the range plans examined in those five MFR districts include references to government’s objectives.

In two districts, RUPs are required to include information on how the agreement holder proposes to manage livestock within the range tenure. The districts refer to this information in the RUP as a ‘management plan.’ In one MFR district, the notice sent to agreement holders preparing a RUP suggests that the management plan should include information that will allow the agreement holder to meet government’s objectives. However, the content of the management plan section within the RUPs primarily addresses how and when the agreement holder will move cattle on to the tenure and between pastures. None of the subject RUPs directly addresses government’s objectives.

³⁰ Source: www.ilmb.gov.bc.ca/slrp/lrmp/kamloops/kamloops/archive/files/background/introduction.html

³¹ Source: Kamloops HLP Order, dated January 23, 2006.

www.ilmb.gov.bc.ca/slrp/lrmp/kamloops/kamloops/legal_documents/files/legal_orders/order_kamloops_hlp_jan06.pdf

³² Refer to S. 37(1) FRPA.

In general, RSPs provide more information than RUPs on how the agreement holder will address government's objectives for range. However, none of the three RSPs address all six of government's objectives for range.

Range plans in the Kamloops and Headwaters Forest District (both are within the Kamloops Timber Supply Area) state that they are consistent with the Kamloops LRMP. The Board did not examine range plan consistency with the Kamloops LRMP because it is not a legal requirement. Rather, range plans in the two districts were assessed to determine plan consistency with the objective pertaining to range in the HLP Order. None of the range plans examined made reference to the objective in the HLP Order.

Discussion

FRPA does not prescribe what is required for a range plan to be consistent with government's objectives for range. As a result, three opposing views have emerged within MFR as to what is required to demonstrate plan consistency with government's objectives:

1. The minimum content requirements of range plans do not support an effective assessment of plan consistency with the objectives. Therefore, the approval test applied to range plans by the district manager focuses more on examining whether the plan content appears to be *inconsistent* with objectives set by government. In other words, "is there anything in the plan that, if implemented, would obviously hinder or prevent the agreement holder's ability to achieve government's objectives for range?"

Some district managers also hold the view that, if the content of the range plan makes no specific reference to a FRPA objective or designated area, such as wildlife or a wildlife habitat area, it implies that the FRPA objective or designated area is not at risk of being adversely affected by grazing. Therefore, such a plan is likely to be found consistent with government's objective for wildlife.

This view is problematic because it is based on the assumption that if a designated area or resource feature is likely to be impacted by range practices, then it would be included in the range plan. This investigation has found that these values are most often not identified in the range plan even though they could be potentially impacted by range practices.

2. The range plan must include content that directly relates to government's objectives in order to reasonably establish if the plan is consistent with those objectives.

Some district managers hold the view that the required and prescribed content requirements of range plans do support an effective assessment of plan consistency with the objectives. For the 15 RUPs in three MFR districts that included content addressing government's objectives, the district managers used their authority under FRPA and directed the agreement holders to consider each of government's objectives as an issue, requiring actions to address those issues. While many of the actions proposed by agreement holders are not measurable, verifiable or enforceable, they do provide sufficient information to reasonably establish plan consistency with the objectives.

3. The range plan is deemed to be consistent with government's objectives for range provided that the plan contains all of the required content (i.e., a map, schedule and any additional content prescribed by the district manager).

The prevailing view within MFR is that the range plan is deemed to be consistent with government's objectives provided that the plan contains the minimum content required in FRPA (i.e., a map and grazing schedule) and content that may be prescribed by the district manager. This view assumes that the prescribed content of a range plan, whether or not it is directly related to the objectives, is sufficient to ensure plan consistency with the objectives. For example, MFR range staff suggested that range plans generally contain sufficient information, such as range readiness criteria, stubble height and browse utilization requirements, to conclude that, if implemented, the plans would likely be consistent with government's forage objective. Some MFR range staff further suggested that, since the objective for forage was likely being met, it could be assumed that several other objectives, such as soils and biodiversity, were also being met. Their conclusions were generally based on the premise that good forage condition would be sufficient to protect soils and biodiversity values throughout the range tenure.

However, this investigation found that many of the range plans examined did not meet all of the content requirements. Therefore, if the prevailing view regarding objectives is accepted as reasonable, then it should also be assumed that half of the range plans are not consistent with government's objectives because the plans do not meet all of the content requirements.

With the exception of government's objective for forage, agreement holders are not generally supportive of government's objectives for range. Reasons provided included:

- The wording of the objectives is confusing and difficult to understand. As a result, agreement holders do not really know what government wants to achieve.
- Agreement holders have difficulty in understanding how their ranching operations may affect government's objectives.
- Agreement holders feel it is unfair to have to meet government's objectives for range when they have little control over other tenure holders and land users who affect their ability to meet those objectives.
- Government's objectives can conflict with the agreement holder's business interests.

Conclusions

Assessment of Range Use Plans

Many range use plans (RUPs) do not include all of the basic content required by FRPA. Common omissions include the location of range pastures, or the number and type of livestock being grazed. In most cases, additional content prescribed by district managers is unclear and the actions proposed by agreement holders to address the prescribed issues are not clear, measurable or enforceable. Unlike forest stewardship plans and woodlot licence plans, range plans are not required to identify resource values or designated areas within the tenure area, such as water intakes or wildlife habitat areas. As a result, there is an increased risk that the values may not receive appropriate protection from livestock grazing. The Board concludes that, for most range use plans:

1. basic content is missing from the plans;
2. the plans do not show how the agreement holder will ensure their practices are consistent with the objectives set by government for range;
3. agreement holders appear to be having difficulty in applying range management concepts used in the RPPR and FRPA; and,
4. compliance and enforcement staff would have difficulty enforcing the plans because the actions and commitments in the plan are rarely measurable or enforceable.

Assessment of Range Stewardship Plans

The three approved range stewardship plans (RSPs) have some of the same weaknesses as RUPs in that the actions or strategies in the plans are generally not clear, measurable or enforceable. There are weaknesses in the documented process for monitoring and evaluating range practices, in that little information is provided on how the monitoring information will be evaluated and used to modify range practices. Overall, the RSPs provide more information than most of the RUPs for understanding how the agreement holder will meet government's objectives. The Board concludes that, for range stewardship plans:

1. plans generally contained more information than RUPs. This additional information would better assist the district manager in assessing plan consistency with government's objectives;
2. it is not always clear how the required process for monitoring and evaluating results, strategies and government's objectives will be used to modify range practices; and,
3. similar to RUPs, compliance and enforcement staff would have difficulty enforcing the plans.

Conclusions about Range Planning under FRPA

This investigation identified a number of findings related to the content of range plans. Most notably, a significant number of range plans do not meet the minimum content requirements. As well, government's objectives for range are not well understood by agreement holders or government range staff. This is of particular concern, given that FRPA has now been in effect for over five years. Other findings relate to what is not required to be included in the plans – things like resource features and designated areas.³³

The assessment of range plans, coupled with interviews with agreement holders and MFR range staff, leads the Board to conclude that the current framework for range planning under FRPA is not working well for agreement holders, MFR range staff or for management of the range resource. There is widespread uncertainty about what the objectives for range mean and what is required to achieve them. Agreement holders are expected to write measurable and enforceable plans, yet may not have the necessary qualifications and experience to do so. Range agreement holders told the Board that they do not have the financial resources to retain professionals to write good range plans. As a result, there is a reliance on district range staff to help them write their plans.

Preparation and approval of range use plans is a time consuming and challenging task for agreement holders and the MFR and some are not entirely sure if range planning is achieving any measurable benefit in the management of the range resource. Others are of the opinion that the FRPA regulatory model has had a positive effect because, for the first time, agreement holders are required to take the lead role in preparing their range plans. However, agreement holders and district MFR range staff believe that a close working relationship between ranchers and government is the foundation of good range management.

The findings of this investigation show that changes in the way that FRPA is implemented are required to make range planning more meaningful to agreement holders and beneficial to the stewardship of the range resource. Government is currently working on revising the *Range Planning and Practices Regulation*, providing a timely opportunity to make improvements to address many of the issues found in this investigation.

³³ It should be noted that this special investigation is an assessment of range planning under FRPA. No field assessment of range tenures were undertaken, therefore, conclusions about the condition of range tenures cannot be made.

Appendices

Appendix 1: Glossary of Terms and Acronyms³⁴

Animal unit month (AUM): The unit by which forage or grazing capability of Crown range land is measured. It is 450 kg of forage, which is the amount of forage required for one month by an average cow, aged 6 months or older.

British Columbia Cattlemen's Association (BCCA): A non-profit organization that represents beef cattle producers in British Columbia. Source: <http://www.cattlemen.bc.ca/about.htm>

British Columbia Grasslands Conservation Council (BCGCC): The Grasslands Conservation Council of British Columbia is a non-profit organization dedicated to preserving, protecting and promoting the grasslands of British Columbia. Source: <http://www.bcgrasslands.org>.

Browse: That part of leaf and twig growth of shrubs, woody vines, and trees available for animal consumption, or, the act of consuming browse.

Browse utilization: Is a measurement of the amount of the current year's annual growth that has been consumed by livestock. By regulation, FRPA sets the maximum browse utilization by livestock at 25%³⁵, with the intent of providing sufficient browse for wildlife and also to ensure plant vigour during critical periods. The district manager may choose to set browse utilization standards that are lower than prescribed by regulation.

Crown range: Crown land included within the boundaries of a range district, but does not include Crown land that is subject to a lease issued under the *Land Act*. Source: *Range Act* (SBC 2004) Chapter 71. Accessed at www.bclaws.ca on April 3, 2009.

Community watershed (CW): Refer to Section 8 of the *Government Actions Regulation*.

Delegated decision maker (DDM): For most FRPA matters, the "Minister" delegates his or her authority to the Delegated Decision Maker (DDM) who is most often the district manager.

Fisheries Sensitive Watershed (FSW): Refer to Section 8 of the *Government Actions Regulation*

Forage: Browse and herbage that is available and may provide food for grazing animals.

Licensed waterworks: refer to Section 1 of the *Forest Planning and Practices Regulation*.

Objective: A concise, time-specific statement of measurable planned results that correspond to pre-established goals in achieving the desired outcome. Commonly includes information on resources to be used, forms the basis for further planning to define the precise steps to be taken, and the resources to be used and assigned responsibility in achieving the identified goals."

Professional reliance: Reliance on the judgment of appropriate professionals who are authorized and qualified to provide a service.

Range agreement holder: refer to Section 1 of the *Range Planning and Practices Regulation*.

Range development: refer to Section 1 of the *Forest and Range Practices Act*.

³⁴ Unless otherwise noted, the definitions to terms and acronyms provided here from: The Ministry of Forests and Range, March 2008. Glossary of Forestry Terms in British Columbia. Available at <http://www.for.gov.bc.ca/hfd/library/documents/glossary/Glossary.pdf>.

³⁵ There is no empirical evidence to suggest that 25% is an appropriate utilization benchmark to balance forage requirements between livestock and wildlife (Cindy Haddow pers. comm.).

Range management: A distinct discipline founded on ecological principles and dealing with the use of rangelands and range resources for a variety of purposes. These purposes include use of watersheds, wildlife habitat, grazing by livestock, recreation and aesthetics, as well as other associated uses. *Source:* Campbell, C.W. and Bawtree, A.H. (eds.), 1998. *Range Handbook for BC*. BC Cattlemen's Association, Kamloops.

Range plan: In the context of this report, the term 'range plan' may be used when referring to both a range use plan and/or a range stewardship plan.

Range practice: A prescribed activity (e.g., grazing of livestock, cutting of hay, and activities related to these practices, or activities related to constructing, modifying, or maintaining a range development) that is carried out on Crown range by the holder of an agreement under the *Range Act* or by a person other than the holder of the agreement.

Range readiness criteria: The plant growth criteria that indicate when a range is ready for grazing.

Range stewardship plan (RSP): An operational plan under the *Forest and Range Practices Act* that may be prepared in place of a range use plan by those who have demonstrated a level of competence in range management. This plan is less prescriptive, provides options for more flexibility for experienced operators, and encourages innovation.

Range use plan (RUP): An operational plan that includes requirements specified by the *Forest and Range Practices Act* and allows a *Range Act* agreement holder to graze livestock or cut hay on Crown range.

Resource feature: refer to Section 5 of the *Government Actions Regulation*.

Stubble height: Stubble height is the measurement of the height of grass after grazing occurs and is an indicator of the volume of grass that can be safely grazed without causing significant harm to the forage species; grazing too much of the grass plant will stop root growth³⁶ and reduce survival. Appropriate stubble heights vary by grass species based on growth characteristics.

Ungulate winter range (UWR): An area containing habitat that is necessary to meet the winter habitat requirements of an ungulate species. UWRs are based on the current understanding of ungulate habitat requirements in winter, as interpreted by the Ministry of Environment (MOE) regional staff from current scientific and management literature, local knowledge, and other expertise from the region. Sections 9 and 12 of the *Government Actions Regulation* of the *Forest and Range Practices Act* outline the regulatory authority for establishing UWR.

Wildlife habitat area (WHA): Mapped area of Crown land containing critical habitat, such as breeding, feeding, and denning habitat, crucial to identified wildlife. WHAs help protect species and plant communities at risk by specifying mandatory practices called general wildlife measures.

³⁶ [Applying best stubble heights on rangelands.](#)

Appendix 2: Range Use Plans Selected by MFR Region and District

MFR region	MFR district	No. of range tenures within district requiring a RUP/RSP	No. of range tenures selected and RUPs requested
Coast	Squamish	3	3
Northern Interior	Fort Nelson	28	4
	Mackenzie	8	3
	Nadina	107	6
	Peace	230	23
	Prince George	45	2
	Skeena-Stikine	64	4
	Vanderhoof	40	4
Southern Interior	100 Mile House	114	19
	Arrow-Boundary	77	8
	Cascades	94	21
	Central Cariboo	105	24
	Chilcotin	88	15
	Headwaters	51	4
	Kamloops	115	20
	Okanagan-Shuswap	165	22
	Quesnel	83	7
	Rocky Mountain	116	11
	Totals	1,533	200

Appendix 3: Government's Objectives for Range³⁷

Objectives set by government for soils

Section 6, RPPR - The objectives set by government for soils are as follows:

- (a) protect soil properties;
- (b) minimize erosion and compaction;
- (c) minimize undesirable disturbance to soils;
- (d) maintain a vigorous and diverse cover of desirable plant species with a variety of root depths sufficient to protect the soil;
- (e) re-establish ecologically suitable vegetation after disturbance occurs;
- (f) maintain ground cover, including sufficient litter and residual dry matter accumulation to protect soil;
- (g) minimize accelerated soil erosion;
- (h) minimize sealing of the soil surface.

Objectives set by government for forage

Section 7, RPPR - The objectives set by government for forage and associated plant communities are as follows:

- (a) maintain or enhance healthy plant communities, including their vigour and cover;
- (b) maintain or enhance forage quality and quantity for livestock and wildlife;
- (c) recruit desirable plants, including through forage seeding;
- (d) maintain a variety of age classes and structural characteristics within plant communities;
- (e) maintain or improve litter;
- (f) enable a range agreement holder, in the exercise of its grazing or hay cutting rights granted by the government, to be vigorous, efficient and world competitive.

Objectives set by government for water

Section 8, RPPR - The objectives set by government for water are as follows:

- (a) maintain or improve water resources;

³⁷ Source: Sections 6-12, *Range Planning and Practices Regulation*.

- (b) maintain or promote healthy riparian and upland areas;
- (c) maintain or promote riparian vegetation that provides sufficient shade to maintain stream temperature within the natural range of variability;
- (d) maintain or promote desired riparian plant communities.

Objectives set by government for fish

Section 9, RPPR - The objectives set by government for fish are as follows:

- (a) conserve fish, fish habitat and aquatic ecosystems;
- (b) manage any adverse effect of deleterious material.

Objectives set by government for wildlife

Section 10, RPPR - The objectives set by government for wildlife are as follows:

- (a) maintain or promote sustainable, healthy, viable, productive and diverse wildlife populations and their associated habitat;
- (b) minimize disturbance during critical periods to wildlife or to wildlife habitats;
- (c) manage the risk of interaction between predators and livestock.

Objectives set by government for biodiversity

Section 11 - The objectives set by government for biodiversity are as follows:

- (a) conserve biodiversity;
- (b) maintain native plant community dynamics;
- (c) encourage the development of late seral plant communities or other desired plant communities;
- (d) maintain plant communities consistent with natural successional stages on areas where forage seeding is carried out within transitory range areas.

Other objectives

Section 12, RPPR - 12(1) For the purposes of sections 33 (1) (e), 34 (1) (e) and 35 (1) (d) of the Act, water quality objectives, wildlife habitat area objectives and ungulate winter range objectives apply.

12(2) The minister responsible for the *Wildlife Act* may exempt a range agreement holder from a requirement associated with an objective under subsection (1) if

- (a) the holder proposes an alternative to the objective, and
- (b) that minister is satisfied that the proposed alternative is consistent with the objective



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