



**Forest  
Practices  
Board**

## **Logging in Fisher Habitat near Prince George, BC**

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*Complaint Investigation #19042*

**FPB/IRC/236**

May 2021

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# Board Commentary

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The Board investigated a complaint from a trapper operating southwest of Prince George in the Prince George Natural Resource District (DPG), about the impacts of timber harvesting to fishers and their habitats. The fisher is a fur-bearing mammal and is designated a species at risk in BC. This is the second Board investigation involving the impacts of forestry on fisher habitat in north central BC, and the Board's issues identified in this case are consistent with what was found in the Nazko complaint<sup>1</sup>. Government has not carried out any landscape-level planning to address fisher habitat needs in the DPG, has not used the tools available in the *Forest and Range Practices Act* (FRPA) to protect fisher habitat at the stand level, and is relying on forest licensees following non-legal guidance.

This investigation found that, although the licensee's planned harvesting met the legal requirements, the complainants' concerns are substantiated. While the forest licensee that carried out the harvesting tried to retain some fisher habitat elements in the cutblocks, and deferred harvesting of two blocks, without a landscape-level plan and consistent incorporation of the non-legal fisher guidance at a larger geographic scale, these efforts are unlikely to conserve fisher habitat in this area.

Management of fisher habitat requires coordinated landscape scale planning, combined with forest practices that consider science-based information at the stand-level. In the DPG, government has not carried out any landscape scale planning for fisher habitat. FRPA provides several legal tools to manage specific habitats of species at risk, yet government has not used these tools in DPG. Instead, government has approached fisher habitat management by investing in non-legal guidance and planning tools for forest professionals and licensees to consider.

It is time for government to strengthen its approach to fisher habitat management. Under the current framework, forest professionals are asked to balance the non-legal guidance with the legal requirements and the expectations of their employer. The licensee then decides what actions to take on the land base. Professional reliance should not be used as a replacement for government leadership in setting clear objectives, which are an essential pillar of FRPA and the foundation of forest stewardship planning. The Board has said this before, and it is also supported in the Professional Reliance Review.<sup>i</sup> Furthermore, government has told the Board that voluntary fisher habitat management guidance is not being implemented at the levels needed to support sustainable populations. This points to the importance of government taking the lead and using the habitat management measures available in FRPA to ensure habitat is planned for and adequately managed for species at risk, such as the fisher.

In the longer term, the Board has recommended government adopt tactical planning as part of FRPA. This would create a clear and integrated process for defining habitat requirements for species like fisher at the landscape-level that could guide practices by forest professionals. However, the Board recognizes that the process would take years to implement across the province. For the fisher—a species at risk in an area heavily logged in response to mountain pine beetle and wildfire—immediate action is needed to clarify how habitat will be managed to ensure populations are not extirpated in the meantime.

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<sup>1</sup> FPB/IRC/217 - Timber Salvage Harvesting & Fisher Management in the Nazko Area, <https://www.bcfpb.ca/wp-content/uploads/2018/10/IRC217-Nazko.pdf>

In accordance with section 131 of FRPA, the Board is making the following recommendations:

1. Ministry of Forests Lands Natural Resource Operations and Rural Development (FLNRORD) promptly clarify its expectations to licensees for application of best practices for fisher, including application of the fisher tool in the DPG.
2. Once FLNRORD clarifies its expectations, Canfor incorporate them into its forest stewardship plan.
3. FLNRORD apply the legal provisions in FRPA to identify and conserve the habitat required for fisher in the DPG.

The Board requests that government respond to recommendations 1 and 3 and Canfor respond to recommendation 2 by September 7, 2021, indicating:

- a) that they accept the recommendations and describe how they will address or have addressed them; or
- b) that they partially accept the recommendations and provide reasons why, and how they will address them; or
- c) that they are not accepting the recommendations, and provide reasons why.

Following receipt of a response to the recommendations, the Board will monitor the actions taken to address the findings of this investigation.

# Introduction

## The Complaint

On May 9, 2019, the Board received a complaint from the holder of trapline TR0712T005 (the trapline). The complainant is concerned that there has been no planning for wildlife and no retention of wildlife habitat, while his trapline has been subject to extensive salvage<sup>2</sup> harvesting in response to beetle infestations and wildfire. The complainant told the Board that his overall trapping success has declined by 90 percent over the last 10 years, and he attributes that decline to timber harvesting practices, including large clearcuts and a lack of retention. The complainant said that three blocks planned for harvesting by Canfor in the Bobtail Mountain Park area are the last remaining suitable fisher habitat within the boundaries of his trapline, and he would like this forest retained.

## Background

### Location and History

A trapline is a tenure issued by government that permits its holder to harvest furbearers within a specified area, but it does not guarantee trapping success. The complainant’s trapline is a 25 897-hectare area located west of Prince George, within the Prince George Timber Supply Area (TSA), including the area within the two provincial parks (see Figure 1). The trapline is within the traditional territories of the Nazko, Lheidlli T’enneh, and Saik’uz First Nations. The Forest Practices Board recognizes the importance of their historical relationship with the land that continues to this day.

The complainant has held the trapline for 10 years, trapping marten, fisher, wolves, coyotes, wolverine, beaver, lynx, otter and other smaller furbearers. Several forest licensees operate within the trapline, and they have conducted extensive salvage harvesting in response to mountain pine beetle and wildfire.

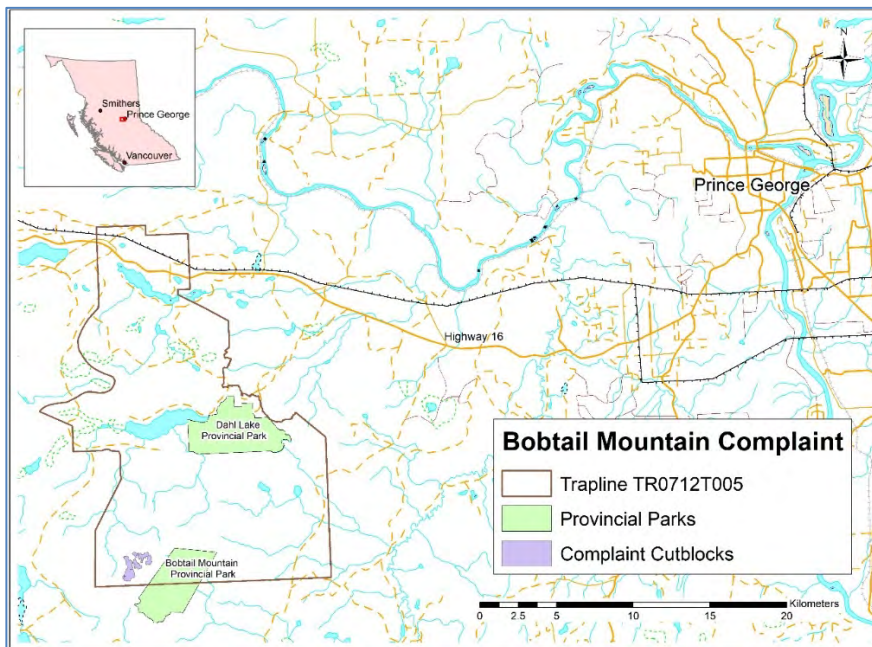


Figure 1. Location of the complaint

<sup>2</sup> According to the spruce beetle management direction, *Salvage harvesting* is primarily conducted to recover damaged timber before it loses wood product value. The trees no longer have any live beetles, therefore this tactic does not reduce beetle populations.

On April 27, 2018, the complainant received a referral package from Canfor proposing seven cutblocks within the trapline. The package included a map showing the proposed blocks, previously referred blocks, reserve areas, and harvested areas, and it invited comment. On June 1, 2018, the complainant called Canfor to express concern that the planned blocks left no green timber on his trapline. He said he would like his trapping rights considered in harvest plans and that Canfor should be leaving what green timber remains within his trapline to support habitat for wildlife, including fisher. In response to the complainant's concerns, Canfor dropped two blocks from its plans.

In July 2018, the complainant met with the Prince George Natural Resource District (DPG) district manager to discuss his concerns. The district manager committed to looking into the matter further. Although the district manager acknowledged making the commitment to the complainant, he could not recall following up and the complainant said he never heard back from anyone at the DPG office.

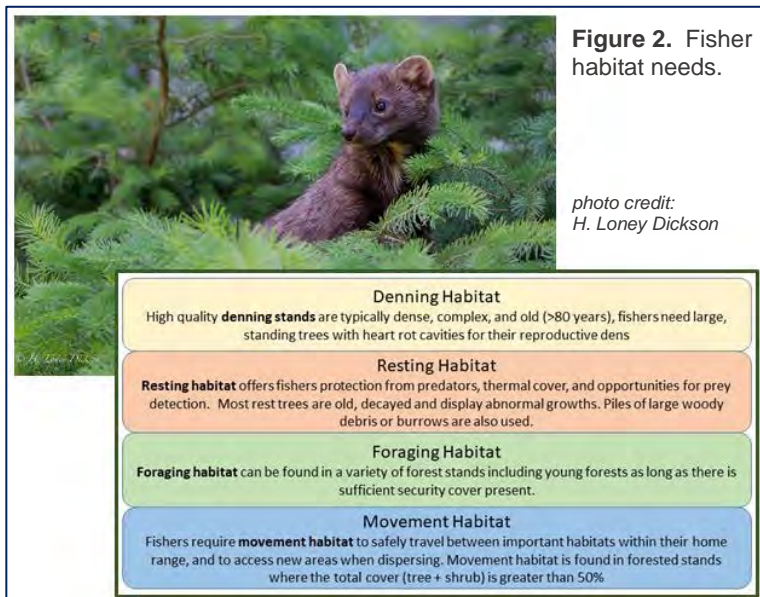
In May 2019, the complainant submitted this complaint to the Board, focusing on three of the remaining five blocks – NOR517, NOR518, and NOR519. Canfor harvested two of the three blocks shortly after the complaint was filed, and harvested the third block in the spring of 2020. Canfor told the Board it prioritized the harvesting of the three blocks for forest health reasons. It said there was spruce beetle in the blocks and dead pine to salvage.

## **Fisher Ecology**

Fishers (*Pekania pennanti*) belong to the weasel family, and are closely related to the marten. Fishers are a forest-dependent carnivore. They successfully establish a home range<sup>3</sup> where there is sufficient suitable habitat.<sup>ii</sup> They need suitable resting and maternal den sites at the stand level, and movement habitat with tree cover, dense shrub cover, and foraging habitat<sup>iii</sup> at the landscape-level (Figure 2).<sup>iv</sup> Fishers are typically found in the valley bottoms, in old spruce forest and/or coniferous and mixed forests, usually associated with riparian areas, and so there is overlap with their habitat needs and the timber harvesting land base. Fishers require stands that are structurally complex (i.e., abundant large trees, snags and coarse woody debris) and provide closed canopy forest with good snow interception. Fishers generally stay in or near forests with at least 30 percent canopy closure and a productive understory.

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<sup>3</sup> An average fisher (female) home range in the moist/wet subzones of sub-boreal forests found in the area of this complaint is 50 square kilometres.



Forest management has the single biggest effect on the quality and quantity of fisher habitat in BC.<sup>v</sup> Forest harvesting typically removes many of the habitat features that fisher rely on at a stand level, and reduces the connectivity of habitat at the landscape-level. Researchers estimate that harvesting 250 hectares of forest in a 50-square-kilometre area within a 12-year period reduces the likelihood of the area supporting a resident fisher by 50 percent. However, the impact of timber harvesting can be reduced if timber harvest plans address fisher habitat at both the landscape-level and stand level. For example, leaving some large trees within a cutblock can

substantially reduce the time it takes for an opening to provide suitable habitat—to about 20 years from almost 100 years. The increased coarse woody debris from dead pines in non-salvaged areas, and the release of understory trees, may enhance the quality of pine-dominated stands as both resting and foraging habitat.<sup>vi</sup>

## Fisher Habitat Management

At the time this complaint was made, BC’s Conservation Data Centre identified the fisher as “blue-listed” (special concern), but its status was upgraded to ‘red-listed’ for the Columbian (Interior) Population in spring 2020. The red listing applies to the fisher population in the trapline area, and it means that the species is endangered or threatened. The Province is now in the early stages of developing a provincial fisher recovery plan, which will identify and facilitate the implementation of priority actions to ensure the survival of the species.<sup>vii</sup> Although the fisher is now red-listed in BC, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has not recommended fishers be listed under the federal *Species at Risk Act*, and therefore no Federal recovery strategy is in development.

Government policy on wildlife habitat management assumes that the network of protected areas (e.g., parks) in combination with the requirements of the *Forest and Range Practices Act* (FRPA) will maintain ecosystem processes and habitat for most wildlife.<sup>viii</sup> If government is satisfied a species relies on habitat that requires special management not otherwise provided for in legislation, and may be adversely impacted by forest or range practices, it can list the species as a species at risk<sup>ix</sup> under FRPA. The Ministry of Environment listed the fisher as a species at risk in 2006.

Once listed as a species at risk, government is able to use tools in FRPA to establish specific habitat management measures for the species, as described in Table 1. However, government has not established habitat management measures for fisher in the DPG.

**Table 1.** FRPA Habitat Management Measures

Management Measure	Description	Authority	Established for fisher in DPG?
Wildlife Habitat Area (WHA)	Specified areas that are necessary to meet the habitat requirements of a species at risk. The purpose of WHAs is to conserve those habitats considered most limiting to a given species <sup>x</sup>	GAR* s.10(1)	No
Objectives	Objectives may be established within WHA's when special management is required.	GAR s.10(2)	No
General Wildlife Measures	General wildlife measures may limit, direct, or restrict forest or range management practices within a specified area such as a WHA	GAR s.9	No
Section 7 Notice	Notifies forest stewardship plan (FSP) holders of the applicable species and indicators of the amount, distribution and attributes of the wildlife habitat applicable to the FRPA wildlife objective. Initiates the requirement for a FSP result or strategy.	FPPR** s.7(2)	No

\* Government Actions Regulation (GAR)

\*\* Forest Planning and Practices Regulation (FPPR)

## Legal Requirements

According to section 5 of FRPA, a FSP must specify intended results or strategies in relation to objectives set by government. FRPA incorporates objectives for wildlife and biodiversity values that apply at both the landscape and stand level.

### *Landscape Level*

Government established an objective for wildlife and landscape-level biodiversity under the *Forest Planning and Practices Regulation* (FPPR) section 9 to, “without unduly reducing the supply of timber from BC's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape”. Instead of preparing a result or strategy to address this FPPR objective, all FSPs in the DPG have defaulted to the *Prince George Biodiversity Order* FSP content.

The order established landscape level biodiversity objectives in the Prince George TSA,<sup>4</sup> addressing old forest retention, old interior forest, and young patch size distribution. Targets are set at a landscape scale, and therefore compliance must be assessed at that scale. Old forest requirements can be an important coarse filter tool to manage habitat. The order does not address the retention of any specific wildlife habitat, and the old forest requirements are non-spatial, meaning there are no mapped old forest areas. Forest planners are not able to evaluate the quality of the old forest and the contribution to habitat values through non-spatial analysis.

Government established a wildlife objective under FPPR section 7 to, “without unduly reducing the supply of timber, conserve sufficient wildlife habitat in terms of amount of area, distribution and attributes for the survival of species at risk”. Even though fisher is designated a species at risk under

<sup>4</sup> The DPG and the Stuart Nechako Natural Resource District are within the PG TSA.



FRPA, this status confers no automatic protection. Since no section 7 notice is in place for fisher in the DPG, there is no requirement for FSP holders to address FPPR objective 7 and include a result or strategy for the management of fisher habitat. FSP holders may voluntarily include a result or strategy for a species at risk, such as fisher, in their FSP.

### *Stand level*

FRPA includes general stand level requirements that contribute to fisher habitat management. There is a general requirement to protect riparian areas, related to the objective for water, fish, wildlife, and biodiversity within riparian areas, in section 8 of the FPPR. The moist rich sites associated with riparian zones in this type of ecosystem found in this trapline (sub-boreal spruce [SBS] biogeoclimatic zone), often incorporate reproductive denning and rest-site structures suitable for fisher.<sup>xi</sup>

There is also a general requirement to retain wildlife trees, related to the objective for wildlife and biodiversity at the stand-level, in section 9.1 of the FPPR. Retention of wildlife trees assists in the conservation of stand-level biodiversity and provides habitat for wildlife. Wildlife tree retention areas (WTRA) provide a present and future source of coarse woody debris, and help to maintain understory vegetation in an undisturbed state.<sup>xii</sup> The stand-level wildlife and biodiversity objective is the only legal requirement in the DPG that relates to management of structural attributes that may benefit fisher habitat.

Canfor's FSP must include a result or strategy in relation to both the objective for water, fish, wildlife, and biodiversity within riparian areas and the stand-level wildlife and biodiversity objective. Section 21 of FRPA requires the holder of a FSP to ensure the intended results or strategies in the plan are achieved.

### **Non-legal Guidance**

In addition to legal requirements, there is non-legal guidance for forest professionals to consider when exercising professional judgement and advising forest licensees. The non-legal guidance applicable in this case includes fisher management guidance, spruce beetle management expectations and retention expectations, and the Prince George Land and Resource Management Plan.

The communication of non-legal guidance to forest licensees occurs in various ways. The province's chief forester has set expectations for forest licensees and forest professionals to consider. District managers also write letters to licensees to set out their expectations of what to consider when preparing a FSP. Both of these methods of communicating expectations clearly indicate the outcome expected by government, although still voluntary for forest licensees to achieve. The provincial government, multi-agency working groups, and research organizations publish guidance and scientific literature to support the integration of best practices and continuous improvement into forest management planning and practices. This approach to communication relies on the voluntary integration of the information into the forest management approach by forest licensees.

### *Fisher Management Guidance*

The Identified Wildlife Management Strategy (IWMS) published species accounts for identified wildlife, including the fisher. It addresses species information such as distribution and habitat descriptions, and provides recommendations for management of the species' habitat.<sup>xiii</sup> The IWMS documents are published as guidance, without specific government expectations attached.

A Fisher Habitat Working Group (the working group) was formed in 2009 with the goal of communicating information to those who can affect the quantity and quality of fisher habitat on the landscape across British Columbia. The working group has compiled web-based resources including

scientific literature and guidance on species and habitat management, research projects, and trapping-related information. The working group has provided fisher habitat training to hundreds of forestry personnel across the province, including training on the fisher habitat spatial analysis in 2013.

In 2017, the working group published the Spatial Fisher Habitat Tool,<sup>xiv</sup> based upon the 2013 spatial analysis. The tool uses vegetation resources inventory data and empirical data collected from free-ranging fishers<sup>xv</sup> to assess proposed cutblocks and to show how the area contributes to fisher habitat. The tool helps identify the type of stands that fishers use for denning, rearing, resting, and movement. The tool assesses the availability of fisher habitat on the landscape using the size of a female fisher's home range to determine if a proposed cutblock has a habitat type that is below targets for fisher habitat and should be considered for retention. The output from the tool identifies retention targets, areas licensees should avoid harvesting or retain within cutblocks, and structural attributes to retain. The working group carried out training sessions on the tool, and advised licensees that use of the tool was voluntary.

### ***Spruce Beetle Management Expectations***

Government has published several expectation documents about spruce beetle management and provided licensees with information on the ecological value of dead standing forest. As part of this investigation, the Board reviewed the March 2016 *Omineca Region Spruce Beetle Management Practices* (spruce beetle management direction), and the Sept 2017 *Omineca Region Guidance – Stand and Landscape Level Retention for Harvesting in Response to Spruce Beetle* (retention expectations) to assess soundness of spruce beetle-related management decisions. The documents outline beneficial management practices to mitigate the impact of spruce beetle on timber supply and maintain ecosystem function when harvesting forests that are impacted by spruce beetle. Both of these documents were provided to forest licensees as government's expected approach to forest management. These expectations are relevant to the complaint, as the three blocks of concern had signs of past and/or current spruce beetle activity.

### ***Prince George Land and Resource Management Plan***

The Prince George Land and Resource Management Plan (the LRMP), approved in 1999, is the most current land use plan for the Prince George area. The LRMP continues to provide strategic direction for resource development on Crown land. It was developed with participation from the public and stakeholders, and therefore is a source of information on public and stakeholder expectations for the management of Crown resources. The LRMP suggests licensees cooperate with trappers to minimize impacts on each other's operations, and produce a consolidated forest development plan to aid trappers in assessing both the individual and cumulative impacts of resource development to their operations. The LRMP also includes an objective for management of marten habitat. Marten are closely related to fisher and have similar habitat requirements. When this LRMP was approved, the Ministers directed the participating ministries to implement the plan.<sup>xvi</sup> Adherence to the LRMP objectives continues to be voluntary, as government never legally established them.

## **Investigation Findings**

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Fishers require forested habitat for different needs at a variety of spatial scales. The Board investigation looked at the three proposed cutblocks of concern to the complainant and observed the forest practices across the trapline. According to the complainant, the three blocks provided the last remaining mature forest capable of providing adequate habitat for fisher in his trapline. The three blocks consisted of old

forest<sup>5</sup> and mature forest,<sup>6</sup> according to the vegetation resource inventory (VRI) data, and contained a diverse range of species including lodgepole pine, spruce, balsam fir, Douglas-fir, and some deciduous trees. The complainant believes the stands made good fisher habitat because they had a diversity of tree species, were structurally complex, and had a closed canopy in areas. Although there is still eight percent of the trapline area remaining as old forest and eleven percent classified as mature,<sup>7</sup> the complainant indicates that the unharvested areas are too small to provide good quality habitat. The Board’s observations of the trapline area align with that of the complainant. There are large clearcut areas with little to no retention. Areas that have been retained are small and fragmented, and do not provide the landscape connectivity that fishers require.

The complainant questioned Canfor's reasons for harvesting the blocks for beetle management, as the affected pine was dead and the live spruce beetle infestation level was very low. He believed that, with almost no susceptible stands in the area, the spruce beetle did not pose a significant threat of spreading. He wanted Canfor to drop all three blocks from the plan.

The Board visited the blocks in the fall of 2019. At that time, NOR517 and NOR519 had been harvested, and NOR518 was standing. The investigation examined whether Canfor met legal requirements for stand-level biodiversity, and what steps Canfor took to address the complainant’s concerns, including consideration of the non-legal guidance described above. NOR518 was harvested shortly after the field trip.

## 1. Did Canfor meet legal requirements for management of fisher habitat?

As discussed earlier, government has not carried out any landscape-level habitat planning for fisher and has not established management measures for fisher habitat at the stand level. The *Prince George Biodiversity Order* FSP content was not assessed for this complaint as it applies at a landscape scale and is not mapped spatially. Canfor did not voluntarily include a result or strategy for fisher habitat in its FSP related to FPPR objective 7. This means that there are no legal requirements for the management of fisher habitat that apply to the three cutblocks or the surrounding landscape.

Section 21 of FRPA requires Canfor to achieve its FSP result for the objective for water, fish, wildlife, and biodiversity within riparian areas. Canfor’s FSP result is to retain a riparian reserve zone and riparian management zone as described in Table 2. Canfor’s three planned blocks included riparian management areas<sup>8</sup> consistent with the requirements of their FSP.

**Table 2.** Riparian Management Area Requirements

Stream Class	RRZ Width	RMZ Width	RMZ Retention Amount
S3	20	20	>=25% of RMZ area
S4	0	30	Understory within 5m 15 trees within 10m

<sup>5</sup> Old forest in the SBSmw is greater than 120 years, according to the *Prince George Biodiversity Order*.

<sup>6</sup> Mature forest in the SBSmw is greater than 100 years of age, according to the *Biodiversity Guidebook* (1999). The *Prince George Biodiversity Order* does not define an age for “mature” stands.

<sup>7</sup> Based on GIS analysis conducted by Canfor after the three blocks had been harvested.

<sup>8</sup> The riparian management area includes the riparian reserve zone and the riparian management zone of a stream.

Section 21 of FRPA requires Canfor to achieve its FSP result for the stand-level wildlife and biodiversity objective. Canfor’s FSP result is to retain 3.5 percent of cutblocks as WTRA, for any cutblock greater than 15 hectares in size. Canfor exceeded the stand-level retention result set out in its FSP, as each of the three blocks retained greater than 3.5 percent in WTRA (see Table 3).

**Table 3.** WTRA Percent by Block Based on Block Site Plans

<b>Block</b>	<b>Block Area (ha)</b>	<b>WTRA Area (ha)</b>	<b>% WTRA</b> (at least 3.5% required)
NOR517	46.4	3.2	7
NOR518	19.8	1.4	11
NOR519	71.6	12.1	17

## **Finding**

There were no legal requirements for the management of fisher habitat.

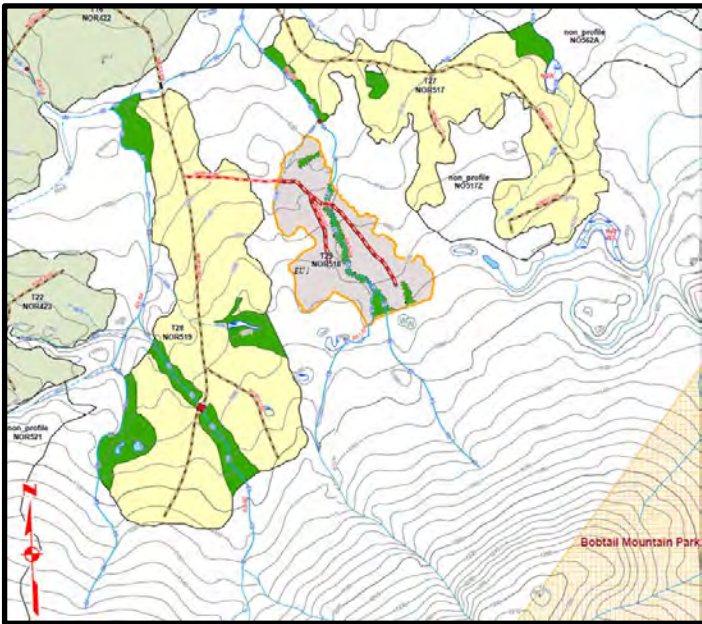
Canfor complied with section 21 of FRPA. It achieved the intended results for water, fish, wildlife, and biodiversity within riparian areas and wildlife and biodiversity at the stand-level in its FSP.

## **2. What did Canfor do to address the complainant's concerns?**

While Canfor had no legal obligation for the management of fisher habitat, it did take steps in attempt to address the complainants concerns.

Canfor became aware of the complainant's concerns in April 2018. In response to those concerns, Canfor deferred two cutblocks from the plan, as they contained young mixed species forests with no active beetle, and let the complainant know about this change. According to the spatial fisher tool, both of the deferred blocks included some forest types that fishers commonly use for resting.

The three blocks of concern also included habitat that fishers commonly use for resting. In response to the complainant’s concerns about harvesting fisher habitat, Canfor increased the amount and orientation of WTRA. Although the WTRA did not overlap with the parts of the block containing forest suitable for resting habitat, Canfor did anchor the WTRA on riparian features that connected to mature timber. This addressed movement habitat by increasing the connectivity of overstory through the blocks and the block boundary (see Figure 3). Canfor retained scattered mature deciduous trees where possible, and understory conifers on one block. On the one block with retained understory conifers, Canfor used a processing and forward harvest system that increased the amount of structural retention compared to harvesting with a feller buncher and grapple skidder. After the blocks were harvested, Canfor piled coarse woody debris and windrowed slash to restore small mammal habitat elements within the blocks.



**Figure 3.** Site-plan map for block NOR518, showing adjacent blocks NOR519 and NOR517, and WTRA areas in dark green.

During the investigation, Canfor proposed a non-legal landscape-level habitat corridor to connect the two parks within the trapline area, Bobtail Mountain Provincial Park and Dahl Lakes Provincial Park. This corridor consists of approximately 300 hectares of mixed-wood stands and high value snags in low-lying riparian areas that provide potential habitat for cavity nesters, including fisher. Some lodgepole pine stands with abundant blowdown were included to maintain connectivity. Canfor indicated that this area was intended to be managed primarily to maintain and enhance biodiversity values, including fisher habitat, and said it would share this information if joint planning occurs with other licensees in the area.

The complainant did not agree that this was suitable habitat and this proposal did not resolve his concerns.

Canfor could have voluntarily decided not to harvest the three blocks. However, Canfor correctly noted that if it did not harvest the three blocks, another licensee could. Canfor is one of several licensees legally entitled to harvest in this area<sup>9</sup>.

All three blocks had a component of live spruce trees, with evidence of past or active spruce beetle damage (Appendix 1). The spruce beetle management expectations present alternatives to clearcut harvesting to mitigate the impact of spruce beetle on midterm timber supply and to maintain ecosystem functions. Due to the risk of windthrow, Canfor proceeded with clearcut harvesting, retaining reserves and understory conifers and mature deciduous where possible.

### **Finding**

To address the complainant’s concerns about harvesting in fisher habitat Canfor applied stand-level measures including increased amount of WTRA, riparian area connectivity, retention of scattered mature deciduous trees, and the creation of coarse woody debris piles following harvesting. It also designed a non-legal landscape-level corridor to protect an area connecting the two parks and deferred two cutblocks from harvest.

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<sup>9</sup> Multiple volume-based licensees are legally entitled to operate anywhere within a TSA to harvest their apportioned volume of the allowable annual cut.

## Discussion

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Although fishers are a species at risk under FRPA and are now a red-listed, or endangered, species government has not implemented the legal tools in FRPA and instead, has relied upon non-legal guidance to influence habitat management in the DPG. This approach is not working; government has admitted to the Board that the guidance for fisher habitat management is being implemented at levels below what is necessary to support sustainable populations.<sup>10</sup> Government also said that current stand-level retention guidance for licensees is not sufficient to address landscape and regional-scale habitat supply issues.<sup>xvii</sup>

This section discusses what else could have been done by government and Canfor to manage fisher habitat in the area of the complaint.

### Government Use of Available Legal Tools

Government has the ability to protect fisher habitat through several mechanisms including the *Government Action Regulation* (GAR). Orders under GAR are limited by policies that address the requirement in FRPA to “not unduly reduce the supply of timber.” While the procedures and accounting for this are complex, the Board examined the IWMS policy and status of management measures in DPG, and determined that the DPG still has flexibility to use GAR if needed to protect species.

Fisher has been listed as a species at risk under FRPA for 14 years, yet there are still no protective measures in place for fisher in the DPG. Government staff told the Board that they have limited capacity for establishment of habitat management measures. Staff have focused their limited capacity on developing wildlife habitat areas for fisher in the Mackenzie TSA because fisher inventory information exists in that area.

Government could also issue a notice under section 7 of the FPPR, specifying the amount, distribution and attributes of fisher habitat required for the survival of this species at risk. The notice would trigger the FRPA objective for wildlife, and licensees would be required to develop FSP content to address those requirements.

Instead of using the legal tools under FRPA, government staff told the Board that forest planners should be integrating the fisher management guidance into their plans. The district manager’s *Expectations on the Development of Forest Stewardship Plans in the Omineca Region*, July 2016, states that incorporation of non-legal information will be an area of focus through the adjudication and approval process of FSPs, but it does not list specific expectations for incorporation of fisher habitat guidance. The DPG approved the current FSPs without incorporation of the fisher management guidance. Although government expressed concern about the lack of evidence that licensees are following the fisher management guidance, government has not taken specific action to protect fisher habitat in the DPG.

### Canfor’s Consideration of Fisher Habitat Guidance

Canfor had the opportunity to assess the impact of its planned blocks on fisher habitat by applying the spatial fisher habitat tool or consulting with a qualified professional about the potential impact of its

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<sup>10</sup> See the government response to the Board’s recommendations in the report “*Timber Salvage Harvesting and Fisher Management in the Nazko Area.*” Available from: <https://www.bcfpb.ca/wp-content/uploads/2021/02/IRC217-Response-to-Recommendations.pdf>

plans on fisher habitat, but it did not do so. The targets and recommendations generated by the analysis would not be legally binding, but would represent the best available science to inform decision making when operating in fisher habitat. The measures applied by Canfor at the stand level within the three blocks of concern, and at the landscape-level by way of the non-legal connectivity corridor, are consistent with the type of management strategies identified in the spatial fisher habitat tool. If Canfor had carried out the analysis, it may have better understood the potential for its harvest plans to impact fishers' home range, where to locate retention and what specific features to incorporate at the stand-level.

Canfor could also incorporate a result or strategy for fisher under the wildlife objective in its FSP. This would encourage stakeholder input into the result or strategy. It would also require operational staff to consider the potential for fisher habitat when developing an area.

## Canfor's Consideration of Spruce Beetle Management Expectations

Canfor told the Board the three blocks were a priority for harvest due to forest health reasons; it was concerned about the spread of spruce beetle to adjacent stands and wanted to harvest the dead pine component. Canfor's cruise data (Appendix 1) showed that two out of the three blocks were pine leading with varying levels of dead pine and that the tree mortality due to spruce beetle was low. Canfor's reconnaissance data for the third block showed that the spruce beetle population was between 5 and 10 percent (see Appendix 1). According to the spruce beetle management direction, these were not high priority blocks for sanitation harvest<sup>11</sup> for spruce beetle; they had low levels of new attack and varying levels of spruce in the stands (Appendix 1). The guidance includes alternate beetle suppression options, such as sanitation harvesting of currently infested spruce and salvage of dead pine combined with use of trap trees or pheromones, or small patch (less than one hectare) removal where possible to reduce the likelihood of windthrow events. These alternative options may have resulted in the retention of many live and non-susceptible trees.



<sup>11</sup> According to the spruce beetle management direction, sanitation harvesting for spruce beetle suppression maximizes the extraction of infested spruce stands with adult and young beetles in order to reduce the existing population and to prevent their spread.

## Conclusions

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The investigation considered whether Canfor complied with the legal requirements for wildlife and biodiversity at the stand-level on the three blocks. Despite fisher being a species at risk in BC, government has not implemented any habitat management measures for fisher in the DPG. Therefore, there are no legal requirements in effect specific to fisher habitat. Canfor did exceed legal requirements for the amount of wildlife tree retention areas.

The investigation also considered what Canfor did to address the complainant's concerns. To address the complainant's concerns, Canfor deferred two blocks from its harvest plans. For the three remaining blocks of concern, Canfor increased the amount and orientation of WTRA and used riparian areas to create connectivity corridors. Canfor used a clearcut with reserves silviculture system on all three blocks, retaining mature deciduous trees where operationally feasible. The retention of understory conifers improved when an alternate harvest system was utilized on one of the blocks. After harvest, it created coarse woody debris piles and windrowed slash to restore small mammal habitat elements within the block.

Although Canfor applied some measures to address the complainant's concerns, it had other opportunities to address fisher habitat. Canfor could have used the spatial fisher habitat tool to better understand the potential for its harvest plans to impact fishers' home range, and could have consulted with a qualified professional. According to the spruce beetle management direction, these blocks were not a priority for sanitation harvesting, yet the objective of limiting the spread of spruce beetle and salvaging dead pine led to the three cutblocks being clearcut harvested.

Government has approached fisher habitat management by investing in non-legal guidance and planning tools for forest professionals and licensees to consider, but admits that this approach is not working. Government has the ability to utilize the legal tools in FRPA to require licensees to manage habitat for fisher. Clear objectives set by government would improve certainty for both fisher habitat management and licensee planning.



## Appendix 1: Summary of Species and Beetle Damage from Timber Cruise Data

Block	Leading Species	Total Basal Area (m <sup>2</sup> )	Species (% basal area)	Live Beetle Attack (m <sup>2</sup> )	Live Attack (%)	Dead Beetle Attack (m <sup>2</sup> )	Dead Attack (%)	Total Dead Basal Area (%)
NOR517	Lodgepole pine	29.3	69	0	0	22.5	77	
	Spruce	11.4	27	0	0	0.4	3	
	Other	1.6	4	0	0	0	0	
	<b>Total</b>	<b>42.3</b>				<b>22.9</b>		<b>54</b>
NOR518	Lodgepole pine	0.5	1	0	0	0.5	100	
	Spruce	24.0	63	1.0	*4	1.9	8	
	Other	13.5	36	0	0	0	0	
	<b>Total</b>	<b>38.0</b>				<b>2.4</b>		<b>6</b>
NOR519	Lodgepole pine	26.4	58	0	0	13.7	52	
	Spruce	16.9	37	0	0	1.4	8	
	Other	2.1	5	0	0	0	0	
	<b>Total</b>	<b>45.4</b>				<b>15.1</b>		<b>33</b>
<i>*Canfor's reconnaissance data estimated 5-10 percent live attack.</i>								

## END NOTES

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- <sup>xiv</sup> Fisher Habitat Working Group. BC Fisher Habitat and Forestry Web Module. <https://www.bcfisherhabitat.ca/habitat-tools/>
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**Forest  
Practices  
Board**

PO Box 9905 Stn Prov Govt

Victoria, BC V8X 9R1 Canada

Tel. 250.213.4700 | Fax 250.213.4725 | Toll Free 1.800.994.5899

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