



**Forest
Practices
Board**

Western Toads and Forest Harvesting near Summit Lake

Complaint Investigation #16041

FPB/IRC/214

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Board Commentary

The Board investigated a complaint from the Valhalla Wilderness Society about the management of western toads by the Nakusp and Area Community Forest (NACFOR) and the Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNRO) during forest harvesting operations near Summit Lake. The western toad is a federally listed species under Schedule 1 of the *Species at Risk Act* and it was blue-listed in British Columbia prior to January 2017, when it was downgraded to the yellow list. This species is sensitive to forestry practices (e.g., road grading and harvesting, etc.), but is not currently protected under the provincial *Forest and Range Practices Act* (FRPA).

The Board acknowledges the efforts of both NACFOR and FLNRO to develop management strategies for western toads near Summit Lake and for contributing to research and seeking expert advice regarding toad habitat and population protection, given that there are currently no legal requirements to do so. The Summit Lake toad population is recognized as regionally important and, given its significance, the Board believes that a cautionary management approach is appropriate until some form of legislated protection for the population is put in place.

Management strategies developed by FLNRO for western toads at Summit Lake acknowledge that efforts are underway to designate this population as regionally important wildlife under the *Government Actions Regulation* (GAR) of FRPA. This would allow for legislated protection of the most important western toad habitat in proximity to Summit Lake in the future.

This complaint specifically addressed the impact of forestry operations on western toads. However it is clear that adjacent land uses, such as motorized recreational trails (some of which were approved by FLNRO during the period of this complaint), have the potential to interact in a cumulative manner with forestry impacts to affect the Summit Lake toad population. Recreational developments should also require a cautionary approach and the Board urges government to consider what it can do to protect this population from other land uses as well.

In accordance with Section 131 of FRPA, the Board makes the following recommendation:

Government should proceed quickly to designate this species as regionally important wildlife under GAR, which would enable the establishment of wildlife habitat areas and implementation of general wildlife measures for protection of western toad habitat, where such measures are warranted.

In accordance with Section 132 of FRPA, the Board requests that FLNRO respond to this recommendation by September 30, 2018.

Introduction

The Complaint

On May 24, 2016, the Forest Practices Board received a complaint from a representative of the Valhalla Wilderness Society (the complainant). The complainant asserts that forest harvesting and road construction and maintenance by the Nakusp and Area Community Forest (NACFOR) is impacting western toad habitat and directly causing mortality to western toads near Summit Lake.

The complainant says that NACFOR's practices are not consistent with commitments it has made to the public to follow western toad best management practices (BMPs) established by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRO). The complainant says that NACFOR has carried out forest practices outside of the preferred timing window specified in the BMPs and has harvested timber in a zone around Summit Lake that is under a two-year deferral. The deferral was established in the BMP document to allow more research on western toads to be completed. The intent of the deferral period is to allow more research on western toads to be completed.

What are best management practices (BMPs)?

BMPs are non-legal guidance, typically developed by government and provided to land users, designed to protect identified values during land-use activities.

The complainant wants NACFOR to stop harvesting in the Summit Lake area because it believes that forestry practices are not compatible with the habitat requirements and presence of western toads. They also want FLNRO to do more to protect the toads.

There are no specific requirements in the *Forest and Range Practices Act* (FRPA) to protect western toads, therefore, the Board did not examine NACFOR's compliance with FRPA. The Board's investigation¹ considered the following questions in order to address the complainants' concerns.

1. Did NACFOR take reasonable steps to protect westerns toads in its Summit Lake operating area?
2. Did FLNRO take reasonable steps to ensure forest practices protect the Summit Lake population of westerns toads?

¹ The Board's investigation involved a pre-harvesting site assessment of NACFOR's Summit Lake operating area and interviews with NACFOR staff, the complainant, FLNRO regional and district staff and FLNRO's consulting western toad specialist.

Background

Summit Lake is located adjacent to Highway 6, about 13 kilometres southeast of Nakusp, BC (see Figure 1), and supports one of the largest documented populations of western toads in the Kootenay region. Each spring, adult toads migrate from winter hibernation sites located in the forested area upslope of Summit Lake to lay their eggs in the shallow waters of the lake. Once hatched, the toadlets and the adults begin their terrestrial migration—starting in mid-August—from Summit Lake to adjacent forested habitats². Toads migrating to the southwest of Summit Lake must first cross Highway 6, which results in significant toad mortality. To reduce the loss of toads, the Ministry of Transportation and Infrastructure installed several underpasses, however, these have met with limited success. To increase awareness about the toads, community groups and other volunteers gather at Summit Lake each year for an event known as “Toadfest” to carry as many toads as possible across the highway.

The Western Toad

Western toads are found throughout most of BC with the exception of the far northeast part of the province. They are relatively common but population declines are suspected in southwestern BC.

BC is considered to be the centre of the toad’s distribution in western North America and the Kootenay region of BC is thought to have the highest numbers of western toads provincially.

Toad populations in BC are suspected to be in decline. This is due in part to developments (including forestry) in and around wetlands and mortality from traffic on roads during migration.

Source: BC Ministry of Environment and Climate Change (undated)

The southwest side of Summit Lake is Crown forest land and is within one of several operating areas in NACFOR’s community forest agreement. The area is referred to by NACFOR as its ‘Summit Lake operating area’ and is accessed by the Summit Lake Forest Service Road (Summit FSR). Interfor (a forest licensee operating nearby) holds the road use permit on the FSR, but NACFOR is responsible for its maintenance through a road use agreement with Interfor.

When NACFOR began planning the development of their operating area in 2013, they received information from a forestry contractor that western toads were in the area. At about the same time, the Selkirk Natural Resource District advised NACFOR that local residents were concerned about NACFOR’s development plans and the potential impact to western toads. The district recommended that NACFOR communicate with a regional FLNRO biologist who was leading a BC Hydro-funded western toad research project at Summit Lake looking at reducing toad mortality along Highway 6.

The complainant and some local residents have stated their opposition to NACFOR’s plans for harvesting. The complainant also asked government to protect the toads and their habitat by expanding Summit Lake Provincial Park to include most of NACFOR’s Summit Lake operating area. In 2016, after learning about NACFOR’s immediate plans to harvest, the complainant and some local residents established a blockade at the start of the Summit FSR.

² Migration timing windows can be variable depending on factors such as ambient air and water temperatures.

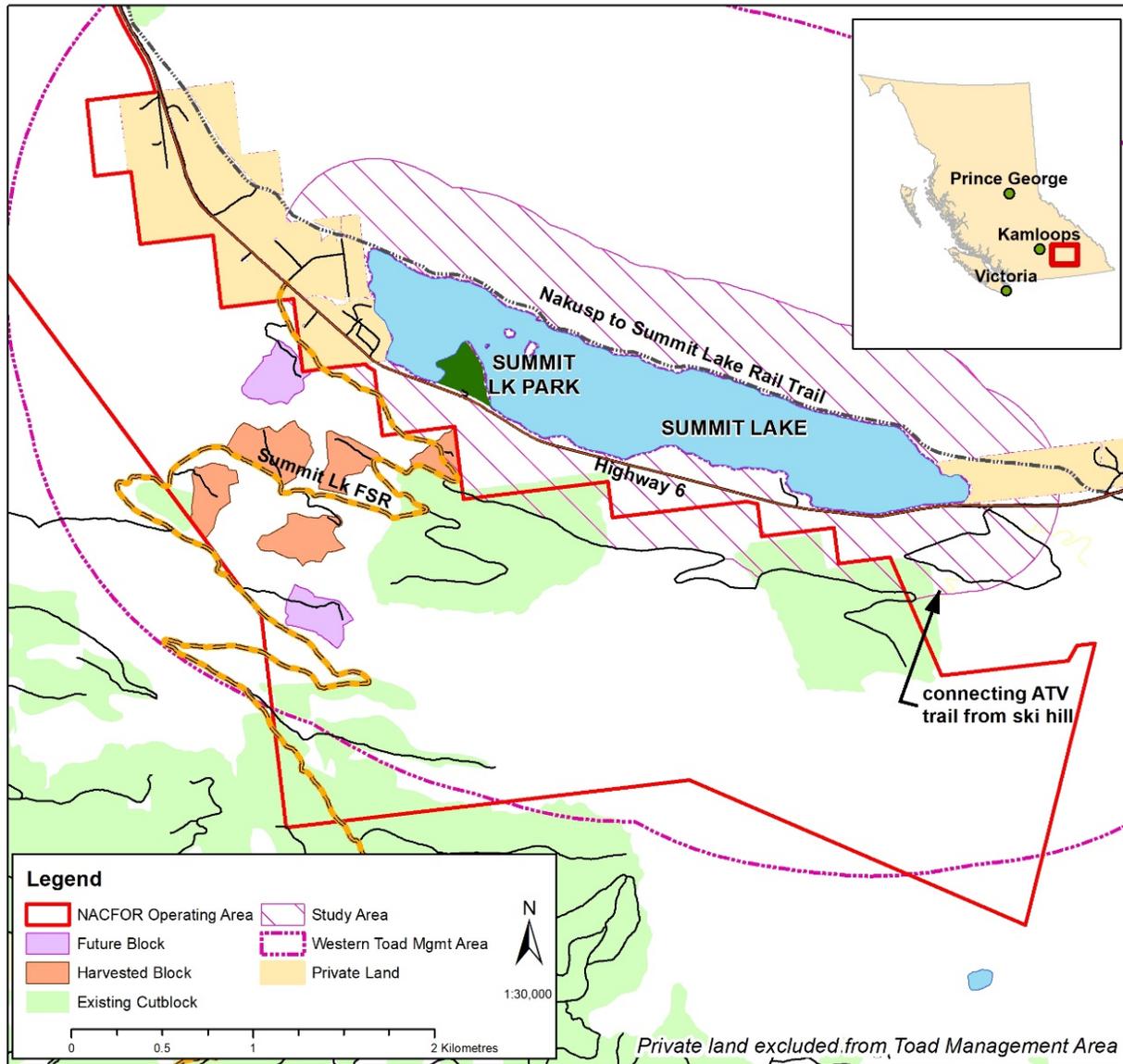


Figure 1. Location of Summit Lake, cutblocks planned or harvested by NACFOR, the outer 'western toad management area' and the smaller 'study area'.

The blockade lasted about a month and in mid-May 2016, NACFOR began grading the Summit FSR as part of its road maintenance obligations. After learning that equipment was working in the area, some local residents and representatives of the complainant walked a section of the road and observed hundreds of toads on the newly graded road and around a parked grader. The complainant then notified FLNRO and filed the complaint with the Board.

Conservation ranking and legal requirements to protect western toads

Western toads are listed under Schedule 1 of the federal *Species at Risk Act* (SARA), as a species of ‘special concern’.³ However, there are no legal requirements in SARA to protect the habitat for species of special concern. At the time the complaint was made, BC’s Conservation Data Centre identified western toads as ‘Blue’ listed (special concern), but their status was downgraded to ‘Yellow’ listed (least risk)⁴ on December 31, 2016.

Western toads are known to be sensitive to forestry practices, however they are not listed as a ‘species at risk’ or a ‘regionally important wildlife’ under FRPA—the provincial legislation that governs forest practices on Crown land. Unless wildlife are specifically listed under FRPA, neither wildlife measures nor designated areas to protect wildlife, including the western toad, can be established. There are also no objectives for the conservation of western toads in the Kootenay-Boundary Higher Level Plan Order.ⁱ

Management of forestry and western toads at Summit Lake

Efforts to reduce the loss of western toads as they cross Highway 6 near Summit Lake have been going on for over 40 years. Since 2010, BC Hydro’s Fish and Wildlife Compensation Program has been funding western toad research at Summit Lake, to document the life history of the toads, thereby enabling more effective BMPs to be developed.

Both FLNRO and NACFOR viewed the research project as a joint opportunity to develop and refine western toad BMPs—because NACFOR was undertaking forest practices in the area, and there was little current information on forestry/western toad interactions in British Columbia. In 2014 and 2015, NACFOR made financial contributions to the research project to learn more about the terrestrial habitat, seasonal movements and winter hibernating status of radio-tagged toads within its operating area. In addition to the research project, NACFOR carried out day-time surveys along transects of different areas occupied by toads including roads, cutblocks and forest and also carried out snow depth monitoring.⁵

³ Under SARA, a species of special concern means a wildlife species that is at risk of becoming a threatened or an endangered species because of a combination of biological characteristics and identified threats.

⁴ Since the last rank assessment, the BC Conservation Data Centre received new information that the threats against the western toad, including land use and disease (chytrid fungus), are lower than previously determined.

⁵ The FLNRO biologist and consulting toad specialist advised NACFOR that snow depths of at least 1 metre are required to protect hibernating toads from harvesting equipment.

In May 2015, NACFOR compiled the advice it obtained from various sources, supplemented with information from the scientific literature, and prepared a set of draft BMPs (BMP document #1). In December 2015, FLNRO developed a draft BMP document to guide forestry operations near Summit Lake (BMP document #2), replacing the BMPs that NACFOR had prepared. In February 2017, FLNRO published updated BMPs (BMP document #3) for a variety of land uses, with a focus on forestry, that apply within a 2-kilometre wide western toad management area around Summit Lake (Figure 1). For forestry activities, the updated BMPs include:

- a 2-year deferral on harvesting within a designated study area so that more research can be done on toad migration and habitat use (*note the deferral period does not apply to road maintenance*);
- timing windows of least risk to western toads; and,
- retaining specific forest attributes in riparian areas.

Summary of BMP documents that have been prepared for western toads at Summit Lake

- BMP document #1 – draft BMPs. Prepared by NACFOR in May, 2015.
- BMP document #2 –draft habitat considerations for forestry operations. Prepared by FLNRO in December 2015.
- BMP document #3 – western toad management strategies. Prepared by FLNRO in February 2017.

Discussion

Did NACFOR take reasonable steps to protect westerns toads in its Summit Lake operating area?

Since 2013, when they first became aware of western toads within their operating area, NACFOR staff say they have taken steps to learn about their habitat requirements, movement patterns, and to ensure their forestry activities minimize harm to the toads. NACFOR staff say they have sought and implemented advice from FLNRO and western toad specialists, contributed financially to western toad research and engaged the public on their approach to conducting forestry activities in western toad habitat.

Steps taken by NACFOR between 2014-2015

Throughout 2014 and 2015, NACFOR was in regular communication with FLNRO, the complainant and other stakeholders to hear and address their concerns about western toads. A FLNRO biologist provided NACFOR with a list of stand-level habitat attributes that could be considered for protection during forest harvesting. The biologist also suggested preferred operating windows for harvesting, including a winter window from November to April with a possible summer window from June 1 to August 1.

In February 2014, NACFOR staff retained a local wildlife technician to provide additional recommendations for mitigating harm to toads. NACFOR used information from experts and scientific literature to draft a set of BMPs. It also summarized concerns and responses it received from stakeholders and posted the information as a frequently asked questions page on its website.ⁱⁱ

NACFOR also produced a toad management brochure and held an open house to inform the public about its strategies for mitigating harm to the toads during forestry operations. NACFOR's toad management brochure re-stated FLNRO's suggestion of a possible summer window for harvesting.

Through 2015, the FLNRO biologist and consulting toad specialist undertook several field reviews of NACFOR's planned roads and cutblocks. The toad specialist advised that the low elevation cutblocks were probably of greater importance to western toads because of their complex stand structure, proximity to Summit Lake and use by western toads for hibernation. As a result, NACFOR agreed to have a field crew, under the supervision of the toad specialist, identify habitat elements in three of the planned lower elevation cutblocks. The habitat elements were incorporated into enhanced riparian reserves, wildlife tree patches and machine-free zones.

Steps taken by NACFOR from 2016 to February 2017

As NACFOR missed the 2015/16 winter harvest window due to the blockade, it started to plan the harvest of high elevation cutblocks in the 2016 summer window suggested by the FLNRO biologist in 2014. As part of its preparations, NACFOR monitored toad presence on forest roads in the vicinity of the high elevation cutblocks starting in April. Monitoring in late May and early June showed high numbers of toads emerging in those planned cutblocks. Based on that information and a follow-up discussion with FLNRO staff, NACFOR decided not to proceed with summer harvesting in 2016. The decision was communicated to FLNRO staff and posted on NACFOR's website.

NACFOR also sent a copy of its toad management brochure to the FLNRO biologist for comment. FLNRO suggested that NACFOR remove the reference to the window for summer harvesting, which it agreed to do. Instead, NACFOR stated that harvesting will be carried out between November and March. However, other strategies would be considered if site conditions prevented winter harvesting.ⁱⁱⁱ

In November 2016, NACFOR made plans to complete road building and improve a section of the Summit FSR in preparation for harvesting planned during the winter of 2016/17 (pending suitable snowpack conditions). NACFOR posted its intentions to harvest on its website and notified FLNRO. Snow pack conditions met FLNRO's suggested criteria for winter harvest, so five cutblocks, totalling almost 35 hectares, were harvested between January and April 2017.

A portion of one of the cutblocks that NACFOR harvested is in the 2-year deferral area (i.e. 1.9 of the 4.5 hectare cutblock). The complainant told Board investigators that NACFOR's harvesting in the deferral area is further evidence that it is not following the rules. NACFOR staff said they decided to harvest the cutblock because it was in the preferred harvest window for western toads, snowpack was appropriate, they had made investments into road construction and block layout and the cutblock was included in a previously issued cutting permit. Therefore, the cutblock was exempt from the 2-year deferral (FLNRO staff confirmed to investigators that the 2-year deferral was not intended to apply to cutting permits it had already issued). NACFOR staff stated that, for future operations, they intend to follow the BMPs and will continue participating in, and contributing to, toad research. NACFOR also agreed to postpone harvesting of an additional 22.7 hectares, even though it was included in a previously issued cutting permit, until the 2-year deferral has expired.

In May 2017, FLNRO and NACFOR staff field inspected two of the low elevation cutblocks harvested by NACFOR. FLNRO staff verified that road construction and harvesting met the intent of the BMPs. However, two areas for improvement were noted – and recognized by NACFOR staff – including greater retention of standing deciduous trees, if feasible, and increasing the number of small debris piles where fire hazard abatement may not be necessary.

Findings

The Board found that NACFOR took reasonable steps in its planning and practices to mitigate harm to western toads. NACFOR contributed to western toad research, communicated regularly with FLNRO and the public, engaged toad specialists to identify and protect stand-level attributes preferred by western toads, developed and implemented voluntary BMPs, and adhered to timing windows.

Did FLNRO take reasonable steps to ensure forest practices protect the Summit Lake population of western toads?

Currently, BMPs have only been prepared for the Summit Lake population of western toads. As some of the BMPs are generic (i.e., can be applied to other western toad populations), FLNRO has provided them to other licensees in the Kootenay region. While FLNRO has received enquiries from some licensees about the BMPs, the extent to which licensees are implementing the BMPs is unknown.

In addition to the BMPs, FLNRO regional staff have been exploring options under FRPA to require legally enforceable measures to protect western toads on forest land around Summit Lake and other toad populations in the region. Since western toads are not listed as a species at risk, staff say their only other option under FRPA is to identify western toads as a regionally important species. However, they say that a procedure has not been established to identify wildlife as a ‘regionally important species’ and there are no examples provincially where such a listing has been implemented. The matter is further complicated by the division of responsibilities for listing species under FRPA. Staff said that the Ministry of Environment and Climate Change is responsible for listing the species and FLNRO is responsible for establishing the orders for those species. With regard to western toads, staff said that, if such a ‘regionally important species’ designation could be implemented, some or all of the forestry BMPs could be made into legally enforceable measures.

FLNRO staff acknowledge that some of the conflict between the complainant, some local residents and NACFOR can be attributed to uncertainties about appropriate timing windows to conduct forestry activities in western toad habitat. In 2014, the FLNRO biologist suggested harvesting could occur during a period in the summer months. However, in subsequent versions of FLNROs BMP documents a preference for winter harvesting on suitable snowpack is cited. FLNRO staff said that some of the confusion over suitable windows for harvesting can be attributed to new information on the life history of the toads that became available as a result of the research work at Summit Lake. This information was used to adjust the BMPs over time. Staff also say that the BMPs are continually being improved and will be clarified where any ambiguity exists.

FLNRO staff also say that a coordinated, area-based plan, that includes the Highway 6 corridor near Summit Lake, forestry activities, recreation (e.g. the Nakusp to Galena trail) and land use on private

land, would provide more effective protection for western toads. The value of such a coordinated plan was highlighted during the Board's investigation when staff in another FLNRO section (in the same district) were not aware of the issues around western toads and authorized an ATV club to construct a trail from the ski hill near Summit Lake connecting to the Summit FSR. Although FLNRO encourages ATV users to abide by the BMPs, there are no enforceable timing windows that restrict their activities, especially at a time when western toads are most vulnerable. The Board also heard of herbicide use adjacent to Highway 6 near Summit Lake by the Ministry of Transportation and Infrastructure and the mowing of grass in Summit Lake Provincial Park—activities that the BMP document recommends be avoided.

Findings

The Board found that FLNRO took reasonable steps to ensure forest practices protect western toads at Summit Lake by conducting research and using that information to refine BMPs for forestry, as well as other land uses. FLNRO are also monitoring forest practices at Summit Lake to assess how well the BMPs are being implemented.

Conclusions

This investigation examined a complaint from the Valhalla Wilderness Society alleging that forest practices conducted by the Nakusp and Area Community Forest (NACFOR) are impacting western toad habitat and causing direct mortality to the toads. To address the complainant's concerns, the investigation considered the following questions:

1. Did NACFOR take reasonable steps to protect westerns toads in their Summit Lake operating area?

The Board concludes that, although there are no legal requirements under FRPA to protect western toads, NACFOR has taken reasonable steps to protect the toads. The steps include seeking advice from specialists, contributing to western toad research, identifying and retaining western toad habitat attributes and implementing available guidance on measures to protect the toads.

2. Did FLNRO take reasonable steps to ensure forest practices protect the Summit Lake population of westerns toads?

The Board concludes that FLNRO has taken reasonable steps to ensure that forest practices protect the Summit Lake population of western toads. FLNRO has led a multi-year research project on the toads and is providing on-going advice to NACFOR about its forestry practices, including implementation of BMPs.

ENDNOTES

- i The Kootenay Boundary Higher Level Plan Order guides management of public lands and resources, providing for the creation of resource management zones and objectives. The legal requirements and objectives in the order apply to a broad landscape but have limited application to specific cutblocks or access roads. Key objectives of the order include:
- biodiversity emphasis assigned by landscape unit;
 - retention targets for old and mature timber;
 - caribou retention zones (revised several times since 2002);
 - special management for streams licensed for domestic use; and
 - scenic areas

The order is available for download at: <https://www.for.gov.bc.ca/tasb/slrp/lrmp/cranbrook/kootenay/pdf/KBHLPOrder0925.pdf>

- ii NACFOR's web-based information on western toads is available at: <http://nakuspcommunityforest.com/projects/western-toad-management-at-summit-lake/>.
- iii NACFOR's toad management brochure makes the following statement regarding the timing of activities: "An important measure for minimizing direct impact to toads will be timing of operations. NACFOR will carry out harvesting from November to March during periods when toads are not migrating. By minimizing ground disturbance, winter harvesting will also mitigate impacts to toads during foraging and overwintering periods.

If site, road, or terrain conditions prevent winter operations, harvesting and hauling can occur when adult toads move to summer foraging habitat and before toadlets start their migration to the upslope forests. Roads may be constructed during any season, if site conditions are favourable. Toad presence and movement will be monitored during all operations."



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