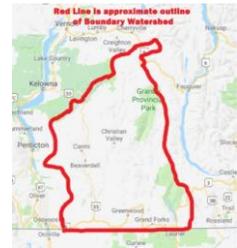


EXECUTIVE SUMMARY

This report points out what is wrong in the Boundary forests, how the current forestry system is negatively impacting our watershed and the people living in it, and proposes a brighter future for both.

The long-term solution we are proposing is a shift to the new paradigm of true sustainability: Nature-Based Forestry that is managed by Community Forest Boards.

We also present Recommended Actions that the BC government can implement immediately under the current system to make forestry practices more ecologically, economically, and socially responsible.



The watershed area covered in the report.

The Out-Dated Paradigm

The current paradigm of forestry management in the Boundary watershed is out-dated, unsustainable, and highly flawed:

- the economic value of our forests is diminishing
- ecosystem integrity and resilience are diminishing
- plant and animal species are facing local extinction
- ancient forests are being lost
- local people are being negatively impacted by forestry practices
- we are losing our protection from climate change
- jobs are in decline

In order to have a healthy, functioning watershed, the forests must be intact. Tree plantations are not forests. They do not have the same structure, composition, and function as intact forests. The number one cause of the loss of intact forests in the Boundary is industrial clearcut forestry.

In this out-dated paradigm the corporate narrative remains the primary influencer of policy. Because corporations are left to monitor themselves and make short-term profit their primary objective in the watershed, all other benefits (ecological, economic, social) continue to weaken and deteriorate.

The New Paradigm (Truly Sustainable Forestry)

The primary objective of forest management should be to maintain the ecological integrity of the forest ecosystem. Biodiversity and productivity are the source of what we value.

The achievement of truly sustainable forestry encompasses four essential elements:

1. Keeping and linking all the parts (ecological and social)
2. Understanding nature's patterns and processes
3. Using a long-term planning horizon
4. Public involvement to maintain community standards

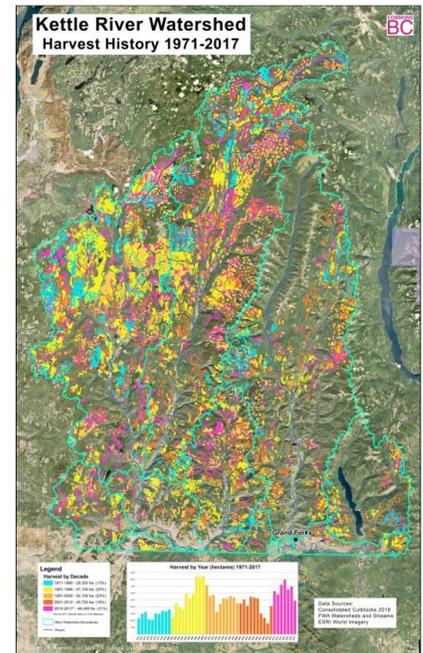
Rather than eliminating jobs, a shift to the new paradigm of true sustainability (Nature-Based Forestry that is managed by Community Forest Boards) merely changes the outcomes of forestry jobs.

Under the new paradigm, employment benefits are driven by a number of factors, including allowing more small- to medium-sized operators access to public timber (eliminating regional monopolies), an increase in the number of public and private sector jobs in planning, monitoring, and research, decentralizing forest management, enabling a competitive, open marketplace, and maintaining a supply of good quality wood that can be accessed by small-businesses to manufacture value-added wood products.

Comparison of forest management paradigms		
Feature	Out-dated Paradigm	New Paradigm
Paradigm	Industrial	Nature/ecosystem, community
Dominant value	Timber supply	Ecological values (nature's needs)
Policy influencer	Private interests	Public interest/citizens
Business model	Large corporations	Small and Medium Sized Businesses
Market	Monopolistic	Competitive, open market
Objective	Uninterrupted timber supply	Ecological integrity and resilience
Objective	Corporate profits	Stable community economies
Outcome	High volume of production	High value of products
Products	Raw logs, dimension lumber	Value-added products
Decision-making	Centralized	Decentralized – community-based
Planning method	Timber-volume based	Base planning on nature's needs and community needs
Silviculture focus	Tree farms	Biodiverse species, conserve old and mature forests
Logging method	Clearcut/ remove all the pieces	Selection logging (constrained by nature's limits)

Summary of the Costs of Industrial Clearcut Forestry in the Boundary

1. There is evidence that the information used to determine the AAC for the Boundary TSA could have been miscalculated. This means that the logging over the past 6 years may have been higher than even what the BC government has determined as 'sustainable'.
2. A huge percentage of the watershed has been clearcut. Numerous cutblocks in the Boundary watershed are hundreds of hectares in size. Clearcutting adds stress to nature in many ways, including increasing peak spring flows, negatively impacting wildlife, reducing biodiversity.
3. In May of 2018 Grand Forks was hit by the most catastrophic flood BC has ever experienced and the Boundary has suffered three higher than average level flood seasons since 2017. Damages and costs were well over \$150,000,000. The connections between flooding and clearcut forestry are well established - large forest disturbance increases average peak flows and the probability of large, destructive floods. Government studies are finding that streams in the Boundary are not 'functioning properly'.
4. Climate change predictions in the Boundary include increased magnitude and frequency of flooding, an increase in fire frequency, increased drought, continued decline of animal and plant species, increased extinction threat, increased tree mortality, and the possibility of current 50-year floods becoming 5-year events.



Clearcut blocks in the Boundary watershed. Map courtesy David Leverage.

5. The 16,000 km of forest roads in the Boundary are wreaking havoc on ecosystems including the devastating consequences of high forest road density on grizzly bear populations and the ways that roads are negatively impacting streams and aquatic organisms (increased sediment and turbidity).
6. Species at risk in the Kootenay-Boundary include 158 red and blue-listed animal species and 84 red and blue listed plant species. Clearcut logging poses threats to wildlife due to fragmentation of habitat, reductions in food sources, and habitat loss which increases extinction threat.
7. Old growth in the Boundary is becoming increasingly rare and is threatened. Old Growth Management Areas (OGMA) are where old growth is supposed to be protected, but licensees are addressing legal old forest retention requirements with *young and mature* forests instead of old forests. Lack of monitoring of old growth retention by the BC government is a problem.

Summary of Recommended Actions to Undertake Immediately

1. The Boundary TSA AAC must be immediately reduced by at least 30% to bring it to the what the province considers to be a 'sustainable' level.
2. Mandate baseline hydrological assessments in all watersheds before any new logging can take place. The assessments must determine if logging has contributed to increases in the frequency, duration and magnitude of peak flows, sedimentation and sediment transport, and how it may contribute to further severe flooding events
3. It is a public sector function to ensure that climate change is factored into the management of public forests. It must not be an optional practice that is merely recommended to professionals. Practices reflective of climate change impacts must be legally mandated by forestry legislation and policy.
4. Lack of full scientific certainty about the potential effects of climate change on Boundary forests require the immediate application of the precautionary principle in every aspect of forestry, including determination of the AAC.
5. Stop logging within 100m of riparian zones (due to the risk of drought and the importance of water).
6. Slash piles – cease the practice of burning slash piles. Instead of creating slash piles, leave the logging debris distributed across logging sites.
7. Build or re-build roads to the proper specifications before any hauling commences.
8. Maintain ditches and culverts, deactivate roads, and restore natural drainage patterns as soon as possible after logging has ceased.
9. Government immediately implement and enforce all of the recommendations from the 2017 Forest Practices Board report regarding roads and grizzlies in the Kettle-Granby.
10. Adjust road density guidelines so they are legally binding requirements (rather than recommendations) and place grizzly and other wildlife needs as the top priority for determining road density requirements.
11. Adopt a no-net-new roads policy and strictly enforce it.
12. Legislate a system for government authority regarding enforcement and non-compliance around road building, road maintenance, road deactivation, and road rehabilitation.
13. Fund adequate staff in the Boundary watershed to monitor and address road maintenance at the operational level (boots-on-the-ground), monitor old growth, monitor grizzly populations.
14. Immediately implement the grizzly bear management plan in the Boundary watershed.

15. Take immediate action to reduce the road density to a limit of 0.4 km/km² in the area of concern for grizzlies (as indicated on map in the report). Make this a legally binding requirement.
16. Direct the Chief Forester to set the AAC at a level necessary to conserve biodiversity, sustain ecosystem function, and support viable grizzly bear populations.
17. Immediately create a Species-at-Risk Act for British Columbia.
18. Legally implement 100% protection of all old growth in the Boundary watershed. Retain all trees and pockets of trees greater than 140 years old, including an *immediate* response to ecosystems at very high risk of irreversible biodiversity loss.
19. Do not allow logging in Old Growth Management Areas (OGMAs).

Summary of New Path Forward (Truly Sustainable Forestry)

Using the new paradigm as a foundation, we propose the way to achieve truly sustainable forestry in the Boundary watershed is two-fold:

1. To implement **Nature-Based Planning** (NBP) across the land base
2. Install **Community Forest Boards** (CFB) that implement and manage Nature-Based Planning (assisted by public sector staff who are educated and informed in Nature-Based Planning, natural sciences, biology, ecology, and eco-forestry)

The goal of Nature-Based Planning is to manage human activities in forests so we can continue to receive their benefits without degrading the productivity and values of the natural forest. Working with nature's patterns and processes, we do not attempt to control nature. The outcome is to maintain ecological integrity by practicing ecological forestry. Knowledge of science will inform the diagnosis and prescription of how best to maintain ecological integrity. CFBs are composed of local people, give undivided loyalty to citizens, follow NBP, prioritize community economies.

To make this positive change possible, the Province must enable it either via new legislation or a pilot project in our region supported and funded by the provincial government.

New Forest Legislation is Required

What is needed to protect the people, the wildlife, and the ecosystems of the Boundary watershed, is a major intervention and change of direction by the government of BC.

An immediate change of forestry legislation is required so that forest decisions are based on ecosystem and conservation science, not politics or corporate profits.

A new Forest Act must be created. The new Forest Act must enshrine in law the new concept of sustainability that puts ecosystem integrity and resilience above all else. It must base forestry management on local administration, create open access to timber, provide undivided loyalty to the people of BC, and focus on local economic well-being.

Models already exist for making changes to provincial legislation. All it will take is the political will and brave leaders to make it happen.

The members of BFWSS are citizens of BC telling the government in no uncertain terms what we want for our community's survival. Respectfully, we ask our readers to do the same. What is at stake is too important to do otherwise.

This report is part of an ongoing search for insight, foresight, and wisdom, led by well-informed and committed citizen volunteers.

