Stewardship Objectives and Cumulative Effects Atlas

Adams Lake Indian Band's Approach to Land Management



Dave Nordquist

Senior Stewardship Officer Adams Lake Indian Band Canada



Historical Stewardship

•Historical Stewardship: The Adams Lake Indian Band has been setting stewardship objectives since time immemorial, rooted in traditional laws and obligations.

•Modern Application: The Band continues to exercise these obligations by creating a Cumulative Effects Atlas in their Traditional Territory.

General Restatements of Law

- Humans Influence and are Influenced by Environmental Change: The proposition that the natural world is in constant flux, in which humans are influenced and influential members (for both better and worse).
- Secwepemc Law Evolves and is Integrated with Secwepemc History: The proposition that law is embedded in, and evolves through, thousands of years of land-based learning.
- iii. Secwepemc Language Is Important to Understanding Secwepemc Law: The proposition that Secwepemctsin provides a richer understanding and transmission of law.
- iv. Individual Agency: The proposition that although individuals understand the importance of the collective as fundamental in Secweperne society, individuals can act independently and make their own free choices in the Secweperne legal tradition.
- Respect: The proposition that respect underlies all relationships among people and between people and the environment.
- vi. Natural Forces Can Be Dangerous: The proposition that dangers and challenges of natural forces are ever-present.

Atlas of Cumulative Landscape Disturbance within the South Thompson Watershed



Adams Lake Indian Band

Chase, BC

Prepared: 2023 (v15)

Used models, tools and processes:

- ALIB ALCES Online (AO) model was populated with public GIS data (2021)
- The Secwepemc Update21 dataset was compiled of current landscape composition and forest age (it was used extensively in this Atlas)
- Additional data were obtained from the publicly available BC Data Catalogue Portal.
- The analyses were done in ArcGIS (v. 10.8.2) in combination with the AO simulator.

Study Area

This Atlas illustrates the cumulative effects of industrial development, highway and road development, tree harvesting and agricultural use on Indigenous ways of life throughout the **South Thompson Watershed (STW)** within *Secwepemcúl'ecw*, the Traditional Territory of the Secwepemc people.

The STW is a 5th-order watershed within the Frazer River Major Watershed that drains into the Pacific Ocean. This region is of interest to ALIB and contains four watershed groups: Adams River, Shuswap Lake, Upper Shuswap, and South Thompson River (4th-order watersheds).

	Area (km²)	% of STW
South Thompson		
Watershed	17,460	-
Adams River	3,338	19%
Shuswap Lake	5,256	30%
South Thompson River	3,663	21%
Upper Shuswap	5,203	30%



Range of Natural Variation (RNV)

An RNV in forest age was estimated to compare the current state and future forecasts to a baseline of undisturbed natural conditions (pre-European Contact Era as a period of sole Indigenous occupation).

Current conditions are drastically different from the baseline.

Baseline forest age class distribution was relatively evenly distributed from young to very old. Very old and very young forests was making up majority of the forest and about one-third could be classified as "middle aged" forest (recruitment and old growth).

Currently 85% of the STW is relatively young forest (immature and recruitment), and just over 1% could be considered as old.



The full information on obtaining Range of Natural Variation (RNV) for the study area is available in the "Adams Lake Indian Band Old Growth analysis for South Thompson Watershed (2023)" report.

The Old Growth definition and its classes are based on the Forest Practices Code of BC Biodiversity Guidebook (1995).

Cumulative Effects Atlas •Comparison of Conditions: The Atlas compares the current state of the territory with Pre-contact baseline conditions.

 Integration of Knowledge: Combines traditional knowledge with modern data and modelling tools (ALCES, ESRI Arcmap, Raven hydrological framework) and now Woodpecker.



Framework Development •Collaborative Efforts: The framework is designed to work with Governments and Proponents wishing to develop in the Band's territory.

•Community Input: Outputs from modelling tools are combined with community input to develop a comprehensive framework. Evaluation and Future Planning •Impact Evaluation: The framework helps evaluate potential development impacts, considering both status quo and alternative management regimes.

•Preferred Future Landscape: The Band is defining a preferred future landscape condition and using tools to forecast and quantify differences from business-as-usual scenarios.

Old Growth Strategy

•Provincial Strategy Contribution: The Atlas was used to summarize Old Growth in the Band's Territory for the Provincial Old Growth Strategy (2023/2024).

•7 Recommendations where contained in this report.

•Forest Landscape Planning: Currently, the Band is using pieces of the framework in collaboration with the local Provincial Government for Forest Landscape Planning.

•Once the framework is finished to the draft stage it will be consulted on with the community and incorporated into outside planning processes.

Adams Lake Indian Band Old Growth Analysis For South Thompson Watershed

Adams Lake Indian Band | CE Analytic





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INTACT FOREST AREA (IFA) AND PROTECTED AREAS

- Protected areas encompass about 4% of STW (in comparison to 14% within BC);
- Provincial Parks: 3.88% of STW (only recreational development is allowed, it includes roads, camp areas, etc.);
- Protected areas: 0.17% of STW (allow activities that are normally restricted from a provincial park, such as an industrial road, pipeline, transmission line, or communications site);
- Ecological Reserves: 0.18% of STW (the most highly protected and least subject to human influence);
- About 50% of the protected areas in the STW are currently within IFA;



RECOMMENDATIONS

<u>Recommendation 1</u> All Recruitment Forest outside of the THLB should be designated a very high priority for wildfire protection and suppression effort.

<u>Recommendation 2</u> Immediately implement a harvesting deferral of all Recruitment Forest within the THLB in the STW until Recommendation 3 and 4 are completed.

Recommendation 3 In conjunction with Adams Lake Indian Band, the Government of British Columbia will undertake a timber supply analysis to evaluate the downward pressure on AAC needed to account for retaining Recruitment Forest within the THLB. This analysis must utilize a precautionary approach and account for increased rate of future losses due to increasing wildfire rates because of climate change.

Recommendation 4 In conjunction with Adams Lake Indian Band, the Government of British Columbia will undertake a Forest Landscape Planning process to ensure that Old Growth and Ancient Forest levels within the STW are within the Pre-European Contact Natural Baseline Reference Conditions. The minimum patch size and ZOI parameters for intact Old Growth and Ancient Forest should be at least 10 km² (1,000 ha) or larger and at least 500-meter from human footprint and young cutblocks (<30 years since harvest). The planning must explore where decommissioning of roads could recover intactness.

<u>Recommendation 5</u> Create an OGMA definition with patch size and ZOI parameters. Update the publicly available OGMA GIS dataset with these updated parameters.

<u>Recommendation 6</u> Implement a frequent and robust Old Growth and Ancient Forest monitoring program utilizing remote sensing technologies that enable automated change detection.

Recommendation 7 Implement a wildfire risk reduction projects within areas set aside for long term Old Growth management.

OLD GROWTH MANAGEMENT AREAS (OGMA)

- **OGMAs** are classified as either Legal (legally established by an Order) or Non-Legal (only identified in planning processes) but identified as legal OGMA;
- There are 2,295 OGMAs within the STW region (approx. 6% of STW);
- Almost half (47%) of forest within OGMAs is Immature Forest (younger than 80 years);
- And less than 2% of forest is Ancient Forest;
- Only 8 OGMA patches (out of 2,259) are bigger that 10 km² which is less than 1% of the OGMAs within STW



Future Vision

•Endangered Species Protection: The framework aims to ensure the protection of endangered species.

- Cultural Use and Community Spaces: Increased cultural use and protection of important community spaces are key goals.
 Resilience to Fire and Climate Change: The Band envisions
- creating a landscape more resilient to fire and climate change.
- •Restoration, mitigation, moratoriums, policy shifts, etc.
- •Monitoring and Adaptive Management: delivered through our Guardian Program for example.



Let's continue the conversation!

Message me your questions or comments in the IAIA25 app.

Dave Nordquist

Senior Stewardship Officer Adams Lake Indian Band

