CARBON GOALS AND STRATEGIES FOR THE WETZIN'KWA COMMUNITY FOREST
December 2019

1.0 Introduction

The Wetzin'kwa Community Forest Corporation (WCFC) recognizes that our forests represent an opportunity for mitigation of climate change through carbon storage. We anticipate that management of carbon in forestry will become an increasingly important objective at the provincial level and will be supported by research, regulation and incentives.

Management of forest carbon is one of many objectives considered in making forest management decisions and should be seen in that context. In addition to environmental, social and economic objectives our community forest corporation is committed to encouraging community involvement, to working with the Wet'suwet'en Peoples, to land stewardship goals, to outdoor recreation and education and to building a healthy community forest economy. (from "Wetzin'kwa Community Forest 2015 Management Plan")

This document outlines the WCFC's goals and strategies for carbon management over the next 3 years and relies heavily on the Ministry Forests, Lands and Natural Resource Operations document "Forest Carbon Strategy 2016-2020" for its provincial context.

2.0 Carbon Management Goals and Strategies:

2.1 Minimize carbon losses to the atmosphere associated with harvest operations and maximize carbon storage in wood products.

Work by the National Forests Sinks Committee identified a "Carbon Smart Harvest" strategy combined with "Wood Substitution" as having the greatest benefit for carbon management. (Stinson et.al. 2011) The harvest part of the strategy seeks to take a larger portion of trees off the cutblock, leaving less to be burned or to decay, and increase the proportion of wood derived from salvage harvesting. The wood substitution part seeks to use more of the harvest for long-term use products especially to replace carbon intensive products such as concrete. (from "Climate Mitigation Potential of British Columbian Forests: Growing Carbon Sinks", MFLNRO, 2013)

2.1.1 Reduce carbon emitted from slash burning and decay in cutblocks

(a) Continue diverting slash to pellet production for bioenergy

(b) Continue diverting waste logs to firewood uses
(c) Divert dry balsam to Seaton timber or other operators where practical
(d) Support research into alternate methods of dealing with slash other then burning, for example, biochar

2.1.2 Optimize wood use

The use of our harvested wood is often beyond our control, but we can:

(a) Maximize utilization of our logs for sawmilling
(b) Prioritize salvage harvesting when possible
(c) Prefer pellet production over slash burning
(d) Support alternate uses of slash fiber that store carbon in long term use

2.2 Increase carbon storage at a landscape level

Our landscape level planning must consider many objectives. Carbon management will be one of these objectives

2.2.1 Reduce Wildfire Risk

Typical natural cycles for fire in the interior of B.C. see the slow buildup of biomass followed by a sudden and catastrophic release of carbon through wildfire. Interrupting that cycle and reducing or preventing wildfire is a primary strategy.

(a) Implement our Strategic Wildfire Hazard Mitigation Plan
(b) Reduce accumulated fuel loads in areas identified as highest risk
(c) Appoint a fire warden to patrol the forest during lightening events and during high fire hazard events
(d) Continue research to identify best practices and relevant research on hazard mitigation

2.2.2 Improve wildfire response

We have already developed an enhanced fire response effort in the forest. Examples of such responses include:

(a) Purchase and store at readily accessible locations fire fighting equipment
(b) Identify human resources for fire fighting and optimize mobilization strategies
(c) Insure access to water sources for pump trucks in the forest area
(d) Create an emergency reserve fund that may be used for wildfire response
(e) Offer training of potential fire crews

(f) Offer our fire fighting equipment to other community organizations in our area as the need arises

2.2.3 Identify Landscape Level Carbon Resources

By understanding the carbon density at the landscape level we can make better carbon management decisions.

(a) Incorporate carbon density data into the G.I.S. database used for mapping and decision making and display the results in mapping products
(b) Identify areas that would benefit from carbon enhancement treatments such as natural disturbances not otherwise stocked.
(c) Identify tools and resources for modeling the carbon consequences of management decisions
(d) Be informed by ongoing research on carbon management

2.3 Increase Carbon Storage at the Stand Level

Carbon management at the stand level is a fairly new topic. The provincial government has a number of initiatives ongoing through the Competitiveness and Innovation branch of the MFLNRO. The Forest Enhancement Society of B.C. is currently supporting a number of studies, and other academic research is in process world wide. Stand treatments for increasing carbon density are still somewhat experimental in our specific forest regimes.

(a) Review and be informed by relevant research
(b) Consider fertilizing, non-standard harvesting techniques, stand thinning and other treatments for their value in increasing carbon stand density
(c) Consider harvest plans in terms of maximizing stored carbon

3.0 **Communication strategies**

This is a working document in a changing area of forest management. Our communications objectives are firstly to inform the public and stakeholders of our commitment to managing carbon and our strategies and initiatives in this regard and secondly to stimulate discussion.

(a) Present this plan at the Annual General Meeting with the document available in written form prior to and at the meeting. Encourage comments and discussion on the topic.

(b) On our website, under the heading "General Management Objectives - Environmental" include a bullet

- to manage for optimum carbon balance

(c) Include this document on our website under the "documents and maps" heading.

(d) Include mapping of landscape carbon values under "documents and maps"

(e) Update mapping and documents from time to time as new information becomes available.

Bibliography

"Forest Carbon Strategy 2016-2020 Ministry of Forests, Lands and Natural Resource Operations
https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resources-climate-change/natural-resources-climate-change-mitigation

"Climate Mitigation Potential of British Columbian Forests: Growing Carbon Sinks", MFLNRO, 2013)
https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nrs-climate-change/mitigation/climatemitigationpotentialofbritishcolumbianforests.pdf

Stinson, G., M. Hafer, C. Smyth, E. Neilson, G. Zhang, M. Fellows, M. Magnan, W. Kurz, E. Krcmar, A. Beatch, G. Rampley, T. Lemprière (2011) Assessing the Climate Change Mitigation Potential of Canada's Forest Sector, Phase 1. Presentation, referenced in "Climate Mitigation Potential..."

Further Resources and Tools

Follow this to link to B.C. government site
https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resources-climate-change/natural-resources-climate-change-mitigation
Then follow link "Tools for mitigating Climate change"

1. Calculating the volume of carbon emissions in harvested wood products

-Carbon Calculator User's Guide
-Carbon Calculator Tool

2. Simulation Model : Forest Carbon Succession v2.0 -

Extension within the LANDIS-II family of models to allow simulation of forest succession, harvesting, planting and natural disturbance over time.

-Forest Carbon and Climate Change Modelling guide
- LANDIS-II Forest Landscape Simulation Model
-Forest Carbon Succession v2.0 Extension of LANDIS-II

3. Carbon Budget Model:

Links to a modelling software developed by the Canadian Forest Service for modelling stand and landscape-level carbon modelling framework.

-Canadian Forest Service Carbon Budget Model

4. Forest carbon Reports:

Links to carbon related reports from Land Based Investment that have received peer and technical reviews.

- See especially "Carbon Budget Modelling on TFL 56" for the Revelstoke Community Forest Corporation (RCFC) initiative on carbon management.

From the same link above, follow the link "Managing forest carbon" for information on B.C.'s Forest Carbon Initiative (FCI).