

**Review of “Kansas, J.L. 2011. High Conservation Value Forest
Assessment Spray Lake Sawmills FMA/B9 Areas”**

Luigi Morgantini, Ph.D.

for

Spray Lakes Sawmills

July 2013

1.0 Introduction:

Spray Lakes Sawmills (SLS) is applying for Certification of its Forest Management Agreement (FMA) area and B9 Quota land tenures under the Forest Stewardship Council (FSC®). One component of FSC® certification is the completion of an assessment to ... *“determine the presence of attributes consistent with High Conservation Value Forests....appropriate to the scale and intensity of forest management”* (FSC 2004).

In 2011, SLS retained HAB-TECH Environmental to complete the assessment related to biodiversity, landscape ecology, and species at risk aspects of HCVPs (Categories 1-3).

Specifically, as per HAB-TECH assessment, the objectives were as follows:

- identify candidate High Conservation Value Forests (HCVF) based on a regional, national, and global information review;
- assess candidates to determine if they meet the FSC® definition of a HCVF attribute;
- map the locations and document the size of HCVF attributes, where possible;
- recommend management strategies that maintain and/or enhance the HCVF attributes (consistent with the precautionary approach);
- recommend monitoring (including adaptive management framework) strategies to assess the effectiveness of management strategies;

2.0 Review

In July 2013, I was retained by Spray Lake Sawmills (SLS) to review their assessment for the presence of High Conservation Value (HCV) attributes and forests on the SLS Forest Management Agreement area (FMA) and B9 Quota land tenures.

As a Wildlife Biologist and Forest Ecologist, I am familiar with the status of knowledge on wildlife species and forest ecosystems along the Eastern Slopes of Alberta. In my past role of Chief Biologist and Forest Ecologist Coordinator for Weyerhaeuser Company in Alberta (1995-2008), I have worked with forest management issues, certification expectations, participated in workshops to develop National Boreal Standards, and managed biodiversity conservation and the integration of ecological and biodiversity values in forest management practices.

This review focuses specifically on the High Conservation Value Forest Assessment (Principle 9) and does not address any other activity related to SLS Stewardship Plan that is being prepared to meet FSC standards. I was specifically requested to review Sections 1, 2, 3, 4.1, 4.2, 4.3 and 5.

The review did not involve re-analysis of all the published and unpublished ecological data that is available on SLS tenure areas and on the surrounding region. This review does not attempt to address whether HCVs within the SLS tenures meets

Rather, the review assesses how the available data were used to meet the spirit and intent of Principle 9 and whether HCVs were properly identified within the SLS land tenures.

This review is structured with an initial overall assessment (Sect 4) followed by more specific details on aspects that I believe need some clarifications.

3.0 Background

In 1999, the Forest Stewardship Council introduced the concept of High Conservation Value Forests (HCVFs). HCVFs possess one or more of the following attributes:

- a. Forest areas containing globally, regionally, or nationally significant:
 - Concentrations of biodiversity values (e.g., endemism, endangered species, refugia); and/or
 - Large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.
- b. Forest areas that are in or contain rare, threatened or endangered ecosystems;
- c. Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control); and
- d. Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health) and/or critical to local communities' traditional cultural identity (e.g., areas of cultural, economic or religious significance identified in cooperation with such local communities).

My review focuses on attributes a, b and c.

The concept of HCVF focuses on the environmental, social and/or cultural values that make a particular forest area outstandingly significant. The intent of Principle 9 is to ensure that those forests are managed in such a way to maintain or enhance the identified High Conservation Values.

Principle 9 states:

“Management activities in High Conservation Value Forests shall maintain or enhance the attributes which define such forests. Decisions regarding High Conservation Value Forests shall always be considered in the context of a precautionary approach.”

High Conservation Values (HCVs) or attributes are identified through an assessment

process that takes into account the scale and intensity of forest management (FSC 2004).

Principle 9 and Appendix 5 (High Conservation Value Forest National Framework) of the FSC National Boreal Standard (FSC 2004) further detail the requirements for the assessment.

The HCVF National Framework document organizes the HCVF definition into a table format with 6 Categories and 19 Key Questions. Each Key Question has Definitive and Guidance Questions used to channel identified values through the Assessment, so that HCVF attributes can be revealed and to provide an opportunity to evaluate thresholds for HCVF designation.

The SLS HCVF assessment included: 1) identification (and mapping, where appropriate) of High Conservation values and forests; 2) development of management strategies to maintain and enhance High Conservation values and forests; and 3) preparation of a monitoring plan to assess the effectiveness of the measures employed to maintain or enhance High Conservation values and forests.

4.0 Overall comments

SLS provided a very good assessment of High Conservation Forest values within their land tenure. The overall analysis was thorough and, based on current data availability, complete. Refereed, published and unpublished manuscripts and reports, as well as various databases were accessed and referred to. Individual Key questions, Definite questions and Guidance questions were addressed in a logical and orderly manner. HCVFs were properly identified and I did not find any gap or missed values. The Assessment should help the process to meet FSC standards.

However, there are several specific aspects that I believe need to be either clarified or expanded on.

5.0 Specific comments and suggestions

5.1 Key Question 6

Key question # 6 is part of Category 1 of the Assessment regarding Forest Areas Containing Globally, Regionally or Nationally Significant Concentration of Biodiversity Values.

Key Question 6 asks:

Does the forest lie within, adjacent to, or contain a conservation area: a) designated by an international authority; b) legally designated or proposed by a

relevant federal/provincial/territorial legislative body; or c) identified in regional land use plans or conservation plans?

SLS assessment lists a number of areas immediately adjacent to or in the vicinity of the FMA that have various levels of environmental protection. As per assessment, *“Protected area classifications include Wildland Provincial Parks, Provincial Parks, Ecological Reserves, Wilderness Areas, Natural Areas, Heritage Rangeland, Indian Reserves, and Banff National Park. All protected areas are provincially designated, with the exception of Banff National Park to the west.”* (SLS 2011)

SLS acknowledges that several of these areas, such as the *“approximately 51 Provincial Recreation Areas (PRAs) scattered across or within close proximity to the FMA/B9...”* are managed *“... with outdoor recreation as the primary objective.”* I acknowledge that some of the areas are largely undeveloped. However, from an ecological/biodiversity perspective, their degree of protection is minimal if at all existent.

Therefore I question the following conclusion:

“In summary, the Ecological Reserves, Wildland Provincial Parks, Provincial Parks, Natural Areas, Heritage Rangeland, Provincial Recreation Areas, and Zone 1 Prime Protection Areas that are in or adjacent to the FMA boundary provide important supporting an connecting functions to the Subalpine and Montane habitats in the FMA. In addition, their legal designation or IRP zoning make them suitable for HCVF designation.” (SLS 2011. Page 54)

In my opinion, whereas some of these areas do indeed *“provide an important supporting and connecting functions to the Subalpine and Montane habitats in the FMA”*, many areas do not. I would suggest this section be qualified so to avoid potentially misleading conclusions.

5.2 Key Question 9

Are there ecosystem types within the forest or ecoregion that have significantly declined

The Key questions has several Guidance questions as follow:

- *Is the forest within an ecoregion with little remaining original forest type?*
- *Have these ecosystems significantly declined (>50% loss)?*
- *Is there a significant proportion of the declining ecosystem type within the management unit in comparison to the broader ecoregion?*
- *Does potential vegetation mapping identify areas within the management unit that can support the declining ecosystem type (e.g., regeneration potential)?*
- *How well is each ecosystem secured by the protected area network and the national/regional legislation?*

In answering this question and the more detailed guidance questions, SLS states “*At this point in time timber harvest has affected approximately 9.3% of the FMA, with a maximum of 19.9% in any given cut compartment (mean = 8.2%; range = 0.5% to 19.9%).*” In my opinion this statement is unclear. Does the 9.3% refer to the actual footprint of cutblocks? If so, in my opinion the statement is questionable. I would argue that the ecological/biodiversity function of the remaining, largely isolated stands, possibly scheduled for a second pass, has been impaired. The percentage of the FMA affected by timber harvest should be calculated based on the total area of the cut compartments entered to date. If that is what was done, it should be clearly stated.

5.4 Key Questions 7 and 10

These questions address the presence of large and unfragmented forest landscapes.

I am mentioning these two questions since they are specifically related to the management and monitoring section of the SLS HCVFs Assessment report.

SLS properly documents the presence of two large, unfragmented forest landscapes. The fact that there are still large tracts of relatively pristine forests along the Eastern Slopes of Alberta is usually lost within the cacophony of controversy swirling around forest management. The reported presence, easily documentable, is extremely important in a local and regional context. Hence their management, including forest practices, need to be carefully planned so that the high ecological and biodiversity values are not lost. Please refer to my comments in 5.5. HCVF Management and monitoring strategies, HCVF Group 13.

5.5 HCVF Management and monitoring strategies

The HCVF Management and monitoring strategies outlined by SLS are consistent with standard provincial forest management policies and operating ground rules. They are easily integrated in the Alberta Detailed Forest Management process and Stewardship reporting. Furthermore, SLS’ commitment to work together with ASRD in regard to specific HCVF attribute and to cooperate/partner with Government and other stakeholders in appropriate research/monitoring is commendable and to be encouraged.

However, consistently with the intent of Principle 9, specifically “... *to manage those forests in order to maintain or enhance the identified High Conservation Values. By focusing on maintaining or enhancing the environmental or social values that make the forest significant, it is possible to make management decisions consistent with the protection of such values.*” (FSC 2004), it is my suggestion that SLS should not simply limit its management to follow provincial policies, but rather it should take it a step further.

Specifically:

HCVF Group 3. Provincially Listed Species at Risk

- In the management strategies regarding Provincially Listed Species at Risk, for old growth adapted and cavity nesting birds, SLS states that it will “*leave residual stands of older forest in non-operational areas* (my emphasis)– *steep slopes, watercourse buffers, protected areas, non-accessible area (landscape retention – see Chapter 5 of DFMP)*. I suggest that in order to address this HCVF Group, leaving residual stands of older forest should not be limited to “non operational areas”. Rather, efforts should be made to leave residual stands of older forest in operational areas as well, where possible and needed to achieve the stated objective, possibly integrating them adjacent to non operational areas.

HCVF Group 4. Focal/Indicator Species

- My comments regarding the Management Strategies for HCVF Group 4 are similar to the comments I made regarding HCVF Group 3. Specifically, SLS should mention retaining residual patches for marten and fisher within non-operational AND operational areas where needed, within either a cutting compartment or a larger area of the SLS tenures.
- Furthermore, SLS makes a reference to leaving “...*residual forest patches to serve as security habitat for marten (e.g. corridors connected to larger forest patches)*.” That is a very general statement. It is not clear how that can be done without an understanding of marten/fisher presence and habitat use in an area. There is no stated commitment in the “Monitoring Strategies” section to achieve that understanding.

HCVF Group 9 – Unique and Diverse Habitat/Plants Communities

- One of SLS management strategies the value of HCVF attribute for late seral and old growth conifer forests (> 170 year old), is to “... *leave residual stands of older forest in non-operational areas - steep slopes, watercourse buffers, protected areas, non-accessible area (landscape retention – see Chapter 5 of DFMP)*.” I submit that such a strategy may not suffice to meet the objective. Late seral and old growth forests in “steep slopes, watercourse buffers, etc” most likely differ in age, structure and composition from late forests that occur on dry sites within the “operational area.”
- As a Management Strategy for late seral and old growth conifer forests, SLS commits to “*manage timber harvest to sustain old growth forest land area to*

levels consistent with DFMP projections.” I have not had access to or reviewed the DFMP for SLS land base, therefore I am not clear whether there are specific late seral/old growth retention targets over and above what is ultimately retained, if any, in a sustained-yield approach to forest management. Such targets may be stated in the existing DFMP. However, considering the importance of naturally occurring late seral/old growth conifer forests for the ecological functioning of forest landscapes, I suggest that the numbers should be also referred to in the Management Strategies of the HCVF Assessment.

HCVF Group 13 – Large Landscape Level Forest

- The presence of large forest landscapes within the SLS land tenures, and their adjacency to even larger tracts outside, is of enormous importance to the ecological integrity of the region and play a significant ecological role in the larger landscape. In the future, it is most likely that SLS will access these currently unfragmented landscapes and will sequence the merchantable timber in the area.
- In the Management Strategies associated with the HCVF attribute “Large Landscape Level Forest”, SLS focuses on a) identifying species potentially threatened, b) “aggressively implement access management...” and c) identify and map “likely movement corridors...” However, there is no reference to the management of such an important HCVF attribute by specifically addressing/retaining the ecological characteristics of these large, unfragmented landscapes and maintaining their ecological integrity. These landscapes are a complex mosaic of forest stands of various ages, structure and composition. SLS entry and timber sequencing will change their structure and functioning.
- In the Monitoring Strategies, SLS indeed commits to “...ensure that landscapes and habitats found in the large landscape level forests in and outside of the FMA occur with an age class distribution that falls within the natural range of variability, by subregion, consistent with forecasts from the DFMP.” While that is, in my opinion, highly commendable, it is also unclear. I would suggest that the specific DFMP forecasts should be specifically referred to in this HCVF Attribute (#14) and in the following one. Integrating forest practices and long term planning in ecologically sustainable landscape level management it is still an evolving science and not easy to practice.
- Further to the above comments, it should be stated and recognized that retaining the characteristics of currently large unfragmented landscapes, their mosaic of various age and species composition, their late seral/old growth characteristic, etc. may not meet the habitat needs of some of the focal species that SLS specifically refer to in this section. That is even more so if attempts are made to ensure “an age class distribution that falls within the natural range of variability.”

Finally, throughout their HCVF Assessment, SLS makes several references to either inoperable areas, steep sites, buffers, etc. I believe a map that shows these areas within the broader tenure base, together with summary tables that outline areas and percentages, would help the reader putting the relevant HCVs into context and better assess SLS' management and monitoring strategies.

6.0 Summary

SLS provided a very good assessment of High Conservation values within their land tenure. The overall analysis was thorough and, based on current data availability, complete.

In my review, I have addressed several specific aspects that I believe would benefit from clarification or should be expanded to avoid misleading conclusions.

In addition, there is one aspect that I believe is most important and should be emphasized. SLS clearly identified numerous HCVFs within their land tenures. The intent of Principle 9, specifically is “... *to manage those forests in order to maintain or enhance the identified High Conservation Values. By focusing on maintaining or enhancing the environmental or social values that make the forest significant, it is possible to make management decisions consistent with the protection of such values.*” (FSC 2004).

The list of Management Strategies adopted by SLS mostly seems to follow provincial policies and guidelines. While that is commendable, it may not be sufficient “*to manage those forests in order to maintain or enhance the identified High Conservation Values.*” I believe that SLS should not limit its Management Strategies to Government Guidelines, but rather take them one step further. Ecologically sound strategies may still be in line with possible Government regulations, but may also be more consistent with the FSC process. If the DFMP specifically address some of my concerns, relevant aspects should then be integrated in the HCVF Assessment.

7.0 References

Forest Stewardship Council (FSC®) Canada. 2004. National Boreal Standard. Version 3.0. January 16, 2004. 176 pp.