

High Conservation Value Forest Assessment in the Alberta-Pacific Forest Industries FMA Area: A Commentary

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Introduction

Recently Alberta-Pacific Forest Industries (AlPac) published on its website a document entitled: High Conservation Value Forests (HCVF) within the Alberta-Pacific Forest Management Agreement Area: A Summary Report (Dyer 2004). In the introduction, Dyer stated [material from the summary report is in *italics*]:

The purpose of this [Dyer] report is to summarize and refine the HCVF attributes identified by Timoney (2003) and to provide a final map of HCVF attributes within the FMA area that will be managed by Al-Pac in accordance with the rigorous standards of the Forest Stewardship Council (FSC). HCVF identification is a new and evolving discipline, and as such, there is no 'right' way to perform an HCVF assessment. Few clear thresholds exist for values that will trigger HCVF designation. HCVF designation is important, because it mandates for a precautionary approach for management of values, and requires a high level of monitoring to ensure the maintenance of identified conservation values.

Final identification of HCVF values differs in some instances from those identified by Timoney (2003). Generally there are four reasons for these differences:

- 1. Changes to the FSC Framework and questions*
- 2. Change in scope of assessment -- this summary considers the FMA area only*
- 3. Lack of spatial data required to meaningfully identify habitat as HCVF*
- 4. Decisions about focal species and judgements on definitions of 'critical' or 'outstanding' values.*

Readers concerned about potential differences between this summary document and the map products produced by Timoney (2003) should consult both reports. Where differences occur in identification of HCVF values, these are discussed.

As the author of the report on which the Dyer summary is based, I feel there is a need to comment on that summary. My comments begin with general observations which are followed by specific points of divergence between the original and the summary report. I conclude with observations on HCVF identification and management.

General Comments

1. A 'summary' is an abridgement of a preceding discourse. When a report does not simply abridge but presents a different opinion, it is not a summary. The Dyer report is not a summary of my findings.
2. It is misleading to state that "readers concerned about potential differences ... should consult both reports." The Timoney report has not been made available by AlPac to readers; therefore no readers can compare the reports.
3. When a summary of someone's work is attempted it is prudent to consult the author of that work to

ensure the summary is true to the original. This was not done.

4. In its rejection of findings of the source report, the summary report fails the FSC criterion of a precautionary approach. Findings that were problematic to AIPac were simply ignored (e.g., buffers around rare species occurrences; rejection of many focal species; rejection of non-bog surface waters as HCVs; the Dry Mixedwood 50 km wide buffer).

5. The identification of focal species in the source report followed a reproducible methodology and was done at the request of and in consultation with AIPac and WWF from the outset. The summary report then rejected most of the top-rated focal species for various reasons-- some of which are examined under specific comments.

6. Of the four reasons provided by Dyer for differences between the two reports: (1) Some of the revised FSC HCVF questions have been rephrased and re-ordered in sequence; but this has no effect on findings. (2) Change in geographic scope is understandable. However, I was directed to assess the region at large and not solely the AIPac FMA; (3) What lack of spatial data? The reader cannot evaluate this lack because it is not addressed further in the Dyer report, nor is the original report available to the reader. If there is a lack of spatial data as regard HCVs, the precautionary approach would call for highlighting this lack of information; (4) Decisions about focal species and judgements about 'critical' or 'outstanding' in the original report were based on a transparent, reproducible methodology; in the summary report, the decisions appear to be arbitrary, as outlined below.

Specific Comments

1. Focal species. I did not, as the summary report states, identify 17 focal species. I identified 65 focal species and 36 focal communities. This list was then prioritized by degree of vulnerability and by vulnerability class, which resulted in a short list of 16 priority focal species and three priority focal communities.

2. In Table 1 of the summary report, most focal species identified in the source report were rejected. I comment on a few representative examples:

Peregrine Falcons are rejected as focal species since no nest sites are known within the FMA. Nest sites are known from the Utikuma Lake area (sites about 10 km from the FMA boundary), and from north of Peerless Lake (also just outside the FMA). These wide-ranging birds would use habitat within the FMA. Rejection of Peregrine Falcons does not appear 'precautionary.'

Whooping Cranes, a globally endangered species, use wetlands within the FMA during migration (e.g., McClelland Lake). Why would their migration habitat not merit protection?

Grizzly Bears were rejected due to their rarity, even though Grizzly Bear habitat is present within the FMA and their occurrences were documented in the source report. Rejection of a species because it is rare is counter to conservation, especially since protection of Grizzlies would benefit a host of species, communities, and ecological processes.

Northern Long-eared Bats, Black-backed Woodpeckers, and American White Pelicans were rejected because they are ranked as 'sensitive only' rather than at risk. This is a Catch-22. These sensitive species are sufficiently common to be useful as indicators of management practices. If they were ranked as 'At Risk' or 'May Be at Risk' they would be 'too rare' and therefore rejected. There is nothing in FSC guidelines, nor was anything discussed during this study, to indicate that species ranked as 'sensitive' would not be eligible for focal status. Furthermore these three species are well-studied and

useful indicators of forest and lake management. The bat is known to be associated with riparian old-growth forest; the woodpecker is known to be associated with old-growth and recent burns and is susceptible to fire suppression and salvage logging; the pelican is a good indicator of lake management and disturbance. To reject them is unjustified. Yet the Woodland Caribou, for which there are hundreds more documented occurrences than the rejected 'sensitive' species, was accepted as a focal species. The Woodland Caribou in the study area are known to be dependent on fen and bog-fen wetlands, of no merchantable value to AlPac. Other examples exist of species which were rejected or accepted for reasons other than scientific.

3. Summary report question 4 (source report questions 5, 6). *Does the forest contain critical habitat for regionally significant species (e.g. species representative of habitat types naturally occurring in the management unit, focal species, species declining regionally)? There is limited information available about potential declines in regionally significant species. Declines in most species identified by Timoney (2003) (Cougar, American Bittern, Black Tern, Short-eared Owl, Sprague's Pipit, Northern Leopard Frog, Canadian Toad and Western Toad) do not appear to be as a result of forest management.*

I would disagree with the much of that paragraph (e.g., limited information, decline unrelated to forest management). But moreover, I documented clustering of regionally rare species in the sand hills between Ft. McMurray and the Athabasca River Delta, along the Clearwater and Athabasca Rivers, and along transportation corridors south of Lesser Slave Lake, the Hondo area between Lesser Slave Lake and Calling Lake, and between Lac La Biche and Cold Lake (including the Lakeland area). Clustering of rare element occurrences was related to river valleys, wetlands, aquatic habitats, old-growth forests, and sand dunes. These findings were ignored. Only Woodland Caribou habitat was recognized by Dyer.

4. Summary report question 5 (source report question 4). *Does the forest support concentrations of species at the edge of their natural ranges or outlier populations?* Dyer reported none, yet the source report found 18 species and communities at their range edges, including dry boreal grasslands that would be impacted by fire suppression and salvage logging on sensitive sandy soils.

5. Summary report question 6 (source report questions 7-9). Summary report stated that Alberta Special Places 2000 program is complete, with no new sites nominated for protection. This statement ignores the 35 sites in the source report as nominated under Special Places 2000.

6. Summary report question 8. Locations for the interior patterned saline marshes are not 'undetermined'. The latitude and longitude coordinates were provided in the source report (along the Clearwater River). Dry grasslands are sporadic and threatened but were ignored.

7. Summary report question 9. Old-growth forest is a major concern. A timber supply analysis that does not account for wildfire, oil and gas, and insect and disease depletions, and climate change, will produce overly optimistic projections about old-growth extent. The Schneider et al. (2003) analysis, which Dyer termed 'less optimistic' than AlPac's analysis, may itself prove to be optimistic if boreal warming and drying trends continue and industrial activities continue to increase.

8. Summary report question 11. *This sets a different threshold than Timoney (2003) which identified only National ESAs as HCVF.* The source report did not use provincial ESA as automatic HCVF at the request of the contractees. I mapped provincial ESAs (Map 2) which the company could designate as HCVs if they so chose.

9. Summary report *Significant differences between Timoney (2003) and this Summary*

I would argue that defining non-bog surface waters as HCV is consistent with FSC guidelines. Assuming that many aquatic and wetland HCVs are captured by mapping provincial ESAs is an untested assumption that fails the precautionary principle. Secondly, many small water bodies are not mapped, so the Timoney (2003) approach was conservative. The approach used in the summary report eliminated 26.4% of the FMA area, including the embattled McClelland Lake area.

10. Summary report *Proposed Management Strategies*

For the management of bird colonies and Trumpeter Swan lakes, the summary report recommends to “conform to existing Operating Ground Rules and Government requirements”. This means that AlPac will do what they are already required to do-- which is insufficient to protect these features and does not ‘raise the bar’ of management.

There is a recommendation to maintain old forest at amounts within 25% of the long term mean old forest condition. The crux of this objective is the description of the ‘long-term mean’. There are several challenges. The use of the mean, rather than a median or interquartile range is probably inappropriate in a variable system which does not follow a normal statistical distribution. The ‘mean’ will be sensitive to the chosen time period and its duration. What was normal from say, 1900 to 1950, may have little to do with what was normal during the 19th Century, the Little Climatic Optimum, the Holocene, or the present. Nor would the old-growth proportion necessarily be the same for various forest types and landscape units existing at the same time. A scientifically robust description of the long term forest condition is a major undertaking.

Further to old-growth management, how does the company manage conifer old-growth when other companies are cutting it? How does the company meet FSC requirements when other companies and industries are not interested?

Lakeland Diversity Area. What are the management plans for areas outside of areas south or east of Thickwood Lake?

McClelland Lake Area. The summary report states the ESA is largely free of potentially harvestable area, but this depends on how ESA boundaries are drawn. The uplands surrounding the lake have been designated HCV by both the source and summary reports (due both to intactness and old-growth forests), yet there is active logging there (Figure 1).

Concluding Comments

The assessment of high conservation value forests is an evolving discipline. The use of the FSC HCVF toolkit helps to structure the assessment and does provide unequivocal answers to the questions of type and occurrence of HCVs. The toolkit, however, is essentially non-spatial and non-temporal, yet management application of results requires a spatial component and a knowledge of how the system is changing.

We begin a high conservation value forest assessment by attempting to place a ‘value’ on forests and other ecosystems. The value is not a monetary one, but rather a societal and ecological one. From the outset there is fertile ground for disagreement.

Recognizing the problem of valuation, I devised a quasi-objective method of overlaying high conservation attributes in the source report. The method rated an area’s conservation value on the basis of the number of overlapping themes. The summary report used a more subjective approach. This is the company’s prerogative. However, subjective approaches make comparison of high conservation value studies difficult. If each company uses a unique set of methods to define HCVFs, then FSC standards may be rendered useless.

Because of the scarcity of HCV assessments, or their perceived sensitive or proprietary nature, HCV assessments are not readily available. This is troubling for the scientific approach as reproducibility or results and standard methods are cornerstones of the scientific method. Those conducting HCV assessments may find themselves 're-inventing the wheel' devoting much time to accessing data and developing both approaches and methods. With no standard protocols, comparison of HCV assessments, if assessments become available, might be hampered by incompatibility.

Currently within the standard set of questions used to assess HCVPs, there appears to be too much emphasis on rare attributes, particularly species, rather than on characteristic attributes. For the purposes of management, the keystone species in the AIPac FMA are likely common and dominant organisms such as White Spruce, Aspen, *Armillaria ostoyae* root rot, *Phellinus tremulae* stem rot, a host of mycorrhizal fungi, Amblystegiaceae mosses, Beaver, and Forest Tent Caterpillar. When we attempt to describe what is 'special'-- viz., the HCVP assessment framework tends to look for what is rare rather than what is fundamental to the function of the ecosystem.

Emphasis on species is understandable due to the abundance of species data, species legislation, and the recognition value of species vs. communities, landscape, or processes. However, for most large forest management areas, the emphasis should be on communities and landscapes, augmented where appropriate by species- or stand-level attributes. Satellite imagery and landscape polygon data (e.g., Alberta Vegetation Inventory) should form the centerpiece of HCVP assessment. With such data, landscape composition, structure, processes, and disturbances, and the biota likely to inhabit the area, can be assessed.

Fundamental to the conservation and enhancement of HCVPs are maintenance of: (1) large intact blocks of habitat; (2) landscape connectivity; (3) a diverse and dynamic mosaic of landscape types and ages; (4) management flexibility; (5) natural disturbance processes such as wildfire, flooding, herbivory, and disease; (6) dominance by native species and communities; (7) and unpolluted, undiverted, and adequate surface water, groundwater, and air quality. These attributes are essentially 'coarse-filter' elements. Given appropriate landscape management, fine-filter elements (rare species, snags and logs, etc.) will be maintained.

The AIPac summary report could be improved in several ways.

- (1) It purports to be a summary of my work, yet it presents a fundamental change in direction. This fact needs to be stated early in the AIPac summary document.
- (2) The summary was prepared without my knowledge or assistance which raises concerns about transparency, reproducibility and fairness. The summary document should state that it was produced without the participation or approval of the author of the original HCVP report.
- (3) In its rejection of many findings of the original HCVP report, the company fails the FSC criterion of a precautionary approach. The precautionary approach needs to be applied or if not applied, then a rationale should be provided.
- (4) The source report has not been made available to the public. The summary report needs to contain a website link so that readers wishing to read the source report can do so.

References Cited

Dyer, S.J. 2004. High Conservation Value Forests (HCVP) within the Alberta-Pacific Forest Management Agreement Area: A Summary Report. Alberta-Pacific Forest Industries Inc., Boyle, AB.

Schneider, R. R., J. B. Stelfox, S. Boutin, and S. Wasel. 2003. Managing the cumulative impacts of land uses in the Western Canadian Sedimentary Basin: a modeling approach. *Conservation Ecology* 7(1): 8. [online] URL: <http://www.consecol.org/vol7/iss1/art8>

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Figure 1. Recent clearcut logging by Northland Forests Products observed on 25 August 2004 near the north side of McClelland Lake. The few trees left standing in the cutblock appear to be non-merchantable. Note the slash piling and mechanically-scarified and plowed soil, known to be detrimental to biological legacy, soil biota, and nutrient-cycling, and in apparent contravention of FSC principle 6.3.3. The area has been identified as HC VF due to its intactness and old-growth forests. Quota holders have rights to conifer Annual Allowable Cut within the FMA managed by AIPac. Non-conforming uses due to multiple tenure on land proposed for FSC certification remain an unresolved issue. Photo by Kevin Timoney.