Woodlot W1475

Proposed Implementation
and Analysis of
Management Recommendations
From Glen Dunsworth

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Introduction

This report summarizes a proposed implementation strategy and spatial analysis of initial recommendations made by Glen Dunsworth, R.P. Bio. for the management of woodlot licence W1475. These recommendations included:

1. Designate physically or operationally isolated wood as reserves.
2. Establish a minimum level of ecological representation of 15%, half of which is distributed across blocks.
3. Increase variation in retention levels among blocks over the rotation.
4. Put 10% of blocks on double rotations.
5. Use the 50% retention of riparian management zones to creatively protect the trail network where trails run within or adjacent to a riparian management zone.
6. Create some buffers around the provincially registered trail network.
7. Protect wetlands and other habitats identified as important for the persistence of at-risk amphibian species.

The 50% RMZ retention of riparian management zones noted in recommendation 5 refers to the 7.7 ha that was excluded from the last AAC calculation but was not spatially defined. This implementation strategy places that reserve area on the map and all spatial analyses that follow are based on these reserve designations.

Designate Physically or Operationally Isolated Wood as Reserves

This recommendation has been implemented for harvested and planned blocks. The current isolated/reserve area by block is summarized in the table below.

Table 1: Current Isolated/Inoperable or Designated Reserve Area By Block

Block	Block Area (ha)	Designated Reserve/WTP (ha)	Isolated Reserve Area (ha)	Isolated Reserve Percentage	Designated Reserve Percentage
10-01	4.0	0.0	0.2*	5%	0%
10-02	4.6	0.5	0.5	0%	11%
12-01	2.9	0.0	0.0	0%	0%
12-02	3.2	0.0	0.0	0%	0%
12-04	2.8	0.0	1.4	50%	0%
12-05	1.8	0.0	0.4	22%	0%
13-01	1.9	0.0	0.4	21%	0%
15-01	1.3	0.0	0.1	7.7%	0%
Total	**22.5**	**0.5**	**2.5**	**11.1%**	**2.2%**

* This reserve area was designated but is also operationally isolated.

Continued spatial analysis of this strategy will take place to ensure AAC assumptions are correct and future reserve area commitments are met.

Establish a Minimum of 15% Ecological Representation

Table 2 shows the current representation of woodlot ecosystems within currently designated reserve areas based on the TEM mapping from the 1996 Triton Report. This analysis indicates that future reserve designation should consider CDF mm 01, 02 and 06 and CWH xm 01 and 05 as higher priority for inclusion in reserves. The CWH xm 07 and 13 site series are likely well represented in the 'Riparian' polygons identified in the Triton Report, which does not identify the site series in these areas.

The licensee has committed to a continued average block level retention of 10%, which equates to a further 16.6 ha of reserve area that has not been spatially designated. The total area shortfall to achieve 15% reserve area by site series is 9.6 ha, which indicates that the total reserve area can come closer to 15% target for all site series. The additional reserve area has not been spatially designated to allow for detailed on the ground analysis of location options during harvest planning, which will also consider Glen Dunsworth's recommendations for ecosystem connectivity, wildlife habitat, recreation trails, and visual quality objectives amongst other values.

Table 2: Current Reserve Area by Site Series

BEC Zone	Site Series	Total Area (ha)	Reserve Area (ha)	Reserve Percentage
CDF	01	32.49	3.52	10.83%
CDF	02	0.94	0.05	5.32%
CDF	04	13.49	3.21	23.80%
CDF	06	43.04	3.37	7.83%
CDF	11	0.65	0.14	21.54%
CWH	01	42.93	2.23	5.19%
CWH	02	9.93	6.91	69.59%
CWH	03	56.49	17.96	31.79%
CWH	04	8.03	3.14	39.10%
CWH	05	5.81	0.42	7.23%
CWH	07	0.47	0.00	0.00%
CWH	13	2.41	0.00	0.00%
Riparian	N/A	12.40	4.12	33.23%

Increase Variation in Retention Levels Among Blocks Over the Rotation

This recommendation is accepted and will be implemented over future harvest areas. Each block will naturally lend itself to different levels of retention aiding in the implementation of this recommendation. Past retention has focused on individual stems and group retention adjacent to blocks. Future blocks will continue to use these strategies with greater variation as well as in-block group retention where appropriate.

Put 10% of Blocks on Double Rotation

This recommendation has not been modelled spatially. AAC modeling shows that there will be 20 ha/10.6% of the operable land base in the 141 - 250 year old age class by 2113. This suggests that this recommendation will be met by default but which stands reach this age class will depend on the harvest sequence.

Protection of Trail Network

This recommendation has been implemented as a 5m buffer on the Knarston Creek Trail from the trail entrance at Siwash Road to Block 12-05, retention of the area between the trail and the riparian reserve zone, and retention of the stand to the north of the unclassified wetland between Knarston Creek and Stream 4. The total area of this reserve strategy is 2.85 ha.

Other trails within the woodlot will not necessarily have a dedicated buffer but block level dispersed and group retention within and adjacent to harvest areas near trails will be used to limit the visual impact of harvesting. Where in-block trails are impacted they will continue to be re-established following harvest.

Create Some Buffers Around the Provincially Registered Trail Network

Some buffers the exist on the Provincially Registered Trail Network (Copley Ridge Trail) as a result of the inoperable terrain in the south portion of the woodlot. In addition, as with the management of the non-registered trail network, block level retention and strategic design will be used to manage the visual impact of harvesting around recreation trails.

Protect Wetlands and Other Habitat

Wetland features are protected through the reserves shown on the attached map. Wetland features that are currently covered by the woodlot reserve network will be the priority for the designation of block level retention. Harvest planning will also attempt to maintain mature forest connectivity between wetland and stream features without the use permanent reserves. Use of open bottom culverts to maintain connectivity under roads will also be explored.

Summary

The total area of W1475 is 242.1 ha. Of this 188.2 is considered operable in the most recent AAC calculation, and 54.1 ha is inoperable or reserved from harvest.

Table 2: Summary of Inoperable Area

Terrain	RRZ	RMZ	WTP	Wetland	Hydro RoW	Road
27.1	8.1	7.7	0.5	1.5	6.9	2.3

Of this inoperable area, only the 7.7 ha of RMZ reserve had not been spatially designated. This area has now been designated as part of this implementation strategy and is shown on the attached map as the "New Reserve", although it has always been excluded from the annual allowable cut calculation.

In addition, the licensee has voluntarily agreed to reduce the AAC by 10% and committed to continue to leave block level reserve area averaging 10% of block area (some blocks may have greater than 10% retention and other less) by block over each 5 year cut control period. This reserve area will largely reflect the range of stand types and very closely relates to a 10% reduction in AAC.

The proposed implementation of the recommendations above is shown on the attached map and summarized below.

Table 3: Current and Proposed Reserve Summary

Forested Reserve Type	Area (ha)	Percentage of Woodlot	Percentage of Operable Area
Riparian Reserve	8.1	3.3%	N/A
Current Isolated/Inoperable & Designated Block Reserve	3.0	1.2%	1.6%
Woodlot Inoperable Reserve	27.1	11.2%	N/A
"New Reserve"	7.7	0.2%	0.3%
SUB TOTAL	**45.9**	**19.0%**	**5.7%**
Future Block Reserve	16.6	6.9%	8.8%
TOTAL	**62.5**	**25.8%**	**14.5%**

In a total of 25.9% of the woodlot area and 14.5% of the operable are reserved from harvest.

Digitally signed by Erik Holbek, RPF
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