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**District Manager Signature:**

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**Romona Blackwell**

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# Disclaimer

Recognizing the special nature of management on a woodlot licence, this disclaimer forms part of the Woodlot Licence Plan (WLP) for Woodlot Licence Number W0082 and advises that:

- the decision to operate under one or more of the Default Performance Requirements provided in the Woodlot Licence Planning and Practices Regulation (WLPPR) is the sole responsibility of the woodlot licence holder, and involved no detailed oversight or advice from the prescribing registered professional forester,
- this disclaimer is signed on the explicit understanding and information provided by government that the use and achievement of a Default Performance Requirement meets the expectations of government with respect to the management of woodlot licences,
- the undersigned Registered Professional Forester certifies that this Woodlot Licence Plan and the supplemental information fulfills the standards expected of a member of the Association of British Columbia Forest Professionals and that I did personally supervise the work.

Signed \_\_\_\_\_

Seal:

Name (Print) W.A. Hopwood

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# **I. MANDATORY CONTENT FOR A WOODLOT LICENCE**

## **PLAN - SUPPLY CREEK UNIT**

### **PLAN AREA**

This part of the woodlot licence plan (WLP) covers only the Supply Creek unit of woodlot license W0082. The Supply Creek unit consists of 130.12 ha of Crown land and private land combined and is located on Forbidden Plateau Road, West of Courtenay. The Supply Creek Crown land portion (Schedule B) is 97.0 ha in size and the Supply Creek private land portion (Schedule A lands) is 33.12 ha in size. The private land portion is located adjacent to the Forbidden Plateau Road, but the Crown land portion is located south thereof, surrounded by private land so that the only current access is through the licensee's private land portion. This allows the control of unsavory forest uses such as garbage dumping, wood theft and vandalism.

The terrain in the Supply Creek unit is generally moderately sloped (10 – 30 %) with an eastern aspect. The elevation ranges from 180 – 390 m ASL with an increased risk of wet snow loads. Soils are 50 cm or less deep on the ridges and upper slopes, while on the lower slopes the soil depth can exceed 1 metre. The soils are very gravely with textures from sandy loam to the loamy sand, which indicates a generally well-drained moisture regime. The area is well suited for ground based harvesting systems that utilize main road arteries in combination with a complementary forwarding / skidding trail system.

Most of the stands in the Supply Creek unit are second-growth with ages between 60 and 90 years. Approximately one third of the stands in the private land portion are third-growth with an approximate age of 30 years (plus residual 70+ year-old overstorey). The species distribution in general is Douglas- fir with a western red cedar and western hemlock understorey. The harvesting activities conducted by the licensee consist of uniform selection harvesting with the characteristic of preparatory cuts under the irregular shelterwood silviculture system. The regulatory harvest entries are designed to reduce site occupancy and to promote crown development as these un-spaced stands featured high stem counts. A further objective is to reduce the off-site western hemlock component and the associated dwarf mistletoe hosts as well as to promote the red cedar understorey.

Non- timber uses include recreational activities such as mountain biking and hiking. The harvesting of non-timber forest products is limited due to the reduced motorized access.

The licensee issues regularly a woodlot newsletter to update neighbours, interest groups and First Nations about the completed and planned activities in woodlot licence W0082.

## MAP AND INFORMATION

**Table 1: Map and Information Content for the Supply Creek Unit**

Information Item	Map	Text	N/A
Forest cover	√		
Topography; (unless exempted by DM)	√		
Location of streams, wetlands and lakes as shown on forest cover maps, terrain resource inventory maps and fish and fish habitat inventory maps.	√		
Riparian classification of streams, wetlands and lakes <u>if shown on maps</u>	√		
Identification of fish streams	√		
Biogeoclimatic zones and subzones (unless exempted by DM)		√	
Public utilities (transmission lines, gas & oil pipelines, and railways)	√		
Existing roads	√		
<b>Special Situations that may not Apply to the WL area</b>			
Resource Management Zones, Landscape Units or Sensitive Areas			√
Wildlife Habitat Areas (unless exempted by DM)			√
Scenic Areas			√
Ungulate Winter Ranges			√
Community Watersheds		√	
Fisheries Sensitive Watersheds			√
Community and domestic water supply intakes that are licensed under the Water Act and any related water supply infrastructures	√	√	
Contiguous areas of sensitive soils			√
Temporary or permanent barricades to restrict vehicle access	√		
Private property within or adjacent to the woodlot licence area	√		
Resource features other than wildlife habitat features and archaeological sites (unless the location of the resource feature is not to be disclosed)			√

All of the applicable information required to be addressed under section 8(1) of the *Woodlot Licence Planning and Practices Regulation* (WLPPR), and checked above, is discussed in the following text of this section and/or is identified on the WLP map in Appendix 2.

### Biogeoclimatic Zones and Subzones

The Supply Creek unit of the woodlot licence is located within the *Very Dry Maritime* variant of the *Coastal Western Hemlock* biogeoclimatic zone (CWH xm1) where the average rainfall can range from 1100 to 2721 mm/year. Much of the original forest cover on the woodlot was harvested via rail and cat in the 30's and 40's and subsequently burnt. The disturbance history has resulted in continuous areas of even-aged Douglas-fir with a scattered hemlock component and a cedar understorey.



## **Resource Management Zones, Landscape Units or Sensitive Areas**

The Supply Creek unit of the woodlot licence is not located within a *Resource Management Zone* or *Special Management Zone* described in the *Vancouver Island Land Use Plan*. There is also no Landscape Unit Plan in place that pertains to the Supply Creek unit.

## **Scenic Areas**

There are no scenic areas present or visual quality objectives established in the Supply Creek unit of woodlot licence W0082.

## **Community Watersheds**

The Supply Creek unit is located within a community watershed (Puntledge, WS code 920.054 ), which was designated as such in 2011. The management strategies relating to the community watershed are detailed in the chapter ‘**Areas Where Timber Harvesting Will be Modified**’.

## **Licensed Water Supply Intakes and Infrastructures**

There is one licensed water supply intake within the Supply Creek unit of woodlot licence W0082, held by the licensee for fire protection purposes.

## **Temporary or Permanent Barricades to Restrict Vehicle Access**

Gates to restrict vehicle access have been established at the main entrance to the Supply Creek M/L and FP Road as indicated on the WLP map. The purpose of the gates is to reduce the risk of fire, firewood theft, vandalism and to prevent garbage dumping.

Other features and resource values relevant to the management of the woodlot licence not mentioned specifically in the text above are indicated on the attached maps (Appendices 1, and 2).



## AREAS WHERE TIMBER HARVESTING WILL BE AVOIDED

There are no areas in the Supply Creek unit of the woodlot licence where timber harvesting will be avoided.

## AREAS WHERE TIMBER HARVESTING WILL BE MODIFIED

Areas in the Supply Creek unit of this woodlot licence where timber harvesting will be modified to protect and manage resources are shown on the map by shading, hatching or lines.



Riparian reserve zones (RRZs) and wildlife tree retention areas (WTRAs) are not planned for regular harvesting other than that specified by regulation, such as tree removal for the purpose of creating trails or for carrying out sanitation treatment. These areas include reserve zones allocated to streams and wetlands and those areas designated or projected as WTRAs. RRZs and WTRAs are denoted in light red shading on the map.



Riparian management zones (RMZs): The table below outlines how timber harvesting will be modified based on the stream, wetland and lake classification. Depending on the present stand structure, terrain, windthrow risk and block configuration the retention level will be uniform, grouped or spatially distinct. In general, understory and unmerchantable cedar and other conifers of good form and vigour will be maintained wherever possible to meet the intent of riparian area management for all stream and wetland classifications. RMZs are denoted in light green diagonal hatching on the map.

**Table 2: Modification of Harvesting in RMZs by Riparian Classification in the Supply Creek Unit**

RIPARIAN CLASS	INTENT OF MANAGEMENT	SPECIES TO RETAIN	RETENTION LEVEL POST HARVEST (stems/ha)
S2 and S3 (Fish bearing or Community Watershed)	<ul style="list-style-type: none"> <li>Maintain the integrity of the RRZ</li> <li>Assist in maintaining wildlife attributes within the RMA, such as wildlife tree cover, nesting and perching habitat and diversity of vertical forest structure.</li> </ul>	<b>Fd, Cw, Hw, PI, Dr and Ac</b>	<b>25 - 100%</b>
S4 (Fish bearing)	<ul style="list-style-type: none"> <li>Maintain stream bank integrity</li> <li>Provide shaded cover, LWD and litter</li> </ul>		<b>25 - 100%</b> within 10 m of channel retain 50% of stems, representative of species, age and size
S4 (non-fish)	<ul style="list-style-type: none"> <li>Minimize sedimentation and debris transport to lower reaches of stream</li> </ul>		<b>0 - 100%</b>
Wetlands	<ul style="list-style-type: none"> <li>Maintain the integrity of the RRZ</li> <li>Assist in maintaining wildlife attributes within the RMA, such as wildlife tree cover, nesting and perching habitat and diversity of vertical forest structure.</li> </ul>		<b>25 - 100%</b>

Fd = Douglas fir, Cw = western red cedar, Hw = western hemlock, PI = lodgepole pine, Dr = red alder, Ac = cottonwood



**Recreation:** The Forest Service recreation inventory information pertaining to the WLP area is summarized in the following table and the polygon numbers are shown on the WLP map. No information exists on the private land portion.

**Table 3: Recreation Feature Inventory for the Supply Creek Unit**

Feature Polygon #	Prominent Feature	Activities	Impact Management
3744	Regenerating stand, small stream or creek	Scenic viewing	Management activities are not considered to impact features or activities
3755	Regenerating stand, exposed bedrock	Scenic viewing	Management activities are not considered to impact features or activities



**Community watershed/ licenced waterworks:** The management activities are not considered to have an impact on the water quality or quantity of the water supply at the Puntledge River water intake for the following reasons:

The sustainable rate of cut is partitioned for this woodlot unit and therefore the harvest rate in the Supply Creek unit of the woodlot licence is relatively low. The streamside protection specified in this WLP is by far greater then on the private land holdings that make up the majority of the watershed area. The streams in this woodlot licence unit are minor and the potential for sediment delivery and debris flow is low. Machine free buffers, spill prevention

measures and stream crossing restrictions are standard operating procedures, which minimize the risk of substance or sediment delivery. The majority of the harvest is conducted as uniform partial cut with minimal impact to surface and subsurface flow patterns.

The water intake within the Supply Creek unit of the woodlot licence is owned by the woodlot licence holder and is licenced to him. The purpose of the water intake is water supply for fire fighting purposes and not domestic consumption.

## PROTECTING AND CONSERVING CULTURAL HERITAGE RESOURCES

The Supply Creek unit of woodlot licence W0082 lies within the traditional territories of five First Nations and Councils. A list of these First Nations/Councils and their contact information is provided within Part IV-1, 'Review and Comment'. In addition to the information sharing process that is implemented for the approval of this plan, First Nations and other interested parties are welcome during the term of this plan to review planned developments upon their own initiative. Documentation of all consultation with First Nations is included within the supplemental information (Part IV) of the final submission of this plan.

The archaeological overview assessment model for the east coast of Vancouver Island, prepared in 2008 by Millennia Research Limited for the Campbell River Forest District shows a low potential for archaeological sites (non-CMT<sup>1</sup>) in the Supply Creek unit of the woodlot licence. There is moderate to high potential for veteran CMTs in the east half of the Crown lands in the Supply Creek unit. According to the model operationalization guideline by Millennia.

If the licensee or any personnel from the woodlot licensee finds evidence of traditional use<sup>2</sup> or cultural heritage values, the relevant First Nations representative will be notified and all work will cease within the immediate (30 m) area. The licensee will cooperate fully.

The following results and strategies (Table 4) for managing cultural heritage values will apply in the Supply Creek unit. These are based on known cultural heritage issues of interest to First Nations in the Campbell River Forest District.

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<sup>1</sup> CMT – culturally modified tree such as bark stripped cedar, canoe logs, plank trees or aboriginal stumps

<sup>2</sup> A forest resource use traditionally exercised by a First Nations people

**Table 4: Results and Strategies for Cultural Heritage Resources in the Supply Creek Unit**

<b><i>Cultural Heritage Value</i></b>	<b><i>Results &amp; Strategies</i></b>
<b>Cedar:</b>	<p><b><i>Result:</i></b></p> <ul style="list-style-type: none"> <li>• Enable continued access to red cedar for traditional use by local First Nations.</li> </ul>
	<p><b><i>Strategies:</i></b></p> <ul style="list-style-type: none"> <li>• Based on availability of stock and ecological suitability (e.g. Cw listed as preferred species), a component of Cedar will continue to be planted in the woodlot to ensure a long-term supply.</li> <li>• Naturally occurring young cedar trees (including poles) will be retained where operationally practicable.</li> <li>• Access will be allowed to monumental cedar trees for traditional use by local First Nations. There are currently no known monumental cedar trees within the woodlot but the aforementioned recruitment strategies will allow opportunities for future generations.</li> </ul>
<b>Traditionally Used Plants:</b>	<p><b><i>Result:</i></b></p> <ul style="list-style-type: none"> <li>• Enable continued access to traditionally used plants for traditional use by local First Nations.</li> </ul>
	<p><b><i>Strategies:</i></b></p> <ul style="list-style-type: none"> <li>• When local First Nations have indicated specific interest in traditional use plants, the licensee will identify the presence of such plants in planned harvest areas and communicate this to the interested First Nations prior to cutting permit submission. This is to allow for review by the local First Nations and for the collection of traditional use plants by local First Nations prior to harvest. Interested local First Nations will also be notified of traditionally used plants, particularly those indicated to the licensee as scarce or not abundant, if identified on the Woodlot Licence area.</li> <li>• A no-pesticide use policy is implemented in this Woodlot Licence. Manual brushing and early planting of large stock is the preferred method to overcome brush problems.</li> </ul>
<b>Cultural Heritage Resources</b>	<p><b><i>Result:</i></b></p> <ul style="list-style-type: none"> <li>• Harvest plans will consider identified cultural heritage resources.</li> </ul>
	<p><b><i>Strategies:</i></b></p> <ul style="list-style-type: none"> <li>• The Licensee will share information with local First Nations upon request and be available for field reviews.</li> </ul>

# WILDLIFE TREE RETENTION STRATEGY

Note: The proportion of the Woodlot Licence area that is occupied by wildlife tree retention areas is specified in the “PERFORMANCE REQUIREMENTS” section of this Woodlot Licence plan.

## INDIVIDUAL WILDLIFE TREES

### a) Species and Characteristics:

Desired species are (in order of preference): Fd, Cw, Hw, Pl, Dr, and Ac with a minimum dbh of 50 cm. The following table describes the species and characteristics of individual trees that will guide the selection of wildlife trees to be retained from harvesting.

**Table 5: Wildlife Tree Value and Characteristics for All Species in the Supply Creek Unit**

	<b>HIGH (at least two of the listed characteristics)</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>CHARACTERISTICS</b>	<ul style="list-style-type: none"> <li>• Internal decay (heartrot or natural/excavated cavities present)</li> <li>• Crevices present (loose bark or cracks suitable for bats)</li> <li>• Large brooms present</li> <li>• Active or recent wildlife use</li> <li>• Current insect infestations</li> <li>• Tree structure suitable for wildlife use (e.g. large nest, hunting perch, bear den, etc.)</li> <li>• Largest tree on site (height and/or diameter) and/or veterans</li> <li>• Locally important wildlife tree species</li> </ul>	<ul style="list-style-type: none"> <li>• Large, stable trees that will likely develop two or more of the characteristics listed under HIGH</li> </ul>	<ul style="list-style-type: none"> <li>• Trees not covered by HIGH or MEDIUM categories</li> </ul>

From: Wildlife Tree Committee recommendations available at: <http://www.for.gov.bc.ca/hfp/wlt/wlt-policy-02.htm>

Given the nature of the historic logging and the thrifty second-growth stands present in the Supply Creek unit few trees in a given stand may have ‘high’ value attributes. One tree per hectare will be the minimum threshold for retention with preference given to trees onsite with the highest wildlife value. Further, subject to safety and forest health considerations, retain all veterans, den trees and trees with active nests.

### Conditions under which Individual Wildlife Trees may be Removed:

The following specific conditions will influence the decision of where individual wildlife trees may be removed:

- worker safety;
- the significance of forest health risk to surrounding stands;
- the ability to retain other wildlife trees to perform as suitable wildlife habitat; and
- the availability of wildlife trees and CWD in adjacent areas.

Unsafe high value wildlife trees will be protected by no-work zones or re-design of cutblock or road configuration if they exhibit a combination of the following characteristics: wildlife tree value category HIGH applicable, DBH > 50 cm, wildlife tree class 2 – 8, > 20 m high, conks or decay present, wildlife use present (nesting, cavities, recent feeding, denning), species Fd, Cw, Hw, Pl, Dr or Ac. All workers involved with the removal of potential wildlife trees will be informed of applicable standards prior to fieldwork to help mitigate unnecessary removals.

### b) Replacement of Individual Wildlife Trees:

Individual trees will be replaced if they are of ‘high’ wildlife value. Replacement trees will be selected using criteria outlined above with a preference for selecting trees that have two or more high wildlife tree value characteristics.

## **WILDLIFE TREE RETENTION AREAS**

### a) Forest Cover Attributes:

The following wildlife tree retention areas (WTRAs) are defined in the Supply Creek unit:

**Table 6: Defined Wildlife Tree Retention Areas in the Supply Creek Unit**

ID	Area (ha)	Composition	Age (years)	Height (m)	Crown Closure (%)	Basal Area (m <sup>2</sup> /ha)
Hopwood Creek RRZ	1.7	F68 C29 H3	83	33	90	55
Supply Creek RRZ	3.6	F71 C22 H7	83	31	90	47
Paton Creek RRZ	1.2	F82 H10 C8	73	21	90	55

Due to the continual maintenance of forest cover in the Supply Creek Woodlot Licence no further WTRA is specified. (See below: WILDLIFE TREE RETENTION.)

#### **b) Conditions Under which Trees may be Removed from Wildlife Tree Retention Areas:**

The goal is to maintain all stems within streamside reserves and WTRAs. However, the following stand-specific issues will influence the decision of where some individual removal may be appropriate:

- worker safety;
- the significance of forest health risk to surrounding stands (specifically, high incidence of dwarf mistletoe);
- the ability of the retained wildlife trees to perform as suitable wildlife habitat;
- creating a corridor for full suspension yarding; and
- the availability of wildlife trees and CWD in adjacent harvest areas.

It is permitted to salvage windthrown timber and individual trees considered a safety hazard. Where forest health issues pose a significant threat to areas outside the WTRA trees maybe cut and harvested, if not left for coarse woody debris.

#### **c) Replacement of Trees Removed from Wildlife Tree Retention Areas:**

Given the nature of the adjacent stands and existing WTRAs, the felling of danger trees or of mistletoe infested trees within a distance from harvest edges as defined in the specific cutting authority will not be a common occurrence or threaten the long-term integrity and usefulness of the WTRAs. As such, no strategy for the specific replacement of individual trees within WTRAs is presented / needed.

Where salvage/harvesting is planned, a suitable replacement WTRA of at least equivalent quality will be identified concurrently to achieve the retention target. Where all or part of a WTRA is salvaged, the salvaged area should be replaced with other suitable habitat in the nearest possible location. If a WTRA suffers windthrow, but is not salvaged, it need not be replaced. Replacement areas must have equal or better wildlife values.



## MEASURES TO PREVENT INTRODUCTION OR SPREAD OF INVASIVE PLANTS


The introduction or spread of invasive plants, specifically scotch broom, into the Supply Creek unit through the use of standard practices is possible.

In the event that scotch broom becomes established, it will be brushed repeatedly and the area re-vegetated. Where it is known or reasonably expected that machinery will be transported from a contaminated site, on or off the woodlot, cleaning of tires, tracks, buckets, undercarriage, etc. will be completed prior to transportation. All newly constructed roads will be grass seeded if scotch broom establishment becomes a concern. Seed mixtures used for the above purposes or for those under Section 29 of the WLPPR will be assessed to ensure that their use does not introduce additional invasive species. Additional species listed in the *Invasive Plants Regulation* (reg. 18/2004) will be managed accordingly if identified.

## MEASURES TO MITIGATE EFFECT OF REMOVING NATURAL RANGE BARRIERS

There are no rangelands present on or adjacent to the woodlot licence and no measures or activities are proposed.

## STOCKING INFORMATION FOR SPECIFIED AREAS

 Alternative: The stocking information for specified areas are found in Appendix 4

Specified areas include:

- the removal of individual trees,
- irregular shelterwood entry,
- single/group tree selection,
- intermediate cutting such as commercial thinning or
- the harvest of special forest products.

The delineation of specified areas will be conducted in conjunction with the pre-harvest mapping as per Section 33 of the WLPPR.

## PERFORMANCE REQUIREMENTS – SUPPLY CREEK UNIT

**Only the performance requirements in Part 3 (Practice Requirements) of the WLPPR for which an alternative can be proposed are shown in this woodlot licence plan. The remaining performance requirements in Part 3 are not shown, nor are the performance requirements in Part 4 (Roads).**

### SOIL DISTURBANCE LIMITS



Alternative - WLPPR s.24(1)(a):

8% of Net Area to be Reforested *except*

- a) up to a maximum of 30% in localised areas (standard unit basis) requiring site preparation for brush or root rot control. In root-rot areas with suitable soils destumping may be prescribed to control the spread of infection. In areas dominated by heavy salal or salmonberry a light soil raking using an excavator mounted brush rake may be prescribed to disturb salal/salmonberry roots. This will create more plantable spots and facilitate seedling establishment and achieve early brush control. The objective of this treatment is to minimize brush competition during seedling establishment and to create a mixed substrate of soil and forest floor, not a complete removal of the forest floor. These treatments may result in dispersed scalps and gouges.
- b) up to a maximum of 15% in wet site units with fluctuating water tables or prolonged periods of standing water in the winter (CWHxm 11, 12, 13, 14, 15). In these areas 400-600 mounds per ha may be created (where prescribed) using an excavator bucket to create suitable micro sites. This will result in dispersed deep gouges.

Further rationale is provided in the supplementary information included in this plan. See Section IV - 4.

### PERMANENT ACCESS STRUCTURES



Default: WLPPR s.25:

The maximum area occupied by permanent access structures is as follows:

- Cutblocks  $\geq 5$  ha – 7% of cutblock area
- Cutblocks  $< 5$  ha – 10% of cutblock area
- Total woodlot licence area – 7% of woodlot licence area

## **USE OF SEED**

👉 Default - WLPPR s.32:

Adoption of Chief Forester's Standards for Seed Use.

## **STOCKING STANDARDS**

👉 Alternative - WLPPR s. 35(1)(a):

The stocking standards, regeneration dates and free growing dates are detailed in Appendix 4. Clarification and rationale is provided in the supplementary information included with the plan. See Section IV - 4.

## **WIDTH OF STREAM RIPARIAN AREAS**

👉 Default - WLPPR s.36(4)(a):

The width of stream riparian areas will be as specified in Section 36(4) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **WIDTH OF WETLAND RIPARIAN AREAS**

👉 Default - WLPPR s.37(3)(b):

The width of wetland riparian areas will be as specified in Section 37(3)(b) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **WIDTH OF LAKE RIPARIAN AREAS**

👉 Default - WLPPR s.38(2)(b):

The width of lake riparian areas will be as specified in Section 38(2)(b) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **RESTRICTIONS IN A RIPARIAN RESERVE ZONE**

👉 Default: WLPPR s.39 (except as provided below)

- Cutting, modifying or removing trees in a riparian reserve zone is limited to the purposes described in Section 39(1) of the WLPPR.
- There may be a need to establish a corridor for full suspension logging of the forest south of Paton Creek if access is not available via adjoining landowners' properties (which it is not at present)..
- There are limited areas within the Supply Creek unit's RRZs where harvesting history in the 1930s and 1940s has resulted in excessive dwarf mistletoe infection of hemlock (harvesting practices which left infected overstoreys; and lack of post-harvest slashburning). Areas of excessive infection adjoining the Supply Creek unit's RRZs may be sanitized of infected hemlock. Areas within the RMZs may also be sanitized. Note that hemlock makes up a maximum of 10% of the applicable Supply Creek unit's RRZs. Selection harvesting would be minimal – restricted to overstocked stands infected by dwarf mistletoe.
- No road construction in RRZs is necessary in the future.

## **RESTRICTIONS IN A RIPARIAN MANAGEMENT ZONE**

👉 Alternative: WLPPR s.40

- Construction of a road in a riparian management zone is limited to the conditions described in Section 40(1) of the WLPPR.
- For the purpose of Section 40(1)(a) of the WLPPR, roads may be constructed in a riparian management zone if a road grade previously existed in this location and it is more practicable to re-establish the road on the old grade.
- Restrictions and conditions on road construction, maintenance and deactivation activities, and on cutting, modifying or removing trees in a riparian management zone are as described in Section 40.
- No road construction in RMZs is necessary in the future.

## **WILDLIFE TREE RETENTION**

👉 Default - WLPPR s.52(1):

- The proportion of the area in the Supply Creek Unit that is occupied by wildlife tree retention areas is no less than 8%. The WTRAs located in the riparian reserve zones make up 6.5 ha, which is 5.0% of the total unit.
- The Supply Creek Unit is managed with a continual forest cover regime (irregular shelterwood, single tree selection and group selection) so that the woodlot as a whole is essentially one large wildlife tree retention area, promoting old-growth attributes. The full range of tree species and sizes is

maintained in each harvest entry (except for hemlock subject to dwarf mistletoe infection and site-incompatibility). All current and potential “wildlife trees” are reserved from cutting, except where safety comes into play.

- In simple terms, of the Net Reforestable Area of the Supply Creek Unit (121.0 ha), 75.1 ha (62%) are aged 76 – 83 years old with 340 – 512 m<sup>3</sup>/ha (merch. volume), 716 – 826 merch. stems/ha, 45 – 55 m<sup>2</sup>/ha merch. BA. So, 62% of the NRA is stocked and available for wildlife as much as possible in a second-growth forest confined by space, industrial neighbours, and history. This 0.62 ratio will not change much in the foreseeable future, so we will almost always have 62% of 121.0 ha essentially in WLRAs. This equates to 57.7% of the total area of the Supply Creek Unit.
- Another way to look at it is in the context of Riparian Management Zones where even less harvesting is carried out – usually in the order of 20% less by both volume and basal area measurements. RMZs make up about 4.9% of the total area of the Supply Creek Unit. Couple these RMZs with RRZs and we have 9.9% of the unit in WTRAs (not to mention the rest of the NRA which is maintained in continuous stocked forest cover, managed so as to accelerate the attainment of old-growth characteristics).
- Fundamentally, this was the basis for W0082 being among the first two forest management units in BC to be FSC-certified in 2000. And it has been the basis for the MOF’s and First Nations’ approval of W0082’s various operating plans since inception.

### **COARSE WOODY DEBRIS**

- 👉 Default - WLPPR s.54(1):  
Area on Coast – minimum retention of 4 logs per ha  $\geq 5$  m in length and  $\geq 30$  cm in diameter at one end.

### **RESOURCE FEATURES**

- 👉 Default - WLPPR s.56(1):  
Ensure that forest practices do not damage or render ineffective a resource feature.

## **II. MANDATORY CONTENT FOR A WOODLOT LICENCE PLAN – QUINSAM UNIT**

### **PLAN AREA**

This part of the woodlot licence plan covers only the Quinsam unit of woodlot licence W0082. The Quinsam unit consists of 302.9 ha of Crown land, located west of Campbell River along the Argonaut Main (access to Quinsam Coal) on the south side of the Gold River Highway. The Quinsam unit is bisected through its full length by a 30 m wide right of way property (Hopwood Road) owned by Allen Hopwood Enterprises Ltd. (not part of W0082).

The terrain in the Quinsam unit of the woodlot licence is generally flat. It includes low-lying areas adjacent to wetlands as well as moderate slopes and broad ridges. Soils are sandy loams. The growing sites are ranging from good to poor with the majority being of moderate quality. The change of site quality and timber type is very gradual and it is mostly an expression of the terrain and the proximity to ground water.

The access to the Quinsam unit is very good. From the Gold River highway H1 Road enters the woodlot licence and connects to the private Hopwood Road, which is the “backbone.” From the Argonaut Main there are various access roads to the Quinsam unit to the South and to the North. Some of the roads to the South are used by TimberWest to access their private forest land holdings. The access to the area between Argonaut Creek, Argonaut Main and the Gold River highway is controlled by gates. If operations shift to other areas of the Quinsam unit, additional gate installations will be considered.

All of the stands in the Quinsam unit are second-growth stands and the majority are between 65 and 70 years old, whereby less than 3% of the area is 35 – 40 years old. The species distribution is in general is Douglas- fir with a western hemlock component and a western red cedar understorey. The harvesting activities conducted by the licensee consist of uniform and strip selection harvesting with the characteristic of preparatory cuts under the irregular shelterwood silviculture system. The harvest entries are designed to reduce stand density and to promote crown development of preferably Douglas-fir and western red cedar.

Non- timber uses include recreational activities such as hunting and ATVing as well as the harvesting of non-timber forest products. Although the Quinsam unit is located adjacent to the Gold River Highway the public use of this area is moderate.

## MAP AND INFORMATION

**Table 7: Map and Information Content for the Quinsam Unit**

Information Item	Map	Text	N/A
Forest cover	√		
Topography; (unless exempted by DM)	√		
Location of streams, wetlands and lakes as shown on forest cover maps, terrain resource inventory maps and fish and fish habitat inventory maps.	√		
Riparian classification of streams, wetlands and lakes <u>if shown on maps</u>	√		
Identification of fish streams	√		
Biogeoclimatic zones and subzones (unless exempted by DM)		√	
Public utilities (transmission lines, gas & oil pipelines, and railways)	√		
Existing roads	√		
<b>Special Situations that may not Apply to the WL area</b>			
Resource Management Zones, Landscape Units or Sensitive Areas		√	
Wildlife Habitat Areas (unless exempted by DM)			√
Scenic Areas	√	√	
Ungulate Winter Ranges			√
Community Watersheds			√
Fisheries Sensitive Watersheds			√
Community and domestic water supply intakes that are licensed under the Water Act and any related water supply infrastructures			√
Contiguous areas of sensitive soils			√
Temporary or permanent barricades to restrict vehicle access		√	
Private property within or adjacent to the woodlot licence area	√		
Resource features other than wildlife habitat features and archaeological sites (unless the location of the resource feature is not to be disclosed)			√

All of the applicable information required to be addressed under section 8(1) of the *Woodlot Licence Planning and Practices Regulation* (WLPPR), and checked above, is discussed in the following text of this section and/or is identified on the WLP maps in Appendix 3.

### Biogeoclimatic Zones and Subzones

The Quinsam unit is located within the *Very Dry Maritime* variant of the *Coastal Western Hemlock* biogeoclimatic zone (CWH xm1) where the average rainfall can range from 1100 to 2721 mm/year. Much of the original forest cover on the woodlot was either burned in the 1938 Sayward fire or harvested via rail and cat around this time. The disturbance history has resulted in continuous areas of even aged Douglas-fir with a scattered hemlock component and cedar understorey. As well, there are small pockets of hardwood (alder) in moist depressions and adjacent to swamps. Some stands in the Quinsam unit were fertilized and spaced or commercially thinned prior to the establishment of the woodlot licence.



## **Resource Management Zones, Landscape Units or Sensitive Areas**

The Quinsam unit is located within Resource Management Zone 31 as described in the *Vancouver Island Land Use Plan*. This area is further covered by the *Sayward Landscape Plan*, which is an approved landscape unit plan. The only constraint from the *Sayward Landscape Plan* is the presence of scenic area in the Quinsam unit.

## **Scenic Areas**

As identified in the *Sayward Landscape Plan*, the Quinsam unit is overlapped in the northern third with partial retention visual quality objectives (VQOs). See '**Areas Where Timber Harvesting Will be Modified**' in this plan for management strategies relating to visual quality objectives.

## **Community Watersheds**

No part of the Quinsam unit is located within a community watershed. However, this area is within risk zone C and with its northern tip in risk zone B of the Hart Lake community watershed as defined in the watershed management plan of the municipal District of Campbell River. See '**Areas Where Timber Harvesting Will be Modified**' in this plan for management strategies relating to the Campbell River community watershed risk zone.

## **Licensed Water Supply Intakes and Infrastructures**

There are no licensed water supply intakes or associated infrastructure within the Quinsam unit.

## **Temporary or Permanent Barricades to Restrict Vehicle Access**

Permanent barricades to restrict vehicle access have been established at the main entrances to the Quinsam unit as indicated on the WLP map (Appendix 3). The purpose of these installations is to reduce the risk of fire, firewood theft, vandalism and to prevent garbage dumping. The gates erected at the entrances also protect further property rights as they access additional private land (Hopwood Road) not included within the woodlot licence.



Other features and resource values relevant to the management of the woodlot licence not mentioned specifically in the text above are indicated on the WLP map (Appendix 3).

## AREAS WHERE TIMBER HARVESTING WILL BE AVOIDED

There are no areas in this Woodlot Licence where timber harvesting will be avoided.

## AREAS WHERE TIMBER HARVESTING WILL BE MODIFIED

Areas in the Quinsam unit where timber harvesting will be modified to protect and manage resources are shown on the map by shading, hatching or lines.

-  Riparian reserve zones (RRZs) and wildlife tree retention areas (WTRAs) are not planned for regular harvesting other than that specified by regulation, such as tree removal for the purpose of creating trails or for carrying out sanitation treatment. These areas include reserve zones allocated to streams and wetlands and those areas designated or projected as WTRAs. RRZs and WTRAs are denoted in light red shading on the map.
-  Riparian Management Zones: The table below outlines how timber harvesting will be modified based on the stream, wetland and lake classification. Depending on the present stand structure, terrain, windthrow risk and block configuration the retention level will be uniform, grouped or spatially distinct. In general, understory and un-merchantable cedar and other conifers of good form and vigour will be maintained wherever possible to meet the intent of riparian area management for all stream and wetland classifications. RMZs are denoted in light green diagonal hatching on the map.

**Table 8: Modification of Harvesting in RMZs by Riparian Classification in the Quinsam Unit**

RIPARIAN CLASS	INTENT OF MANAGEMENT	SPECIES TO RETAIN	RETENTION LEVEL POST HARVEST (stems/ha)
S2 and S3 (Fish bearing)	<ul style="list-style-type: none"> <li>Maintain the integrity of the RRZ</li> <li>Assist in maintaining wildlife attributes within the RMA, such as wildlife tree cover, nesting and perching habitat and diversity of vertical forest structure.</li> </ul>	<b>Fd, Cw, Hw, PI, Dr and Ac</b>	<b>25 - 100%</b>
S4 (Fish bearing)	<ul style="list-style-type: none"> <li>Maintain stream bank integrity</li> <li>Provide shaded cover, LWD and litter</li> </ul>		<b>25 - 100%</b> within 10 m of channel retain 50% of stems, represen- tative of species, age and size
S5 and S6 (non-fish)	<ul style="list-style-type: none"> <li>Minimize sedimentation and debris transport to lower reaches of stream</li> </ul>		<b>0 - 100%</b>
Lake and Wetlands	<ul style="list-style-type: none"> <li>Maintain the integrity of the RRZ</li> <li>Assist in maintaining wildlife attributes within the RMA, such as wildlife tree cover, nesting and perching habitat and diversity of vertical forest structure.</li> </ul>		<b>25 - 100%</b>

Fd = Douglas fir, Cw = western red cedar, Hw = western hemlock, PI = lodgepole pine, Dr = red alder, Ac = cottonwood



**Scenic Areas:** To ensure harvest areas are managed to be consistent with the partial retention (PR) visual quality objectives (VQOs) large openings will follow the line and form of the landscape. Innovative visual forestry techniques such as screening and green-up sequencing will be used to reduce visual impacts along highways and other foreground situations. The assessment procedures outlined in the Visual Impact Assessment Guidebook 2001 may be used to direct design and assist in evaluation, whereby the categories of visually altered forest landscapes are defined as:

- (a) *preservation*: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is
  - (i) very small in scale, and
  - (ii) not easily distinguishable from the pre-harvest landscape;
- (b) *retention*: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is
  - (i) difficult to see,
  - (ii) small in scale, and
  - (iii) natural in appearance;
- (c) *partial retention*: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is
  - (i) easy to see,
  - (ii) small to medium in scale, and
  - (iii) natural and not rectilinear or geometric in shape;

- (d) *modification*: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint,
- (i) is very easy to see, and
  - (ii) is
    - (A) large in scale and natural in its appearance, or
    - (B) small to medium in scale but with some angular characteristics;
- (e) *maximum modification*: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint,
- (i) is very easy to see, and
  - (ii) is
    - (A) very large in scale,
    - (B) rectilinear and geometric in shape, or
    - (C) both.



Recreation: The Ministry of Forests' recreation inventory information pertaining to the WLP area is summarized in the following table and the polygon numbers are shown on the WLP map.

**Table 9: Recreation Feature Inventory Information for the Quinsam Unit**

Feature Polygon #	Prominent Feature	Activities	Impact Management
3110	Coniferous Forest	Scenic Viewing	Management activities are to be consistent with partial retention VQO
3137	Coniferous Forest		Regular management activities are not considered to impact features or activities
3146	Coniferous Forest		Regular management activities are not considered to impact features or activities
3154	Wetland Vegetation, Birds, Small Mammals	Viewing of Large Mammals	Regular management activities are not considered to impact features or activities
3167	Coniferous Forest, Man-made Structures		Regular management activities are not considered to impact features or activities
3177	Small Stream, Wetland Vegetation, Coniferous Forest	Viewing of Large Mammals	Regular management activities are not considered to impact features or activities



Watershed Risk Zones B and C: The regular forest management practices under the current forest and environmental legislation are sufficient to minimize the risk of pollution and contamination of the John Hart Lake water intake.

## PROTECTING AND CONSERVING CULTURAL HERITAGE RESOURCES

The Quinsam unit of woodlot licence W0082 lies within the traditional territories of five First Nations and Councils. A list of these First Nations/Councils and their contact information is provided within Part IV-1, 'Review and Comment'. In addition to the information sharing process that is implemented for the approval of this plan, First Nations and other interested parties are welcome during the term of this plan to review planned developments upon their own initiative. Documentation of all consultation with First Nations is included within the supplemental information (Part IV) of the final submission of this plan.

The archaeological overview assessment model for the east coast of Vancouver Island, prepared in 2008 by Millennia Research Limited for the Campbell River Forest District shows in the Quinsam unit a low potential for culturally modified trees (CMTs<sup>3</sup>). The potential for archaeological sites (non-CMT) is also low except some random pixels of moderate potential, which are associated with the midden layer.



An archaeological site potential assessment, prepared for the adjacent woodlot licence W1641 in March 2007 under the consideration of previous AOAs concludes that: "The distance from coastal shoreline precludes potential for the presence of non-CMTs archaeological sites. Past fieldwork conducted in similar inland locations has indicated that the potential for finding non-CMT sites decreases dramatically as one moves away more than 500 m from coastal shoreline. No further archaeological work is recommended for W1641".

If the licensee or any personnel from the woodlot licensee finds evidence of traditional use<sup>4</sup> or cultural heritage values, the relevant First Nations representative will be notified and all work will cease within the immediate (30 m) area. The licensee will cooperate fully.

The following results and strategies (Table 10) for managing cultural heritage values will apply in the Quinsam unit. These are based on known cultural heritage issues of interest to First Nations in the Campbell River Forest District.

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<sup>3</sup> CMT – culturally modified tree such as bark stripped cedar, canoe logs, plank trees or aboriginal stumps

<sup>4</sup> A forest resource use traditionally exercised by a First Nations people

**Table 10: Results and Strategies for Cultural Heritage Resources in the Quinsam Unit**

<b><i>Cultural Heritage Value</i></b>	<b><i>Results &amp; Strategies</i></b>
<b>Cedar:</b>	<b><i>Result:</i></b> <ul style="list-style-type: none"> <li>• Enable continued access to red cedar for traditional use by local First Nations.</li> </ul>
	<b><i>Strategies:</i></b> <ul style="list-style-type: none"> <li>• Based on availability of stock and ecological suitability (e.g. Cw listed as preferred species), a component of Cedar will continue to be planted in the woodlot to ensure a long-term supply.</li> <li>• Naturally occurring young cedar trees (including poles) will be retained where operationally practicable.</li> <li>• Access will be allowed to monumental cedar trees for traditional use by local First Nations. There are currently no known monumental cedar trees within the woodlot but the aforementioned recruitment strategies will allow opportunities for future generations.</li> </ul>
<b>Traditionally Used Plants:</b>	<b><i>Result:</i></b> <ul style="list-style-type: none"> <li>• Enable continued access to traditionally used plants for traditional use by local First Nations.</li> </ul>
	<b><i>Strategies:</i></b> <ul style="list-style-type: none"> <li>• When local First Nations have indicated specific interest in traditional use plants, the licensee will identify the presence of such plants in planned harvest areas and communicate this to the interested First Nations prior to cutting permit submission. This is to allow for review by the local First Nations and for the collection of traditional use plants by local First Nations prior to harvest. Interested local First Nations will also be notified of traditionally used plants, particularly those indicated to the licensee as scarce or not abundant, if identified on the Woodlot Licence area.</li> <li>• A no-pesticide use policy is implemented in this Woodlot Licence. Manual brushing and early planting of large stock is the preferred method to overcome brush problems.</li> </ul>
<b>Cultural Heritage Resources</b>	<b><i>Result:</i></b> <ul style="list-style-type: none"> <li>• Harvest plans will consider identified cultural heritage resources.</li> </ul>
	<b><i>Strategies:</i></b> <ul style="list-style-type: none"> <li>• The Licensee will share information with local First Nations upon request and be available for field reviews.</li> </ul>

# WILDLIFE TREE RETENTION STRATEGY

Note: The proportion of the Woodlot Licence area that is occupied by wildlife tree retention areas is specified in the “PERFORMANCE REQUIREMENTS” section of this Woodlot Licence plan.

## INDIVIDUAL WILDLIFE TREES

### a) Species and Characteristics:

Desired species are (in order of preference): Fd, Cw, Hw, Pl, Dr, and Ac with a minimum dbh of 50 cm. The following table describes the species and characteristics of individual trees that will guide the selection of wildlife trees to be retained from harvesting.

**Table 11: Wildlife Tree Value and Characteristics for All Species in the Quinsam Unit**

	<b>HIGH (at least two of the listed characteristics)</b>	<b>MEDIUM</b>	<b>LOW</b>
<b>CHARACTERISTICS</b>	<ul style="list-style-type: none"><li>• Internal decay (heartrot or natural/excavated cavities present)</li><li>• Crevices present (loose bark or cracks suitable for bats)</li><li>• Large brooms present</li><li>• Active or recent wildlife use</li><li>• Current insect infestations</li><li>• Tree structure suitable for wildlife use (e.g. large nest, hunting perch, bear den, etc.)</li><li>• Largest tree on site (height and/or diameter) and/or veterans</li><li>• Locally important wildlife tree species</li></ul>	<ul style="list-style-type: none"><li>• Large, stable trees that will likely develop two or more of the characteristics listed under HIGH</li></ul>	<ul style="list-style-type: none"><li>• Trees not covered by HIGH or MEDIUM categories</li></ul>

From: Wildlife Tree Committee recommendations available at: <http://www.for.gov.bc.ca/hfp/wlt/wlt-policy-02.htm>

Given the nature of the historic logging and the thrifty second-growth stands present in the Woodlot Licence area few trees in a given stand may have ‘high’ value attributes. One tree per hectare will be the minimum threshold for retention with preference given to trees onsite with the highest wildlife value. Trees may be left as dispersed individuals or as a groups either internally or externally to harvest areas.

Additionally, cottonwood will be retained where worker safety permits.



**b) Conditions under which Individual Wildlife Trees may be Removed:**

The following specific conditions will influence the decision of where some individual wildlife trees may be removed:

- worker safety;
- the significance of forest health risk to surrounding stands (specifically, high incidence of dwarf mistletoe);
- the ability to retain other wildlife trees to perform as suitable wildlife habitat; and
- the availability of wildlife trees and CWD in adjacent areas.

Unsafe high value wildlife trees will be protected by no-work zones or re-design of cutblock or road configuration if they exhibit a combination of the following characteristics: wildlife tree value category HIGH applicable, DBH > 50 cm, wildlife tree class 2 – 8, > 20 m high, conks or decay present, wildlife use present (nesting, cavities, recent feeding, denning), species Fd, Cw, Hw, Pl, Dr or Ac. All workers involved with the removal of potential wildlife trees will be informed of applicable standards prior to fieldwork to help mitigate unnecessary removals.

**c) Replacement of Individual Wildlife Trees:**

Individual trees will be replaced if they are of 'high' wildlife value. Replacement trees will be selected using criteria outlined above with a preference for selecting trees that have two or more high wildlife tree value characteristics.

## **WILDLIFE TREE RETENTION AREAS**

### **d) Forest Cover Attributes:**

Wildlife tree retention areas (WTRAs) are preferably located in fully constrained areas for long-term retention (e.g. riparian reserve zones [RRZs] and operationally limited areas). The presently allocated WTRA and RRZs are shown on the 1:5000 WLP maps (Appendix 3) and occupy 8.1 ha or 2.7% of the Quinsam unit. The reserves include some representative larger trees (DBH > average operational cruise) with moderate to high value to wildlife and regenerating stands with future wildlife potential. The WTRA 1 covers environmentally sensitive habitat used by elk and the riparian reserve zones around the wetlands include a variety of eco sites and stand characteristics. A list of presently allocated reserves and their attributes are detailed in the table below.

**Table 12: Defined Wildlife Tree Retention Areas in the Quinsam Unit**

<b>ID</b>	<b>Area (ha)</b>	<b>Composition</b>	<b>Age (years)</b>	<b>Height (m)</b>	<b>Crown Closure (%)</b>	<b>Basal Area (m<sup>2</sup>/ha)</b>
Wet 1	1.0	F50 H35 Pw15	40	80	90	10
Wet 2	1.7	F55 H25 C10 D10	70	25	90	40
Argo Wet	0.8	F60 H25 C10 D5	70	27	90	45
Wet 4	1.1	F60 H25 C10 D5	70	27	90	45
WTRA 1	3.5	D80 F10 H5 C5	70	20	90	25

The size, shape and location of the presently shown reserves is subject to change upon further engineering work. Final mapping and location of reserves adjacent to cutblocks will be shown with the submission of pre-harvest mapping required by Section 33 of the Woodlot Licence Planning and Practices Regulation (WLPPR).

Through on-going observation, there will be potential for identifying and locating nesting trees, and other important habitat trees for retention and additional wildlife tree retention areas. No nesting sites or bear dens requiring specific habitat or tree retention have been identified to date.

Due to the continual maintenance of forest cover in the Quinsam Unit, no further WTRA is specified. (See below: WILDLIFE TREE RETENTION.)

**e) Conditions Under which Trees may be Removed from Wildlife Tree Retention Areas:**

The goal is to maintain all stems within streamside reserves and WTRAs. However, the following stand-specific issues will influence the decision of where salvage may be appropriate for WTRAs include:

- worker safety;
- the significance of forest health risk to surrounding stands;
- the ability of the retained wildlife trees to perform as suitable wildlife habitat; and
- the availability of wildlife trees and CWD in adjacent harvest areas.

It is permitted to salvage windthrown timber and individual trees considered a safety hazard. Where forest health issues pose a significant threat to areas outside the WTRA trees maybe cut and harvested, if not left for coarse woody debris.

**f) Replacement of Trees Removed from Wildlife Tree Retention Areas:**

Given the nature of the adjacent stands and existing WTRAs, the felling of danger trees or of mistletoe infested trees within a distance from harvest edges as defined in the specific cutting authority will not be a common occurrence or threaten the long-term integrity and usefulness of the WTRAs. As such, no strategy for the specific replacement of individual trees within WTRAs is presented / needed.

Where salvage/harvesting is planned, a suitable replacement WTRA of at least equivalent quality will be identified concurrently to achieve the retention target. Where all or part of a WTRA is salvaged, the salvaged area should be replaced with other suitable habitat in the nearest possible location. If a WTRA suffers windthrow, but is not salvaged, it need not be replaced. Replacement areas must have equal or better wildlife values.

## MEASURES TO PREVENT INTRODUCTION OR SPREAD OF INVASIVE PLANTS

The introduction or spread of invasive plants, specifically scotch broom, into the Quinsam unit through the use of standard practices is possible.

In the event that scotch broom becomes established, other than along Highway 28, Argonaut Mainline and Hopwood Road, it will be brushed repeatedly and the area re-vegetated. In general vehicle access is restricted via gates to limit traffic and spread of invasive plants. Where it is known or reasonably expected that machinery will be transported from a contaminated site, on or off the woodlot, cleaning of tires, tracks, buckets, undercarriage, etc. will be completed prior to transportation. All newly constructed roads will be grass seeded if scotch broom establishment becomes a concern. Seed mixtures used for the above purposes or for those under Section 29 of the WLPPR will be assessed to ensure that their use does not introduce additional invasive species. Additional species listed in the Invasive Plants Regulation (reg. 18/2004) will be managed accordingly if identified and located in the Quinsam unit.

## MEASURES TO MITIGATE EFFECT OF REMOVING NATURAL RANGE BARRIERS

There are no rangelands present on or adjacent to the Woodlot Licence and no measures or activities are proposed.

## STOCKING INFORMATION FOR SPECIFIED AREAS



Alternative: The stocking information for specified areas are found in Appendix 4

Specified areas include:

- areas subject to commercial thinning,
- the removal of individual trees, or
- areas subject to single/group/strip tree selection or
- other types of intermediate cutting and /or
- areas subject to the harvest of special forest products.

The delineation of specified areas will be conducted in conjunction with the pre-harvest mapping as per Section 33 of the WLPPR.

## PERFORMANCE REQUIREMENTS – QUINSAM UNIT

**Only the performance requirements in Part 3 (Practice Requirements) of the WLPPR for which an alternative can be proposed are shown in this Woodlot Licence Plan. The remaining performance requirements in Part 3 are not shown, nor are the performance requirements in Part 4 (Roads).**

### SOIL DISTURBANCE LIMITS

👉 Alternative - WLPPR s.24(1)(a):

8% of Net Area to be Reforested *except*

- a. up to a maximum of 30% in localised areas (standard unit basis) requiring site preparation for brush or root rot control. In root-rot areas with suitable soils destumping may be prescribed to control the spread of infection. In areas dominated by heavy salal or salmonberry a light soil raking using an excavator mounted brush rake may be prescribed to disturb salal/salmonberry roots. This will create more plantable spots and facilitate seedling establishment and achieve early brush control. The objective of this treatment is to minimize brush competition during seedling establishment and to create a mixed substrate of soil and forest floor, not a complete removal of the forest floor. These treatments may result in dispersed scalps and gouges.
- b. up to a maximum of 15% in wet site units with fluctuating water tables or prolonged periods of standing water in the winter (CWHxm 11, 12, 13, 14, 15). In these areas 400-600 mounds per ha may be created (where prescribed) using an excavator bucket to create suitable micro sites. This will result in dispersed deep gouges.

Further rationale is provided in the supplementary information included in this plan. See Section IV - 4.

### PERMANENT ACCESS STRUCTURES

👉 Default: WLPPR s.25:

The maximum area occupied by permanent access structures is as follows:

- Cutblocks  $\geq 5$  ha – 7% of cutblock area
- Cutblocks  $< 5$  ha – 10% of cutblock area
- Total Woodlot Licence Area – 7% of Woodlot Licence area

## **USE OF SEED**

- 👉 Default - WLPPR s.32:

Adoption of Chief Forester's Standards for Seed Use.

## **STOCKING STANDARDS**

- 👉 Alternative - WLPPR s. 35(1)(a):

The stocking standards, regeneration dates and free growing dates are detailed in Appendix 4. Clarification and rationale is provided in the supplementary information included with the plan. See Section IV - 4.

## **WIDTH OF STREAM RIPARIAN AREAS**

- 👉 Default - WLPPR s.36(4)(a):

The width of stream riparian areas will be as specified in Section 36(4) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **WIDTH OF WETLAND RIPARIAN AREAS**

- 👉 Default - WLPPR s.37(3)(b):

The width of wetland riparian areas will be as specified in Section 37(3)(b) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **WIDTH OF LAKE RIPARIAN AREAS**

- 👉 Default - WLPPR s.38(2)(b):

The width of lake riparian areas will be as specified in Section 38(2)(b) of the WLPPR. The RMA width is shown on the WLP map for illustration purposes only; the actual width is based on field measurement according to the *Riparian Management Guidebook*.

## **RESTRICTIONS IN A RIPARIAN RESERVE ZONE**

- 👉 Default: WLPPR s.39 (except as provided below).

There are limited areas within the Quinsam unit's RRZs where harvesting history in the 1930s and 1940s has resulted in excessive dwarf mistletoe infection and overstocking. Where such situations occur, they may be sanitized / thinned. Note that hemlock makes up a maximum of 25% of the applicable Quinsam unit's RRZs. Selection harvesting would be minimal – restricted to overstocked, dwarf-mistletoe-infected stands.

- No road construction in RRZs is necessary in the future.

## **RESTRICTIONS IN A RIPARIAN MANAGEMENT ZONE**

👉 Default: WLPPR s.40

- Construction of a road in a riparian management zone is limited to the conditions described in Section 40(1) of the WLPPR.
- For the purpose of Section 40(1)(a) of the WLPPR, roads may be constructed in a riparian management zone if a road grade previously existed in this location and it is more practicable to re-establish the road on the old grade.
- Restrictions and conditions on road construction, maintenance and deactivation activities, and on cutting, modifying or removing trees in a riparian management zone are as described in Section 40.
- No road construction in RMZs is necessary in the future.

## **WILDLIFE TREE RETENTION**

👉 Default - WLPPR s.52(1):

- The WTRAs located in the riparian reserve zones and in the ESA type make up 8.1 ha, which is 2.7% of the unit's total area.
- The Quinsam Unit is managed with a continual forest cover regime (irregular shelterwood, single tree selection and group selection) so that the woodlot as a whole is essentially one large wildlife tree retention area, promoting old-growth attributes. The full range of tree species and sizes is maintained in each harvest entry (except for hemlock subject to dwarf mistletoe infection and site-incompatibility). All current and potential "wildlife trees" are reserved from cutting, except where safety comes into play.
- In simple terms, of the Net Reforestable Area of the Quinsam Unit (281.4 ha), 272.9 ha (97%) are aged 66 – 70 years old with 299 – 440 m<sup>3</sup>/ha (merch.), 633 – 1,192 merch. stems/ha, 42 – 52 m<sup>2</sup>/ha merch. BA. So, 97% of the NRA is stocked and available for wildlife. This 0.97 ratio will not change much in the foreseeable future, so we will almost always have 97% of 281.4 ha essentially in WLRAs. This equates to 93% of the total area of the Quinsam Unit.



- Another way to look at it is in the context of Riparian Management zones where even less harvesting is carried out – usually in the order of 20% less by both volume and basal area. RMZs make up about 8.8% of the total area of the Quinsam Unit. Couple this with the RRZs and we have 11.5% of the unit in WTRAs (not to mention the rest of the NRA which is maintained in continuous, stocked forest cover, managed so as to accelerate the attainment of old-growth characteristics).
- Fundamentally, this was the basis for W0082 being among the first two forest management units in BC to be FSC-certified in 2000. And it has been the basis for the MOF's and First Nations' approval of W0082's various operating plans since inception.

### **COARSE WOODY DEBRIS**

👉 Default - WLPPR s.54(1):

Area on Coast – minimum retention of 4 logs per ha  $\geq 5$  m in length and  $\geq 30$  cm in diameter at one end.

### **RESOURCE FEATURES**

👉 Default - WLPPR s.56(1):

Ensure that forest practices do not damage or render ineffective a resource feature.

### **III. APPENDIX TO MANDATORY CONTENT**

#### **Appendix 1: Woodlot Licence Location Map**

**Licensee:** Allen Hopwood  
Enterprises Ltd.  
**Forest Region:** Coast  
**Forest District:** Campbell River  
**Reference Map:** 92F065  
**Datum, UTM Zone:** NAD 83, 10  
**TSA:** 37 Strathcona  
**TSB:** A Sayward  
**Drafted:** Sept 30, 2013  
**By:** ECON

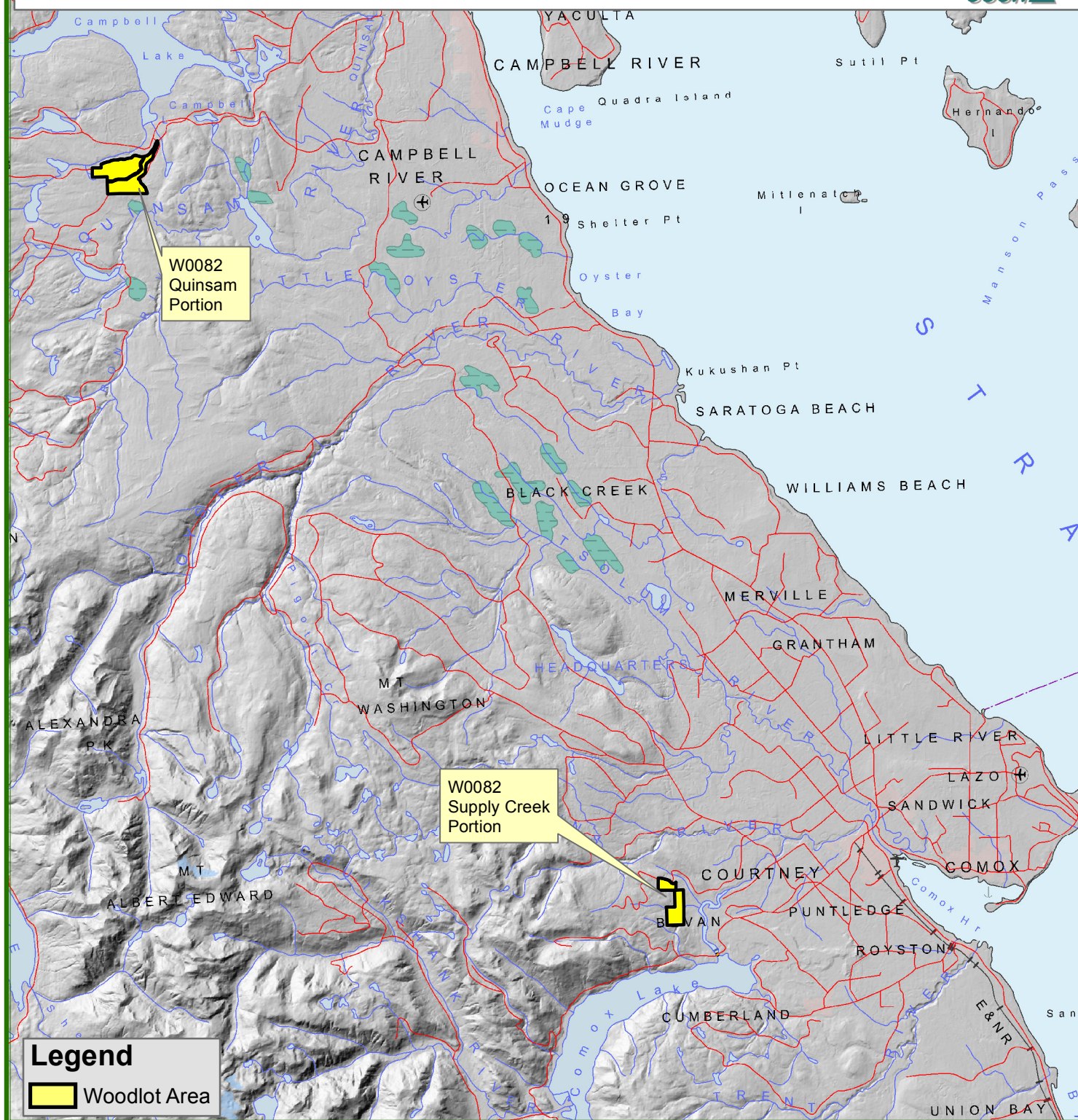
Woodlot Licence  
W0082

Allen Hopwood Enterprises Ltd.



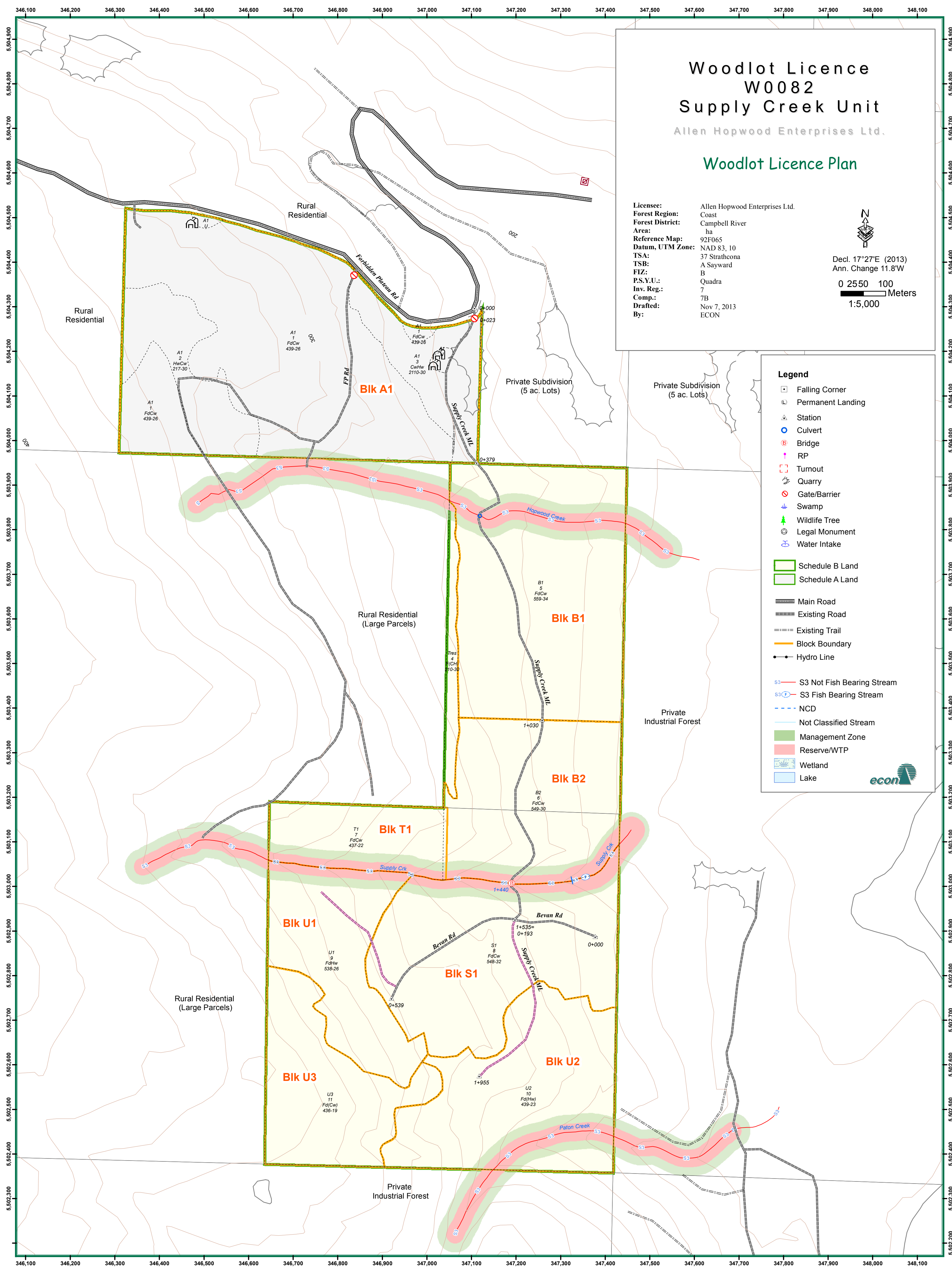
0 2,500 5,000  
Meters  
1:250,000

## Overview Map



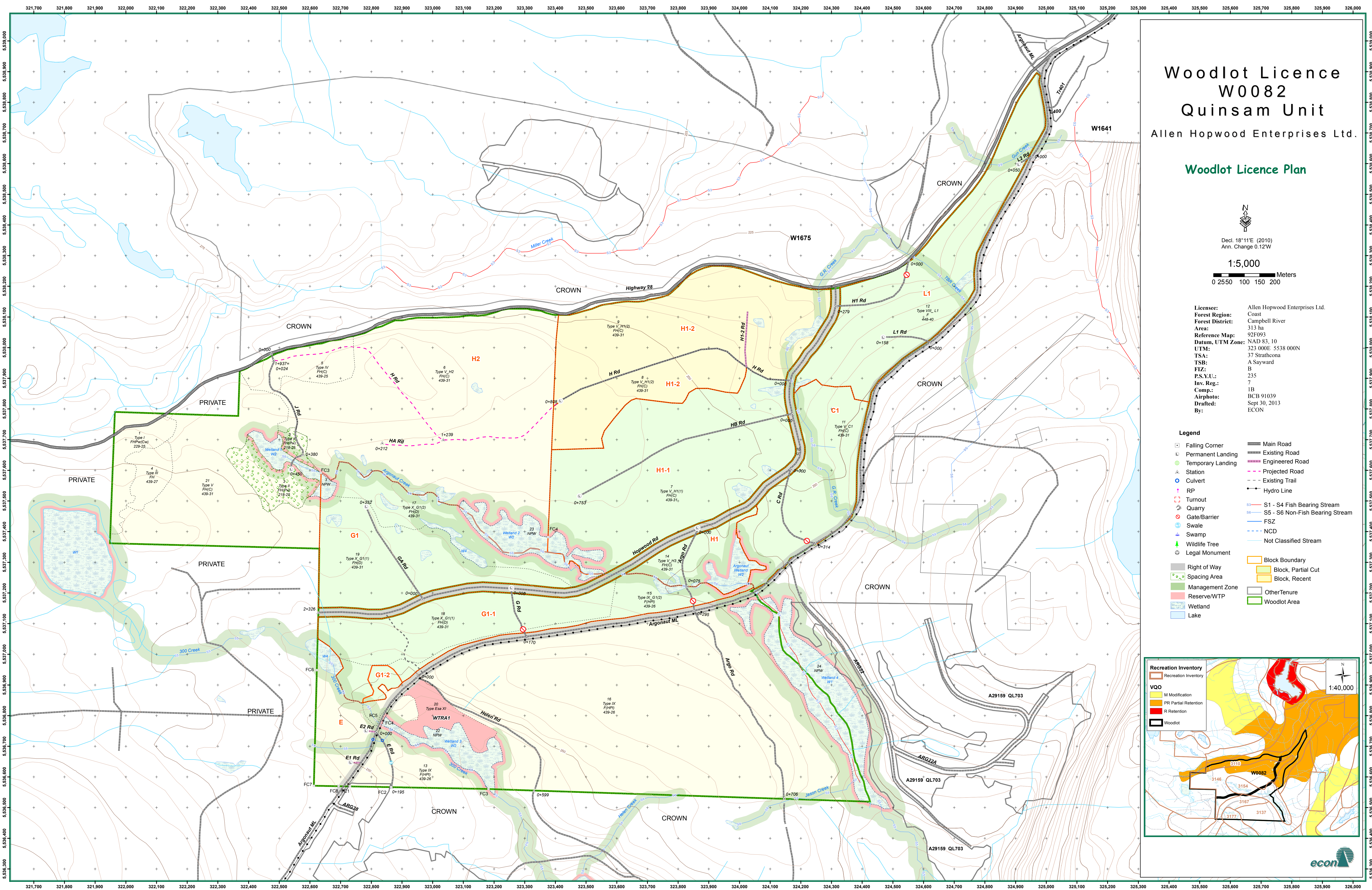
## **Appendix 2: Woodlot Licence Plan Map - Supply Creek Unit**





### **Appendix 3: Woodlot Licence Plan Map - Quinsam Unit**







APPENDIX 4: ALTERNATIVE STOCKING STANDARDS

Table: A

ADMINISTRATION																											
Vancouver Forest Region			Campbell River Forest District			Licensee: Hopwood Enterprises Ltd.												Woodlot Licence #W0082					October 1, 2013				
ID #	BEC		Preferred Species						Acceptable Species								Stocking (w/s)			Min Inter Tree Dist (m)	Regen Delay	FG Date	Tree Ht > Brush (min %)	Post Spacing Density		Comments:	
	Zone & variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	Target P&A (sph)	Min P&A (sph)	Min P (sph)	MITD (m)	Max (yrs)	Late (yrs)		Min	Max		
A	CWHxm	01/04	Fd	3.0					Pw <sup>5</sup>	2.5	Hw <sup>8</sup>	2.0	Cw	1.5	Lw <sup>9</sup>	1.5	900	500	400	2.0	3	20	150	500	1500	Zonal site	
B	CWHxm	02	Fd	2.0					Pl	1.25	Pw <sup>5</sup>	2.5					400	200	200	2.0	3	20	150	200	800	Avoid logging – xeric site, shallow soils	
C	CWHxm	03	Fd	2.0					Cw	1.0	Pw <sup>5</sup>	2.5	Lw <sup>9</sup>	1.5	Pl <sup>6</sup>	1.25	800	400	400	2.0	3	20	150	400	1200	Dry site	
D	CWHxm	05/07	Cw	2.0	Fd	4.0			Bg	3.5	Pw <sup>5</sup>	2.5					900	500	400	2.0	3	20	150	500	1500	Rich and moist site	
E	CWHxm	06	Fd	3.0	Cw	1.5			Pw <sup>5</sup>	2.5	Hw	2.0					900	500	400	2.0	6	20	150	500	1500	Wet site	
F	CWHxm	08/09 <sup>1</sup>	Cw	2.0	Bg	3.5			Ss <sup>7</sup>	3.5							900	500	400	1.5	3	20	150	500	1500	Floodplain - medium/high bench	
G	CWHxm	10	Act	4.0	Dr <sup>4</sup>	4.0	Mb <sup>4</sup>	4.0									800	400	400	1.5	3	20	150	400	1200	Floodplain - low bench	
H	CWHxm	11 <sup>1</sup>	Cw	1.0					Pl <sup>1</sup>	1.25							400	200	200	1.5	3	20	150	200	800	Avoid logging – wet and very poor	
I	CWHxm	12 <sup>1</sup>	Cw	1.0					Hw <sup>4</sup>	1.5	Pw <sup>5</sup>	2.5	Ss <sup>7</sup>	1.5			800	400	400	1.5	3	20	150	400	1200	Organic soils - avoid ground based equipment	
J	CWHxm	13/14 <sup>2</sup>	Bg	3.5	Cw	2.0	Fd <sup>1</sup>	4.0	Ss <sup>7</sup>	3.5							900	500	400	1.5	3	20	150	500	1500	Fluctuating water table	
K	CWHxm	15 <sup>2</sup>	Cw	2.0					Ss <sup>7</sup>	3.5							800	400	400	1.5	3	20	150	400	1200	Fluctuating water table	
L	CWHxm	01/06	Dr <sup>4</sup>	3.0	Mb	3.0											1200	800	800	1.5	3	20	150	800	1500	High density deciduous management	
M	CWHxm	05/07/08/09 <sup>1</sup> /13/14 <sup>2</sup> /15 <sup>2</sup>	Act	4.0	Dr <sup>4</sup>	4.0	Mb	4.0									1200	800	800	1.5	3	20	150	800	1500	High density deciduous management	
O	CWHxm	01/04/06	Cw	1.5	Pw <sup>5</sup>	2.5			Fd <sup>3</sup>	3.0	Hw <sup>3, 8</sup>	2.0	Lw <sup>9</sup>	1.5			900	500	400	2.0	3	20	150	500	1500	Alternate species root rot treatment	
P	CWHxm	02	Pw <sup>5</sup>	2.5					Pl <sup>6</sup>	1.25	Fd <sup>3</sup>	2.0					400	200	200	2.0	3	20	150	200	800	Avoid logging – xeric site, shallow soils	
Q	CWHxm	03	Cw	1.0	Pw <sup>5</sup>	2.5			Fd <sup>3</sup>	2.0	Pl <sup>6</sup>	1.25	Lw <sup>9</sup>	1.5			800	400	400	2.0	3	20	150	400	1200	Alternate species root rot treatment	
R	CWHxm	05/07	Cw	2.0	Pw <sup>5</sup>	2.5			Fd <sup>3</sup>	4.0	Bg <sup>3</sup>	3.5					900	500	400	2.0	3	20	150	500	1500	Alternate species root rot treatment	
S	CWHxm	08/09	Cw	2.0					Bg <sup>3</sup>	3.5	Ss <sup>3, 7</sup>	3.5					900	500	400	1.5	3	20	150	500	1500	Alternate species root rot treatment	
T	CWHxm	12	Cw	1.0	Pw <sup>5</sup>	2.5			Hw <sup>3</sup>	1.5	Ss <sup>3, 7</sup>	1.5					800	400	400	1.5	3	20	150	400	1200	Alternate species root rot treatment	
U	CWHxm	13/14 <sup>2</sup>	Cw	2.0					Bg <sup>3</sup>	3.5	Fd <sup>3</sup>	4.0	Ss <sup>3, 7</sup>	3.5			900	500	400	1.5	3	20	150	500	1500	Alternate species root rot treatment	



### ***Foot Notes***

- 1 Elevated microsites are preferred.
- 2 These sites represent areas with strongly fluctuating water tables. They are often found as mosaics in combination with other sites. Elevated microsites are preferred and mechanical mounding is recommended.
- 3 Not acceptable within 10 m of Fd, Hw, Bg or Ss second growth stumps.
- 4 Avoid gleyed soils and in frost pockets.
- 5 Pw must be free of blister rust within 10 cm of the stem and be pruned as per ministry guidelines or be blister rust resistant stock ( $\geq 50\%$  resistance). Pw may occupy 5% on all sites except sites 04 & 05 where 20% will be the upper limit of the Free-Growing composition. When used for root rot treatment no limit on percent composition is set.
- 6 Restricted to nutrient-very-poor sites.
- 7 Risk of weevil damage, use resistant stock where possible. Ss will not exceed 20% of the free growing stand or 5% of the free growing stand on site series 13, 14, & 15 on a dispersed basis. Clumps not to exceed 0.1ha in size.
- 8 Hw is not acceptable on site series 04. The proportion of the free-growing stand comprised of Hw will not exceed 20%.
- 9 Larch (Lw) will be used as an alternative species in W0082 in site series 03 and 04 only with approval from CRFD as more field data becomes available or as MOFR policy provides clearance.

### ***Stocking Standards - General Comments***

This table has been developed from the *Reference Guide for FDP Stocking Standards* and the correlated guidelines and site interpretation for the Vancouver Forest Region (VFR). Where site series have similar stocking standards, they have been combined. Sections A-K are the general stocking standards. Sections L & M are the deciduous stocking standards. Sections O-U apply to sites affected by root rot.

‘Biogeoclimatic unit’ or ‘BEC’ means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests for the identification and interpretation of ecosystems, as applicable to a harvested area.

Site series with the comment of ‘avoid logging’; floodplain site series or sites with strongly fluctuating water tables have been included. However, management on these sites will be limited and will generally be included within a mosaic of better sites. In some cases where there are fluctuating water tables, mounding may be prescribed to create better microsites.

Where standards units (SUs) are comprised of an un-mappable mosaic of site series, the practice will be to manage for the stocking standards, noted by the ID#, of the dominant site series provided that the tree species are suitable (i.e. preferred and acceptable) in all site series contained within the SU.

A limited number of scattered deciduous trees will be tolerated on all conifer plantations, to provide a nurse crop, promote nutrient cycling or for general biodiversity objectives. Allow up to 50 spha as deciduous ghost trees during surveys on all sites so that these deciduous ghost trees have no impact on the free growing status of the crop trees. Where deciduous trees are within 10 m of each other they are not to be regarded as ghost trees due to increased competitive density effects (The deciduous stems in question would impact the free growing status of sample trees).

The minimum inter-tree spacing is generally reduced to 1.5 m under the following site-specific conditions: frequent bedrock, large blocky colluvium, hygric sites, and disturbed roadside areas amongst slash accumulations (up to 10 m from the travelled portion of the road). On machine mounded sites the minimum inter-tree spacing is reduced to 1.0 m.

### ***Deciduous Management***

**Recommended Regime:** The product objective is to manage for high quality knot-free sawlogs on a 40 - 50 year rotation. Stand-establishment with high densities (1500 sph) is required to achieve a target of 1200 stems/ha at free growing. At approximately age 10, but not before stand height 12 to 16 m, space to 900 stems/ha. Dead branch prune the crop trees early and continue density regulation treatments approximately every 10 years to maintain good crown forms and eliminate low quality stems.

The establishment of a second crop conifer layer (Cw, Ss) before or after density treatment is optional. If a red cedar or Sitka spruce understory is planted in addition, then the natural pruning of the alder would be enhanced. The removal of the alder at harvest age is should be planned for while leaving a fully stocked, semi-mature conifer pole stand remaining.

Where conifers are established underneath a designated deciduous stand, the stand's regeneration and free to grow status will be measured using the deciduous standards only. Where conifers are established underneath a designated deciduous stand, the stand's regeneration and free growing status will be measured using the deciduous standards only. Damage criteria for deciduous species will be based on the "Free Growing Damage Criteria" given in the Hardwood Management in the Coast Forest Region, prepared by the Silviculture Working Group and resource specialist as follows:

Unless otherwise stated in regulation or an approved stocking standard, an acceptable broadleaf crop tree must:

- Not have a tree pith that is laterally displaced more than 30 cm from the location of the root-crown pith.
- Not originate from a cut stump <sup>15</sup>
- Have one dominant live leader <sup>26</sup>

---

<sup>5</sup> Stems originating from the sides or cut surface of stumps are very susceptible to breakage at the coppice point, exception may be Big leaf maple

<sup>6</sup> The objective is that the tree has a single stem that will develop into a healthy crop tree. Accordingly, a healthy, free growing broadleaf tree must have an identifiable live leader. It is not important if a portion, but not all, of the leader is browsed or killed for example by venturia blight.

- Not have a wound<sup>7</sup> that is greater than 10% of the stem circumference nor is greater than 10% of the total length of the stem.
- Not have any fungal infections or insect infestations<sup>8</sup> affecting tissues below the bark surface, visible without destructive sampling<sup>4</sup>
- Not be browsed so as to limit its ability to become a crop tree.

### ***Stocking Information – Specified Areas***

Openings of up to 0.1 ha in size are acceptable, not requiring pre-harvest mapping, associated regeneration and requirements to establish a Free Growing stand. No long-term impact on timber yield is expected as the subject areas are likely to regenerate naturally or will be planted concurrent with harvest in adjacent areas.

**Table B: Stocking Information for Specified Areas**

Target from Table A standards	Layer*	Stocking**		
		Target pa	MIN pa	MIN p
(stems/ha)		(well-spaced/ha)		
<b>1200</b> <b>ID 86000 (all layers)</b>	1	400	200	200
	2	800	400	300
	3	1000	500	400
	4	1200	700	600
<b>900</b> <b>ID 86002 (all layers)</b>	1	400	200	200
	2	500	300	250
	3	700	400	300
	4	900	500	400
<b>800</b> <b>ID 86003 (all layers)</b>	1	300	150	150
	2	400	200	200
	3	600	300	300
	4	800	400	400
<b>400</b> <b>ID 86005 (all layers)</b>	1	200	100	100
	2	300	125	125
	3	300	150	150
	4	400	200	200

\*Stand Layer definition

Tree Layer 1	Mature	trees $\geq$ 12.5 cm dbh
Tree Layer 2	Pole	trees 7.5 cm to 12.4 cm dbh
Tree Layer 3	Sapling	trees $\geq$ 1.3 m height to 7.4 cm dbh
Tree Layer 4	Regeneration	trees < 1.3 m height

\*\* pa - preferred and acceptable species      p - preferred species

Preferred and acceptable species and 'Target from Table A Standards' are as specified in Table A by biogeoclimatic ecosystem classification (BEC) site series.

<sup>7</sup> A wound is defined as an injury in which the cambium is dead or completely removed from the tree exposing the sapwood. Measure the wound across the widest point of the exposed sapwood. Healed-over wounds (= scars) are acceptable. Fire or sunscald damage can also cause wounds.

<sup>8</sup> Visible stem infections include cytospora canker or sooty-bark canker, and visible insect infestations, such as poplar borer. The significance of some diseases, such as armillaria root disease, to broadleaves is unknown or uncertain, and several cannot be feasibly identified by visual features during free growing surveys.

## **IV. SUPPLEMENTAL INFORMATION REQUIRED TO BE SUBMITTED IN SUPPORT OF THE PROPOSED WOODLOT LICENCE PLAN**

### **1. REVIEW AND COMMENT**

#### **ADVERTISING**

The official advertisement appeared in the Campbell River Mirror and Comox Valley Record on October 8, 2013. Thus, the 30-day consultation period expired on November 7, 2013.

#### **REFERRALS**

This plan was referred to the following agencies and/or groups either directly or via Forest District (contact Aaron Smeeth ALO):

**K'omoks First Nation**

3320 Comox Road  
Courtenay, BC V9N 3P8  
Ph: 339-4545; Fax: 339-7053

**Qualicum First Nation**

5850 River Road  
Qualicum Beach, BC, V9K 1Z5  
Ph: 757-9337, Fax: 757-9898

**Nawakolas First Nations**

203-2005 Eagle Drive  
Campbell River, B.C. V9H 1V8  
Ph: 286-7200, Fax: 286-7222

**Cape Mudge First Nation**

PO Box 220  
Quathiaski Cove, BC, V0P 1N0  
Ph: 285-3316, Fax: 285-2400

**Campbell River First Nation**

1400 Weiwaikum Road  
Campbell River, BC, V9W 5W8  
Ph: 286-6949, Fax: 287-8838

Maps and a letter requesting comments were forwarded by the Forest District to:

- Guide-Outfitter certificate holder #100675 (Glen Venus)
- Trapline holder of trapline # TR0110T604 & # TR0106T621 Allen Hopwood.

#### **WRITTEN COMMENTS RECEIVED**

On October 31, we received by email a letter dated October 31 from Campbell River (Weiwaikum) Indian Band, Chief Robert Pollard, referred to Nanwakolas File IF13-057 saying they have “no concerns with the new Woodlot Licence Plan and Management Plan or with the 5-year increase in the AAC for the Supply Creek Block.

**Proposed Woodlot Licence Plan & Revised Allowable Cut for Woodlot Licence # W0082**

Notice is hereby given that the holder of woodlot licence W0082 will hold a public viewing of the proposed Woodlot Licence Plan and revised allowable cut (for a portion of the Woodlot). These have been developed under the Forest and Range Practices Act (FRPA). The woodlot licence is located in the vicinity of Courtenay and West of Campbell River.

The Woodlot Licence Plan shows the areas where timber harvesting will be avoided, modified or allowed. The plan also includes information on performance requirements and strategies designed for the maintenance and protection of resource values in the plan area. The term of the Woodlot Licence Plan is 10 years. It is available for review by resource agencies and the public before the District Manager makes a determination.

The allowable cut calculation was done using the BC Forest Service's TIPSy yield calculation computer model and reflects the 2013 updated forest inventory for the Supply Creek Unit of W0082. It is put forward as an amendment to W0082's Management Plan and is available for review by resource agencies and the public before the District Manager makes a determination.

Both documents are available for review during regular business hours from October 8<sup>th</sup> to November 7<sup>th</sup>, 2013 at the office of Allen Hopwood Enterprises Ltd. near Courtenay. Please call (250) 334-3043 to arrange a meeting with the licensee. All approved higher-level plans that encompass the development area will be made available for viewing at these times.

If any interested parties are unable to review the proposed documents during these times, arrangements can be made to view them at a time convenient to them. Allen Hopwood Enterprises Ltd. must receive concerns or comments in writing by November 7, 2013 at the following address: 5501 Forbidden Plateau Road, Courtenay, BC, V9J 1L3 or at [wahopwood@gmail.com](mailto:wahopwood@gmail.com).



# CAMPBELL RIVER INDIAN BAND

1400 Weiwaikum Road, Campbell River, BC, Canada V9W-5W8

Tel. : (250) 286-6949

Fax: (250) 287-8838

TOLL FREE: 1-877-286-6949

October 31, 2013

**Allen Hopwood Enterprises Ltd.**

5501 Forbidden Plateau Road

Courtenay, BC V9J 1L3

Ph. (250) 334-3043 Cell: 250-897-2563

[wahopwood@gmail.com](mailto:wahopwood@gmail.com)

**Re:** W0082 Woodlot Licence Plan(WLP), Management Plan(MP), and 5 year ACC Increase

**Nanwakolas File:** IF 13-057

**Proponent:** Allen Hopwood Enterprises Ltd.

**File:** W0082

Mr. Hopwood,

The above application is located within the traditional territory of the Wei Wai Kum Nation as documented by evidence of historical use and the memories of our Elders. As holders of Aboriginal Title to these territories, the Wei Wai Kum First Nation maintains the right to make decisions concerning the use and protection of all lands, waters and resources within our territories.

The Wei Wai Kum Nation has reviewed the above application and at this time has no concerns with the new Woodlot Licence Plan and Management Plan or with the 5 year increase in the AAC for the Supply Creek block from 880 to 990 cubic meters.

The Wei Wai Kum Nation may choose in the future to address the issues of Aboriginal rights and title infringement and compensation through the treaty process, the courts or other dispute resolution process. We also reserve the right to raise objections if any cultural use, archaeological sites or environmental impacts are identified when the above development is being carried out or if we discover impacts on our rights or interest that we had not foreseen.

Regards,

Chief Bob Pollard

Wei Wai Kum First Nation

Campbell River



## Allen Hopwood Enterprises Ltd.

5501 Forbidden Plateau Road  
Courtenay, BC V9J 1L3  
Ph. (250) 334-3043 Cell: 250-897-2563  
E-mail: wahopwood@gmail.com

District Manager, MLFNR  
Campbell River Forest District  
370 S. Dogwood St.  
Campbell River, BC V9W 6Y7

November 16, 2013

Dear District Manager:

Re: W0082 Woodlot Licence Plan & Amendment to Management Plan (Revised AAC)

We reference the drafts of the above-noted documents which were emailed and delivered in hard copy to you on October 7-8. The 30-day consultation period ended November 7.

Enclosed for your approval are the final documents, revised in accordance with inputs from your staff, First Nations and other stakeholders.

All of your staff's directives and proposed changes have been implemented to our best ability.

We propose that the revised AAC for the Supply Creek Unit be made effective January 1, 2012, since the inventory and calculations were done in the Spring of 2013. We further propose that the amended AAC be approved for ten years (2012 – 2021); or at least until the end of 2019 when the current temporary AAC for the Quinsam Unit expires.

Also enclosed are:

- A report on the consultation process including how/where we made changes to the documents;
- A copy of the Campbell River Band's (Nanwakolas File IF13-057) response.

We thank you and your staff for your advice and look forward to finalizing these matters. If you have any further questions or comments, please do not hesitate to contact us at your earliest convenience. We would be glad to meet with you anytime in this regard.

Signed and sealed hard copies will be delivered to your office.

Yours truly,

Allen Hopwood, RPF  
Cc Truewood Forests Ltd.

## CONSULTATION – WLP & AAC PROPOSAL: W0082

### CONSULTATION PERIOD

The official advertisement appeared in the Campbell River Mirror and Comox Valley Record on October 8, 2013. Thus, the 30-day consultation period expired on November 7, 2013.

### FIRST NATIONS CONSULTATION

On July 19, 2013, in our irregular woodlot bulletin to stakeholders, we notified First Nations of our pending Woodlot Licence Plan.

On October 5, we emailed/mailed WL stakeholders including First Nations (Laich Kwil Tach Treaty Society, Qualicum, Komoks, Cape Mudge/Wewaikai, Campbell River/Weiwaikum) telling them of the proposed WLP and AAC increase; offering a meeting and/or visit.

On October 7, we emailed notification and copies of the WLP, AAC proposal and newspaper advertisement to First Nations (Komoks, Cape Mudge/Wewaikai, Qualicum, Campbell River/Weiwaikum, Laich Kwil Tach Treaty Society); offering to meet with them and/or host a visit to our WL.

On October 8, our legal notice was published in the Campbell River Mirror and Comox Valley Record.

On October 8, we mailed (Canada Post) a notification letter to First Nations.

On October 11, the Nanwakolas Council (Erica Haunch) acknowledged receipt on October 7 of the notification and attached information. She stated that they represented Komoks, Cape Mudge/Wewaikai, Campbell River/Weiwaikum.

On October 15, Wendy Ravai, RPF, of Nanwakolas asked for another copy of the WLP and AAC proposal, which was sent that day.

On October 21, I phoned the Qualicum and Komoks First Nations to make sure they had received the notification and documents. The Komoks Band Manager said the documents would have been received if sent to the email address we had used, and that he would get back to me. The Qualicum Band Manager said she was new to the job and would check and get back to me. (Neither has, so far.)

On November 4, we emailed the Komoks and Qualicum First Nations to remind them of the 30-day/November 8 deadline (again offering a meeting and/or on-site visit). No reply has been received from Komoks. Qualicum replied that this email was received and forwarded to Chief and Council and that they would reply ASAP – nothing so far.

On October 30, Nanwakolas' Wendy Ravai, RPF, asked by email how long the temporary increase in the Supply Creek's AAC would be for. I replied that I want it for as long a period as possible because I am



confident in the AAC increase and want to put off a re-cruise/recalculation for as long as possible; but that I would set any time limit she thought was advisable. No further response.

On October 31, we received by email a letter dated October 31 from Campbell River (Weiwaikum) Indian Band, Chief Robert Pollard, referred to Nanwakolas File IF13-057 saying they have “no concerns with the new Woodlot Licence Plan and Management Plan or with the 5-year increase in the AAC for the Supply Creek Block...” (copy attached).

#### OTHER CONSULTATION

The First Nations consultation section above outlines how we have approached this process with non-First Nations stakeholders.

We received and responded to requests for complete documents from one of our sons, a friend (respected retired RPF), and James Neill, a planner with the Strathcona Regional District. None has since responded.

#### MOF CONSULTATION

The MOF received electronic copies on October 7 and hard copies on October 8.

The MOF’s Ron Mecredy, RPF, had the following comments/questions which have been addressed as follows regarding the proposed Supply Creek Unit AAC increase:

- Why are the TIPSYS average Top Heights for each stand/block less than the average site indices for the three species in each stand? The site indices are based on height at breast height age 50 years. The TIPSYS tabular heights for each stand are based on total stand age; hence, the difference.
- For clarity, put the year of origin in Table 4. Done.
- Crown closure percents in Tables 1 – 3 were not necessarily in accordance with the MOF inventory manual. These percents have no influence on TIPSYS’s pertinent calculations for the Supply Creek Unit’s AAC. So we adjusted them in accordance with the TIPSYS model’s outputs.

The MOF’s Aboriginal Liaison Officer, Aaron Smeeth, requested deletions in the Supply Creek and Quinsam Unit’s section PROTECTING & CONSERVING CULTURAL HERITAGE RESOURCES (pp. 6 & 21) as follows (all of which have been done):

- “..in the ‘veteran’ and ‘no inventory’ models, forest professionals use their knowledge of a proposed cutblock and judge if any conflict with CMTs might reasonably exist, and make a recommendation for further study or no further study by professional archaeologists”;
- “Forest District’s Aboriginal Liaison Officer”;
- “Since the same conditions are true for the Quinsam Unit, including the absence of archaeological sites, it is safe to assume these statements are equally valid here.”

The MOF’s Mr. Jim Simpson commented on/requested changes as follows:

- The Supply Creek Unit’s map should show surrounding lands’ ownership and zoning/use. Done.
- Concern about the statement regarding exemptions from sections of the WLFMR in the Watershed Section. This statement has been removed.
- Restrictions on harvesting, etc., in Riparian Reserve Zones should be “Default” rather than “Alternative”. Done. (Also, note the addition of the sentence about the possibility of a corridor for full suspension logging across Paton Creek.)
- Need for quantifying sections of roads in RRZs at Supply Creek and Quinsam? Clarified by noting that no new roads are needed in RRZs or TMZs.
- Wildlife Tree Retention at Supply Creek and Quinsam should be “Default” rather than “Alternative” and that the “Default” be clarified/quantified to show how the 8% minimum will be met under W0082’s management regime. Done.

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Allen Hopwood, RPF  
November 11, 2013

## **REVISIONS MADE AS A RESULT OF COMMENTS RECEIVED**

The revisions added in the final submission are described in the cover letter.

## **2. CONSULTATION WITH FIRST NATIONS**

Included within the final submission is a copy of the 'First Nations Information Sharing Checklist' a consultation checklist provided by the Campbell River Forest District. Included with the checklist are all letters, minutes and correspondence.

## **3. EXEMPTIONS**

N/A

## **4. RATIONALE IN SUPPORT OF PROPOSED ALTERNATIVE PERFORMANCE REQUIREMENTS**

### **STOCKING STANDARDS**

Alternative stocking standards are proposed given the location and the licensee's full intent to facilitate intensive forest management and to improve site productivity and species/product diversity. Additionally, the existing default standards with respect to the use of broadleaf species lack prescribed values for implementation and are therefore defined further within the alternative stocking standards. Full details and listing of the stocking standards are provided in Appendix 4.

All areas of harvest will undergo pre-harvest mapping as per Section 33 of the Woodlot Licence Planning and Practices Regulation. At that stage the fundamental decision will be made as to whether a conifer or a broadleaf standard will apply and the Standard Unit ID will be assigned.

Forest health concerns pose additional issues as to the appropriateness of the default stocking standards in areas where root rot (e.g. *Phellinus weirii*) impacts the regeneration and long-term health and productivity of the preferred species. The proposed alternative stocking standards enable the production of healthy stands that protect adjacent resources and values. For example, on an infected zonal site (01) adjacent to an S4 creek or recreational trail stumping is not appropriate due to sedimentation concerns or to visual appearance. In these cases the establishment of Douglas-fir (preferred) may prove difficult and unsuited in the long-term due to re-infection.

The Chief Forester's stocking standards indicate black cottonwood (Act), red alder (Dr) and bigleaf maple (Mb) as being a productive, reliable and feasible regeneration option

on several site series within the CWHxm. The use of broadleaf species is proposed in consideration of the Chief Forester's memorandum dated August 22<sup>nd</sup>, 2000 and the supporting note 'Common Principles for the Management of Red Alder within the Coast Forest Region' dated August 2004 as well as the Guideline of the Silviculture Working Group – 'Hardwood Management in the Coast Forest Region (2009). The management for broadleaf species is proposed on a scale consistent with the management assumptions adopted in the last Annual Allowable Cut (AAC) calculation.

In the attached Alternative Stocking Standards high density stocking is prescribed for the deciduous stands to ensure self-pruning and bole development. The minimum height criterion is based on the tallest conifer standard of the particular site series since the listed hardwoods are at least as rapidly growing as their coniferous counterparts. If a cedar or Sitka spruce understory is planted in addition to the full hardwood stocking, then the natural pruning of the alder would be enhanced. However, the stand's status will only be measured using the broadleaf standards. The removal of the alder at harvest age and the retention of a fully stocked, semi-mature conifer pole stand behind is operationally feasible.

The minimum density post-spacing shown corresponds to the values recommended in the Establishment to Free-growing Guidebook for the Vancouver Forest Region - i.e. the same as the minimum stocking standard for conifer stands. However, the maximum post-spacing density is set higher than the recommended 600 spha above the target density due to the fact that the woodlot licence units are located in a snow belt with frequent heavy snow and freezing rain loads. If the density of a juvenile stand would be reduced to drastically, then there would be a high risk of snow press and stem breakage. This will allow for two-stage spacing entries in order to manage the described risks and it also provides the opportunity to capture the small-diameter products.

The stocking standards for specified areas are as per the default standards with the exception of deciduous stands with initial stocking densities greater than 900 stems per hectare (spha). For these stands the target and minimum stocking standards for tree layer 1 have been reduced from the default coniferous standards to reflect the difference in deciduous stand development and management regimes. Under a deciduous management regime initial densities will be higher than those for a coniferous stand but thinning targets for semi-mature stands will be comparable to those of conifer stands.

The broadleaf standards are also supported by the following research literature:

- Hibbs *et al.* The Biology and Management of Red Alder (1994),
- E.B. Petersons *et al.* FRDA Report 250 – Black Cottonwood and Balsam poplar manager's handbook for British Columbia (1996).
- L. Sigurdson *et al.* 2nd draft report on Weyerhaeuser's Red Alder Management Practices (1998),
- P.J. Courting *et al.* Forest Research Extension Note 016 - Red Alder management trials in the Vancouver Forest Region (2002).
- N. Hughes *et al.* Silviculture Working Group – Hardwood Management in the Coast Forest Region (2009).

## **SOIL DISTURBANCE LIMITS**

Site preparation treatments would be conducted concurrent with or immediately following harvesting resulting in soil disturbance that may meet the assessment criteria for scalps and gouges. The increased limits are maximums only and are included to increase flexibility on these sites. These site conditions will normally constitute a small proportion of an applicable harvest area. Prescription and application of these treatments will consider critical site factors including soil sensitivity to erosion, displacement and compaction.

## **RESTRICTIONS IN A RIPARIAN RESERVE ZONE**

The alternative proposed includes the construction of 2 stream crossings that are operationally necessary to access parts of the Supply Creek unit that would be otherwise isolated. The construction will be conducted in a manner that will minimize channel disturbance and sediment delivery.

## **RESTRICTIONS IN A RIPARIAN MANAGEMENT ZONE**

The alternative proposes to construct roads on existing grades in order to minimize earth works and the number of trees removed for the establishment of the right of way. The road construction on existing grades within a riparian area will be only considered if it does not increase the risk of sediment delivery or the potential to impact the stream.

## **WILDLIFE TREE RETENTION**

The Supply Creek and Quinsam units are managed with a continual forest cover regime (irregular shelterwood, single tree selection and small group-selection) so that the units as a whole are essentially one large wildlife tree retention area, promoting old-growth attributes and structures. The full range of tree species and sizes is maintained in each harvest entry. This wildlife tree retention objective is consistent with the current management plan and the implemented silviculture strategy. The current AAC for the Quinsam unit was approved on this basis and the present AAC uplift application for the Supply Creek unit also considers the WTRA configuration as described in this woodlot licence plan.

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