



## WOODLOT LICENCE W0097



THIS LICENCE, dated **March 31, 2009**.

### BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT  
OF THE PROVINCE OF BRITISH COLUMBIA,  
AS REPRESENTED BY THE DISTRICT MANAGER, of the  
MINISTRY OF FORESTS AND RANGE  
**SOUTH ISLAND FOREST DISTRICT**  
**4885 CHERRY CREEK ROAD**  
**PORT ALBERNI, BRITISH COLUMBIA**  
**V9Y 8E9**  
Phone: (250) 731-3000 Fax: (250) 731-3010  
(the "District Manager")

### AND:

**BRUCE MURRAY CARPENTER**  
**354 ALLSBROOK ROAD**  
**PARKSVILLE, BRITISH COLUMBIA**  
**V9P 2A8**  
Phone: #(250) 248-9764 Fax: (250) 248-3691  
(the "Licensee")

### WHEREAS:

- A. Pursuant to section 46 (1) of the *Forest Act*, the (Regional or District) Manager offered the Licensee a replacement for Woodlot Licence No. **W0097** which term began on **March 31, 1999**.
- B. The Licensee accepted the replacement offer,
- C. The parties have entered into this Licence pursuant to section 46 (7) of the *Forest Act*.

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THE PARTIES agree as follows:

## 1.00 GRANT OF RIGHTS AND TERM

- 1.01 The term of this Licence is **Twenty (20)** years, beginning on **March 31, 2009**.
- 1.02 Subject to this Licence and the forestry legislation the District Manager grants the Licensee during the term of this Licence:
  - (a) the right to manage Schedule "B" Land in accordance with this Licence, the forestry legislation, the management plan in effect under this Licence, and operational plans approved in respect of this Licence;
  - (b) the exclusive right to harvest Crown timber from Schedule "B" Land; and
  - (c) the right to enter Schedule "B" Land for the purpose of exercising a right or fulfilling an obligation under or associated with this Licence.
- 1.03 The Licensee must not harvest timber:
  - (a) from Schedule "A" Land except under a cutting permit; or
  - (b) from Schedule "B" Land except under a cutting permit or road permit;or as otherwise authorized under the forestry legislation.
- 1.04 Subparagraph 1.03 (a) does not apply to:
  - (a) a reserve as defined under the *Indian Act (Canada)*; or
  - (b) a road clearing width on private land.
- 1.05 Subject to paragraph 1.06, the Licensee will not enter, use or occupy Schedule "B" Land except under and in accordance with a cutting permit, road permit, or special use permit authorizing such use or occupation.
- 1.06 Paragraph 1.05 does not apply to temporary use or occupation for the purpose of:
  - (a) carrying out silviculture activities;
  - (b) collecting inventory information;
  - (c) doing engineering layouts and surveys;
  - (d) carrying out protection activities; or
  - (e) fulfilling other obligations of the Licensee under or associated with this Licence.

## **2.00 OTHER CONDITIONS AND REQUIREMENTS**

- 2.01 The Licensee is bound by and must comply with the conditions and requirements set out in Schedule "C" to this Licence.
- 2.02 The Licensee must not harvest timber if the timber is specified as reserved timber in a cutting permit, or under an applicable operational plan or the forestry legislation.
- 2.03 The Regional Manager or District Manager, in a notice given to the Licensee, may advise the Licensee that after the date specified in the notice the Licensee may only submit applications for cutting permits for areas of Crown land meeting the requirements set out in the notice.
- 2.04 The requirements referred to in paragraph 2.03 may restrict the areas of land for which the Licensee may submit applications for cutting permits to any or all of the following:
  - (a) a part of the licence area;
  - (b) a type of terrain within the licence area; and
  - (c) a type of timber within the licence area.
- 2.05 Before giving notice under paragraph 2.03, the Regional Manager or District Manager will consult with the Licensee and will consider its comments.

## **3.00 TIMBER VOLUME CHARGED TO THE LICENCE**

- 3.01 The definition of the volume of timber harvested in part 4, division 3.1 of the *Forest Act* applies to this Licence.
- 3.02 The determination of the volume of timber harvested will incorporate the volume of waste determined under part 4.00.
- 3.03 Where the coast timber merchantability specifications in the Provincial Logging Residue and Waste Measurement Procedures Manual differs from the specifications found in the Appraisal Manual that was in effect on the date of the submission of the application for the cutting permit or road permit, the specifications found in that Appraisal Manual shall govern.

## **4.00 WASTE ASSESSMENT**

- 4.01 The quantity and quality of merchantable Crown timber that could have been harvested under this Licence but at the Licensee's discretion was not harvested, will be determined in accordance with the provisions of Provincial Logging Residue and Waste Measurement Procedures Manual, as amended or replaced from time to time.



- 4.02 The District Manager, in a notice given to the Licensee, may require the Licensee to pay in respect of the volume of timber determined under paragraph 4.01, a monetary assessment for all waste.
- 4.03 The amount of money that the Licensee must pay under a waste assessment will be determined in accordance with the provisions of the Provincial Logging Residue and Waste Measurement Procedures Manual as they are at the time the quantity and quality of merchantable Crown timber is determined under 4.01.
- 4.04 For the purpose of conducting the assessment of the volume of timber that was not harvested as described in paragraph 4.01:
- (a) the Licensee must conduct an assessment in accordance with the current Provincial Logging Residue and Waste Measurement Procedures Manual after the Licensee has declared that primary logging has been completed for each cut block; or
  - (b) the District Manager may conduct an assessment in accordance with the current Provincial Logging Residue and Waste Measurement Procedures Manual after the expiry of the term of a cutting permit or Licence or the Licence and/or cutting permit otherwise being terminated, whichever occurs first.
- 4.05 If the District Manager carries out an assessment under paragraph 4.04, the District Manager, in a notice given to the Licensee, may require the Licensee to pay the costs reasonably incurred by the District Manager in carrying out the assessment.

## **5.00 MANAGEMENT PLAN**

- 5.01 The Licensee must submit a proposed management plan to the District Manager on or before a date specified by the District Manager in a notice given to the Licensee.
- 5.02 A proposed management plan submitted under paragraph 5.01 or subparagraph 5.04 (b) must:
- (a) be prepared in accordance with:
    - (i) any directions of the District Manager; and
    - (ii) any applicable handbook;
  - (b) be consistent with:
    - (i) this Licence;
    - (ii) the forestry legislation;
    - (iii) higher level plans under the *Forest Practices Code of British Columbia Act* or the *Forest and Range Practices Act*;

- (c) include inventories of the timber resources in the licence area, prepared in the manner, presented in the format and meeting the specifications referred to in:
  - (i) any directions of the District Manager; and
  - (ii) any applicable handbook;
- (d) include any other inventories and information regarding the development, management and use of the licence area that the District Manager requires to determine the allowable annual cut for the licence area;
- (e) propose an allowable annual cut for the licence area which considers the following:
  - (i) inventories and other information referred to in subparagraphs (c) and (d);
  - (ii) timber harvest specifications applicable for the timber resources in the licence area;
  - (iii) the management and conservation of non-timber resource values in the licence area, including visual quality, biological diversity, soils, recreation resources, cultural heritage resources, range land, wildlife, water and fish habitats;
  - (iv) the control of forests health factors or salvage of timber damaged by catastrophic events;
  - (v) silviculture practices and forest health factors that may impact on timber production;
  - (vi) the anticipated impact of the reductions to the productive portion of the licence area due to permanent roads, landings, pits and trails; and
  - (vii) any other factors that may impact on the allowable annual cut for the licence area;
- (f) contain a rationale for the proposed allowable annual cut referred to in subparagraph (e) prepared in accordance with:
  - (i) any directions of the District Manager; and
  - (ii) any applicable handbook;
- (g) if required in:
  - (i) any directions of the District Manager; or
  - (ii) any applicable handbook;

provide some or all of the information referred to in this paragraph in the form of maps meeting the requirements of the District Manager or the handbook, as the case may be; and

- (h) contain:
  - (i) a commitment to update the inventories and information referred to in subparagraphs (c) and (d) if required by the District Manager;
  - (ii) the commitments made in the Licensee's application for the Woodlot Licence; and
  - (iii) the Licensee's goals for the Woodlot Licence.
- 5.03 The District Manager, within three months after the date on which the District Manager receives a proposed management plan submitted under paragraph 5.01 or subparagraph 5.04 (b), will in a notice given to the Licensee approve the proposed management plan, subject to such conditions as the District Manager considers necessary or appropriate, if:
  - (a) the District Manager is satisfied that the proposed management plan meets the requirements of paragraph 5.02;
  - (b) the proposed management plan includes inventories and information referred to subparagraphs 5.02 (c) and (d) which are satisfactory to the District Manager; and
  - (c) the District Manager has determined an allowable annual cut for the licence area, based on the proposed management plan.
- 5.04 If the District Manager does not approve a proposed management plan under paragraph 5.03:
  - (a) the District Manager, within three months after the date on which the District Manager receives the proposed management plan, will specify in a notice given to the Licensee why the District Manager has not approved the proposed management plan; and
  - (b) the Licensee, within one month after the date on which the Licensee is given the notice referred to in subparagraph (a), must submit a new or revised proposed management plan to the District Manager.
- 5.05 Subject to paragraph 5.06, the management plan in effect under this Licence expires three months after the date upon which the Licensee is required to submit a proposed management plan pursuant to a notice given to the Licensee under paragraph 5.01.
- 5.06 If:
  - (a) the District Manager, within three months after the date on which the District Manager receives a proposed management plan submitted under paragraph 5.01, has neither:
    - (i) approved the proposed management plan under paragraph 5.03; nor

- (ii) given the Licensee a notice referred to in subparagraph 5.04 (a); and
- (b) there is a management plan in effect under this Licence;  
then the term of the management plan referred to in subparagraph (b) is deemed to be extended until such time as the District Manager approves the proposed management plan under paragraph 5.03, or gives the Licensee a notice referred to in subparagraph 5.04 (a), as the case may be.
- 5.07 The Licensee must manage both Schedule "A" Land and Schedule "B" Land in accordance with the management plan in effect under this Licence.
- 5.08 Subject to paragraph 5.06, the management plan:
  - (a) approved under the Woodlot Licence replaced by this Licence; and
  - (b) still in effect on the date immediately preceding the start date referred to in paragraph 1.01;is deemed to be the management plan in effect under this Licence.
- 5.09 A management plan:
  - (a) referred to in paragraph 5.08; or
  - (b) approved by the District Manager under paragraph 5.03;is deemed to be part of this Licence during the period the management plan remains in effect.

## **6.00 ROADS**

- 6.01 If the District Manager consents to a road closure or restriction in accordance with the forestry legislation, the Licensee must comply with any directions of the District Manager with respect to the closure or restriction, including directions regarding the type, location and marking of barricades and the posting of warning notices.

## **7.00 CRUISE AND APPRAISAL INFORMATION**

- 7.01 Unless otherwise authorized by the District Manager, the Licensee must ensure that cruise data submitted under this Licence are:
  - (a) compiled in accordance with the Cruise Compilation Manual as amended from time to time; and
  - (b) based on cruises carried out in accordance with the Cruising Manual prepared by the Ministry of Forests and Range as amended from time to time.
- 7.02 The Licensee must ensure that appraisal data submitted under this Licence are:
  - (a) compiled in accordance with; and

- (b) include all data required under;  
the policies and procedures approved by the Minister from time to time under section 105 of the *Forest Act* for the forest region in which the licence area is located.

## **8.00 CUTTING PERMITS**

- 8.01 Subject to paragraphs 8.02, 8.03 and 8.04, the Licensee may submit an application to the District Manager for a cutting permit to authorize the Licensee to harvest one or more proximate areas of land within the licence area which are either:
  - (a) identified in a forest development plan or woodlot licence plan for which the Licensee may, during the term of the forest development plan or woodlot licence plan, apply for a cutting permit; or
  - (b) exempted under the *Forest Practices Code of British Columbia Act* from the requirement for a forest development plan or under the *Forest and Range Practices Act* from the requirement for a woodlot licence plan.
- 8.02 Before submitting an application for a cutting permit, the Licensee must compile:
  - (a) cruise data; and
  - (b) appraisal data;in accordance with the requirements of part 8.00, for the areas of Schedule "B" Land to be included in the application.
- 8.03 An application for a cutting permit submitted under paragraph 8.01 must:
  - (a) be in a form acceptable to the District Manager;
  - (b) include:
    - (i) a map to a scale acceptable to the District Manager showing the areas referred to in the application; and
    - (ii) the cruise data and appraisal data referred to in subparagraphs 8.02 (a) and (b); and
  - (c) if required by the District Manager, identify the sequence in which the areas of land referred to in the application for the cutting permit would be harvested if the cutting permit is issued.
- 8.04 The areas of land shown on the map referred to in clause 8.03 (b) (i) must be consistent with areas referred to in paragraph 8.01.
- 8.05 Subject to paragraphs 8.06 through 8.15 inclusive and paragraph 8.04, upon receipt of an application for a cutting permit submitted under paragraph 8.01, the District Manager will issue a cutting permit to the Licensee if:

- (a) there is a management plan in effect under this Licence;
  - (b) the District Manager is satisfied that:
    - (i) the requirements of paragraphs 8.01 through 8.04 inclusive have been met; and
    - (ii) the cruise data and appraisal data referred in subparagraphs 8.02 (a) and (b) are adequate for the purpose of determining stumpage rates for timber harvested from Schedule "B" Land;
  - (c) the location of the areas of land referred to in the application for the cutting permit, and the types of terrain and timber, meet any conditions or requirements referred to in part 2.00;
  - (d) the District Manager is satisfied that any sequence of harvesting referred to in subparagraph 8.03 (c) is appropriate;
  - (e) the District Manager is satisfied that activities and operations under or associated with the cutting permit will be consistent with this Licence, the forestry legislation, operational plans, and the management plan referred to in subparagraph (a).
- 8.06 The District Manager may consult trappers, guide outfitters, range tenure holders and other licenced resource users, who may be affected directly or indirectly by activities or operations under or associated with a cutting permit, engaged in or carried out on areas of land referred to in an application for the cutting permit.
- 8.07 The District Manager may consult other resource agencies for the purpose of determining whether activities and operations under or associated with a cutting permit, engaged in or carried out on areas of land referred to in an application for a cutting permit, meet the requirements of the forestry legislation.
- 8.08 The District Manager may impose conditions and requirements in a cutting permit to protect the interests of trappers, guide outfitters, range tenure holders and other licenced resource users, and ensure activities and operations under or associated with the cutting permit meet the requirements of the forestry legislation.
- 8.09 The District Manager may consult an aboriginal group who have an aboriginal interest or proven aboriginal right, including aboriginal title, or a treaty right, that may be affected by activities or operations carried out under or associated with a cutting permit.
- 8.10 The District Manager may impose conditions in a cutting permit to address an aboriginal interest or proven aboriginal right, including aboriginal title, or a treaty right.
- 8.11 The District Manager may refuse to issue a cutting permit if, in the opinion of the District Manager, issuance of the cutting permit would

the Regional Manager or District Manager, after at least four weeks notice to the Licensee, may instruct the Ministry of Small Business and Revenue to take from the deposit:

- (c) an amount equal to the money which the Licensee failed to pay;
- (d) an amount sufficient to cover all costs incurred by the Regional Manager or District Manager in remedying the Licensee's failure to perform its obligations; or
- (e) an amount equal to the Regional Manager's or District Manager's estimate of the costs which the Regional Manager or District Manager could reasonably expect to incur in remedying the Licensee's failure to perform its obligations; and

for that purpose a security included in the deposit may be realized.

12.05 A notice referred to in paragraph 12.04 must specify:

- (a) the money which the Licensee has failed to pay or the obligation which the Licensee has failed to perform; and
- (b) the amount the Regional Manager or District Manager intends to instruct be taken from the deposit.

12.06 Subject to paragraphs 12.08, 12.09 and 12.10, if:

- (a) the Ministry of Small Business and Revenue, under paragraph 12.04, takes from the deposit an amount equal to the Regional Manager's or District Manager's estimate of the costs which the Regional Manager or District Manager could reasonably expect to incur in remedying the Licensee's failure to perform its obligations; and
- (b) the costs incurred by the Regional Manager or District Manager in remedying the Licensee's failure to perform its obligations are less than the amount taken from the deposit;

the Government will as soon as feasible return to the Licensee an amount equal to the difference between the amount taken from the deposit and the costs incurred by the Regional Manager or District Manager.

12.07 If:

- (a) the Ministry of Small Business and Revenue, under paragraph 12.04, takes from the deposit an amount equal to the Regional Manager's or District Manager's estimate of the costs which the Regional Manager or District Manager could reasonably expect to incur in remedying the Licensee's failure to perform its obligations; and
- (b) the costs incurred by the Regional Manager or District Manager in remedying the Licensee's failure to perform its obligations are greater than the amount taken from the deposit;



the Ministry of Small Business and Revenue may take from the deposit an additional amount equal to the difference between the costs incurred by the Regional Manager or District Manager and the amount originally taken from the deposit, and for that purpose a security included in the deposit may be realized.

- 12.08 If the Ministry of Small Business and Revenue, under paragraph 12.04, takes from the deposit an amount equal to the Regional Manager's or District Manager's estimate of the costs which the Regional Manager or District Manager could reasonably expect to incur in remedying the Licensee's failure to perform its obligations, the Regional Manager or District Manager is under no obligation to remedy the Licensee's failure.

12.09 If:

- (a) the Ministry of Small Business and Revenue, under paragraph 12.04, takes from the deposit an amount equal to the Regional Manager's or District Manager's estimate of the costs which the Regional Manager or District Manager could reasonably expect to incur in remedying the Licensee's failure to perform its obligations;
- (b) the Regional Manager or District Manager does not remedy the Licensee's failure to perform its obligations; and
- (c) the Regional Manager or District Manager gives a notice to the Licensee indicating that the Government will not be remedying the Licensee's failure to perform its obligations;

subject to paragraph 12.10, the Government may retain the amount taken from the deposit under paragraph 12.04.

12.10 If, after receiving a notice referred to in paragraph 12.09, the Licensee:

- (a) remedies the failure to perform its obligations; and
- (b) gives a notice to that effect to the Regional Manager or District Manager within three months of the date on which the notice referred to in paragraph 12.09 is given to the Licensee, or within such longer period as the Regional Manager may approve;

the Government will return to the Licensee an amount equal to the difference between the amount taken from the deposit and any costs incurred by the Regional Manager or District Manager in respect of the Licensee's failure to perform its obligations.

12.11 If the Regional Manager or District Manager considers that:

- (a) any activity or operation that may be engaged in or carried out under this Licence is likely to cause damage to persons or property; and



potentially result in an unjustifiable infringement of an aboriginal interest or proven aboriginal right, including aboriginal title, or a treaty right.

- 8.12 The District Manager may refuse to issue a cutting permit if a required operational plan has not been approved for an area of land referred to in the application for the cutting permit.
- 8.13 If the District Manager:
- (a) determines that a cutting permit may not be issued because the requirements of paragraph 8.05 have not been met;
  - (b) is carrying out consultations under paragraph 8.06, 8.07 or 8.09; or
  - (c) refuses to issue a cutting permit under paragraph 8.11 or 8.12;
- the District Manager will notify the Licensee within 45 days of the date on which the application for the cutting permit was submitted.
- 8.14 A cutting permit must:
- (a) identify the boundaries of the areas of Crown land which, subject to this Licence and the forestry legislation, the Licensee is authorized to conduct operations;
  - (b) specify a term which does not exceed four years;
  - (c) specify a timber mark to be used in conjunction with the timber harvesting operations carried out under the cutting permit;
  - (d) specify whether, for the purpose of determining the amount of stumpage payable in respect of timber removed under the cutting permit, the volume or quantity of timber is to be determined using information provided by:
    - (i) a scale of the timber; or
    - (ii) a cruise of the timber conducted before the timber is cut;and
  - (e) include such other provisions, consistent with this Licence, as the District Manager considers necessary or appropriate.
- 8.15 The District Manager may amend a cutting permit only with the consent of the Licensee.
- 8.16 The Licensee is required to make application to the District Manager for an extension to a cutting permit at least 45 days before expiry of the cutting permit in a form as required by the District Manager.
- 8.17 A cutting permit is deemed to be part of this Licence.
- 8.18 All cutting permits in effect that were issued under the Woodlot Licence that is replaced by this Licence continue under this Licence for the duration of their respective terms.

## **9.00 ACCESS**

- 9.01 Nothing in this licence authorizes the Licensee to in any way restrict the Crown's right of access to Crown lands.
- 9.02 The Regional Manager or District Manager may:
- (a) enter onto Schedule "A" Land; and
  - (b) use roads owned or deemed to be owned by the Licensee;
- for the purpose inspecting the Licensee's activities under or associated with this Licence, and for the purpose of fulfilling an obligation or exercising a right under this Licence.

## **10.00 COURT DETERMINED ABORIGINAL RIGHTS AND/OR TITLE**

- 10.01 Notwithstanding any other provision of this Licence, if a court of competent jurisdiction:
- (a) determines that activities or operations under or associated with this Licence will unjustifiably infringe an aboriginal right and/or title, or treaty right;
  - (b) grants an injunction further to a determination referred to in subparagraph (a); or
  - (c) grants an injunction pending a determination of whether activities or operations under or associated with this Licence will unjustifiably infringe an aboriginal right and/or title, or treaty right;
- the Regional or District Manager, in a notice given to the Licensee, may vary or suspend this Licence in whole or in part, or may vary or suspend, or refuse to issue a cutting permit or road permit to the Licensee so as to be consistent with the court determination.
- 10.02 Subject to this Licence and the forestry legislation, if:
- (a) under paragraph 10.01, the Regional or District Manager has varied this Licence or a cutting permit or road permit issued to the Licensee;
  - (b) a court of competent jurisdiction subsequently overturns, sets aside or dissolves the determination or injunction referred to in that paragraph; and
  - (c) it is practical to do so;
- the Regional or District Manager, at the request of the Licensee, will vary the Licence or permit to reflect as closely as possible, for the remainder of its term, the terms and conditions of the Licence or permit prior to the variation under paragraph 10.01.
- 10.03 Subject to this Licence and the forestry legislation, if:

- (a) under paragraph 10.01, the Regional Manager or District Manager has suspended this Licence or a cutting permit or road permit issued to the Licensee;
- (b) a court of competent jurisdiction subsequently overturns, sets aside or dissolves the determination or injunction referred to in that paragraph; and
- (c) it is practical to do so;

the Regional or District Manager, at the request of the Licensee, will reinstate the Licence or permit for the remainder of its term.

10.04 Subject to this Licence and the forestry legislation, if:

- (a) under paragraph 10.01, the District Manager has refused to issue a cutting permit or road permit;
- (b) a court of competent jurisdiction subsequently overturns, sets aside or dissolves the determination or injunction referred to in that paragraph; and
- (c) it is practical to do so;

the District Manager, at the request of the Licensee, will issue the permit.

## **11.00 REPORTING**

11.01 The Regional Manager or District Manager, in a notice given to the Licensee, may require the Licensee to submit a report containing such information as the Regional Manager or District Manager requires regarding:

- (a) the Licensee's performance of its obligations under or in respect of this Licence; and
- (b) the processing, use or disposition of the timber harvested under this Licence;

if the information is not included in any other reports which the Licensee must submit under the forestry legislation.

11.02 Upon receipt of a notice referred to in paragraph 11.01 the Licensee, on or before the date specified in the notice, must submit a report to the Regional Manager or District Manager containing the required information.

11.03 Subject to paragraph 11.04, the Regional Manager or District Manager may include the information contained in a report submitted under paragraph 11.02 in any reports prepared by the Ministry of Forests and Range for public review.

- 11.04 Subject to the *Freedom of Information and Protection of Privacy Act*, the Regional Manager or District Manager will not disclose information provided in confidence by the Licensee in a report submitted under paragraph 11.02.

## 12.00 FINANCIAL AND DEPOSITS

- 12.01 In addition to any money payable in respect of this Licence or a road permit under the forestry legislation, the Licensee must pay to the Government:
- (a) upon receipt of a notice, statement or invoice issued on behalf of the Government:
    - (i) stumpage under part 7 of the *Forest Act* at rates determined, redetermined and varied under section 105 of that Act in respect of timber removed under a cutting permit or road permit; and
    - (ii) waste assessments under part 4 of this Licence calculated in accordance with the Provincial Logging Residue and Waste Measurements Procedures Manual; and
- 12.02 During the term of this Licence, the Licensee must maintain with the Government a deposit in the amount prescribed under the *Forest Act* and the regulations made under that Act, in a form acceptable to the Minister, as security for the Licensee's performance of its obligations under or in respect of this Licence or a road permit.
- 12.03 If the Regional Manager or District Manager gives the Licensee a notice that an amount has been taken under this part from the deposit, the Licensee, within four weeks of the date on which the notice is given, must pay to the Government, in a form acceptable to the Minister, an amount sufficient to replenish the deposit.
- 12.04 If the Licensee fails:
- (a) to pay money that the Licensee is required to pay to the Government under:
    - (i) this Licence or a road permit; or
    - (ii) the forestry legislation in respect of this Licence or a road permit; or
  - (b) to otherwise perform its obligations under:
    - (i) this Licence or a road permit; or
    - (ii) the forestry legislation in respect of this Licence or a road permit;

- (b) the deposit is insufficient to indemnify the Government for any liability which the Government might incur as a consequence of the activity or operation;

the Regional Manager or District Manager may require the Licensee to maintain with the Government a special deposit, in a form acceptable to the Minister, in the amount determined by the Regional Manager or District Manager, and the Licensee must comply.

12.12 If the Licensee fails to:

- (a) remedy any damage resulting from an activity or operation referred to in paragraph 12.11; or
- (b) compensate any person who suffers a loss as a result of an activity or operation referred to in paragraph 12.11;

the Regional Manager or District Manager, after at least four weeks notice to the Licensee, may instruct the Ministry of Small Business and Revenue to take an amount from the special deposit sufficient to indemnify the Government for any liability which is or may be incurred by the Government as a consequence of a failure referred to in subparagraph (a) or (b).

12.13 A notice referred to in paragraph 12.12 must specify:

- (a) the nature of the Licensee's failure; and
- (b) the amount the Regional Manager or District Manager instructs be taken from the special deposit.

12.14 Subject to the *Forest Act* and the regulations made under that Act, the Government will return to the Licensee;

- (a) the deposit, less deductions made under paragraphs 12.04 and 12.07, when:
  - (i) this Licence expires, or is surrendered; and
  - (ii) the Regional Manager or District Manager is satisfied that the Licensee has fulfilled its obligations under this Licence; and
- (b) a special deposit, less deductions made under paragraph 12.12, when the Regional Manager or District Manager is satisfied that the Government is no longer at risk of being held liable as a consequence of an activity or operation referred to in paragraph 12.11.

### 13.00 REPRESENTATIONS

13.01 The Licensee represents and warrants that the Licensee:

- (a) a Canadian citizen or permanent resident of Canada who is 19 years of age or older;

- (b) is the owner of all Schedule "A" Land;
- (c) does not hold more than one other Woodlot Licence or control a corporation that holds more than one other Woodlot Licence;
- (d) has the ability to undertake and complete its obligations under the Licence within the term;
- (e) has the ability to carry out its obligations in a safe and environmentally sound fashion;
- (f) has reviewed the licence area and has fully informed itself of all matters relating to the Licence; and
- (g) has no legal or other reason why it cannot enter into the Licence.

13.02 All representations and warranties made in paragraph 13.01 are material and will conclusively be deemed to have been relied upon by the Crown, notwithstanding any prior or subsequent investigations by the Crown, and they will continue in full force and effect for the term of this Licence.

#### **14.00 LIABILITY AND INDEMNITY**

14.01 The Licensee must indemnify the Crown against and save it harmless from all claims, demands, suits, actions, causes of action, costs, expenses and losses faced, incurred or suffered by the Crown as a result, directly or indirectly, of any act or omission of:

- (a) the Licensee;
- (b) an employee or agent of the Licensee;
- (c) a contractor of the Licensee who engages in any activity or carries out any operation, including but not restricted to harvesting operations, under or associated with this Licence or a road permit; or
- (d) any other person who on behalf of or with the consent of the Licensee engages in any activity or carries out any operation, including but not restricted to harvesting operations, under or associated with this Licence or a road permit.

14.02 For greater certainty, the Licensee has no obligation to indemnify the Crown under paragraph 14.01 in respect of any act or omission of:

- (a) an employee, agent or contractor of the Crown, in the course of carrying out his or her duties as employee, agent or contractor of the Crown; or
- (b) a person, other than the Licensee, to whom the Crown has granted the right to use or occupy Crown land, in the course of exercising those rights.

- 14.03 Amounts taken under part 12.00 from the deposit or a special deposit, and any payments required under parts 4.00 or part 12.00 are in addition to and not in substitution for any other remedies available to the Crown in respect of a default of the Licensee.
- 14.04 The Government is not liable to the Licensee for injuries, losses, expenses, or costs incurred or suffered by the Licensee as a result, directly or indirectly, of an act or omission of a person who is not a party to this Licence, including but not restricted to an act or omission of a person disrupting, stopping or otherwise interfering with the Licensee's operations under this Licence by road blocks or other means.

## **15.00 TERMINATION**

- 15.01 If this Licence expires and is not replaced under section 46 of the *Forest Act*, or is surrendered, canceled or otherwise terminated:
- (a) all cutting permits will immediately terminate; and
  - (b) timber, including logs and special forest products, cut under the authority of this Licence and which are still located on Crown land, will vest in the Crown, without right of compensation to the Licensee; and
  - (c) unless otherwise agreed to between the District Manager and the Licensee prior to the surrender, cancellation or termination of this Licence, title to all improvements, including roads and bridges, constructed by the Licensee on Crown land under the authority of this Licence will vest in the Crown, without right of compensation to the Licensee; and
  - (d) the Licensee may continue to enter Schedule "B" Land for a period of one month after the expiry or termination of this Licence for the purpose of removing the Licensee's property.
- 15.02 The Licensee will not take away any improvements or remove any timber referred to in subparagraph 15.01 (b), unless authorized to do so by the Regional Manager.
- 15.03 If the Licensee commits an act of bankruptcy, makes a general assignment for the benefit of its creditors or otherwise acknowledges its insolvency, the Licensee is deemed to have failed to perform an obligation under this Licence.

## **16.00 WAIVER**

- 16.01 No waiver by the Crown of any default non-compliance by the Licensee in the strict and literal performance of or compliance with any provision of the Licence will be deemed to be a waiver of the strict and literal performance of or compliance with any other provision, condition or requirement of the Licence or to be a waiver of, or in any manner release



the Licensee from compliance with any provision, condition or requirement in the future, nor will any delay or omission by the Crown in the exercising of any right hereunder in any manner with respect to non-compliance impair the exercise of any such rights in the future.

## **17.00 NOTICE**

- 17.01 A notice given under this Licence must be in writing.
- 17.02 A notice given under this Licence may be:
- (a) delivered by hand;
  - (b) sent by mail; or
  - (c) subject to paragraph 17.05, sent by facsimile transmission;
- to the address or facsimile number, as applicable, specified on the first page of this Licence, or to such other address or facsimile number as is specified in a notice given in accordance with this part.
- 17.03 If a notice is given under this Licence, it is deemed to have been given:
- (a) if it is given in accordance with subparagraph 17.02 (a), on the date it is delivered by hand;
  - (b) if it is given in accordance with subparagraph 17.02 (b), subject to paragraph 17.04, on the eighth day after its deposit in a Canada Post Office at any place in Canada; and
  - (c) if it is given in accordance with subparagraph 17.02 (c), subject to paragraph 17.05, on the date it is sent by facsimile transmission.
- 17.04 If, between the time a notice is mailed in accordance with subparagraph 17.02 (b) and the time it is actually received, there occurs a postal strike, lockout or slowdown that might reasonably affect delivery of the notice, the notice is not deemed to be given until the party actually receives it.
- 17.05 If a notice is sent by facsimile transmission, the party sending the notice must take reasonable steps to ensure that the transmission has been successfully completed.
- 17.06 Either party may, from time to time, advise the other party by notice in writing, of any change of address of the party giving such notice and, from and after the giving of such notice, the address specified will, for purposes of this Licence, be considered to be the address of the party giving such notice.

## **18.00 MISCELLANEOUS**

- 18.01 The Licensee must:
- (a) comply with the forestry legislation; and



- (b) ensure that its employees, agents and contractors comply with these Acts, regulations and standards when engaging in or carrying out activities or operations under or associated with this Licence.
- 18.02 Nothing in this Licence is to be construed as authorizing the Licensee to engage in any activities or carry out any operations otherwise than in accordance with the requirements of the forestry legislation.
- 18.03 This Licence will enure to the benefit of, and be binding on, the parties and their respective heirs, executors, successors and permitted assigns.
- 18.04 The laws of British Columbia will govern the interpretation of this Licence and the performance of the parties' obligations under this Licence.
- 18.05 Any power conferred or duty imposed on the Regional Manager or District Manager under this Licence may be exercised or fulfilled by any person authorized to do so by the Regional Manager or District Manager.
- 18.06 The Licensee must comply with the requirements of all legislation applicable to activities or operations under or associated with this Licence, including but not restricted to the *Workers Compensation Act*, *Health Act*, and *Employment Standards Act*, and the regulations made under those Acts.
- 18.07 The Schedules to this Licence are deemed to be part of this Licence.
- 18.08 Nothing in this Licence authorizes the Licensee to in any way restrict the Government's right of access to the licence area, or the right of any other authorized entrant, user or occupier of these areas.
- 18.09 Subject to this Licence and all applicable legislation, including but not restricted to the forestry legislation, the Minister will ensure that the obligations under this Licence of the Ministry employees referred to in this Licence are fulfilled.
- 18.10 Nothing in this Licence entitles the Licensee to have an area of Schedule "B" Land to be replaced with another area, or to have rights awarded under another Licence under the *Forest Act*, in the event:
  - (a) timber is damaged or destroyed by pests, fire, wind or other natural causes;
  - (b) an area of land is deleted from the licence area under the forestry legislation, or under any other Act or regulation; or
  - (c) this Licence expires, is surrendered, is cancelled or otherwise terminated.
- 18.11 At the request of the Regional Manager or District Manager, the Licensee will survey and define on the ground any or all boundaries of the licence area.
- 18.12 Where harvesting of timber has been authorized under this Licence, the District Manager in a notice to the Licensee, may require the Licensee to

carry out a legal survey on the portions of the area to be operated upon that are adjacent to any private land boundaries.

## 19.00 INTERPRETATION & DEFINITIONS

19.01 This Licence is divided into parts, paragraphs, subparagraphs, clauses and subclauses, illustrated as follows:

1.00 part;

1.01 paragraph;

(a) subparagraph;

(i) clause;

(A) subclause;

and a reference to a subparagraph, clause or subclause is to be construed as a reference to a subparagraph, clause or subclause of the paragraph, subparagraph or clause, as the case may be, in which the reference occurs.

19.02 In this Licence, unless the context otherwise requires:

“aboriginal interest” means a potential aboriginal right and/or aboriginal title that has not been proven through a court process;

“cutting permit” means a cutting permit issued under this Licence;

“District Manager” means:

- (a) a District Manager appointed under the *Ministry of Forests and Range Act*, for a forest district in which all or part of the licence area is situated; and
- (b) any person authorized by the District Manager to exercise a power or fulfill a duty under this Licence;

“*Forest Act*” means the *Forest Act*, R.S.B.C. 1996, c. 157, as amended from time to time, or the successor to this Act, if it is repealed;

“*Forest and Range Practices Act*” means the *Forest and Range Practices Act*, S.B.C. 2002, c. 69 as amended from time to time, or the successor to this Act, if it is repealed;

“forest development plan” means a forest development plan referred to in the *Forest Practices Code of British Columbia Act* that is approved by the District Manager in respect of this Licence;

“forestry legislation” means, but is not restricted to:

- (a) the *Forest Act*;
- (b) the *Forest Practices Code of British Columbia Act*;
- (c) the *Forest and Range Practices Act*; and

the regulations and standards made under those Acts;

“*Forest Practices Code of British Columbia Act*” means the *Forest Practices Code of British Columbia Act*, R.S.B.C. 1996, c. 159, as amended from time to time, or the successor to this Act, if it is repealed;

“Government” means the Government of the Province of British Columbia;

“handbook” means a guideline, guidebook, policy, procedure, or manual set or approved by the Ministry for preparation of a management plan or the preparation of inventories and other information to be included in a management plan;

“harvest” means:

- (a) cut;
- (b) remove;
- (c) cut and remove.

“licence area” means Schedule “A” Land and Schedule “B” Land;

“management plan” means the management plan prepared and approved for this Licence in accordance with part 5.00 of this Licence;

“merchantable Crown timber” means timber that meets or exceeds the timber merchantability specifications described in the Provincial Logging Residue and Waste Measurement Procedures Manual, as amended or replaced from time to time;

“Minister” means the Minister responsible for administering the *Forest Act*;

“person” includes a corporation and a partnership and an Indian Band, unless the context requires otherwise;

“primary logging” means felling timber and yarding or forwarding the timber to central landings or road-sides, but does not include removing the timber from these landings or road-sides;

“Regional Manager” means:

- (a) a Regional Manager appointed under the *Ministry of Forests and Range Act*, for the forest region in which all or part of the licence area is situated; and
- (b) any person authorized by the Regional Manager to exercise a power or fulfill a duty under this Licence.

“remove” means the removal of timber from the licence area and “removed” and “removing” have the corresponding meanings;

“road permit” means a road permit entered into under the *Forest Act* which provides access to timber harvested, or to be harvested, under this Licence;

“Schedule “A” Land” means the private land described in the Schedule “A” to this Licence;

“Schedule “B” Land” means the Crown land described in Schedule “B” to this Licence;

“special deposit” means a special deposit referred to in paragraph 12.11;

“special use permit” means a special use permit issued under the *Forest Act* before June 15, 1995, or under the *Forest Practices Code of British Columbia Act* on or after June 15, 1995, to authorize the Licensee to use or occupy Crown land within the licence area;

“waste” means merchantable Crown timber that could have been cut and removed under this Licence but that the Licensee at his discretion does not cut and remove, and as defined in the Provincial Logging Residue and Waste Measurement Procedures Manual, as amended from time to time;

“woodlot licence plan” means a woodlot licence plan referred to in the *Forest and Range Practices Act*, that is prepared or approved by the Minister in respect of the Licence.

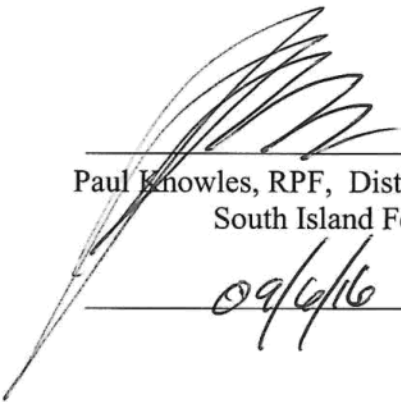
- 19.03 Unless otherwise provided in paragraph 19.02, if a word or phrase used in this Licence is defined in the *Forest Act*, the *Forest and Range Practices Act*, or the *Forest Practices Code of British Columbia Act* the definition in the Act applies to this Licence, and where the word or phrase in the Act is replaced by a new word or phrase, this Licence is deemed to have been amended accordingly.
- 19.04 If a provision of the *Forest Act*, the *Forest and Range Practices Act*, or the *Forest Practices Code of British Columbia Act* referred to in this Licence is renumbered, the reference in this Licence is to be construed as a reference to the provision as renumbered.
- 19.05 In this Licence, unless the context otherwise requires:
- (a) the singular includes the plural and the plural includes the singular; and
  - (b) the masculine, the feminine and the neuter are interchangeable.

IN WITNESS WHEREOF the Licence has been executed by the (Regional or District) Manager and the Licensee on the date first written above.

SIGNED by the )  
(Regional or District) Manager )  
on behalf of Her Majesty )  
the Queen in Right of )  
the Province of )  
British Columbia )  
in the presence of: )

  
Signature )

  
Printed Name )

  
Paul Knowles, RPF, District Manager  
South Island Forest District

  
09/6/16  
Dated

THE COMMON SEAL of )  
the Licensee was affixed )  
in the presence of: )

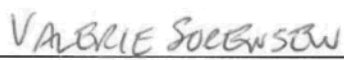
\_\_\_\_\_  
Signature )

\_\_\_\_\_  
Printed Name )

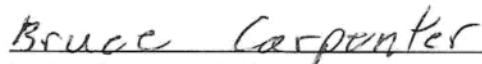
(or)

SIGNED, by the Licensee  
in the presence of:

  
Signature of Witness )

  
Printed Name of Witness )

  
Bruce Murray Carpenter - Licensee

  
Printed Name of Licensee and Title

  
June 11/09  
Dated

## **SCHEDULE "A"**

### **1.00 DESCRIPTION OF NON CROWN LANDS**

- 1.01 The private land subject to this licence is as described on the attached Exhibit "A" map.

## **SCHEDULE "B"**

### **1.00 DESCRIPTION OF CROWN LANDS**

- 1.01 The Crown land subject to this Licence is as described on the attached Exhibit "A" map(s).



P OF: **Woodlot Licence W0097**  
**Blocks A and B**

Date Feb. 7/97

Drawn by

REPLACES PREVIOUS MAP  
Dec. 6/94

REST REGION: **Vancouver**

ID DISTRICT: **Cameron**

DISTRICT: **Port Alberni**

SHOWN AS A  
BOLD SOLID LINE:

Planning Cell

M. Zone East± North±  
d 10 390116 5461454

Reg 7 Compt. 17 L B

NAD 27 X  
83

MANAGEMENT UNIT TIMBER SUPPLY AREA

e E

Number 38

CASCADES

Base Map

Ref. Map 092F028,F038

iber

Block B

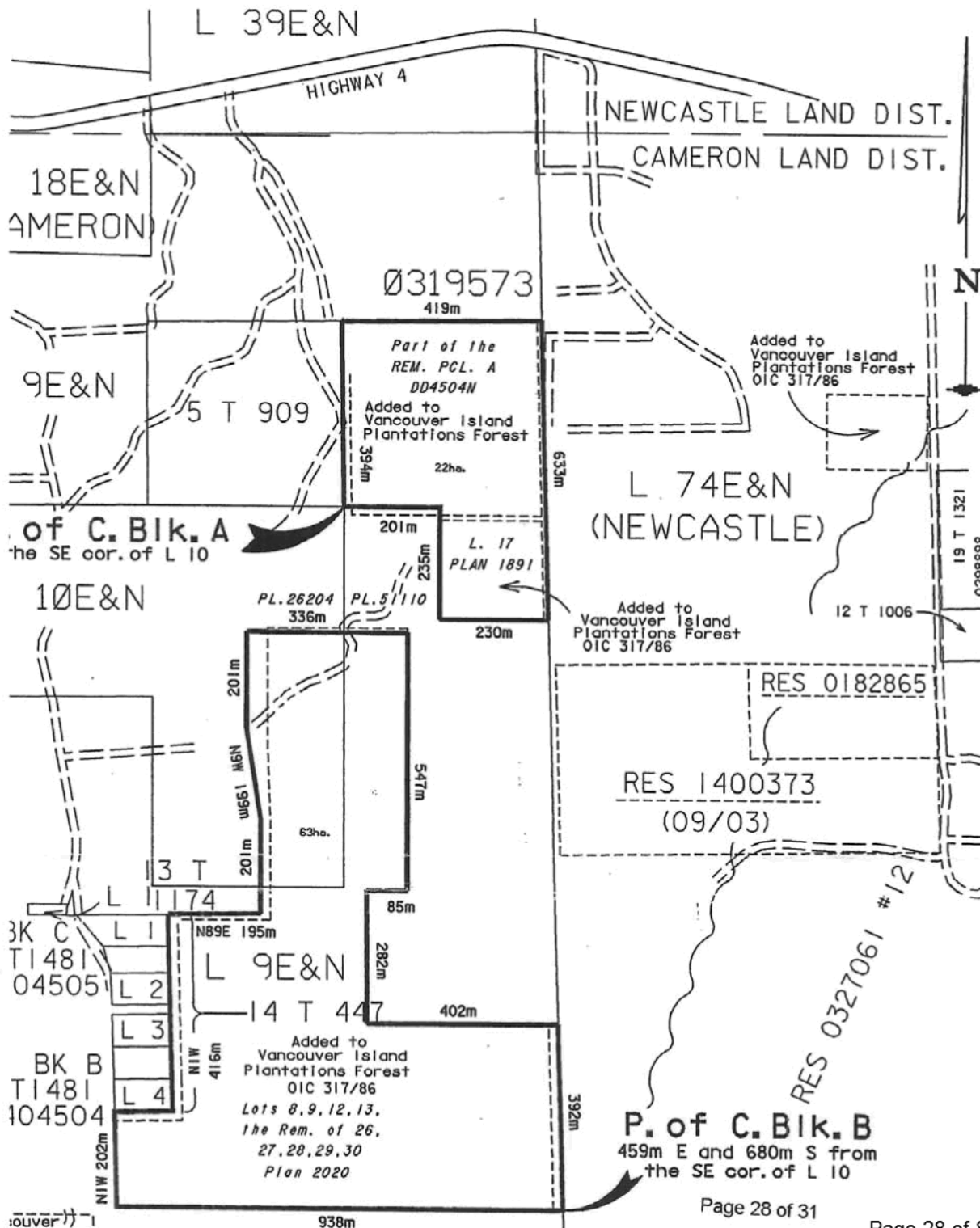
West X

ODM Map ID WL097

ORCS \*

Scale 1:10000

Area 85 hectarest

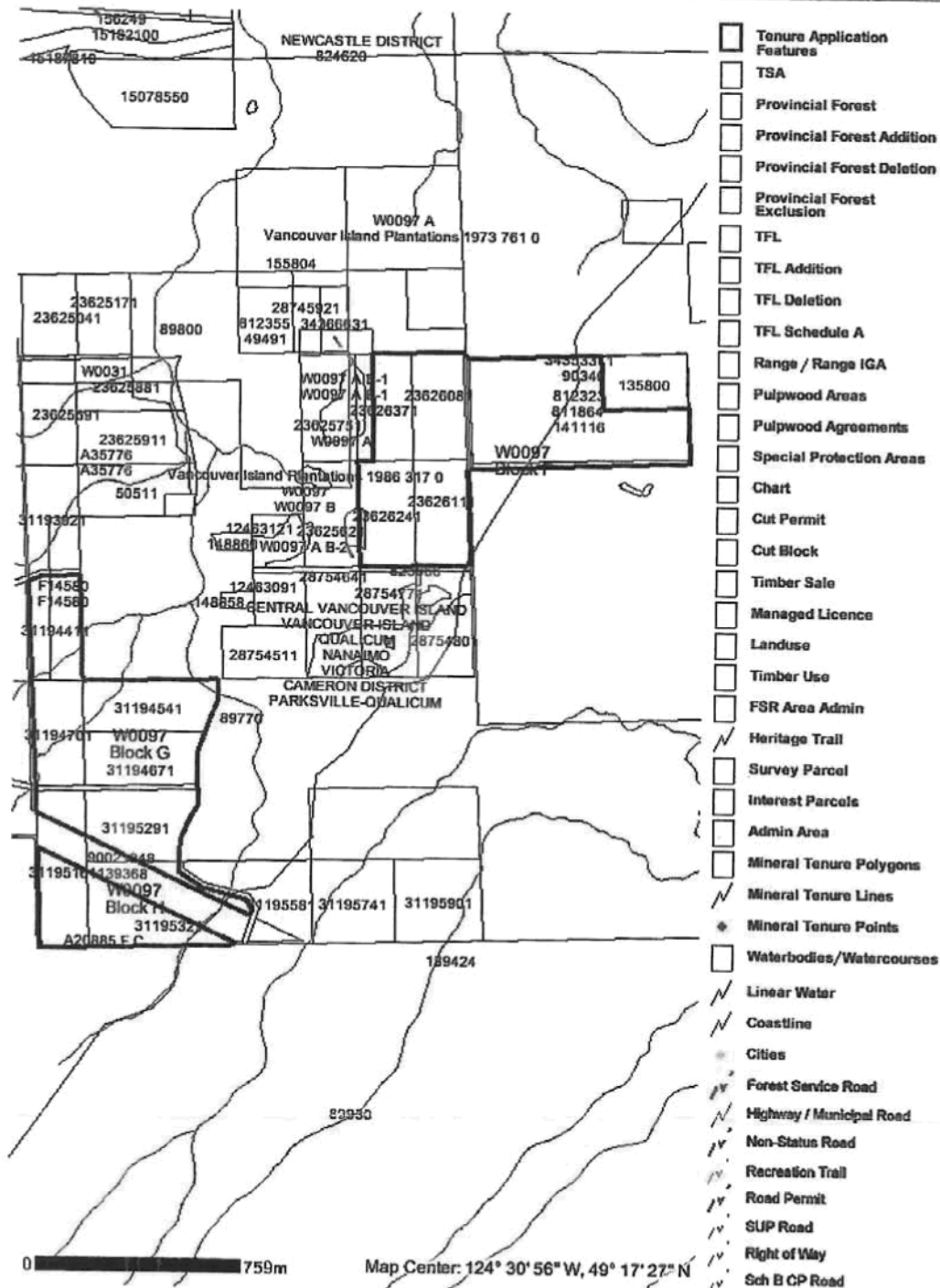






## FTA304 - Exhibit A - Tenure Map

FILE:	W0097	Submitted By:	DISTRICT MANAGER SOUTH ISLAND (DSI)
FILE Type:	A04 - Woodlot Licence	Submission Date:	2005-12-10
Submission Area:	116.6306	Submitted To:	DSI - South Island Forest District
Scale:	1:19909	Revised By:	
DATUM:	NAD 83	Revision Date:	
UTM Zone:	NOT AVAILABLE	Cascades:	
Description:	Woodlot Licence Schedule B		
BCGS Reference Maps:			



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MINISTRY OF



BRITISH  
COLUMBIA

MAP OF:

W0097

# Schedule 'A' Lands



Ministry of  
Forests

EXHIBIT 'A'

1 OF 1

Date 98/06/19

Drawn by BGD

Replaces Previous Map  
98/04/29

FOREST REGION: Vancouver

LAND DISTRICT: Nanoose

DISTRICT: South Island

SHOWN AS A  
BOLD SOLID LINE:

J.T.M. Zone East± North±  
Grid 10 406394 5460455

Reg 7 Compt. 21 L A

Planning Cell

NAD 27 X  
83

MANAGEMENT UNIT

TIMBER SUPPLY AREA

Type Z

Number 38

Timber

Block B

Sub-B

CASCADES  
West X

Base Map 092F029, 039

Ref. Map

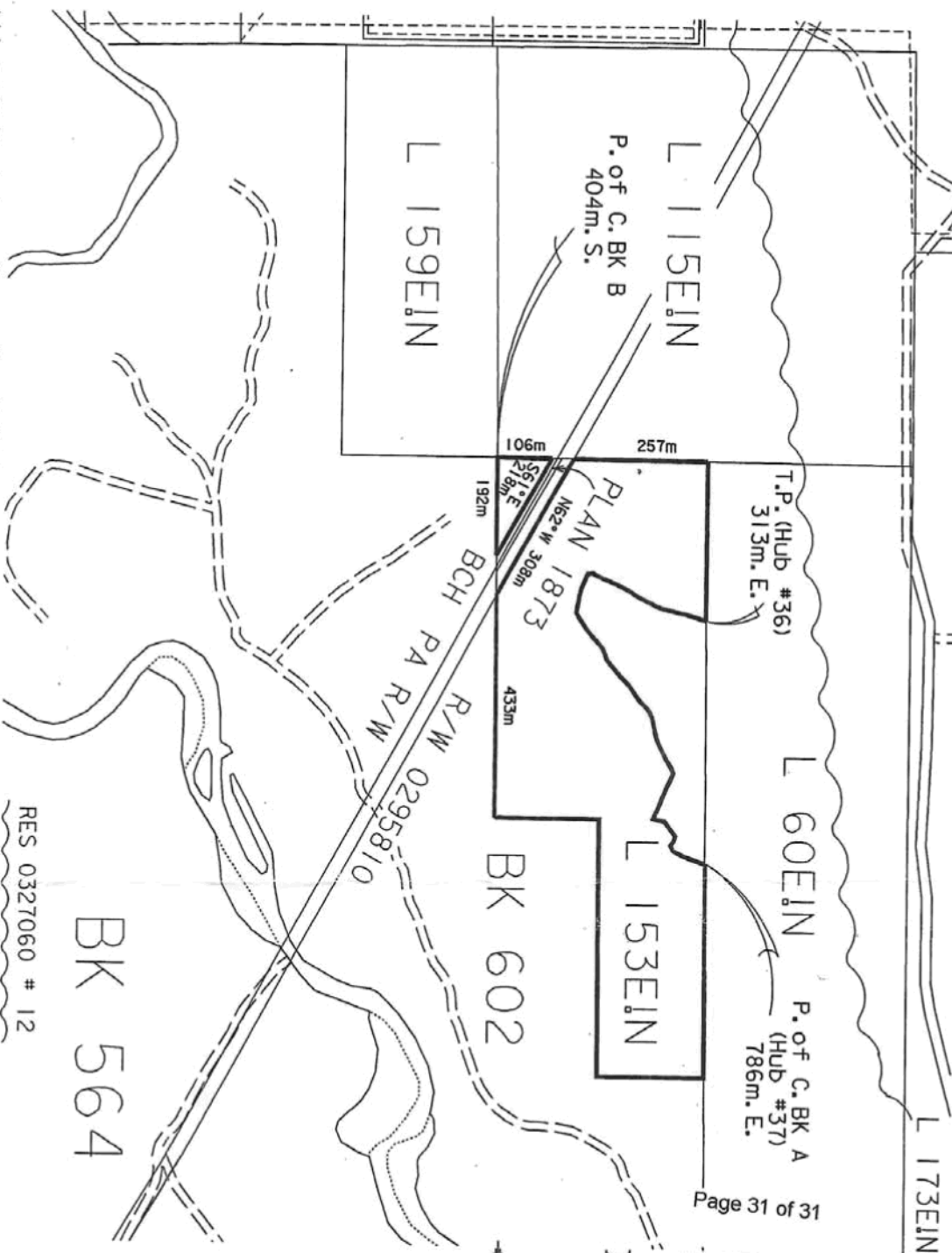
ODM Map ID WL0097A

Scale 1: 10,000

ORCS \*

Area 31 hectarest

All points taken from the N.W. Cor. L153E1N



EXCLUDE THEREOUT PLAN 1873, R/W 0295810

Page 31 of 31


**WOODLOT LICENCE W0097  
MANAGEMENT PLAN NO. 2  
2009-2019**

**Licensee:  
Bruce M. Carpenter**

**Submitted by:**

  
Bruce M. Carpenter

**Approved by:**

  
District Manager  
South Island Forest District

**Date Approved:**



**APPROVED**

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- Appendix 4: Forest Inventory Information
- Appendix 5: AAC Rationale
- Appendix 6: Advertisement of Management Plan
- Appendix 7: Review and Comment

## INTRODUCTION

This Management Plan describes the forest values and associated resource management objectives for Woodlot Licence W0097. This Management Plan is consistent with the *Forest Act* and the associated regulations in addition to requirements of the *Forest and Range Practices Act (FRPA)* and associated regulations. Other relevant legislation is also referenced in this plan.

The Vancouver Island Land Use Plan (VILUP), which came into effect December 1, 2000, is the only Higher Level Plan covering the woodlot licence area. The Vancouver Island Land Use Plan (VILUP) E&N South General Management Zone covers the area within the Woodlot Licence.

The intent of the General Management Zone is to manage a wide range of resource values in accordance with the principles of integrated resource management, based on an ecosystem approach. The area within the E&N South General Management Zone has significant timber values which are particularly suitable for enhanced silviculture; offers significant recreation/scenic and tourism opportunities associated with intensively managed, roaded resource lands; has significant wildlife and fish values; and because the area was intensively harvested and subjected to extensive fires in the past, has the potential for active biodiversity conservation/restoration.

This Management Plan replaces Management Plan #1 (March 1999).

## 1.0 AREA DESCRIPTION

The original licence included six separate parcels spread over approximately 14 kms in the vicinity of Coombs on the east coast of Vancouver Island. Five of the original parcels are Crown Land (Schedule A) and the remaining parcel is private land (Schedule B). In 2007, W0097 was expanded to include three additional parcels of Crown Land near Coombs. All parcels lie within the South Island Forest District and the Arrowsmith Timber Supply Area.

The entire woodlot licence area is identified on the maps in Appendix 1.

### 1.1 Private Land

The private portion is located 3 km southwest of Parksville, with access via Allsbrook Road, off the Alberni Highway. The legal description of this portion is "District Lot 153, Nanoose Land District". Only 31.5 ha of DL 153 is included in the woodlot. The remainder is hydro and gas right-of-ways and farmland. The majority of the property is in the Agricultural Land Reserve.

The private lands are dominated (75%) by second growth conifers, ranging 50 to 90 years of age. The remaining 25% consists of young plantations, 10 to 20 years of age. This portion of the woodlot lies within the Maritime Coastal Douglas Fir biogeoclimatic subzone (CDFmm).

## 1.2 Crown Land

Three of the original Crown portions of the Woodlot Licence (Blocks C, D and E) are also in the Agriculture Land Reserve. Of these, Blocks C and D are in the Moist Maritime Coastal Douglas Fir (CDFmm) biogeoclimatic subzone and Block E is in the Very Dry Maritime Coastal Western Hemlock (CWHxm1) biogeoclimatic subzone. These three parcels are also in the French Creek Community Watershed. The remaining two original parcels (Blocks A and B) as well as the expansion parcels (Blocks G, H and I) are located in the CWHxm1 biogeoclimatic subzone. These parcels lie within the Little Qualicum River Community Watershed.

The Crown lands support 40-120 year old second growth. While conifers dominate the greatest portions of these blocks, there are significant areas of mixed species stands and a few areas dominated by deciduous stands. The expansion portions also contain young plantations 18 years of age.

The Crown land now totals 338.5 hectares.

## 2.0 LICENSEE GOALS

A number of management objectives and goals have been taken into account in the preparation of this plan. They include:

- Practicing integrated resource management on the licence area , recognizing the many forest values for inclusion in forest management objectives;
- Managing selected areas on an extended rotation to recreate old-growth characteristics;
- Operating W0097 in a profitable way by marketing logs and other forest products in such a manner as to realize the highest possible utilization of the timber resource;
- Optimizing the value of products generated and supporting local industry;
- Enhancing the recreational and educational opportunities available on the Crown land portion of the woodlot;
- Maintaining or enhancing existing biodiversity;
- Increasing my personal knowledge about and understanding of forestry and ecological systems.



### 3.0 FOREST RESOURCES

#### 3.1 Wildlife

A comprehensive wildlife inventory was completed for the original portions of W0097 by Triton Environmental Consultants Ltd in 1997. The consultants and the Ministry of Environment (MoE) indicate that the Pacific Water Shrew, a red listed (threatened) species, may exist in streams and riparian areas within the woodlot. Because this shrew is protected by the federal *Species at Risk Act (SARA)*, residences of these animals are protected from destruction under Section 33 of the Act. MoE also suggests Red-legged Frogs, a blue listed species (species of special concern), is likely present in wetlands within the woodlot.

The *Identified Wildlife Management Strategy (FPC)* lists the following species as being within the Nanaimo Area Lowlands Ecoregion that could potentially occur in W0097:

- Northern Goshawk
- Marbled Murrelet
- Keen's Long-eared Myotis

Although records indicate that the Keen's Long-eared Myotis range may overlap with the woodlot area, the environmental consultants do not think that critical habitats occur within the original part of the woodlot. The expansion area has not been assessed, so may contain critical habitat.

There are also a number of blue-listed species whose ranges overlap the woodlot. They were not actually observed during the assessment in 1997 but they may exist on the woodlot or visit it. These include: turkey vultures, peregrine falcons, western screech-owls, Vancouver Island pygmy owls, Hutton's vireos; Islands pine grosbeak, Townsend's big eared bat, and Vancouver Island ermine. A number of these species require large trees or old-growth trees for some aspects of their life-cycle, so maintenance or recreation of old-growth characteristics will be a priority in some areas of the woodlot.

To date, no Wildlife Habitat Areas have been designated by MoE within the woodlot licence or recent expansion areas. However, suitable habitat for these and other wildlife species will continue to be provided within protected areas (wildlife tree retention areas (WTRAs) and Riparian Reserve Zones (RRZs)) and by the harvest rates and patterns within both the existing woodlot and expansion areas. Furthermore, RRZs will protect potential Pacific Water Shrew and Red-legged Frog habitat. Road maintenance activities and harvesting will be conducted so as to minimize the introduction of sediment into any wetlands and ponds within the woodlot area.

Large mammals present in this woodlot include Roosevelt Elk, black-tailed deer, black bear and cougar. Small mammals present would include the raccoon, Douglas squirrel and a variety of rodents. Sufficient browsing from deer and elk has occurred to require some type of browse protection on the plantations. Any bear den trees found in the woodlot will be protected from harvesting wherever possible. The licensee has attempted to create potential bear dens during stumping operations, one in each of cutblocks B3 and B4, but to date their use has not been confirmed.

If any of the red or blue listed or Identified Wildlife species are found, the licensee will inform the MoE. The MoE will also be informed if any nests of Great Blue Herons, Eagles or Ospreys are found within the woodlot licence area and if nests are found, they will be protected in individual wildlife trees or wildlife tree retention areas.

### 3.2 Biodiversity and Old Growth

Biodiversity is the diversity of plants, animals and other living organisms in all their forms and levels of organization. In order to maintain biodiversity, the licensee will endeavour to manage the ecosystems within the woodlot to provide suitable habitat conditions for all native species. Specifically the licensee will maintain the overall diversity of the woodlot area by:

- using a variety of opening sizes and silviculture systems to create a greater diversity of age classes;
- retaining some deciduous forest types;
- retaining veteran trees and some large diameter second growth, where possible, for their wildlife values and contribution to the structure of openings;
- retaining wildlife tree retention areas (WTRAs) throughout the woodlot licence area.

The licensee will endeavor to locate specific areas of the expansion portion of the woodlot with high biodiversity values within the next five years.

Within the CDF mm and CWHxm biogeoclimatic subzones, a number of natural plant communities are considered part of the Conservation Data Centre's (CDC) red and blue (rare) lists (see Appendix 2). The conservation status ranking of these natural plant communities reflects the rarity of a plant community occurrence at the national and provincial level. The CDC considers all successional stages of plant communities on these lists valuable for conservation, especially when some of the forested plant communities have little or no representation remaining in a natural or "climax" state. Although the woodlot licence area has been disturbed by humans and is not currently in a "climax" state, there may be some rare plant communities that are ecologically valuable, especially if there are few or no natural, undisturbed occurrences left in the Province. If any rare plant communities are identified during the inventory or during block and road layout, every effort will be made to protect these within WTRAs or other reserves. Alternatively, stands may be managed for extended rotations to enhance older forest attributes in these plant communities.

Current legislation under the *Forest and Range Practices Act* requires 8% wildlife tree retention, and Woodlot Licence Plans will be consistent with that requirement. However, unharvested areas outside the cutblocks will continue to provide additional biological diversity.

Wildlife tree retention areas will be located around wetlands, sensitive ecosystems, and some older forest types to protect non-timber resources as well as habitat diversity. These WTRAs will also protect potential red and blue listed plant and animal communities. Once an inventory of the expansion area (Blocks G, H and I) is completed and better information is collected on the suitability of the current WTRAs, and all streams within the expansion area are classified, additional or replacement WTRAs will be designated.

There are no designated Old Growth Management Areas within the woodlot licence area. However, some mature and older stands will be protected within WTRAs, and will eventually become old growth. During the re-inventory of the expansion portion of the woodlot, any old growth and ecologically unique areas will be identified for potential protection. The licensee will place the highest conservation emphasis on the oldest, most intact stands which most represent original old-growth conditions. In addition, scattered veterans will be protected within WTRAs and within cutblocks where safety permits. Wherever possible, wildlife danger trees (trees with cavities and insipient decay) will be retained in "No Work Zones" within WTRAs.

Old growth attributes may also be maintained or created within younger stands that already exhibit characteristics of older stands. This may not exclude harvesting within these stands, but may require longer rotations and/or individual tree selection systems to create uneven aged stands. Any suitable stands for old growth creation and maintenance will be identified during the re-inventory of the woodlot.

### 3.3 Sensitive Ecosystems

In the 2004 Sensitive Ecosystem Inventory (SEI), the MoE identified a large older second growth conifer polygon in Block A, B and I. Two wetland polygons were also identified in Block B, and one wetland polygon was identified in Blocks C and D. These have been protected within wildlife tree patches. In Block E, the MoE identified a large older mixed forest/older riparian forest. These SEI polygons are identified on orthophotos in Appendix II. No other sensitive ecosystems have been identified within the woodlot licence boundary.

These ecologically unique areas will be identified for potential protection during the inventory of the woodlot. Efforts will be made to confirm SEI locations and wherever possible, protect them from harvest or incorporate them within the wildlife tree retention strategy included in the Woodlot Licence Plan.

### 3.4 Water

There are a number of creeks and wetlands in the woodlot with the most substantial being located in Block E. All of these will be mapped and classified on an ongoing basis as roads and cutblocks are developed. Blocks A, B, G, H and I are located in the little Qualicum Community Watershed while Blocks C, D and E are situated in the French Creek Community Watershed. French Creek and two of its tributaries flow through Block E. Block B contains a pond with an existing water licence, and there are several other licenses on Whiskey Creek downstream from the woodlot. Block F, the private land portion of the woodlot, lies within the Englishman River Community Watershed. Consequently, stringent planning and monitoring will be required.

Water resources are administered by the Ministry of Environment and the Integrated Land Management Bureau. A Water Licence, issued under the authority of the *Water Act* is required for the use of surface water in British Columbia. Currently there is no legislation regulating groundwater use or groundwater well development. The *Drinking Water Protection Act* protects all sources of drinking water.

### 3.5 Fisheries

The private portion of the woodlot has two seasonal creeks flowing through it. Because water from the woodlot drains into a pond containing fish that was created on the licensee's private land outside the woodlot licence, there may be potential seasonal fish habitat within the private portion of the woodlot.

Block A contains a substantial boggy area with a creek flowing out of it. While no fish have been found within the woodlot, both resident trout and salmon are known to live downstream and fish have been observed in the ditch on Carson Road. Block B contains two wetlands (one W4 and one non-classified) but no fish have been observed in these wetlands. Wetlands are also evident in Blocks C and D, although no fish have been observed in either of these wetlands.

French Creek and its tributaries flow through Block E and have the most significant fisheries values, containing both resident trout and salmon rearing areas. Since no substantial barriers other than a beaver dam are currently present, the northwestern tributary has also been classified as S4 until a fisheries biologist assesses the streams.

Streams within Blocks G, H and I have not been formally classified, but are at least S4 because they lie within the Little Qualicum Community Watershed. All creeks and wetlands within the woodlot licence area will be accurately mapped and classified, and suitable riparian reserves and management zones will be established during the operational planning process to protect them.

### 3.6 Mineral and Petroleum

There are no active mineral or petroleum resources within W0097.

### 3.7 Heritage Resources and Traditional Use

The entire woodlot licence area lies within the overlapping traditional territories of the Nanoose, Qualicum and Comox First Nations. Aboriginal rights are recognized and affirmed in the *Constitution Act* and the licensee recognizes that the Qualicum and Comox aboriginal rights can not be unjustifiably infringed upon. The Nanoose First Nation is a Douglas Treaty First Nation and therefore has treaty rights. The licensee will share information with First Nations in the preparation of this Management Plan and through the operational planning process.

All heritage resources will be protected as per the *Heritage Conservation Act* and *Forest and Range Practices Act*. No Archaeological Impact Assessment has been completed for the woodlot to date. To ensure that other features of heritage value are identified within this portion of the woodlot prior to road construction and harvesting, Culturally Modified Tree (CMT) surveys will be completed for all blocks and road sections that contain an old growth Cw component. Should there be any previously unrecorded sites identified during forest management activities, the licensee will cease any operations that may impact the site immediately.

### 3.8 Botanical Forest Products

The collection of botanical forest products from the licence area is fairly limited at present, with the exception of salal harvesting in Blocks A, B, C and D. Mushroom harvesting has increased since the roads were constructed in Blocks A, B and E. Other plants or plant components are harvested sporadically or in limited volume. The public may also utilize the remaining Crown portions of the woodlot area to collect botanical forest products such as salal, ferns, and mushrooms.

As local populations continue to grow, access to various portions of the woodlot improves, and other plants or markets are identified, it is probable that the harvesting of botanicals will continue to expand. Because there are no regulations in place that deal with the collection of these products, the Ministry of Forests and Range will be notified should it appear that the environment is being damaged as a result of harvesting activities.

### 3.9 Recreation

Much of the woodlot has few features which constitute a destination for recreationalists and due to other recreational sites nearby there is little recreational use of the Crown or Private parcels. Hiking is the main recreational activity within the entire woodlot licence area. Roads and trails throughout the Palmer Road area are well used by local recreationists. Mountain biking and horseback riding are the prevalent recreation activities. Block A contains some hiking trails, but these are generally short and used mainly by the immediate neighbours. ATV use is evident in Block B.

A recreation inventory has been completed for the licence area and identifies the key activities to be gathering and collecting, wildlife viewing, horseback riding and hunting. Blocks C and D have moderate recreation resource value and features that are sensitive, mainly trails used by hikers and horseback riders.

Block A lies adjacent to and east of a 40 acre parcel that the Regional District of Nanaimo (RDN) leases from the Crown for community park purposes.

None of the conceptual Regional Trail Corridors proposed in the RDN Regional Parks & Trails System Plan – 2005 - 2015 lie within Woodlot Licence 0097. Chattsworth Road, which lies adjacent to Block B and terminates near Block G is incorporated into one of the conceptual trail corridors. Depending on its finalized location, this trail corridor may extend through portions of Blocks G and H. The licensee is also aware of the RDN's interest in possibly developing a trail that would connect Palmer Road to Matterson Road through Blocks C and D of the woodlot as part of the Electoral Area F community trail network.

Improvements to the existing road network, through proposed harvesting activities will increase recreational use of the areas. The licensee will continue to actively participate in discussions with the RDN about future plans for both the Electoral Area F community trail network and the Regional Trail system, as well as user groups to discuss means to maintain and enhance the recreational resources of the Crown land in the woodlot licence area.

The licensee will not restrict non-motorized public access to the Crown portions of the licence. An exception to this may occur when management operations may endanger public safety or

during periods of extreme fire hazard. Motorized use of portions of the Crown land is currently restricted to prevent vandalism and garbage dumping.

### 3.10 Landscape

None of the parcels of the woodlot licence lie within the Scenic Area defined by the visual landscape associated with views following the travel corridor along Highway 4.

Presently the main visual concerns are with adjacent private land owners. The licensee recognizes that aesthetics must be given adequate consideration, and during harvest planning every effort will be made to minimize the visual impact on these neighbours.

## 4.0 FOREST INVENTORY

The current woodlot inventory is based on the 1989-1992 reinventory of the South Island Forest District and projected to 2007 and the 1:5000 scale maps of all Blocks based on 1994 air photo interpretation, and projected to 2007. Forest cover information was updated to reflect recent harvesting and silvicultural activities.

A Vegetation Resource Inventory could be used to collect both timber and ecological information for the Crown land portions of the woodlot and funding opportunities may exist through the Forest Investment Account. If no funding opportunities are available, the licensee will complete a re-inventory of the woodlot within the next 10 years. The licensee will ensure the forest inventory is maintained in a current state.

The MoFR inventory information is summarized in Appendix 4. This data was utilized in the calculation of the long term sustainable harvest rate for the licence area, providing an Annual Allowable Cut (AAC) of the Woodlot Licence (Section 5.2).

This woodlot licence has been divided into four management units:

#### ***MUI - Overmature and Mature Leading Coniferous Stands***

These stands make up approximately 165 hectares of the licence area and are composed of age classes 5, 6 and 7. Site indices on these stands range from 19 to 35. Once harvested, fully stocked stand of ecologically acceptable species will be planted. Natural restocking will be acceptable to supplement planted stock. While harvesting activities will focus on these stands, it is expected that a portion of these stands, particularly those over 100 years of age will be incorporated into the licensee's Wildlife Tree Retention strategy.

#### ***MUII - Immature Coniferous Stands***

These stands make up approximately 87 hectares of the licence area; most stands are age class 4 (61-80 years). Harvesting of these stands will not take place in the immediate future however these stands do provide excellent opportunities for commercial thinning should economic opportunities arise and based upon individual stand descriptions. Stands would be harvested if timber is in imminent danger of being lost or destroyed due to insect infestations, disease, fire or windthrow. The stands will be monitored to ensure they remain in a healthy state and contribute

to the Mean Annual Increment (MAI) of the woodlot licence. Where opportunity exists, consideration will be given to enhance the productivity on these stands through silviculture treatments. A portion of these stands are on the private lands and have lower stocking levels due to past thinning operations

#### ***MUIII - Regenerating Stands***

These stands make up approximately 79 hectares and include areas that have been recently harvested and planted, plantations that are not yet free growing, and plantations that are free growing. Stands will be monitored regularly and basic silviculture will be undertaken as required. These areas may provide opportunities for stand improvement activities over the course of this management plan. Two plantations on the private land continue to be NSR due to elk damage, drought and severe brush. The licensee continues to meet these challenges in his efforts to fully stock these stands.

#### ***MUIV – Deciduous Stands***

Approximately 34 hectares (9%) of the woodlot licence area is comprised of deciduous stands. The deciduous component of the licence area is important from a biodiversity stand-point and includes red alder in moister and riparian areas as well as some arbutus, singly, and in small groups, scattered over the woodlot on dry sites.

Within the operable area of the forest, off-site alder types will be prescribed for treatment, usually at the time of harvesting. This will result in a stand conversion to coniferous species. Any loss of biodiversity due to such prescriptions will be off set by the planting and managing red alder in appropriate sites for a variety of purposes. The licensee expects that up to 4.9 ha of the woodlot will be actively managed for deciduous species.

## **5.0 TIMBER MANAGEMENT**

### **5.1 Forest Products**

In order to maximize the financial success of this woodlot, the return on forest products should be maximized. High value sawlogs, house logs, poles and lower value pulp logs will be the major forest products from this licence. The licensees will also endeavor to find a market for the deciduous species, which exist in the licence area. Minor volumes of fence posts, firewood and other special forest products may also be produced. Botanical forest products may be collected by the licensees and general public.

### **5.2 Annual Allowable Cut**

Various methods can be used to help estimate a suitable Annual Allowable Cut (AAC) for the woodlot. The Variable Density Yield Program (VDYP) and Table Interpolation Program for Stand Yield (TIPSY) can be used to generate mean annual increments (MAI) and standing volumes of specific stands based upon the species, ages and heights.

The model used to propose a sustainable timber harvesting volume for W0024 was WOODLOT 3.2, developed by the Ministry of Forests and Range specifically for the Woodlot Licence program. The model uses VDYP and TIPSY and Area Volume Allotment Check methodology. An initial harvest rate is chosen and the model proceeds to project this harvest rate over time;



harvesting and growing polygons that have been selected and in the order selected over time. This series of iterations continues until the harvest rate reaches a non declining even flow.

TIPSY is used to estimate volumes in managed stands (second and subsequent rotations) and VDYP is used to project existing unmanaged stand volumes. VDYP incorporates losses due to decay, waste and breakage. In TIPSY, Operational Adjustment Factors (OAF) are applied to account for losses in timber volume due to unproductive areas (OAF1) and age dependent factors such as disease, decay, waste and breakage (OAF2). Although a higher standard of inventory has been completed for a portion of the woodlot, a large portion of the woodlot has not been inventoried so OAF1 was set at the standard 15% and OAF2 was set at the standard 5%.

The minimum harvesting standards in WOODLOT were set to a stand having a minimum diameter of 25 centimeters and a minimum volume of 300 m<sup>3</sup> per hectare. This is consistent with the factors used in the Arrowsmith Timber Supply Review. Those stands with a greater than 50 percent deciduous component have not been excluded from AAC calculation because they represent a small proportion of the woodlot inventory and most will be converted to coniferous stands. The WOODLOT model calculates a long-term sustainable harvest rate of 2200 m<sup>3</sup>/year over a 250 year planning horizon (see Appendix 5 for details).

### 5.3 Silvicultural Systems and Biodiversity

Eastern Vancouver Island has experienced major forest fires every few centuries, resulting in a variety of age classes and stands. Left to natural processes, the landscape would consist of even-aged stands with a complex stand structure of snags and veteran trees that had survived previous fires and small areas that escaped from the burn. To a lesser extent small openings were created by disease and wind events. This area is classified as an ecosystem with infrequent ecosystem maintaining fires, Natural Disturbance Type II (NDT2).

In order to recreate these historic landscape patterns there should be a range of small to medium sized, similar aged forest patches on the landscape. A combination of small dispersed clearcuts and some dispersed partial cuts, and a few aggregate harvest units along with a connected network of mature and old forests should be maintained. The silvicultural system selected for each site will be the one that best suits the condition and ecology of the stand.

Alternative even-aged systems (seed tree & shelterwood), small clearcuts with reserves, retention systems and patch cuts can be used to simulate the small scale disturbances of the past. In addition, there is the opportunity for intermediate harvests through commercial thinning, with small patchcuts in root disease centers as younger immature stands develop.

Additionally, large veteran trees will be retained wherever possible due to their relative scarcity on the east coast of Vancouver Island and their potential to provide coarse woody debris (CWD). CWD will be retained through harvesting operations as allowed by the utilization standards and FRPA regulations. Snags, which are required by some wildlife, will be periodically created by ringing trees not considered commercially valuable. This snag creation to date has been limited to the private land portion of the woodlot licence.

Where suitable, portions of the woodlot will be managed on extended rotations. Extended rotation areas will likely be adjacent to Wildlife Retention areas or riparian areas. They may also be designated in areas that currently have few vets or large snags in order to develop more suitable habitat for old growth dependent species such as cavity nesters or bats.



Commercial thinning or low intensity shelterwoods may be employed in some extended rotation stands to create a multi-layered canopy while recovering some harvestable volume. It is hoped that these initiatives, as well as deciduous stand conversions and other volume enhancing treatments, will maintain the AAC in the face of extending some planned rotations.

Deciduous stands, primarily of alder and maple, and mixed deciduous stands may be left intact or even encouraged where they are deemed appropriate. For example, wildlife tree retention areas and riparian areas can benefit from the biodiversity conferred by a deciduous component and they can play an important role in soil or bank stabilization. Additionally, deciduous species may be used to rehabilitated root disease areas, especially those with sensitive soils that preclude stumping.

The licensees will maintain the overall diversity of the area by:

- the use of alternative silviculture systems to create greater structure and a diversity of age classes within stands
- retaining some deciduous forest types
- retaining veteran trees for their biodiversity values, where safe to do so
- retaining some component of coarse woody debris
- retaining some uncommon (cottonwood, aspen or maple) wherever possible

#### **5.4 Access and Engineering Development**

The licensee recognizes that location of a good network of roads is a key factor in woodlot management. All roads will be developed to minimize environmental impact and maximize efficiency.

The Crown parcels are accessible via a number of roads or gazetted roads. Access to Block B is achieved through an extension of Marples Road. Block A is accessed through Tralee Road or off Carson Road. Carson Road may also provide future access to Block I. The eastern portion of Block I (gravel pit) is currently accessed off Clark Road. Block G is accessed via existing old logging roads extending off the end of Chattsworth Road. Access to Block H is currently through TimberWest private land and the hydro right-of-way adjacent to TimberWest property. However, there is a gazetted right-of-way through Block G and through the hydro right-of-way to the northeast corner of Block H. This gazetted access may or may not be suitable for road construction. Currently Blocks C and D have both Palmer and Matterson Roads gazetted along their boundaries but the only actual road access is off Palmer Road. Palmer Road may be extended to provide access in the future. A recently constructed extension to Pratt road now provides access to Block E.

The private parcel is accessible via Allsbrook Road, off the Alberni Highway, and a small network of private roads.

#### **5.5 Harvesting Methods**

Falling on the woodlot licence area will be carried out by chainsaw or mechanical felling systems.

In harvesting the AAC the system utilized will best suit the condition of the site. Hoe-forwarding is a viable alternative to ground-based skidders on many sites and ground skidding will only be

used where ground and site conditions permit. Seasonal constraints will be implemented in situations where site conditions dictate or if ground skidding is utilized. In areas inappropriate for ground based systems, small machine cable systems may be employed. Cable systems may be required on the steeper terrain within Block H.

Secondary transportation will be highway sized trucks which may be self loading or loaded by an independent loader.

## **5.8 Harvest Priorities and Salvage Operations**

Except for commercial thinning, harvesting healthy timber will generally be restricted to mature stands. Diseased or damaged stands with merchantable timber will be given priority for early harvest depending on the degree of damage or deterioration, their accessibility, and market conditions. Developing a core road system within each parcel to enable salvage operations throughout the woodlot is a priority.

In the short term, activities on the Private portion will predominantly consist of silvicultural treatments. To date, these lands have been the focus of intensive silvicultural activities including; brushing and backlog reforestation. The private land now makes up 8.4 % of the harvestable area of the woodlot. One cutblock was harvested in 2002-04. The licensee expects that harvesting activities on the private land portion will be limited to salvage operations during the term of this Management Plan.

While most harvesting will be administered through standard operational planning procedures, provision exists for minor harvesting operations of 500 m3 or less throughout the licence area.

# **6.0 SILVICULTURE**

## **6.1 Basic Silviculture**

The licensee shall carry out basic silviculture activities consistent with the *Forest Act*; the *FPC* and the *Woodlot Licence Forest Management Regulation* for areas covered under a Forest Development Plan; and *FRPA* and the *Woodlot Licence Planning and Practices Regulation* for areas covered under a Woodlot Licence Plan.

### **Seed Collection & Tree Seedlings**

No seed collections are anticipated, however, the licensee will cooperate with the MoFR if requested. The licensee will purchase seedlings to meet reforestation needs. All stock will originate from registered seedlots and will conform to the Chief Foresters's Standards for Seed Use.

### **Site Preparation**

The purpose of site preparation is to reduce the fire hazard, reduce or delay brush problems and to ensure achievement of target stocking standards.

In most areas of the licence, there should be no need for site preparation. The exception to this would be in small, brushy areas and root disease areas that require destumping treatment. Destumping as a site preparation treatment may also be used as an alternative to future brushing of competing deciduous trees that have a high coppicing ability, such as maple. In most situations lopping and scattering the slash should be adequate in lieu of site preparation. However, in situations where excessive slash is a problem, consideration will be given to bunching and piling the slash throughout the setting. Burning the piles would be considered an option, or as an alternative, slash could be chipped.

## **Reforestation**

### *Conifers*

The most appropriate reforestation method will be determined through an ecological evaluation of the site and consideration of the requirements of the species to be established. Species selection will be guided by the stocking standards for the woodlot set in the WLP.

Planting will be the most common reforestation method. It is anticipated that Douglas-fir, and western redcedar will be the most commonly planted species, with minor amounts of grand fir and western white pine being planted. Other species may be planted on a trial basis.

Some small trials of non-native conifers will be established from time to time where they are deemed to be ecologically suitable and have economic potential, or have some other objective in being established.

In an effort to minimize the regeneration delay, the licensee will plan to carry out planting within one year of harvest. In some cases, based upon the silvicultural system prescribed, natural regeneration may be an option.

### *Hardwoods*

These will have a small but important position in the licensee's reforestation program. The total area reforested to hardwoods will not exceed five percent of the woodlot. The objectives of planting deciduous species in appropriate microsites include:

- maintaining the natural biodiversity of hardwood/conifer mixtures in appropriate areas
- using alternate species in the management of root disease infected sites
- producing some short rotation (35-40 year) saw log volume to offset some longer rotation conifer volumes
- encouraging the small but growing hardwood manufacturing companies on the east coast of Vancouver Island

Operable sites that are nutrient rich, fresh to moist and well drained (CDFmm site series 06/07, CWHxm1 site series 05/07) are prime candidates for red alder management. Where such sites are currently occupied by coniferous stands infected with root disease and stumping treatments would cause an unacceptable level of site degradation, the establishment of an alder rotation will be the licensee's first choice.

Where such sites are currently carrying commercial quality alder, it's replacement by a second deciduous crop will occur only on a trial basis: the licensee will monitor diameter and height growth and compare the results with data published in the FRDA Report 240 (Red Alder Management for BC).

Stocking standards for hardwood management will be set in the WLP.

### **Surveys**

In order to ensure a plantation becomes free growing within an optimum time frame, it is important that the licensee be aware of seedling survival and performance. Under normal conditions, a walk through survey will be carried out one season after planting and a formal survey completed after the second growing season. If the plantation is not satisfactorily restocked (NSR) it will be fill-planted immediately and another survey will be conducted the following season.

Free growing surveys will be conducted according to MoFR standards and results will be submitted as a component of the annual report.

### **Brushing and Weeding**

Free Growing (FG) standards are achieved when a minimum number of well-spaced, preferred and acceptable trees meet a minimum height requirement and are 150 percent of the height of the competing vegetation. The licensee will perform treatments, as necessary, to ensure plantations become FG within timelines specified in legislation. Any brushing treatments that are required will be done manually and the use of herbicides will be avoided.

## **6.2 Incremental Silviculture**

The goals of incremental silviculture activities will be to improve forest health and to increase the overall productivity and value of the forest. Any stand improvement activities are expected to be carried out by contractors as funding becomes available.

Because of the age class structure of the woodlot licence, no opportunities for stand improvement activities (spacing, pruning and fertilization) have existed to date. However, with the inclusion of the expansion area and as plantations become free growing over time, more opportunities for stand improvement will become available. The licensees will endeavor to find ways to fund incremental silviculture projects.

### **Backlog Reforestation**

If the licensee identifies any of these areas within the expansion portion of the woodlot, every effort will be made to obtain funding in order to bring these sites into production as soon as possible.

Two polygons within the private land portion of the woodlot remain NSR after repeated attempts at restocking these areas. One previously NSR polygon is now satisfactorily restocked (SR). Regeneration difficulties are mainly a result of deer, elk and bear damage to tree protectors,

heavy brush and extended summer droughts. The licensee will continue to brush, fill plant and monitor these polygons to ensure they become restocked. These polygons do not currently contribute to the AAC calculation.

### **Site Rehabilitation**

Site rehabilitation involves the removal of existing non-commercial stands and subsequent regeneration of the site to commercial coniferous species. The inventory information shows there are some leading deciduous stands within W0097 which may provide some opportunities for this type of enhancement in the expansion portions of the woodlot..

### **Fertilization**

Increased yields and a reduction in rotation length are possible with fertilization and may be especially beneficial to sites of low productivity. Fertilization can accelerate the development of stands by increasing piece size which could fill gaps in the age class profile. Fertilization at the time of planting may help to ensure seedling performance and allow them to outcompete surrounding vegetation. No broad-cast fertilization treatments will be carried out within the Community Watersheds.

### **Spacing**

While the primary objective of spacing is to concentrate growth on fewer stems, resulting in a lower technical rotation age of crop trees, other goals are also important. These include:

- improving the species composition to control diseases such as mistletoe or root disease;
- increasing the percentage of higher value species;
- improving the stand structure, which increases its ability to withstand snow damage and windthrow;
- enhancing biodiversity;
- aesthetics

Currently there may be some opportunities for spacing stands in the Block G and the private land portion of the woodlot. Spacing will be undertaken on stands that will benefit from such a treatment as funding opportunities allow.

### **Pruning**

Pruning will improve forest values by increasing the amount of clear mature wood and reducing the size of the knotty core, reducing stem taper - resulting in an increased final product value.

Some pruning has been carried out on the private land portion of the woodlot. Currently there may be some pruning opportunities in the Block G and private portions of the woodlot. Pruning will be undertaken where appropriate opportunities exist and if funding becomes available.

## **6.3 Commercial Thinning**

Harvesting by means of commercial thinning can be prescribed in stands where a merchantable volume can be extracted and adequate crop trees can remain until rotation age. Under certain

stand conditions and harvesting constraints commercial thinning can increase; merchantable timber volume production, the financial value of timber, and recover potential mortality. Other non-timber objectives may also be achieved by commercial thinning such as improved wildlife habitat, biodiversity and aesthetics. Volumes obtained from commercial thinning can be used to mitigate any age-class imbalance that may exist in the timber supply profile.

Portions of the private land have been commercially thinned. There may be future opportunities for commercial thinning within the younger immature conifer stands in the Crown portions of the woodlot.

## 7.0 FOREST PROTECTION

### 7.1 Fire Prevention

The licensee will comply with the *Wildfire Act and Regulation* regarding fire suppression equipment required, work hours and prevention measures. When operating on the licence area during fire season the licensee will contact the South Island Forest District Office or Coastal Fire Base to determine the current Fire Danger Class for the area.

To minimize the buildup of fuels from timber harvesting and silvicultural activities, the licensees must assess areas to determine if a fire hazard is present once harvesting is complete. The licensee will abate any hazards that are created by dispersing slash accumulations or by spot burning where suitable, particularly for roadside or landing debris.

### 7.2 Forest Pests and Disease

The licensee will monitor the woodlot for insects and disease and notify the MoFR if any new outbreaks or infections are found.

#### Root Disease

Root disease of various types can be a common occurrence in most second growth Douglas-fir stands on Vancouver Island, and there are a few extensive areas of root disease evident in W0097. To date, the majority of the cutblocks (B1-4, A1) have been harvested and site prepared to treat root disease. Salvage operations have also focused mainly on recovering timber that has been infected with root disease. Root disease infected areas will be treated by stump pulling or planting with resistant species. The appropriate method will be determined based on a site assessment.

#### White Pine Blister Rust

Western White Pine is a suitable minor species for some sites in the CWHxm1 biogeoclimatic zone and is particularly suitable as a silvicultural control for root disease areas. In situations where Western White Pine is an acceptable species, blister rust resistant stock will be planted. To further reduce the risk of infection, trees may be pruned. Healthy White Pine will be retained in any spacing operations, for biodiversity reasons and the possibility of finding blister rust resistant

trees. If mature, uninfected Western White Pine are found in stands that are to be harvested, the licensee will endeavor to reserve the trees for the reasons outlined above.

### **Hemlock Dwarf Mistletoe and Lodgepole Pine Dwarf Mistletoe**

Stands with components of Western Hemlock in Block A have been found to be infected with this parasitic seed plant. Given that one of the management strategies is to prioritize harvest of these generally undesirable stands, all infected and non-infected hemlock trees in the stand will be removed. Because western hemlock is generally not a preferred species, hemlock dwarf mistletoe is not expected to perpetuate in this area.

Some lodgepole pine in Errington and Coombs are infected with lodgepole pine dwarf mistletoe, and some has been found in the woodlot, particularly in Blocks C and D, near Palmer Road.

### **Balsam Woolly Adelgid**

The Balsam Woolly Adelgid is a sucking insect that most often attacks large true firs. Attack can occur on the stem or the crown and while trees can survive most attacks, growth can be impacted. Recognizing that this pest occurs on southern Vancouver Island, the planting of any Grand Fir will be limited to a minor stand component.

### **Ungulates and other Wildlife**

Local deer and elk populations have browsed plantations in the licence area and are especially fond of western red cedar. The licensee will continue to protect seedlings by using browse protection methods.

Young plantations can also be severely damaged by mice or voles girdling the lower stems of trees less than six years old. Most of the damage appears to occur during population peaks, years with heavy prolonged snow cover, or simply from particular animals which have acquired a taste for conifers. Brushing to reduce ground cover and encouraging birds of prey may help reduce damage.

## **7.3 Damage Due to Blowdown**

There are a number of areas of blowdown in the woodlot. These are mainly due to root disease centres, wet areas, or exposed timber faces such as the south edge of Block B. Because of the rapid deterioration of timber quality after blowdown occurs, these areas will be harvested as quickly as possible wherever feasible.

Periodic removal of windthrown trees, mainly along roadsides and hydro right-of-ways, has been carried out over the life of the previous Management Plan, especially after significant storm events.

Windthrow strategies, especially important along fish streams, will be identified in harvesting plans. Although some cutblock boundaries can be designed to follow more open stands that are less susceptible to windthrow, in some windthrow prone areas alternative treatments such as feathering edges or pruning may be prescribed.

## 8.0 INFORMATION GATHERING AND REVIEW

### 8.1 Public Review

This Management Plan, covering the entire woodlot licence area, was advertised in the PQ News on Friday, December 19<sup>th</sup>, 2008 for public review. The public, resource agencies and interest groups had the opportunity to submit comments regarding this Management Plan until January 30<sup>th</sup>, 2009 and the First Nations had the opportunity to submit comments until March 15<sup>th</sup>, 2009. All written comments are included in Appendix 7.

### 8.2 Resource Agencies and Interest Groups

In addition to the Ministry of Forests and Range, the resource agencies and interest groups that will be contacted during the preparation of this Management Plan and will be consulted during the subsequent Woodlot Licence Plan process are:

- Nanaimo Regional District
- Ministry of Environment
- Department of Fisheries and Oceans
- Qualicum First Nation
- Nanoose First Nation
- Comox First Nation
- Silver Spurs Riding Club

Comments were received from the Ministry of Environment and the Ministry of Forests and Range and are included in Appendix 7.

## 9.0 REVISION

A few revisions were made to the draft Management Plan to reflect comments submitted by resource agencies. These revisions are summarized below.

All species listed in the e-mail received from Kevin Telfer, Ecosystems Biologist, Ministry of Environment were confirmed to already be identified in the text. The last paragraph in Section 3.1 was reworded to include the licensee's commitment to protect any Bald Eagle, osprey, Great Blue heron nests in individual wildlife trees or wildlife tree retention areas. All references to wildlife tree patches (WTPs) was changed to wildlife tree retention areas (WTRAs) for consistency with the Woodlot Licence Plan and current legislation.

Based on comments received from Emma Neill, Tenures Forester, MFR, Section 3.7 was reworded to recognize that the Nanoose First Nation are a Douglas Treaty First Nation and therefore have no aboriginal interests.

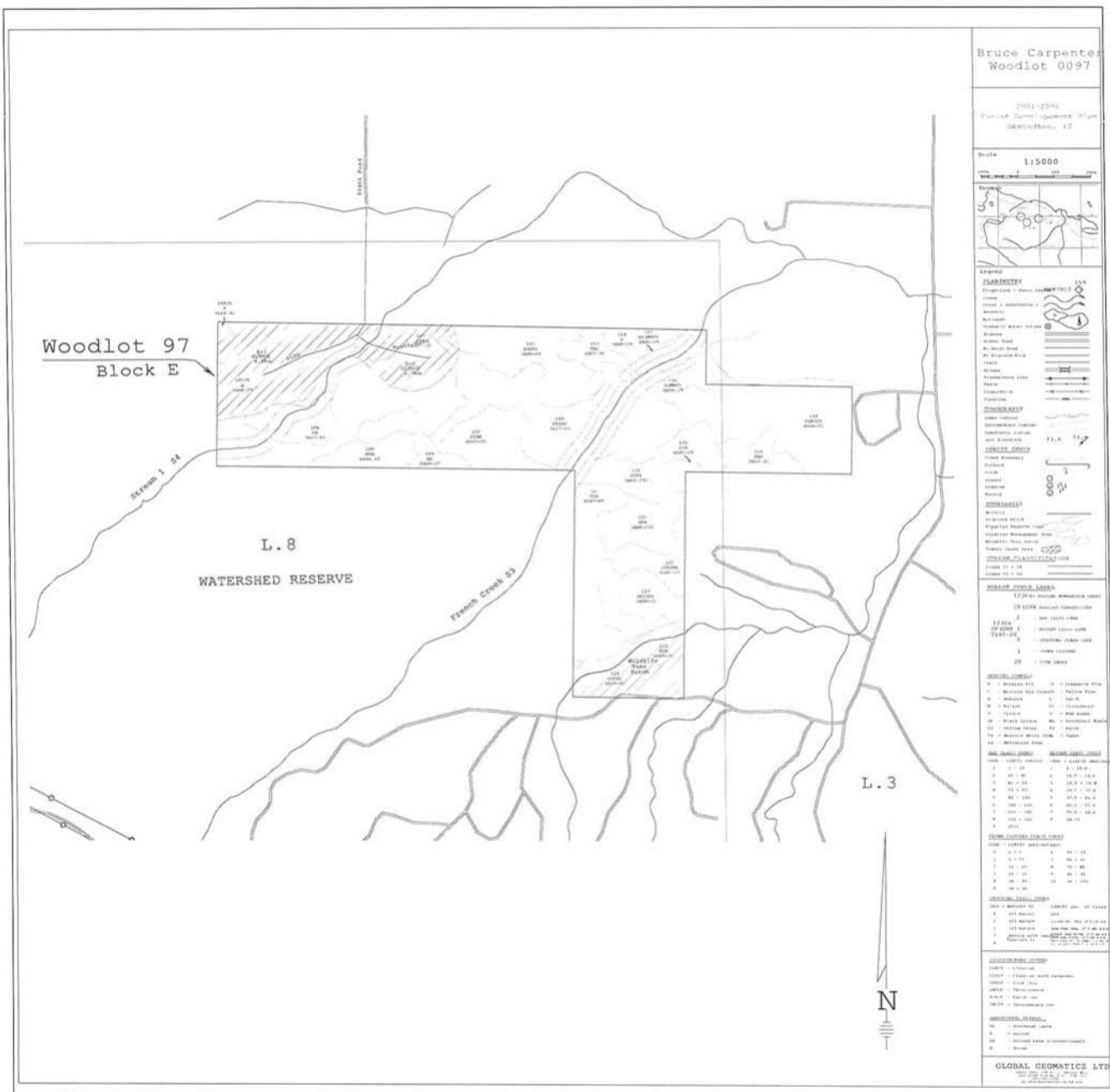
Section 5.4 was reworded to include the gazetted right-of-way into Block H, which may or may not be appropriate for road construction, as another possible access.



## 10.0 ANNUAL REPORT

By April 30 of each year, all activities carried out on the Woodlot Licence will be reported electronically (RESULTS) for the previous calendar year. The data will include information for each completed project, as well as maps for harvesting activities, free growing, and incremental silviculture projects, where forest cover changes have occurred.

**APPENDIX 1**  
**Management Plan Map**





**APPENDIX 2**  
**Sensitive Ecosystem Inventory**

39600

Copyright

92F028  
West side Blocks  
C and D

5460000

92F038  
Block A, B, H, top I

390000

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**APPENDIX 3**  
**Red and Blue Listed Plant Communities**

Scientific Name	English Name	BC Status	BGC	Ecosystem Group
<i>Abies grandis</i> / <i>Mahonia nervosa</i>	grand fir / dull Oregon-grape	Red	CDFmm/04	Forest
<i>Abies grandis</i> / <i>Tiarella trifoliata</i>	grand fir / three-leaved foamflower	Red	CDFmm/06	Forest
<i>Alnus rubra</i> / <i>Carex obnupta</i> [	red alder / slough sedge [	Red	CDFmm/14	Wetland, Forest
<i>Populus balsamifera</i> ssp.	black cottonwood ]	Blue	CDFmm/11	Forest, Wetland
<i>Alnus rubra</i> / <i>Lysichiton americanus</i>	red alder / skunk cabbage	Red	CDFmm/00;CWHxm1/00	Woodland, Forest
<i>Arbutus menziesii</i> /	arbutus / hairy manzanita	Red	CDFmm/n/a	Sparsely Vegetated, Herbaceous
<i>Arctostaphylos columbiana</i>	northern wormwood - red	Red	CDFmm/Wf53;CWHmm1/Wf53;CWHxm2/Wf53	Wetland, Herbaceous
<i>Artemisia campestris</i> - <i>Festuca rubra</i> / <i>Racomitrium canescens</i>	fescue / grey rock-moss	Blue	CDFmm/Em05	Estuarine, Herbaceous, Wetland
<i>Carex lasiocarpa</i> - <i>Rhynchospora alba</i>	slender sedge - white beak-rush	Red	CDFmm/00;CWHvh1/00;CWHwh1	Sparsely Vegetated, Herbaceous
<i>Carex lyngbyei</i> Herbaceous	Lyngbye's sedge	Blue	CWHvh2/Wm50;CWHwm/Wm50;CWHxm1/Wm50	Wetland, Herbaceous
<i>Carex macrocephala</i> Herbaceous	herbaceous vegetation	Red	CWHxm1/00	Estuarine, Herbaceous, Wetland
<i>Carex sitchensis</i> - <i>Oenanthe sarmentosa</i>	large-headed sedge	Blue	CDFmm/Ed02;CWH/Ed02	Estuarine, Herbaceous, Wetland
<i>Deschampsia cespitosa</i> - <i>Sidalcea hendersonii</i>	Sitka sedge - Pacific water-parsley	Blue	CDFmm/Ed01	Estuarine, Herbaceous, Wetland
<i>Deschampsia cespitosa</i> ssp.	tufted hairgrass -	Red	CDFmm/Wm51;CWHwk1/Wm51	Wetland, Herbaceous
<i>beringensis</i> - <i>Aster subspicatus</i>	Henderson's checker-mallow	Blue	BGxw2/Wm04;CDFmm/Wm04;ESSFdv	Wetland, Herbaceous
<i>Deschampsia cespitosa</i> ssp.	tufted hairgrass - meadow	Red	d/Wm04;ESSFdv/Wm04;IDFxm/Wm04;SB	Wetland, Herbaceous
<i>beringensis</i> - <i>Hordeum</i>	barley	Blue	Sdk/Wm04;SBsmk2/Wm04	Wetland, Herbaceous
<i>Distichlis spicata</i> var. <i>spicata</i>	seashore saltgrass	Red	CDFmm/00;CWHxm1/00	Grassland, Herbaceous
<i>Dulichium arundinaceum</i>	Herbaceous Vegetation	Red		
<i>Eleocharis palustris</i> Herbaceous	three-way sedge	Blue		
<i>Festuca idahoensis</i> ssp. <i>roemerii</i> -	common spike-rush	Red		
<i>Koeleria macrantha</i>	Roemer's fescue - junegrass	Red		

Red Blue listed Plant Communities 2008

Scientific Name	English Name	BC Status	BGC	Ecosystem Group
<i>Juncus arcticus</i> - <i>Plantago macrocarpa</i>	arctic rush - Alaska plantain	Red	CDFmm/Ed03;CWH/Ed03	Estuarine, Herbaceous, Wetland
<i>Ledum groenlandicum</i> / <i>Kalmia microphylla</i> / <i>Sphagnum</i> spp.	Labrador tea / western bog-laurel / peat-mosses	Blue	CWHvm1/Wb50;CWHxm1/Wb50;CWHxm2/Wb50	Wetland, Shrub
<i>Menyanthes trifoliata</i> - <i>Carex lasiocarpa</i>	buckbean - slender sedge	Blue	CDFmm/Wf06;CWHws1/Wf06;ICHwk1/Wf06;IDFdk2/Wf06;SBSdk/Wf06	Wetland, Herbaceous
<i>Myosurus minimus</i> - <i>Montia</i> spp. - <i>Limnanthes macounii</i>	tiny mousetail - montias - Macoun's meadow-foam	Red	CDFmm/00	Wetland, Herbaceous
<i>Myrica gale</i> / <i>Carex sitchensis</i>	sweet gale / Sitka sedge	Red	CDFmm/Wf52;CWHmm1/Wf52;CWHmm2/Wf52;CWHvh2/Wf52;CWHwm/Wf52;CWHxm1/Wf52;CWHxm2/Wf52	Wetland, Shrub, Herbaceous
<i>Picea sitchensis</i> / <i>Rubus spectabilis</i> Very Dry Maritime	Sitka spruce / salmonberry Very Dry Maritime	Red	CWHxm1/08;CWHxm2/08	Riparian, Forest
<i>Pinus contorta</i> / <i>Sphagnum</i> spp. CDFmm	lodgepole pine / peat-mosses CDFmm	Red	CDFmm/10	Forest, Wetland
<i>Pinus contorta</i> / <i>Sphagnum</i> spp. Very Dry Maritime	lodgepole pine / peat-mosses Very Dry Maritime	Blue	CWHxm1/11;CWHxm2/11	Forest, Wetland
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> - <i>Alnus rubra</i> / <i>Rubus spectabilis</i>	black cottonwood - red alder / salmonberry	Blue	CWHdm/09;CWHds1/09;CWHds2/09;CWHmm1/09;CWHms1/08;CWHms2/08;CWHvm1/10;CWHwm/06;CWHws1/08;CWHws2/08;CWHxm1/09;CWHxm2/09	Riparian, Forest
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> / <i>Salix sitchensis</i>	black cottonwood / Sitka willow	Blue	CWHdm/10;CWHxm1/10;CWHxm2/10	Riparian, Forest
<i>Populus tremuloides</i> / <i>Malus fusca</i> / <i>Carex obnupta</i>	trembling aspen / Pacific crab apple / slough sedge	Red	CDFmm/00	Wetland, Shrub
<i>Pseudotsuga menziesii</i> - <i>Arbutus menziesii</i>	Douglas-fir - arbutus	Red	CDFmm/02	Woodland, Forest
<i>Pseudotsuga menziesii</i> - <i>Pinus contorta</i> / <i>Racomitrium</i>	Douglas-fir - lodgepole pine / grey rock-moss	Red	CWHxm1/02	Woodland, Forest

Scientific Name	English Name	BC Status	BGC	Ecosystem Group
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Gaultheria shallon</i> Dry Maritime	Douglas-fir - western hemlock / salal Dry Maritime	Blue	CWHdm/03;CWHxm1/03;CWHxm2/03	Forest
<i>Pseudotsuga menziesii</i> / <i>Mahonia nervosa</i>	Douglas-fir / dull Oregon-grape	Red	CDFmm/01	Forest
<i>Pseudotsuga menziesii</i> / <i>Melica subulata</i>	Douglas-fir / Alaska oniongrass	Red	CDFmm/03	Woodland, Forest
<i>Pseudotsuga menziesii</i> / <i>Polystichum munitum</i>	Douglas-fir / sword fern	Red	CWHdm/04;CWHxm1/04;CWHxm2/04	Forest
<i>Quercus garryana</i> - <i>Arbutus</i>	Garry oak - arbutus	Red	CDFmm/00	Woodland, Forest
<i>Quercus garryana</i> / <i>Bromus carinatus</i>	Garry oak / California brome	Red	CDFmm/00	Woodland, Forest
<i>Quercus garryana</i> / <i>Holodiscus</i>	Garry oak / oceanspray	Red	CDFmm/00	Woodland, Forest
<i>Ruppia maritima</i> Herbaceous Vegetation	beaked ditch-grass	Red	CDFmm/00	Woodland, Forest
<i>Salicornia virginiana</i> - <i>Glaux maritima</i>	Herbaceous Vegetation	Red	CDFmm/Em01;CWH/Em01	Estuarine, Herbaceous, Wetland
<i>Salix sitchensis</i> - <i>Salix lucida</i> ssp. <i>lasianhra</i> / <i>Lysichiton americanus</i>	American glasswort - sea-milkwort	Red	CDFmm/Em02;CWH/Em02	Estuarine, Herbaceous, Wetland
<i>Sidalcea hendersonii</i> Tidal Marsh	Sitka willow - Pacific willow / skunk cabbage	Red	CDFmm/Ws51;CWH/Ws51;ICH/Ws51	Wetland, Shrub, Riparian
	Henderson's checker-mallow Tidal Marsh	Red	CWHxm1/00	Wetland, Estuarine, Herbaceous
<i>Thuja plicata</i> - <i>Picea sitchensis</i> / <i>Lysichiton americanus</i>	western redcedar - Sitka spruce / skunk cabbage	Blue	CWHdm/12;CWHds1/12;CWHds2/12;CWHmm1/12;CWHms1/11;CWHms2/11;CWHvh1/13;CWHvh2/13;CWHvm1/14;CWHwh1/12;CWHwh2/06;CWHws1/11;CWHxm1/12;CWHxm2/12	Wetland, Forest
<i>Thuja plicata</i> - <i>Pseudotsuga menziesii</i> / <i>Eurhynchium oregonum</i>	western redcedar - Douglas-fir / Oregon beaked-moss	Red	CDFmm/05	Forest
<i>Thuja plicata</i> / <i>Achlys triphylla</i>	western redcedar / vanilla leaf	Red	CDFmm/12	Forest
<i>Thuja plicata</i> / <i>Carex obnupta</i>	western redcedar / slough sedge	Blue	CWHdm/15;CWHxm1/15;CWHxm2/15	Wetland, Forest
<i>Thuja plicata</i> / <i>Lonicera involucrata</i>	western redcedar / black twinberry	Red	CWHdm/14;CWHxm1/14;CWHxm2/14	Forest

Scientific Name	English Name	BC Status	BGC	Ecosystem Group
<i>Thuja plicata</i> / <i>Oemleria cerasiformis</i>	western redcedar / Indian-plum	Red	CDFmm/13	Forest
<i>Thuja plicata</i> / <i>Polystichum munitum</i> Very Dry Maritime	western redcedar / sword fern Very Dry Maritime	Blue	CWHxm1/05; CWHxm2/05	Forest
<i>Thuja plicata</i> / <i>Rubus spectabilis</i>	western redcedar / salmonberry	Red	CWHdm1/13; CWHxm2/13	Forest, Riparian
<i>Thuja plicata</i> / <i>Symphoricarpos albus</i>	western redcedar / common snowberry	Red	CDFmm/07	Riparian, Forest
<i>Thuja plicata</i> / <i>Tiarella trifoliata</i> Very Dry Maritime	western redcedar / three-leaved foamflower Very Dry Maritime	Red	CWHxm1/07; CWHxm2/07	Forest
<i>Trichophorum alpinum</i> / <i>Scorpidium revolvens</i>	Hudson Bay clubmoss / rusty hook-moss	Red	CWHxm1/Wf10; SBSmc2/Wf10; SBSmk2/Wf10	Wetland, Herbaceous
<i>Tsuga heterophylla</i> - <i>Pseudotsuga menziesii</i> / <i>Eurhynchium oreganum</i>	western hemlock - Douglas-fir / Oregon beaked-moss	Red	CWHxm1/01; CWHxm2/01	Forest
<i>Tsuga heterophylla</i> - <i>Thuja plicata</i> / <i>Blechnum spicant</i>	western hemlock - western redcedar / deer fern	Red	CWHdm/06; CWHxm1/06; CWHxm2/06	Forest
<i>Typha latifolia</i> Marsh	common cattail Marsh	Blue	BGxh1/Wm05; BGxh2/Wm05; BGxw1/Wm05; CDFmm/Wm05; CWHdm/Wm05; CWHxm1/Wm05; CWHxm2/Wm05; IDFdk3/Wm05; IDFdm2/Wm05; PPxh1/Wm05	Wetland, Herbaceous

**APPENDIX 4**  
**Forest Inventory Information**



Polygon	AREA	SP 1	%	SP 2	%	SP 3	%	SP 4	%	AGE	HEIGHT	SI	CC
92F028 A1	5.2	FD	75	CW	25		0		0	1	0	28	1
92F028 E1	5.3	FD	75	CW	25		0		0	1	0	32	1
92F029 16	0.4	FD	80	CW	20		0		0	3	0	26	1
92F029 17	0.9	FD	80	CW	20		0		0	3	0	26	1
92F029 18	1.4	FD	80	CW	20		0		0	3	0	26	1
92F028 B3	1.1	FD	75	CW	25		0		0	4	0	24	1
92F028 B4	9.9	FD	88	CW	12		0		0	4	0	32	1
92F028 B1	3.4	FD	80	CW	16	PW	4		0	5	0	24	1
92F028 B2	2.7	FD	86	CW	14		0		0	5	0	24	1
92F029 20	1.1	FD	55	CW	26	PW	10	BG	9	5	0	24	1
92F029 7	1	CW	80	FD	20		0		0	11	0	24	5
92F029 2	2	NSR											
92F029 5	0.5	NSR											
92F029 8	0.7	CW	100		0		0		0	12	0	27	5
92F029 13	0.2	CW	50	PW	50		0		0	13	0	20	5
92F028 47	5.5	FD	60	DR	20	CW	10	BA	10	13	4	28	28
92F029 6	2.3	FD	80	PW	20		0		0	17	1	27	5
92F029 9	0.8	FD	70	CW	15	PW	15		0	17	1	27	5
92F028 20	8.2	CW	50	DR	40	FD	10		0	18	6	23	10
92F028 10	3.5	FD	60	DR	30	CW	10		0	18	9	32	10
92F028 49	19.8	FD	60	DR	30	CW	10		0	18	9	32	10
92F028 19	3.1	PW	90	DR	10		0		0	18	2	12	10
<b>Regeneration</b>	<b>79.0</b>												

Polygon	AREA	SP 1	%	SP 2	%	SP 3	%	SP 4	%	AGE	HEIGHT	SI	CC
92F029 11	1.6	HW	70	FD	30		0		0	54	0	26.3	70
92F029 14	0.1	HW	70	FD	30		0		0	54	0	24	70
92F038 436	1.1	HW	70	FD	30		0		0	59	20	19	60
92F038 468	2.7	HW	70	FD	30		0		0	59	21	21	70
92F029 12	0.3	FD	100		0		0		0	60	0	20	50
92F028 113	1.7	FD	50	DR	30	CW	20		0	64	39	36	70
92F028 119	1.7	FD	40	HW	30	DR	30		0	64	34	32	70
92F028 30	2.8	FD	70	PL	30		0		0	64	21	20	60
92F028 32	1	FD	50	PL	50		0		0	64	21	20	60
92F028 34	1.2	FD	80	CW	10	PL	10		0	64	24	22	50
92F038 460	1.7	FD	80	PL	20		0		0	64	21	20	60
92F028 102	4.6	FD	50	CW	30	DR	20		0	69	46	40	70
92F028 103	1.4	FD	50	DR	30	HW	20		0	69	35	31	70
92F028 104	2.3	FD	50	DR	30	HW	20		0	69	35	31	70
92F028 107	9.9	FD	50	DR	30	HW	20		0	69	35	31	70
92F028 108	1.9	FD	60	CW	20	HW	20		0	69	38	33	60
92F028 112	3.3	FD	30	CW	30	DR	20	HW	20	69	40	35	70
92F028 118	8.2	FD	50	DR	20	HW	20	CW	10	69	40	35	80
92F029 4	9.8	FD	100		0		0		0	76	0	27	50
92F028 164	1.2	PL	70	FD	30		0		0	78	29	25	60
92F028 163	25.3	FD	100		0		0		0	79	33	27	70
92F028 166	0.7	FD	100		0		0		0	79	33	27	70
92F029 10	1.4	FD	80	PL	10	DR	10		0	79	0	26	50
92F029 15	0.9	FD	90	HW	10		0		0	80	0	27	50
<b>Immature</b>	<b>86.8</b>												

Polygon	AREA	SP 1	%	SP 2	%	SP 3	%	SP 4	%	AGE	HEIGHT	SI	CC
92F028 173	17	FD	90	PL	10		0		0	81	34	28	50
92F029 3	1	CW	70	HW	30		0		0	84	0	19	50
92F028 35	7	PL	90	FD	10		0		0	84	23	19	60
92F028 38	8.2	PL	70	FD	30		0		0	84	25	21	60
92F028 26	1.4	FD	70	CW	10	HW	10	PL	10	89	21	16	60
92F028 29	2.5	FD	70	PL	30		0		0	89	25	20	70
92F028 41	4.1	FD	70	PL	30		0		0	89	27	22	70
92F028 42W	0.1	FD	70	PL	20	CW	10		0	89	27	22	60
92F028 165	3.3	PL	90	FD	10		0		0	98	28	22	60
92F028 170	0.2	PL	80	FD	20		0		0	98	30	24	70
92F029 1	5.1	FD	100		0		0		0	99	0	24	50
92F028 17	1.9	FD	90	HW	10		0		0	105	27	20	70
92F028 48	1	FD	90	HW	10		0		0	105	30	22	80
92F028 122	1.9	CW	40	FD	30	DR	20	HW	10	109	37	25	60
92F038 454	2.4	CW	40	HW	30	FD	30		0	109	16	11	40
92F028 120	0.5	FD	50	CW	30	DR	20		0	109	42	29	60
92F028 27	8.4	FD	90	CW	10		0		0	109	39	28	60
92F028 28	2.2	FD	60	CW	20	PL	20		0	109	22	16	40
92F028 3009	1.9	FD	80	CW	20		0		0	109	30	21	60
92F028 31	0.5	FD	80	CW	20		0		0	109	30	21	60
92F038 450	5.9	FD	60	CW	30	HW	10		0	109	33	24	70
92F038 456	1.6	FD	90	CW	10		0		0	109	39	28	60
92F038 457	0.3	FD	90	CW	10		0		0	109	39	28	60
92F038 459	2.1	FD	80	CW	20		0		0	109	30	21	60
92F038 461	0.6	FD	80	CW	20		0		0	109	30	21	60
92F028 25	4.4	PL	70	FD	30		0		0	109	30	23	70
92F028 3005	0.1	FD	82	CW	10	HW	8		0	113	50	35	70
92F028 3006	9.3	FD	82	CW	10	HW	8		0	113	50	35	70
92F028 3007	8.6	FD	82	CW	10	HW	8		0	113	50	35	70
92F028 39	7.2	FD	82	CW	10	HW	8		0	114	37	26	60
92F028 3004	2.1	FD	80	CW	20		0		0	114	37	26	60
92F028 40	2.5	FD	80	CW	20		0		0	114	37	26	60
92F028 43	1.7	FD	80	CW	20		0		0	114	37	26	60
92F028 24	19.7	FD	80	HW	10	CW	10		0	129	47	31	60
92F028 37W	0.4	FD	90	CW	10		0		0	129	36	24	60
92F028 44	0.3	FD	90	CW	10		0		0	129	36	24	60
92F038 455	4	FD	60	CW	30	HW	10		0	129	45	30	60
92F028 22	6.9	FD	90	CW	10		0		0	130	50	33	70
92F028 106	5	FD	80	HW	20		0		0	133	51	33	70
92F028 110	11.4	FD	70	DR	20	HW	10		0	133	51	33	70
Mature/ Overmature	164.7												

Inventory 2008

Polygon	AREA	SP 1	%	SP 2	%	SP 3	%	SP 4	%	AGE	HEIGHT	SI	CC
92F028 21	1.5	DR	70	CW	15	FD	12	HW	3	16	12	23	20
92F028 167	1.4	DR	80	FD	20		0		0	58	24	23	80
92F028 121	2.9	DR	60	FD	20	HW	20		0	60	34	33	80
92F028 126	3.7	DR	90	FD	10		0		0	60	34	33	90
92F028 105	1.3	DR	100		0		0		0	64	30	29	80
92F028 109	1.9	DR	80	FD	20		0		0	64	29	27	80
92F028 111	5	DR	80	CW	10	FD	10		0	64	30	29	80
92F028 114	1.3	DR	100		0		0		0	64	30	29	80
92F028 115	1.3	DR	60	CW	20	MB	10	FD	10	64	30	29	60
92F028 116	1.1	DR	80	MB	10	FD	10		0	64	30	29	80
92F028 123	1.9	DR	50	FD	20	CW	20	HW	10	64	32	31	80
92F028 124	2.3	DR	80	CW	10	HW	10		0	64	30	28	80
92F028 172	2.1	DR	80	FD	20		0		0	68	30	28	70
92F028 175	3.4	DR	70	FD	20	PL	10		0	68	28	26	80
92F028 50	3	DR	100		0		0		0	70	29	27	80
<b>Deciduous</b>	<b>34.1</b>												
92F028 18	2.5	Hydro RoW											
92F028 23	5.1	Pit											
92F028 161	0.7	swamp											
92F028 169	5.3	swamp											
92F038 305	0.3	swamp											
92F029 19	1	Hydro RoW											
92F028 301	0.4	swamp											
92F028 302	0.8	swamp											
92F028 303	0.1	swamp											
92F028 304	0.1	swamp											
<b>Non Forested</b>	<b>16.3</b>												

**APPENDIX 5**  
**AAC Rationale**

## **Proposed Allowable Annual Cut for Woodlot Licence W0097**

December 2008

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### **Model Information**

The program used for timber supply simulations of woodlot licences is WOODLOT 3.2 (March 29, 2007), developed by Enfor Consultants Ltd. in consultation with the Ministry of Forests, Resource Tenures and Engineering Branch. A timber supply model such as WOODLOT assists licensees in determining how a forest provides a harvest flow or supply of timber over time given the inventory data (polygons) and a specific set of forest management objectives.

The model uses mathematical techniques to simulate the growth of a woodlot forest, and harvest the woodlot over a 250 year planning horizon. Timber volumes are derived from natural and managed stand yield tables, and accounted for over time. The harvest calculation uses a series of iterations of growth and cut at an optimal harvest rate for the polygons.

Natural and unmanaged stand volumes are projected using Variable Density Yield Prediction (VDYP) tables. VDYP incorporates losses due to decay, waste and breakage. The volume adjustment factor (VAF) can be altered to more accurately reflect the inventory or cruise data for these unmanaged polygons. However, because no inventory or cruise data is available at this time, the VAF was not adjusted for any of the polygons.

Managed stand volumes, including the second and subsequent rotations, are estimated using Table Interpolation Program for Stand Yield (TIPSY). In TIPSY, Operational Adjustment Factors (OAFs) are applied to account for losses in timber volume due to unproductive areas (OAF 1) and age dependent factors such as disease, decay, waste and breakage (OAF 2). OAF 1 is set at the standard 15% and OAF 2 is set at the standard 5%.

WOODLOT creates a non-declining even flow harvest rate, calculated to be sustainable over a 250 year planning horizon. The minimum harvesting standards for each polygon were set at a minimum harvest volume of 300 m<sup>3</sup>/ha, a minimum diameter at breast height of 25 cm and a minimum rotation age of 70 years. Regeneration delay is 1 year. Oldest stands are harvested first.

### **Roads**

No roads have been excluded from the gross area of the polygons. Palmer Road, Carson Road, the majority of Tralee Road and a small portion of Marples Road lie outside the woodlot. An estimated 3.4 ha (0.9%) of the woodlot is currently identified as permanent access (gravel and dirt roads). Blocks F (private land) and G (predominantly older plantations) contain the most permanent access at 2.1% and 2.7% respectively. There is currently no permanent access in Blocks C and D. It is anticipated that existing roads will provide some of the access to future

cutblocks in all Blocks. A netdown of 7% for existing and future permanent access is incorporated into the AAC calculation, making the AAC a conservative estimate.

### **Biodiversity**

Current legislation requires 8% of the Woodlot Licence area to be protected as Wildlife Tree Patches (WTPs) to maintain biodiversity. Wildlife tree patches will be designated around wetlands, adjacent fish stream channels, in sensitive areas, and in older forest types to protect these non-timber resources as well as habitat diversity. These wildlife tree patches may also protect potential red and blue listed plant and animal communities.

Once the inventory of the woodlot is completed and better information is collected on the suitability of the current WTPs, and all streams within the expansion area are classified, additional or replacement WTPs will be designated. A Wildlife Tree strategy will be prepared during operational planning and incorporated into the Woodlot License Plan.

A netdown of 8% has been incorporated into the AAC calculation to account for biodiversity and the Wildlife Tree Retention strategy.

### **Deciduous Stands**

The previous Management Plan and AAC calculation did not exclude deciduous from the productive land base because there was little deciduous inventory in the original woodlot licence area and private land.

Approximately 3.5 ha of deciduous leading stands have been added to the woodlot licence area with the inclusion of the expansion area. During the inventory of the expansion area the merchantability of the additional deciduous stands will be assessed.

Because the individual polygons are generally small in size and it is expected that these will be harvested when the adjacent coniferous stands are harvested, the deciduous stands have been included in the AAC.

### **Proposed AAC**

An allowable annual cut of 2200 m<sup>3</sup>/year is proposed. Rotation age, minimum diameter and volume limits reflect those used in the Arrowsmith TSA. Deciduous stands have been included in the productive land base and planting of a maximum of 4.9 ha of deciduous stands is included in the AAC calculation.

Net downs for roads are conservative and are expected to be reduced within the next ten years as access to the majority of the woodlot is established. WTPs reflect current legislation. The regeneration delay reflects the licensee's current practices. Growth of new plantations reflects

W0097 proposed AAC

current legislation requiring the use of Class A seedlings with a 5% genetic worth (GW) be planted on the majority of harvested openings in the future. A 5% GW was not included in current plantations. Two NSR polygons are excluded from the AAC calculation.

A number of runs of the model were prepared, providing a range in harvest rates of 2221 m<sup>3</sup>/year for harvesting the oldest stands first, to a high of 2321 m<sup>3</sup>/year for harvesting stands closest to harvest age while still meeting the harvest parameters. Runs of the model also included excluding 5% GW in future plantations which resulted in harvest rates ranging from 2181 m<sup>3</sup>/year to 2327 m<sup>3</sup>/year..

The proposed AAC of 2200 m<sup>3</sup>/year is slightly less than that generated by the WOODLOT model because the licensee believes that some of the polygons are less than fully stocked and until a reinventory is completed for the top-up areas, an accurate VAF can not be determine for the unmanaged immature and mature stands.



**APPENDIX 6**  
**Advertisement of Management Plan**  
**for Public Review**

Woodlot Licence W0097  
Draft Management Plan #2  
Draft Woodlot Licence Plan

039-102

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PQ News  
Friday Dec. 19, 2008

**APPENDIX 7**  
**Review and Comment**

**islandswest**

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**From:** "Neill, Emma FOR:EX" <Emma.Neill@gov.bc.ca>  
**To:** "Islands West" <islandswest@shaw.ca>  
**Sent:** Friday, March 27, 2009 2:05 PM  
**Subject:** RE: W0097 MP

Hi Nancy.

I have no significant issues with the Management Plan:

May want to recognise that Nanoose First Nation has represented themselves to government as a Douglas Treaty First Nation and therefore they have treaty rights, not aboriginal interests.

In the portion that talks to access - I believe there is a gazetted access trail into Block H, so technically there is Crown access - whether it is suitable or whether it is economical to construct is another issue.

I have just sent out reminder letters to First Nations and will see if anything comes of that, I have asked them to contact me directly if they have issues - the letter says I am expecting the final plan shortly and that it will be considered by the District Manager at the end of April.

Have a good weekend.

Emma Neill  
Tenures Forester  
South Island Forest District

Phone: (250) 731-3022  
Fax: (250) 731-3010

**islandswest**

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**From:** "Telfer, Kevin ENV:EX" <Kevin.Telfer@gov.bc.ca>  
**To:** "Islands West" <islandswest@shaw.ca>  
**Sent:** Wednesday, March 11, 2009 4:24 PM  
**Attach:** ATT00011.htm  
**Subject:** RE: W0097 MP Map #2

Nancy, once again, thanks for sending me the map files.

I'm still playing catch-ups<sup>22</sup> so  
will not be able to give you comprehensive comments on W0097. However,  
as this was one of the most comprehensive woodlot management plan  
submissions I've seen to date, I'd have to say that the majority of  
points I would have raised regarding wildlife and biodiversity were  
already mentioned in sections 3.1 "Wildlife" and 3.2 "Biodiversity and  
Old Growth" in the report.

These issues are:

Wildlife

Pacific Water Shrew  
Northern Goshawk  
Marbled Murrelet  
Keens' Long-eared Myotis,  
Townsend's Big-eared bat  
Peregrine falcon  
Western Screech owl  
Vancouver Island Ermine  
Great Blue Heron & Bald Eagle (appropriate nesting tree supply)  
Bear den retention

Biodiversity and Old Growth

Several plant communities in the CDF mm and CWHxm are red listed.  
Conservation strategies should be developed, which retain old forest,  
and conserve/enhance these attributes in second growth stands.

Once again, I'd like to thank you for a comprehensive submission, which  
will be retained by MOE for information purposes.

Kevin L. Telfer C.D., R.P.F.  
Ecosystem Biologist  
BC Ministry of Environment  
2080A-Labieux Road, Nanaimo, B.C. V9T 6J9  
tel. (250) 751-3222 fax (250) 751-3208  
mailto:Kevin.Telfer@gov.bc.ca  
'http://MOE.gov.bc.ca <http://moe.gov.bc.ca/>

From: Islands West [mailto:islandswest@shaw.ca]  
Sent: Wednesday, February 11, 2009 8:54 AM  
To: Telfer, Kevin ENV:EX  
Subject: W0097 MP Map #2

Map #2 attached

----- Original Message -----

From: Telfer, Kevin ENV:EX  
<mailto:Kevin.Telfer@gov.bc.ca>  
To: Islands West <mailto:islandswest@shaw.ca>  
Cc: Neill, Emma FOR:EX <mailto:Emma.Neill@gov.bc.ca>  
Sent: Wednesday, February 11, 2009 8:25 AM  
Subject: RE: W0097 Management Plan review reminder

Thanks Nancy

There has been a problem with the MOFR woodlot website, and I've been unable to get a copy from them before the deadline. Thanks for the extension. Would you happen to have a paper copy?

Thanks  
Kevin L. Telfer C.D., R.P.F.  
Ecosystem Biologist  
BC Ministry of Environment  
2080A-Labieux Road, Nanaimo, B.C. V9T 6J9  
tel. (250) 751-3222 fax (250) 751-3208  
mailto:Kevin.Telfer@gov.bc.ca  
<http://MOE.gov.bc.ca>

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From: Islands West [mailto:islandswest@shaw.ca]  
Sent: Wednesday, February 11, 2009 7:41 AM  
To: Telfer, Kevin ENV:EX  
Subject: W0097 Management Plan review reminder

Hi Kevin,

Just a friendly reminder that the review period for the Management Plan for W0097 officially ended January 30th. However, because of holidays etc. the plan didn't get onto the South Island website until mid January. So if you could send any comments you have by the end of February, that would be fine. Thanks.

Regards,  
Nancy Pezel

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Islands West Forestry  
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