



SCHEDULE C Additional Terms

02-CoastalNRM-20

Attachment to the Agreement with _____ for Tree Planting in the Red Deer Creek Fire area.

ARTICLE 1: General Conditions

General Requirements

- 1.1 The Contractor must have effective communication equipment (e.g. radiotelephone, satellite phone, cell phone) on site, capable of communication between the planting site and Coastal NRM Representative.
- 1.2 Further to Schedule A, Section 2.13; the Contractor may be assessed a reduction in Basic Payment in the amount of ten dollars (\$10.00) for each disposable seedling container liner or seedling wrapper not properly disposed of and in the amount of twenty-five dollars (\$25.00) for each seedling container not properly disposed of.
- 1.3 Critical or important invasive species identified in the field must be reported to the Coastal NRM Representative.
- 1.4 The successful contractor will be required to confirm that they have an Infection Prevention and Control Plan in place. All contractors are expected to follow the guidance and recommendations in “Industrial Camp Workers, Contractors, and Employers Working in the Agricultural, Forestry, and Natural Resource Sectors”. The following resources are available:
 - (a) <https://www.worksafebc.com/en>
 - (b) <https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/current-health-topics/covid-19-novel-coronavirus>
- 1.5 In recognition of certain contract administration costs that the Contractor may incur in relation to COVID-19 expenses, the Province will consider up to a maximum of 10% of the tendered price be added, and same will be reflected in the maximum contract amount.

Project Supervision

The following are Key Personnel who will fill the following roles:

Role or Function	Name of Person / Phone # / eMail Address	Qualifications - Professional / Technical Designation and/or Experience
Project Supervisor		Successful management of a similarly sized and complex project. Minimum three (3) years of planting project supervision experience.
Foreperson		Minimum of one (1) years planting seasons of foreperson experience and/or two planting seasons of tree planting industry experience.
Quality Checker		Minimum of one (1) planting season of quality checking and/or one planting season of planting experience.
Pay Plot Checker		Minimum of one (1) planting seasons of pay plot checking experience.

Responsibilities of Key Personnel

The above Key Personnel must be full-time, non-planting and on site and perform the following responsibilities:

Role or Function	
Project Supervisor	<p>Overall management and administration of the Work under this Agreement, including reporting and communications with the Coastal NRM Representative.</p> <p>Operational review with all other Contractor personnel, prior to the commencement of planting the Treatment Units within each Work Area.</p>

Foreperson	Conduct a minimum of two quality plots on each tree planter daily; provide a copy of the completed plot cards to the Coastal NRM Representative upon request; and, manage any substandard tree storage, tree handling, and planting quality issues.
Quality Checker	Perform and record a minimum of two quality plots on each tree planter daily; provide a copy of these plot cards to the Coastal NRM Representative upon request; and, manage any substandard planting quality issues.
Pay Plot Checker	Conduct the planting quality inspection plots (pay plots) for each Treatment Unit, as well as collect all additional information required to meet Regeneration Delay and update forest cover as outlined under section 4.12 (b) of this Schedule.

- 1.6 The Contractor must provide a minimum of one member of the Association of BC Forest Professionals (Registered Professional Forester or Registered Forest Technologist) to be on site and supervise the quality and, payplot data collection. The member must also sign/seal each Payment Certificate to certify that all Work has been completed to acceptable standards.

Helicopter Use

- 1.7 The cost and organization of transporting seedlings, planters, boxes and garbage to and from the Work Area by helicopter will be the responsibility of the Contractor.

Access

- 1.8 The Coastal NRM will only be addressing any substantial access changes that may arise. *(substantial access changes include circumstances such as bridge removals and road washouts that did not exist prior to the contract tender closing date or were not indicated on the tender maps).*
- 1.9 Crossings of any stream course with any vehicle must be managed in order to minimize disturbance to stream banks and water quality. All crossing materials are to be removed prior to leaving the block. The stream crossing must be left in the same or better condition than it was prior to block entry.

Wildfire Danger Tree Assessments

- 1.10 Danger trees must be assessed prior to planting each unit. Assessments must be carried out as per the approved Wildlife Danger Tree assessment procedures by a certified assessor and submitted to the Coastal NRM Representative. Trees assessed as dangerous must **be felled by a certified faller or have a safe work zone established** prior to planting

Work Progress Plan

- 1.11 The Contractor will provide the Coastal NRM Representative with a Work Progress Plan, which must be approved by the Coastal NRM Representative **one (1) month** prior to the commencement of work. Further to Section 6.02 of the Agreement, the Work Progress Plan must also include:
- (a) estimates of production per week including the number of planters, crews, and camps;
 - (b) the names of Key Personnel that will be conducting works as specified in this Schedule and documentation of experience and references upon request;
 - (c) project commencement date and estimated project completion date;
 - (d) the initial sequence of blocks to be planted; and
 - (e) a schedule of nursery/cold storage seedling lift/thaw and pick up dates.
- 1.12 The Contractor will modify the Work Progress Plan as required and update the Coastal NRM Representative weekly on the progress of the project and resultant changes. Changes may be subject to the approval of the Coastal NRM Representative.
- 1.13 All trees planted must be reconciled with cold storage and/or nursery records of seedlings delivered, and a report submitted to the Coastal NRM Representative within two (2) weeks of project completion.
- 1.14 All trees must be planted no later than July 1, for Spring Planting. **Coastal NRM may reduce the Basic Payment by an amount of two thousand dollars (\$2,000.00) per day for each day that planting exceeds this date.**

Contractor Reporting

- 1.15 The Contractor must track all seedling movements from the nursery, as well as moving seedlings to and between Treatment Units, and ensure that planting locations of all stock are accurately mapped and reported. The Contractor must submit to the Coastal NRM Representative the final planting information within ten (10) days of completing all Planting within a Payment Area in the following format:
- (a) **Digital data in a format suitable for upload into Plant Wizard.** The following information must be provided by Treatment Unit :

- i. The area of the Treatment Unit;
 - ii. The total number of seedlings planted by species, request key, seedlot and stock type;
 - iii. The planting start and completion dates.
- (b) A **Seedlot Map** showing the following information by Treatment Unit:
- i. The area of the Treatment Unit;
 - ii. The location of seedlots planted;
 - iii. The total number of seedlings planted by species, seedlot, request key, and stock type;
 - iv. The planting start and completion dates;
 - v. The location and quantity of seedlings that have suffered from a Risk Event and a description of the type of Risk Event; *Risk Event means any event or site condition that places the planted trees at risk of mortality*
- 1.16 The Contractor must, on any Payment Area not completed due to a shortage of trees, ribbon the unplanted area with prominent flagging tape and its location mapped on the Seedlot Map. The Contractor shall organize planting so as to leave a single condensed and contiguous unplanted area. The unplanted area shall be left at the front (entry) end of the Payment Area.
- 1.17 If the Contractor has not fulfilled the reporting obligations in Section 1.14 within 10 days, the Coastal NRM may reduce the Basic Payment by one hundred dollars (\$100.00) for every 24 hour period the information is late.

ARTICLE 2: Seedlings

Delivery of Seedlings

- 2.1 The Contractor must provide the cold storage facility/nursery at least 10 working days' notice of their pick-up schedule.
- 2.2 Reefer units will be supplied by the Contractor
- 2.3 The Contractor is responsible for scheduling all seedling pickups through the Coastal NRM Representative (10 days prior), from the designated storage facilities, and transporting them in a manner consistent with seedling transportation guidelines to be approved by the Coastal NRM Representative.
- 2.4 Summer trees will be the Contractor's responsibility to make arrangements for the delivery of seedlings from a nursery to Payment Areas. The Coastal NRM will reimburse the Contractor for the costs to ship seedlings from a non-local nursery to Fort St. John. The Coastal NRM Representative must approve the transportation rate prior to shipping. Invoices are to be submitted from the Contractor, clearly indicating the distance, rate, and

total cost. The exception for reimbursement is for local nurseries. Summer seedlings could be located at various nurseries throughout BC and Alberta.

Responsibility for Seedlings

- 2.5 Upon pick up of the seedlings from the nursery or cold storage facility location, the Contractor shall sign a receipt acknowledging the number of seedlings received and their condition. The Contractor must provide the Coastal NRM Representative with these receipts upon request.
- 2.6 A reefer unit is required for storing seedlings during this contract. The Contractor will be responsible for any reefer rental costs including any expenses associated with maintaining the reefer unit. In addition any reefer on site must be padlocked to prevent theft.

Summer Stock Handling - Use of Reefers

- 2.7 Transportation of summer plant seedlings in semi-trailers must be done in reefer equipped units to dissipate heat generated from active stock. Reefer units are to be set to operate at 8°C.
- 2.8 Seedlings can be stored in a reefer for up to 5 days, commencing from when the boxes were closed at the nursery.
- 2.9 If 5 days pass or the seedling bundle temperature inside the seedling box cannot be kept below 10°C, then the reefer must be unloaded and field cached as stated below in suitable field caches. Failure to conform will result in a fine of up to \$1000/day plus the invested cost of the seedlings if damage to the seedlings is a result of excessive temperatures and blackout periods.

Summer Stock Handling - Suitable Field Caches

- 2.10 A shade tent or a tarp/shade cloth is suspended 60 cm or more above the seedling boxes to provide an effective shade cover.
- 2.11 The Contractor will open the seedling boxes and place the seedling bundles in an upright position if they were packaged lying down. Seedling boxes will be not be stacked.
- 2.12 Seedling boxes will be separated in a manner that permits air circulation around each box.
- 2.13 Inside box temperature must not exceed 10°C.

- 2.14 Seedling boxes shall not be stored in field caches for more than seven days total (from leaving the nursery) without prior written approval of the Coastal NRM Representative. For trees held in the field cache longer than seven days and without prior written approval of the Coastal NRM Representative will result in a \$100/box/day fine.
- 2.15 If these provisions cannot be met at the on-site storage locations, then the Contractor shall, on a daily basis, transport each day's seedling supply from a storage facility or area where the aforementioned provisions can be met.
- 2.16 The Contractor will assess and record twice a day the seedling bundle temperature inside the seedling box and plug moisture levels for seedlings stored in reefers or field caches. These records must be kept with the stored seedlings at all times.

ARTICLE 3: Planting

Unburnt Piles or Decked Wood

- 3.1 For blocks that have unburnt piles and/or decked wood remaining, planting shall not be completed any closer than a minimum of 1 metre from the piles/decked wood and no planting is to occur between the piles/decked wood and the road, unless directed by the Coastal NRM Representative.

Minimum Acceptable Density

- 3.2 Minimum acceptable density is specified in the Schedule B and the resulting planting density will be based on payment plot results.
- 3.3 The Contractor will have the opportunity to increase the planted density on those planting units that do not meet the minimum acceptable density if there are sufficient seedlings available.
- 3.4 Where planting spots are available and the Contractor has failed to maintain the minimum density specified, the Coastal NRM shall reduce the Basic Payment by pro-rating the actual density against the minimum required density. That is:

Planted density divided by the specified minimum density multiplied by the payment to equal a pro-rated payment.

Example: Planted density is 1300 and minimum density is 1330

Payment = $1300/1330 \times \text{Basic Payment}$ (or 97.8% of Basic Payment)

- 3.5 Where density fines are calculated on top of quality deductions, the Coastal NRM shall reduce the Basic Payment using the following formula:

Density payment (%) multiplied by the quality payment (%) to equal the final prorated payment (%)

Example: 97.8% (density payment) X 97% (quality payment) X block rate

Payment = 97.8% X 97 X Basic Payment (or 94.9% of Basic Payment)

These calculations are exclusive of any excess wastage or other fines.

Obstacle Planting

- 3.6 When specified by the Coastal NRM Representative, plant all seedlings within 10 cm of debris, stumps, logs and rocks. If debris is elevated, ensure that the seedling has sufficient clearance to prevent wind caused damage to the leader. If none of these obstacles exist then plant on any microsite that is at least 10 cm above the surroundings area. No seedlings are to be planted on existing trails or potential pathways. Minimum inter tree distance for obstacle planting is 1m.

Treatment Unit Layout

- 3.7 The **Coastal NRM representative** is responsible for the layout of Treatment Units.

Screening

- 3.8 Planting spots shall be prepared by screening loose litter, slash, and minor vegetation in an area large enough that no loose litter or slash will fall onto the planted seedling.

ARTICLE 4: Planting Inspection Specifications

Planting Payment Plot Inspections and Regeneration Delay Milestone

- 4.1 The Contractor shall commence within 72 hours of completing all work within a Payment Area the establishment of planting quality inspection plots (pay plots), along with the collection of other information outlined under section 4.12(b) of this Schedule required to meet regeneration delay as per the standards defined in the Coastal NRM of Forests' Planting Quality Inspection System (located online at <http://www.for.gov.bc.ca/isb/forms/lib/FS704A.PDF>), and this Schedule. The Contractor hereby acknowledges to have read and understood these documents.
- 4.2 Planting quality inspection plots will be used for the regeneration delay milestone declaration. At a minimum, the information under section 4.12(b) of this Schedule will be submitted in support of this declaration. This information will be submitted in a format approved by the Coastal NRM Representative prior to contract start up.
- 4.3 Planting quality data will be compiled and summarized by Payment Area. (Treatment Unit level). Regeneration Delay information will be compiled and summarized at the Standard Unit level. No additional stratification of the Standard Unit is required. Any formal stratification that would normally be done during a silviculture survey must be noted in the final report (i.e. change in leading species).

Plot Establishment and Field Marking

- 4.4 The following is the plot intensity required to complete the work for planting quality inspection plots:
- Target 1 plot per hectare with a minimum of 5 plots per Standard Unit up to 40 hectares. For Standard Units greater than 40 hectares reduce the intensity as per the following:
 - 40-80 hectares: 1 plot/2hectares
 - 80+ hectares: 1 plot/3 hectares
- 4.5 The Contractor shall establish all plots on a predetermined grid or vector sampling system. Plots must be established in a manner that will ensure complete and uniform coverage of all Treatment Units/Standards Units identified.
- 4.6 For fill plant areas, the Contractor will ensure that silviculture and inventory labels are representative of the ages and species throughout the Payment Area, taking into account natural and previously planted trees, as well as new planted trees.

- 4.7 Plots landing entirely on roads, landings, or naturally non-productive sites shall be moved at 10 metre increments until a productive plot is encountered.
- 4.8 The following formula can be used to determine the distance between plots in the field when reducing the intensity after 40 hectares: (# of hectares X 10,000/# of plots, then take the square root).

$$\sqrt{\# \text{ hectares} * 10,000 / \# \text{ of plots}}$$

Example: $\sqrt{84.3 \text{ hectares} * 10,000 / 28 \text{ plots}} = 173.5 \text{ m plot spacing}$

Plots are to be 1/200 hectare circular plots with a plot radius of 3.99m.

- 4.9 The Contractor will ensure that the inspection lines have a prominent point of commencement (P.O.C.) close to a road or trail and marked clearly with double flagging of different colours. The flagging must have the date, and distance and azimuth to first plot marked on it with waterproof marker.
- 4.10 All plots must be marked in two places with flagging:
- At a height of approximately 1.3 m above each plot centre - the Contractor shall write the plot number and strip line (if applicable), surveyors initials, date of survey, bearing and distance to next plot, in waterproof ink.
 - At the exact location of the plot centres on the ground.
- 4.11 At the Contractor's discretion, GPS may be used to locate plot centres. If the Contractor chooses to use GPS to locate the plot centres, a list of plot coordinates must accompany the map submission.

Contractor's Request for Inspection

- 4.12 Upon completion of the planting quality inspection plots, the Contractor shall request, no greater than 72 hours upon completion of this work, that the Coastal NRM Representative inspect and determine the acceptability of the work. The request must be in writing and include the following:
- A planting **Payment Certificate** for each Planting Unit, including:
 - GPS coordinate marking plot locations (if applicable);
 - The number of plantable spots;
 - The number of seedlings planted;
 - Excess trees and percentage;
 - The number of seedlings satisfactorily planted;
 - The number of planting faults with a coded reason for each;

- The quality percentage;
 - Planted species composition;
 - Planting confidence interval;
 - Any applicable payment reductions;
 - The signature and seal of a Qualified Registered Professional.
- (b) **Additional information in support of regen delay milestone**
- Tally of tree species (include natural, advanced and deciduous regeneration) total and percentage by tree species;
 - Tally of well-spaced tree species (only preferred and acceptable species to M value) total and percentage by tree species;
 - Average ages of the two leading species (dominant and co-dominant);
 - Average age of the well-spaced trees;
 - Average height of the two leading species (dominant and co-dominant);
 - Average height of the well-spaced trees;
 - Crown closure of commercial tree species;
 - Site index of leading species;
 - Using the above information prepare Silviculture and Inventory labels in the following formats.

The sample inventory label below describes a stratum with the following characteristics:

Pli40Sx30At20Bl10 – 5/3 – 0.6/0.4 – 18/E – 3 - 3440(14)

- Species composition of the total trees is lodgepole pine 40 percent, spruce 30 percent, aspen 20 percent and subalpine fir 10 percent.
- Average age of dominant and co-dominant lodgepole pine is 5 years and the spruce is 3 years.
- Average height of dominant and co-dominants lodgepole pine is 0.6 meters and the spruce is 0.4m
- Site index of the leading species, lodgepole pine, is 18 meters at 50 years
- Site index E is SIBEC
- Crown closure of all the commercial tree species is 3 percent
- Total trees per hectare is 3,440
- Year of the survey is 2014

The sample silviculture label below describes a stratum with the following characteristics:

SR-Pli66Sx32Bl2 - 1 - 0.3 - 21/E - 1120(14)

- A prefix of NSR, SR, or FG identifies the stocking status of the stratum. NSR and SR represents well spaced trees and FG represents free growing trees.
 - Species composition of the well spaced trees is lodgepole pine 66 percent, spruce 32 percent and subalpine fir 2 percent
 - Average age of all species of well spaced trees is 1 years
 - Average height of all species of well spaced tree is 0.3 meters
 - Site index of the leading species, lodgepole pine, is 21 meters at 50 years
 - Site index, E is SIBEC
 - Well spaced trees per hectare is 1,120(based on the m value of the target stocking status from the Site Plan)
 - year of survey is 2014
- (c) A legible field map that includes the following information:
- Location of P.O.C., striplines and plots;
 - Treatment Unit and Standards Unit boundaries;
 - The location of unplanted, low density and/or low quality areas.
- (d) Information from the plots in a format that can be used to review the planting quality inspection by Treatment Unit.

4.13 The Contractor will accurately delineate and GPS traverse the following:

- (a) Unplanted areas;
- (b) Low density/low quality areas.

Final Project Report

4.14 At the completion of the project under this Agreement and within 10 Work Days after planting has been completed on the last Payment Area, the Contractor must submit to the Coastal NRM Representative, all reports in either hardcopy and/or electronic format. In addition submit the following information if requested:

- (a) Daily contract notes
- (b) The final Plant Wizard allocation
- (c) Planting stocking shipping order forms
- (d) Daily production summary
- (e) EMS Documentation

- (f) Information to update the Schedule B

NOTE: ADDITIONAL REGEN DELAY INFORMATION REQUIRED UNDER SECTION 4.12(b) IN THIS SCHEDULE IS NOT REQUIRED IN A DIGITAL FORMAT FOR UPLOAD INTO CENGEA.

SAMPLE