Forests for Tomorrow
Aerial Forest Fertilization Prescription

ADMINISTRATION/AREA DESCRIPTION			
Resource District	**TSA/TFL/Licensee**	**Location**	**Field Work Completed by and date**
Chilliwack	Fraser TSA	Big Silver	Jeff McWilliams RPF, Louis Orieux RPF Heli Feb 3 2020
Mapsheet	**RESULTS Opening ID**	**Treatment Unit/Block**	**Project Number/Plan name**
92H.061	1661521	BigSilver13	CS19LMN004 (20)
Gross Opening(s) Area (ha)		**No Treatment Area (ha)**	**Net Treatment Area (ha)**
35.7		0.0	35.7
Stand Tending History		**Aspect**	**Topography**
N/A		S/SE	Even to gently rolling
Latitude:	49°38'34.5"N	**Longitude:**	121°53'32.0"W
Elevation (min):	620m	**Elevation (max):**	880m

*The net treatment area accounts for areas removed for NP (natural), permanent access structures, riparian reserve zones, and areas identified as not suitable for treatment. Area estimates are based on digitized (non-traversed) treatment boundaries.

STAND DESCRIPTION[1]				
Dom/Co-Dom trees of target species expected to respond to fertilization (sph)	**Live Crown % (of crop trees)**	**Crown Closure %**		**Age (yrs)**
Fd600	50	60-80		50
Estimate Species Composition/Inventory Component (based on volume or basal area)	**Estimated Height (top height of leading species)**	**Total Estimated (sph)**	**Estimated SI[2] (Fd)**	**Ht to Diam (DBH) Ratio**
Fd70-80Hw20-30(Cw)	29	800-1000	32	0.6 - 0.8

ECOSYSTEM INFORMATION[1]						
Polygon	**Net Area(ha)**	**Zone Subzone Variant**	**Site Series**	**Edatope Moisture/Nutrients**	**Slope Position**	**Slope Avg. % & Range**
A	35.7	CWHds1(ms1)	01(03)	(2)3-4/B-C	Mid-slope	55

[1] Stand and ecological descriptions and stand tending history estimates are based on VRI, RESULTS information, aerial photo review and helicopter and/or field recce assessments.
[2] Based on "Site Index Estimates Derived from RESULTS or field measurements and Site Index Curves or Growth Intercept data.

TREATMENT DETAILS

Foliar Analysis: (reference any foliar analysis work)
N/A
Re-Treatment: (indicate if area has been previously treated; number of times; years since last treatment and fertilizer used)
No previous fertilization

Polygon	Net Treatment Area(ha)	Type of Fertilizer	Prescribed Application Rate	Season/ Timing	Fertilizer Amount (kg)
A	35.7	Urea	435 kg/ha	Fall or spring. Repeated every 7-10 years, up to 10 years prior to harvest.	15,530
Total Area:	35.7	Urea	435 kg/ha	**Total kg:**	15,530

RISK ASSESSMENT: FOREST HEALTH, WILDFIRE
Forest Health RR < 5%
Wildfire (e.g. risk ranking) Low
Private Property There are no private properties directly adjacent to the treatment area.

MANAGEMENT OBJECTIVES/IRM VALUES
Treatment Objective(s) and Future Regime:
The treatment objective is to increase the diameter and height growth of dominant and co-dominant Douglas-fir and western red cedar crop trees resulting in an increased merchantable volume per hectare. The benefit of treatment is that either the same volume (as with no treatment) can be harvested at an earlier age, or more volume will be available at the originally planned harvest age.
Research Installations or Permanent Sample Plots:
The treatment area does not conflict with any known research installations or permanent sample plots.
Visuals:
The treatment area has established visual quality objectives of Modification.
Cultural Heritage:
A First Nations referral will be completed prior to each treatment.
Recreation:
The treatment area is not directly adjacent to identified recreation sites, reserves, parks or other ecological reserves.
Wildlife/Biodiversity/Species at Risk:
The treatment area is 100 m SE of an Ungulate Winter Range No-Harvest Zone.
Range:
The treatment area is not within established range tenure.
Other Resources or Tenure/Issues: (e.g. Karst; Trappers; hydro rights-of-way; weather stations)
The treatment area is directly N of a hydro powerline. The treatment area is within identified trapline TR0210T014. Fertilization is not expected to have significant detrimental effects on wildlife in the area.
Water Bodies/Fish/Water Quality:
Management Objectives: 1. To maintain the water quality of streams flowing in and adjacent to this unit

Riparian Classes	Location/Measures Prescribed/ Buffers/ Comments
Streams (NCD, S6)	Streams identified in the vicinity of the treatment area during field reconnaissance have been excluded from treatment. Streams found to be visible from the air during the pre-treatment aerial recce will be protected by establishing 10-20 m no treatment zones. Streams not visible from the air will be treated over. Fertilizer loading zones will not be located within Riparian Management Zones.
Wetlands W1-W5	N/A
Lakes L1-L5	N/A
Non-classifiable wetland (NCW; NCL; NCD)	N/A
Residential Water Intakes	N/A
Watersheds &Water Quality Sampling (if in community watershed)	
The treatment area is not within a community watershed.	

LOGISTICS AND SAFETY	
General Access:	
Distance from Nearest Town (Chilliwack)	Approximately 80 km from Chilliwack. Get on Hwy/BC-1 E for 16 km and take exit 135 for BC-9 toward Agassiz/Harrison/Hot spring road. Continue for 9 km and turn right onto Agassiz-Rosedale Hwy/Evergreen Dr/BC-9 N. Continue for 2 km and turn right onto Agassiz-Rosedale Hwy/Hot Springs Rd/BC-9 N and proceed 6.5 km. Turn left on to Lillooet Rd and stay on the road for 8.5 km. Turn left onto Harrison East Forest Service Rd and continue for ~34.5km. Turn left on to Big Silver FSR. Travel uphill into the treatment area.
Access Condition	4x4
Access Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Potential Staging Areas	EH15 - 121°50'36.9"W 49°37'6.8"N
Staging Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Comments: There is a hydro powerline on the south edge of the treatment unit. The helicopter pilot should take caution flying in this area.	
Safety: (Distance to hospital and contact information; radio frequencies for access; any safety specific protocols; snags)	
Approximately 80km to Chilliwack General Hospital. 45600 Menholm Rd, Chilliwack, BC V2P 1P7 (604) 795-4141	

STORAGE/HANDLING OF FERTILIZER
Storage/Transport: (e.g. type of fertilizer; any regulations as far as transport; conditions of storage)
Forest-grade fertilizers are not regulated for rail or road transportation. Because of water solubility, blended fertilizer must be stored in dry containers and protected from moisture. Storage areas must be secure to prevent cattle or wildlife from eating fertilizer – small doses of the urea component of blended fertilizers are lethal to cattle and ungulates.
Accidental Spills: (e.g. ground, water)
To be handled consistent with the applicator's spill and safety protocols.

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FOREST FERTILIZATION PRESCRIPTION CERTIFICATION	
Attachments: 1:5,000 Aerial Fertilization Prescription Map **Plan Prepared By: Alex Ainsworth, FIT** **Date:** March 11, 2020	**RPF's Signature and Seal** **RPF Name: Louis Orieux, RPF** **Date Signed**: March 27, 2020 B.A. Blackwell & Associates Ltd.