

Forest Carbon Initiative

Aerial Forest Fertilization Prescription

***Polygon B submitted under 2019-2020 Rx project; Polygons A and C to be submitted under 2020-2021 Rx project.**

ADMINISTRATION/AREA DESCRIPTION			
Resource District	TSA/TFL/Licensee	Location	Field Work Completed by and date
Chilliwack	Fraser TSA / W0043	Lower Chehalis	Jeff McWilliams, RPF Louis Orioux, RPF Heli Feb 3 2020
Mapsheet	RESULTS Opening ID	Treatment Unit/Block	Project Number/Plan name
92H.021/031	1234834	LoCh7	FC0000427 (19-20)
Gross Opening(s) Area (ha)		No Treatment Area (ha)	Net Treatment Area (ha)
65.2		0.0	65.2
Stand Tending History		Aspect	Topography
Juvenile Spaced		E (variable)	Even to gently rolling
Latitude:	49°18'23.2"N	Longitude:	121°57'42.9"W
Elevation (min):	180m	Elevation (max):	380m

*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)
Fd800-1000(Cw)	80-90	A: 40-50 B, C: 25		20
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
A: Fd55 Hw25 Cw20 B, C: Fd50 Cw25 Hw25	A: 11-11.5 B, C: 9-11	1800-2000	A: 34-36 B, C: 30-32	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	27.2	CWHvm1/dm	01	3-4/B-C	Mid-slope	50
B	24.2	CWHdm	01(03)	(2)3-4/B-C	Mid-slope	20
C	13.8	CWHdm	01(03)	(2)3-4/B-C	Mid-slope	20

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.

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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	27.2	Urea	435 kg/ha	Fall or spring. Repeated every 7-10 years, up to 10 years prior to harvest.	11,832
B	24.2	Urea	435 kg/ha	Fall or spring. Repeated every 7-10 years, up to 10 years prior to harvest.	10,527
C	13.8	Urea	435 kg/ha	Fall or spring. Repeated every 7-10 years, up to 10 years prior to harvest.	6,003
Total Area:	65.2	Urea	435 kg/ha	Total kg:	28,362

RISK ASSESSMENT: FOREST HEALTH, WILDFIRE
Forest Health RR < 5%
Wildfire (e.g. risk ranking) High
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 redcedar crop trees resulting in an increased total volume of wood per hectare. The primary benefit of the treatment is increased sequestration of CO2 over at least a ten-year period. A secondary benefit is an increased merchantable volume at harvest.
Research Installations or Permanent Sample Plots: The treatment area does not conflict with any research installations or permanent sample plots.
Visuals: The treatment area is partially within an established visual quality objective of Partial Retention.
Cultural Heritage: A First Nations referral will be completed prior to each treatment.
Recreation: Polygon C is directly adjacent to the Chehalis River Recreation Site. Polygon B is approximately 175 m W of the Recreation Site.
Wildlife/Biodiversity/Species at Risk: Polygons A and B are directly adjacent to legal OGMAs.
Range: The treatment area is not within an established range tenure.

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Other Resources or Tenure/Issues: (e.g. Karst; Trappers; hydro rights-of-way; weather stations)	
Polygons B and C are partially within Woodlot License W0043.	
Polygons A and B are within identified Trapline TR0209T004. Fertilization is not expected to have significant detrimental effects on wildlife in the area.	
Hydro RoW (high tension overhead powerlines) run E-W between polygons A and B.	
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, S3, 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)	Polygons B and C are approximately 50 m away from a non-classifiable lake.
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 50 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 left on to BC-7 W and proceed for 15 km. Turn right on to Chehalis Forest Service Rd and proceed ~7.2km to 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	32 – 121°57'9.1"W 49°19'4.8"N
Staging Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Comments: High tension overhead powerlines run E-W between polygons A and B.	
Safety: (Distance to hospital and contact information; radio frequencies for access; any safety specific protocols; snags)	
Approximately 50km to Chilliwack General Hospital. 45600 Menholm Rd, Chilliwack, BC V2P 1P7 (604) 795-4141	

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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.	

FOREST FERTILIZATION PRESCRIPTION CERTIFICATION	
<p>Attachments: 1:15,000 Aerial Fertilization Prescription Map</p> <p>Plan Prepared By: Alex Ainsworth, FIT</p> <p>Date: June 12, 2020</p>	<p>RPF's Signature and Seal</p> <div style="text-align: center;">  </div> <p>RPF Name: Louis Orioux, RPF</p> <p>Date Signed: June 12, 2020</p> <div style="text-align: right;">  <p>B.A. Blackwell & Associates Ltd.</p> </div>