

FES Forest Carbon Initiative

Aerial Forest Fertilization Prescription

ADMINISTRATION/AREA DESCRIPTION			
Resource District	TSA/TFL/Licensee	Location	Field Work Completed by and date
Chilliwack	Fraser TSA	Clear Creek	Jeff McWilliams, RPF Louis Orioux, FIT (Heli) Nov/Dec 2018
Mapsheet	RESULTS Opening ID	Treatment Unit/Block	Project Number/Plan name
92H.062	1661521	ClearCrkFCI1	FC0000427
Gross Opening(s) Area (ha)		No Treatment Area (ha)	*Net Treatment Area (ha)
99.6		0.0	99.6
Stand Tending History ¹		Aspect	Topography
N/A		S	Even to gently rolling
Latitude:	49°41'4"N	Longitude:	121°45'44"W
Elevation (min):	500	Elevation (max):	880

*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				
Dominant /Co-Dominant trees of target species expected to respond to fertilization (sph)	Live Crown % (of crop trees)	Crown Closure		Age
Fd500 Cw50	50-60	50-60		40
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
Fd60Hw35Cw5	22	800-1000	30	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	43.4	CWHms1(ds1)	01	3-4/B-C	Middle Slope	50 (40-60)
B	9.8	CWHms1(ds1)	01	3-4/B-C	Middle Slope	50 (40-60)
C	9.4	CWHms1(ds1)	01	3-4/B-C	Middle Slope	50 (40-60)
D	37.0	CWHms1(ds1)	01	3-4/B-C	Middle Slope	50 (40-60)

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) N/A					
Polygon	Net Treatment Area(ha)	Type of Fertilizer	Prescribed Application Rate	Season/ Timing	Fertilizer Amount (kg)
A	43.4	Urea	435 kg/ha	Spring or Fall Repeated every 10 years, up to 10 years prior to harvest	18,879
B	9.8	Urea	435 kg/ha	Spring or Fall Repeated every 10 years, up to 10 years prior to harvest	4,263
C	9.4	Urea	435 kg/ha	Spring or Fall Repeated every 10 years, up to 10 years prior to harvest	4,089
D	37.0	Urea	435 kg/ha	Spring or Fall Repeated every 10 years, up to 10 years prior to harvest	16,095
Total Area:	99.6	Urea	435 kg/ha	Total kg:	43,326
RISK ASSESSMENT: FOREST HEALTH, WILDFIRE					
Forest Health N/A					
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 & Western redcedar crop trees resulting in an increased total volume of wood and carbon per hectare. The benefit of the treatment is increased sequestration of CO ₂ over at least a ten-year period.					
Research Installations or Permanent Sample Plots: The treatment area does not conflict with any research installations or permanent sample plots.					
Visuals: The treatment area does not fall within an established visual quality objective polygon.					
Cultural Heritage: A First Nations referral will be completed prior to each treatment.					
Recreation: The treatment unit is not adjacent to any recreational polygons					
Wildlife/Biodiversity/Species at Risk:					

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The treatment area is within an established spotted owl WHA – No Harvest Zone. The treatment area overlaps established mountain goat UWR- No Harvest zone, and is adjacent to multiple legal OGMA's.
Range:
The treatment area is not within an established range tenure.
Other Resources or Tenure/Issues: (e.g. Karst; Trappers; hydro rights-of-way; weather stations)
The treatment area is within Trapline TR0210T020. 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	No streams were identified within the treatment area during field reconnaissance. Clear creek runs adjacent to the treatment area. 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 (Hope)	Approx. 94.0 km to the staging area from Hope. Follow BC-7 W and Agassiz-Rosedale Hwy/Hot Springs Rd/BC-9 to Lillooet Rd in Harrison Hot Springs (40.6 km). Lillooet Rd turns slightly left and becomes Rockwell Dr. Follow for 5.2 km and slight right onto Hick's Lake Rd/Rockwell Dr. Continue for 1.2 km and slight left onto Harrison East FSR and continue for 38.0 km. Turn right onto Clear Creek FSR and follow for 9.0 km to the treatment area.
Access Condition	2x4
Access Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Potential Staging Areas	Staging Clear1 – 121°44'43"W, 49°41'0"N
Staging Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Comments:	
Safety: (Distance to hospital and contact information; radio frequencies for access; any safety specific protocols; snags)	

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94 km to Fraser Canyon Hospital
1275 7 Ave, Hope, BC V0X 1L4
(604) 869-5656

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, fertilizer must be stored in dry containers and protected from moisture. Storage areas must be secure to prevent wildlife from eating fertilizer – small doses of urea are lethal to ungulates.

Accidental Spills: (e.g. ground, water)

To be handled consistent with the applicator's spill and safety protocols.

FOREST FERTILIZATION PRESCRIPTION CERTIFICATION

Attachments:

1:10,000 Aerial Fertilization Prescription Map

Plan Prepared By: Rodrigo Reimann Baston, FIT

Date Prepared: February 15, 2019

RPF's Signature and Seal



The image shows a handwritten signature in blue ink that reads "Jeff McWilliams". The signature is written over a circular professional seal. The seal contains the text "REGISTERED PROFESSIONAL FORESTER OF THE PROVINCE OF BRITISH COLUMBIA" around the perimeter.

RPF Name: Jeff McWilliams, RPF

Date Signed: March 15, 2019

