



Forests for Tomorrow

Aerial Forest Fertilization Prescription

ADMINISTRATION/AREA DESCRIPTION			
Resource District	TSA/TFL/Licensee	Location	Field Work Completed by and date
Cascades	Merritt TSA	Red Creek	Jeff McWilliams, RPF Louis Orioux, RPF (July 2019)
Mapsheet	RESULTS Opening ID	Treatment Unit/Block	Project Number/Plan name
92H.059	1714368	RedCrk2	IM18DCS003 (003)
Gross Opening(s) Area (ha)		No Treatment Area (ha)	*Net Treatment Area (ha)
70.0		0.0	70.0
Stand Tending History ¹		Aspect	Topography
N/A		S/SW/SE	Even to gently rolling
Latitude:	49° 30' 56" N	Longitude:	120° 19' 19" W
Elevation (min):	1340m	Elevation (max):	1460m

*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				
Co-Dom/Intermediate trees of target species expected to respond to fertilization (sph)	Live Crown % (of crop trees)	Crown Closure		Age (Avg)
Pl800	30	60		75
Estimate Species Composition/Inventory Component (based on volume or basal area)	Estimated Height (top height of leading species)	Total Estimated (sph)	Estimated SI ² (PI)	Ht to Diam (DBH) Ratio
Pl95(Fd, Sx, Bl, Decid)	22	1600	19	0.7-1.0

ECOSYSTEM INFORMATION ¹						
Polygon	Net Area(ha)	Zone Subzone Variant	Site Series	Edatope Moisture/Nutrients	Slope Position	Slope Avg. % & Range
A	11.6	MSxk1	01	3-4/B-D	Mid-slope	15 (5-25)
B	1.3	MSxk1	01	3-4/B-D	Mid-slope	15 (5-25)
C	1.5	MSxk1	01	3-4/B-D	Mid-slope	15 (5-25)
D	1.3	MSxk1	01	3-4/B-D	Mid-slope	15 (5-25)
E	1.7	MSxk1	01	3-4/B-D	Mid-slope	15 (5-25)
F	46.1	MSxk1	01	3-4/B-D	Mid-Slope	15 (5-25)
G	6.5	MSxk1	01	3-4/B-D	Mid-Slope	15 (5-25)

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 assessment

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	11.6	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	6,322
B	1.3	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	709
C	1.5	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	818
D	1.3	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	709
E	1.7	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	927
F	46.1	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	25,125
G	6.5	NS Blend (35.5-0-0-10.1)	545kg/ha	Fall 2019 Repeated every 7-10 years, up to 10 years prior to harvest	3,543
Total Area:	70.0	NS Blend (35.5-0-0-10.1)	545kg/ha	Total kg:	38,153
RISK ASSESSMENT: FOREST HEALTH, WILDFIRE					
Forest Health Endemic levels of Mountain Pine Beetle (IBM)					
Wildfire (e.g. risk ranking) Moderate					
Private Property N/A					

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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 Lodgepole pinecrop 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:	
Portions of the treatment area are within an established visual quality objective of Modification.	
Cultural Heritage:	
A First Nations referral will be completed prior to each treatment.	
Recreation:	
The treatment does not conflict with any identified recreation sites, reserves, or parks or other ecological reserves.	
Wildlife/Biodiversity/Species at Risk:	
The treatment unit does not fall within any Wildlife/Biodiversity/ Species at Risk Polygons.	
Range:	
The treatment area is within active range tenure RAN077476 which belongs to Rock Hill Investments Ltd.	
Other Resources or Tenure/Issues: (e.g. Karst; Trappers; hydro rights-of-way; weather stations)	
The treatment area is within identified Trapline TR0807T064. 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, S4, S6)	<p>No streams were identified within the treatment area during field reconnaissance.</p> <p>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.</p> <p>Fertilizer loading zones will not be located within Riparian Management Zones.</p> <p>A TRIM stream runs through polygon A that is not visible from the air or aerial imagery. All other TRIM streams have been removed from the treatment area.</p>
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.	

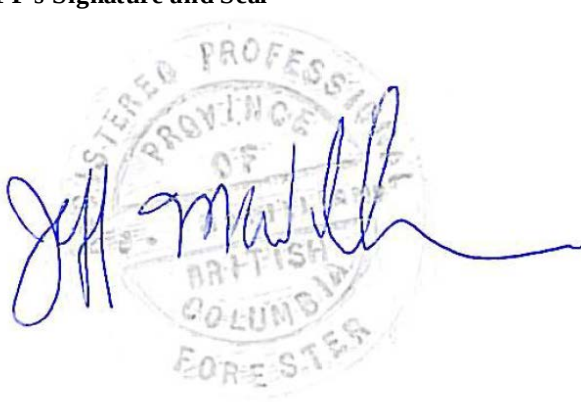
LOGISTICS AND SAFETY	
General Access:	
Distance from Nearest Town (Princeton)	<p>Approximately 33km from Princeton.</p> <p>From Princeton proceed N on Highway 5A for 1km, turning right at Old Hedley Rd. In 0.3km keep left to follow Princeton-Summerland Rd. Continue 15.5km to Red Creek FSR. Turn Right at 2.5km to stay on Red Creek FSR. Continue on the mainline for 12km then turn right for 500m to reach staging Red2.</p>

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Access Condition	2x4
Access Improvements Required	None required at this time. Access and stagings should be re-confirmed prior to treatment.
Potential Staging Areas	Red2–120°17'50"W 49°30'40"N Red4–120°18'45"W 49°30'37"N Red5–120°19'18"W 49°31'27"N Red6–120°19'25"W 49°30'35"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) ~34 km to Princeton General Hospital 98 Ridgewood Dr, Princeton, BC V0X 1W0 Phone: (250) 295-3233	

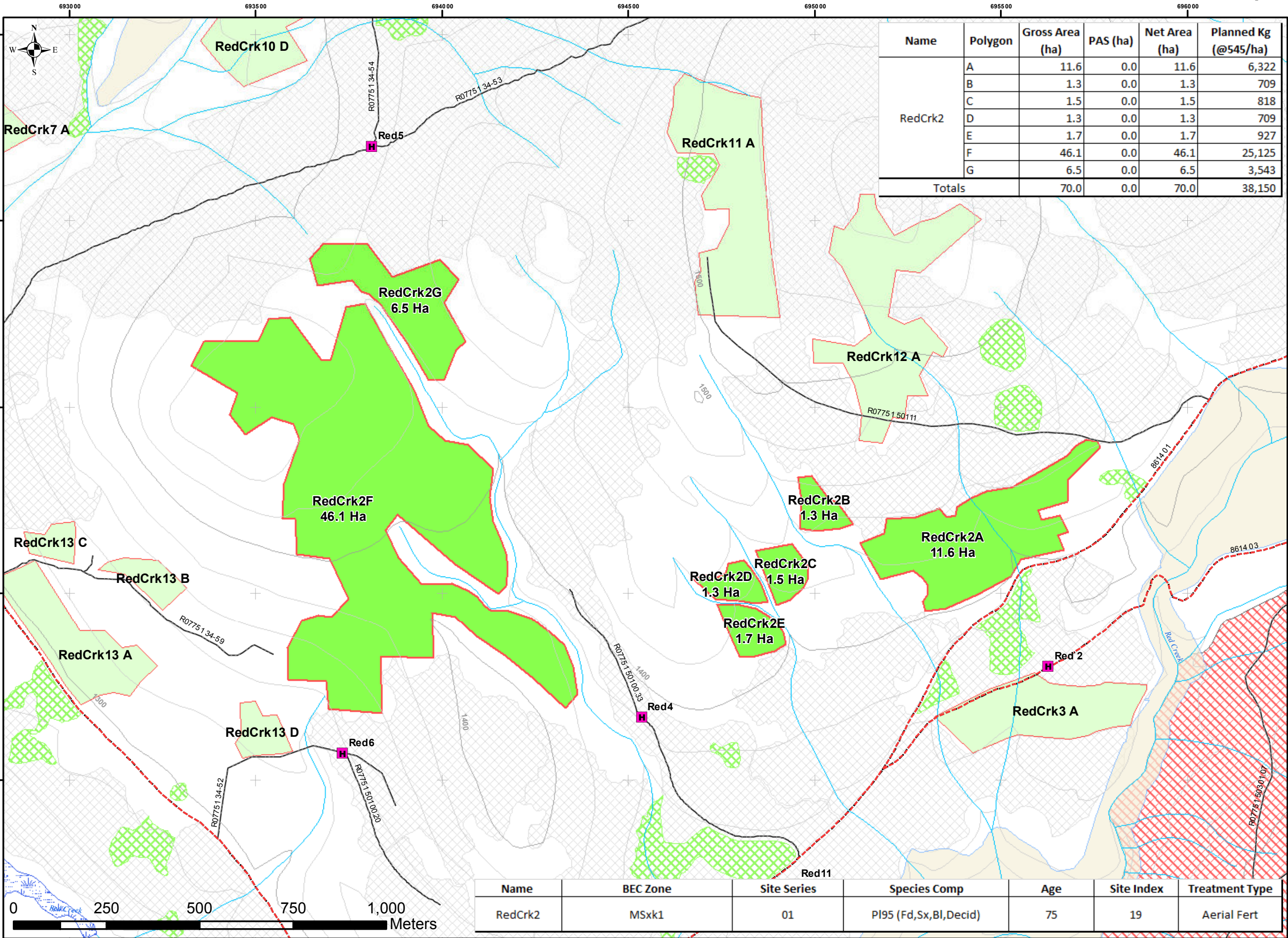
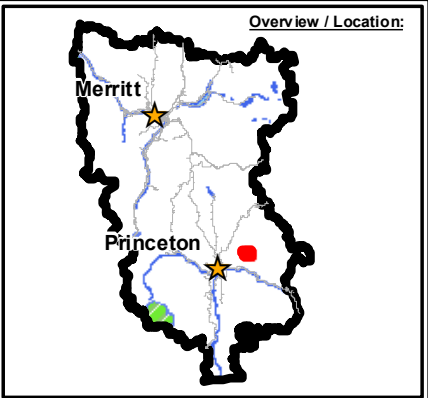
STORAGE/HANDLING OF FERTILIZER
Storage/Transport: (e.g. type of fertilizer; any regulations as far as transport; conditions of storage) Forest-grade fertilizers are not regulated for rail or road transportation. Because of water solubility, blended fertilizer must be stored in dry containers and protected 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: 1:10,000 Aerial Fertilization Prescription Map Plan Prepared By: <u>Matthew Thompson, FIT</u> Date: August 12th, 2019	RPF's Signature and Seal  RPF Name: <u>Jeff McWilliams, RPF</u> Date Signed: August 12 th , 2019 

Cascades NRD - Aerial Fertilization Prescription Map - FFT

Prescription Name: RedCrk2



Forest Region: Thompson-Okanagan
Nat. Res. District: Cascades
Location: Red Creek
Mapsheet(s): 92H.059

- Legend**
- Prescription Unit
 - Fertilization Prescriptions
 - Access Limit
 - Heli Staging
 - Reload / Refuel
 - Turnaround
 - Local Rd
 - Highway
 - Forest Service Road
 - Road Permit
 - Special Use Permit Road
 - Cutblock: Active
 - Cutblock: Pending
 - Cutblock: Retired
 - Lake
 - Wetland
 - River
 - Stream
 - Forest Cover Reserves
 - Crown RW
 - OGMA (nonlegal)
 - OGMA (legal)
 - Community Watersheds
 - Indian Reserve
 - Dominion Government Block
 - Treaty Land
 - Private - Crown Grant
 - Crown and Private A and B
 - Community Forest / Woodlot
 - Crown Park Equivalent / Reserve
 - Military Reserve
 - Federal Reserve
 - Crown UREP Reserves
 - Crown Miscellaneous Reserves
 - Crown Christmas Tree Permit
 - Parks and Ecological Reserves
 - Research Installations
 - Growth and Yield
 - UWR: Conditional Harvest Zone
 - UWR: No Harvest Zone
 - WHA: Conditional Harvest Zone
 - WHA: No Harvest Zone
 - WHA: Proposed
 - Interpretative Forest
 - Recreation Reserve
 - Recreation Site

Scale: 1:10,000
Coordinate System: NAD 1983 UTM Zone 10
Date: August 12, 2019
Map created by: MT