



REGIONAL DISTRICT OKANAGAN SIMILKAMEEN Fuel Management Prescription

1. PROJECT IDENTIFICATION

PROJECT ID AND UNIT ID: Faulder East	LAND OR TENURE HOLDER: Crown Land
LATITUDE/LONGITUDE: 49° 37' 16.00" N; 119° 46' 47.00" W	GEOGRAPHIC DESCRIPTION: Faulder; 8 km West of Summerland
HIGHER-LEVEL PLAN (HLP): Okanagan Shuswap Land and Resource Management Plan	MAP REFERENCE NUMBER: 082E012

2. AREA SUMMARY

AREA (HA): 22.2	BGC SUBZONE AND VARIANT: PP xh1
ELEVATION AND SLOPE POSITION: 680-700m, mid-lower slope	CFFDRS FUEL TYPE: C7
SLOPE AND ASPECT: 10-65%, W	TIMBER TYPE: Py(Fd)
SOIL TEXTURE CLASS: SiL	DUFF DEPTH: 1-2 cm

GENERAL DESCRIPTION:
The treatment area is located adjacent to private residences and holdings within the community of Faulder. The treatment boundaries extend from the private lot boundaries, upslope to around 100 meters from the private land boundaries. The stands predominantly consist of Ponderosa Pine (Py) and Douglas Fir (Fd) of varying age classes and stand structures. The understory vegetation ranges from grass to vegetation complexes containing Oregon grape, pine grass, saskatoon, snowberry and arrow-leaved balsamroot.

3. LOCATION/ACCESS SUMMARY

Nearest community(s):	Faulder; Summerland
Approximate distance to community(s):	Within 100m of private property; Approximately 8km West of Summerland just off the Princeton-Summerland Hwy along Fish Lake Road.
Nearest highway(s):	Princeton-Summerland Hwy
Access point(s):	2km North on Fish Lake Road from the mailboxes in Faulder. Private road access at the southern end of TU 1. Seek permission from land owner if required. Access to the north of TU 1 is off Fish Lake Rd and up a quad trail.
Access requirement(s):	Permission from private land owners to enter through private land would improve access and improve emergency evacuation time from the site in the case of an emergency.
Access structure(s):	N/A

Treatment Area(s) are within a community watershed?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If yes, watershed identifier:	Trout Community Watershed

4. GOALS & OBJECTIVES

MANAGEMENT GOALS:	ECOSYSTEM RESTORATION ()	PUBLIC SAFETY (1)
	RANGE IMPROVEMENT ()	RECREATION ()
	WILDLIFE HABITAT ()	OTHER: ()
	Improve public safety through a reduction in fuel loading (standing and surface fuel) within the wildland urban interface (WUI) to improve survivability of adjacent structures and to provide defensible space within which wildland fire fighters can operate during an interface wildfire.	

5. ECOLOGICAL DESCRIPTION by Treatment unit (TU)

TU	Area (ha)	Zone	Subzone	Variant/Phase	Site Series & %	Elevation (m)	Slope			
							Aspect	Position		
1	10.1	PP	xh	1	01/05/06 (50/40/10%)	700-765	W	Mid/lower		
2	12.1	PP	xh	1	02/01/05 (50/40/10%)	700-780	W	Mid/lower		
TU	Slope (%)			Soil			Hydrology		Humus	
	Min	Max	Avg	Texture		CF (%)	Depth to HW Table (cm)	Seepage Present (Y/N)	Humus Form	Depth (cm)
			Surface	Sub-surface						
1	15	30	20	SiL	SiL	35-75	> 100	N	Mor	1
2	20	65	35	SiL	SiL	35-75	> 100	N	Mor	1

6. STAND DESCRIPTION

+ Indicates specimens were noted in the stand but not captured in the stand data plots

- Indicates not present in plots or noted during field review

TU	DBH CLASS (cm)	0- 12.4 (cm)	12.5 – 20 (cm)	20.1 – 30 (cm)	30.1 – 40 (cm)	40.1 – 50 (cm)	50.1+ (cm)	Total	Species
1	<i>Pre-treatment</i>	75	50	75	100	50	+	350	Fd
	DENSITY (approx. stems/ha)	75	125	150	25	+	+	375	Py
2	<i>Pre-treatment</i>	150	100	100	+	+	+	350	Fd
	DENSITY (approx. stems/ha)	250	200	+	50	+	+	500	Py

Refer to Appendix A for example pictures of current stand conditions.



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7. VALUES

7.1 RIPARIAN MANAGEMENT AREAS

A dry streambed was located in a steep draw between TUs 1 and 2. Treatment will not impact the flow of water through this draw nor the stability of the slopes of the draw.

7.2 RARE PLANT COMMUNITIES

Nearly all site series within the PPxh1 are red or blue listed. The four site series that dominate the treatment areas (01, 02, 05 and 06). Site series 01,02, and 05 are all blue listed with portions of the Tus also contain the red listed 06 site series. The retention of crown cover including all deciduous trees and shrubs will ensure the protection of species utilizing these areas. Disturbance will be further minimized by hand falling on snow or frozen ground.

7.3 RED or BLUE-LISTED SPECIES

Several masked sensitive species occurrences listed by CDC have been recorded within the vicinity of the TU's. However, none of these records occur within the identified Tus. Surveys for a number of different Species-at-Risk have been conducted in the surrounding areas, these species include: Western Screech-owl, Flammulated Owl, White-headed Woodpecker and Lewis's Woodpecker. None of these species have been recorded within a 2 km radius of the proposed TU's, except for the Flammulated Owl. This species has been recorded at a number of locations including one just east of the southern half of TU 1. Flammulated Owl's typically nest in large veteran trees (that range in diameter from 33 to 82 cm), adjacent to small patches of in-growth. The in-growth provides newly fledged young with poor flight abilities an opportunity to climb back into protective cover, if needed. No other known Species-at-Risk occurrences or Wildlife Habitat Areas are found within 2 km of the proposed TU's.

7.4 UNGULATE WINTER RANGE

The entire area surrounding the TU's has been identified as ungulate winter range. All PPxh1 site series are considered low snow-pack habitats and mule deer could benefit from the maintenance of snow interception cover (OS LRMP 2001). The best winter forage is typically found on more xeric sites such as the 02 site series found within TU 1.

7.5 COMMUNITY OR DOMESTIC WATER SUPPLIES

The Trout Creek Community Watershed has been identified within the proposed treatment areas. Several residences are located below the treatment areas with associated wells. An older residential well that was drilled in 1978 was identified (FID 5480) on iMap but could not be confirmed in the field. The proposed treatments will not involve using machinery, all trees will be hand felled for piling and burning.

7.6 FIRST NATION INTERESTS

Initial consultation and First Nations referrals have occurred with Pentiction, Lower Similkameen, Okanagan Nation Alliance and Osoyoos First Nations. A communication record has been included with this document.

7.7 ARCHAEOLOGICAL/HERITAGE VALUES

None identified to date.

7.8 VISUAL QUALITY OBJECTIVES

There are two established Visual Quality Objectives for the treatment area. A Preservation Zone 2 in the Project Name – Faulder and a Modification Zone 2 in the Project Name – Darke Lake. The OSLRMP states that Zone 2 areas are not scenic areas and do not have established Visual Quality Objectives. Within these areas the main focus is on designing and implementing resource management activities that blend into the natural landscape. The treatment unit area is on a flat bench above the valley bottom and is only visible to a few homes on the opposite side of the valley and from a short section of the Princeton-Summerland Highway across the valley. The proposed treatment for this area would return the site to a more natural open forest canopy consistent with historic forest stand structure as well as existing adjacent forest stands. Treatment unit boundaries will follow private property boundaries along the western boundary and natural openings and terrain along the eastern boundary.

7.9 RECREATION FEATURES OR IMPROVEMENTS

The area within the treatment unit is classified within the OSLRMP as an Intensive Recreation Area and during field work many trails were noticed within the proposed treatment area. Treatment methods will be limited to hand falling and piling and burning with no heavy equipment entering the site. Impacts to trails should be minimal. One high recreation area was noted in the field and delineated on the treatment map.

7.10 BIODIVERSITY OBJECTIVES

Retention of a diverse tree species composition within all crown classes, where possible, will help avoid a single species stand susceptible to pest impacts. Healthy advanced regeneration will be retained as per section 8.1. Deciduous trees and shrubs will be retained (as long as it is safe to do so) to maintain or promote species biodiversity. Retention of a diverse tree species composition (wherever possible) will ensure the perpetuity of a diverse co-dominant canopy composition and avoid a single species stand that may succumb to a single forest pest or pathogen.



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7.11 TIMBER USE OR IMPROVEMENT

Not applicable.

7.12 RANGE USE OR IMPROVEMENTS

The identified range use polygons within the treatment area are RAN077114 B, RAN075507, and RAN077115. The range polygon RAN077116 B was recently retired. Vern Sopow, one of the range license holders was contacted and approves of the proposed treatments. The remaining range permit holders were contacted, Donald Barron and Edward Ripley with no reply.

7.13 SOILS

Soils in the proposed treatment area are predominantly Silty Loams.

7.14 HLP CONSIDERATIONS

The OSLRMP was considered during the development of this prescription.

7.15 WILDLIFE TREES

There are abundant occurrences of dead, large diameter Py and Fd within these treatment units. These trees **MUST** be retained. If it is unsafe to work around these trees as determined by a Wildlife Danger Tree assessor, then a **NO WORK ZONE** must be established and the wildlife tree retained.

8. TREATMENT STRATEGY

8.1 TREE REMOVAL/RETENTION STRATEGY BY SIZE/SPECIES

A retention strategy using tree diameter (DBH) limit, crown class and species composition will be used to guide crews towards the desired future ecosystem condition. This is provided in section 11.2 of this plan.

- All veteran trees (defined in this prescription as any tree over 40 cm dbh) will be retained unless it is unsafe to do so. No Work Zones should be considered first before deciding to fall veteran trees noted to be unsafe to work around.
- Deciduous species are to be retained regardless of size.
- Regeneration <2 m in height with >50% crown and in good health is to be retained to a density of 25 stems/hectare.
- All green attack Py trees should be felled and burned.

Dead and dying trees that must be felled for public safety or structure protection can be left on site as future CWD habitat as long as the criteria below are met. Felled and existing stems in larger diameter classes may be left on site as CWD under the following criteria:

- Pieces are in the higher diameter class (>25cm) and in higher decay classes suitable for habitat;
- If fallen as part of the treatment, pieces should not form a large jackpot that will contribute to a high intensity fire and/or high flame lengths;
- Pieces are bucked flush with the ground (fallers can buck/limb existing CWD to meet this criteria) and stems are bucked into individual pieces no more than 5m in length;
- Candidate pieces are more than 5m from another piece of retained large diameter CWD;
- Pieces are not within 30m of homes or other structures (high value pieces may be moved outside this distance if feasible to do so);
- No more than 5-20 tons/ha should be left on site as large CWD (about 10 snags >30cm dbh)

8.2 TREATMENT UNIT SPECIFICS

TU 1

- An existing recreation trail at the North end of the unit provides access to the area. The trail leaves Fish Lake Road 200m beyond the northern boundary of TU 1.

TU 2

- Access the unit from the south end of TU 1 and walk approximately 330m south to the unit, or
- From the property marker just north of the mailboxes in Faulder walk approximately 300m north.



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9. TREATMENT METHODS

9.1 MERCHANTABLE TREE REMOVAL

No merchantable timber will be removed from the site.

9.1.1 ROADS, LANDINGS AND TRAILS

Existing roads and trails will be utilized for access for the crews only. An ATV may be used on the recreation trail entering from the north into TU 1 to bring in fuel and equipment for operations but must remain on existing trails at all times.

9.1.2 FELLING

Hand felling and bucking will be employed. Where required by WCB regulations, WCB certified fallers will be used.

9.1.3 YARDING/SKIDDING

Not applicable.

9.1.4 LOADING & HAULING

Not applicable.

9.1.5 SLASH DISPOSAL

Woody debris will be piled for burning in both TUs. Larger diameter pieces (>12.6 cm DBH) may be bucked and set aside as firewood for public use where requested by the adjacent property owners and practical to do so. Stems >30 cm may be left as CWD as per section 8.1.

9.1.6 SITE DISTURBANCE

Areas of notable disturbance shall be rehabbed to the pre-existing state following fuel management operations and seeded with native grass seed.

9.1.7 SPECIAL MEASURES

Not applicable.

9.2 NON-MERCHANTABLE TREE REMOVAL

9.2.1 BRUSHING

No brushing will occur unless the presence of brush is a safety hazard (i.e. danger tree/shrubs) or a safe working requirement for using a chainsaw while felling a tree.

9.2.2 PRUNING

Residual trees in all TUs will be pruned to 2m on flat ground and ~3m on slopes over 15% if safe to do so. The measured distance should occur at the lowest point of the branch, which may be the tip or mid branch.

9.2.3 THINNING

Regeneration <2m in height with crowns <50% will be felled as part of the treatment. All regeneration <2m in height with live crowns >50% will be retained as per section 8.1. All stems >2m and <12.5 cm in dbh will be considered part of the suppressed layer and addressed as per section 11.2.

9.2.4 MULCHING

Not applicable.

9.2.5 MASTICATION

Not applicable.

9.2.6 GRINDING

Not applicable.



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9.2.7 PRESCRIBED FIRE

Not applicable.

9.3 OTHER ISSUES

9.3.1 WEED CONTROL

Not Applicable.

9.4.1 TRAFFIC CONTROL

Not applicable.

9.4.2 SMOKE MANAGEMENT

Open Burning Smoke Controlled Regulations will be followed as will regional district burning bylaws.

9.4.3 SAFETY

WCB and associated OH&S work practices must be followed for these operations. Only certified fallers will be allowed to fall trees >6" in diameter at the butt.

9.4.4 PUBLIC and AGENCY CONSULTATIONS

Communications with the RDOS Electoral Area Director and staff has been ongoing. A posting at the community notice board in Faulder was completed in the summer of 2010. A community meeting with the residents of Faulder should take place prior to operations. The Wildfire Management Branch has been consulted throughout the RDOS CWPP process and treatments in Faulder have been discussed during the quarterly meetings of the South Okanagan Fuel Management Committee.

9.4.5 FIRST NATIONS

First Nations with interests in the area were sent information letters.

10. MACHINERY

No machinery will be utilized for these operations. Hand felling and pile and burning are the only treatments employed.

11. POST-TREATMENT

The post-treatment stands will tend towards more open and even aged stands of mixed Fd and Py with a lower density of understory stems that can act as ladder fuels. Healthy regeneration will be retained in the understory so as to promote recruits into the stand. This modified stand structure should help minimize the chance of a ground fire working its way into the tree canopy creating a crown fire while maintaining ecological diversity.

11.1 POST-TREATMENT STAND CONDITION

Treatment Unit	Species Composition	
	Species	%
TU 1	PyFd	50:50
TU 2	PyFd	67:33

11.2 POST-TREATMENT STAND DENSITY (compare to Section 6. Pre-Treatment Stand Density)

*Leave all/any trees in this DBH class unless unsafe to do so.

TU	DBH CLASS (cm)	Stand Structure by Tree Species							Total	Species
		<12.4 & >2m tall (cm)	12.5 – 20 (cm)	20.1 – 30 (cm)	30.1 – 40 (cm)	40.1 – 50 (cm)	50.1+ (cm)			
1	Post-treatment Density (approx. stems/ha)	-	-	25	100	50	*	175	Fd	
		-	-	100	25	*	*	125	Py	
2	Post-treatment Density (approx. stems/ha)	-	50	100	*	*	*	150	Fd	
		-	50	-	50	*	*	100	Py	

11.3 POST-TREE REMOVAL

11.3.1 EXPECTED VEGETATION RESPONSE

Opening the overstory should improve vegetation vigor.

11.3.2 INVASIVE PLANT SPECIES

It is not anticipated that there will be any issues with invasive plants post treatment.

11.3.3 OTHER TREATMENTS AND THEIR EFFECT

Not applicable.

11.3.4 ADDITIONAL FUELS MANAGEMENT TREATMENTS

The site should be reassessed in 3-5 years for further maintenance treatments.

Refer to Appendix A for example pictures of current stand conditions



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12. PROFESSIONAL RELIANCE

PREPARED BY:

John Davies, RPF

PROFESSIONAL SIGNATURE & SEAL



Valhalla Consulting Inc.

Date Submitted:
5 October 2012

John Davies
RPF No. 4267

PRESCRIPTION APPROVAL

RESOURCE MANAGER NAME *(Printed)*

SIGNATURE

DATE:

TITLE AND AGENCY

13. ATTACHMENTS

- MAP(S) ****Mandatory****
- AIR PHOTOS
- FIELD DATA CARDS
- CRUISE DATA
- ADDITIONAL COMMENTS
- PICTURES

- TERRAIN STABILITY ASSESSMENT
- FOREST HEALTH ASSESSMENT
- VISUAL LANDSCAPE ASSESSMENT
- CULTURAL HERITAGE ASSESSMENT
- OTHER Communication Record

Appendix A: Photos of Stand Types Found in the Treatment Units

