BCTS
BC Timber Sales

# SP/HP MAP

BCTS TSL TA0906
(LICENCEE & #)

BLOCK: 7 PRE: EK K10 1330
UBI: BF798
LOCATION: DOCTOR CREEK

Map Reference: 082J.001
Air Photos:
Forest Region: Southern Interior
District: Rocky Mountain
TSA: Invermere

Mag. 15.4° E of T.N.
Date: Aug 02, 2021
Land District: Kootenay
Elevation range: 1220 - 1520m
Scale: 1:10,000
Drawn By: D.Michel

UTM Coordinate:

| Zone | Easting | Northing |
|---|---|---|
| 11 | 569398 | 5548551 |
| Lat. | 50° 05' 07" N | Long. 116° 01' 48" W |

N

| TA0906-7 | | | | | | |
|---|---|---|---|---|---|---|
| SU | NAR | Silv System | Harvest Method | BEC | Stocking Standard | Soil Disturbance Limit |
| 1 | 43.4ha | CC/RES | Conventional/ cable (tether/winch) | MSdw 103 | 1062263 | 10% |
| 2 | 44.0ha | CC/RES | Conventional | MSdw 104 | 1062265 | 10% |
| NP: 0.0ha | | | | | | |
| PAS: 5.6ha | | | | | | |
| WTRA: 10.6ha | | | | | | |
| RES: 10.1ha | | | | | | |
| Gross: 113.7ha | | | | | | |

## SP/HP Legend

- Subject Block
- Right of Way
- Riparian Reserve Zone
- Slope Area (>35%)

**Management Zones**
- MFZ
- RMZ
- SMZ
- WMZ

**Harvest Method**
- Cable
- Ground

**Standard Unit**
- 1
- 2
- 3
- Non Productive
- PAS
- Reserve - Other
- WTP
- WTRA

P / E Permanent Landing; Proposed/Existing
Culvert; Existing/Proposed
Block GPS Station
Road GPS Station
BC Block Center
Major Culvert
Pipeline Crossing
Ecology Plot
Cattleguard
Gate
Skid Direction
Yarding Direction
Gully, Draw
Cliff
Designated Crossing

- Road Permit
- Forest Service Road
- Existing Road
- Proposed Road
- Unknown Road
- Deactivated Road
- Skid Trail

**Adjacent Blocks**
**(Planning Status, Block Status)**
- PP and (Info or 196)
- PP and PROP
- PP and OPC
- WIP and (Info or 196)
- WIP and PROP
- WIP and OPC
- ADV
- HB
- LC
- RG
- GU
- FG
- Deferred

Slide
Slope Break
Gully, Draw
Fence Line
Stream - Unclassified
Stream classified
NCD/NVC
Waterbody
Wetland
BEC Zone
Inoperable
Recreation Area
WMA
VRI Polygon
Indian Reserve
Woodlots
National Park
Provincial Park
Protected Area
Ecological Reserve
Fish Barrier

- Intermediate Contours
- Index Contours
- Fence
- Transmission Lines
- Pipeline
- Existing Trails
- Paved Road, Divided
- Gravel Road
- Area of Concern
- Reach Break

Meters
0 50 100 200 300 400

VAST RESOURCE SOLUTIONS

**Appraisal Roads**
- CRR23527Sec03 Short Term New Construct 789m
- CRR23527Sec04Seg1 Long Term New Constuct 380m
- CRR23527Sec04Seg2 Short Term New Construction 1099m
- CRR23527Sec05 Short Term New Construct 208m
- CRR23527Sec06 Short Term New Construct 387m
- CRR23527Sec09 Short Term New Construct 113m
- CRR23527Sec10Seg01 Long Term Reactivation 1429m
- CRR23527Sec10Seg02 Short Term New Construct 544m
- CRR23527Sec11 Short Term New Construct 832m
- CRR23527Seg12Seg01 Long Term Reactivate 871m
- CRR23527Sec12Seg02 Long Term New Construction 1081m
- CRR23527Sec12Seg03 Short Term New Construct 361m
- CRR23527Sec16 Short Term New Construct 236m
- CRR23527Sec18 Long Term Reactivate 3214m

**Non-Appraisal Roads**
- CRR23527Sec01 Short Term New Construction 35m
- CRR23527Sec02 Short Term New Construct 30m
- CRR23527Sec07 Short Term New Construct 80m
- CRR23527Sec08 Short Term New Construct 80m
- CRR23527Sec13 Short Term New Construct 59m
- CRR23527Sec14 Short Term New Construct 83m
- CRR23527Sec15 Short Term New Construct 58m
- CRR23527Sec17 Out of Block Skid Trail 92m
- CR0108.05BearMain Existing 6304m
- CR0108.08BearSouth Existing 5075m
- CR9693.01Dunn Existing 3205m
- CR9693.05 Whitebark FSR Existing 2287m

File: \\Client\P$\19.0084.00_BCTS_Invermere_Multiphase Development\05-Dr Creek\GIS\MXD_Data\LRM\LRM_TA0906_B7_SPHP.mxd

RIPARIAN ASSESSMENT

| Block | Riparian I.D. and Class | RMA | SU | Width (m) | BA or SPH Retained | Comments (Indicate if in a Community Watershed) |
|---|---|---|---|---|---|---|
| 7 | W3<br><br>W5 | 30m RMZ<br><br>40m RMZ, 10m RRZ | 1 | | Minimal | The RMA of both wetlands have been impacted by wildfire (Crown Fire). 95-100% mortality has occurred or is anticipated. As the RMZ of both wetlands is adjacent to the Bear Main, minimal retention is prescribed as to address fire-damaged trees that pose a hazard to workers and road users. To address hazard trees, retention within the RMZ may be less than 10% of the pre-harvest stems s required by the FSP. Alternate levels of retention are permissible provided sound rationale is provided by a QRP. Tree removal within the RRZ is permissible when to address a safety hazard. Due to the minimal retention to be left, the RMZ and RRZ have not been flagged in the field.<br><br>Retain any green topped Lw or Fd encountered adjacent to the wetlands if structurally sound and roots are greater than 50% intact.<br><br>A variable width machine free zone has been flagged adjacent to the wetlands to limit machine-traffic. Do not place any slash piles within the MFZ. |

Management Strategies:

Monitor for sedimentation entering streams and take corrective action where required.

**Safety Highlights:**

**Fire Damaged Stands**: Block has been damaged by wildfire. Trees have been structurally compromised. Fire damaged trees pose high risk of tree-fall due to damaged root systems. Increasing wind speeds elevate the risk of sudden tree fall posing a danger to workers and machinery. In areas of greater fire severity, trees may suddenly break due to burnt out boles, damaged branches creating widowmakers/overhead hazards. Dangers trees must be removed a safe distance from all landings/decking areas where they cannot strike workers.

**Steep Terrain:** A portion of SU1 is planned for tether/ winch-assist systems where slopes exceed 50%. Complete steep slope hazard assessments as required by WCB prior to commencing work and follow all safety protocols in place for winch-assist/ tether operations.

**Gullied terrain:** Dry gullies are present in SU1 within the harvest unit planned for tether/winch assist systems. Operators must exercise caution when working around gullies to avoid machine upset.

**Boulders**: Large boulders may become dislodged during operations and present a hazard to workers and vehicles/machinery working downslope.

**Windthrow**: Areas of heavier windthrow may be present in the block.

**Leave Tree Specifications:**

**Table 1 – Layer 1 Reserve Timber[1]**

| SU | Selection Priority | Species | Size | Stems per Hectare to Retain | | | Distribution[2] | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Target | Min | Max | S | G | I | R |
| **1- Cable** | N/A | N/A | N/A | No Reserves – Cable Harvest | | | | | | |
| 1 | 1<br>2 | Lw<br>Fd | ≥25cm dbh | 5 | 0 | 10 | X | X | X | |
| 2 | 1<br>2 | Lw<br>Fd | ≥25cm dbh | 15 | 0 | 30 | X | X | X | |
| 1 & 2 | 1<br>2 | Lw<br>Fd | ≥25cm dbh | All Existing | | 5 | X | X | X | |
| 1 & 2 | 1 | At/Ep | ≥25cm dbh | All Existing | | | X | X | X | |

Additional Requirements/ Comments:

1. **Minimum is to be left only where leave-trees of identified species, size class, and structural integrity do not exist within areas of the SU. Leave as many trees meeting the retention requirements as available up to maximum amount.**
2. The above cutspecs include trees that are dead or alive, with selection preference to be given to live trees (green tops/ minor bark char).
3. **Lw/Fd ≥45cm dbh that are retained will contribute to the targets of the other Lw/Fd leave objectives.**
4. Leave all Lw/Fd ≥45cm dbh where encountered, live or dead provided the trees are structurally sound and safe to do so. It is anticipated that there will be minimal retention of trees in this diameter class due to the lack of presence in the preharvest stand.
5. There are no reserve trees planned for the portion of SU1 that is planned for Cable Harvest.
6. Trees that do not meet utilization standards for sawlog or pulp due to large defect are to be retained onsite where safe to leave and not posing a safety hazard. If felled as result of presenting a safety hazard, retain onsite as large woody debris.
7. All stems retained must be structurally sound, have >50% of the root system intact and not present a hazard to crews on the ground.
8. Voids >1ha may exist post-harvest dependent on pre-existing stand structure and available leave-trees.

[1] Refer to *Appendix 1* for *Table of Reserve timber Abbreviations and Definitions*

[2] Distribution types: S: Single Tree, G: Group of trees, I: Irregularly distributed, R: Regularly distributed

**Note: Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule "A", Section 2.00 regarding Dangerous trees.**

**Table 2- Other Reserved Timber**

| Non Merch | | | | |
|---|---|---|---|---|
| **SU** | **Location** | **Species** | **Size** | **Stems/ha** |
| **1,2** | Where possible, retain clusters of green advanced regen | Fd, Lw, Sx, Bl | >1.3m height | - up to 3 clusters/ha |

| Coarse Woody Debris | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SU** | **Size** | **# per Hectare** | **Distribution** | | | | |
| | | | **S** | **G** | **I** | **R** | |
| **1,2,** | Min 2m length (≥5m m if available)<br>Min 20cm diameter at one end<br><br>Target larger logs where they occur and are not suited as sawtimber.<br><br>Avoid leaving green Sx or Fd logs as CWD due to susceptibility to bark beetles. | Min 4 logs/ha<br>1.24m3/ha | **x** | **x** | **x** | | • This is the minimum required as per the 2017-2022 FSP for MSdw |

| Dead Trees to be stubbed (where Mechanical Falling is utilized) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | No stubbing prescribed | | | | | |

**Harvest / Operational Constraints:**

- Operate during conditions that prevent excessive soil disturbance. Avoid harvesting during periods of excessive soil moisture such as spring freshet and after heavy rainfall.
- Maintain natural drainage patterns during and at completion of harvest. At completion of operations all road sections must be left in a hydrologically stable state.
- This block is sensitive to encroachment by invasive species. Ensure that all equipment entering the site is inspected for invasive plant material and washed if material is found. Document inspections and actions taken.
- All landings and rehabbed/deactivated areas are to be seeded after completion of hazard abatement and/or rehabilitation/deactivation activities and no longer than 1 year following soil exposure. .
- **No soil disturbance must occur within the sensitive area identified on the map, Area must be clear cut.**
- Slash is not to be placed within the MFZ adjacent to the wetlands.
- **Where available and operationally feasible, leave green alder and/or surviving advanced regen along the edges of roads to provide screening for wildlife. Avoid roadside decking where such screening exists.**

## Kootenay Business Area Field Marking Standards

| | Ribbon | Paint |
|---|---|---|
| Harvest Boundary | BCTS Block Boundary | |
| Falling Corners | | FC# |
| WTRA Boundary | Reserve | |
| Reserve Boundary | Reserve | |
| Riparian Reserve Zone | Reserve | |
| Riparian Management Zone | Riparian Mgmt. Zone | |
| Management Zone | Management Zone | |
| Treatment Unit Boundary | Treatment Unit Boundary | |
| Reserve Trees | | |
| Machine Free Zone | //// Machine Free Zone //// | |
| Cruising | Cruise Line | Plot Trees |
| Traverse Stations | | |
| SP Plot Location | | |

| | Ribbon | Paint |
|---|---|---|
| NCD & Stream Centers | Water Course | |
| Road P-Line | | |
| Road Center Line | Road Centerline | |
| Landings | Landing | |
| Road Right of Way | R/W Boundary | |
| Road RP | | |
| Culverts | Culvert | |
| Designated Crossing | Crossing | |
| Culvert RP Outside Right of Way | | |
| Tail Holds / Guyline / Intermediate Supports | | |
| Skid Trail / Back Spar Trail / Forwarding Trail | / / / / / / Trail / / / / / / | |
| Recce Ribbon / D-Line / Skyline Roads | / / / / / / / / / / / / / / / | |

I certify that the work described herein fulfills standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.

**Chris Lovesey, RPF # 4803**

RPF PRINTED NAME

**August 6, 2021**

DATE SIGNED

**RPF'S SIGNATURE and SEAL**

REGISTERED PROFESSIONAL FORESTER
PROVINCE OF BRITISH COLUMBIA
CHRISTOPHER LOVESEY
NO. 4803

Chris Lovesey