

MUL1 Proposed Harvest Block Description – Squamish Community Forest

Proposed Harvest Area Location

Proposed block MUL1 is located on a sidehill within Ray Basin and is accessed from the G-Main and Ray Basin forestry roads. The Ray Basin road is accessed from the Mamquam River FSR at 6.5km, G-Line splits from the Ray Basin Road at 0.2km. The majority of the block is within the District of Squamish municipal boundary.

Forest Stand Description

The proposed harvest area (Block MUL1) consists of second growth coniferous forest that is approximately 60 years old. The terrain is characterized as broken and benched sidehill areas. Planned harvest areas contain gentle to moderately steep slopes (10% to 40%). Some steeper areas and flatter wet areas with sensitive soils around small streams have been designated as Wildlife Tree Retention Areas (WTRAs). Additionally, some of the areas of seepage and wet soils on flat benches and gentle slopes have been established as retention patches. The established WTRA and retention patches will not be disturbed during harvest and will serve to protect areas with wetter sensitive soils and contribute to maintenance of water quality.

The dominant canopy trees consist of approximately 40% Douglas Fir, 35% Western Redcedar and 25% Western Hemlock, with approximate heights of 30-35 meters and diameters at breast height of 30-70 centimetres. Merchantable size trees are present at various density ranging from 600 to 1000sph. Portions of the planned harvest area were previously spaced resulting in somewhat uniform density of similar sized trees. Portions not previously spaced contain a well-established understory sub-merch layer comprised primarily of western red cedar. These sub-merchantable stems range from 7.5cm to 20cm dbh and have heights ranging from 6-15m. Understory herb and shrub layers are variable with well established understory vegetation in areas with lower crown closure and increased light while other areas with high crown closure have sparse understory plant layers due to decreased light levels reaching the forest floor. There are scattered individuals and clumpy areas containing mature deciduous stems (Maple, cottonwood, alder).

There are several small stream features bisecting the block. Streams within the harvest boundary will have individual riparian management prescriptions developed.

Archaeological Potential

The Squamish Forest District Archaeological Overview Assessment (AOA) (Millenia Research 1997) ranks the area of the proposed blocks as low with some moderate potential areas. According to the Habitation Model for the Millenia Research 1997 AOA, the potential for habitation is low to moderate given limited presence of gentle to flat slope areas. The potential for presence of Culturally Modified Trees (CMTs) is low as the forests are less than 140 years old. Potential for rock art is rated low as there is a lack of rock faces and outcrops that would support rock art within the area being referred.

Cultural Designations

The proposed timber harvest area is not located within or adjacent to any Cultural Management Areas or Squamish Nation Siiyamín ta Skwxwú7mesh (cultural sites) as identified within the Sea to Sky Land and Resource Management Plan, nor within any Kwa kwayx welh-aynexws (Wild Spirit Places). The Raffuse Creek Siiyamín ta Skwxwú7mesh is located greater than 600m east of the planned harvest area.

Xay Temíxw Land Use Plan

Based on the Land Use Plan Map (First Draft May 22, 2001) for Xay Temíxw – Squamish Nation Traditional Territory Forest and Wilderness Land Use Study, as presented in the 2023 rebrand, the proposed MUL1 harvest area and roads are located within the Mamquam River Restoration Area subzone of the Forest Stewardship Zone.

Chance Find Procedure

The Skwúwú7mesh Úxwumixw (Squamish Nation) Chance Find Procedure - Guidelines for Archaeological Chance Find Management 2020 has been utilized during layout and engineering fieldwork. No suspect archaeological features or artifacts were noted. The Chance Find Procedure will be included in pre-works with contractors for the road reconstruction/construction and timber harvesting activities.

Riparian and Aquatic Habitats

The location of all streams within and adjacent to the block have been determined during block layout and associated field work. A Registered Professional Forester will assess each riparian feature and prescribe appropriate management strategies to maintain quality and flow of water resources. Prescriptions will utilize a variety of strategies to achieve water quality and riparian management goals including but not limited to stream side retention, establishment of streamside Machine Free Zones (MFZs), machine crossing restrictions, avoiding woody debris entry into stream channels, use of puncheon, etc.

Wildlife/Species at Risk

While the proposed harvest areas support a variety of wildlife species, there are no legally designated areas for the protection of biodiversity and wildlife within the proposed Community Forest harvest blocks and roads. The proposed blocks are not within or adjacent to any areas identified as containing critical habitat features necessary for the survival of any plant or animal species at risk, or for the winter survival of ungulate species.

A Registered Professional Forester has further assessed the proposed timber harvest and road areas for important wildlife habitat features and prescribed site level management strategies for existing habitat values where identified (e.g., retention of wildlife trees). A minimum of 10% of the total block area will be designated as Wildlife Tree Retention Area. WTRA have been located on areas where specific wildlife trees have been identified and where tree retention will contribute to management of other forest values within the unit (slope stability, water quality, visual impacts, etc).

Terrain Stability

Appropriate terrain stability assessments will be completed as required, as determined by a qualified professional. There have been no terrain stability concerns identified during field assessments and layout activities on this block.

Recreation

An approximately 130m section of an unauthorized mountain bike trail (Turbo Vision) runs through the southeastern corner of the block. This trail is not authorized for construction and has over steep sections which are not sustainable. Squamish Off-Road Cycling Association (SORCA) has been notified of the block plans around this trail and been informed that the Community Forest has no plans to manage or protect this particular trail. No further management consideration is expected to be needed for this trail.

Visual Quality

The area of the block has been assigned a Visual Quality Objective of Modification. The block may be visible from various forestry roads in the Mamquam valley. The block is not expected to be visible from neighborhoods in Squamish. The block is not expected to be visible from any significant public viewpoints. The block area will be partially to mostly screened from view by topography and existing forest cover. Individual retention trees and patches will further break up the expected views. Following harvesting the block will easily meet the criteria of modification assigned to the area and is expected to exceed the requirement and be consistent with the classification of "Partial Retention"

Wildfire

This block is not considered to be within the Wildland Urban Interface (WUI). It is approximately 3km to the closest developed area. Measures to mitigate post-harvest wildfire risk will include normal timber utilization combined with piling of woody debris for disposal, both at the roadsides and within the blocks. During debris piling the creation of 3-5 "critter piles"/ha will be prescribed. These small piles will provide habitat for small mammals, amphibians and various songbirds within the post harvest stand.

Harvest System

This block is planned to be harvested under a retention harvesting system. Retention on the block is comprised of aggregate retention patches both internal and external to the block boundary as well as individual or small clump (2-5trees) dispersed retention trees. Aggregate patches have been flagged with boundary ribbon and individual stem and small dispersed retention clumps will be marked in the field prior to harvest.

Retention across the block is targeting to retain 25% of the pre-harvest volume. The block harvest area is approximately 14.5ha, planned WTRA is 3.6ha and planned retention patches total 0.7ha. The combined 4.5ha of WTRA/retention is equivalent to ~22% of the block total area. Additionally, individual dispersed stems and small clumps of trees at variable densities ranging from 10 to 40sph (average 25sph) will be retained across the harvest area. Retention trees will be marked in the field prior to harvest start. All retention trees marked will be from the dominant / codominant canopy layers and trees with elevated wildlife habitat values will be prioritized for retention. Approximately 500 individual stems will be marked for retention across the block area. Assuming average current stocking of 900sph, the planned 25sph equates to 3% retention. Combined, the 22% retention located in retention patches/WTRA along with the 3-5% of total individual stems is equivalent to 25% of the pre harvest volume being retained across the block.

There is a well-established component of smaller western red cedar stems present across the stand in the understory canopy layers at various densities. These trees range in size from ~8m to 20m and dbh range from 12.5cm to 20cm. These cedar trees will not be marked for retention but the harvesting prescription will require retention of these immature stems as much as operationally possible. These cedar trees will be retained for ecological and structural diversity and to provide ongoing and future opportunities for cultural collection of cultural use cedar products.

A Retention harvesting system will be applied. Retention will provide habitat values such as thermal and security cover and nesting trees. Small patch openings will be interspersed with areas of variable retention with individual and small groups of mature trees to be retained. Trees identified during pre-harvest assessments as having high habitat values or wildlife features will be prioritized for retention. Retention of both mature and immature stems across the block area will maintain a level of ecological and structural

diversity across the harvested stand. Where operationally possible and safe to do so, individual stems and small areas of mature deciduous stems will also be retained. There will be no point in the block that is greater than 1 tree length from a retained, stem, clump or WTRA. Crown influence will remain across the entire block following harvest completion.

There are higher ecological value large logs and stumps present across the block at variable density. Many of these large features are in an advanced state of decay and are functioning as nurse logs maintaining natural vegetation communities and providing habitat for variety of plant and animal species. These features are artifacts of the original old growth forest type which was present prior to first pass harvesting 60-65 years ago. Harvesting crews will be trained to recognize increased value nurse logs and these features will be avoided as much as possible during harvest operations.

Silviculture

All areas harvested will be reforested with suitable mix of tree species as promptly as possible after harvest completion. Roads utilized for harvesting will have specific post harvest plans developed and will be seasonally deactivated if road use in the future is likely, or permanently deactivated and returned to a productive state if identified as a road not required for use for future harvesting opportunities.

The species mix for reforestation will be developed by a Registered Professional Forester based on field assessments. Tree species for reforestation will likely consist of a mix of Douglas-fir and western redcedar. It is expected that the blocks will infill naturally with a low to moderate density of western hemlock regeneration. Fill plants will be completed if seedling survival or natural infill are found to be insufficient.