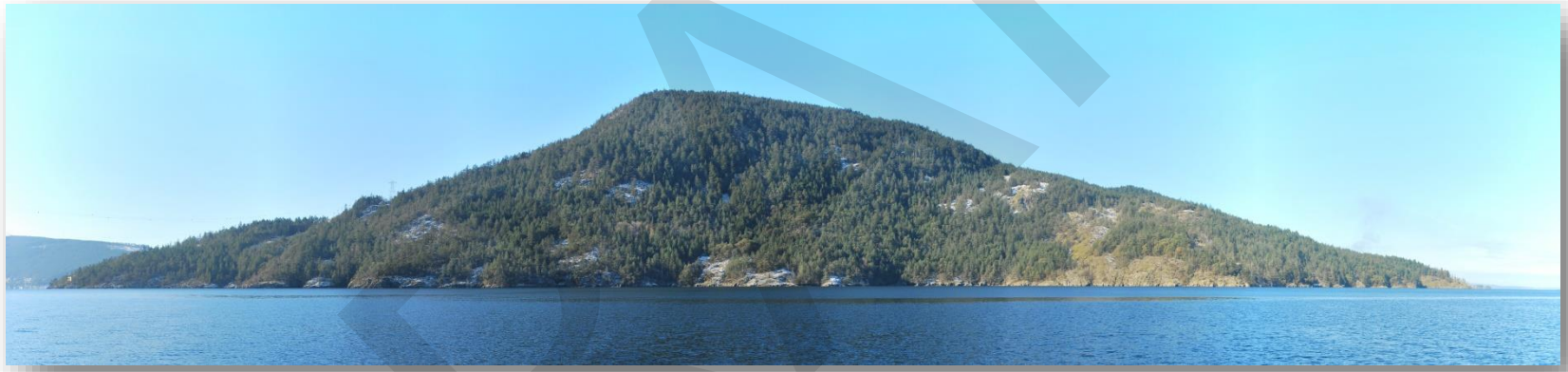
Visual Landscape Inventory
& Recommended Scenic Objectives
North Cowichan Municipal Forest Reserve



MUNICIPALITY OF NORTH Cowichan

November 2019

Table of Contents

Location 4
Executive Summary 5
Acknowledgement 7
History of the Municipal Forest Reserve 8
Update Rationale 9
Viewpoints and Visible Area 9
Managing Visual Quality in an Urban Interface Forest. 10
Stewardship of Visual Values in Forests 11
Foreground Landscapes 12
Recommended Visual Quality Classes 13
Visual Landscape Inventory Approach 14
Stoney Hill: 15
Mt. Tzouhalem: 15
Maple Mountain 17
Mount Prevost: 18
Mount Sicker 19
Mount Richards 20
Summary of Visual Sensitivity Unit Classifications 20
Existing Visual Conditions (EVC) 22
Visual Absorption Capability (VAC) 23
Biophysical Rating (BR) 24
Viewing Condition (VC) 25
Viewer Rating (VR) 26
Visual Sensitivity Class (VSC) 27
Recommended Visual Quality Classes (RVQC) 28
Visual Sensitivity Class – Recommended Visual Quality Class Equivalents 29
Observations 30
Appendix I – Viewpoint Index 31
Appendix II – Visual Landscape Attribute Summary Table 33

Appendix III - Visual Quality Objective Definitions 34

List of Illustrations

Figure 1 Municipal Forest Map 4
Figure 2 Mount Provost from Vpt. 303 6
Figure 3 Maple Mountain from Crofton Vpt. 330 7
Figure 4 Mt. Sicker from Vpt. 326 8
Figure 5 Visible Area Calculations 9
Figure 6 Maple Mountain from Maple Bay dock. Vpt. 292 11
Figure 7 Mount Tzouhalem from Vpt. 301 12
Figure 8 Mount Sicker from Cowichan Exhibition Grounds Vpt. 312 21

Location

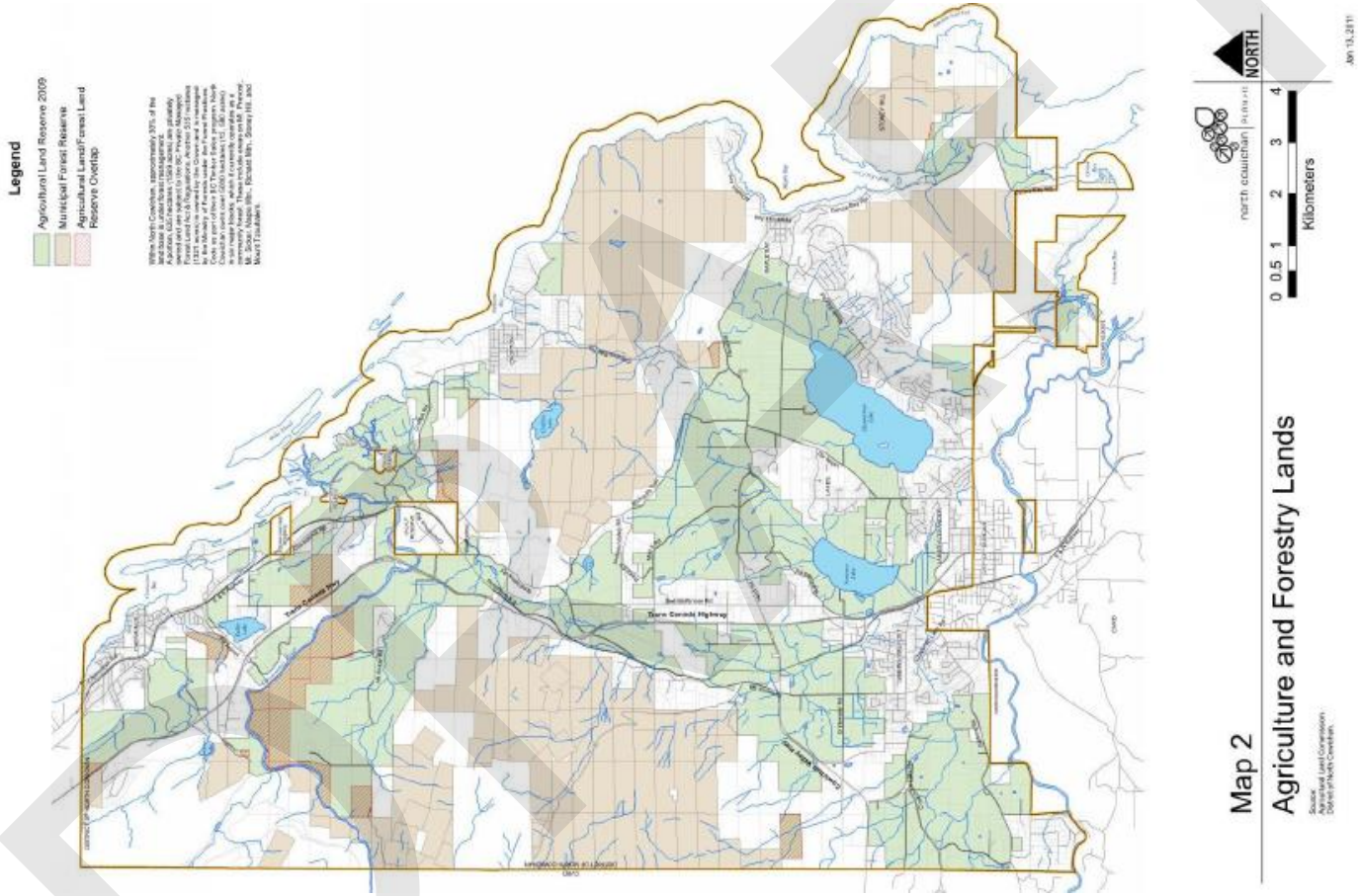


Figure 1 Municipal Forest Map

Executive Summary

This project updates a Visual Landscape Inventory (VLI) of the Municipal Forest Reserve previously completed by RRL Recreation Resources Ltd. (RRL) in 2000. The update has been undertaken by RRL in 2019.

The update provides current measures of visual quality of the Municipal Forest Reserve (MFR), including the Existing Visual Condition of the forest landscapes. The MFR was assessed from 50 public viewpoints located throughout the community, including from ocean locations from Sansun Narrows and Maple Bay that provide views of the Municipal Forest Reserve (MFR).

A series of photographic panoramas were taken from each viewpoint to assist with interpretation of landscape elements. The visible area of the MFR was assessed in the field, and further refined using viewshed analysis[1], where overlapping views from different viewpoints were combined to determine the extent of the visible area.

The VLI captures the visible landscape into units, termed Visual Sensitivity Units, VSU's. In each of these VSU's landscape condition, biophysical characteristics, ability to absorb visual changes and the sensitivity of each VSU to changes is assessed using the standards used to assess scenic landscapes in Provincial Forests.

This report summarizes the distribution of scenic landscapes associated Mount Prevost, Mount Sicker, Mt. Tzouhalem, Stony Hill, Mount Richards, and Maple Mountain. The MFR areas make up parts of these larger landscapes.

The project outputs include digital panorama files, viewpoint location files and viewpoint direction arrows, VSU shapefile and accompanying VSU area measures.

There are approximately 6,014 hectares of visible forest landscapes viewed from viewpoints throughout the Cowichan Valley and of lying coastal waters between Crofton and Cowichan Bay. Of this larger visible area, 3,334 ha are within the MFR.

[1] Google Earth Viewshed Analysis tool

The VLI Re-Inventory provides a set of recommended Visual Quality Classes (rVQC's) for the visible area. The rVQC's can assist the Municipality in assigning Visual Quality Objectives (VQO's) for the visible areas of the MFR. The difference between a rVQC and a VQO is the rVQC is strictly an assessment based on landscape values, whereas a VQO incorporates a wide range of forest values and incorporates stakeholder and First Nations inputs to arrive at a scenic objective.

A stakeholder engagement process similar to that used by the Province for reviewing rVQC's and for establishing VQO's may provide a useful framework that the Municipality may use as a guide for establishing VQO's[2].

The quality or Existing Visual Condition (EVC) of the MFR landscapes is high, with approximately 53% of the landscapes being in a state of Partial Retention and 42% is in Retention.

The rVQC's prepared in conjunction with the 2019 re-Inventory reflect the fact that viewer expectations are high, and forest landscapes remain an important and integral element in the community.

Figure 2 Mount Provost from Vpt. 303

[2] The Government Actions Regulation (GAR) provides the criteria and processes for the creation of localized areas that require special management of certain forest values. These values include wildlife, fish, water quality, visual quality, stream and lake sides and recreation. The regulation also provides for the creation of objectives for managing these areas.

Acknowledgement

Project support was provided by Shaun Mason, R.P.F., Municipal Forester.

Project funding was provided by the Municipality of North Cowichan.

This report was compiled by RRL Recreation Resources Ltd.

Figure 3 Maple Mountain from Crofton Vpt. 330

History of the Municipal Forest Reserve

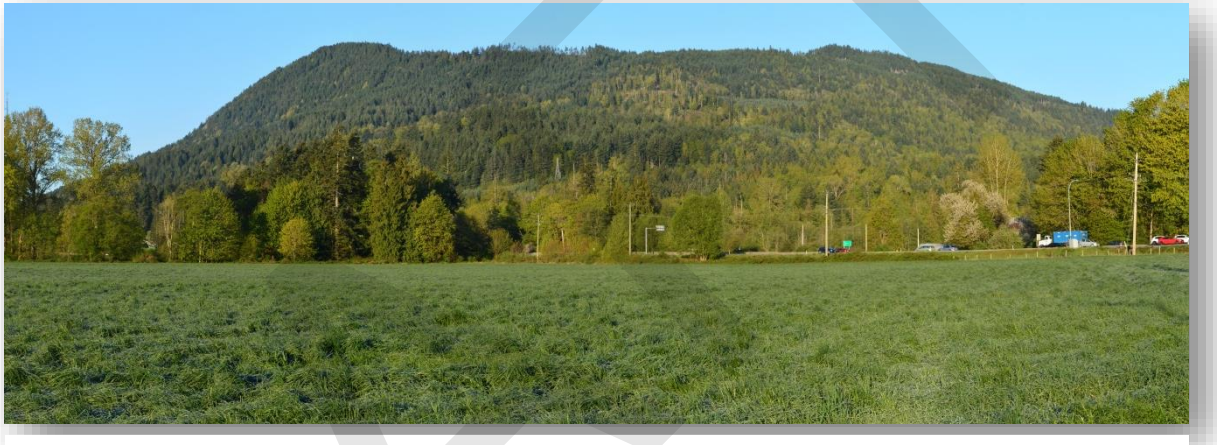


Figure 4 Mt. Sicker from Vpt. 326

The Municipality established its Community Forest in 1946. These lands remained un-managed until the 1960s when holdings were divided into ten woodlots.

These woodlots were harvested by local operators by "diameter limit cutting," which permitted the logging of trees greater than a set diameter. This management of the Forest Reserve continued until 1981, when the Municipality established a Forestry Department overseen by the Forestry Advisory Committee (FAC).

The FAC continues to operate today, and is made up of three elected officials, three appointed volunteer foresters, and three Municipal staff. In the last twenty years, the land base has been managed intensively. Current logging practices are now patch-cut with green tree retention, and all harvested areas are planted.

The community forest consists of six major land holdings: Mount Prevost, Mount Sicker, Mt. Tzouhalem, Stony Hill, Mount Richards, and Maple Mountain. This working forest is managed for multiple uses, including forest harvesting, recreation, forest education, domestic water supply, visual landscape, and economic development. The land base is managed to the intent of the *Forest Practices Code,* with audits of our operation.[3]

[3] https://www.northcowichan.ca/EN/main/departments/parks-recreation/forestry/History.html

Update Rationale

Generally, the extent of areas of a forest that are visible tend not to change significantly unless new viewing opportunities develop, such as from a new trail, or a new housing development. New views can also open up when foreground screening is removed, or gaps are made that afford new views.

In the case of the MFR, views from the water, main roads and throughout much of the community have remained relatively unchanged. However, there are some new viewpoints, such as from the Cowichan Exhibition Grounds and the Vancouver Island Motorsport facility.

Viewpoints and Visible Area

How a forest landscape is viewed is important. Is it a glimpse view, or more direct and sustained. Is a landscape viewed from one location and from nowhere else? These different viewing opportunities guide the application of forest landscape design. For the majority of the viewpoints used in this assessment, they offer unobstructed, direct and sustained views of the Municipal Forest Reserve.

An effort has been made to capture views from viewpoints that afford a fairly wide range of views of the MFR and are representative of how the forest is viewed from the community. From these points, visible area measures have been made, indicating the extent of the visible areas.

In this VLI update, 50 different viewpoints were used to capture the visible areas of the MFR. The majority of the MFR is visible from difference locations throughout the community.

In addition to field photography and mapping, the visible area has been assessed using Google Earth's Viewshed Analysis Tool, which loads high resolution data surrounding place marks, or in this instance, the viewpoints which provide cumulative views of the MFR.

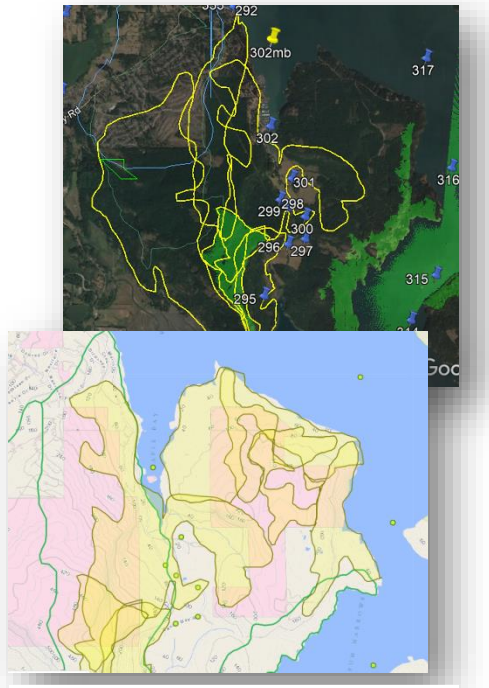


Figure 5 Visible Area Calculations

Managing Visual Quality in an Urban Interface Forest.

Management of scenic resources is simplified when all of a landscape is within a single tenure. In such cases, the temporal changes in visual quality that occur as the forest cycles through the harvest and regeneration phases can be coordinated by a single land or resource manager.

However, as is the case with the Municipal Forest Reserve, and with many forest landscapes, there are multiple tenures and land uses visible on the same landscape. There are also multiple viewpoints. This creates both challenges and opportunities.

The main challenge is that other activities that reduce or deplete visual quality are outside of the control of the municipal forest, such as when a new residential development, gravel quarry, hydro line or other infrastructure is established on the same landscape but outside of the MFR. This means that where a scenic objective has been approved to guide visual impacts of forestry activity, the latitude available for managing visual quality may be reduced.

There are some advantages to working with a landscape where there are multiple tenures. In the Cowichan landscapes, there is a mix of visual quality resulting from residential, industrial and agricultural activity. Unlike a large scale uninterrupted forest landscape (i.e. portions of Clayoquot Sound, Desolation Sound, etc.) Cowichan landscapes exhibit a mosaic of conditions which may in some instances provide visual design opportunities.

As with multi-use forests, visual or scenic resources are but one of the resources present. Integration of the different resources is part of overall forest stewardship practice. In BC, the Forest and Range Practices Act, FRPA, and the Forest Practices Planning Regulation, FPPR, provide the main frameworks that are used to establish objectives and guide best practices for the range of resources present in the forest.

For scenic resources, a key guide is the Visual Landscape Design Manual[4] which outlines approaches to interpreting landform characteristics to take best advantage of the natural lines of force present as well as utilizing natural openings and other elements and fit forest harvesting into the landscape and reduce the visual impact.

[4] Visual Landscape Design Manual. Ministry of Forests/Recreation Branch 1994

Stewardship of Visual Values in Forests

The Municipality of North Cowichan is one of the few communities in North America that owns and manages forest lands for the benefit of residents. The Municipal Forest Reserve (MFR) is +/-5,000 ha in size, or 25% of the land base in North Cowichan.[5]

The MFR has long been managed for a range of uses and values, including scenic resources, which were first mapped in 2001 and formally acknowledged in MFR planning and development documents.[6]

Management of visual quality in forests in BC was initiated around 1981 with the introduction of the Forest Landscape Handbook, sometimes referred to as the “Green Book” This was a pioneering publication put out by the Ministry of Forests. It initiated a transition in how the visible impacts of forest development, primarily blocks and roads, were managed from key viewpoints such as recreation sites, highway rest stops and communities and other points generally accepted as offering publicly accessible views of forest landscapes.

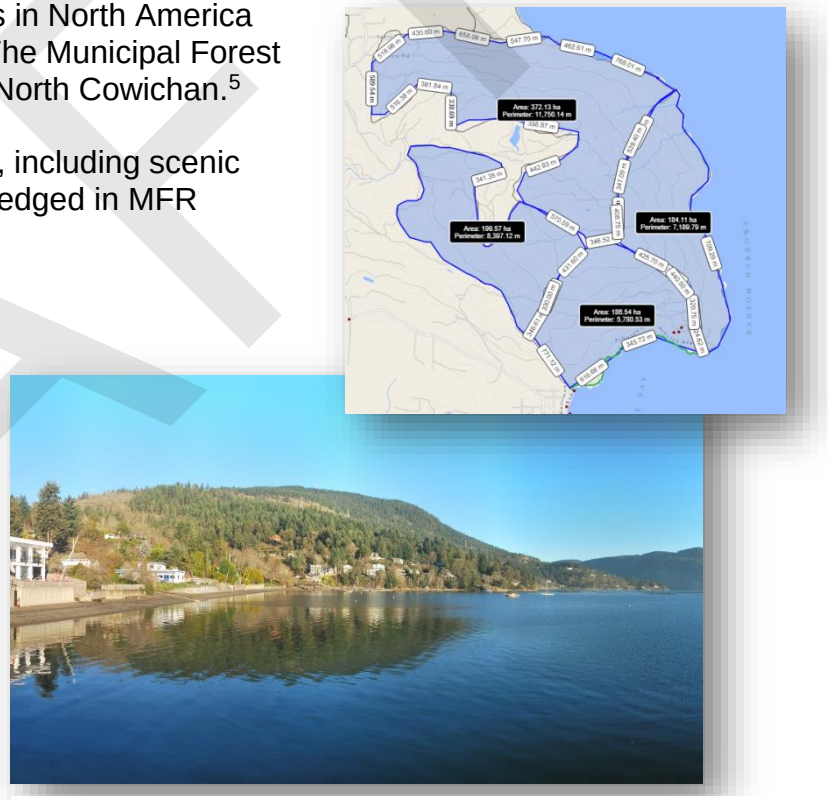


Figure 6 Maple Mountain from Maple Bay dock. Vpt. 292

The concept of visual resource management is straightforward in principle, essentially fitting forest development into the natural and topographic features in the landscape to reduce the visible impact. Over time, the approach has been refined through study of viewer perception and through application of digital tools that are now commonplace in forest stewardship.

[5] https://www.northcowichan.ca/EN/main/community/current-topics/municipal-forest-reserve.html
[6] Forest Reserve Forest Development Plan 1997-2003.

Foreground Landscapes

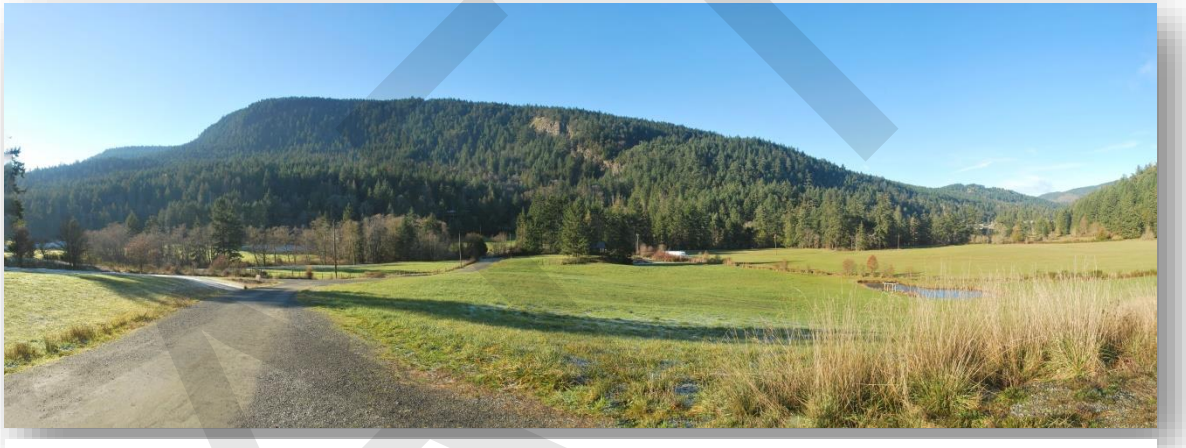


Figure 7 Mount Tzouhalem from Vpt. 301

Given the urban interface nature of the Municipal Forest Reserve, where viewing distance is frequently less than one kilometer, some mention of approaches to stewardship of foreground visual quality is merited.

The visual impact of forest activity viewed in the foreground, such as alongside a road, can be challenging to manage and the majority of concerns that are expressed about the visual impacts of forest activity relate to roadside and foreground landscapes.

Options for management of roadside visual quality include continuous foreground screening, or using an irregular opening screen where trees are retained to break up and direct views into the opening. Roads leading into the block can be angled or curved. Additionally, the length and depth of openings are effective methods for changing viewing opportunities.

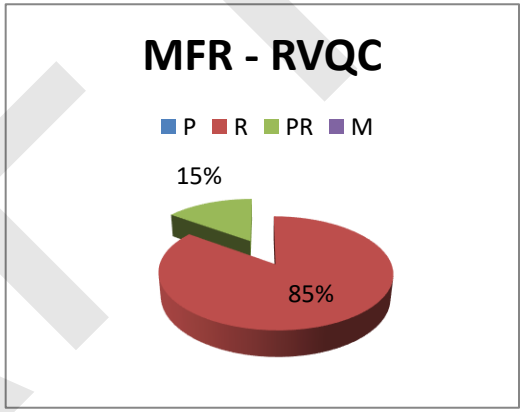
View perception research indicates that coarse woody debris, i.e. stumps, branches, have the greatest negative visual impact, reducing viewer acceptance of the alteration[7]. Where forest landscapes are viewed solely from a roadside, and where it is practical to retain a foreground screen, (wind firm for example) then retention of a foreground screen is most effective. Later removal of the foreground screen will reveal newly established forest.

Increased acceptance of removal of forest alongside a roadside can result from establishing a roadside trail in the location. Examples include Tofino and Port McNeill (currently in progress) where trails parallel the highway.

[7] MFLNRO Road Side View Perception Study 2006

Recommended Visual Quality Classes

The MFR VLI Update includes a set of recommended Visual Quality Classes (rVQC's). The purpose of these rVQC's is to provide the Municipality with a base reference to guide formalizing the level of scenic quality to be maintained on MFR landscapes over time.



The rVQC's are based on an analysis of inventory attributes, in particular the Visual Sensitivity Class ratings. The mapping of visual polygons (Visual Sensitivity Units) and their ratings are found in the detailed mapping of the VLI Re-Inventory.

On Crown Forest Lands, the Province uses a highly structured, rigorous and formal review, stakeholder and First Nation engagement process to move from the rVQC's to formally established Visual Quality Objectives (VQO's). [8]

The Municipality may wish to develop a similar engagement process to arrive at final Visual Quality Objectives (VQO's) for the MFR.

[8] The Government Actions Regulation (GAR) provides the criteria and processes for the creation of localized areas that require special management of certain forest values. These values include wildlife, fish, water quality, visual quality, stream and lake sides and recreation. The regulation also provides for the creation of objectives for managing these areas.

Visual Landscape Inventory Approach

Visual Landscape Inventory (VLI) comprises two main tasks,

1) Delineation of the scenery that is visible and,

2) Classification of that scenery in a manner consistent with provincial standards.

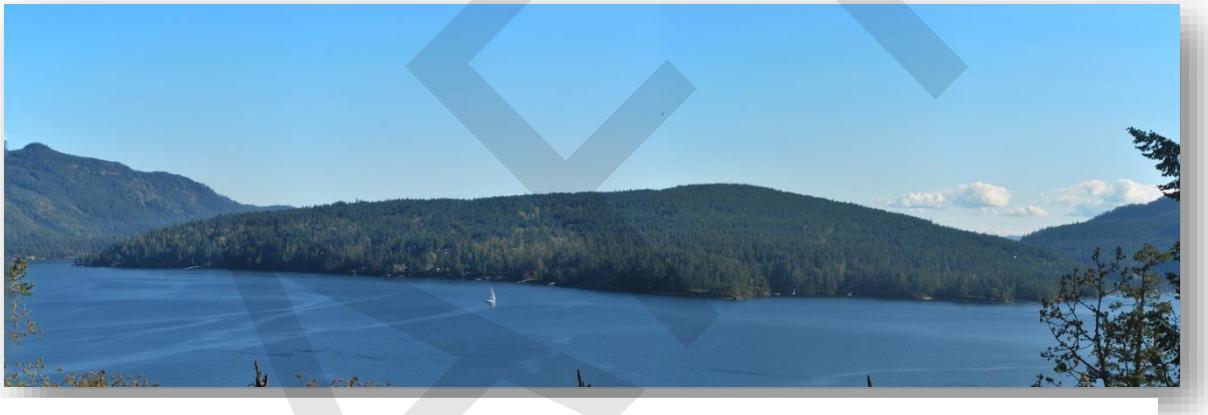


Figure 8 Stoney Hill from Arbutus Point Vpt. 334

Some of the first VLI's were completed in British Columbia in the late 1980's and they included what is referred to a Visual Quality Objectives.

The VLI for the Municipal Forest Reserve was first completed in 1991[9] and was used to establish the Visual Quality Objectives (VQO's). These VQO's have guided the management of visual resources in the MFR for the past 28 years.

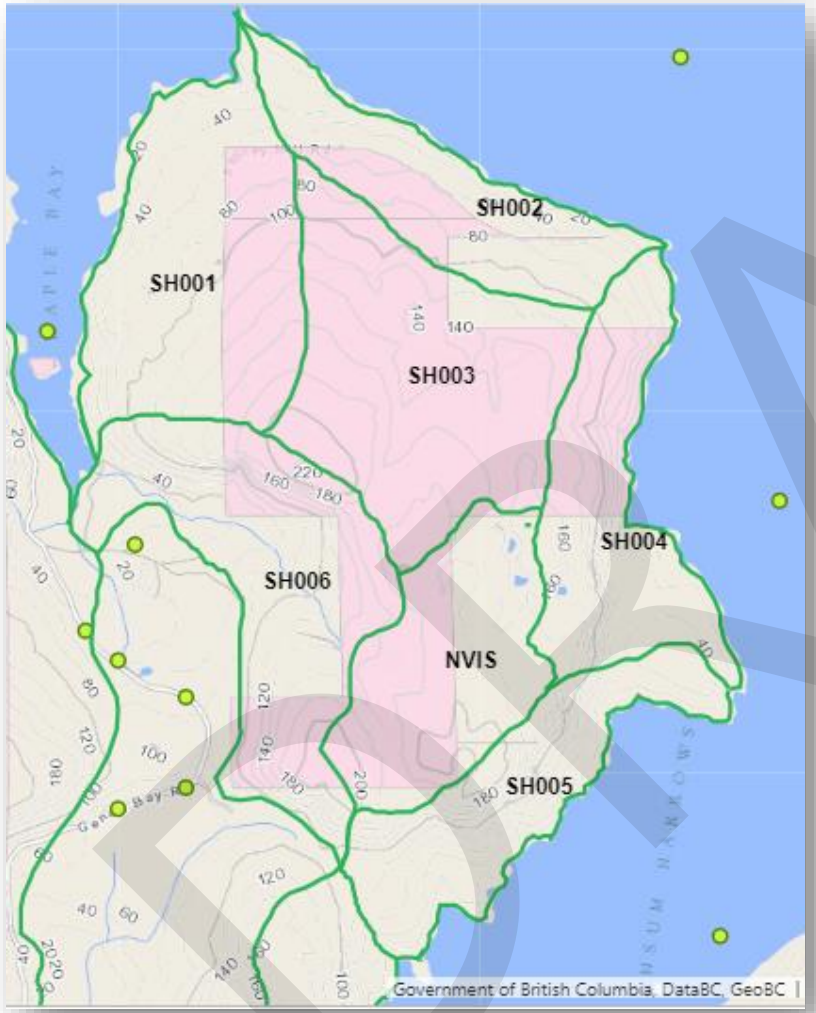
The re-inventory updates the visual resources data measures to reflect changes in the condition of the scenery. It also updates the viewer ratings so that they are in alignment with current expectations.

The Google Earth visible area analysis tool has been used to assist with the accurate delineation of the visible landscape.

A comprehensive, 67 slide, PowerPoint overview of Visual Landscape Inventory and Visual Resource Management process used by the MFLNRORD[10] is available here: VLI In Review .

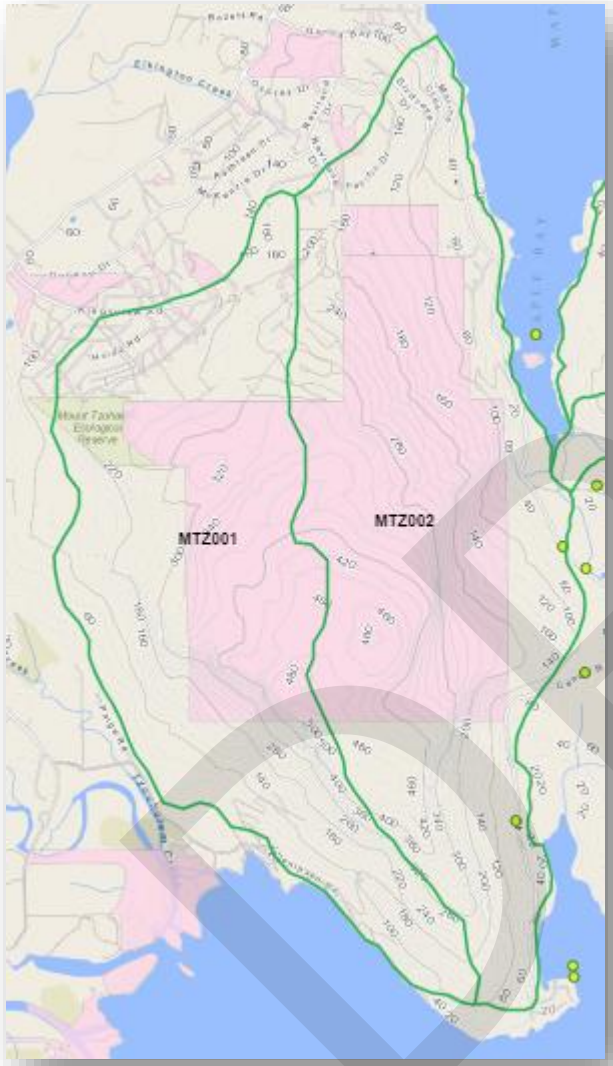
[9] Previous VLI for this same area was completed by RRL Recreation Resources Ltd. in 1991.
[10] MFLNRORD - Ministry of Forests, Lands, Natural Resource Operations and Rural Development

Stoney Hill:



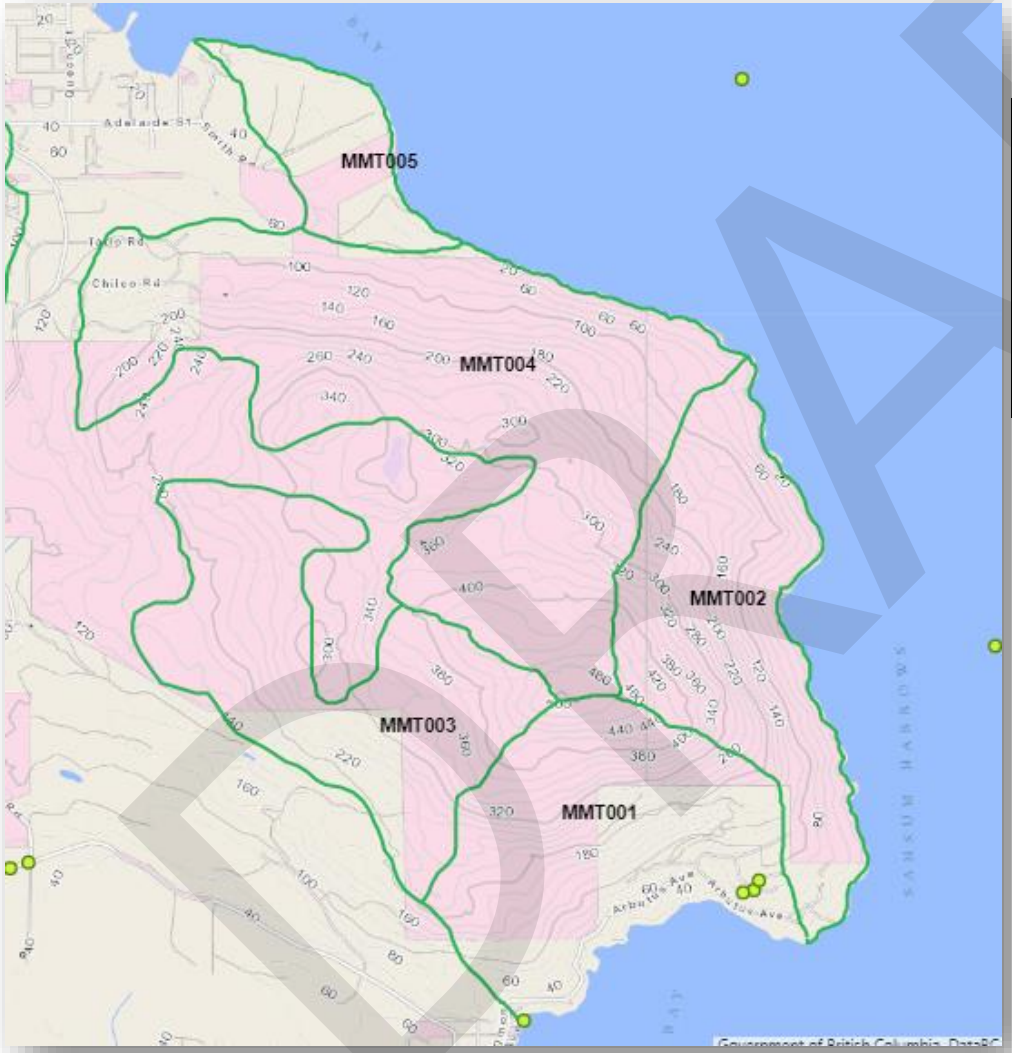
VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
STHL-001	R	M	M	H	H	2	R	126	42.2
STHL-002	R	M	M	H	H	2	R	73	18.5
STHL-003	R	M	M	H	H	2	R	142	133.0
STHL-004	R	M	H	H	H	2	R	86	27.9
STHL-005	R	M	H	H	H	2	R	79	.08
STHL-006	R	M	M	H	H	2	R	129	49.4
NVS	NV	NV	NV	NV	NV	NV	NA	88	42.3
Total								**635**	**313.3**

Mt. Tzouhalem:



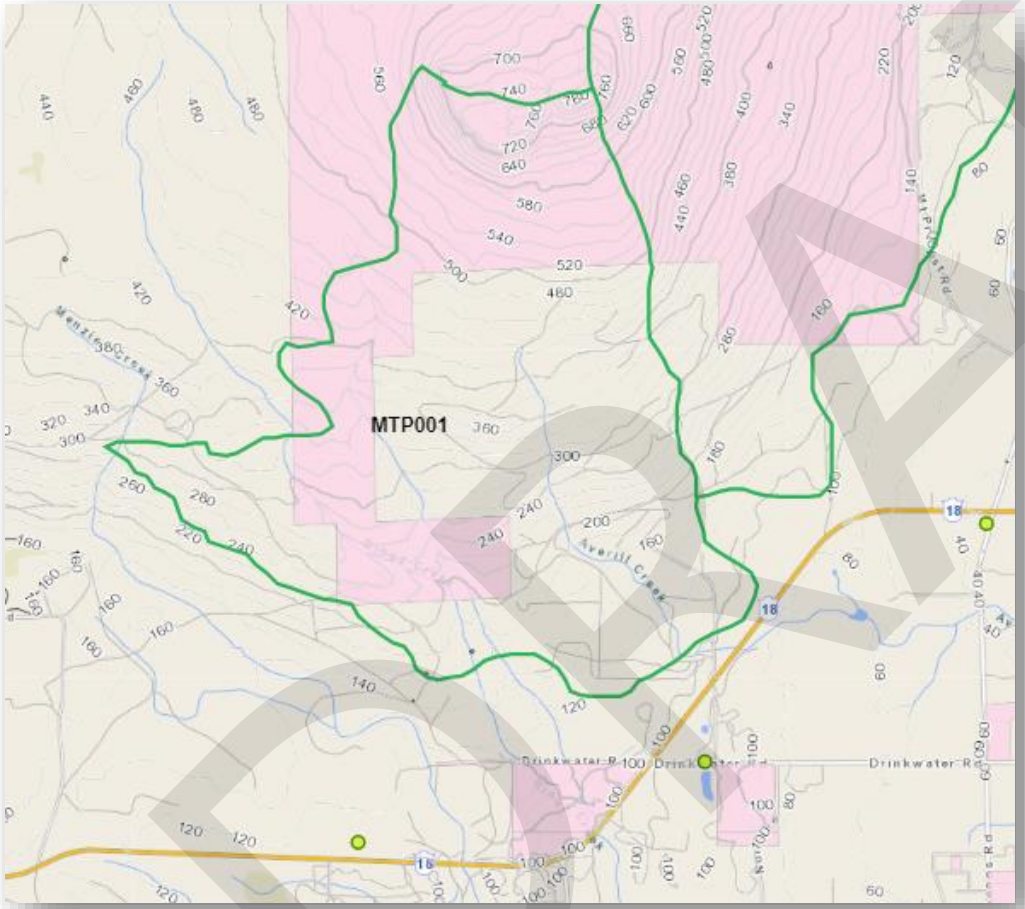
VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
MTZ001	M	M	H	H	H	2	R	509	171.0
MTZ002	PR	M	H	H	H	2	R	675	335.3
Total								**1,184**	**506.3**

Maple Mountain



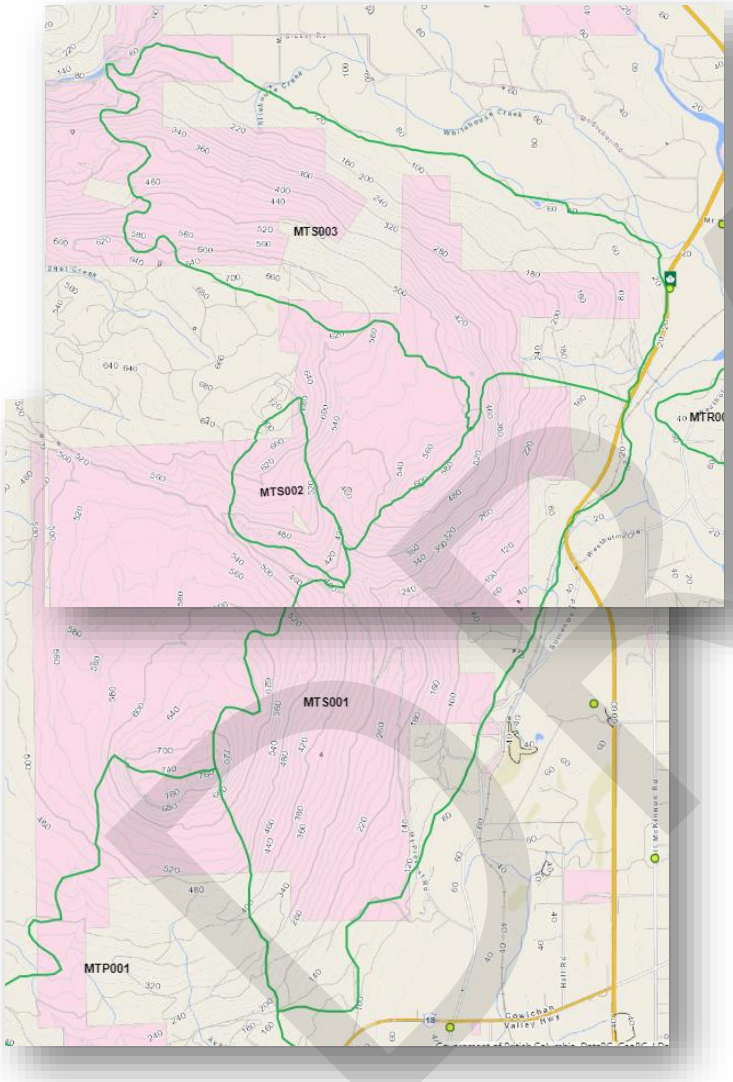
VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
MMT001	PR	M	H	H	H	2	R	186	95.8
MMT002	R	M	H	H	H	2	R	184	171.8
MMT003	R	M	M	H	H	2	R	195	162.4
MMT004	R	M	M	H	H	2	R	372	329.6
MMT005	PR	H	M	H	H	2	R	63	13.5
Total								**1,000**	**773.1**

Mount Prevost:



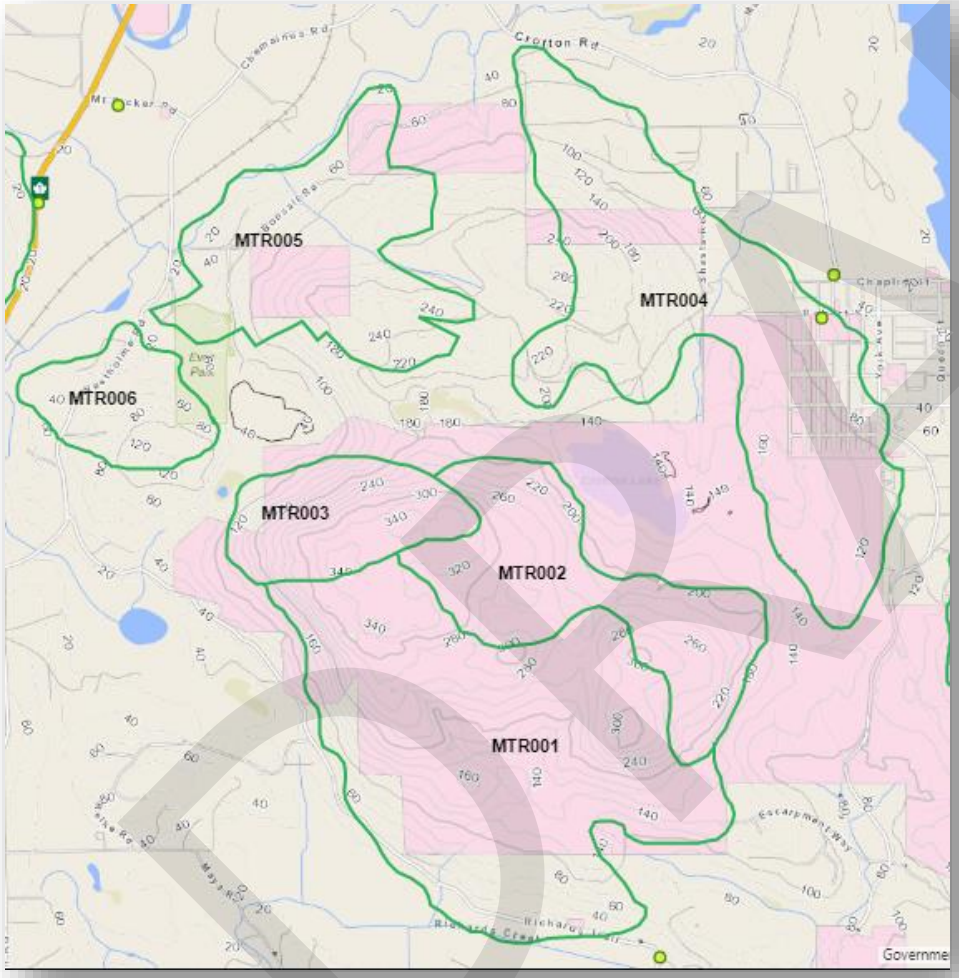
VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
MTP001	PR	M	H	H	H	2	R	496	180.4
Total									180.4

Mount Sicker



VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
MMS001	R	M	M	H	H	2	R	282	277.3
MTS002	R	M	M	M	H	2	PR	83	77.7
MTS003	PR	M	M	M	H	2	PR	764	419.5
Total								**1,129**	**774.5**

Mount Richards



VSU	EVC	VAC	BR	VC	VR	VSC	rVQC	Area (Ha)	MFR (Ha)
MTR001	R	M	M	H	H	2	R	332	258.6
MTR002	R	M	M	H	H	2	R	134	134
MTR003	R	M	M	H	H	2	R	72	67.8
MTR004	PR	M	M	H	H	2	R	288	128.8
MTR005	PR	M	M	H	H	2	R	145	21.9
MTR006	PR	M	M	H	H	2	R	57	0
Total								**1,025**	**611.1**

Summary of Visual Sensitivity Unit Classifications

The VLI Re-Inventory provides current and accurate measures of the elements that make up the forest scenes or landscapes.

It also provides guidance as to the level of landscape quality to be maintained via a Recommended Visual Quality Class, (RVQC's) or an appraisal of the level of visible alteration that would be accepted in a particular landscape or scene[11].

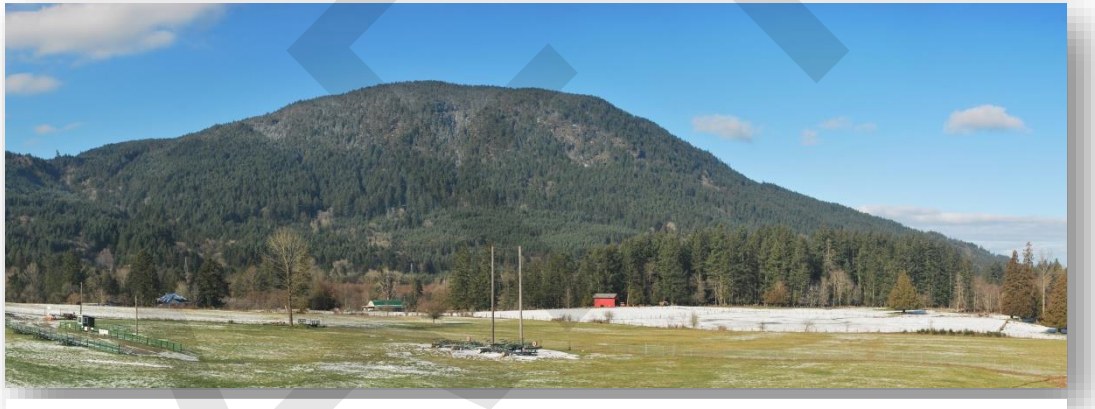


Figure 9 Mount Sicker from Cowichan Exhibition Grounds Vpt. 312

The following section summarizes the six key outputs of the Visual Sensitivity Unit (VSU) Classification forms.

Each VSU form has 34 units of measure for each VSU, which are summarized in six key measures:

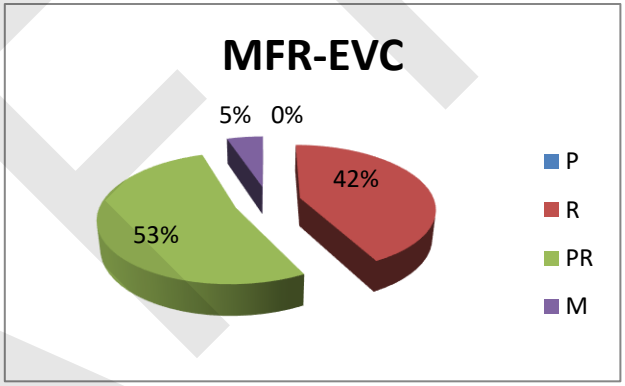
- EVC - Existing Visual Condition,
- VAC - Visual Absorption Capability,
- BR - Biophysical Ration,
- VR - Viewing Condition,
- VC - Viewer Rating
- VSC - Visual Sensitivity Class.

[11] The Province of BC has conducted several studies to determine the levels of visual change that are accepted by the viewing public. These include: 1) BC Ministry of Forests, 1994 - A First Look at Visual Effective Green-up in British Columbia: A Public Perception Study – Recreation Branch. 2) 1995-Visual Impact Assessment Guidebook-Recreation Branch BC Ministry of Forests, 3) 1997 - Visual Impacts of Partial Cutting Forest Practices Branch. BC Ministry of Forests.

Existing Visual Conditions (EVC)

Existing Visual Condition (EVC) is a measure of the present level of landscape alteration caused by human activities. EVC is expressed as a Visual Quality Class[12].

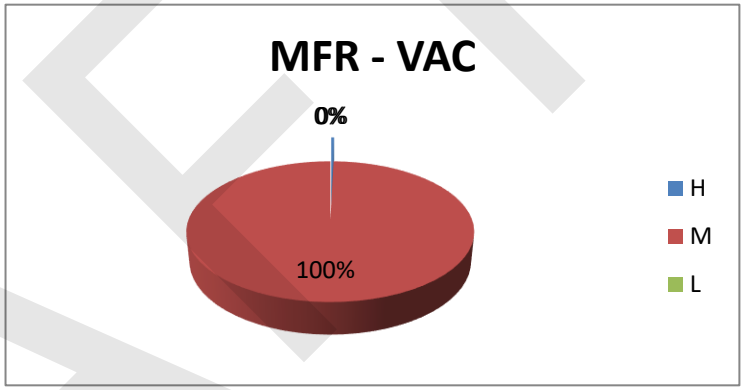
Overall scenic quality in 2019 in the Municipal Forest Reserve, as measured by Existing Visual Condition, is high, with 95% of the visible landscape having an EVC rating of Partial Retention (PR) or Retention (R).



[12] A calculated measure of the level of human-made visible alteration that would be acceptable for a given VSU.

Visual Absorption Capability (VAC)

VAC is a measure of a landscape's ability to absorb alteration and maintain its visual integrity. Landscapes have varying abilities to absorb human caused alterations due to their biophysical characteristics.

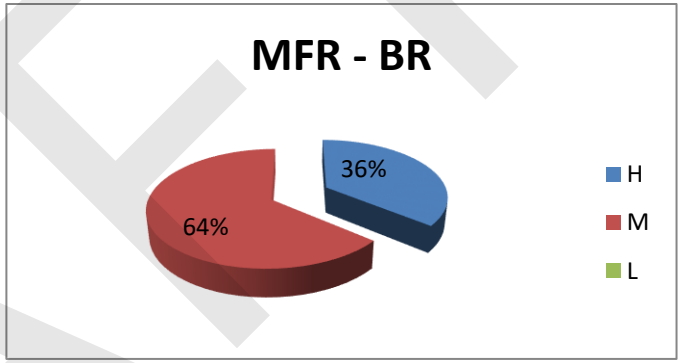


VAC tends to remain relatively stable over time as the main factors contributing to VAC (slope, aspect, surface variation and rock/soil/vegetative variety) remain stable, excepting the rock/soil/vegetative measure.

The majority of the MFR is recorded to have a moderate VAC. However, many of the landscapes have parts within them which are relatively steep. This requires forest harvesting to be carefully designed aesthetically to ensure meeting the VQO's with particular attention being given to south aspect landscapes that are also subject to high viewer numbers and direct, sustained views.

Biophysical Rating (BR)

The Biophysical Rating (BR) is a measure of the degree to which the biophysical characteristics of a VSU create visual interest and draw people's attention. The more biophysical characteristics create visual interest and draw people's interest, the more sensitive the VSU is to change. This equates to an indicator of landscape scenic attractiveness.



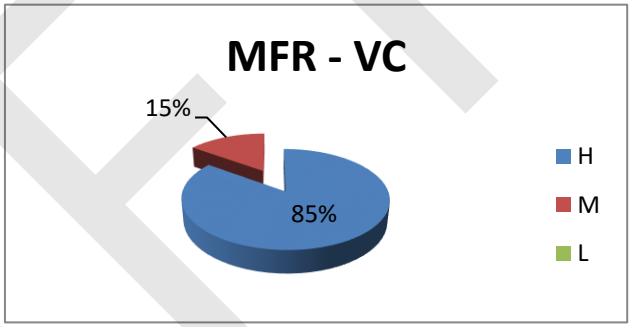
2019[13] BR measures show that 64% of scenery in the MFR has a Moderate BR rating, 36% has a High BR, providing a clear indication of the intrinsic scenic attractiveness of the area.

In the MFR there is a concentration of high quality scenic resources, combined with sheltered waters, numerous residential areas, facilities, parks and public viewpoints.

[13] BR measures are not available from 1999 as they were not assessed at that time.

Viewing Condition (VC)

Viewing Condition (VC) is a measure of the condition under which the landscape is most commonly viewed.



Distance, Frequency, Duration and Viewing Angle are the four measures that combine to create either a low, moderate or high viewing condition. Viewing of MFR landscapes is from points throughout the community, as well as from the ocean. In most cases viewing distances are relatively close and contributes to the visible areas being rated moderate or high.

Because there are an almost infinite number of viewpoints on the water's surface, it is possible to view a landscape from varying distances and numerous locations. Additionally, duration of viewing is an important factor, and where sustained views of a landscape occurs, as is typical from slower moving vessels travelling between Sansun Narrows, Maple Bay and Chemainus, sustained or high, viewing duration occurs. View duration from anchorages, marinas and fishing areas, are obvious locations where lengthy view durations occur.

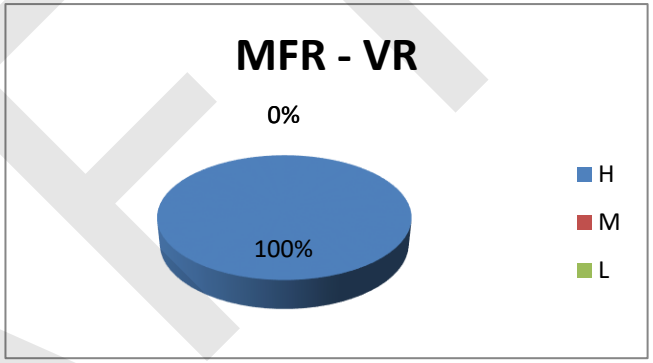
Available viewing angles from the water are typically direct unless topography limits views to oblique angles. Visitors onboard vessels are typically travelling at a rate that enables sustained views, and view angles shift as viewers approach, come parallel, then pass scenery along their route.

From the 50 public viewpoints used to assess the MFR visual resources, many of the viewpoint locations provide direct, sustained views. The TransCanada Highway has high use and affords views of significant portions of the MFR. Additionally there are residential areas, such as Maple Bay and Arbutus Point, with views south to Stony Hill. There are facilities such as the Motorsport Track and the Cowichan Exhibition Grounds with views to Mount Provost, and there are views to Mount Tzouhalem, Stony Hill, Maple Mountain and Mount Sicker from both residential areas and from the ocean.

Viewer Rating (VR)

VR is a measure of the number of people likely to view the Visual Sensitivity Unit and the preferences, expectations or concerns they have about how they would like the VSU to look.

Viewing Rating (VR) is driven by a combination of the number of viewers and their expectations. In the MFR, 2019 viewer numbers tend to rate moderate to high, and expectations of most viewers is high.



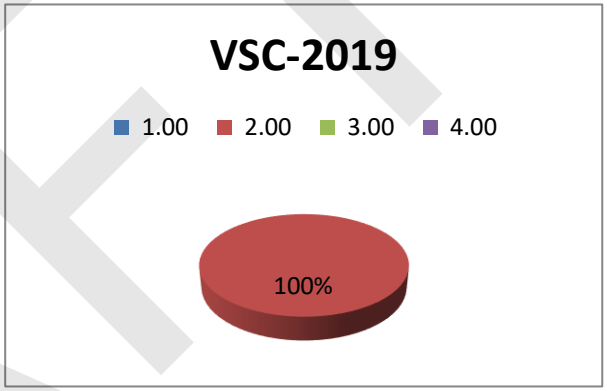
Visual Sensitivity Class (VSC)

VSC[14] is a measure of the sensitivity of a landscape to visible changes.

It is an assessment of the likelihood that carrying out forest practices or other resource developments in the VSU would give rise to some degree or kind of criticism or concern.

The VLI classification system effectively identifies appropriate visual stewardship levels via determination of VSC's.

The majority of the MFR's scenic areas fall in the high visual sensitivity (VSC's 2). Management of visuals is clearly important.



[14] VSC 1-Very High, VSC 2-High, VSC 3-Moderate, VSC 4-Low, VSC 5-Very Low

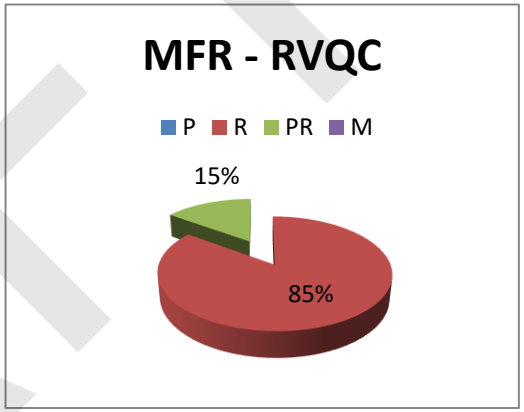
Recommended Visual Quality Classes (RVQC)

RVQC's are a default-calculated measure of the level of human-made visible alteration that would be acceptable for a given VSU.

RVQC's are intended to provide guidance to the Municipality for making any potential VQO changes.

A significant (85%) portion of the visible landscape has a rVQC of Retention.

Retention landscapes tend to be focal, frequently viewed, south aspect and associated with higher value recreation settings(facilities, residential areas) with accompanying increased viewer sensitivity and higher expectations of visual quality.



Visual Sensitivity Class – Recommended Visual Quality Class Equivalents

The default VSC-RVQC measures[15] provide a link between the polygon's visual sensitivity and a default VQO.

VSC - RVQC Relationship Table

VSC – 1	VSC – 2	VSC-3	VSC-4	VSC-5
P-R	R-PR	PR-M	M-MM	M-MM

The relationship table provides a starting point for the Municipality decision making process on VQOs. Final VQO decision is influenced by public, First Nations, and stakeholder input.

[15] H. Benskin Memo 1997– This memo laid out the relationship between Visual Sensitivity Classes (VSC's) and Recommended Visual Quality Objectives (RVQC's).

Observations

The scenic quality of the landscapes in which the MFR is located is generally high, and the most significant visible impacts on these landscapes are a result of residential and agricultural development. The MFR areas lie within larger landscapes units having a mixture of uses and tenure. This urban interface environment means control of visual changes on these landscapes is not wholly within the control of one tenure holder and as such any visible alterations in the MFR will not be in isolation but will be viewed in combination with the larger landscape.

In the visible landscapes there are strong skyline forces which may be drawn upon and reflected in the design of forest harvesting openings. Additionally, there are strong topographic features, where creeks draws and rock outcrops break the landscape into distinct landforms. Visual impacts should be designed to minimize disruption of natural force lines that are present and reference to the Forest Landscape Design Manual is advised[16].

Visually, the MFR presents a mosaic of different textures and colours resulting from a history of forest harvest and regeneration, augmented by naturally occurring rock outcrops as are seen in most areas of the MFR. Topography is variable, as is aspect. Viewing distances are often short, and viewing direction is often direct and sustained, as from locations such as the Cowichan Exhibition Grounds or travelling towards Crofton on the Saltspring Island Ferry.

In planning forest development in visible areas of the MFR, a pre-harvest, Visual Impact Assessment, or VIA, should be considered. A VIA simulates, in perspective view, the visual effects of proposed timber harvesting and road construction or modification operations on the scenic landscape.

Pre-harvest visual impacts should be assessed from several viewpoints, and planned harvest openings should be designed from public viewpoints which offer the best direct, unobstructed view of the planned opening. The Visual Impact Assessment Guidebook[17] produced by the BC Forest Practices Branch outlines best practices in terms of how to manage forest landscape resources. Following the protocols outlined in the VIA Guidebook would be consistent and in alignment with the approaches undertaken with regards stewardship of forest landscapes on Crown Land throughout the Province.

[16] Visual Landscape Design Training Manual. BC Ministry of Forests - Forest Practices Branch Forest Practices Branch. 1981 https://www.for.gov.bc.ca/hfd/pubs/docs/mr/Rec023.htm
[17] Ministry of Forests, Forest Practices Branch. 2001. Visual Impact Assessment Guidebook. 2nd ed. For. Prac. Br., Min. For., Victoria, B.C.

Appendix I – Viewpoint Index

Viewpoint #	Date/Time	Lat/Long	Pano Image #'s	Viewpoint Location Description
291	2018-12-05 14:19	N48 44 33.8 W123 37 35.6	1723-1734	Cowichan Bay Marine Gateway Park east to Mount Provost
292	2018-12-06 10:22	N48 48 53.4 W123 36 33.9	1425-1442	Maple Bay Dock north to Maple Mountain and Arbutus Point
293	2018-12-06 10:58	N48 45 35.3 W123 35 49.6	1443-1452	Genoa Bay Marina west to Mount Tzouhalem
294	2018-12-06 11:00	N48 45 33.2 W123 35 49.4	1453-1460	Genoa Bay Marina north to Stony Hill, east to Grouse Hill
295	2018-12-06 11:22	N48 46 04.8 W123 36 07.3	1463-1468	Genoa Bay Road north to Stony Hill
296	2018-12-06 11:29	N48 46 35.0 W123 35 46.1	1469-1474	Genoa Bay Road east to Stony Hill
297	2018-12-06 11:36	N48 46 38.0 W123 35 31.1	1475-1479	Genoa Bay Road west to Mount Tzouhalem
298	2018-12-06 11:52	N48 47 00.7 W123 35 53.0	1481-1489	Genoa Bay Road north to Maple Mountain and east to Stony Hill
299	2018-12-06 12:02	N48 46 56.3 W123 35 45.8	1490-1495	Genoa Bay Road north to Maple Mountain and east to Stony Hill
300	2018-12-06 12:14	N48 46 51.0 W123 35 31.3	1496-1499	Genoa Bay Road northwest to Mount Tzouhalem
301	2018-12-06 12:26	N48 47 13.1 W123 35 42.4	1508-1515	Genoa Bay Farm 5881 Genoa Bay Road west to Mount Tzouhalem
302	2018-12-06 12:36	N48 47 43.8 W123 36 01.3	1516-1527	Maple Bay Marina, Gas Dock, west to Mount Tzouhalem
303	2018-12-07 13:29	N48 48 11.2 W123 45 19.6	1529-1536	Drinkwater Road North Road Jtn north to Mount Provost
304	2018-12-07 13:45	N48 47 30.1 W123 45 35.3	1552-1556	Drinkwater Road Tansor Tempo Service Station north to Mount Provost
305	2018-12-07 13:52	N48 47 31.8 W123 45 40.5	1547-1556	Tansor Road Sahtlam Road Jtn north to Mount Provost
306	2018-12-07 14:17	N48 48 49.0 W123 44 11.5	1557-1563	Somenos Road Cowichan Valley Highway Jtn north to Mount Provost
307	2019-02-05 11:47	N48 48 04.1 W123 39 07.0	1567-1575	Boat Launch off Westlock Road, east side Quamichan Lake, northwest to Mount Provost
308	2019-02-05 12:08	N48 49 28.5 W123 38 37.6	1577-1581	Flett Road and Osborn Bay Road east to Maple Mtn
309	2019-02-05 12:24	N48 49 51.5 W123 39 45.6	1582-1585	Richards Trail west to Mt. Provost
310	2019-02-05 12:34	N48 49 26.3 W123 39 52.1	1586-1592	Richards Trail north to Mr. Richards
311	2019-02-05 12:51	N48 49 34.2 W123 42 48.4	1593-1601	Bell McKinnon between Sprott Road and Lowery Road west to Mt. Provost
312W	2019-02-05 13:12	N48 50 15.4 W123 43 13.2	1602-1614	Cowichan Exhibition Grounds west to Mount Provost
312E	2019-02-05 13:12	N48 50 15.4 W123 43 13.2	1615-1621	Cowichan Exhibition Grounds east to Mount Richards
313	2019-02-05 13:53	N48 47 58.4 W123 46 43.3	1622-1632	Vancouver Island Motorsport Circuit 4603 Cowichan Valley Highway north to Mount Provost
314	2019-02-06 9:56	N48 45 50.4 W123 33 56.5	1642-1653	Sansun Narrows off Sanson Point

Viewpoint #	Date/Time	Lat/Long	Pano Image #'s	Viewpoint Location Description
315	2019-02-06 10:04	N48 46 16.7 W123 33 34.3	1654-1666	Sanson Narrows between Sanson Point and Separation Point
316	2019-02-06 10:19	N48 47 19.4 W123 33 21.3	1667-1678	Sanson Narrows between Sanson Point and Octopus Point
317	2019-02-06 10:33	N48 48 23.3 W123 33 42.9	1679-1687	Sanson Narrows-Maple Bay between Octopus Point and Paddy Mile Stone
318	2019-02-06 10:54	N48 50 05.0 W123 34 31.2	1688-1695	Sansun Narrows between Arbutus Point and Grave Point west to Maple Mountain
319	2019-02-06 11:12	N48 51 40.3 W123 35 35.7	1696-1706	Between Osborn Bay and Grave Point southwest to Maple Mtn
320	2019-02-26 17:31	N48 40 16.5 W123 34 01.1	1707-1715	Sansun Narrows between Arbutus Point and Grave Point west to Maple Mountain
321	2019-02-26 17:31	N48 47 14.1 W123 42 21.7	1737-1739	Beverly Street Dike Trail east to Mount Tzouhalem
322	2019-02-26 17:32	N48 47 16.0 W123 42 27.4	1740-1744	Beverly Street Dike Trail east to Mount Tzouhalem
323	2019-03-05 17:37	N48 47 16.1 W123 41 53.6	1756-1762	York Road east to Mount Tzouhalem
324	2019-03-09 14:04	N48 53 45.6 W123 42 52.6	1764	Trans Canada Hwy sth of Fuller Lake Road south to Mount Richards
325	2019-03-09 14:08	N48 53 32.8 W123 42 39.2	1773-1774	Trans Canada Hwy sth of Fuller Lake Road south to Mount Richards
326S	2019-03-09 14:15	N48 52 27.9 W123 42 16.8	1775-1781	Mount Sicker Road south to Mount Richards
326W	2019-03-09 14:15	N48 52 27.9 W123 42 16.8	1782-1786	Mount Sicker Road west to Mount Provost
327	2019-03-09 14:23	N48 52 09.9 W123 42 38.8	1787-1794	Trans Canada Hwy sth of Mount Sicker Road east to Mount Richards
328	2019-04-20 15:08	N48 48 49.2 W123 39 03.1	1800-1805	Henderson Road off Stamps Road
329	2019-04-20 15:37	N48 49 27.6 W123 38 42.4	1806-1811	Herd Road west of Flett Road approx. 100 metres south to Mt Tzouhalem
330	2019-04-20 15:53	N48 51 56.7 W123 38 57.1	1820-1823	Crofton Road and Chaplin Road south east to Maple Mtn
331	2019-04-20 15:59	N48 51 48.9 W123 39 00.5	1824-1829	Sports Field Crofton southeast to Maple Mtn
332	2019-04-20 16:10	N48 51 56.7 W123 38 17.3	1830-1836	Ferry Dock Osborn Bay south to Maple Mtn
333	2019-04-20 16:34	N48 48 56.2 W123 36 35.6	1837-1840	Maple Bay rowing club
334	2019-04-20 16:43	N48 49 23.8 W123 35 32.5	1844-1849	Bayview Drive Arbutus Point
335	2019-04-20 16:46	N48 49 23.5 W123 35 35.4	1841-1843	Bayview Drive Arbutus Point
336	2019-04-20 16:50	N48 49 25.5 W123 35 31.2	1852-1858	Bayview Drive Arbutus Point
337	2019-04-20 17:01	N48 49 01.9 W123 36 31.4	1865-1869	Lion Rampart Pub dock in Maple Bay south east to Paddys Milestone
338	2019-04-20 17:15	N48 47 19.3 W123 40 16.0	1871-1886	Quamichan Lake north to Mt Provost and Mt Tzouhalem

Appendix II – Visual Landscape Attribute Summary Table

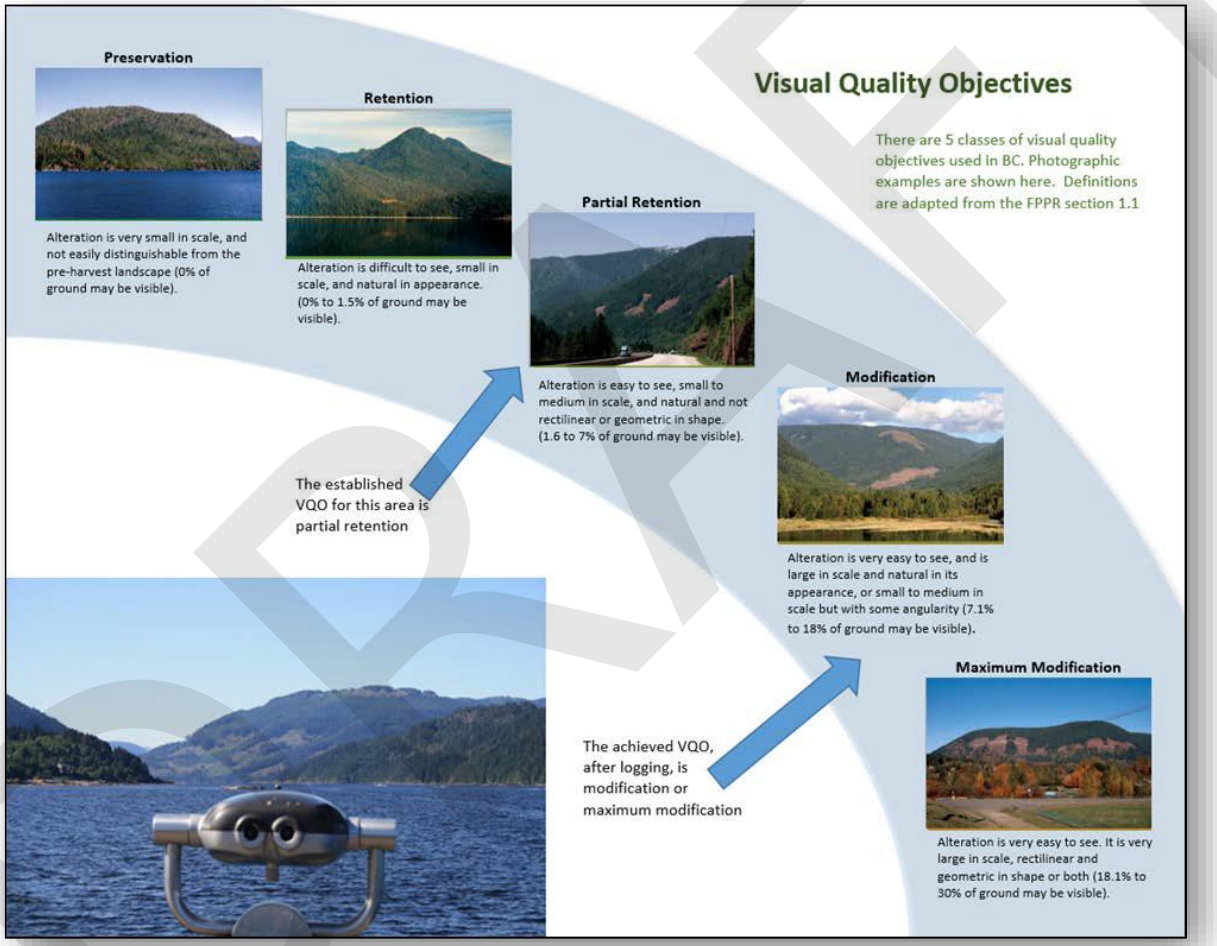
VSU[18]	EVC	VAC	BR	VC	VR	VSC	rVQC	Vpt1	Vpt2	Vpt3	Vpt4	Vpt5
MM001	PR	M	H	H	H	2	R	292	302	317		
MM002	R	M	M	H	H	2	R	319	320			
MM003	R	M	M	H	H	2	R	318	320			
MM004	PR	M	M	H	H	2	R	292	302			
MM005	PR	H	M	H	H	2	R	332	319			
SH001	R	M	M	H	H	2	R	292	333	337		
SH002	R	M	M	H	H	2	R	317				
SH003	R	M	M	H	H	2	R	334	335	336		
SH004	R	M	H	H	H	2	R	315	316			
SH005	R	M	H	H	H	2	R	314	315			
SH006	R	M	M	H	H	2	R	296	297	298	299	300
MR001	R	M	M	H	H	2	R	309	310	312		
MR002	R	M	M	H	H	2	R	332				
MR003	R	M	M	H	H	2	R	326	327			
MR004	PR	M	M	H	H	2	R	322				
MR005	PR	M	M	H	H	2	R	326	327			
MR006	PR	M	M	H	H	2	R	326	327			
MTZ001	M	M	H	H	H	2	R	321	322	323	291	329
MTZ002	PR	M	H	H	H	2	R	301	315	317	328	329
MTP001	PR	M	H	H	H	2	R	313	305	303	306	312
MTS001	R	M	M	H	H	2	R	312	326	311	309	310
MTS002	R	M	M	M	H	2	PR	311	312			
MTS003	PR	M	M	M	H	2	PR	326				

MM Maple Mountain
SH Stoney Hill
MR Mount Richards
MTZ Mount Tzouhalem
MTP Mount Provost
MTS Mount Sicker

[18] VSU-Visual Sensitivity Unit, EVC – Existing Visual Condition, VAC-Visual Absorption Capacity, BR-Biophysical Rating, VC-Viewing Condition, VR-Viewer Rating, VSC-Visual Sensitivity Class, rVQO-Recommended Visual Quality Objective

Appendix III - Visual Quality Objective Definitions

[19]



[19] FPB/SIR/46 September 2016