Summary Report

Visual Landscape Re-Inventory

Sunshine Coast Natural Resource District

Prepared for:
Ministry of Forests, Lands and Natural Resource Operations
Coast Forest Area

March 2015

BRITISH COLUMBIA
The Best Place on Earth

RRL

Table of Contents

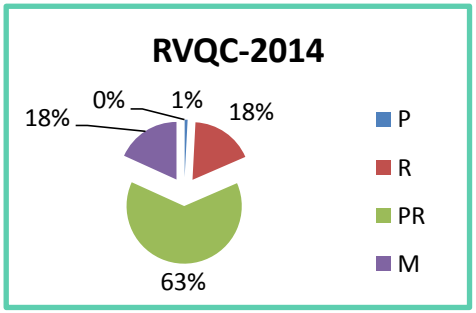
EXECUTIVE SUMMARY 4
ACKNOWLEDGEMENT 5
BACKGROUND 6
Marinas, Docks, Resorts, Yacht Clubs 9
Desolation Sound 10
Visual Landscape Inventory History 11
SUMMARY OF VISUAL SENSITIVITY UNIT CLASSIFICATIONS 12
Existing Visual Conditions (EVC) 13
Visual Absorption Capability (VAC) 14
Biophysical Rating (BR) 15
Viewing Condition (VC) 16
Viewer Rating (VR) 17
Visual Sensitivity Class (VSC) 19
RECOMMENDED VISUAL QUALITY CLASSES (RVQC) 20
VISUAL SENSITIVITY CLASS – Recommended Visual Quality Class Equivalents 21
RECOMMENDATIONS 22
APPENDIX I 25

List of Photographs and Illustrations

1 - Boater at north end of Lewis Channel (Cover) 1
2 - Survey Vessel 5
3 - Area of Visual Landscape Re-inventory.....6
4 - Location of Desolation Sound Marine Park.....10
5 - Toba Wilderness Resort 11
6 - Well designed logging in Desolation Sound, adjacent to recovered logging.....12
7 - The owners of this 60' vessel have been cruising Desolation Sound for over 30 years.....15
8 - Marine Link Tours travelling up Bute Inlet.....17
9 - Guests travelling on the Malibu Princess https://www.flickr.com/photos/taylorandafrica/2640134803/.....18
10 - Yacht visiting Bute Inlet 21
11 - Camp Malibu - Princess Louisa Inlet.....22
12 - Yacht Visiting Toba Inlet http://www.yachtspotter.com/focard3.php?foo=FG061 23
13 - Toba Inlet Kayakers.....24

EXECUTIVE SUMMARY

This report summarizes the 2012-14 Sunshine Coast Natural Resource District Visual Landscape Re-Inventory projects and presents a comparative analysis of the visual changes that have occurred. The VLI Re-Inventory captured 2,700km[1] of shoreline and 470,676 ha of visible area[2].



The VLI Re-Inventory also provides a set of Recommended Visual Quality Classes (RVQC's) for the visible area. The objective being to assist the District Manager with making future Visual Quality Objective (VQO) management changes under Government Actions Regulation[3] (GAR).

The appearance or Existing Visual Condition (EVC) of the landscapes is high, with approximately 90% of the landscapes being in a state of Partial Retention or higher quality. Overall, landscape condition has improved over the 15 years since the previous landscape inventory was completed, when, in 1999, 73% of the scenery was in a visual condition of Partial Retention or higher[4].

There are over 40 marine parks and reserves in the Sunshine Coast. The area is extensively written about, photographed and is an international calibre tourism destination. Recreation use has continued on a sustained basis in some areas for decades (e.g. Jervis Inlet and Princess Louise Inlets), while increasing significantly in other areas of the district (e.g. Discovery Islands).

The RVQC's prepared in conjunction with the 2012-2014 Re-Inventory reflect the fact that viewer expectations are high, recreational use is sustained and increasing in several areas, and overall visual quality has improved, (98% of the scenery has a moderate to high Biophysical rating) the Sunshine Coast remains one of British Columbia's most important marine recreation and tourism areas while also sustaining an extensive and valuable operable forest land base for over a century.

---

[1] Calculations were done using BC's TRIM 1:20000 data.
[2] Visible area calculated using ARC GIS done digitally using digital elevation model data overlain with appropriate age-class forest cover to generate a visible area map.
[3] 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.
[4] Original VLI inventory on the TSA completed in 1991 with updates 1991-99. QVO's were established in 1997 and reconfirmed in March 28, 1999

ACKNOWLEDGEMENT

Project support was provided by Lloyd Davies R.P.F., Visual Resources Management Specialist, MFLNRO, Coast Forest Area, Nanaimo, BC.

Data management and ARC GIS tasks were completed by Darrin Charmley. Darrin is based in Victoria and is a geographer and ARC GIS specialist. Darrin interpreted the BCGW data. His skill, high standards and attention to details contributed directly to the quality of the accuracy of the inventory data.

This report was compiled by Jeremy Webb, RRL Recreation Resources Ltd. Email: rrl-ltd@shaw.ca, or telephone 250-743-4046.

2 - Survey Vessel

BACKGROUND

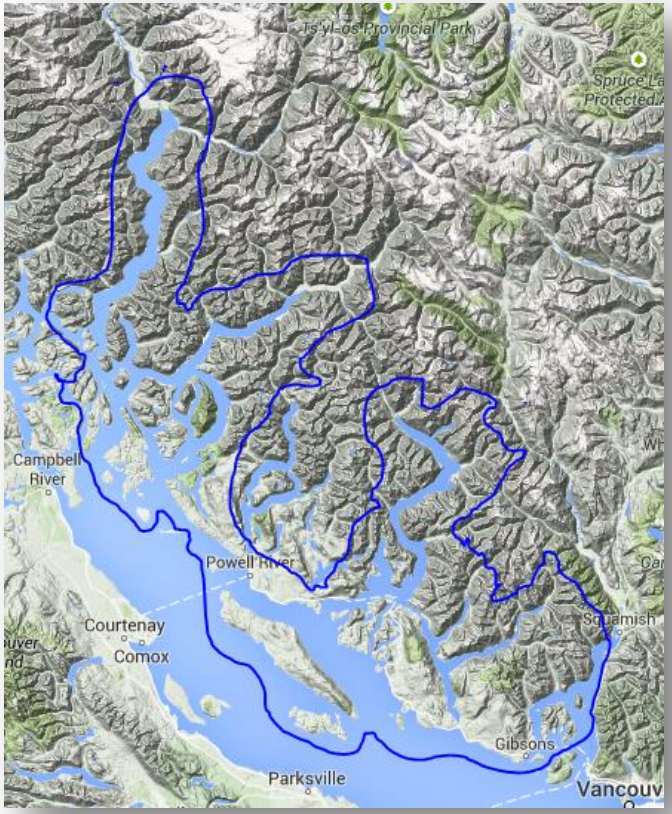
This summary report documents the 3 phases of re-inventory completed 2012-14 and presents a comparative analysis of the changes in Visual Landscape Inventory (VLI ratings between current 1999 and 2014 re-inventory).

The Sunshine Coast Natural Resource District Visual Landscape Re-Inventories, conducted between 2012-2014, updated the visible landscape measures from Howe Sound in the south, to Toba and Bute Inlets in the north, west to Texada and Lasqueti Islands.

The VLI Re-Inventory captured 2,700km[5] of shoreline and 470,676 ha of visible area[6].

The VLI Re-Inventories also provided a set of Recommended Visual Quality Classes (RVQC's). The objective being to assist the District Manager with making future Visual Quality Objective (VQO) management changes under Government Actions Regulation[7] (GAR).

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.

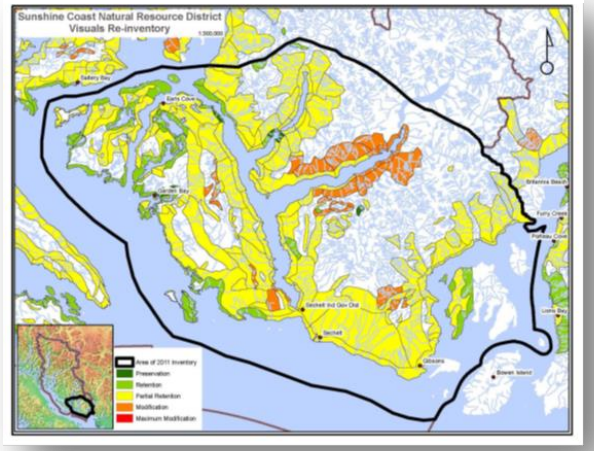


3 - Area of Visual Landscape Re-inventory

[5] Calculations were done using BC's TRIM 1:20000 data.
[6] Visible area calculated using ARC GIS done digitally using digital elevation model data overlain with appropriate age-class forest cover to generate a visible area map.
[7] 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.

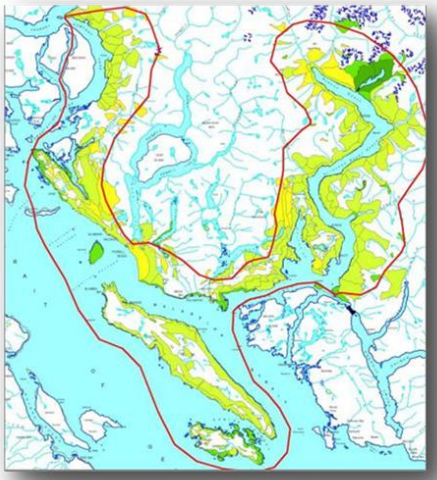
Visual Landscape Re-Inventory Phases

2012



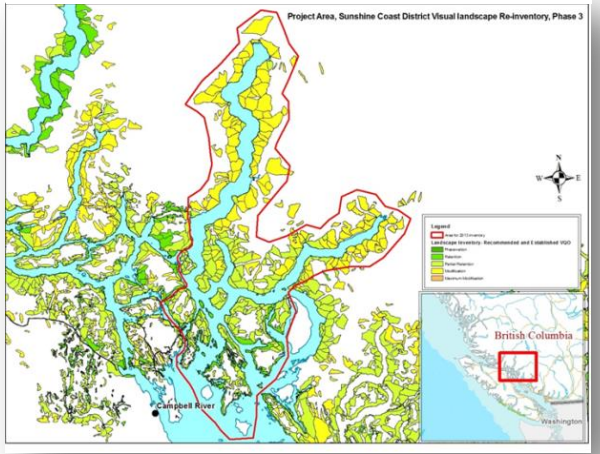
The 2012 Re-Inventory area begins in the south portion of the District and includes Anvil and Gambier Islands which are located in Howe Sound. On the mainland coast, bordering on Howe Sound, the inventory encompassed the height-of-land between Potlatch Creek and Ellesmere Creek, south to Gibsons and Gower Point, then north to the northern extent of the Sechelt Peninsula, and includes Sakinaw Lake and Ruby Lake. The inventory encompassed the three inlets located on the inside of the Sechelt Peninsula; Sechelt Inlet, Salmon Inlet and Narrows Inlet. The inventory also captured Nelson Island, Thormanby and Captain Islands.

2013



The 2013 Re-Inventory area extends from Brettell Point at the northern end of Homfray Channel, south to Sarah Point,south and north into Malaspina Inlet and Theodosia Inlet then southeast along the mainland coast to Powell River then continuing southeast to Saltery Bay before proceeding north to include Hotham Sound, Jervis Inlet and Princess Louisa Inlet. Off from the mainland coastline the inventory includes Texada and Lasqueti Islands.

2014

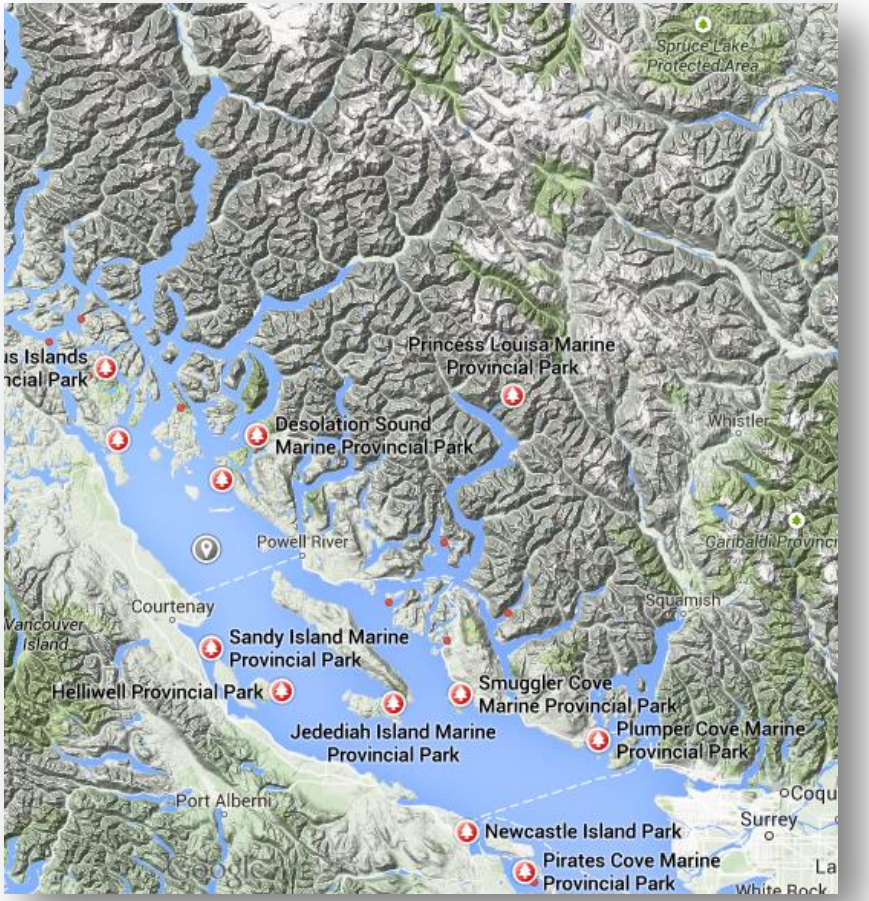


The third and final phase of the Re-Inventory completed in 2014 included Bute Inlet, Toba Inlet, East and West Redonda Islands, Raza Island, Stuart Island, Ramsay Arm, Cortez Island, Hernado Island, Read Island, and Maurelle Island.

The significance of this area of BC's coast in terms of scenic resources and natural settings is substantive and reflected by the concentration of over 40 provincial parks and ecological reserves.

Park and Protected Areas in Sunshine Coast Natural Resource District

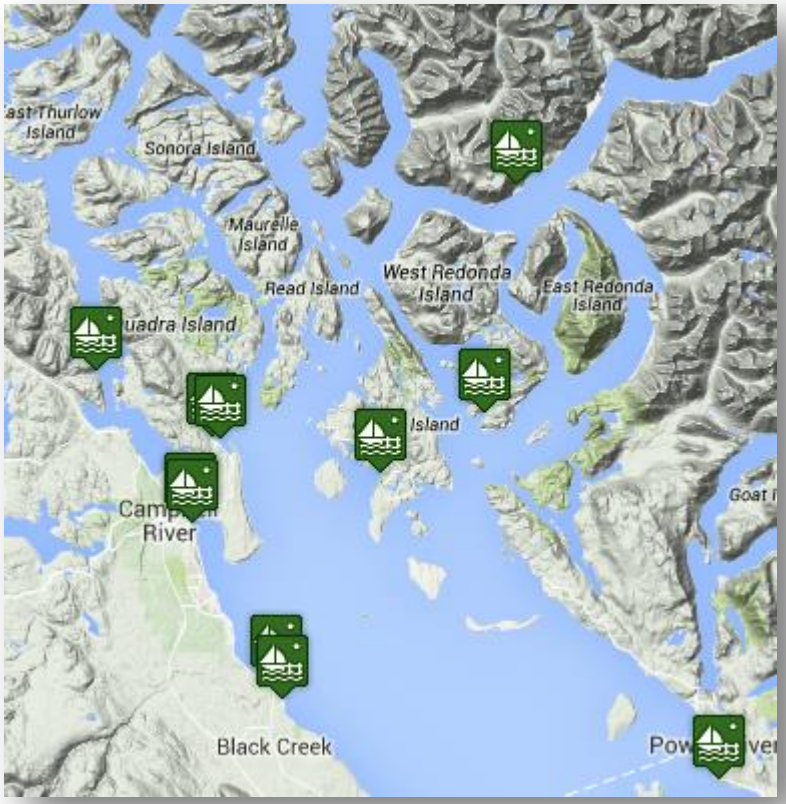
1. Ambrose Lake Ecological Reserve - Agememnon Channel
2. Buccaneer Bay Provincial Park – Thormanby Island
3. Anderson Bay Provincial Park – Texada Island
4. Copeland Islands Marine Provincial Park – Copeland Islands
5. Desolation Sound Marine Provincial Park – Desolation Sound
6. East Redonda Island Ecological Reserve – East Redonda
7. Francis Point Provincial Park – Garden Bay
8. Garden Bay Marine Provincial Park – Garden Bay
9. Halkett Provincial Park - Gambier Island
10. Harmony Islands Marine Provincial Park – Hotham Sound
11. Homathko Estuary Provincial Park – Bute Inlet
12. Jedediah Island Marine Provincial Park – Jedediah Island
13. Kunechin Islets – Salmon Inlet
14. Lasqueti Island Ecological Reserve- Lasqueti Island
15. Malaspina Provincial Park – Malaspina Inlet
16. Mansons Landing Provincial Park – Cortes Island
17. Mount Richardson Provincial Park – Sechelt Inlet
18. Musket Island Marine Provincial Park – Hardy Island
19. Octopus Islands Marine Provincial Park – Quadra Island
20. Plumper Cove Provincial Marine Park-Keats island
21. Princess Louisa Marine Provincial Park – Princess Louise Inlet
22. Porpoise Bay Provincial Park – Sechelt Inlet
23. Read Island Provincial Park – Read Island
24. Rendezvous Island Park – Rendezvous Island
25. Roscoe Bay Provincial Park – West Redonda Island
26. Sabine Channel Provincial Park-Jervis Island
27. Saltery Bay Provincial Park – Earls Cove
28. Sargeant Bay Provincial Park-Sechelt
29. Sechelt Inlets Marine Provincial Park – Sechelt Inlet
30. Simson Provincial Park-Thormanby Island
31. Skookumchuck Narrows Provincial Park – Sechelt Inlet
32. Small Inlet Marine Provincial Park – Quadra Island
33. Smelt Bay Provincial Park – Cortes Island
34. Smugglers Cove Marine Park-Halfmoon Bay
35. South Texada Provincial Park –Texada Island
36. Surge Narrows Provincial Park – Quadra Island
37. Teakerne Arm Provincial Park – West Redonda Island
38. Thurston Bay Marine Provincial Park – Sonora Island
39. Von Donop Marine Provincial Park – Cortes Island
40. Walsh Cove Provincial Park – West Redonda Island



Marinas, Docks, Resorts, Yacht Clubs

Anchorages and facilities have a direct bearing on visitor use patterns and numbers.

There are over 40 active marinas, resorts, lodges, docks scattered throughout the Sunshine Coast Natural Resource District as of 2014.



In addition, there are yacht club outposts (Vancouver Yacht Club and Seattle Yacht Club – Garden Bay, and on Cortez Island, at Lund and Okeover Inlet) and there are sea kayaking business with permanent and with seasonal bases, and other tourism operators (whale watching) who utilize coastal sites, the waters and channels in the Sunshine Coast Natural Resource District.

Fuel sales, accommodation, guiding services, moorage, maintenance, repairs, boat sales, beverage and food, are among the financials that draw upon the visual resources located in this area of the coast.

Much of the recreation and tourism activity (boating, fishing, scenic viewing) occurs outside of Parks.

Outdoor recreation and tourism in the Sunshine Coast is an important component to the local and provincial economy. Tourism operators market the scenery as the key ingredient that makes their products unique and attractive[8].

[8] http://wcwl.com/

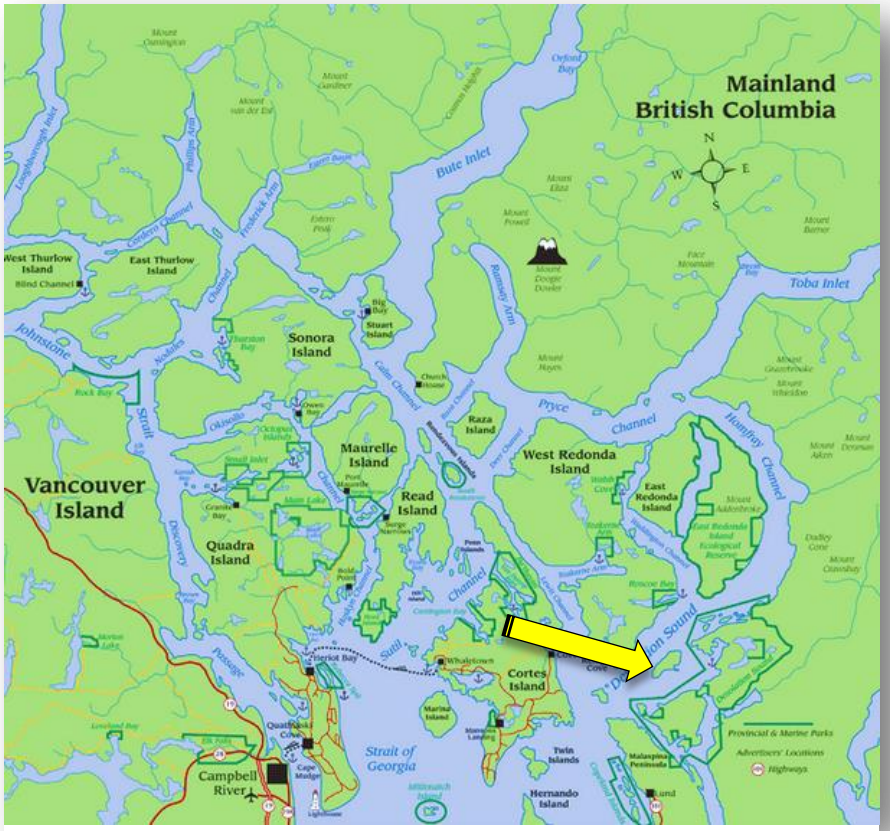
Desolation Sound

Within the Sunshine Coast Natural Resource District there are many parks and anchorages. Key among them is Desolation Sound Marine Park. It is a focal point and destination for boaters and is the largest Marine Park in BC.

Desolation Sound Marine Park is a boater's delight with over 6,350 acres of shoreline and water making it the largest Marine Park in B.C. The park can be split up into three major destination anchorages: Prideaux Haven, Tenedo's Bay and Grace Harbour.

The topography of the park varies from relatively low rolling hills of Gifford Peninsula to the Unwin Range rising over 4,500 feet directly behind Prideaux Haven. There are many safe anchorage locations, most of which are either totally or partly enclosed by low shoreline or high cliffs, islands or mountainsides. Warm waters make Desolation Sound Marine Park an ideal place to swim and scuba dive, saltwater and freshwater fishing, and walk-in wilderness camping. [9]

The Park draws boaters and kayakers to the Sunshine Coast and management of scenic resources in adjacent crown forest landscape is important.



4 - Location of Desolation Sound Marine Park

[9] http://www.sunshinecoastcanada.com/hidden-gems/desolation-sound?highlight=WyJhbmNob3JhZ2UiXQ==

Visual Landscape Inventory History

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.

Some of the first VLI's were completed in British Columbia in the late 1980's.

The VLI for the Sunshine Coast Natural Resource District was first completed in 1991[10] and updated in 1991-99. It was the foundation for the establishment of Visual Quality Objectives (VQO's) in 1997. It has guided management of visual resources in this area for the past 20 + years.

The re-inventory completed between 2012 and 2014 updates the visual resources data to reflect changes in the condition or quality of the scenery. A computer generated visibility analysis was used to assist with the accurate delineation of the visible landscape.

The area was re-inventoried by a single contractor specializing in forest visuals using standardized classification tools. The calibre and consistency of the data has improved over the original inventory.

5 - Toba Wilderness Resort

[10] Previous VLI for this same area was completed by RRL Recreation Resources Ltd. in 1991.

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 landscape.

6 - Well designed logging in Desolation Sound, adjacent to recovered logging

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].

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:

- Existing Visual Condition,
- Visual Absorption Capability,
- Biophysical Ration,
- Viewing Condition,
- Viewer Rating
- Visual Sensitivity Class.

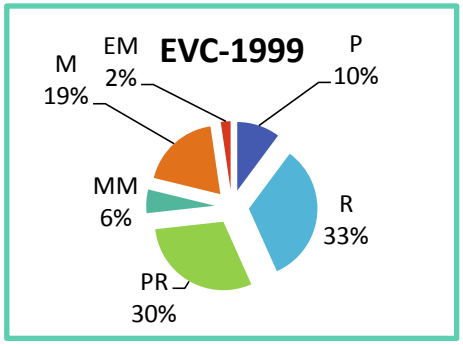
Each of the six key measures is reviewed and a comparison of the changes between the 1999 VLI inventory and the 2014 inventory are graphically presented.

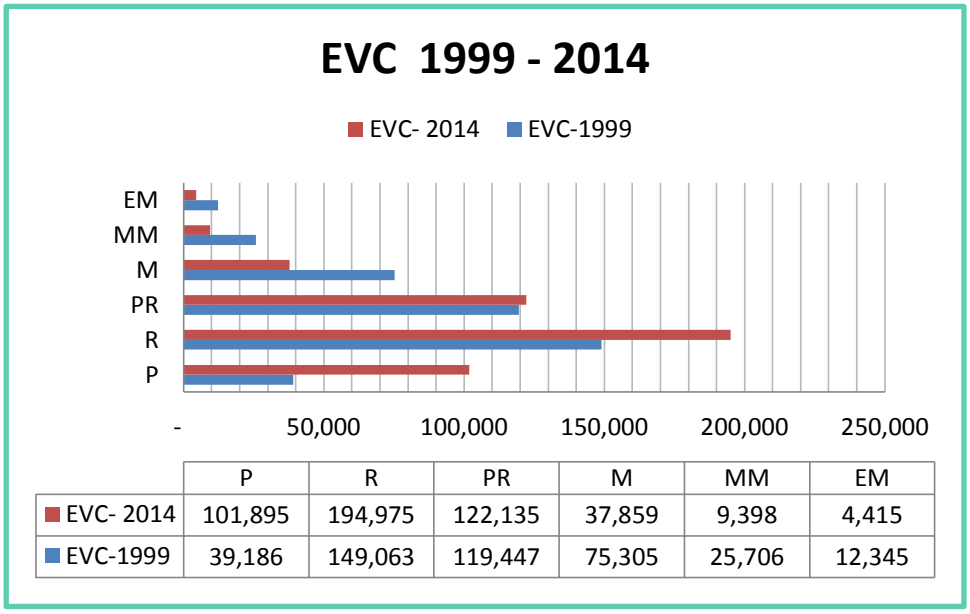
[11] The Province of BC has conducted several studies to determine the levels of visual change that are accepted by the viewing public. These include: 1) BC Ministry of Forests, 1994 - A First Look at Visual Effective Green-up in British Columbia: A Public Perception Study – Recreation Branch. 2) 1995-Visual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

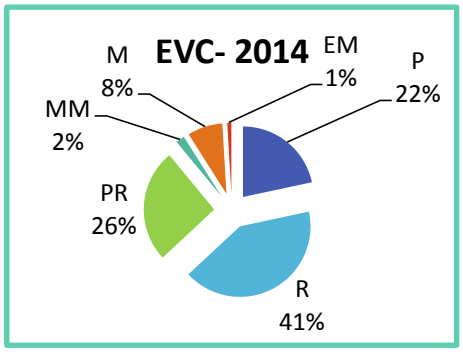
Existing Visual Condition (EVC) is a measure of the present level of landscape alteration caused by human activities. EVC is expressed as a Visual Quality Class[12]. Over the 15 years since the previous VLI was completed, overall visual quality has improved significantly with 89% of the visible scenery having an EVC of Partial Retention (PR), Retention (R) or Preservation (P).

Overall scenic quality in 2014, as measured by Existing Visual Condition, is high, with 89% of the visible landscape having an EVC rating of Partial Retention (PR) or higher. This compares favourably over 1999 EVC measures, where 73% of the visible landscape had an EVC of PR, R, or P. A positive shift of 16%.





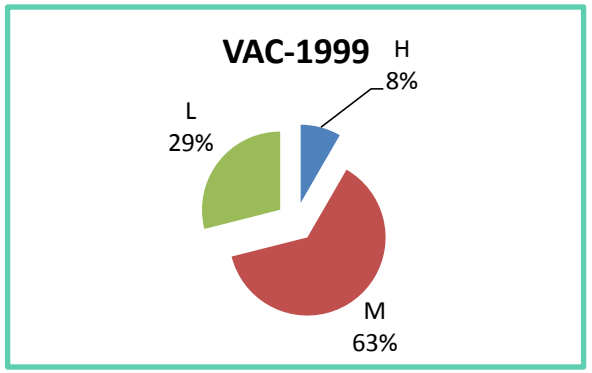
	P	R	PR	M	MM	EM
EVC- 2014	101,895	194,975	122,135	37,859	9,398	4,415
EVC-1999	39,186	149,063	119,447	75,305	25,706	12,345



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

Visual Absorption Capability (VAC)

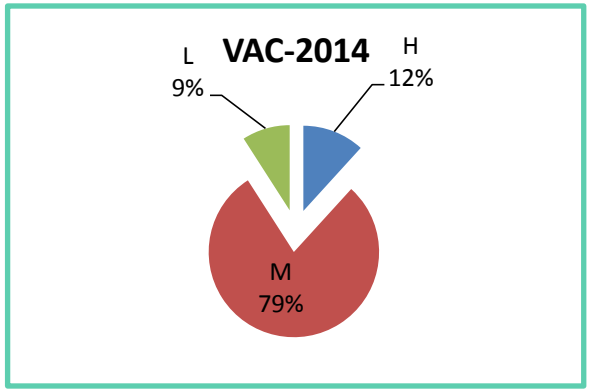
VAC is a measure of a landscape's ability to absorb alteration and maintain its visual integrity. Landscapes have varying abilities to absorb human caused alterations due to their biophysical characteristics.

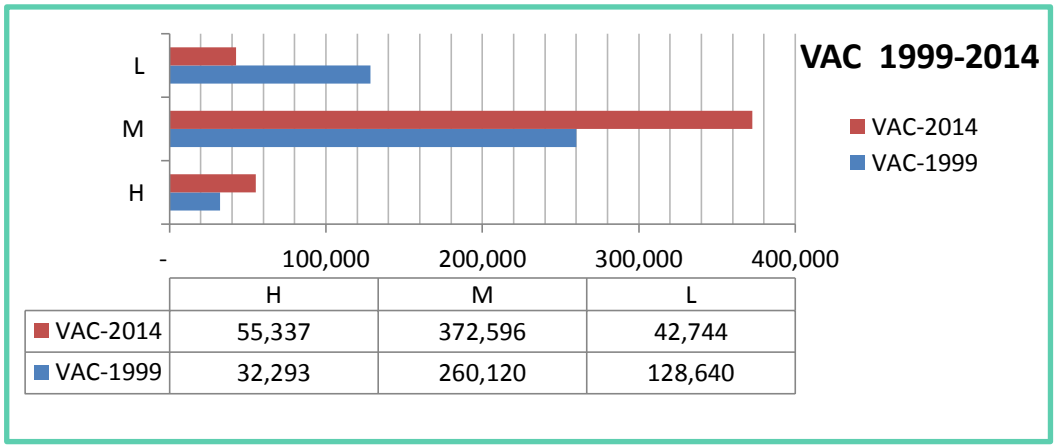


VAC tends to remain relatively stable over time as the main factors contributing to VAC (slope,aspect,surface variation and rock/soil/vegetative variety) remain stable, excepting the rock/soil/vegetative measure.

In this instance, there is a notable decrease in the areas having low VAC, 9% in 2014 vs 29% in 1999. This shift is attributable primarily to increased accuracy in the application of the VSU Classification system over time.

The vast majority of the study area (79%) is recorded to have a moderate VAC. However, many of the coastal landforms are steep and highly visible from various waterways. This requires forest harvesting to be carefully designed aesthetically to ensure meeting the VQO's.



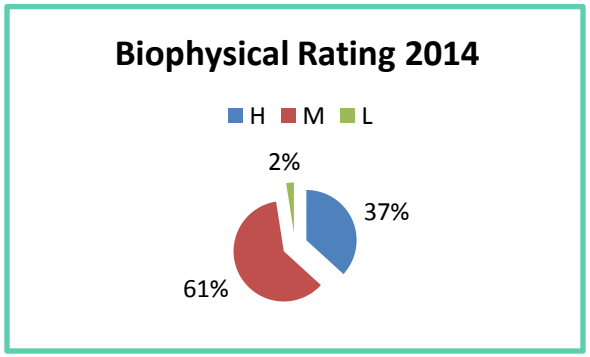


	H	M	L
VAC-2014	55,337	372,596	42,744
VAC-1999	32,293	260,120	128,640

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.

The Sunshine Coast Natural Resource District, with 2,700 km of shoreline and 470,000 ha of visible area represents a key scenic resource area in British Columbia. It is close to major centers, with protected navigable waters and is an area that supports a broad and established recreation user base. The waters of the Sunshine Coast hold tremendous potential.



7 - The owners of this 60' vessel have been cruising Desolation Sound for over 30 years.

2014[13] BR measures show that 98% of scenery in the Sunshine Coast Natural Resource District has a Moderate to High rating, providing a clear indication of the intrinsic scenic attractiveness of the area. The concentration of high scenic resources, combined with protected waters, numerous marine parks and anchorages, attract new and repeat visitors year after year.

While most all of the waters are navigable, there are areas of strong rapids and tidal currents, which results in holding patterns as vessels await slack tides, and there are specific marine passages and channels which receive concentrations of use by vessels travelling from one destination to the next.

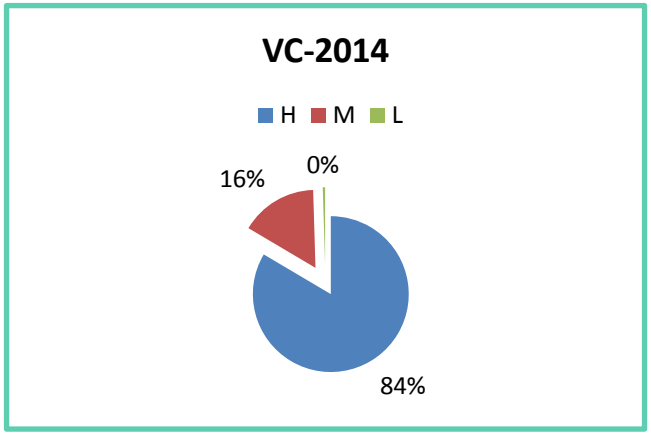
[13] BR measures are not available from 1999 as they were not assessed at that time.

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. Given the viewing of coastal landscapes is from the water, in most cases viewing distances are relatively close and contributes to 100% of the visible area rated moderate or high.

In 1999, Viewing Condition (VC) was not assessed. However, it was assessed in 2014.



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.

Duration of viewing is an important factor, and where sustained views of a landscape occurs, as is typical from slower moving vessels travelling either along or parallel to shorelines, or along channels and inlets, sustained or high, viewing duration occurs. View duration from anchorages, marinas and resorts, fishing areas, are obvious locations where lengthy view durations occur.

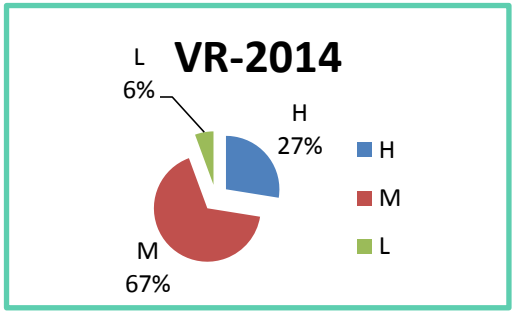
Available viewing angles from the water are typically direct unless topography limits views to oblique angles. Visitors onboard vessels are typically travelling at a rate that enables sustained views, and view angles shift as viewers approach, come parallel, then pass scenery along their route.

From anchorages, view duration is more sustained, and view angles move through 360 degrees in response to tidal ebb and flood. There are literally hundreds of anchorages available in the Sunshine Coast Natural Resource District. Marine travel routes are mixed, with the more direct, point to point travel occurring in inlets (Bute, Toba, Jervis).

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 Sunshine Coast Natural Resource District, 2014 viewer numbers tend to rate moderate to high, and expectations of most, 94% of viewers, also rate moderate to high.



8 - Marine Link Tours travelling up Bute Inlet

Overall, viewer numbers are increasing in the district. Recreational and tourism use is spreading into the inlets and more remote channels as visitors take advantage of GPS navigation technology and seek new experiences and challenges and as commercial tourism businesses (e.g. Kayak Tours[14]) expand their operations.

One established commercial operator makes 32 trips up Bute and Toba Inlets and along Johnstone Strait each season, carrying an average compliment of approximately 12 passengers for a week at a time for a total of 400 +/- viewers between March – October and are fully booked for 2015.[15]

Another tourism operator markets Bute Inlet as "The ultimate Sport Fishing Experience" focusing on the chinook fishery and the blend of temperate rainforest and Pacific Ocean coastal shoreline[16] and making comparisons to the fiords in Norway[17].

[14] http://www.coastmountainexpeditions.com/?q=node/26
[15] http://www.marinelinktours.com/2016-schedule
[16] http://buteinlet.com/
[17] http://nanooklodge.com/salmon_steelhead_magazine.html

Viewer Rating (cont'd)

One of the longest established lodges on BC's coast is located near the head of Jervis Inlet at the entrance to Princess Louisa Inlet. Camp Malibu has been in continuous operation since 1954.

Operating March-September, the camp has 8,000-8,500 guests each year, who travel 3 hours each way between Jervis Inlet and Egmont on the Malibu Princess.

9 - Guests travelling on the Malibu Princess
https://www.flickr.com/photos/taylorandafrica/2640134803/

There is a second youth camp operating in both Jervis Inlet and in Princess Louise Inlet hosting up to 800 guests each summer. Operating continuously since the early 1970's in the mountains around the north end of Princess Royal Reach of Jervis, Princess Louisa, and south end of Queen's Reach of Jervis, the camp conducts week long trips, on different routes for 2 months in the summer.

Park	12/13	13/14	3 year average (11/12-13/14)
Desolation Sound Marine Park	25,562	46,739	33,330
Francis Point	14,498	32,325	19,431
Smuggler Cover	11,181	29,295	-
Princess Louisa Marine Park	17,610	9,475	24,771
Rebecca Spit	5,840	4,272	-
Plumper Cove	1,939	3,619	-
Mansons Landing	451	2,070	-
Jedediah Island Marine Park	1,629	1,566	4,100
Squitty Bay	1,238	1,421	1,544

BC Parks collects visitor data for some marine parks[18]. It is important to note that for some very popular and high use marine parks, no current user data has been collected (e.g. Octopus Islands, Copeland Islands Marine Parks).

In Princess Louisa Marine Park, BC Parks recorded a three year average of 24,771 visitors each season.

Although it is difficult to obtain reliable user statistics for all of the areas within the Sunshine Coast NRD, it is safe to say the area receives some of the Province's highest marine recreational use.

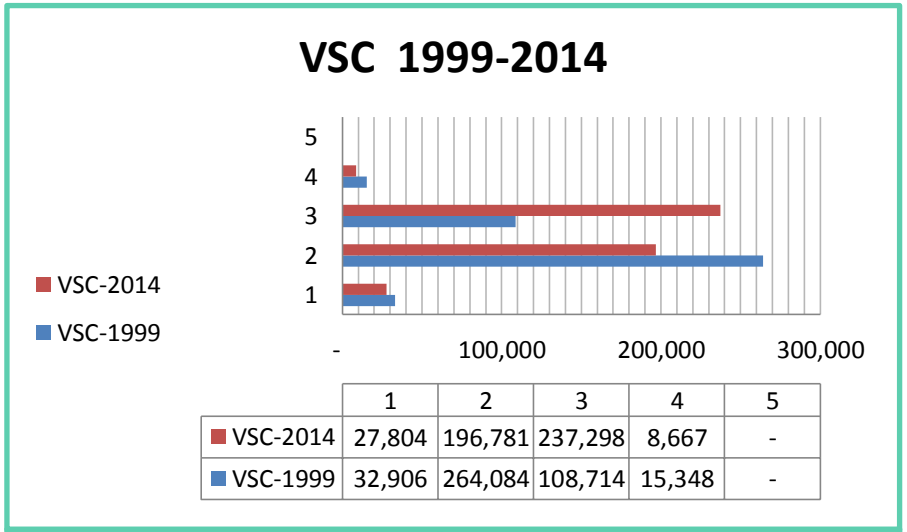
[18] http://www.env.gov.bc.ca/bcparks/research/statistic_report/statistic-report-2014.pdf

Visual Sensitivity Class (VSC)

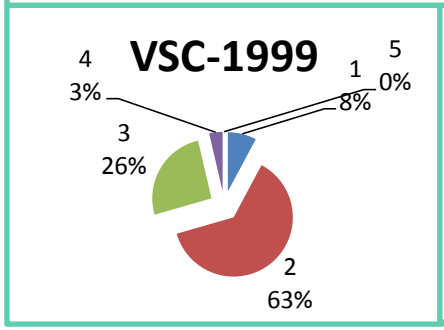
VSC[19] is a measure of the sensitivity of a landscape to visible changes.

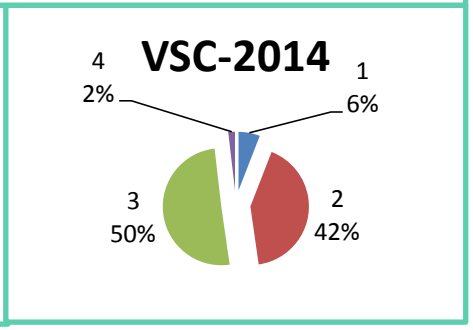
It is an assessment of the likelihood that carrying out forest practices or other resource developments in the VSU would give rise to some degree or kind of criticism or concern.

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



	1	2	3	4	5
VSC-2014	27,804	196,781	237,298	8,667	-
VSC-1999	32,906	264,084	108,714	15,348	-





The vast majority of the district's scenic areas fall in the moderate to high visual sensitivity (VSC's 2 and 3). Management of visuals is clearly important. VQO's should be established that respect this visual sensitivity and the public's desire for quality scenery. In a coastal setting, it is understandable that a significant portion of visible landscape will merit a higher level of visual stewardship than would be found in locations that have more moderate biophysical and viewing conditions and viewer expectation ratings.

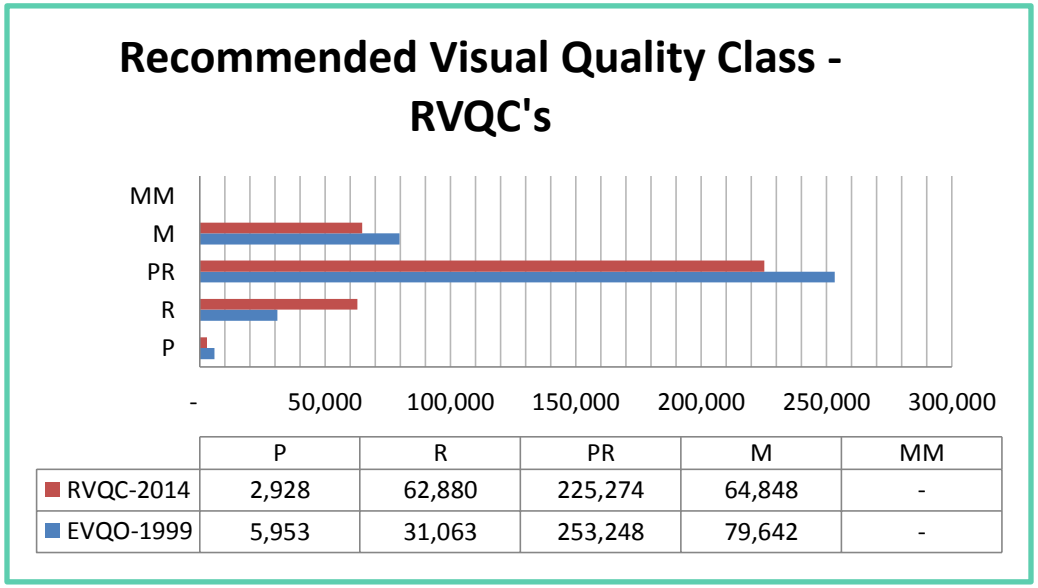
[19] VSC 1-Very High Concern, VSC 2-High Concern, VSC 3-Moderate Concern, VSC 4-Low Concern, VSC 5-Very Low Concern

RECOMMENDED VISUAL QUALITY CLASSES (RVQC)

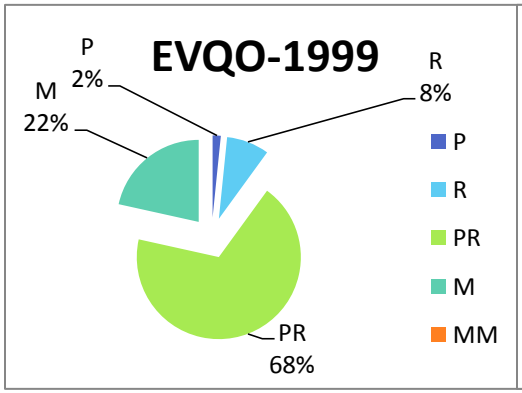
RVQC's are a default-calculated measure of the level of human-made visible alteration that would be acceptable for a given VSU.

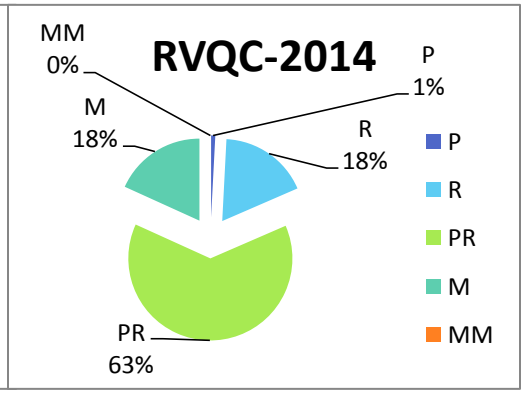
RVQC's are intended to provide guidance to the Ministry for making any potential VQO changes that may be made by a District Manager through GAR[20].

In comparing the 1999 to the 2014 VLI's, there is a 10% increase in Retention RVQC area. Retention landscapes tend to be focal, frequently viewed, south aspect and associated with higher value recreation settings(lodges, resorts, communities, anchorages, ferry routes)with accompanying increased viewer sensitivity and higher expectations of visual quality.



	P	R	PR	M	MM
RVQC-2014	2,928	62,880	225,274	64,848	-
EVQO-1999	5,953	31,063	253,248	79,642	-





[20] Government Action Regulation. 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 SENSITIVITY CLASS – Recommended Visual Quality Class Equivalents

The default VSC-RVQC measures[21] 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	PR-M-MM	M-MM

The relationship table provides a starting point for district manager decision making on VQOs. Final VQO decision is influenced by public, First Nations, and stakeholder input. The established VQO(s) may or may not fit the recommendations contained in the VSC-RVQC table.

10 - Yacht visiting Bute Inlet

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

RECOMMENDATIONS

The high quality scenery of coastal landscapes of the Sunshine Coast NRD is a key factor in this being one of the Provinces highest marine recreation use area. With over 470,000 visible hectares and over 40 established provincial parks and thousands of users, scenery is a valuable and substantive resource in this area of BC.

11 - Camp Malibu - Princess Louisa Inlet

Over the past 15 years, scenic quality has improved by over 10% with nearly 90% of the visible landscape having an Existing Visual Condition (EVC) rating of Partial Retention (PR) or better. This compares favourably over 1999 EVC measures, where 73% of the visible landscape had an EVC of PR, R, or P. Visitors regularly comment on the high quality of scenery in the Sunshine Coast[22],[23].

This improvement in visual quality can be attributed to changes to forest practices under the Forest Range Practices Act (FRPA), and as Visual Quality Objectives (VQO's) have been established and gained planning and operational traction. And as the legacy of large scale forest development visual impacts are now largely recovered the scenic quality has improved.

While the overall quality of Sunshine Coast scenery is high, there is no room for complacency in terms of stewardship of visual landscape quality. In fact the opposite is true. Now that scenic quality on the whole is at higher levels, visible changes, when they occur, are more noticed. Further, natural landscapes have a lengthening track record of attracting recreational use, and commercial recreation/tourism is taking advantage, building and expanding product offerings. Viewer expectations of visual quality are not decreasing. 94% of viewers have moderate to high expectations regarding visual quality and 84% of viewing conditions are rated as high in 2014. Further, looking ahead, viewer numbers will not be decreasing.

[22] http://www.kayakingtours.com/about-us/spirit-of-the-west-reviews-2011.html
[23] http://www.quadraisland.ca/adventure-recreation-tours/scenic_and_wildlife_tours.html#.VP8nvflzQ7Y

The portion of the visible area rating a Partial Retention level VQO of visual stewardship remains similar from 1999-2014 (68%/63% respectively). However, the portion of visible area rating Retention VQO has increased from 8% to 18% of the visible area in 2014[24]. It is these areas that merit particular attention and VQO monitoring moving forward.

12 - Yacht Visiting Toba Inlet
http://www.yachtspotter.com/focard3.php?foo=FG061

Forest licensees will need to continue carefully designing and managing for VQOs throughout the Sunshine Coast, and the MFLNRO will in turn need to routinely monitor visual quality and complete C&E VQO inspections to ensure a high level to compliance in this scenically important part of the Province.

While the whole of the Sunshine Coast presents valuable marine recreation opportunities, there are areas of concentrated use, for example the Discovery Islands, Sechelt Inlet, Jervis Inlet and Princess Louise, Desolation Sound, and viewscapes associated with established parks, anchorages and communities. These are areas where there are thousands of viewers each year. Particular care in the design of forest harvesting aesthetics needs to be followed in these important landscapes

It is important not to overlook stewardship of visual quality in Toba and Bute Inlets as they receive hundreds of viewers each year. Toba Inlet is an area which exhibits intensive application of visual resource stewardship, particularly in terms of design, where foreground logging is clearly visible, where surface disturbance is minimal, roads are few, and the 'fit' of the logging meshes with natural topography.

[24] Provincially, the Retention VQO applies to 1,326,945 hectares (13% of the area under a VQO). The Partial Retention VQO applies to 5,395,445 hectares (52% of the area under a VQO). https://www.for.gov.bc.ca/hfp/sof/2010/SOF_2010_Web.pdf **The State of British Columbia's Forests Third Edition 2010 Ministry of Forests Mines and Lands.**

The visible nature of forest development in Toba, (and other areas) isn't accepted by everyone. One kayak company has curtailed its visits to Toba citing "…extreme logging[25]", while others, including kayak tour companies[26], continue to visit Toba[27]/[28]/[29]/, Homfray Channel, and other coastal inlets. At the same time, one tourism group advises that the Discovery Islands sustain $22 million annually in tourism revenue and employ 625 people[30].

In sum, the Sunshine Coast is one of BC's highest marine recreation use areas. At the same time, commercial marine based recreation and tourism has grown and continues to grow substantially alongside forest development activity.

Over the 23 years since the Visual Landscape Inventory was first completed (1991) and provided the basis for establishing Visual Quality Objectives for the Sunshine Coast (1997), several things have happened. Overall, visual quality has improved and recovery of historical, large scale logging is notable in several areas.

13 - Toba Inlet Kayakers

http://www.bcseakayak.com/our-destinations/toba-inlet/

The 2014 Re-Inventory RVQC's have been carefully developed using current MFLNR tools, and draws on current measures of the visible landscape elements to derive the Visual Sensitivity Class (VSC) ratings for each Visual Sensitivity Unit (VSU) in the Sunshine Coast. They are intended to provide guidance to the District Manager when entertaining any formal changes to the currently established VQO's

Where higher (i.e. Retention RVQC's) are present, engagement of recreational users should be part of any future GAR VQO orders, i.e. in addition to local tourism, recreational groups, contacting provincial and foreign yacht clubs, cruise lines, tourism associations, etc. in order to capture and develop accurate assessments of viewer expectations in key areas of the Sunshine Coast.

[25] http://www.coastmountainexpeditions.com/?q=node/19
[26] http://www.bcseakayak.com/our-destinations/toba-inlet/
[27] http://tobawildernest.com/
[28] http://www.waywest.ca/location/toba-inlet
[29] http://www.desolationsoundyachtcharters.com/
[30] https://vimeo.com/61583243

APPENDIX I

Sunshine Coast VLI Classification Summary Table - 1999 & 2014

	P	**R**	**PR**	**M**	**MM**	**EM**	TOTAL AREA
EVC-1999	39,186	149,063	119,447	75,305	25,706	12,345	421,053
EVC- 2014	101,895	194,975	122,135	37,859 9,398	9,398	4,415	470,677
	H	**M**	**L**				
VAC-1999	32,293	260,120	128,640	-	-	-	421,053
VAC-2014	55,337	372,596	42,744	-	-	-	470,677
	H	**M**	**L**				
BR-2014	138,661	229,156	9,287	-	-	-	377,104
BR-1999	NA	NA	NA	-	-	-	-
	H	**M**	**L**				
VC-2014	314,907	60,387	1,810	-	-	-	377,104
VC-1999	NA	NA	NA	-	-	-	-
	H	**M**	**L**				
VR-2014	103,820	252,142	21,142	-	-	-	377,104
VR-1999	NA	NA	NA	-	-	-	-
	1	**2**	**3**	**4**	**5**		
VSC-1999	32,906	264,084	108,714	15,348	-		421,053
VSC-2014	27,804	196,781	237,298	8,667	-	-	470,550
	P	**R**	**PR**	**M**	**MM**		
RVQC-2014	2,928	62,880	225,274	64,848	-	-	355,930
EVQO-1999	5,953	31,063	253,248	79,642			369,906

Ministry of
Forests, Lands and
Natural Resource Operations

Coast Forest Area
2100 Labieux Road
Nanaimo, BC, V9T6E9

Visual Quality Objective Conformance Monitoring of the Discovery Islands

Campbell River and Sunshine Coast Natural Resource Districts

May 9, 2014

Prepared by
Lloyd Davies, RPF
Visual Resource Management Specialist
Coast Forest Area

Introduction

The purpose of the in-field visual resource monitoring within the Discovery Islands was to evaluate the overall level of conformance of forest harvesting to the established Visual Quality Objectives. The report documents the current visual condition, overall level of conformance, and identifies any specific areas of concern. The project was jointly promoted by the Ministry of Forests, Lands & Natural Resource Operations (MFLNRO) and Ministry of Jobs, Tourism & Skills Training (JTST). Initiation of this broad scale conformance monitoring was in part to address concerns being expressed by the Discovery Islands Marine Tourism Group. The goal was to document the forest licensees performance at achieving legally established VQOs.

Study Area

The Discovery Islands is a descriptive term used to define a group of islands between Vancouver Island and the Mainland of BC, starting near Campbell River and running slightly north of Sayward in latitude. It is generally considered to encompass the following major islands: Quadra, Cortez, Read, Maurelle, Sonora, Stuart, East Thurlow, West Thurlow, Raza, West Redonda, and East Redonda. The area has a large number of scenic marine passages, including Johnstone Strait, Okisollo Channel, Hole in the Wall, Whiterock Passage, Sutil Channel, Calm Channel, Pryce Channel, Cordero Channel, and a number of smaller passages, arms, and bays. Portions of the fiord landscapes of Bute Inlet and Toba Inlet were also reviewed. Portions of the east coast of Vancouver Island, as seen from Johnstone Strait, were also included. It is a group of rugged coastal islands and marine passages widely known for their scenic attractiveness. The area provides the foundation for a provincially significant amount of public recreation and commercial tourism. The Discovery Islands' natural beauty is also highly valued by the local residents of the islands, including First Nations. At the same time, the area is heavily forested and supports a large forest industrial base. The forest sector is critically important in supporting healthy communities, jobs and the local economy within the Discovery Islands. For the purposes of the field monitoring, all areas shown on the Discovery Islands VQO map (Appendix 1) were reviewed.

Methodology

In-field monitoring was completed during September 4-15, 2013. Dates were chosen for optimal weather, lighting, and ocean conditions. Travel was by MFLNRO vessel and water taxi to duplicate a recreation/tourism boating experience. Forty hours were logged on the water. A digital SLR camera with GPS capability was used to record the landscape scenes. In total, over 750 digital

photographs were recorded. Each photograph was geotagged with its GPS location at the time of capture. The GPS locations were subsequently used to map the location of stops shown in Appendix 3. The majority of visible forest harvesting was reviewed and an ocular (eye based) assessment was noted. Stops chosen would typically be regarded as significant public viewpoints. Locations chosen are all easily accessible to the boating public and tourism sector. They were chosen generally mid-channel to provide a reasonable or best view of the landscape scene. No attempt at randomness of sampling was done. In a few locations, a detailed Visual Quality Effectiveness Evaluation form was completed to record the achieved visual condition. However, the broad scope of monitoring did not technically follow the Forest and Range Evaluation Program (FREP) of sampling individual landforms based on random selection.

Personnel

Planning and in-field visual monitoring was completed by Lloyd Davies, RPF, Visual Resource Management Specialist for the Coast Forest Area. Staff support and local knowledge within the Campbell River District was provided by John Andres, RPF, Stewardship Officer. Staff support and local knowledge within the Sunshine Coast District was provided by Blake Fougere, RPF, Stewardship Officer and Gerard Nachtegaele, RFT, Resource Technologist, Tenures. See Appendix 3 for MFLNRO staff contacts.

Visual Quality Objectives

Visual Quality Objectives (VQOs) are forest management objectives established by a district manager under the Government Action Regulation section 7 (2). They are used to reflect society's desired level of visual quality on the landscape. The Forest Planning and Practices Regulation section 1.1 defines 5 categories of alteration:

(a) **Preservation**: *consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is*

(i)Very small in scale, and (ii) not easily distinguishable from the pre-harvest landscape;

(b) **Retention***: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is*

(i) difficult to see, (ii) small in scale, and (iii) natural in appearance;

(c) **Partial Retention**: *consisting of an altered forest landscape in which the alteration, when assessed from a significant viewpoint, is*

(i) easy to see, (ii) small to medium is scale, and (iii) natural and not rectilinear or geometric in shape;

(d) **Modification**: *consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is*

(i) is very easy to see, and (ii) is (A) large in scale and natural in its appearance, or (B) small to medium in scale but with some angular characteristics;

(e) **Maximum Modification**: consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint,

(i) is very easy to see, and (ii) is (A) very large in scale, (B) rectilinear and geometric in shape, of (C) both.

To assist with graphically understanding the categories of visually altered forest landscapes, see poster entitled: **A Guide to Visual Quality Objectives**.

MFLNRO Visual Resource Management program is overviewed in the publication "**Managing Change on British Columbia's Scenic Landscape**. See **link**.

Additional resource material on the MFLNRO's Visual Resource Management program can be found at the following **website**.

Once VQOs are legally established, forest licensees are responsible for ensuring their harvesting and road building is consistent. Government assesses conformance[1] through random field monitoring under the Forest and Range Evaluation Program. Cases of suspected non-compliance[2] may also be investigated by MFLNRO Compliance & Enforcement staff. The current Discovery Islands VQO conformance review, while strategic in scope, is in part fulfilling the Ministry's obligation to monitor resource practices under the Forest & Range Practices Act.

---

[1] **Conformance** is a term defined as "*acting in accordance with specified standards or authority*". In the context of resource stewardship monitoring it refers to meeting the spirit and intent of the VQO legal definitions (Categories of visually altered landscape, FPPR section 1.1) through use of visual design concepts. Conformance monitoring is central to the Forest & Range Evaluation Program.

[2] **Compliance** is a term defined in part as "*the act or process of complying*" and "*conformity in fulfilling official requirements*". The MFLNRO interprets "*To be in compliance*" means the activity is meeting all statutory requirements of relevant standards, regulations, and acts. In the context of visual resource management, Compliance & Enforcement staff is responsible for ensuring the legal commitments of approved Forest Stewardship Plans are met.

Visual Quality Objective Status

Sunshine Coast District had VQOs established in May 1997 under the Forest Practices Code. The VQOs were subsequently carried forward into FRPA by virtue of FRPA section 180 and 181 in December 2004.

Campbell River District established VQOs in December 14, 2005 through a FRPA Government Actions Regulation section 7 (2) order. It involved considerable input from forest licensees, general public, recreational stakeholders, and First Nations.

The amount and distribution of VQO classes within the Discovery Islands is shown in Table 1. The location of the VQOs is shown in the map Appendix 1.

Table 1 Discovery Islands, Area by Established VQO class

VQO	Campbell River_Ha	Campbell River_%	Sunshine Coast_Ha	Sunshine Coast_%	Total_Ha	Total_%
Preservation (P)	417.4	0.5%	841	0.9%	1258.4	0.7%
Retention (R)	9770.1	12.0%	10207.4	11.3%	19977.5	11.6%
Partial Retention (PR)	49845.3	61.0%	52776.1	58.5%	102621.4	59.7%
Modification (M)	21684.8	26.5%	26362.9	29.2%	48047.7	28.0%
Maximum Modification (MM)	0	0.0%	0	0.0%	0	0.0%
	81717.6	**100.0%**	**90187.4**	**100.0%**	**171905**	**100.0%**

The above indicates the proportion of the Discovery Islands in the 2 districts is very similar. In addition, the distribution of area by VQO class is extremely close. The vast majority (60%) is Partial Retention VQO. This is followed by 28% Modification VQO. A small (11.6%) but significant portion is the highly restrictive Retention VQO. Neither Preservation VQO nor Maximum Modification VQO is significantly represented.

Compared to provincial VQO distribution (P=1.1%, R=12.7%, PR=51.5%, M=30.3%, MM=4.4%), the Discovery Islands area on average is being managed for visual quality similarly. However, there is slightly more Partial Retention and less Modification VQO than the provincial averages.

Summary of Previous VQO Monitoring

Under the Forest & Range Evaluation Program (FREP)

The MFLNRO uses procedures developed under the FREP program to monitor conformance to VQOs. For more information on the Visual Quality Effectiveness Evaluation Protocol see **link**. The protocol procedures randomly select harvest blocks (under 3 years old) that fall within scenic areas with an established VQO. The chosen block is then used to identify the landform for review. Once a landform is identified and viewpoint(s) chosen, all harvest openings and road building are assessed for their cumulative visual impact. Sampling has been conducted in various years for the two districts with cutblocks approved under both the Forest Practices Code (FPC) and Forest & Range Practices Act (FRPA). To date, a modest sampling of 22 landforms have been assessed within the area of the Discovery Islands.

Campbell River District	total of 14 samples
86% conformance	14% non conformance (2 samples)
Sunshine Coast District	total of 8 samples
87.5% conformance	12.5% non conformance (1 sample)

Combined FREP results indicate a high level (86%) of VQO conformance[3]. This is slightly higher than the total Coast Area conformance of 82% based on 102 FREP samples. It is substantially better than the provincial averages under the FPC (63% conformance) and FRPA (69% conformance).

[3] FREP conformance means achieving the rating of either "well met", "met", or "borderline". Borderline in FREP Visual Quality Effectiveness Evaluations refers to situations of one measure meeting the VQO and one measure not meeting the VQO. For example, meeting scale of alteration guidelines but not meeting legal definition.

Findings: A Visual Monitoring Photographic Review

The following photographic review is presented in the order of travel. In other words, it follows no priority for visual impact significance. The first two field days were spent within the Campbell River District portion of the Discovery Islands. Subsequently, another two days were spent within the Sunshine Coast District. Each photograph "Stop" includes its geographical location, a note on the relative level of VQO conformance in the scene, and any relevant comments. For the benefit of online review, each report photograph "thumbnail" is linked to a website housing full resolution images. Simply "click" on the individual photo thumbnail to review the image in detail. It is important to recognize that photographs are being presented in the report as a surrogate to actual on-site viewing. Photographs when reviewed at a very large scale of reproduction are generally regarded as a fairly reliable surrogate. However, readers are reminded that photographs cannot substitute for in-field review where the human scale, viewing context, and travel experience all play a part in the landscape perception.

The location of each Stop is shown on the map in Appendix 3. Select wall map for suitable large scale printing.

A Discovery Islands Study Area map showing VQOs and location of Stops is found in this link. Stop locations are also shown and can be reviewed in detail on Google Earth:

Table 2

VQO Conformance Summary findings from 96 chosen stops:

District	# Conforming	# Non-conforming
Campbell River	46	4
Sunshine Coast	43	3
Totals	**89** (92.7%)	**7** (7.3%)

Table 3

Breakdown of Conformance

District	Betters[4]	Met[5]	Borderline[6]	Non-conforming[7]
Campbell River	8	28	10	4
Sunshine Coast	16	19	8	3
Totals	**24** (25%)	**47** (49%)	**18** (18.7%)	**7** (7.3%)

(Stops 1 - 64 are located within the Campbell River Forest District)

Stop 1

Herriot Bay, Quadra Island- natural appearing setting, good conformance to PR VQO.

[4] **Betters** is used to describe where the existing visual condition is less impacted than allowed by the VQO class. For example, currently a natural appearing scene (Preservation existing visual condition) in an area that allows for a Partial Retention VQO.

[5] **Met** is used to describe where the existing visual condition is equal to the VQO. For example, forest harvesting meeting Partial Retention (PR) in an area established as PR VQO.

[6] **Borderline** is used in this report to describe forest harvesting towards the upper limits of allowed alteration of the VQO class in terms of definition, visual design quality, and/or scale of landform alteration. For example, harvesting in a Partial Retention polygon that is verging on or straddling the border of a Modification visual condition.

[7] **Non-conforming** is used to describe where the existing visual condition is less than the established VQO. For example, harvesting has resulted in a Modification visual quality class in an area established as Partial Retention or more restrictive VQO.

Stop 2

Open Bay and Hyacynthe Bay, Quadra Island- natural appearing setting, good conformance to VQOs. Foreshore is largely privateland (no VQOs) with a mix of Preservation-Retention-Partial Retention VQOs. Landforms seen in the mid and background are mostly Modification VQOs.

Stop 3

Hoskyn Channel- natural appearing landscapes, conformance betters the primarily PR VQOs

Stop 4

Quadra Island as viewed from Freedom Point on Read Island. Natural appearing landscapes with good conformance to VQOs

Stop 5

Westside of Read Island seen from Hoskyn Channel. Privateland logging has minor visual impact. The area is generally an established Partial Retention VQO. Although privateland is not subject to VQOs, it shows a good degree of conformance to PR VQO.

Stop 6

Read Island close-up view. Private landowner (no VQOs) retained foreshore trees to mitigate visual impact. Meets in effect a Partial Retention VQO.

Stop 7

West entrance to Whiterock Passage, Surge Narrows Park- some old privateland logging that has visually greened-up. Crownland conforming to the Retention VQOs.

Stop 8

Recreational boaters in Whiterock Passage

Stop 9

East entrance of Whiterock Passage viewing north. Logging on Stuart Island is easy to see despite the long viewing distance. From this distant view, the Stuart Island harvesting is subordinate and conforming to the PR VQO. This is the only visual impact in an otherwise natural appearing landscape. See also Stops 88-90, 112.

Stop 10

Okisollo Channel viewing north, natural appearing scene, conforming well to R & PR VQOs.

Stop 11

Surge Narrows Provincial Park, natural landscape.

Stop 12

Okisollo Channel viewing Maurelle Island. BCTS loading barge/grid ramp is seen along the foreshore. Barge/grid ramp eliminates booming grounds, log booms, and associated visual impacts. A small industrial intrusion to an otherwise natural appearing landscape. Conforming to the Partial Retention VQO.

Stop 13

Close-up view of BCTS log loading barge/grid ramp, Maurelle Island. Designed to limit the negative visual impact. See also Stops 116 and 117. Hydro seeding grass on exposed soil areas within the visible road right-of-way has potential for softening visual impact.

Stop 14

Sonora Island, viewed from mid Hole in the Wall. A natural appearing landscape which is conforming to the Retention VQOs.

Stop 15

Sonora Island, Hole in the Wall passage, location of proposed Block 11360 (TimberWest). It has been designed to be unseen. As planned, it is expected to conform to Retention VQO.

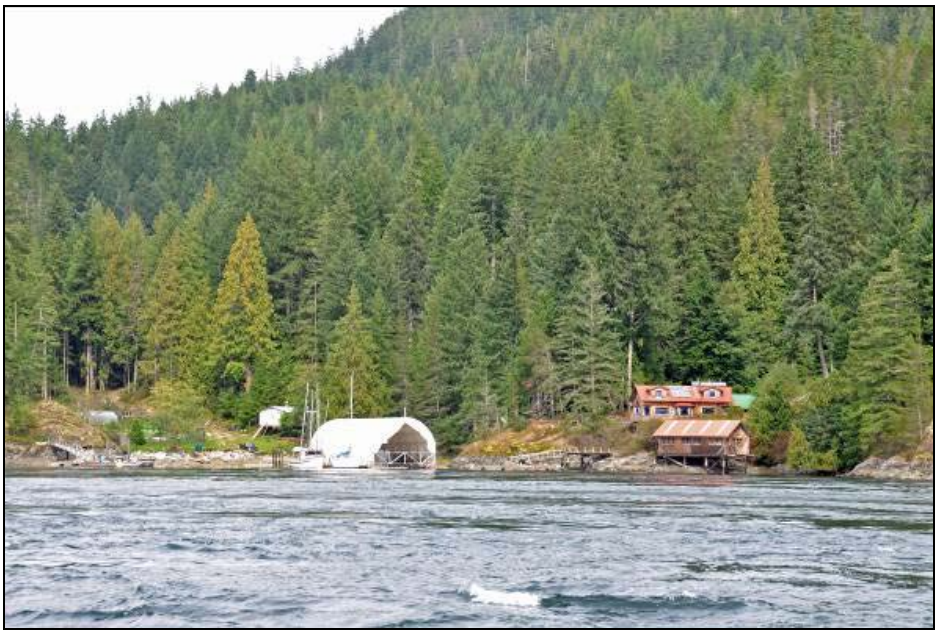
Stop 16

Hole in the Wall passage viewing (south) to Maurelle Island. Old cutblock now greened-up and conforming to the Partial Retention VQO.

Stop 17

Sonora Island seen from Calm Channel. Natural appearing landscape that remains in conformance with the Partial Retention VQOs.

Stop 18

- 

Diamond Bay, Sonora Island. Home base for the vessel Columbia III and Mothership Adventures.

Stop 19

Owen Bay panoramic view of Sonora Island. Largely natural appearing. Conforming to Retention and PR VQOs.

Stop 20

Owen Bay, Sonora Island, visible cutblock conforming to the PR VQO.

Stop 21

Sonora Island, north of Owen Bay, TFL 47 Block 11-33H conforming to PR VQO. Cutblocks are easy to see, appear small in relative scale, and not rectilinear nor angular.

Stop 22

Barnes Bay, Sonora Island, harvesting of various ages. Landscape appears somewhat tattered by the cumulative impact of forest alterations. Overall result conforms to the PR VQOs.

Stop 23

Sonora Island east of Woods Bay. A passing view to boaters. A relatively small and rounded appearing cutblock & road conforming well to the Partial Retention VQO.

Stop 24

Sonora Island, Woods Bay. A largely natural setting with exception of log dump. Conforming well to the Partial Retention VQOs.

Stop 25

Sonora Island. Close-up view of Woods Bay log dump. Exposed rock & soil is visually significant. An industrial setting, despite being exempt from VQOs, that is not consistent with Partial Retention. At the close of operations, assess potential for visual rehabilitation through planting of grasses/shrubs/trees on disturbed ground.

Stop 26

Quadra Island, Okisollo Channel east of Chonet Bay log dump. Overall the harvesting is conforming to PR VQO. However, the cutblock seen in the center is verging towards Modification visual quality class due to slight angularity of cutblock.

Stop 27

Western Sonora Island viewed from Johnstone Strait, south of Elk Bay. From this distant view Block 11-406 is easily seen but appears to conform to the PR VQO. In-block tree retention aids in reducing the apparent scale and negative visual impact. (See also Stop 30).

Stop 28

Elk Bay, Vancouver Island. Block Elk 171 is conforming to PR VQO when viewed from center channel of Johnstone Strait. It is verging towards a Modification visual quality class due to straight appearing back boundary. Greater foreshore reserve would lessen visual impact and help reduce risk of potential windthrow damage. Old harvesting pattern is showing strong unnatural angularity.

Stop 29

Sonora Island viewed from Okisollo Channel, near Venture Point. Borderline conformance to PR VQO. Verging towards a Modification visual quality class due to somewhat blocky shape. Greater foreshore reserve and in-block tree retention would have reduced the apparent scale. Right side of cutblock has a visually effective level of in-block tree retention.

Stop 30

Sonora Island, west entrance to Okisollo Channel near Granite Point. TFL 47 Block 11-406 is very easy to see foreground harvesting. It appears large in scale relative to small landform. The clearcut contrasts in colour & texture to the surrounding forest. It interrupts the skyline and includes some visually obvious road cut. From this view location the harvesting has merged into a Modification visual quality class and therefore is not conforming to the PR VQO.

Stop 31

Elk Bay, Vancouver Island. Interfor Block ELK-194 (center of photo) is easy to see, appears medium in scale, with some straight unnatural lines. Viewed from a typical boating distance, the harvesting patterns conform to the PR VQOs. However, the unnatural appearing straight boundary line of Block Elk-194 is verging towards a Modification visual quality class.

Stop 32

Elk Bay, Vancouver Is., Interfor Block ELK-191, small block, no obvious angularity, good foreshore reserve. Viewed from midground distance (typical of recreational boaters) it conforms to the PR VQO.

Stop 33

Sonora Is., Green Sea Bay, BCTS harvesting. Cutblocks are very easy to see, high contrast in colour & texture, medium in relative scale of landform alteration. Various openings do not show strong angular characteristics. Harvesting is conforming to PR VQO but the cumulative impact is towards the upper limits of the VQO class. (See also stop 63).

Stop 34

Chatham Point, privateland logging. Original visual impact is beginning to lessen with visual green-up.

Stop 35

Sonora Island, Kumealeon Bay, TFL 47 Block 11-68. Harvesting shows good visual design and the in-block tree retention helps to mitigate the negative visual impact. Conforming well to the Partial Retention VQO.

Stop 36

Hemming Bay, TFL 47. (Telephoto view). Harvesting is easy to see despite the long (15 km) viewing distance. Focal position high on landform, unnatural visual design, some angularity and visible road cuts. The resulting visual impact conforms to the Modification VQO. (See also Stops 50 & 51).

Stop 37

Fredrick Arm viewed from Hall Point. From a distant view the harvesting is conforming to PR VQO.

Stop 38

Frederick Arm viewed near to Hall Point. Individually the cutblocks conform to the PR VQO. In combination the landscape is trending towards a Modification visual quality class and at the boundary of acceptable visual change. Future harvesting needs to consider adjacent green-up and careful aesthetic design to reduce the cumulative visual impacts.

Stop 39

Frederick Arm (telephoto view from Hall Point). From shorter viewing distances the harvesting is verging towards Modification visual quality class. Block on right shows an overall rectilinear shape. The amount and pattern of in-block tree retention is insufficient to mitigate the visual impact. Cutblocks seen on the left demonstrate well-designed natural shape, pattern and size.

Stop 40

Frederick Arm seen at distance from Denham Bay, Cordero Channel. Harvesting is conforming to PR VQO but is towards the upper limits of the visual quality class (ie. borderline).

Stop 41

Head of Frederick Arm (TFL 45), viewed from Cordero Channel (telephoto). Small to medium appearing blocks relative to large coastal landform. Blocks appear extremely angular with high contrast in colour & texture. Harvesting appears as a Modification visual quality class and therefore not conforming to the PR VQO set for the main travel corridor (primary viewpoints). See also the close-up view taken in Stop 42 below.

Stop 42

Whale watching boat in Frederick Arm (taken with telephoto lens). Showing 2 strongly contrasting harvest blocks with angular unnatural boundary shapes. Complying with the approved Forest Stewardship Plan (FSP) which allows for Modification VQOs from within Frederick Arm, noted as "secondary viewpoints" locations.

Stop 43

Denham Bay Resort, Cordero Channel. One of the vacation resorts within the Discovery Islands. In addition to channel view locations, resorts are considered significant public viewpoints.

Stop 44

Phillips Arm at Cordero Channel. Small heli blocks are well design and distributed with minimal visual impact. Conforming well to the Partial Retention VQO.

Stop 45

Midway into Phillips Arm. Viewing to head of Inlet. The extent of primary viewpoints, conforming to the Partial Retention VQOs.

Stop 46

South side of Phillips Arm in Cordero Channel, TFL 45, harvest blocks appearing medium in scale. No obvious angular characteristics. Conforming to the Partial Retention VQOs.

Stop 47

West side of Phillips Arm about ½ way within the inlet, TFL 45, very easy to see, medium to large appearing size, some angularity, and contrasting orientation across the landform, resulting in Modification visual quality class. Originally set for a PR VQO, it complies with approved FSP which allows for Modification VQOs from "secondary viewpoints" from within the inlet (as opposed to Cordero Channel).

Stop 48

Phillips Arm south side viewed from Cordero Channel, TFL 45, a variety of new and historical logging, conforming to the Partial Retention VQOs.

Stop 49

Cordero Channel near Picton Point, small well-designed cutblock, large older cutblocks have achieved visually effective green-up. Overall, conforming to the PR VQO.

Stop 50

Cordero Channel at Brooks Bay. Moderate sized cutblock has interrupted the visually sensitive ridgeline. Despite the focal position of this block, when viewed from a distance, the harvesting is still conforming to the PR VQO. Also seen from further distance, see Stop 36.

Stop 51

Telephoto view of ridgetop harvesting (as above). Although cutblock is relatively small the interruption of the focal skyline is resulting in a significant visual impact.

Stop 52

Phillips Arm (telephoto) TFL 45 seen from Cordero Channel. The landscape is showing a pattern of various age types resulting from forest harvesting. Overall, the landscape is conforming to the PR VQO. The most recent harvest block is exhibiting some angular qualities and lack of aesthetic design. Verging towards a Modification visual quality class.

Stop 53

Near Cordero Lodge. Harvesting design and in-block tree retention aid in limiting visual impact. Conforming to the Partial Retention VQO.

Stop 54

Cordero Lodge.

Licensee took care to ensure harvesting is not seen from the lodge, TFL 47.

Stop 55

Near Cordero Lodge. Foreshore tree reserve (including crown thinning) maintained to ensure the harvesting is not apparent for passing boaters, TFL 47.

Stop 56

Cordero Channel (mainland) west of Green Point. Relatively good visual design. However, the fresh logging in the foreground has significant visual impact due to temporary high contrast in colour in texture. Viewed from mid-channel locations the harvesting conforms to the PR VQO.

Stop 57

Cordero Channel west of Cordero Lodge. TFL 47 Block 7-058. Clearcut is very easy to see in the foreground. Medium in scale relative to landform. No strong angular characteristics. Transition between PR and Modification visual quality class. Borderline conformance to PR VQO.

Stop 58

Longhborough Inlet, TFL 47. Clearcut harvesting is very easy to see in the foreground. Medium in scale with some straight boundaries and strongly angular characteristics. No evidence of any aesthetic design considerations. Conforming to the Modification VQO but verging on Maximum Modification.

Stop 59

Blind Channel Resort on West Thurlow Island. The visual impact of old privateland loggings is beginning to soften with green-up of forest vegetation. Owner encouraged tree removal to allow for greater winter sunshine.

Stop 60

West Thurlow Island, TFL 45. Harvesting showing visual design problems. Cutblock upper left is blocky with dominant road cut. Ridgeline tree retention is insufficient to prevent a "picket fence" effect. In combination the harvesting is conforming to PR VQO. However it is verging on achieving a Modification visual quality class.

Stop 61

West Thurlow Island, Butterfly Bay, TFL 45. Conforming to the Partial Retention VQO. Irregular shaped openings that are interspersed with in-block tree retention patches assist in meeting the VQO. Cutblock at the time of harvest would have verged on a Modification visual quality class.

Stop 62

Cruising by East Thurlow Island. Scenic viewing an integral part of yachting.

Stop 63

Sonora Island, Green Sea Bay, BCTS Block K034C2FA. Cutblocks are very easy to see, high contrast in colour & texture, medium in relative scale of landform alteration. Various openings do not show strong angular characteristics. Harvesting is conforming to PR VQO but the cumulative impact is towards the upper limits of the VQO class. (Similar to stop 33).

Stop 64

Lougborough Inlet. Minimal visible debris and subordinate appearing road building. Ridgeline clear of scattered residual trees. Conforming to the Modification VQO.

(Stops 65 - 130 are primarily within the Sunshine Coast District)

Stop 65

MFLNRO "Sand Skipper", Lund, BC . Vessel used for field monitoring,

Stop 66

North of Lund near Kinghorn Island. Recreational boating traffic is provincially significant in the vicinity of Desolation Sound.

Stop 67

Sarah Point in Malaspina Channel. Scenically attractive and visually intact viewscape.

Stop 68

Desolation Sound near Homfray Channel. Visually intact viewscape. Internationally recognized scenic landscapes.

Stop 69

Cabin on shore of East Redonda Island.

Stop 70

Atwood Bay. BCTS cutblock. Visually well designed harvesting showing natural shapes and in-block tree retention. Good example of conformance to PR VQO.

Stop 71

BCTS harvest block located at Brettel Point in Homfray Channel. Subordinate to the viewing experience and conforming to the PR VQO.

Stop 72

Interfor harvesting, mouth of Toba Inlet, near Brettel Point. Primarily natural shapes which are conforming to the PR VQO. Cumulative impact is verging towards Modification visual quality class at closer viewing distances.

Stop 73

Extremely scenic landform in Toba Inlet showing some small dispersed helicopter logging. Good conformance to the PR VQO.

Stop 74

Toba Inlet west of Brem River. Small helicopter harvest blocks that are well shaped and distributed across the landform. Good example of conformance to PR VQO.

Stop 75

Telephoto view of Toba Inlet small heli block. Good visual design and conformance to PR VQO. Foreshore tree reserves could be more substantial to ensure they remain windfirm.

Stop 76

Toba Inlet heli block showing odd angular shape. Small in relative scale of landform alteration and conforming to the PR VQO. The poor visual design is verging towards Modification visual quality class.

Stop 77

Toba Inlet outside legal scenic area (no VQOs). Exhibiting unnatural appearing visual design.

Stop 78

Toba Inlet , Brettel Point, VSU #211. Ground-based harvest conforming to the PR VQO. Overall "blocky" shape is reduced by in-block tree retention.

Stop 79

Mouth of Toba Inlet, VSU #512, north of Brettel Point. A very good example of visual design helping meet the PR VQO. Cutblock/leave pattern and shape beneficial. High contrast in colour is temporary.

Stop 80

Confluence of Toba Inlet-Homfray Channel. Distant harvesting showing a lack of visual design.

Stop 81

East side of Raza Island. Varied block shapes and sizes conforming to the Partial Retention VQO.

Stop 82

Pryce Channel mid-channel view location. At time of original harvesting it had a significant negative visual impact. C&E Investigation found this harvesting in non-compliance to the Partial Retention VQO. Province's first VQO non-compliance and fine. November 2009.

Stop 83

Raza Island seen from Pryce Channel. A variety of forest harvesting conforming to the PR VQO. (Similar view as Stop 81).

Stop 84

Ramsay Arm-Quatum River. Old harvesting greening-up and now conforming to the PR VQO. Initially the harvesting created a borderline Modification visual condition. This was largely due to the cutblock's scale of landform alteration, visual apparency, and simplicity of visual design.

Stop 85

Head of Ramsay Arm. From this distance the harvesting conforms to the PR VQOs. To a degree the cutblocks reflect the natural patterns found in the exposed rock faces.

Stop 86

Head of Ramsay Arm, VSU 146. From a closer viewing distance the forest harvesting has slipped into a Modification visual quality class. Scale of landform alteration may be appropriate. However, its angular characteristics, apparency and lack of visual design is not conforming to the Partial Retention VQO legal definition.

Stop 87

Ramsay Arm. Old forest harvesting has long reached visually effective green-up. Original harvesting pre-dates VQOs.

Stop 88

Stuart Island distant view. The high visual contrast in colour, unnatural shapes and patterns makes the harvesting very easy to see. Appearing somewhat straight-lined with angular characteristics. Not conforming to the Partial Retention VQO.

Stop 89

Stuart Island seen from Johnstone Bluff. Similar to Stop 88 above. Highly visible and wide linear layout effectively bisects the landform. (see also Stops 9, 88, 90, 112)

Stop 90

Stuart Island mid channel viewpoint. For boaters the harvesting is very easy to see and appears large in relative scale of landform alteration. Unnatural size, shape, and linear layout effectively bisects the entire landform creating a significant visual impact. Best categorized as a Modification visual quality class.

Stop 91

Bute Inlet panorama near Fawn Point. Distant logging conforms to the Partial Retention VQOs.

Stop 92

Bute Inlet near Fawn Point. Although conforming to the PR VQO the cutblock exhibits poor visual design. Visual notch along the focal ridgeline creates an abrupt edge that attracts viewers attention.

Stop 93

Bute Inlet VSU 85. Relatively small cutblocks with a significant negative visual impact due to poor angular design. Conforming to the Modification VQO.

Stop 94

Bute Inlet scenic side valley. Old harvest cutblocks while discernible have reached visually effective green-up. Original harvest blocks appeared large and very rectilinear. Future forest harvesting shape, size, and pattern need to better consider visual design.

Stop 95

Bute Inlet, wildlife/scenic viewing charter boats.

Stop 96

Mouth of Bute Inlet. Combination of harvest openings conforming to Partial Retention VQO. Contrasting cutblock colour and visual design borderlines on Modification visual quality class. Illustrates the importance of allowing sufficient visually effective green-up between adjacent harvest blocks.

Stop 97

Raza Island. Relatively small appearing harvest openings conforming to the Partial Retention VQO. Lack of visual design and angular block shapes verging towards a Modification visual quality class definition.

Stop 98

East Redonda Island. Radial pattern of in-block tree retention assists with conformance to the Partial Retention VQO.

Stop 99

Waddington Channel viewing north. Largely natural appearing landscape.

Stop 100

Pendrell Sound, East Redonda Provincial Marine Park, natural viewscape.

Stop 101

East Redonda Island, Horace Head. Scenic point of land with natural appearing landscapes.

Stop 102

Homfray Channel, eastside, just north of Desolation Sound Marine Park. Some forest harvesting concentrated on lower slopes. Conforming to the Partial Retention VQO. (FREP Sample DSC 2013-11).

Stop 103

Lewis Channel viewing north near confluence with Teakerne Arm. Forest harvesting is quite subordinate and conforming to the PR VQOs. Older privateland harvesting cutblocks have visually softened with forest green-up and are now conforming to the Partial Retention VQO. (left side of photo).

Stop 104

Mid Teakerne Arm panorama. Viewing north to West Redonda Island. Natural appearing landscape that conforms to the Retention VQOs.

Stop 105

Teakerne Arm Provincial Marine Park. Popular destination for recreational boaters.

Stop 106

Queen Charlotte Lodge tug (sport fishing charters) returning from Haida Gwaii. Lewis Channel. Scenic viewing is recognized as an important component to sports fishing tourism.

Stop 107

Top of Lewis Channel viewing north. Raza Island on right side. Largely natural appearing. No issues of conformance to Partial Retention VQOs.

Stop 108

Ocean Kayakers in Deer Passage following the shoreline.

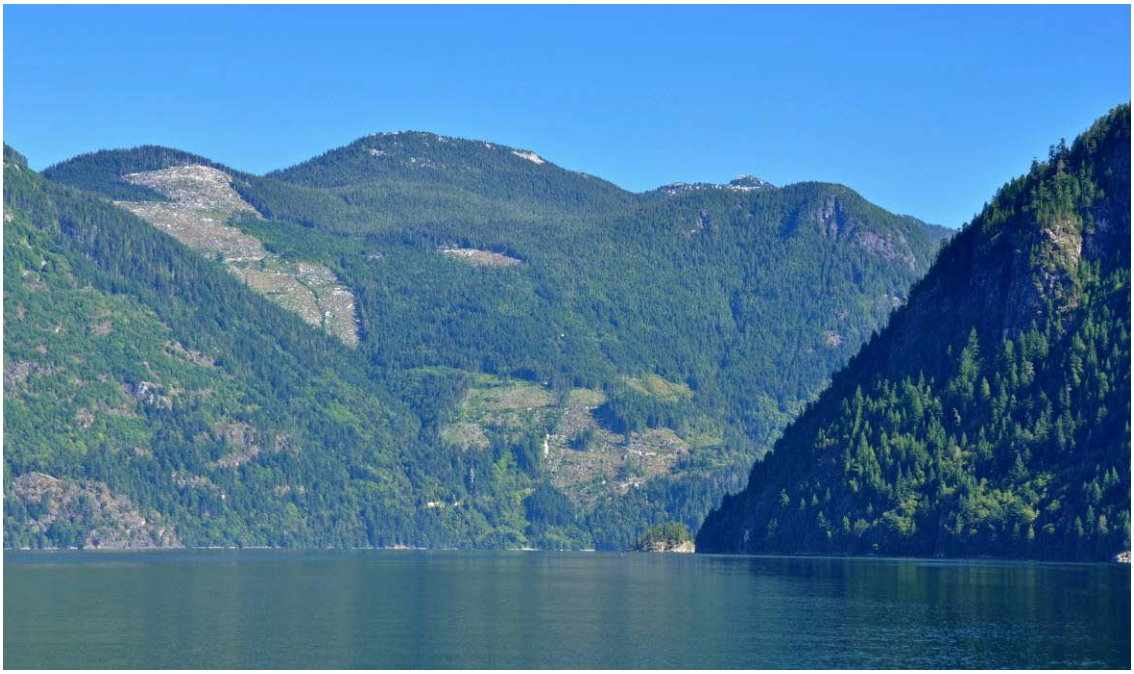
Stop 109

Raza Island viewed from Deer passage. Natural appearing landform at the southern end of the island.

Stop 110

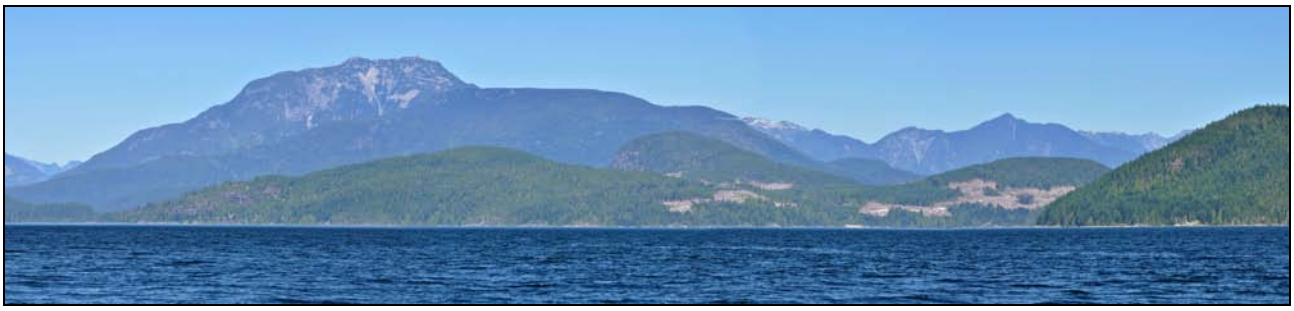
Deer Passage confluence with Pryce Channel. Evidence of old forest harvesting still discernible despite many years of green-up. More recent harvesting along Pryce Channel (right side of image) is clearly visible and showing unnatural shape and size.

Stop 111



Deer Passage viewing into Pryce Channel. At time of harvest the blocks appeared to not conform to the Partial Retention VQO. C&E determination of non-compliance.

Stop 112



Distant view of forest harvesting on Stuart Island. Significant contrast caused by logging is very easy to see even from long distances. Not conforming to the spirit and intent of Partial Retention VQO. (duplicate of photo in Stop 88).

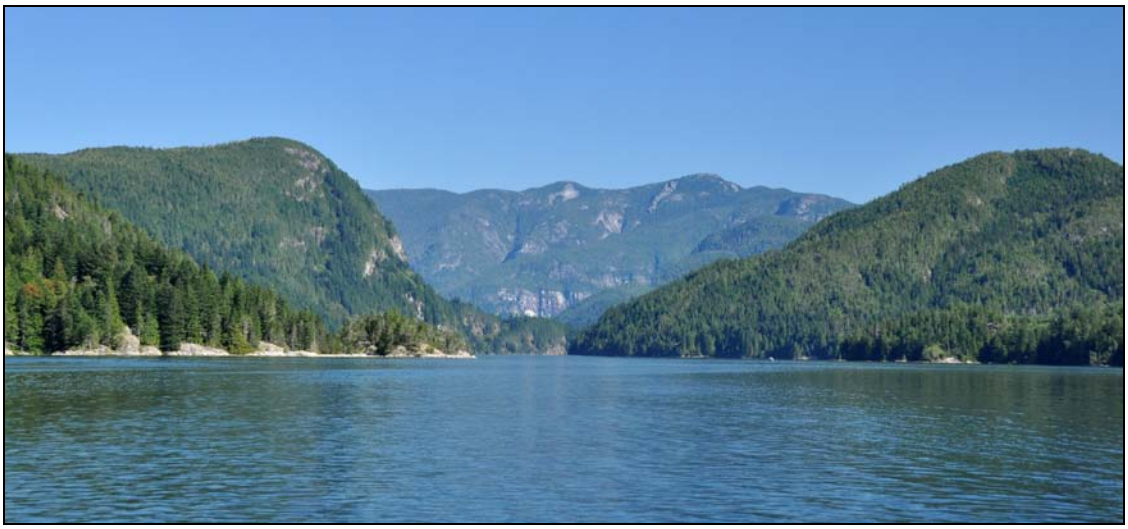
Stop 113

East entrance to Hole in theWall passage. Natural appearing 2nd growth forest

Stop 114

East entrance into Hole in the Wall passage (viewing west). Largely natural appearing landscape. No issues of conformance to the Retention and Partial Retention VQOs.

Stop 115

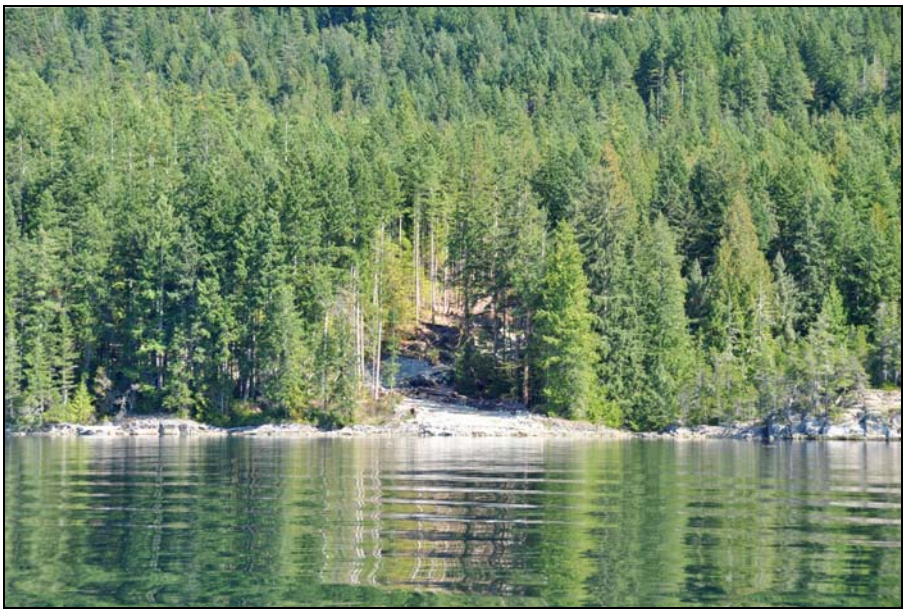


West entrance to Hole in the Wall passage (viewing east). Older forest harvesting within the passage is not evident from this view location. No issues of conformance to the Retention and PR VQOs.

Stop 116

Maurelle Island, BCTS logdump is visible along the foreshore. From this mid-channel viewpoint the alteration appears small and visually subordinate. Meets the spirit and intent of the Partial Retention VQO.

Stop 117



Telephoto view of BCTS logdump on Maurelle Island, Okisollo Channel. Relatively small industrial intrusion to an otherwise natural appearing landscape. Tree retention, narrow width and road layout has helped minimize the visual impact. (similar view as Stop 13).

Stop 118

Maurelle Island seen from Okisollo Channel. Scenic view of natural appearing landscape.

Stop 119

Maurelle Island seen from Okisollo Channel. Dry rocky slopes of predominantly 2nd growth Douglas Fir. No obvious signs of recent forest harvesting. No issues of VQO conformance to the PR VQOs.

Stop 120

Read Island home. One of the residences that are scattered amongst the Discovery Islands. Visual management from permanent land-based homes can be a concern.

Stop 121

South entrance to Whiterock Passage. Natural appearing landforms. Discovery Islands is a visually interesting and complex mix of foreground, middleground, and background landforms. Visual management in each of the distance zones may require different strategies of visual management to ensure consistency with the VQOs.

Stop 122

Whiterock Passage middle section (viewing east). A popular passage for small recreation boaters and kayakers. Natural appearing landscape. In conformance to the foreshore Retention VQOs.

Stop 123

Top of Whiterock Passage, viewing north. Telephoto view towards forest harvesting on Stuart Island. Focal view towards harvesting makes it is very easy to see. Shapes, size, and angularity appear unnatural. Wide linear layout has effectively bisected the landform creating strong visual tension. Not conforming to the Partial Retention VQO. (see also Stops 88-90).

Stop 124

Evans Bay, Read Island (viewing NE). Small and naturally shaped cutblock remains somewhat difficult to see. Dispersed in-block tree retention assists with mitigating visual impact. Conforming to the Retention VQOs.

Stop 125

Head of Evans Bay panorama, Read Island. Forest harvesting remains very difficult to see. Conforming to the Retention VQO.

Stop 126

Carrington Bay, Cortez Island. Visually intact foreshore. Managing the foreground views from popular marine anchorages remains important. Employing special forest harvesting strategies in the land-water interface maybe required to meet the VQOs.

Stop 127

Quartz Bay, Cortez Island. Illustrative of the residential settlement pattern scattered around Cortez and southern Quadra Island.

Stop 128

Von Donop Inlet Provincial Marine Park, Cortez Island. Conformance to the Preservation VQOs. Visual impact mitigation strategies are important in managing the views from the formal and popular anchorages dispersed throughout the Discovery Islands.

Stop 129

Top of Cortez Island viewing north. Natural appearing viewscape. Illustrative of the intact high quality scenery.

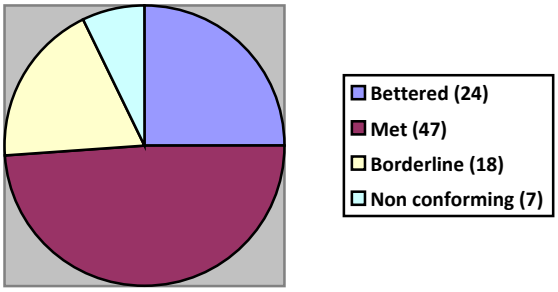
Stop 130

Sarah Point, northern tip of Malaspina Peninsula (12 km north of Lund, BC). Viewscape remains naturally appearing. Dramatic coastal scenery draws both domestic and US boaters to this part of the Province.

Summary

Overall conformance was 93% to the legally established Visual Quality Objectives for the 96 sample sites/stops. The high level of conformance within the Discovery Islands exceeds earlier findings completed under the FREP monitoring program. The field monitoring has found the vast majority of forest harvesting and road building is conforming to the VQOs. In total 89 of the 96 stops conform to the VQOs. Of those conforming, 47 stops (49%) recorded the VQOs being met and 24 stops (25%) bettered the established VQOs (see Chart 1, Breakdown of VQO conformance). The review also found that 18 of the conforming stops (19%) are borderline in meeting the VQOs. (Borderline referring to situations of one measure meeting the VQO and one measure not meeting the VQO). The borderline results are primarily when the VQOs legal definition is not achieved while scale of alteration guidelines are met. Here the forest harvesting is verging towards non conformance. In these cases the visual impact is often towards the maximum level of development for the VQO class. The report also documents 7 stops (7%) of non conformance to the VQO. In these cases of non conformance, contributing factors were either the lack of visual landscape design (poor aesthetic block shapes), overly large apparent block size, visual impact of in-block roads, insufficient in-block tree retention, and/or visual impact caused by a ragged or exposed skyline. In a few locations, the cumulative visual impact of many years of forest harvesting was a contributing factor.

Chart 1 Breakdown of VQO conformance (based on 96 stops)



Recommendations

To ensure continued high levels of VQO conformance, the following visual management recommendations are provided. These are advocated while being cognizant of forest licensees need to balance the AAC implications to their forest harvesting commitments.

1. Forest licensees need to focus on visual landscape design. In particular, effort should be given to creating aesthetically designed cutblock shapes and patterns which appear more natural. Additionally, emphasize strategies that produce smaller appearing cutblocks and harvesting with greater in-block tree retention in order to minimize any negative

visual impacts. Where silviculturally sound, partial cutting systems which retain greater tree retention should be explored. Addressing the distribution and location of forest harvesting and road building on the landform remains important. Minimizing the amount of visible in-block roads remains an important management strategy. Harvesting along focal skylines needs to consider visual impact mitigation strategies.

2. Forest licensees should put less reliance on scale of landform alteration guidelines for meeting VQOs. Scale of alteration should be considered a predictive measure to be considered in concert with aesthetic design. Meeting the legal definition of the VQOs remains paramount.

3. In highly sensitive viewscapes/corridors, forest operations should strive for the more (aesthetic) restrictive end of the respective VQO class.

4. Licensees should continue using robust pre-harvest visual impact assessment procedures. The Discovery Islands are highly visible and may require modelling from a number of significant public viewpoints. If there is any uncertainty as to appropriate viewpoints, confirmation with MFLNRO is advisable.

5. The cumulative visual impact on the landform and the greater landscape scene needs to be considered. An important timing strategy for highly sensitive landscapes is ensuring sufficient visually effective green-up between adjacent harvests.

6. In highly sensitive viewscapes forest licensees should continue visually monitoring their operations from all important viewpoints as harvesting progresses. This will assist with catching and preventing unforeseen visual impacts.

7. It is important that licensee staff maintain sufficient expertise in visual resource management. Foresters practicing in visually sensitive landscapes need to maintain or acquire sufficient education, training, and expertise in visual management. Alternatively, forest licensees should be employing qualified consultants.

8. Licensees should continue using a wide range of professional peer reviews of their forest development plans when operating in important scenic areas. For example, peer review by other forest professionals, MFLNRO visual specialists, and potentially affected tourism stakeholders.

9. Licensees need to continue fostering cooperative information sharing with potentially affected public/recreation/tourism stakeholders to help resolve visual management concerns prior to harvest operations. Digital (website) information sharing of pre-harvest visual impact assessments should be explored. For their part, the commercial tourism sector and non commercial public recreation sector need to work cooperatively with the forest companies to help resolve or accommodate their interests in maintaining scenic quality.

References

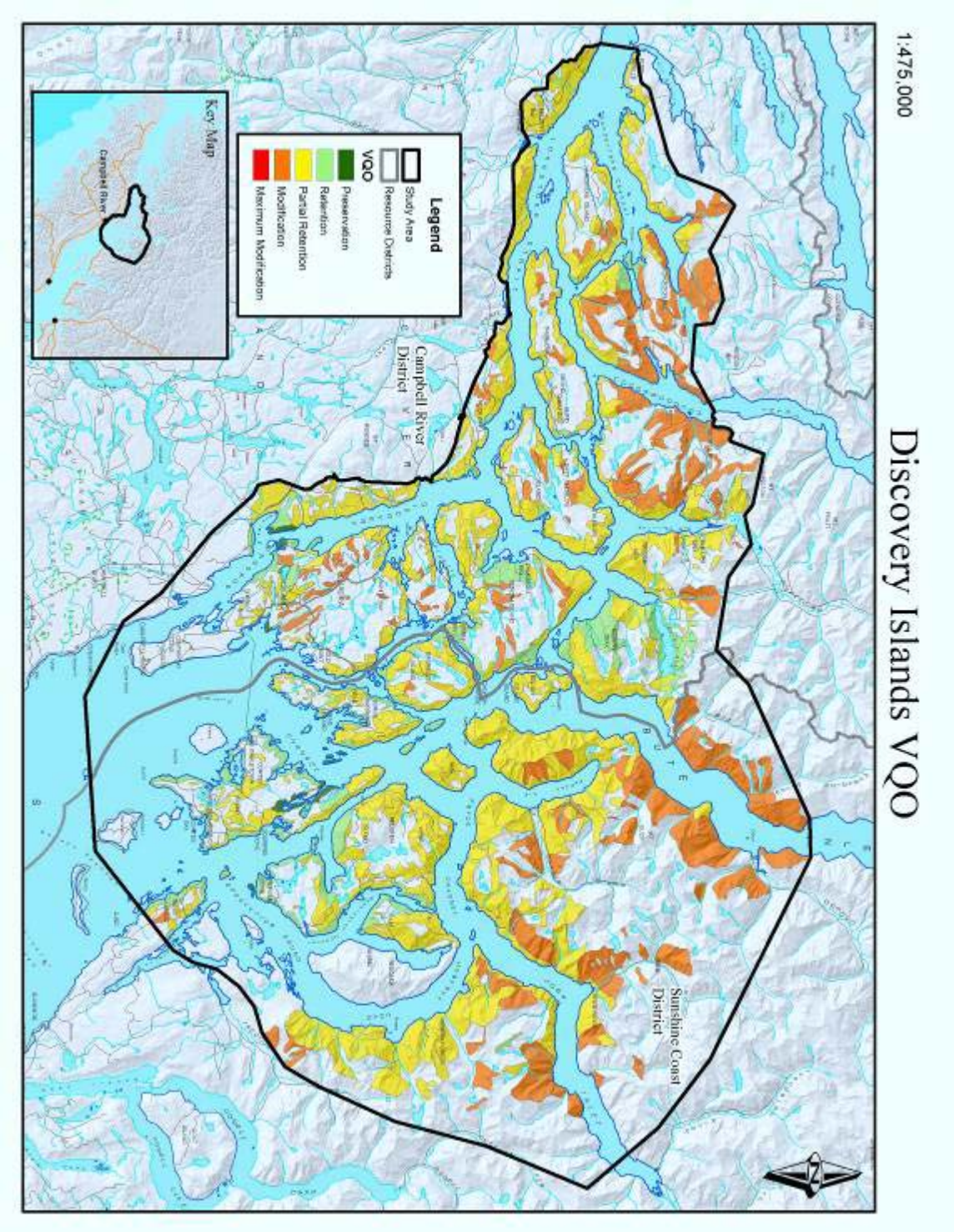
Visual Landscape Inventory, Procedures & Standards Manual,
Forest Practices Branch, Ministry of Forests, May 1997.

Visual Landscape Design Training Manual, Recreation Branch publication 1994:2, Ministry of Forests, 1994.

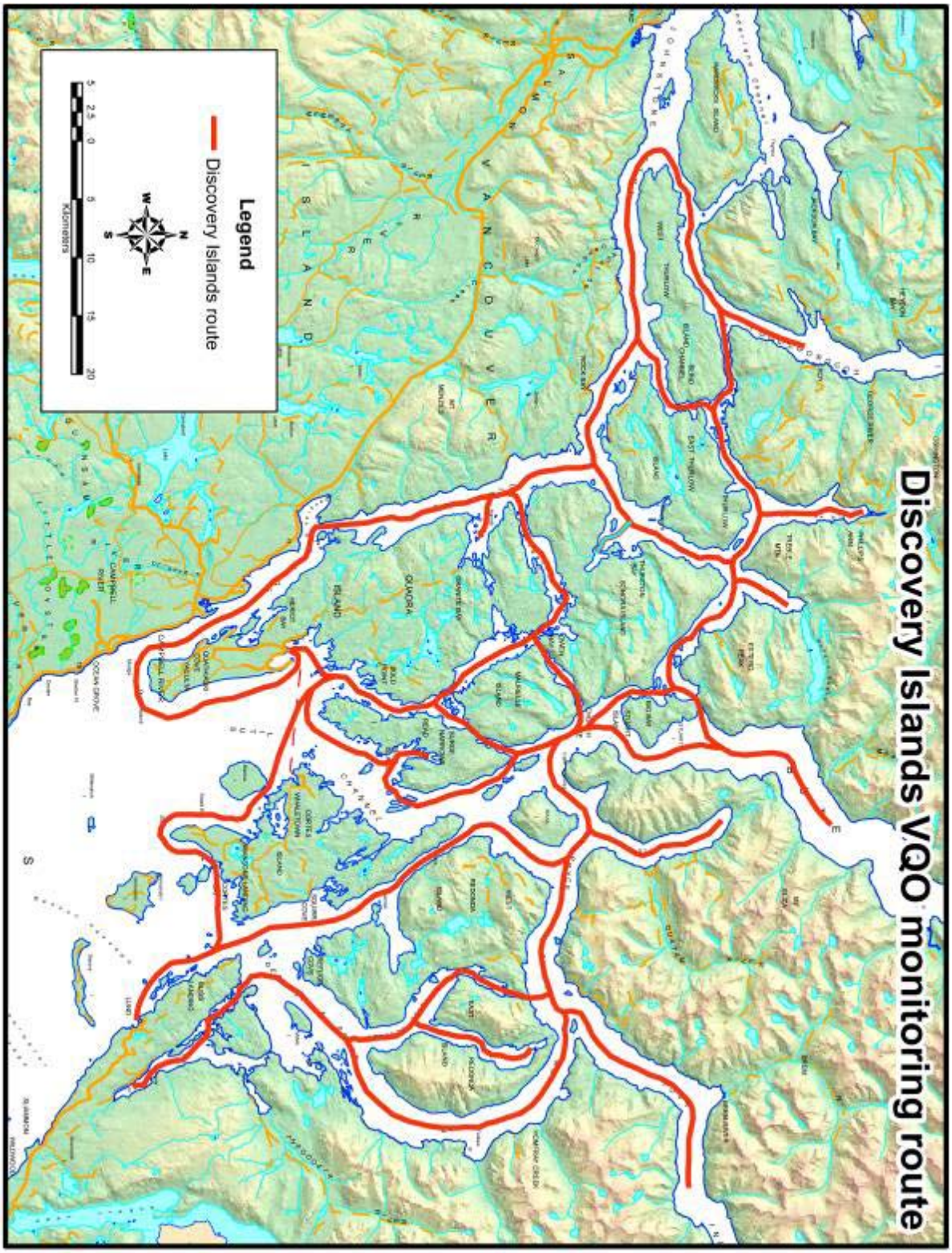
Visual Impact Assessment Guidebook, Second Edition, Forest Practices Code of British Columbia, Ministry of Forests, January 2001.

Protocol for Visual Quality Effectiveness Evaluation, Procedures and Standards, Version 3.0, October 2008, Forest and Range Evaluation Program, Ministry of Forests, Lands, and Natural Resource Operations.

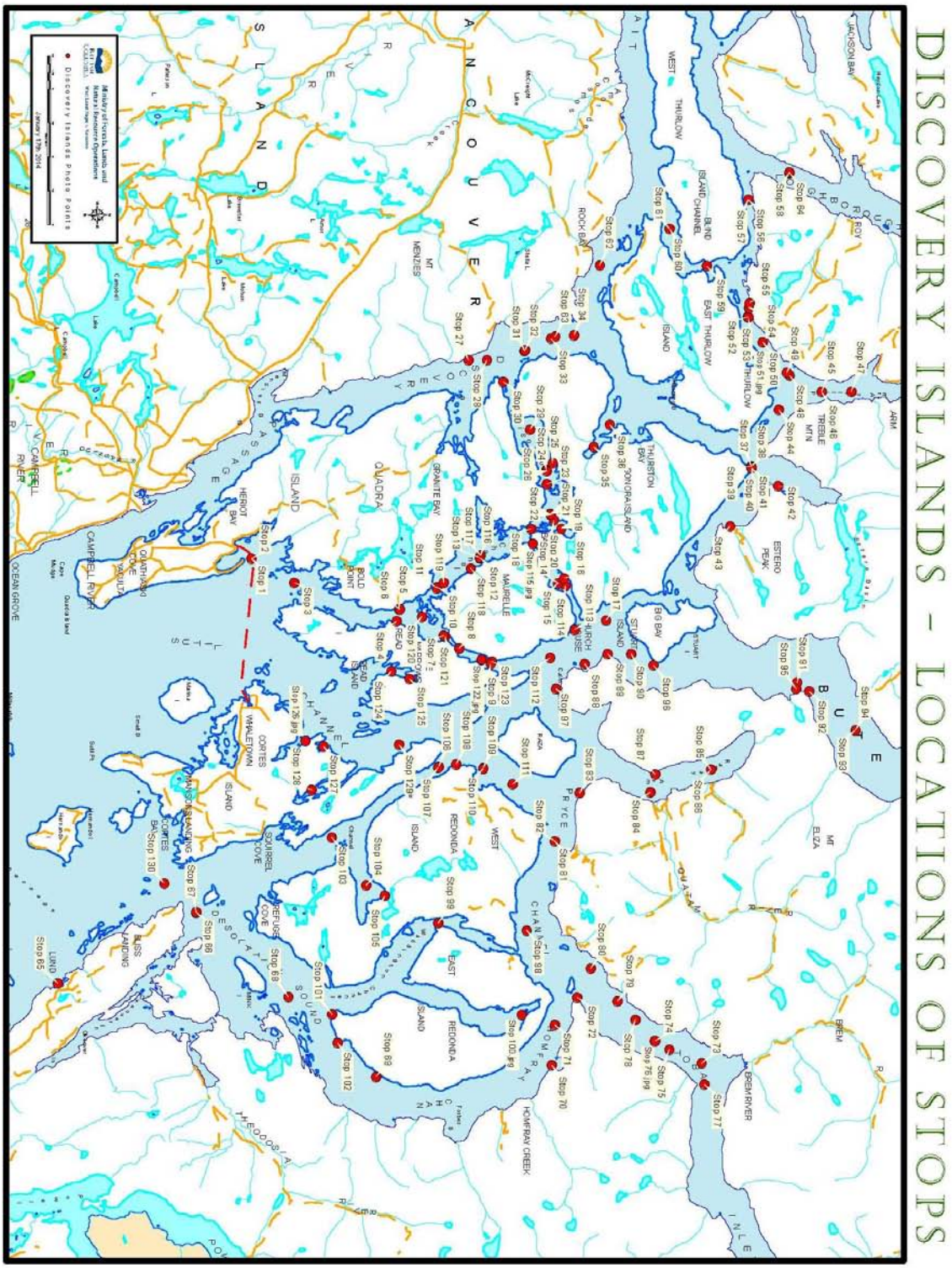
Appendix 1


Discovery Islands VQO
1:475,000
Legend
Study Area
Resource Districts
VQO
Preservation
Retention
Partial Retention
Modification
Maximum Modification
Key Map
Campbell River District
Sunshine Coast District

Appendix 2 Route Map



Appendix 3 Map of Photographic Stops 1 thru 130



Appendix 4 Staff Contacts

Lloyd Davies, RPF, Visual Resource Management Specialist
Coast Forest Area, MFLNRO
Lloyd.Davies@gov.bc.ca

John Andres, RPF, Stewardship Officer
Campbell River District, MFLNRO
John.Andres@.gov.bc.ca

Blake Fougere, RPF, Stewardship Officer
Sunshine Coast District, MFLNRO
Blake.Fougere@gov.bc.ca

Gerard Nachtegaele, RFT, Resource Technologist, Tenures
Sunshine Coast District, MFLNRO
gerard.nachtegaele@gov.bc.ca