Visual Landscape Inventory Training Manual

Visual Landscape Inventory Course Manual

ACKNOWLEDGEMENTS

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NOTICE

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We make no representation about the accuracy of this course if delivered by a trainer that has not been approved by the Ministry of Forests.

The development of this manual was initiated by the Resources Inventory Committee as part of a training course to provide instruction in Visual Landscape Inventory in British Columbia.

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Visual Landscape Inventory Procedures & Standards Manual
RIC Standard separate tab

Introduction

The Visual Landscape Training Course is a three day standard course intended to provide participants with the required skill and knowledge to properly conduct Visual Landscape inventories in accordance with the procedures and guidelines in the approved Resource Inventory Committee (RIC) Standard document entitled *Visual Landscape Inventory Procedures & Standards Manual (May 1997)*.

Purpose

The purpose of this course is to improve the standards of practice and ensure consistency of application throughout the province. In doing so, the course covers all aspects of Visual Landscape Inventory including information and background material assembly, choice of viewpoints, visual landscape unit delineation, visual landscape unit rating, preparation of sightlines, and post-fieldwork tasks.

Target Audience

This course is a Level 4 RIC Training Course intended for technicians and professionals who will actively participate in conducting Visual Landscape inventories. Participants will include consultants, Ministry of Forests staff and forest industry employees.

Participant Pre-requisites

All participants are required to have:

- completed or assisted with a Visual Landscape Inventory within the last two years;
- intermediate to advanced map reading skills including being able to:
    1. locate a position on a map,
    2. relate plan view to perspective view,
    3. interpret air photos,
    4. transfer information between maps and air photos at different map scales,
    5. use a compass and clinometer.

Training Objectives

Upon completion of this course, participants will be able to satisfactorily complete a Visual Landscape Inventory to RIC standards.

Course Design
This course is presented as seven modules developed from the Visual Landscape Inventory Procedures & Standards Manual. The course is delivered over three consecutive days.

The course is designed to be taught by a technical specialist with experience in Visual Landscape Inventory who will be aided by an assistant.

The course has a strong emphasis on practical application both in the classroom and in the field. The classroom exercises mimic typical office work and the field exercises will be performed under similar conditions to typical field work.

In order to broaden the knowledge of participants, examples of landscapes from throughout the province are presented through the mediums of maps, slides, illustrations, and photographs. These examples will illustrate a range of topography and alteration types.

Each day begins with classroom lectures and exercises which provide participants with the knowledge they will apply in the afternoon field exercises.

The final examination stresses the two most important skills - delineating VSUs and rating VSUs.

Course Delivery
The course has both lecture and practical “hands-on” components. The practical components are both field and classroom based.

The classroom based exercises will imitate real life office work e.g. the assembly of background information, review of existing work, and completion of sightlines.

The field exercises will imitate real life field work and will expose the participants to typical landscapes of the area, ideally with a range of existing visual conditions.

Participant Evaluation
The evaluations are designed to test participants comprehension of the material taught. Participants will either pass or fail the course based on their ability to conduct a visual landscape inventory as outlined in the RIC standard. A pass is 70%.

At the end of Modules 3 and 4 participants will complete a short test (30 min) to evaluate their comprehension of the material. Each module evaluation is worth 25% of the total mark for a total of 50%.

Module 7 is the Final examination for the course. The exam is field based and will consist of pre-delineated units which are to be rated as well as units which are to be both delineated and rated. The time frame for the exam is 2.5 hr. The exam is worth 50% of the total mark.

Course Timetable

Day One

Introduction
Module 1
30 min

Pre-Fieldwork
Module 2
2 hours 15 mins

VSU Delineation
Module 3
5 hours

Day Two

VSU
Classification
Module 4
9 hours

Day Three

Post-Fieldwork
Module 5
45 mins

Review
Module 6
1.5 hours

Final
Examination
Module 7
2.5 hours

Equipment List

Typical equipment needed for undertaking a visual landscape inventory is listed below.

REQUIRED FOR THE VLI TRAINING COURSE

- clinometer
- compass
- Douglas (navigational) protractor
- pencils
- selection of coloured pens
- eraser
- scale ruler
- mapping board (firm work surface, portable, minimum size 30 x 45 cm)
- pocket stereoscope

NOT REQUIRED FOR VLI TRAINING COURSE, USED FOR REGULAR VLI FIELD WORK

- binoculars
- camera and/or video recorder
- watch
- print or slide film or video tape
- cruiser vest
- first aid kit

Introduction

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I INTRODUCTION

History

The first formal management for visual resources by the Ministry of Forests was in 1981.

Historically, scenery was not managed or considered a resource in British Columbia forests. The forests were managed for timber and were not open to the general public. In the early 1960s there was growing public concern over access to the forest. By 1962, public hearings were held and the result was the Industrial Roads Act. The public now had access to forest land and multiple use programs were developed.

Many of the people who went into the forests were dismayed by the large, unattractive clearcuts. This led to a need to improve forest management.

The increase in importance of the tourism industry also improved forest management. Scenery was now considered a resource that needed management. People have more leisure time than ever before and regularly visit the forests for relaxation and recreation. Social values of the forest have a higher profile than in the past.

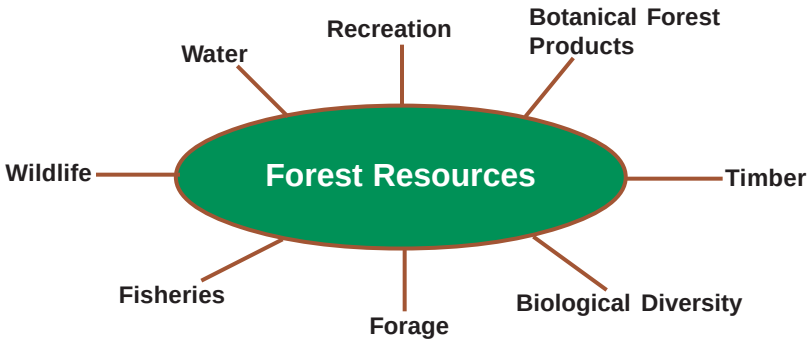
Formal visual landscape management in BC started in 1981. Since then the methodology has changed, but the goal is still to provide good stewardship of visual resources.

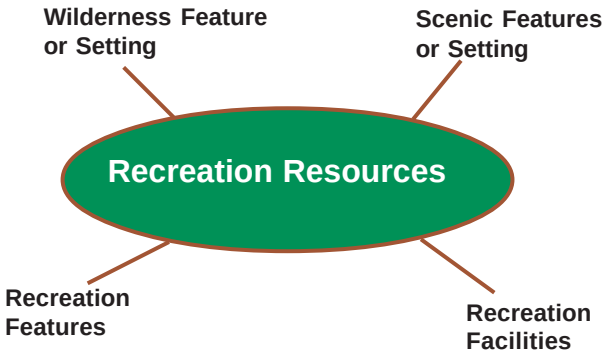
Mandate

The Forest Act and the Forest Practices Code of BC Act define the responsibilities for visual landscape inventory.

The mandate to develop and maintain a Visual Landscape Inventory is established in Sections 2, 3, and 4 of the *Forest Act*, and Part 1, Section 1 of the *Forest Practices Code of BC Act*. This mandate applies to all provincial Crown lands outside of parks and settled areas.

The *Forest Act* sets out the ministry's responsibility for developing and maintaining an inventory of land and forests, assessing land, and classifying land, for such uses as wilderness and recreation. The *Forest Practices Code of BC Act* defines forest resources as inclusive of recreation resources and, in turn, recreation resources as inclusive of scenic features (or visual resources).





Section 28 (d)(ii) of the *Forest Act* requires that a Tree Farm Licence (TFL) management plan contain an inventory of recreation resources. Ministry policy (#1.1, TFL Inventory) stipulates that TFL licensees must carry out these inventories at their own cost and to ministry standards.

Purpose and role

Classifies the provincial land base into Visually Sensitive Areas versus Not Visually Sensitive Areas.

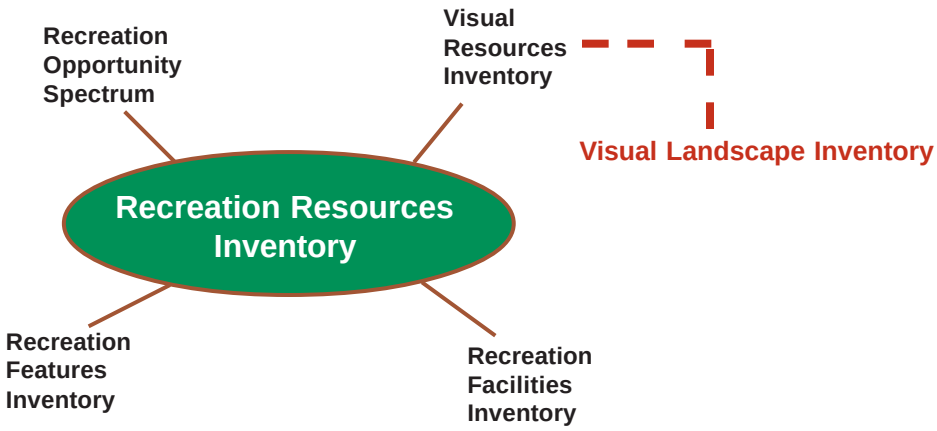
The purpose of the Visual Landscape Inventory is to provide information about the visual condition, characteristics and sensitivity to alteration of areas and travel corridors throughout the province. This information is intended to assist land use planners and resource managers in deciding appropriate land uses, resource development objectives and management prescriptions.

The role of the Visual Landscape Inventory is to delineate, classify and record areas and corridors throughout the province that are considered to be “visually sensitive,” and that could give rise to concern if their visual appearance were altered by forest practices or other resource development activities.

The Visual Landscape Inventory, therefore, serves to flag those areas of the province that warrant special attention and consideration in strategic and operational planning because of their sensitivity to visual alteration. The inventory also serves to locate and delineate areas that might serve as candidates for identification as *scenic areas* under the Forest Practices Code. Visual Quality Objectives may be established for these areas in higher level plans or by district managers.

Relationship to the Recreation Resources Inventory

The relationship of the Visual Landscape Inventory to the Recreation Resources Inventory is illustrated below.



As shown above, the Visual Landscape Inventory is a component of the Visual Resources Inventory which, in turn, is a component of the Recreation Resources Inventory.

At this time there is no Visual Resources Inventory. It is envisaged that when this level is implemented it will provide an additional overall context within which the Visual Landscape Inventory would be carried out. Until such time visually sensitive areas will be identified as per existing standards. These visually sensitive areas will provide the primary context for classification of visually sensitive units.

The Visual Landscape Inventory classifies provincial crown land throughout the province (except protected areas which are not subject to industrial development) as either unclassified, not visually sensitive or visually sensitive.

The inventory further subdivides visually sensitive areas into visual sensitivity units and classifies them into visual sensitivity classes.

A Visual Landscape Inventory may be carried out at either a broad or detailed scale:

A Visual Sensitivity Unit is described in terms of biophysical and viewing characteristics, and is classified into a Visual Sensitivity Class.

Broad scale assessment. Delineation and classification of the provincial landbase into Visually Sensitive Areas (VSAs) and Not Visually Sensitive Areas (NVSAs).

Detailed assessment. Delineation of VSAs into Visual Sensitivity Units (VSUs) and the classification of these units into Visual Sensitivity Classes (VSCs).

Broad Scale Assessment

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1.0 BROAD SCALE ASSESSMENT

office work

1:250,000 scale

The broad scale assessment identifies Visually Sensitive Areas (VSAs) and is a largely in-office mapping exercise generally completed at a 1:250 000 scale to determine what areas in a Forest District are visually sensitive. This broad scale assessment was not always carried out in previous Visual Landscape Inventories. However, it has been added in order to:

- identify the scope and extent of the inventory;
- identify the areas that require a detailed assessment; and
- flag visually sensitive areas that have not yet undergone detailed assessment.

useful in large districts where 1:50,000 scale inventories are few in number

The delineation of Forest Districts into VSAs and NVSAs should normally be done in-house by ministry staff. The reasons for this are:

can be completed quickly

- ministry staff should be familiar with inventory methodology and should be qualified to carry out this phase of the inventory. Where this is not the case (e.g. new staff), the broad scale will serve to familiarize staff with the inventory process and with the visually sensitive areas within their district;

- the workload is not onerous. It should not take more than a few days to complete this component of the inventory; and

used for planning

- results of the broad scale assessment are critical to planning processes, Timber Supply Analyses (TSA), and to the Detailed Assessment (Visual Landscape Inventory).

A Visually Sensitive Area Inventory is a broad scale inventory which may be replaced by a more detailed Visual Landscape Inventory

The broad scale assessment consists of three steps:

1. **Information assembly**
2. **Visually Sensitive Areas mapping**
3. **Public Input**

1.1 Procedure

1. **Information Assembly**
2. **Visually Sensitive Area Mapping**
3. **Public Input**

STEP 1: Information Assembly

1) Obtain paper copies by letter block of all 1:250 000 scale NTS/ BCGS topographic maps for the entire forest district.

2) Gather existing information showing areas with visual concern or sensitivity. For example:

- previously completed Visual Landscape Inventory maps at a broad or detailed scale for Timber Supply Areas and Tree Farm Licence areas,
- scenic areas identified and made known by a district manager or planning process;
- Visual Quality Objectives established by a district manager or through a higher level plan (HLP);
- existing reports, plans or referral comments by ministry or other agency staff, stakeholders or the public which provide indications of visual concerns for specific areas;
- district staff input with respect to areas that stakeholders or the public value from a visual standpoint; and
- Ministry of Small Business, Tourism and Culture (MSBTC) Resource Inventory (TRI) maps.

Examples of HLPs include:

land use plans at regional and sub-regional levels,

CORE reports,

LRMPs

STEP 2: Visually Sensitive Area Mapping

UAs

1) Delineate and classify as Unclassified Areas (UAs) lands that are outside the scope of the inventory. These include private lands, Federal Crown lands, parks and other protected areas. Use gazetted boundaries to define UA polygon boundaries.

Transfer background information

2) Transfer background information gathered in Step 1 (Information Assembly) to the 1:250,000 NTS maps and classify as Visually Sensitive Areas (VSAs).

Use local knowledge.

3) Use local knowledge to delineate further VSAs that meet the criteria.

District Recreation Maps are a good source of local knowledge because they illustrate recreation areas and facilities

Height-of-land boundaries

VSAs are delineated using a combination of biophysical and social attributes described in Section 1.2. Where no previous Visual Landscape Inventories, higher level plans or district manager decisions have previously identified a VSA, use the height of land on either side of a highway/water corridor, or the height of land encircling a lake or regional feature to define the VSA polygon boundary.

NVSAs

4) Delineate and classify as NVSAs areas with no potential to be altered. Non-forested areas, such as alpine which are not subject to timber harvesting, may be subject to visual alteration by other resource development activities such as mining or seismic lines, etc. These areas should be delineated and classified as either VSAs if they could be subject to visual alteration, or as NVSAs if they are unlikely to be altered.

Unique polygon number

5) After line work has been completed (polygons delineated), assign a unique identification number to each VSA regardless of mapsheet (polygons cross neat-lines). Where a VSA polygon crosses several mapsheets, list the additional mapsheets that the polygon covers on the VSA classification form as a reference (also refer to the Ministry of Forests*: Forest Inventory Manual Volume 5: Preparation and Creation of F.R.G.I.S. Data Files*). It is important to note that the VSA polygon number combined with the project number and district code make it unique within the province and eliminates the need to use the map number as a means of making the polygon 'unique'.

VSA Classification Form

6) Complete a VSA Classification Form for each visually sensitive area in accordance with the standards.

Update

7) Update the broad-scale assessment annually or as required. The results of this assessment are not static. As new roads are built and access is opened up into new areas there will be an influx of people. This may require some areas previously classified as NVSA to be reclassified as VSA.

STEP 3: Public Input

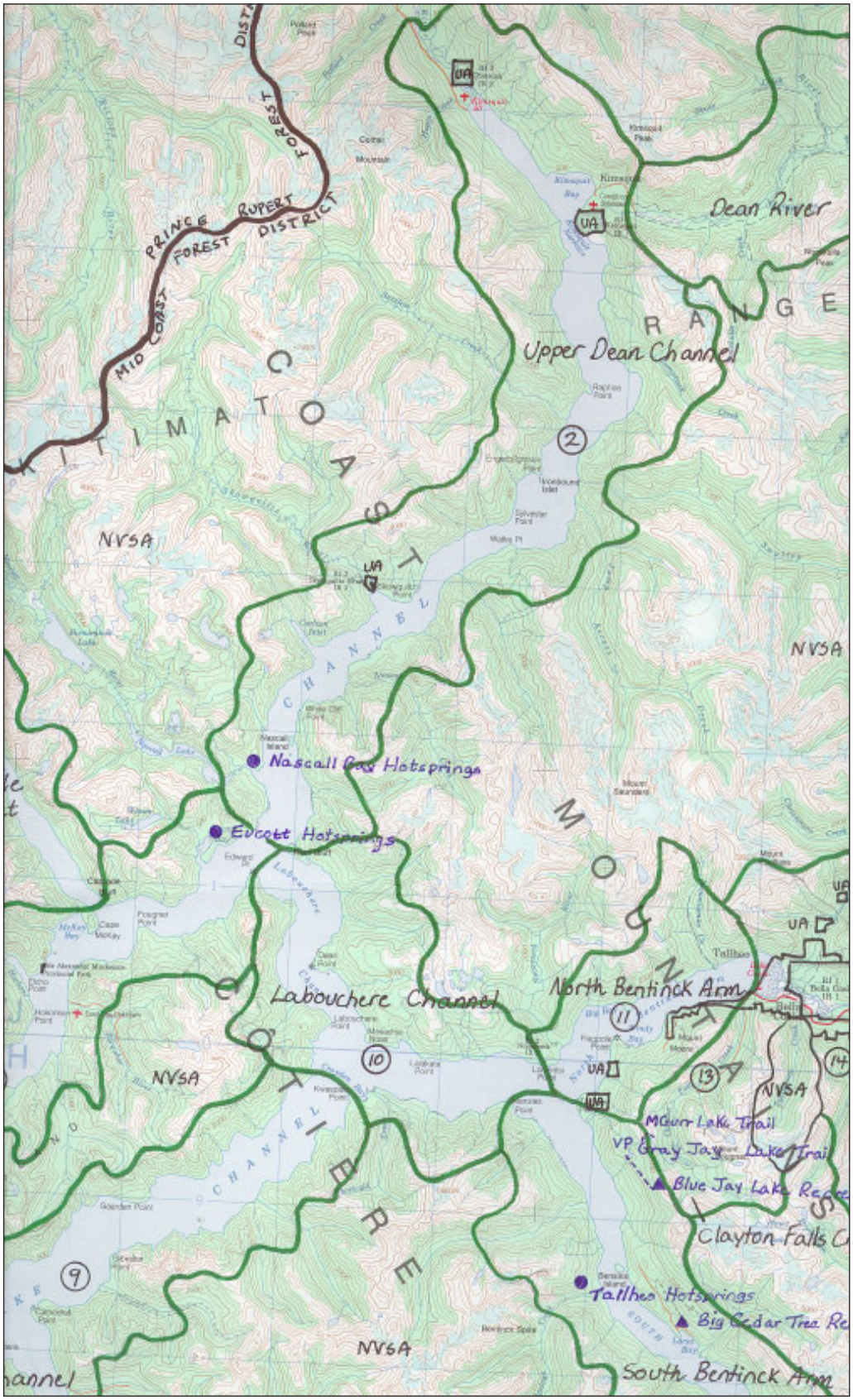
Obtain District Manager approval prior to public input

Coordinate public input within ministries and agencies to minimize repeated solicitation of the public within a short time frame.

Once a district VSA map has been compiled, public input should be solicited to enable all areas valued by the public to be identified. Public input on the VSA mapping should normally be obtained at the same time as existing planning processes (e.g., land and resource management planning) and later refined at a more local level as part of the detailed assessment.

Open House at a local community centre. The photographs attract attention and comments. The table formation allows for ease of viewing.

Completed Visually Sensitive Area Map



Reduced 1:250,000 scale NTS map. 93D, Bella Coola.

VSA Mapping Notes:

The following are some general comments and ideas which can be useful when developing VSA maps. They are in no particular order. Refer to the completed VSA map on the previous page.

- Try to lump VSA units together, rather than split them. The purpose of the mapping exercise is to provide a general guide to the extent of visual resources, and the differences between them. Detail is not as important as is consistency and logic in the delineation of the units.

- If the area being mapped already has extensive and detailed visual landscape inventories completed, be sure the VSA map is consistent with these. This is important as there has often been public or stakeholder input into the preparation of detailed level landscape inventories, and the expectation will be that the VSA map is an accurate reflection of this input. If there are differences between VSA mapping and detailed mapping, rationale for these changes should be prepared.

- If existing visual landscape inventories are digital, and many of them are, consider generating a digital VSA map based on these. For example, colour theming of existing data is useful in illustrating the varying distribution of visual sensitivity.

- The large view should be considered when preparing a VSA map. Consider developing VSA units on the basis of different types of physiography. For example, in Bella Coola, there are the Kitimat Ranges to the north, and the Pacific Ranges to the south. Further, there is a transition between the coast and the interior. Consider the continuity of an inlet, but also consider whether there are changes along an inlet (such as a change in physiography) that could merit delineation of a different VSA unit.

- VSAs can be delineated on the basis of the type of recreation experiences (e.g. motorized or non-motorized) that takes place. Is there a clear break between activity areas? In the Bella Coola area there are inlets, rivers, lakes, backcountry areas and road corridors, in addition to site specific features such as hot springs that have high recreation values. These features can contribute to delineation of different VSAs.

- One example might be a group of small islands covering a large area, navigable only by small boat or kayak, but adjacent to a large strait navigable by larger craft. It would be logical to delineate two different VSAs, one for the islands, and one for the strait. The group of islands is also an example of specific nodes or clusters of features, which work in concert with each other to provide recreation opportunities, thus providing the basis for delineating a VSA.

- As the map develops, some units will blend together. This is normal. It is also normal to have a wide range in VSA sizes.

- Delineation of VSAs does not necessary imply management of visual resources will follow. The VSA map provides a broad overview of the extent of possible visual resources, and provides a basis from which further inventory or analysis may be conducted.

- The VSA map is an inventory of the extent of visual resources at present. Usually not all of these VSAs will be actively managed for visual resources. However, the VSA map identifies the scope and nature of visual landscape resources in a manner similar to the Recreation Opportunity Spectrum or ROS map, which provides a “picture in time” of recreation resources at a particular point.

1.2 Standards for classifying Visually Sensitive Areas

A Visually Sensitive Area (VSA) is an area that is considered to be sufficiently sensitive to visual alteration to warrant special consideration in strategic and operational planning. These areas may include viewsheds that are visible from communities, public use areas and travel corridors including roadways and waterways.

A VSA Classification Form must be completed for each mapsheet.

Using the following numbered list as a guide, complete the VSA Classification Form for each mapsheet (the numbers below correspond to the numbers shown on the classification form).

1) Forest District Code

Record the 3-character forest district code (see Appendix I: List of Forest District Codes).

2) Rated By

Record the name of the person carrying out the inventory.

3) Date

Record the date the work was completed (year/month).

4) Project Number

Record the project number. Each number is unique for the forest district and is assigned by the district recreation or inventory officer. The three-digit project number ranges from 001 - 999.

5) NTS/BCGS Maps Number/s

Record the National Topographic System/British Columbia Geographic System (NTS/BCGS) map number on which the VSA occurs. Include the leading zero for map numbers under 100 (e.g. 093G). Where a VSA straddles mapsheets list all the mapsheets.

6) NTS/BCGS map scale

Record the NTS or BCGS map scale.

7) Visually Sensitive Area Number

Assign a unique[1] number to each VSA. This is a four-digit number ranging from 0001 to 9999.

8) Cross Mapsheet Number (optional)

This number and the instructions for assigning the number will be generated at a future date (leave blank or record as “N/A”, not applicable, if no number is available).

[1] The VSA number combined with the forest district code and project number makes the polygon number unique within the province.

9) Visually Sensitive Area Name

Record the name by which the VSA is most commonly referred to (e.g. highway corridor, geographic area or hwy. #, lake name, etc.)

10) Visual Sensitivity Area Code

Record the numbers of the observations used in classifying the area as a VSA using the table below and based on the procedures for delineating VSAs

Unclassified (UA)	Visually Sensitive Area (VSA)	Not Visually Sensitive Area (NVSA)
Areas outside jurisdiction (e.g. private lands, federal crown land, parks and other protected areas)	**1** Areas visible from communities, public use areas, or travel corridors; **2** Areas seen by a large number of viewers; **3** Areas where public expectations for scenic quality are well above average (viewshed around backcountry lodge, tourism destination, highway rest stop, area adjacent to a Forest Service trail/site); **4** Areas containing regional or local topographic features that are valued by the public; **5** Areas that possess inherent visual or scenic values **6** Areas identified as visually sensitive or scenic through referral or plannning process (e.g. Commission on Resources and the Environment direction, land and resource management plans, local resource use plans); **7** Areas identified by previous Visual Landscape Inventories; **8** Areas of proposed new highway routes or changes to highway alignment; **9** Areas visible from important high elevation viewpoints; **10** Areas identified by tourism operators or MSBTC as important for tourism; **11** Areas adjacent to high-use Forest Service roads which lead to popular recreation areas; **12** Areas around important recreation features that attract the public; and **13** Other.	Areas with no potential to be visually altered. i.e. areas with no significant potential to be visually altered by human activities between inventory updates. For example, a relatively inaccessible area, with difficult access, no commercial forest and no mineral potential; and Areas not possessing any characteritics identified under Visually Sensitive Area.

11) Visual Sensitivity Unit Classification

Record whether the VSA has been delineated and classified into Visual Sensitivity Units and Visual Sensitivity Classes. Record, yes (Y) and the date (month/year) the delineation and classification were done or, no (N) VSUs are not present.

12) VSA Rationale Statement (optional)

Record a rationale statement where a Visually Sensitive Area is identified but is not described by an existing VSA code.

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2.0 DETAILED ASSESSMENT - PRE-FIELDWORK

The detailed assessment is done in the field and is generally carried out at a scale of 1:50 000 to identify Visual Sensitivity Units (VSUs) or classify Visually Sensitive Areas (VSAs) into VSUs with visual sensitivity classes. The detailed assessment is carried out where more detailed information about a particular VSA is required for operational planning. The purpose of this detailed assessment is to:

- identify the portion of the landscape that is visually sensitive as viewed from on-the-ground or on the water and in special circumstances high elevation viewing locations;
- delineate Visually Sensitive Areas into Visual Sensitivity Units (in this case, the detailed assessment (VSUs) re-places the broad scale assessment (VSAs);
- describe each VSU in terms of its existing visual condition, visual absorption capability, and biophysical and viewing characteristics, and classify it into a visual sensitivity class.

Each component contains a number of steps.

The detailed assessment consists of four components, each of which is described in separate chapters:

2.0 Pre-fieldwork and Public Input

3.0 VSU Delineation

4.0 VSU Classification

5.0 Post Fieldwork

2.1 Procedure - Pre-Fieldwork

1. **Information Assembly**
2. **Public Input**
3. **Choose Viewpoints**
4. **Prepare Field Map**
5. **Field Preparation**

STEP 1: Information Assembly

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

In southwestern B.C., 1:20,000 scale maps are often used by TFL licensees.

Fieldwork may be done on one map base, then transferred to another type of map base for final presentation.

NTS maps - colour is user friendly, contours are excellent, roads can be outdated. Older versions have legal boundaries and are printed on heavier paper.

road maps - very useful for names of roads when mapping rural or urban interface areas. Limited use on logging roads. May show trails and campsites.

1) Become fully acquainted with the procedures and standards for carrying out a detailed Visual Landscape Inventory as described in this manual as well as existing provincial and regional Visual Landscape Management Guidelines, and the mapping and drafting/digitizing symbols to be used in the field and office. In most circumstances Detailed Assessment mapping will occur on 1:50 000 scale NAD 1983 Terrain Resource Inventory Maps (contours). **Note:** special circumstances may allow the use of 1:50 000 NTS scale or 1:20 000 TRIM base maps.

Familiarize yourself with older style visual landscape inventories. You may be required to update one or match to one.

2) Obtain and review all relevant information pertaining to areas determined to be Visually Sensitive. The information required includes:

- topographic maps for contours, travel routes, communities, recreation sites, lakes and land uses;
- maps showing existing and planned highways and related developments (viewpoints, rest stops, road re-alignments, etc.);
- sub-regional plans which may identify potential travel routes;
- forest cover maps for vegetation information, forest road networks, history of past openings, administrative boundaries, environmentally sensitive areas, etc.;
- forest development maps showing existing and proposed roads, access, rights-of-way, Special Use permits, and other developments (company and small business five year development plan maps);

recreation maps - some are commercially available, others are provided by special interest groups. Increasingly available. May be good for logging roads.

recreation or travel books - present tourist point-of-view. Can provide useful pieces of information, but can be out of date. Be sure to check publication date.

TFL recreation maps - best source for logging roads (check date of map), lack of detail outside TFL boundary, no contours.

Forest District recreation maps - lack contours and detail, good for Forest Service and licensee recreation facilities, good for mainline logging roads.

Marine Charts - vital when working on the water for safety and for locating position. Also useful for indicating which landforms are prominent landmarks.

- recreation inventory maps and brochures, if available, showing existing and proposed recreation sites, trails, related facilities and special features;
- existing visual landscape inventories, including inventories completed for the study area and adjacent areas such as other tenures which may require rationalization with this Visual Landscape Inventory;
- other recreation resources inventory themes (ROS Maps) ; and
- statistics, if available, on traffic volume counts for travel corridors, tourism, fishing, hunting and recreation oriented developments (sites, trails, commercial developments).

Statistics are available for some Forest Service recreation sites and most Provincial or National Parks. Traffic counts are available for highways and major roads from Ministry of Transportation and Highways. Freshwater fishing statistics are available from Ministry of Environment, Lands and Parks (have river and lake information).

STEP 2: Public Input

Obtain District Manager approval prior to public input.

Coordinate public input within ministries and agencies to minimize repeated solicitation of the public within a short time frame.

Hold public meetings at a time convenient to the public such as evenings or weekends.

Hold public meetings in "neutral territory" such as shopping malls, libraries, community centres and schools.

People enjoy writing on a map. Give them a pen and let them locate viewpoints or favourite recreation areas.

Share your information with the public. Individuals are often focused on one area and you can tell them about new places to go.

Long time forest industry employees are good sources of information.

Always follow-up public contributions with a thank you letter and let them know what happened to their input (e.g. a copy of their letter in a report).

1) Involve the public up front. Invite native bands, government agencies, non-government organizations, interest groups, and industrial or commercial businesses that may have interest in the visual values of the project. Ask them to provide information and identify their particular concerns.

Asking for public input may be done by placing an advertisement in local newspapers, holding an open house or by doing a mail-out to user groups. If the answers to public input are insufficient, further surveying in the field may be done at the time of fieldwork to involve the general public, tourists and local businesses in the project area.

Where public input is solicited, it should be made clear to participants that their role is to provide input, not take part in consultation, negotiation or decision-making. However, they should feel that they have input into the decisions and that their input is important, otherwise why would anyone bother to be part of the public process. It should also be made clear that the type of information sought includes:

- location of viewpoints and viewscapes valued by the public;
- an indication of amount of use;
- types of user activities; and
- user expectations and concerns.

This information is needed to enable the eventual determination of the Viewing Condition and Viewer Rating parameters for each VSU.

In those cases where the Visual Landscape Inventory work has been contracted, the methods for obtaining public input should be decided upon by the appropriate ministry staff and set out in the contract. Normally ministry staff should be present at any public input event.

Public concerns should be addressed in a final report and be reflected in the mapping. All public comments should be documented in an appendix to the final report (e.g., a copy of the newspaper add requesting input from the public).

Note: in those circumstances where the Visual Landscape Inventory is contracted, consultants should meet with the contract manager before public input and before commencing the field work.

Re: NOTICE OF OPEN HOUSE: Rocky Island Woodlots & Provincial Forest Areas

Dear :

Capable Consulting is conducting an update of the visual landscape inventory of the public lands in several Rocky Island Woodlots and Provincial Forest Areas. These areas include:

Woodlots: 25, 42, 1610, 1611.

Provincial Forest:

Lot 215 (Rocky Ridge),
Lot 225 (Rocky Point)
Lot 165 (east side of Shallow Lagoon).

(And the area south of the new Bluff Lake Park.

To ensure visual landscape values are recognized and recorded, public input is requested. Interested individuals and user groups who would like to discuss the inventory and record information regarding landscape features and values within the above mentioned areas, are encouraged to attend an **OPEN HOUSE** on **September 19th** at the Rocky Island Community Hall from 1:00 pm to 6:00 pm.

Staff from Capable Consulting will also be available to meet with local individuals, recreation groups, forest workers, commercial tourism operators and other knowledgeable people at an **OPEN HOUSE** in Flatville on August 11th at the Ministry of Forests District office, 2222 Straight Road from 10:00 am to 4:30 pm and in Piedmont on August 15th at the Sagebrush Mall, 45 Easy Street from 4:00 pm to 9:00 pm.

Funding for these inventories is being provided by Forest Renewal BC.

OPEN HOUSE
Update of Visual Landscape Inventory for the Little-to-See Grasslands

Capable Consulting is conducting an update of the Visual Landscape Inventory of the public lands in the Little-to-See Grasslands Area. This inventory is being completed for the Ministry of Forests, Low Hills Only Forest District.

To ensure recreation and visual landscape values are recognized and recorded, public input is requested. Interested individuals and user groups who would like to discuss the inventory and record information regarding visual landscape features and values within the above mentioned area, are encouraged to contact Capable Consulting at, 0999 Paved Road, Small Town, B.C. V4V 4X4. For further information, please call V. Capable toll-free 1-739-367-3733.

Staff from Capable Consulting will also be available to meet with local individuals, recreation groups, forest workers, commercial tourism operators and other knowledgeable people at an **OPEN HOUSE** in Flatville on August 11th at the Ministry of Forests District office, 2222 Straight Road from 10:00 am to 4:30 pm and in Piedmont on August 15th at the Sagebrush Mall, 45 Easy Street from 4:00 pm to 9:00 pm.

Funding for these inventories is being provided by Forest Renewal BC.

To ensure visual landscape values are recognized and recorded, we are contacting individuals like yourself to gather information regarding visual landscape features and values in the *Little-to-See Grasslands Area*.

How important is landscape quality to your visits to the area?

[ ] Not important
[ ] Somewhat important
[ ] Important
[ ] Very Important

Are you able to give an estimate of how many people visit this area for each year?

[ ] 10-30
[ ] 30-50
[ ] 50-70
[ ] 70-90
[ ] 100 plus
[ ] other _____ (please fill in number)
[ ] don't know

Examples of public input materials. At the top is a mailout letter giving notice of an Open House, at the lower right is a newspaper advertisement for an Open House, and on the left is part of a mailout survey.

STEP 3: Choose Viewpoints

There will also be views from travel corridors. These are difficult to locate prior to field work, unless personal knowledge or public input can provide them.

Using information from the background assembly and public input, choose likely viewpoints.

A viewpoint is a ground or water location that offers an opportunity to view scenery. Viewpoints are the locations from which Visual Sensitivity Units will be delineated and rated. Different types of viewpoints have different classifications within the Visual Landscape Inventory. This classification will be covered in Chapter Four, VSU Classification.

Examples of viewpoints are:

- highway rest areas and pullouts
- lodges, motels, hotels
- campsites
- picnic areas
- views along a trail
- anchorages
- docks or marinas

Viewpoints may be added or deleted as the project progresses.

Consider potential viewpoints (e.g. proposed location of a road adjacent to a lakeshore or proposed location of a rest stop).

Preliminary viewpoint locations should be confirmed with Ministry of Forests recreation staff prior to fieldwork.

Viewpoint locations may be adjusted in the field in order to obtain the best views of a landscape unit(s).

STEP 4: Prepare Field Map

Alterations are useful as landmarks, especially for coastal projects.

Use forest cover maps, development plans and air photos for locations of recent alterations.

Forest cover, forest development plans and old NTS maps are good sources for legal boundaries. Watch for different datums!

Try using different colours for alterations, roads, boundaries, etc.

1) Transfer existing landscape alterations, openings (including year logged), roads and important key features to topographic field maps to provide landmarks and facilitate field mapping.

2) Transfer existing private land legal boundaries to topographic field maps. Do not put ratings on private lands but label them as Unclassified Areas (UA) and use gazetted boundaries. However, existing alterations on private lands may influence or affect Visual Sensitivity Unit descriptions and classifications for adjacent Crown land.

Example of Prepared Field Map

STEP 5: Field Preparation

Weather/Season

The optimum time for conducting a visual landscape inventory is during the summer when most of the snow cover has melted, the sun is at its highest in the sky providing ample daylight, and the weather is more reliable. You will also be working at the time of year when most of the outdoor recreation occurs.

A project that includes viewpoints from a winter recreation area may require a winter inventory. Note that harvested areas are more prominent in the winter when they are covered with snow.

Landscapes with a variety of vegetation types that display fall colour can be an attraction to visitors and an inventory timed to coincide with the best display of colour may be an option.

Crew Logistics

Consider the number of people required to complete the work. Two people seems to be the optimum crew size for inventory, photography and safety purposes. If staff resources are available, two or more crews could cover a large area quickly. Determine the type of accommodations prior to field-work and book accommodations if necessary. Ensure that crew members are adequately trained in outdoor mapping work, photography and visual landscape inventory.

Method of Travel

Carry out the Visual Landscape Inventory using travel methods which would be used by the average forest visitor or traveller so that similar viewing opportunities can be assessed. Contact logging company or Ministry of Forests staff to find out current road conditions.

Safety

Fieldwork is often carried out in remote locations or along narrow industrial roads used by large vehicles. Establish a check-in routine between inventory crews and individuals. WCB has check-in standards.

When travelling along active industrial roads contact the trucking operator or logging company prior to using roads. You may be able to get a radio, or you may be given a procedure to follow when using the roads. If the roads are very busy or narrow, consider working outside of hauling hours.

Field Equipment

Check that field equipment is complete and in working order prior to starting fieldwork. The amount and type of equipment varies according to each project. A backup camera and an ample supply of film are vital. A second camera is also useful if the project requires aerial work where you need to be efficient. Rolls of 36 exposures are useful for landscape inventory because you don't need to carry as many rolls and you can fit more panoramas on each roll, negating the need to be constantly changing film.

Marine Planning

When working on the water, check weather forecasts closely. Contact local fishing guides, boat rental companies, the Coast Guard or other knowledgeable individuals to obtain information on local weather and water conditions. Carry appropriate marine charts and a copy of the tide tables for your area.

Contingency Plans

Set up contingency plans prior to fieldwork. If weather conditions preclude fieldwork, and the project deadline is approaching, a helicopter or float plane is a quick method of completing the project in remote areas. Sometimes a contingency plan may involve just waiting for fog to lift or the weather to improve.

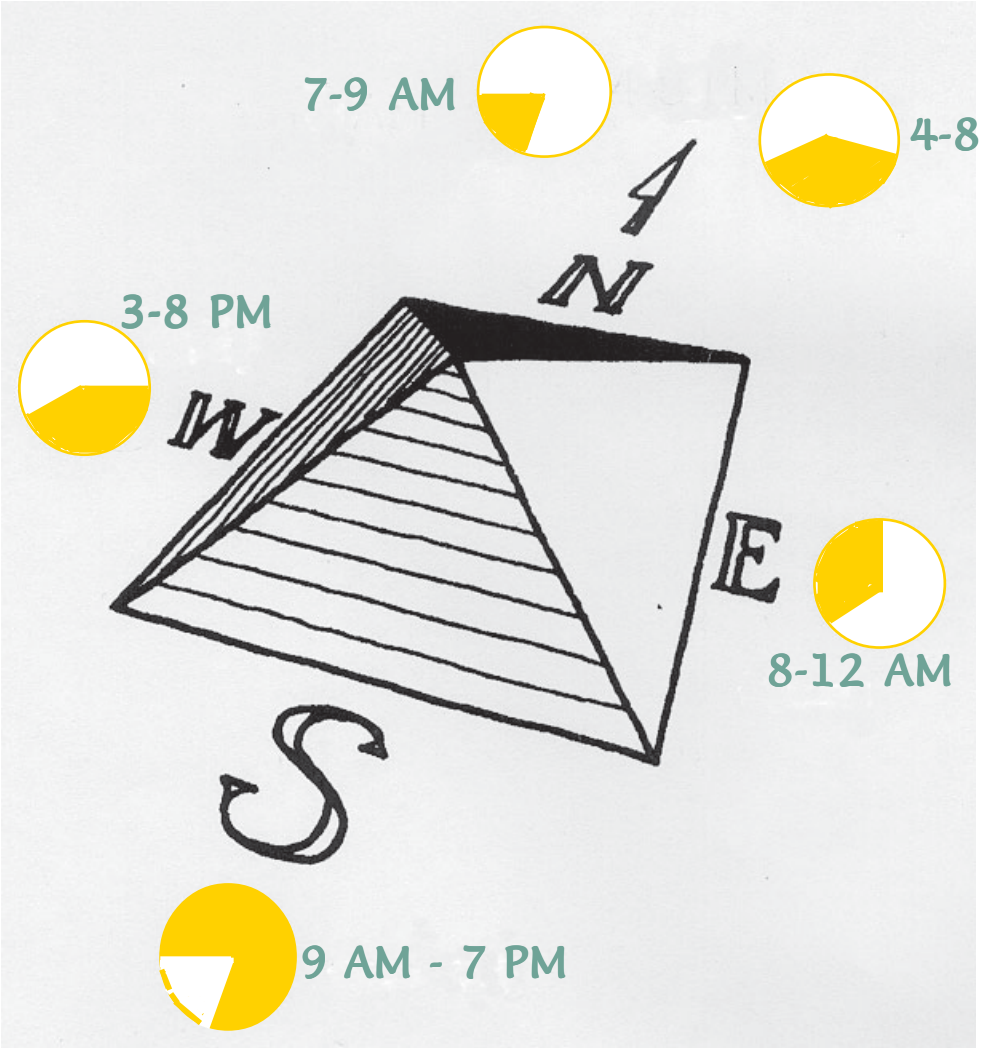
Field Preparation Checklist

- ☐ assembled field equipment
- ☐ checked equipment is in working order
- ☐ arranged accommodation
- ☐ contacted logging company/contractor
- ☐ checked road or water conditions
- ☐ arranged transportation
- ☐ prepared field map
- ☐ had preliminary viewpoints approved
- ☐ prepared an itinerary
- ☐ arranged a check-in procedure

Optimum Lighting

The requirements for visual landscape photography specify photographs with optimum lighting. The landform should be clearly visible and not obscured by cloud, fog or shadow. Some shading is effective in accentuating topography.

The time of day and the aspect dictate the direction of lighting: side lit, front lit or back lit. The illustration below shows the different aspects and the best time for photography during the months of May through September.



Recommended times are for sunny days from May through September in all parts of the province. Early morning and evening times may be extended in northern parts of the province because of longer daylight hours.

VSU Delineation

Introduction

Broad Scale Assessment

Pre-Fieldwork

VSU Delineation

VSU Classification

Post-Fieldwork

Contents

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3.0 DETAILED ASSESSMENT - VSU DELINEATION

The VSU delineation part of the detailed assessment is done in the field and is generally carried out at a 1:50 000 scale to identify Visual Sensitivity Units (VSUs) or classify Visually Sensitive Areas (VSAs) into VSUs with visual sensitivity classes. VSU delineation will:

- identify the portion of the landscape that is visually sensitive as viewed from on-the-ground or on the water and in special circumstances high elevation viewing locations;
- delineate Visually Sensitive Areas into Visual Sensitivity Units (in this case, the detailed assessment (VSUs) replaces the broad scale assessment (VSAs);

Each component contains a number of steps.

The detailed assessment consists of four components, each of which is described in separate chapters:

2.0 Pre-fieldwork and Public Input

3.0 VSU Delineation

4.0 VSU Classification

5.0 Post Fieldwork

3.1 Procedure - VSU Delineation

1. **Mapwork and VSU Delineation**
2. **Visual Screening**

STEP 1: Mapwork and VSU Delineation

Drive one way along a road observing and taking note of views and viewpoints, then map on the way back.

1) As a first step, determine the character of the landscape by travelling the area in all possible directions, taking note of special features, road stops, pre-selected and possible new or overlooked viewpoints, traffic pullouts, traffic conditions, etc.

Sightline visible area plots generated by hand are time-consuming. It is better to delineate in the field and check difficult areas later after fieldwork (refer to Post-Fieldwork 5.0 for sightline methodology).

2) Generate a visibility map by determining what portion of the landscape is visible or not visible from the various viewpoints and travel corridors (e.g., roads/trails/water-based routes); A visible area boundary can be initially determined in the office using sightline or computer-generated visible area plots but must be subsequently confirmed through field observation.

If VSAs are present, check the accuracy of the linework and adjust as necessary.

Visible Area Mapping Checklist

- ☐ **locate your viewpoint**
- ☐ **orient the map to match the direction you are facing**
- ☐ **identify and locate prominent features**
- ☐ **identify and delineate the most distinctive upper visible area boundary**
- ☐ **identify and delineate all other upper visible area boundaries**
- ☐ **locate and delineate the visible area boundary closest to you (lower boundary)**
- ☐ **locate and delineate non-visible areas**

Visible Area Mapping Notes:

The following are some general comments and ideas which can be useful when mapping the visible area.

- The most important factor when mapping is location. Your location. If you do not know where you are, it will be difficult to accurately locate the landscape you are viewing. While travelling, keep track of your location using landmarks, roads, bridges, human-made alterations, kilometre markers on industrial roads or the odometer on your vehicle. This is where the thorough preparation of your field map will be invaluable, because you will have indicated on the map the location of landmarks, tenure boundaries, roads, recent alterations etc.

  If you cannot determine your location from the map or you want to be more accurate, take a compass reading off feature(s) you can locate on the map. Compass readings from three or more features will give the most accurate position (triangulation).

  Determining your location on the water is more difficult than on land. Points of land, cutblocks, and creeks are indicators of location. An option is to choose viewpoints where you can identify your location.

  Where accuracy is important, a GPS (corrected data) can be used for determining location. Loading the coordinates of predetermined viewpoints into an on-board GPS is efficient for marine and aerial fieldwork.

- Orient the map so that it is facing the same direction as you are viewing. This will assist in locating distinctive features and when using a compass to locate a feature.

- Identify some distinctive features such as sharply defined peaks, distinctive ridgelines, waterfalls, creeks, valleys, cliffs, cutblocks, communication towers, beaches, roads, powerlines etc. Locate these features on the map and label them.

- Once you have located yourself, oriented the map and located some distinctive features you are now able to start mapping the visible area. Start with a distinctive ridgeline that is silhouetted along the skyline and transfer it to your map. Delineate other ridgelines. Note that not all ridgelines correspond directly to a height-of-land as viewed on a map. The area above a slope break where the lower slope is steeper and the upper slope is more gentle will often not be visible from below.

- Identify the visible area boundary closest to you. It may be very close to you unless the view is screened. On a water body, the visible area boundary will be the shoreline. If the view is screened, the boundary will be further away and may be difficult to define. Use distinctive features such as human-made alterations, vegetation type changes or topographic breaks to locate this boundary.

- Identify areas that are not visible such as creeks draws, valleys, areas that are screened, hollows and benches. Locate them on the map and delineate them.

3) Delineate the visible area into Visual Sensitivity Units (VSUs). If Visually Sensitive Areas (VSAs) are present, delineate further into VSUs. Generally, VSUs are delineated based on the homogeneity of the landform and of the biophysical elements comprised in a scene.

VSUs are based on landform shapes and are not defined or delineated using Existing Visual Condition (EVC) or existing alteration boundaries. VSUs can be mapped in a number of ways, based on viewing angle, distance, slope, topography, landscape complexity, etc. The recommended procedures for delineating VSUs are as follows:

VSUs are not delineated based on EVC, alteration boundaries, or a change in vegetation type like the break between forested and alpine.

Transitional vegetation types such as burns and newly planted forest change rapidly over time. Delineation is largely landform based. Delineation based on vegetation types would create small, splinter units that would only differ from neighbouring units in one respect: vegetation. The other biophysical characteristics would be the same.

- First, identify and record on the map the upper boundary of the VSU, which is usually the easiest boundary to map and often corresponds to the height of land found on the topographic map and the visible area boundary. On flatter topography, this upper boundary can also be referred to as the boundary located furthest away from the observer.

- Second, identify and record on the map the lower boundary of the VSU, or for flatter topography, the boundary located closest to the observer. This boundary is usually the most difficult one to map and sightline plots can be of great help in identifying it. Use landmarks such as the contour elevation of ridgelines that may be present between the observer and the VSU to be defined or any kind of landform characteristics or vegetative openings that can be spotted on both the field and the map.

- Terraces or hollows (i.e., non-visible pockets) in a VSU are defined and mapped as separate units (coded as NVS) to reflect their lower visual sensitivity and by doing so, they provide useful landmarks for defining the boundary of the bigger VSU they fall into.

- If a VSU is a distinct landform, the diagonal ridgelines at each end of the landform can help in defining the edges of the VSU as long as the change in topography defining the ridgeline, i.e., contour intervals can be spotted on both the map and in the field.

- It is important to recognize that some scenes will contain foreground, midground and background units. In these circumstances it is not uncommon to find that the back line of one unit acts as the front boundary of the next. What appears to be one continuous scene in perspective view will become a series of small units in plan view as mapped on a topographic base map with many non-visible or not visually sensitive areas in between the VSUs.

VSU Delineation Notes:

The following are some general comments and ideas which can be useful when delineating VSUs.

- A common problem is deciding the appropriate number of units. A range of level of detail is acceptable, while the extremes of too many units ("splitting") and too few units ("lumping") is not acceptable. The number of units is affected by the map scale, topography and viewing distance.

  The scale of the map will often dictate the number of VSUs. At 1:20,000 a greater number of units is to be expected than at 1:50,000 scale. The larger scales tend to increase the level of detail. This is appropriate and should not be mistaken for splitting.

  Topography also dictates the number of VSUs. If you are mapping on level terrain and are surrounded by numerous hills which are quite distinct from each other, then you will delineate each hill as a unit. If you are facing the side of a mountain with small valleys, bowls and avalanche chutes that form part of the character of the landform then that side of the mountain will be one VSU.

  Viewing distance also influences the number of units. From longer viewing distances landforms tend to merge together into one shape and units will be larger and fewer in number. From close viewing distances, when only pieces of a landform are viewed, VSUs tend to be smaller and greater in number.

  Aim for a reasonable level of accuracy, placing greater emphasis on accurate delineation of foreground and midground VSUs. Background VSUs (greater than 8 km away) are still delineated, but accuracy is not as critical.

- Remember that your linework may change as you move along the travel corridor or move to another viewpoint. Map in pencil, don't worry about closing lines and be prepared to change your work. Landforms that are viewed obliquely from one location may be viewed directly from another.

VSU Delineation Checklist

- ☐ identify and delineate upper boundary of the VSU
- ☐ identify and delineate lower boundary of the VSU
- ☐ identify and delineate non-visible areas
- ☐ identify and delineate the sides of the VSU
- ☐ move to the next viewpoint and check your mapwork from that location

VSU Delineation Example

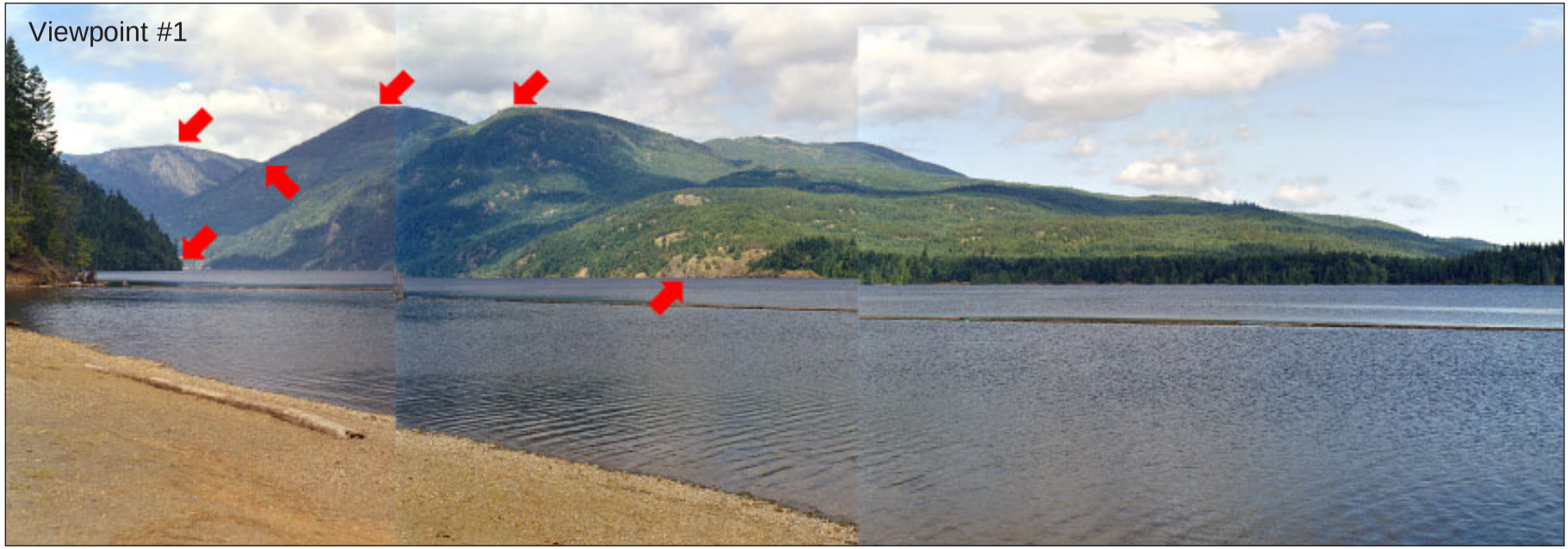
The following pages illustrate VSU delineation using photographs, maps and accompanying text. The photographs and maps will be easier to use if they are taken out of the binder, because some of the photographs are spliced together to create an image that fits in landscape orientation and the map may be easier to read if it is turned upside down to match the direction of view of the photographs.

The final map is a compilation from the three viewpoints with the VSUs delineated and numbered.

Three viewpoints are used, all of which are on the same lake. The viewpoints are part of a travel corridor along the west side of the lake. For the purposes of this illustration, assume that the project was limited to these three road view-points.

The viewpoints are sequential, travelling north to south along the road. The viewpoints illustrate how a landscape along a travel corridor builds and changes as VSUs are viewed obliquely or focally from different viewpoints.

For simplicity in numbering, all VSUs and rating points are assumed to be on the same BCGS map.

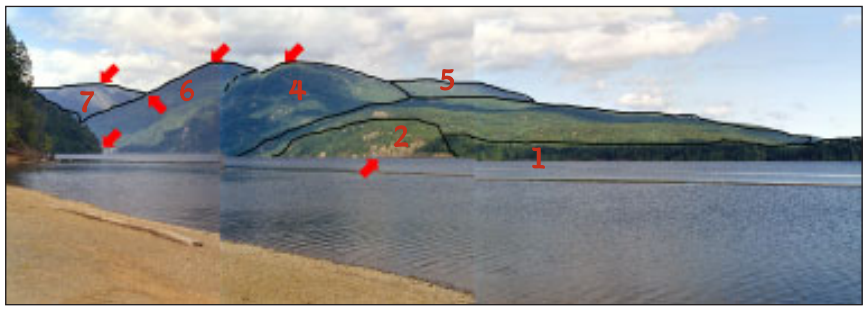


The first viewpoint is a regional park at the east end of the lake. The viewpoint is easy to locate on the map as it is identified with a campsite symbol. The views are oblique, but it is a good place to start.

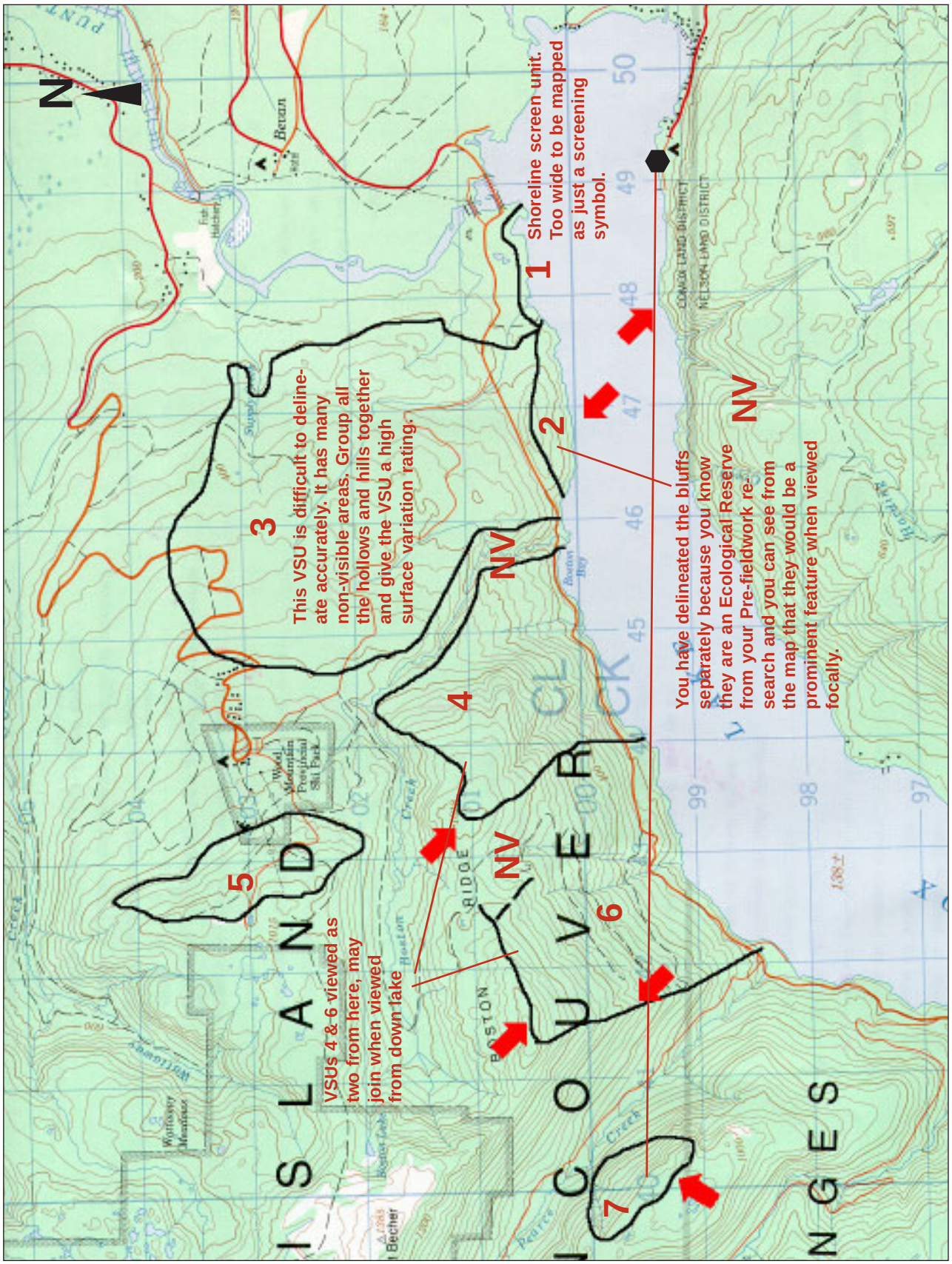
First, orient your map. This is easy because you are looking north so the map will be the right side up. Find some distinctive features. Such features are indicated by red arrows on both the upper image and the map. From left to right on the image they are: a point near the beach, a rocky mountain, a straight ridge, two mountain tops, and some rocky bluffs along the lake shore.

Locate and delineate prominent ridgelines, especially those including the distinctive features. Some distinctive ridgelines are the rocky mountain, the straight ridge, the rocky bluffs and the ridge heading north towards the ski hill.

VSUs have been delineated on the lower image and on the map using black lines. VSUs have been assigned a number for ID purposes. Note areas that are currently non-visible, bearing in mind they may be visible elsewhere.



Viewpoint #1


N
1
Shoreline screen unit. Too wide to be mapped as just a screening symbol.
2
You have delineated the bluffs separately because you know they are an Ecological Reserve from your Pre-fieldwork research and you can see from the map that they would be a prominent feature when viewed focally.
3
This VSU is difficult to delineate accurately. It has many non-visible areas. Group all the hollows and hills together and give the VSU a high surface variation rating.
4
5
6
7
NV
NV
NV
VSUs 4 & 6 viewed as two from here, may join when viewed from down lake
ISLAND
COUVER
NGES
Bevan
Boston Bay
Wood Mountain Provincial Ski Park
Wattaway Meadows
Pearce Creek
Boston Creek
BOSTON RIDGE
COMOX LAND DISTRICT
NELSON LAND DISTRICT

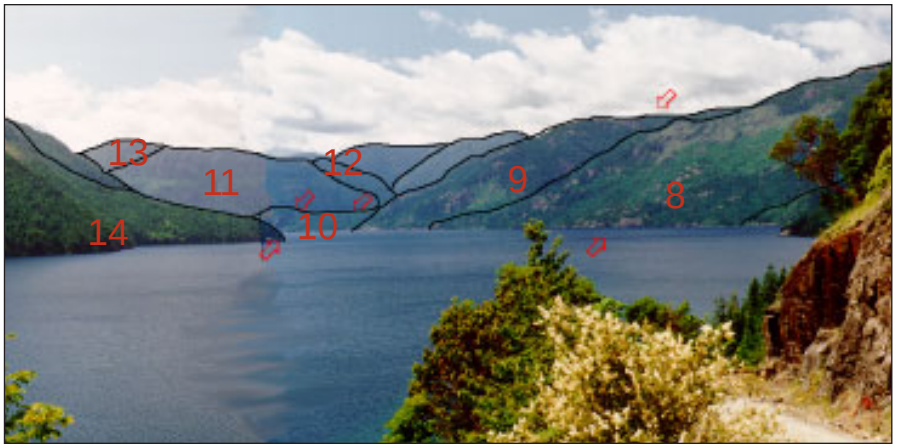
Viewpoint #2

You have been following the map as you drive around the east end of the lake to the second viewpoint. As you drive down the hill above “Buttle Bluffs” a view opens up, and a nearby pullout littered with garbage and cigarette butts indicates that people often stop to look. You see that a little further on the road turns a corner which is easy to locate on your map.

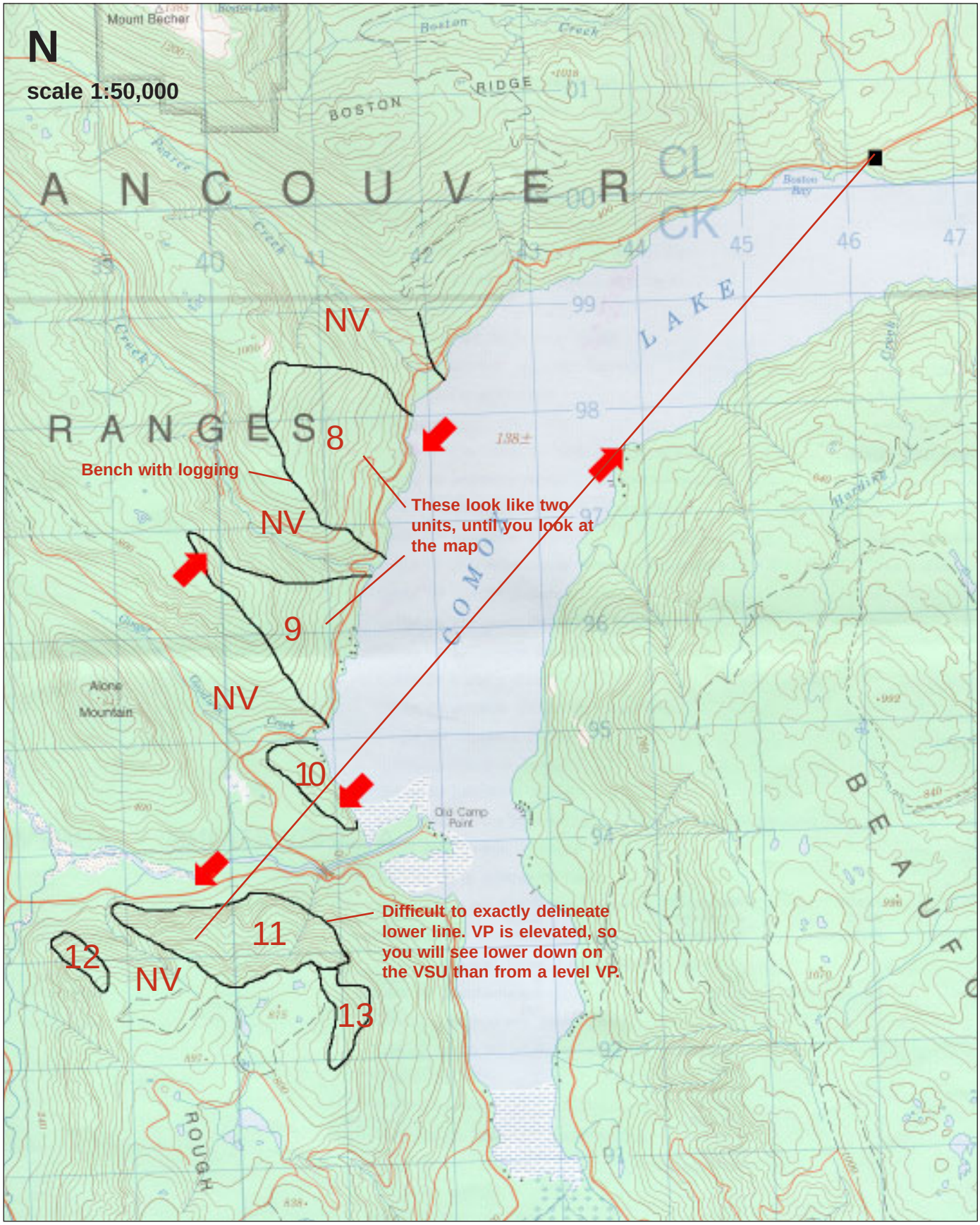
First orient your map. You are facing south, so the map is best viewed upside down. Find some distinctive features. Such features are indicated on the upper image and on the map with orange arrows. From left to right on the image they are: a point at the end of an alluvial fan, a low rocky knoll, a valley, bluffs along the shoreline and an escarpment near the skyline. To check location draw a line of sight from the viewpoint through the tip of the alluvial fan, over the knoll and into the mountain behind the valley.

Locate and delineate prominent ridgelines, especially those including the distinctive features. Some easy ridgelines are the alluvial fan on the left, the low knoll, the mountain behind the valley and the ridge with the escarpment.

VSUs are delineated on the lower image using black lines. These correspond to those on the map. VSUs have been assigned a number for ID purposes. Note areas that are currently non visible, bearing in mind they may be visible elsewhere. Note topographic screening along road.



Viewpoint #2

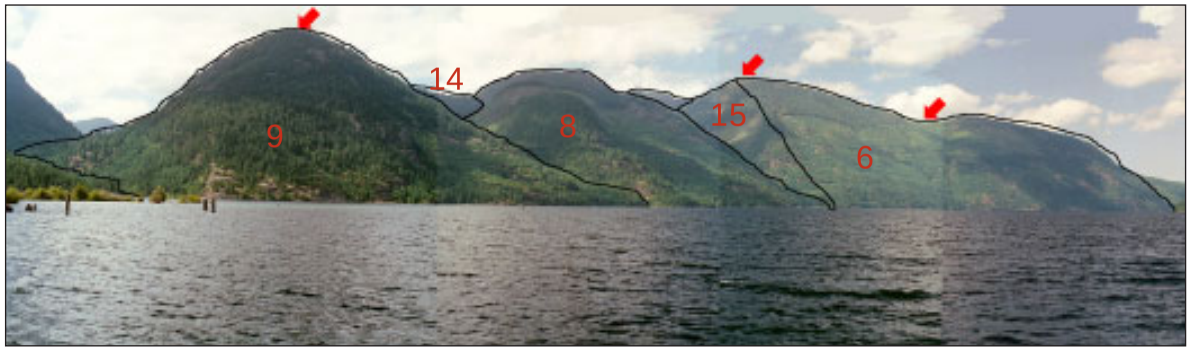

N
scale 1:50,000
Mount Becher
BOSTON
RIDGE
ANCOUVER
RANGES
LAKE
NV
8
Bench with logging
These look like two units, until you look at the map
NV
9
NV
10
Alone Mountain
Old Camp Point
11
12
NV
13
Difficult to exactly delineate lower line. VP is elevated, so you will see lower down on the VSU than from a level VP.
ROUGH

The third viewpoint is an informal picnic site and camping area off Old Camp Point. As its name suggests, it is a prominent point that used to be a logging camp. The point offers a great view of Comox Lake and is almost a 180 degree view from Viewpoint #2. Many of the VSUs you mapped from viewpoints 1 and 2 are visible from Viewpoint #3 and are much easier to delineate.

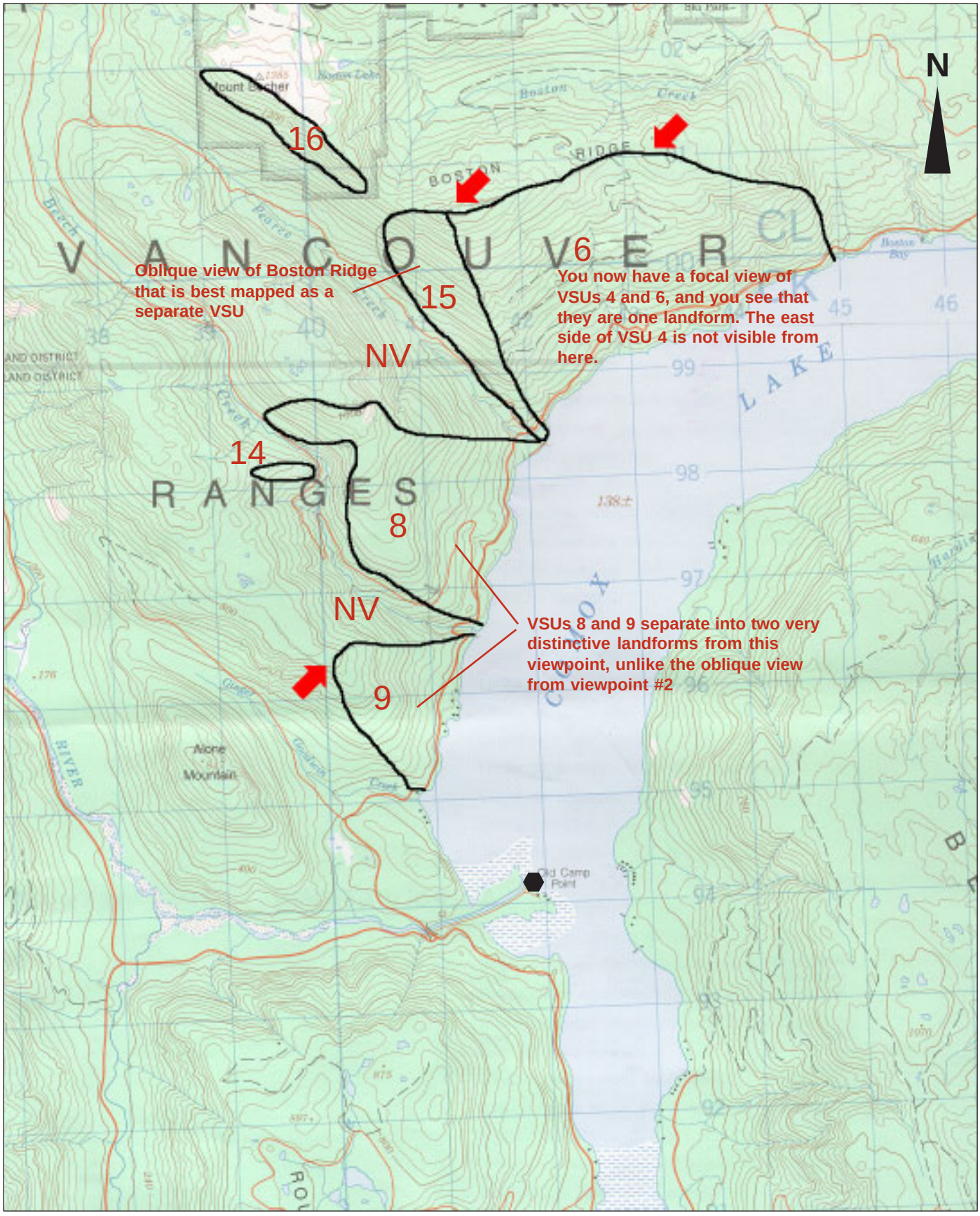
First, orient your map. Again, this is easy because both map and direction of view are to the north. Find some distinctive features. Such features are indicated on the image and map with red arrows. From left to right on the image they are: a prominent rounded mountain, a mountain top, and a saddle. Distinctive features are not so useful at this viewpoint, because the landforms themselves are well-defined and distinctive.

Locate and delineate prominent ridgelines. You are not sure where to start here, as there are many prominent ridgelines and skylines. The rounded mountain closest to you is a good place to start.

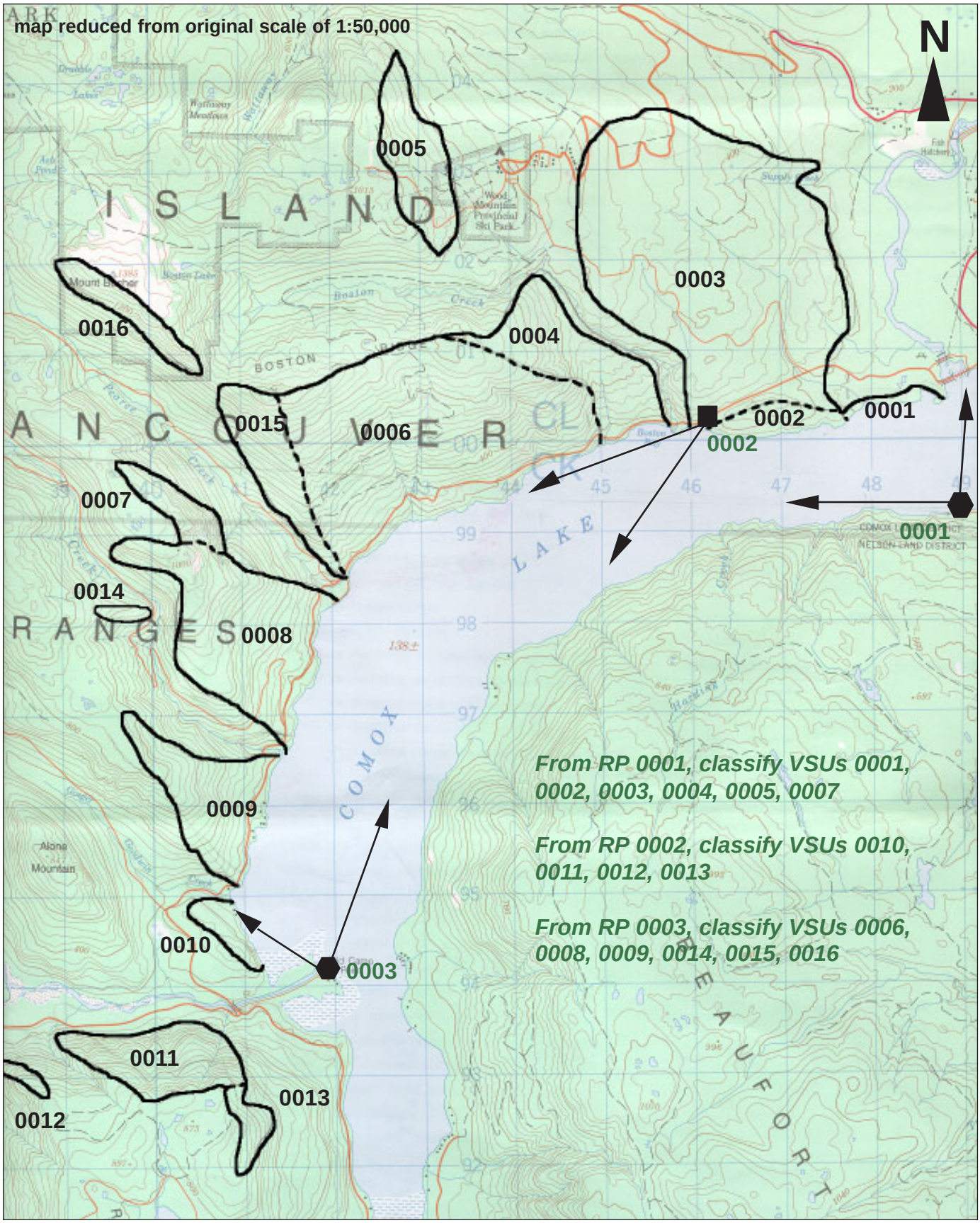
VSUs are delineated on the lower image and the map using black lines. VSUs have been assigned a number for ID purposes. Note that some areas previously mapped as NV are now visible, and that some areas visible from Viewpoint #2 are no longer visible.



Viewpoint #3


N
16
15
14
NV
8
NV
9
V6
Oblique view of Boston Ridge that is best mapped as a separate VSU
You now have a focal view of VSUs 4 and 6, and you see that they are one landform. The east side of VSU 4 is not visible from here.
VSUs 8 and 9 separate into two very distinctive landforms from this viewpoint, unlike the oblique view from viewpoint #2
VANCOUVER
RANGES
LAKE
Alone Mountain
Old Camp Point

Final Map


map reduced from original scale of 1:50,000
N
0005
0003
0016
0004
0002
0001
0015
0006
0007
0001
0014
0008
0009
0010
0003
0011
0013
0012
From RP 0001, classify VSUs 0001, 0002, 0003, 0004, 0005, 0007
From RP 0002, classify VSUs 0010, 0011, 0012, 0013
From RP 0003, classify VSUs 0006, 0008, 0009, 0014, 0015, 0016

STEP 2: Visual Screening

It is common to find long lines of screening parallel to roads. This is the map equivalent of driving through a tunnel of trees.

1) Before, during or after completing the line work, indicate visual screening/barriers (by topography or vegetation) using standard symbols from the Visual Landscape Inventory legend.

Visual Screening (topography) ||||||||||

Visual Screening (vegetation) ∩∩∩∩∩∩∩∩

Visual Screening (Topography)

The road-cut screens the view to the right side of the image.
Cariboo Forest Region

Visual Screening (vegetation)

The vegetation in the foreground at the side of the road blocks the view of the valley and the lower slopes of the mountain.

Visual Screening (Vegetation partial)

The trees partially screen the view. Partial vegetative screening is not mapped separately from full vegetative screening in the current map legend, but was widely used on older inventories. The symbol most often used is ∩ ∩ ∩ ∩
Fish Lake, Cariboo Forest Region.

VSU Classification

Introduction

Broad Scale Assessment

Pre-Fieldwork

VSU Delineation

VSU Classification

Post-Fieldwork

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4.0 DETAILED ASSESSMENT - VSU CLASSIFICATION

The VSU classification part of the detailed assessment is done in the field and is generally carried out at a 1:50 000 scale to identify Visual Sensitivity Units (VSUs) or classify Visually Sensitive Areas (VSAs) into VSUs with visual sensitivity classes. VSU Classification will:

- describe each VSU in terms of its existing visual condition, visual absorption capability, and biophysical and viewing characteristics, and classify it into a visual sensitivity class.

Each component contains a number of steps.

The detailed assessment consists of four components, each of which is described in separate chapters:

2.0 Pre-fieldwork and Public Input

3.0 VSU Delineation

4.0 VSU Classification

5.0 Post Fieldwork

4.1 Procedure - VSU Classification

1. **VSU Classification Form**
2. **Finish Mapwork**
3. **Photography**

STEP 1: VSU Classification Form

Always confirm with Forest District or Region staff to check the VSU numbering methodology.

1) After line work has been completed (polygons delineated), assign a unique identification number to each Visual Sensitivity Unit regardless of mapsheet (polygons cross neat-lines). Where a VSU polygon crosses several mapsheets, list the additional mapsheets that the polygon covers on the VSU classification form as a reference. It is important to note that the VSU polygon number combined with the project number and district code make it unique within the province and eliminates the need to use the map number as a means of making the polygon 'unique'.

2) Complete a Visual Sensitivity Unit Classification Form for each VSU in accordance with the standards set out in 4.2.

In many cases, a VSU will be visible from more than one formal viewpoint and/or from other viewing locations. In such cases the VSU Classification should be completed from the viewpoint or viewing location offering the best possible view of the unit. This location is known as the VSU Rating Point.

See Section 4.3 for detail on rating point types.

Each VSU Rating Point should be assigned a number and this number entered on the Classification Form and on the inventory map. A VSU Rating Point may be a major, minor or potential viewpoint. Or, the best viewing location may not be at a formal viewpoint (e.g., major, minor or potential viewpoint), but will still be used as the VSU rating point. Describe the location of rating points that are not formal viewpoints in the statement of rationale. This type of rating point is called a photopoint.

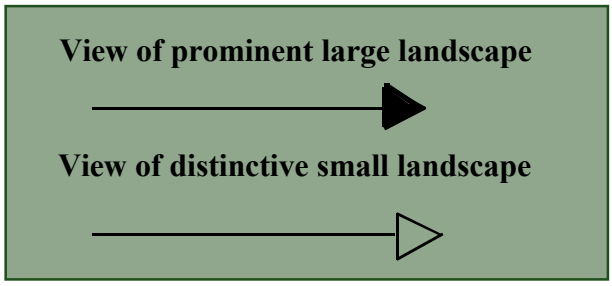
Identify the location and type of viewpoint or viewing location by a symbol from the Visual Landscape Inventory legend on the inventory map.

Major viewpoint	⬣ #
Minor viewpoint	■ #
Potential Viewpoint	◆ #
Photopoint	● #

STEP 2: Finish Mapwork

1) After completing the classification form, if necessary, adjust VSU boundaries to reflect important variations in Visual Sensitivity Class (VSC). Do not use Existing Visual Condition (EVC) to amend visual sensitivity unit boundaries and do not create too many small splinter units.

2) Identify key landscape features with arrows indicating views of prominent visible slopes, views of small distinctive landscapes and focal/unique features that are likely to attract attention.



STEP 3: Photography

1) Take photographic panoramas from identified major, minor and potential viewpoints and from all VSU Rating Points using slide and/or print film. Photographs should generally be taken using a 50-55 mm camera lens (unless otherwise specified by the Ministry of Forests).

Refer to discussion of optimum lighting conditions in Pre-Fieldwork (2.0)

- If necessary, use portrait (vertical) format to capture the full height of the landform within the frame. Film speed may vary depending on existing light conditions. Photographs of landscapes should be taken at times when lighting of the landscape is at its optimum (see p.29) and landforms are clearly visible. Some shade effect is permitted provided it accentuates landform line and shape and does not obscure significant amount of landscape details.

- Record photograph number, time, date the photo was taken, lens used, and other data on back of the VSU Classification Form. Where photographs are taken at locations other than a VSU Rating Point, complete a Photography Data Form.

Useful for aerial work

2) Record panoramic views of the VSU with VHS format colour videotape. This procedure is optional.

Public input is an ongoing process.

3) Retain records of all data, information and opinions gathered in the field.

4.2 Classification Forms and Standards Methodology for Visual Sensitivity Units

Classification Forms

To facilitate the recording of the ratings and values assigned to the various factors and parameters, a Visual Landscape Inventory classification form has been developed. Earlier versions of similar forms have been referred to as "checklists."

Ideally, the form should be completed in the field at the time of mapping.

The Visual Sensitivity Unit Classification Form is to be completed for each VSU.

The classification form should be used to record initial and final ratings and values, and all rationale statements. This will document the values and classifications given and will also assist in the testing and monitoring of the Visual Landscape Inventory standards.

The form is designed to document the mapper's reasoning. It also attempts to standardize ratings. The factor information could be used to assist in visual landscape design as it indicates which biophysical features the VSU possess and which are the most important to the viewer.

Section 4.2 will document the first 10 spaces on the VSU Classification Form, including the Rating Point Data. Sections 4.3 through 5.0 are an illustrated reference which presents the standards for parameters and factors used when rating VSUs.

Standards Methodology

The observations, factors and methods are specific to, and will normally vary with, each parameter, but the overall application of the standards is as follows:

Observations — Specific measures of the observed characteristics of a VSU that are used to assign a rating to a factor, and in some cases a parameter. Observations can be qualitative (descriptive) or quantitative (measured), and can represent either biophysical or viewer values. Observations can be objective assessments or professional judgments. While observations are primarily determined through field work, some may be determined in the office;

Factors — The identifiable and distinguishable characteristics or aspects of a VSU which are used to determine some VSU parameters. Factors are rated by observations and assigned a relative rating of High (H), Moderate (M) or Low (L), or the case of some factors Not Applicable (N/A);

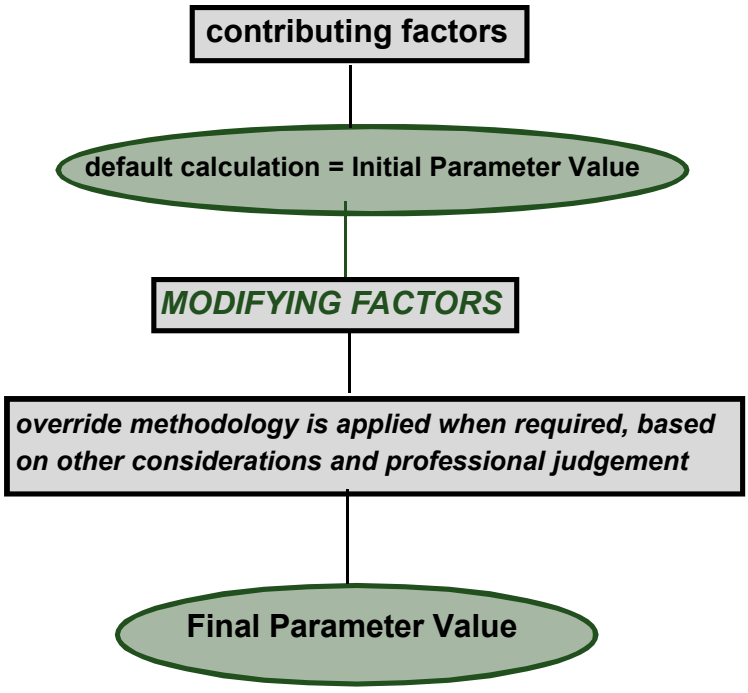
Parameters — The characteristics or features used to describe and classify VSU. Parameters may be derived by aggregating factors and/or other parameter ratings.

Methods — The comparisons, default calculations and override methodologies, which are used to determine ratings or values for the factors or parameters.

Methodology for determining derived parameter values

Derived Parameters are:
Existing Visual Condition, Visual Absorption Capability, Biophysical Rating, Viewing Condition and Viewer Rating.

The method for determining the factor ratings, and in some cases parameters, is: observe the VSU; compare the observation with the descriptions in the table provided; and record the appropriate rating.



Default calculations are used to make initial determinations and override methodologies are used (where necessary) to make final determinations.

The default calculation is: sum the numeric values associated with the contributing factor, and determine an initial value of the parameter based on the value range provided. The range will vary depending upon the number of contributing factors or parameters.

Override Methodology

Evaluate the accuracy of the initial value determined by the default calculation; use professional judgment to alter the default calculation, if required, and include a rationale statement whenever a default calculation is altered.

Limit use of the override. Instead, adjust factors (where possible) before using the override.

Note that using the override is a subjective judgement on factors that have been rated objectively.

The override methodology should be used to alter default calculations where:

- modifying factors are present (the manner in which modifying factors will affect the default parameter value will vary); and
- any other conditions that affect the VSU have not been accounted for by the default calculation (e.g., different weightings for different factors).

A rationale statement should be included where:

- a factor requires supplemental text description of features present; or
- an override methodology is used to alter an initial, or default calculated value.

Further comments should be provided where other circumstances warrant recording additional information.

Example of override

A pristine valley around an attractive lake that is within a days drive of a town. The area receives low use because only a few people know about it. Most of the visitors to the area are members of a nature appreciation society who like to photograph and paint the scenery.

Viewer numbers would be low and expectations would be high. This gives a moderate value for Viewer Rating, but in this case the expectations are more important than the numbers. An override would be used on the Viewer Rating parameter to raise it to High.

4.3 Standards for Visual Sensitivity Unit Information and VSU Rating Point Data

A Visual Sensitivity Unit (VSU) is a distinct topographical unit as viewed from one or more view-points and is delineated based on the homogeneity of the landform and of biophysical elements.

A Visual Sensitivity Unit classification form (Appendix I) must be completed for each Visual Sensitivity Unit (polygon) mapped. *Important note: this form is to be completed in the field at the time the VSUs are mapped.*

Section 4.3 covers the first 10 numbers on the VSU Classification Form. These are records of observations pertaining to identifying the VSU and its Rating Point. The remaining numbers 11 through 42 on the Classification Form are discussed in sections 4.4 through 5.0.

Visual Sensitivity Unit information

Using the following numbered list as a guide, complete a Visual Landscape Inventory Classification Form for each Visual Sensitivity Unit. The numbers correspond to the numbers shown on the classification form.

1) Forest District Code

Record the 3-character forest district code (see List of Forest District Codes).

2) Rated By

Record the name of the person carrying out the inventory.

3) Date

Record the date the work was completed (year/month).

4) Project Number

Record the project number. Each number is unique for the forest district and is assigned by the district recreation or inventory officer. The three-digit project number ranges from 001 - 999.

5) Visually Sensitive Area Number (where applicable)

Record the Visually Sensitive Area (VSA) Number as recorded on the VSA map or Classification Form. Where VSA mapping has not been completed within a forest district this number will not be available. In this instance leave it blank.

6) Visual Sensitivity Unit Number

The Visual Sensitivity Unit (VSU) number identifies the VSU polygon. A VSU polygon is defined as a distinct topographic unit as viewed from special viewpoints and/or from travel corridors where possible. The numbers assigned to VSUs should be listed in ascending order as seen travelling along a road, water corridor, or other route. **Each VSU polygon will be assigned a four-digit unique number (0001 - 9999) regardless of mapsheet.** The polygon number combined with the forest district code and project number makes the polygon number unique within the province.

7) Visual Resource Unit Number (optional)

A Visual Resource Unit number may be assigned to a group of Visual Sensitivity Units making up a scene with similar visual characteristics or biophysical attributes that are important to be planned and managed for as a whole unit. This four-digit number ranges from 0001-9999.

A Visual Resource Unit is smaller than a VSA and larger than a VSU. Do not use unless required in the contract.

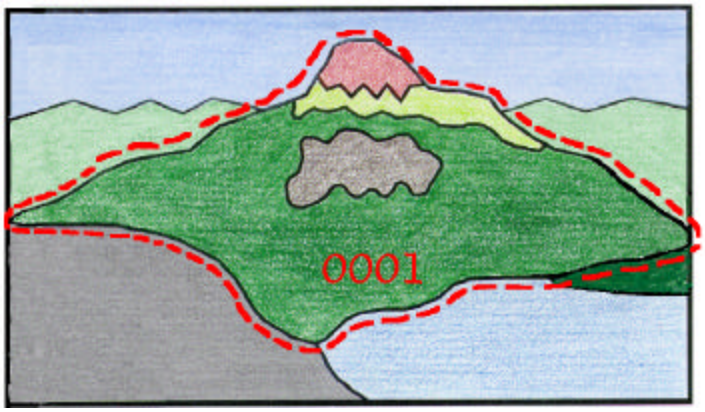
8) Cross-Mapsheet VSU Number (optional)

The 'cross-mapsheet" Visual Sensitivity Unit number will be generated at a future date (leave blank or record as N/A if no number is available).

9) BCGS Map Number

Record the BCGS map number and include the leading zero for map numbers under 100 (e.g. **0**93G004). A 6' X 12' size BCGS map may be used and is most commonly plotted individually at a 1:20 000 scale or as one of four maps at a 1:50 000 scale (this is informally referred to as a 'Quad' map - be sure to record the individual mapsheet number if a Quad map is used).

A unit is delineated and numbered. Field numbering may change during final drafting. The number is just to link the form and unit together.



Visual Sensitivity Unit Rating Point data

Visual Sensitivity Unit (VSU) Rating Point data is a detailed listing of photographic and reference information about the VSU Rating Point. Photographs may be taken of each VSU or group of VSUs from each VSU Rating Point. The image type should be identified for each VSU Rating Point: slide, print, digital image and/or videotape recording. Several types of images may be available for each Rating Point.

10) VSU Rating Point Number

Record the VSU Rating Point Number. This number has formerly been referred to as the 'key viewpoint'. The VSU Rating Point is the ground or water location that offers the best viewing opportunity of the VSU. **The VSU Rating Point is the location from which the final inventory ratings are completed and is often the location from which the VSU is the most sensitive.** The VSU Rating Point may be a major, minor or potential viewpoint as well as a photopoint. It is identified by a unique number (1 - 9999) for every BCGS map.

10.1) Viewpoint Type

If a VSU Rating Point coincides with a formal viewpoint, identify and record the viewpoint type: major viewpoint (V1); minor viewpoint (V2); or potential viewpoint (V3). If the VSU Rating Point is at a location other than a formal viewpoint, it is known as a photopoint (V0).

Major, minor and potential viewpoints are identified based on the number of viewers; frequency of visits; duration of viewing; types of activities; type of stop and access.

Major ⬢ A major viewpoint would have a high value attached to the above factors and may include a highway rest area, lodge, popular campsite or picnic area.

Minor ■ A minor viewpoint would have a moderate to low value and may include a highway pullout, a point of interest along a trail or a dispersed use camping area.

Potential ● A potential viewpoint is a site which currently does not exist but may become an important view of a VSU in the near future (e.g. proposed location of a road adjacent to a lakeshore or proposed location of a rest stop).

Photopoint ♦ A photopoint would have a low value and may include a glimpse view along a highway or trail not associated with a pullout, rest area or point of interest. Any location that happens to offer a view that is not a formal viewpoint is a photopoint.

10.2) Elevation of the VSU Rating Point

Record the elevation of the VSU rating point (which may be obtained from TRIM or NTS topographic maps or by using an altimeter or GPS in the field).

10.3) Latitude and Longitude Coordinates (optional)

Record the latitude and longitude or UTM coordinates (using a GPS if available).

10.4) BCGS Map Number of the VSU Rating Point

Record the BCGS map number which contains the VSU Rating Point (it may not be within the same map as the VSU).

10.5) Compass Bearing (0-360 degrees)

Record the compass bearing representing the horizontal direction of view, as seen from the VSU Rating Point to the **centre** of the VSU.

10.6) Vertical Viewing Angle (0 - 90 degrees ±)

Record the vertical viewing angle. The vertical angle is measured between the viewer's location (VSU Rating Point) and the **centre** of VSU. This angle is obtained using a clinometer. Record this number in degrees and indicate whether the angle is positive (upward) or negative (downwards) using '+' and '-' signs which precede the angle value.

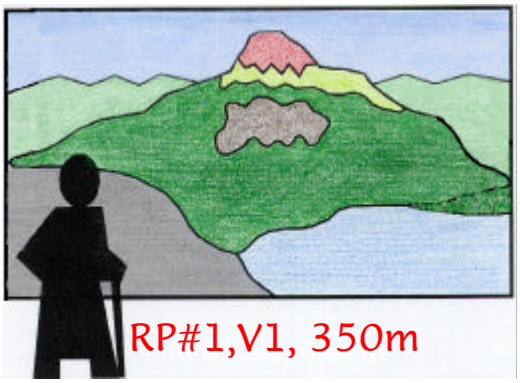
10.7) Roll Number (Start - End Frame Number):

Record the roll or tape number for a roll of film or videotape The range is from 1-9999. The start and end frame numbers reference the range of print or slide frame numbers for the pictures taken on the roll or the counter start and stop numbers for the videotape. All start and stop numbers range from 1-9999.

10.8) Focal Length of Lens (mm)

Record the focal length of the lens used. Photographs should generally be taken using a 50 - 55 mm focal length lens unless otherwise specified by the ministry.

Record any additional prints, slides and/or videotape recordings taken from locations other than a VSU Rating Point on the separate Photography Data Form.



4.4 Standards for Classifying Existing Visual Condition

	Existing Visual Condition (EVC) is a measure of the present level of landscape alteration caused by human activities. EVC establishes the baseline from which additional landscape alterations, if made, would be measured. EVC is expressed as a Visual Quality Class (see Chapter 11, *Recreation Manual*) as follows:
Preserved (P)	No visible human-caused alterations.
Retained (R)	Human-caused alterations are visible but not evident.
Partially Retained (PR)	Human-caused alterations are evident but subordinate and therefore not dominant.
Modified (M)	Human-caused alteration are dominant but have natural appearing characteristics.
Maximally Modified (MM)	Human-caused alterations are dominant and out of scale.
Excessively Modified (EM)	Human-caused alteration are excessive and greatly out of scale.

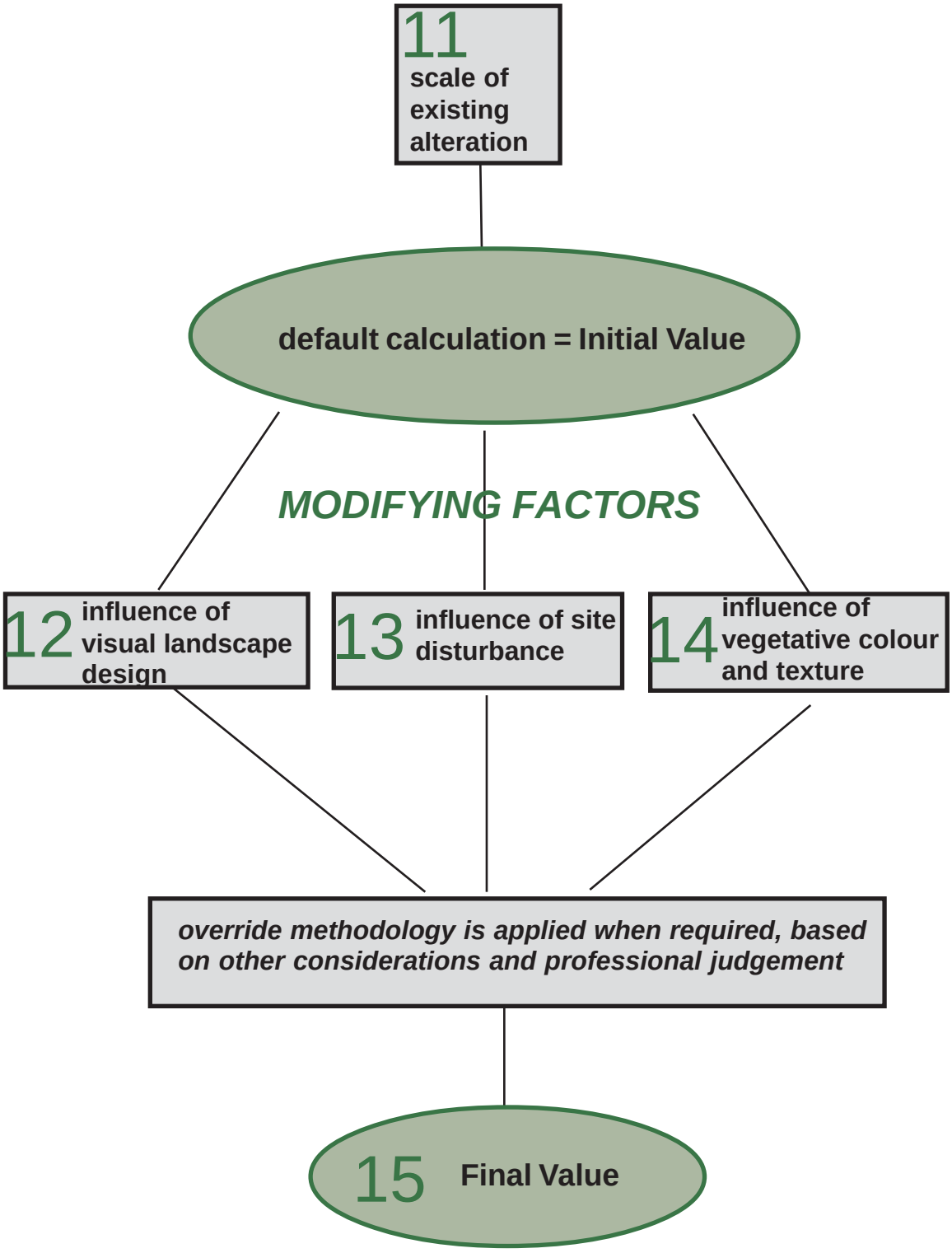
unit #

EVC

VAC BR VC VR

VSC

The observations, factors and methods used to determine EVC are illustrated below.
The initial rating of EVC is determined by one factor. Three modifying factors are considered in determining the final EVC value.



11) Scale of Existing Alteration

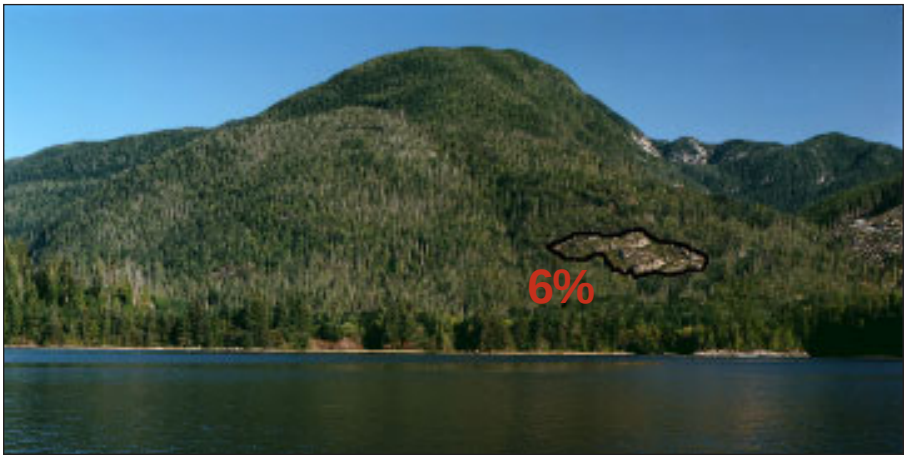
Scale of existing alteration is the amount of area within the VSU that has not reached visually effective green-up (VEG). This factor is a measure of the scale (in perspective) of **human-caused alteration** to the landscape. Natural openings such as rock, alpine or grassland are not be considered in either the percent altered or the total area of the VSU. Only the forested area of the VSU is considered.

The rating for Scale of Existing Alteration is determined as follows: observe the VSU; compare the observation with the percentages and photographs; then record the appropriate rating on the VSU Classification Form.

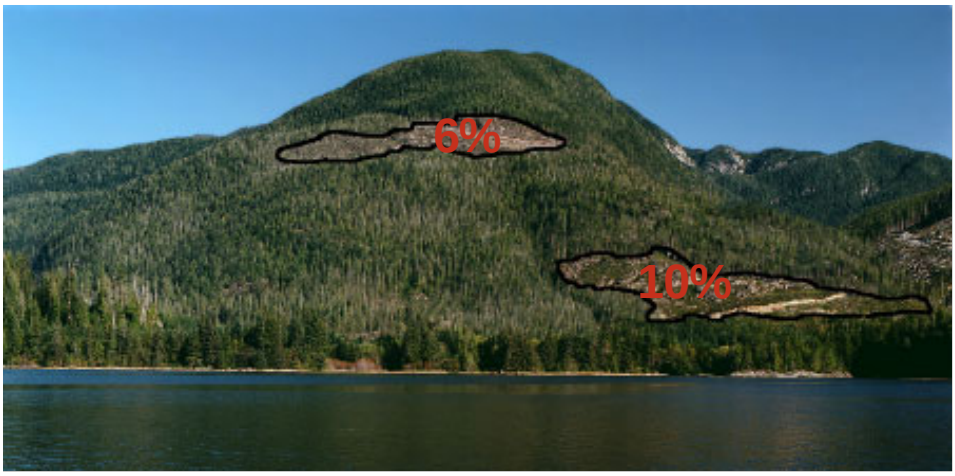
0%

0-1.5%

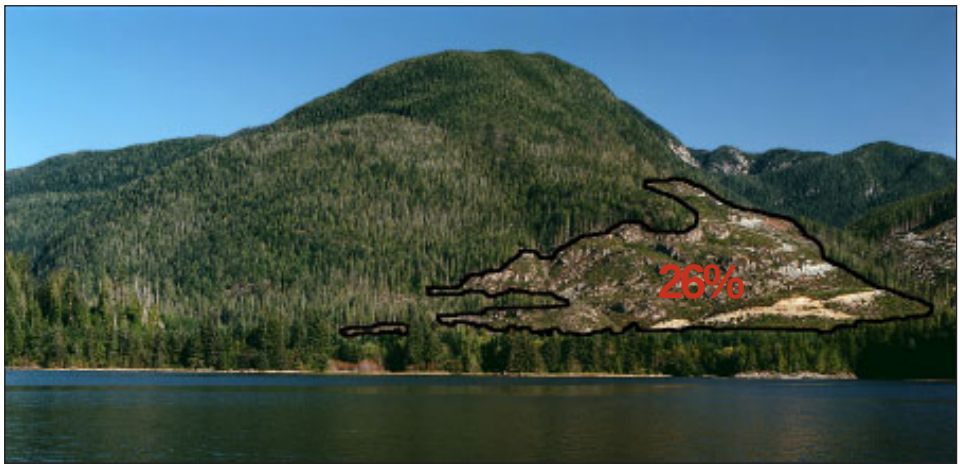
1.5 - 7%



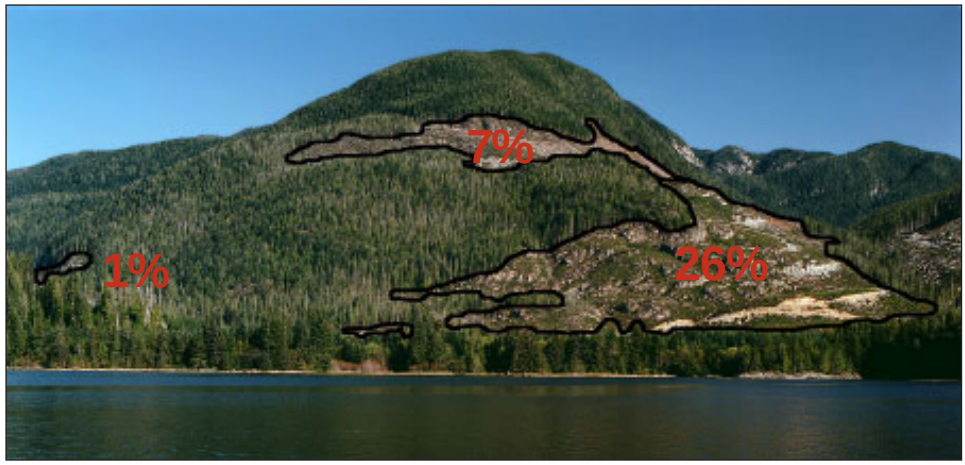
7 - 20%



20 - 30%



>30%



note: the above discrete predictor percentages were developed through analysis of clear cutting and visual quality report data.

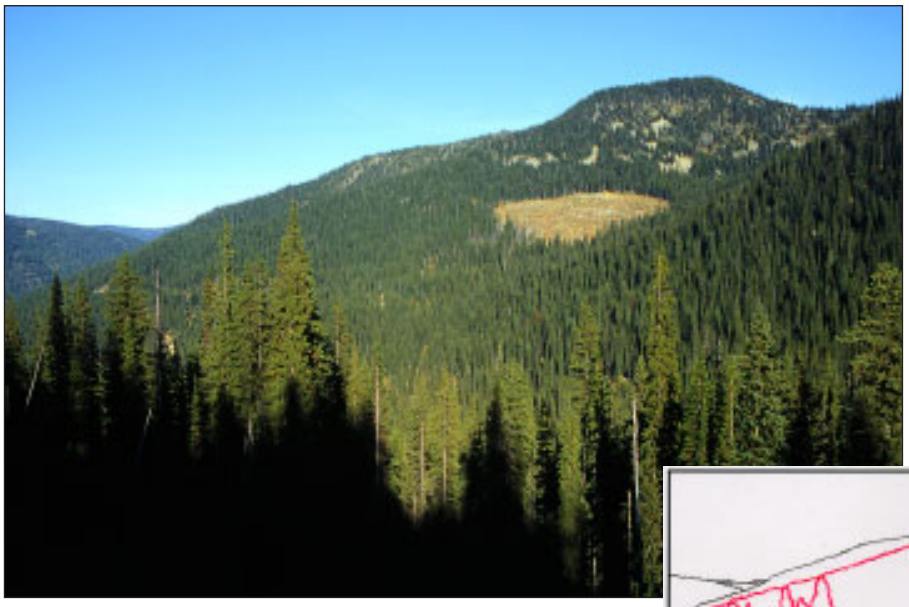
EVC Initial Value

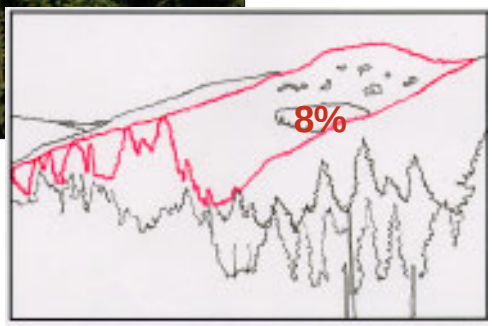
The initial value of Existing Visual Condition (EVC) is determined based on the percentage of non-visually effective greenup (non-VEG) using the table below. The percentages were determined from scale of alteration (factor #11).

0%	(P) Preserved
0-1.5%	(R) Retained
1.5-7%	(PR) Partially Retained
7-20%	(M) Modified
20-30 %	(MM) Maximally Modified
>30%	(EM) Excessively Modified

Record the initial value of EVC on the VSU Classification Form.

Example 1





The cutblock is 8% of the total green area of the VSU. Note that the natural rock openings are not part of the calculation. Summit Creek, Highway #3, Nelson Forest Region.

Existing Visual Condition(EVC)							*EVC Rationale:*
11 Scale of Existing Alteration	0%	0-1.5%	1.5-7%	7-20%	20-30%	>30%	
EVC Initial Value	P	R	PR	M	MM	EM	
12 Influence of Visual Landscape Design	H		M		L	N/A	TA: 1 2 3 4 5 6 7 8 9 10
13 Influence of Site Disturbance	H		M		L	N/A	
14 Influence of VEG Colour & Texture	H		M		L	N/A	A B C D
15 EVC Final Value	**P**	**R**	**PR**	**M**	**MM**	**EM**	

Example 2

No alterations. Alaska Highway near Toad River, Prince George Forest Region.

Existing Visual Condition(EVC)							*EVC Rationale:*
11 Scale of Existing Alteration	0%	0-1.5%	1.5-7%	7-20%	20-30%	>30%	
EVC Initial Value	P	R	PR	M	MM	EM	
12 Influence of Visual Landscape Design	H		M		L	N/A	TA: 1 2 3 4 5 6 7 8 9 10
13 Influence of Site Disturbance	H		M		L	N/A	
14 Influence of VEG Colour & Texture	H		M		L	N/A	A B C D
15 EVC Final Value	**P**	**R**	**PR**	**M**	**MM**	**EM**	

12) Influence of Visual Landscape Design

Influence of Visual Landscape Design is a measure of the degree to which human-made alterations have followed the concepts and principles of visual landscape design. For a comprehensive understanding of design, see the *Visual Landscape Design Training Manual* produced by the Ministry of Forests. The better the design the greater (or more positive) the influence. The main method for rating design quality is the lines of force analysis.

The rating for *Influence of Visual Landscape Design* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs; then record the appropriate rating on the VSU Classification Form.

Note: All types of alteration evaluated in the VSU are identified using the table below. Record the appropriate code on the VSU Classification Form. Natural disturbances, such as fires and earth slumps, are not identified but may be noted if they are an important feature of the VSU.

Types of Alteration (TA)

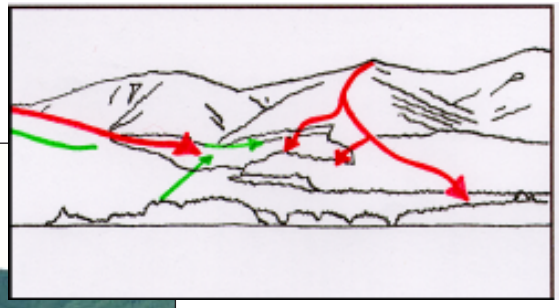
TA Code:	Type:
1	timber harvesting openings (includes logging roads within the opening)
2	road, rail transportation routes, airfields, etc.
3	power, seismic or pipeline corridors, etc.
4	mining, quarries, gravel pits, dumps, etc.
5	structural (bridges, dams, buildings, docks, floats, etc.)
6	agricultural
7	settlement
8	recreational use areas (ski hills, sites, trails, etc.)
9	aquaculture
10	other types of alteration (record type in the statement of rationale)

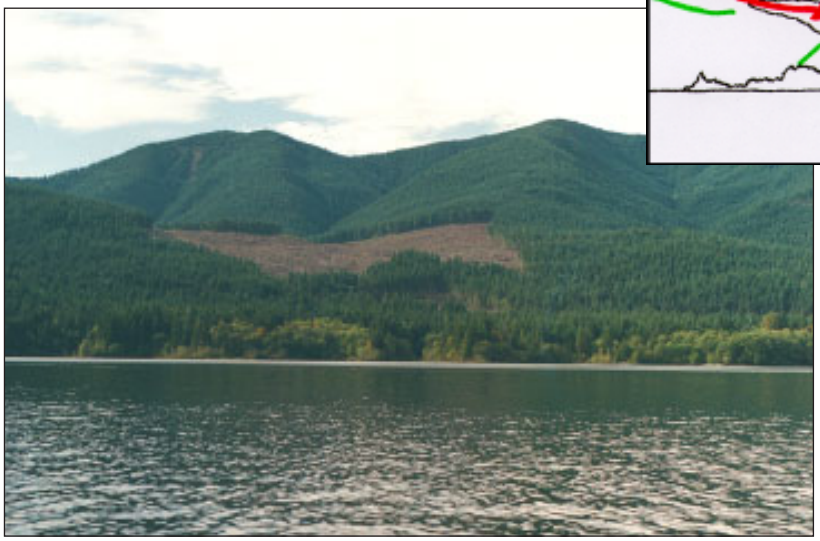
High (greater)
Shape borrows from natural character of landscape, utilizes natural lines of force, boundaries are feathered and stratified to reduce contrast.

Visual force lines indicate the direction a viewers eye moves over a landscape. Green arrows are visual force lines that move up valleys and dips, while red arrows indicate visual force lines that move down ridges.

This cutblock is the first alteration on an unaltered slope with uniform forest cover and little surface variation. The cutblock is positioned at the base of the slope and fits in well with natural lines of force.
Lava Lake, near Terrace, Prince Rupert Forest Region

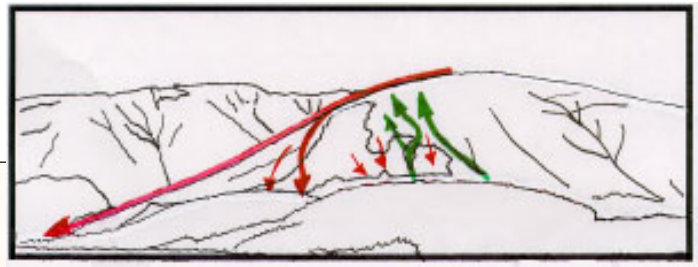
Moderate
Some natural character reflected in design, major lines of force recognized, some effort to mitigate contrast is evident.





This cutblock is the first alteration on moderately undulating topography. Forest cover is uniform second growth. The block is well positioned in a saddle and follows force lines reasonably well.
Cowichan Lake, Vancouver Forest Region

Low (lesser)
Square or angular in shape, contradicts or breaks natural lines of force causing tension, stark contrasting boundaries.



The second alteration on a slope with moderate surface variation. Most of the vegetation is uniform. The cutblock has artificial, straight line edges. It breaks most of the natural lines of force.
Near Terrace, Prince Rupert Forest Region

N/A (not illustrated) No human-made alterations visible

13) Influence of Site Disturbance

Influence of Site Disturbance is a measure of the extent to which roads, trails, landings and other site disturbances are visible and visually intrusive. Site disturbance is exposed and disturbed soil which can cause particularly intrusive and long-lasting visual scarring and reduce the visual quality of the VSU. The position of any site disturbances, the shape of their vertical and horizontal alignment, soil erosion problems, and the treatment of road cut, side cast or other debris are important considerations when evaluating this factor. The less visual impact the site disturbance has, the greater the influence it has on EVC. A greater influence means minimal site disturbance.

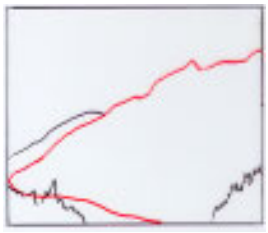
The rating for *Influence of Site Disturbance* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs; then record the appropriate rating on the VSU Classification Form.

High (subordinate) site disturbances are subordinate to VSU, no side-casting, landings or erosion evident. Visual contrast is minimal.

The high category includes altered areas that have no site disturbance. For example, a heli-logging cutblock with no roads or landings is included in the high category. Exposing soil or rock by removing trees is a site disturbance and often creates visual contrast.

Small amount of exposed soil and rock. No erosion, sidecasts or landings. Low visual contrast between the road and the regenerating forest.
Buttle Lake near Campbell River, Vancouver Forest Region

Moderate
site disturbances begin to dominate unit, little or no evidence of side-casting or erosion. Some visual contrast.



Some visual contrast between the road and the regenerating forest. Minor sidecasting and rock cuts along the road. The viewer's eye is drawn by the road and exposed rock.
Ashlu Creek, north of Squamish, Vancouver Forest Region

Low (dominant)
site disturbances dominate unit, with evidence of side casting, may have erosion; high contrast cuts or fills, may contain a distinct "zig-zag" pattern or many parallel roads; and high visual contrast.

Visual contrast is a type of site disturbance. Even though there may be no side casting or erosion a pale road across a darker slope is high visual contrast.

Erosion is the main site disturbance, and is heightened by the visual contrast between the slides and the forest.
Gilford Island, Vancouver Forest Region

N/A
no visible site disturbances. An unaltered unit or one that has fully recovered

Not Illustrated

14) Influence of Vegetative Colour and Texture

Influence of Vegetative Colour and Texture is a measure of the degree to which partial Visually Effective Greenup (VEG) has occurred and softens the visual impact of past disturbances. The greater the greenup the stronger the influence of vegetative colour and texture.

The rating for *Influence of Vegetative Colour and Texture* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs; then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter or letters on the VSU Classification Form.

High (Strong)

A. some ground may still be visible

B. regenerating forest is well advanced

C. distinctions in height, colour and texture remain between cut-blocks and adjacent forest, but cutblocks no longer seen as recently cut over

D. vegetation plays a strong role and may ameliorate effects of harvesting in a VSU by at least one Visual Quality Class (or EVC (*e.g. EVC is reduced from M to PR because of VEG).*

Example of High (B,C,D). VEG is well advanced, and although the altered area is large, the EVC is Retention.
Lone Cone on Meares Island, Vancouver Forest Region

Moderate

A. roads and logging debris are still visible

B. cutblocks have a green hue

C. vegetation plays a moderate rehabilitating role and may ameliorate effects of harvesting in a VSU within a Visual Quality Class (e.*g. although still Partial Retention, EVC is close to Retention)*

Roads are still visible and the cutblock has a green hue. The VEG has softened the impact of the harvesting. Moderate (A,B,C).

Low (Weak)

A. new clearcuts, roads and/or mass wasting are still clearly visible

B. cutblocks have little new vegetation

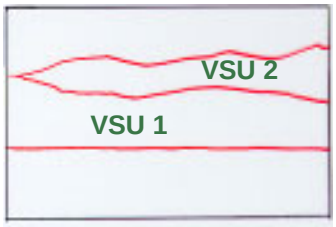
C. vegetation plays a small rehabilitating role in ameliorating effects of harvesting in a VSU (e.g. *cutblocks no longer appear freshly logged).*

New clearcuts are still clearly visible and vegetation plays a small role in reducing the impacts of harvesting. Low (A,C). Highway 16 near Morristown, Prince Rupert Forest Region

N/A

A. no existing alterations

B. no partial VEG of existing alterations. *Recent logging still appears brown.*



The alteration in VSU 1 has no partial VEG - N/A (B). VSU 2 has no existing alterations - N/A (A).
Cowichan Lake, Vancouver Forest Region

15) EVC Final Value

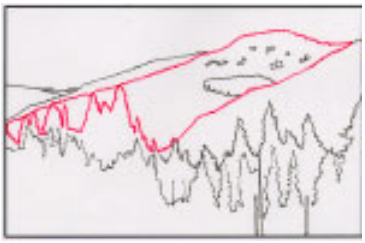
The final value of Existing Visual Condition (EVC) is determined using the override methodology where necessary (see Section 4.2).

The EVC modifying factors are: *Influence of Visual Landscape Design*; *Influence of Site Disturbance;* and *Influence of Vegetative Colour and Texture*. These factors have influence on the EVC by increasing or decreasing its initial value. For example, if the initial EVC rating is Partial Retention as predicted by a 6% alteration, but is poorly designed, has heavy site disturbance and little to no greenup, then these combined negative influences may serve to shift the initial EVC of Partial Retention towards Modification. Conversely, if the initial EVC rating is Partial Retention as predicted by a 3% alteration but Visual Design is good, there is little to no site disturbance and greenup is significantly advanced, then these combined positive influences may shift the initial EVC from Partial Retention to Retention.

Professional judgment should be used to decide whether any other considerations should be taken into account in determining a final value for EVC.

Record the final value, and any rationale for change between the initial and final value on the VSU Classification Form.

Example 1

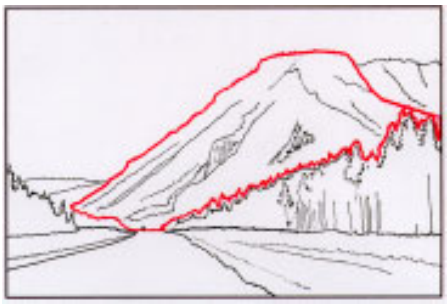


Cutblock design is in the high end of the moderate category, and there is little site disturbance (High). These factors combined with a scale of alteration (8%) at the low end of Modified is justification for adjusting the EVC to PR.

Existing Visual Condition(EVC)								*EVC Rationale:*
11 Scale of Existing Alteration	0%	0-1.5%	1.5-7%	7-20%	20-30%	>30%		
EVC Initial Value	P	R	PR	M	MM	EM		
12 Influence of Visual Landscape Design	H		M		L		N/A	TA 1 2 3 4 5 6 7 8 9 10
13 Influence of Site Disturbance	H		M		L		N/A	Alteration - 8%. Moderate design and minimal site disturbance moves the EVC to PR.
14 Influence of VEG Colour & Texture	H		M		L		N/A	A B C D
15 EVC Final Value	**P**	**R**	**PR**	**M**	**MM**	**EM**		

For determination of Initial Value, refer to page 66.

Example 2



No alterations, so the three modifying factors are non-applicable.

Existing Visual Condition(EVC)							*EVC Rationale:*
11 Scale of Existing Alteration	0%	0-1.5%	1.5-7%	7-20%	20-30%	>30%	
EVC Initial Value	P	R	PR	M	MM	EM	
12 Influence of Visual Landscape Design	H		M		L		N/A TA: 1 2 3 4 5 6 7 8 9 10
13 Influence of Site Disturbance	H		M		L		N/A
14 Influence of VEG Colour & Texture	H		M		L		N/A A B C D
15 EVC Final Value	**P**	**R**	**PR**	**M**	**MM**	**EM**	

For determination of Initial Value, refer to page 67.

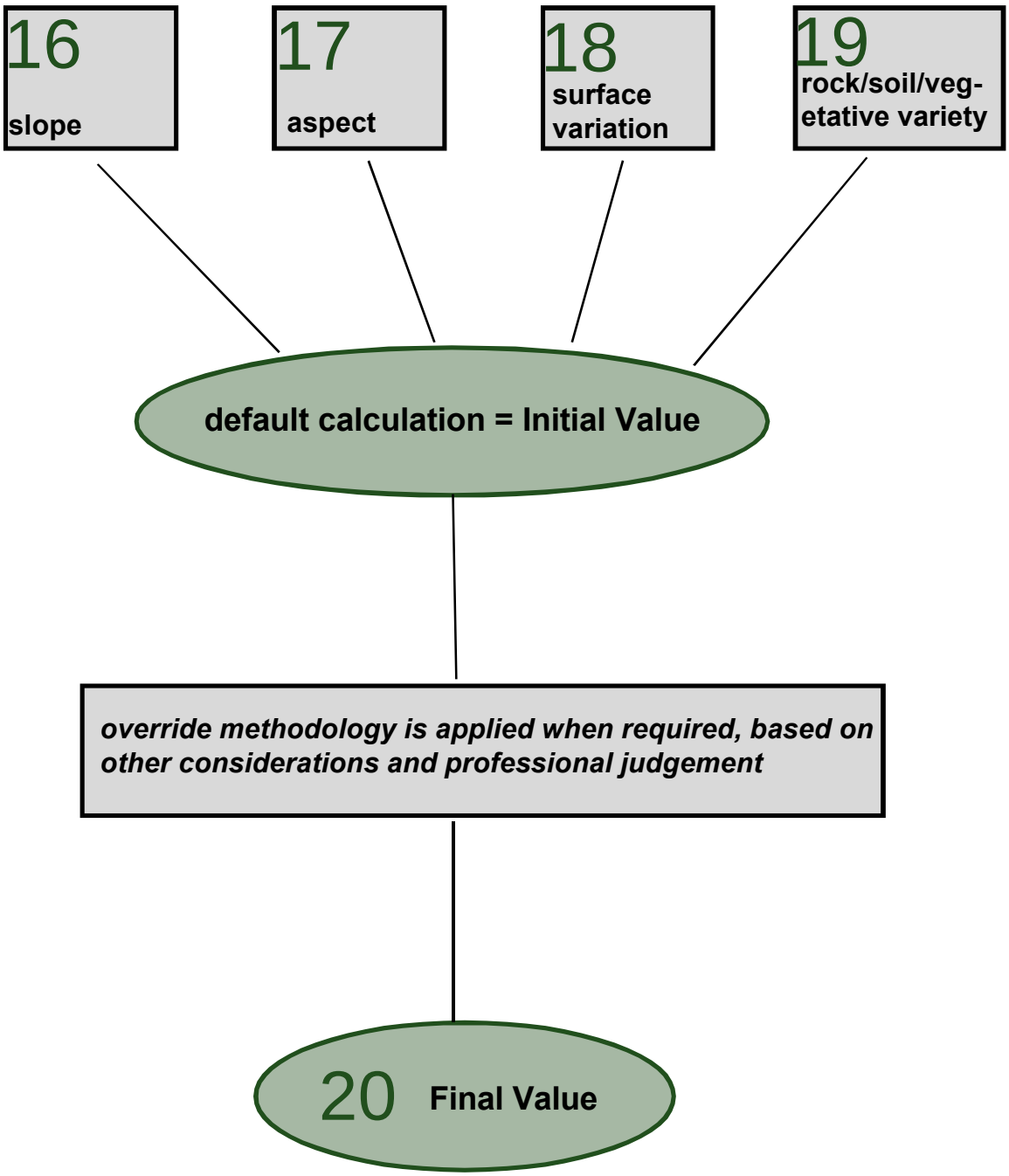
4.5 Standards for Classifying Visual Absorption Capability

Visual Absorption Capability (VAC)	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 is expressed in terms of a relative rating as follows:
High (H)	Landscape has high ability to absorb alteration and maintain its visual integrity.
Moderate (M)	Landscape has moderate ability to absorb alteration and maintain its visual integrity.
Low (L)	Landscape has low ability to absorb alteration and maintain its visual integrity.

unit #
EVC
VAC BR VC VR
VSC

The observations, factors and methods used to determine VAC are illustrated below.

The initial value of VAC is determined by four factors.



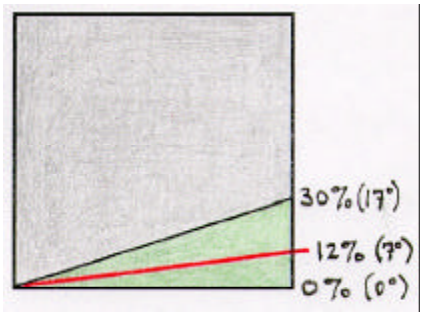
16) Slope

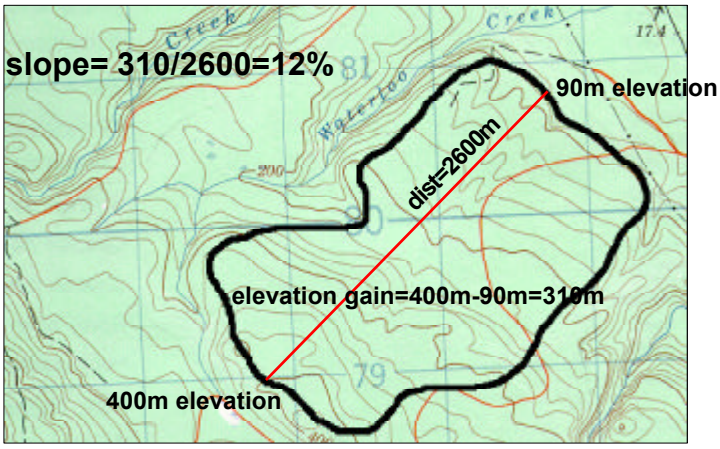
Slope is a measure of the steepness of the Visual Sensitivity Units (VSU's) surface. As the steepness of a VSU increases, the landscape becomes more strongly presented to the viewer and increasingly more sensitive to alteration. *Slope* also affects perspective, scale and vegetative screening effectiveness.

The rating for *Slope* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.

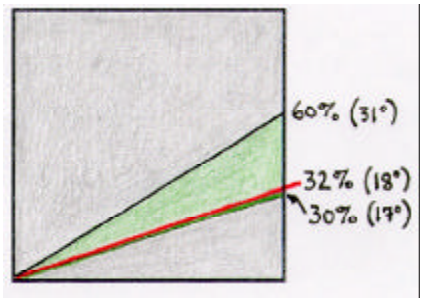
Note: "rise over run" as determined by the contours on the topographic map is used to determine slope class in cases where a determination cannot be made by observing the VSU. If the VSU has varying slopes, then topographic maps can be used to measure slopes at various locations within the VSU to determine an average slope. When determining slope, measure perpendicular to the contours and use a long run where possible to give a more accurate representation.

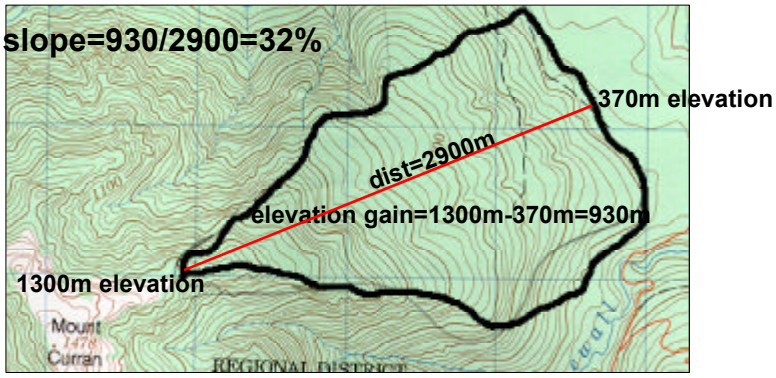
High (gentle) less than 30%.



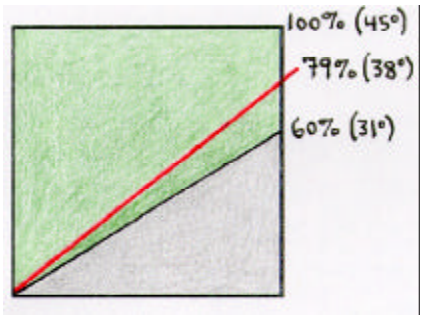


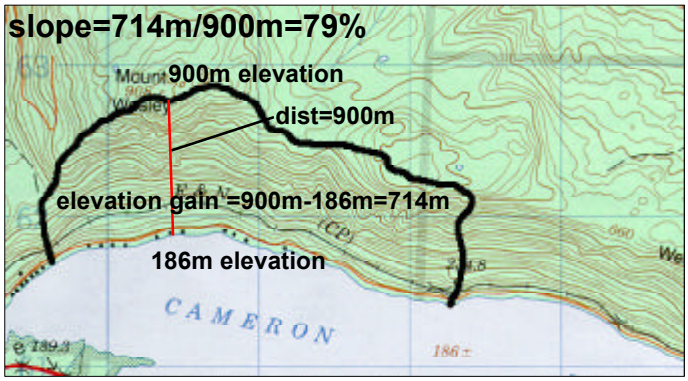
Moderate 30-60%





Low (steep) greater than 60%





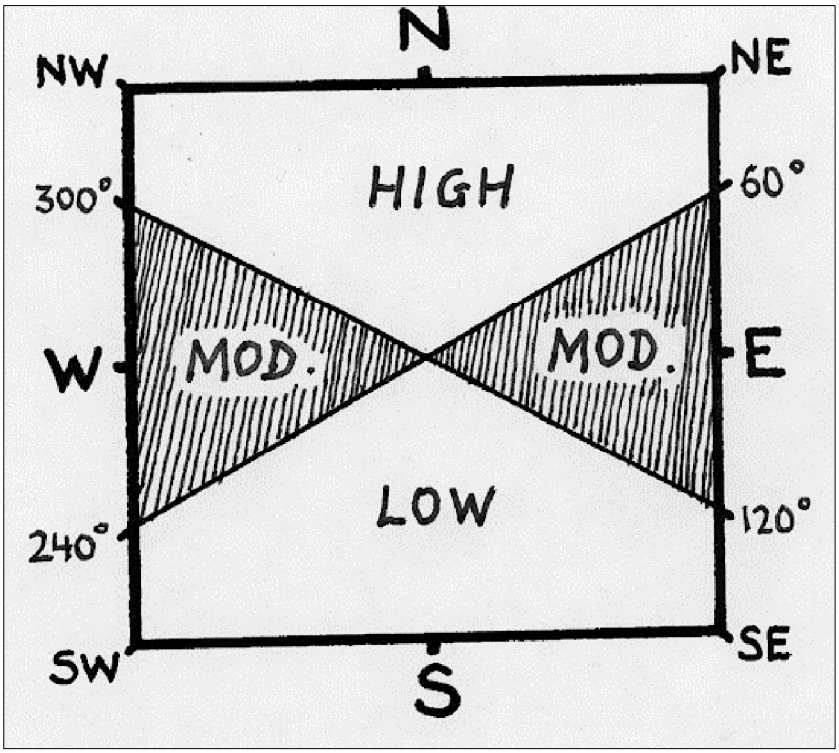
17) Aspect

Aspect is a measure of the direction a slope faces and influences how light strikes it. The amount, quality and direction of light which strikes the slope determines how vividly site details and human-caused alterations may be seen. North facing slopes are generally back lit (more shaded), resulting in a dull landscape with little detail, colour or texture visible. This enables them to absorb alterations more easily than south facing slopes that are front lit and whose colour and texture become more dominant.

The rating for *Aspect* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.

High
North, northwest or northeast facing slopes, or flat topography for which aspect is not applicable

Moderate
west facing slopes



Moderate
east facing slopes

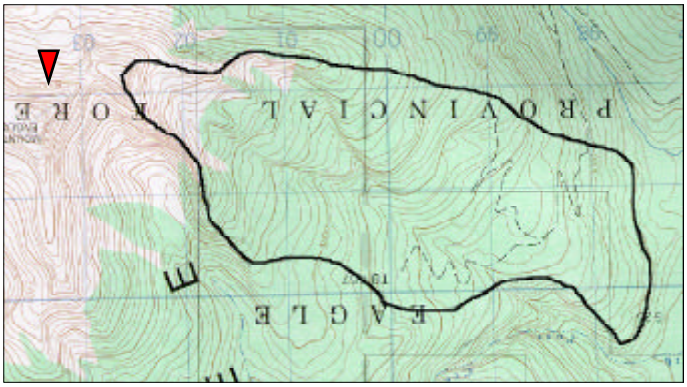
Low
south, southwest or southeast facing slopes

18) Surface Variation

Surface Variation is a measure of the variations of the land surface within a Visual Sensitivity Unit (VSU). The more the land undulates and varies, the greater the ability of the VSU to absorb change. **VAC increases where the land surface is rolling, uneven, gullied or has numerous benches**. VAC decreases where the land surface has little or no variation.

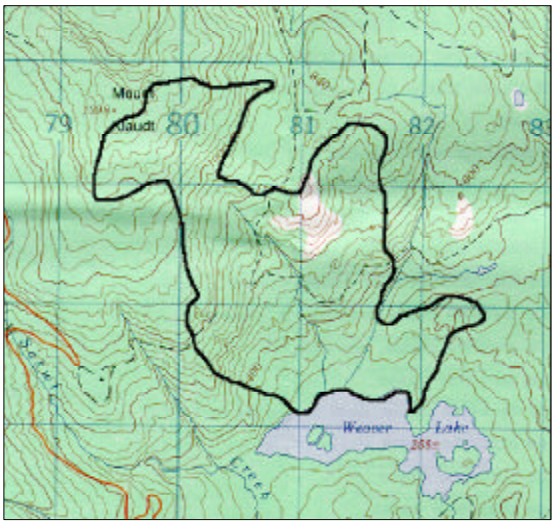
Map example **(various scales- original scale 1:50,000)**

High
high level of variety in topography (e.g. many hollows, knobs, benches and breaks in topography)



Surface Variation can be in the horizontal plane (undulating grasslands of the Interior) or vertical plane (mountain with deeply incised creeks). The horizontal plane has more variation.

Moderate
some variety in topography (e.g. some hollows, knobs, benches and breaks in topography)



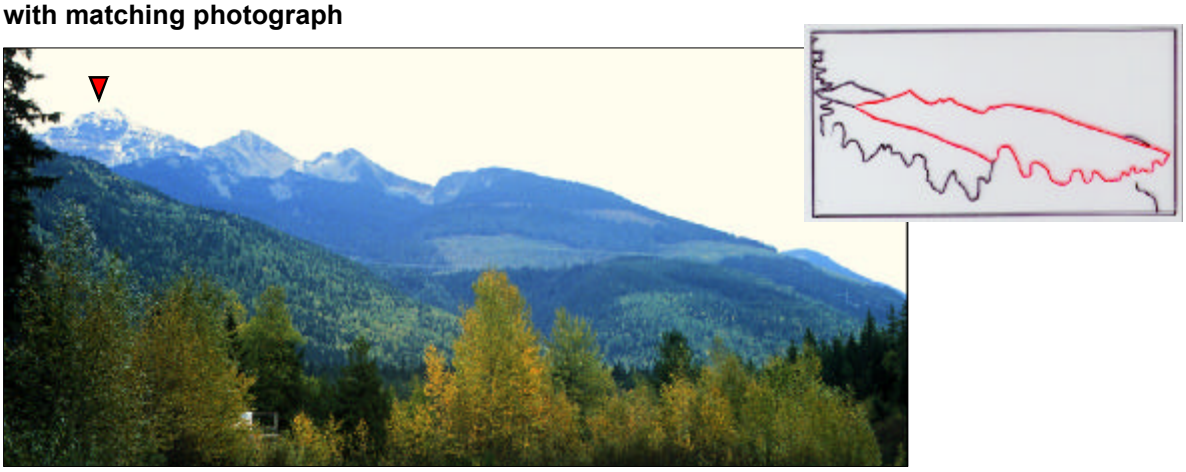
Observe both the map and the VSU when rating surface variation. The eye may see more variation than the map shows or vice versa.

Low
little or no variety in topography (e.g. steep, uniform slopes)

Check contour interval on your map. A bigger contour interval appears less steep and more varied.

The rating for *Surface Variation* is determined as follows: observe the VSU; compare the observation with the descriptions, maps and photographs below, then record the appropriate rating on the VSU Classification Form.

with matching photograph



High surface variation. Note the peaks and saddles, the creeks and slope breaks. The photograph shows more variation than the map.
Three Valley Gap, Kamloops Forest Region

Moderate variations in topography.
Weaver Lake near Harrison, Vancouver Forest Region

Uniform slopes with only minor variations in topography.
Lagoon Inlet, Queen Charlotte Islands,
Vancouver Forest Region

19) Rock/Soil/Vegetative Variety

Rock/Soil/Vegetative Variety is a measure of the colour and texture contrasts created by different types of rock, soil and vegetation. The greater the visual variety the greater the ability of the landscape to absorb alterations. Variety can be natural, as in colour contrasts and textures created by different types of vegetation and soil/rock, or human-made, as in areas of forest that have been harvested.

In situations where there is low variety, the VAC will be low. Conversely, in areas of high visual variety, the VAC will be high. Previous human made alterations which are angular in shape, large in size and chaotic in appearance may not increase VAC. However, well designed blocks which have achieved VEG can provide the variety necessary to increase VAC.

The rating for *Rock/Soil/Vegetative Variety* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs below, then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter or letters on the VSU Classification Form.

To rate this factor first determine the overall appearance of the VSU and choose the best description letter(s). Then, consider the human-made alterations (if any) and the impact they have on the rock/soil/vegetative variety. Refer back to factors 12 and 13 where you rated the quality of human-made alterations.

Well-designed alterations
A high or moderate rating for landscape design and site disturbance indicates that the alteration has natural characteristics and will add to the natural diversity of the VSU. The increase in diversity created by the alteration may increase the variety up a rating, or it may not increase the rating.

Poorly-designed alterations
A low rating for landscape design and site disturbance indicates that the alteration is angular in shape, has artificial characteristics, and is in strong contrast to the rest of the VSU. Usually, this will not increase the variety of a VSU, and in many cases will decrease the variety.

If the quality of alteration decreases or increases the variety, letter D should be one of the choices and a short explanation written in the rationale.

High

A. diverse variations in vegetation patterns

B. numerous natural or human-made openings in the tree canopy

C. diverse colour/texture variations in vegetation, rock and/or soil

D. other

High variety caused by vegetation and rock outcrops with diverse colours and textures. High (B,C).
Kinaskin Lake, Prince Rupert Forest Region

Moderate

A. some variations in vegetation patterns

B. some natural or human-made openings in the tree canopy

C. some colour/texture variations in vegetation, rock and/or soil

D. other

Variety is provided by the mixture of vegetation types at the base of the VSU and the cutblocks. The cutblocks add to the diversity, but do not increase it up to high. Moderate (A,B,C).
Sicamous, Kamlooops Forest Region

Variety is provided by openings in the tree canopy . These openings are natural, but openings can also be formed through clearing of land for agriculture or timber harvesting. The grass in the openings provides some colour and texture variations. Moderate (B,C).
Between Cache Creek and Lillooet, Kamlooops Forest Region

Low (Weak)

A. uniform, continuous vegetation cover

B. few natural or human-made openings in the tree canopy

C. little or no colour/texture variations in vegetation, rock and/or soil

D. other

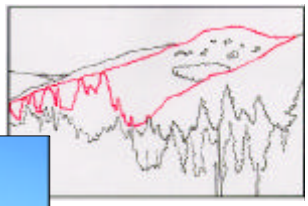
Variety is low because the forest cover is uniform and there is only one opening. Low (A,B)
Quesnel Lake, Cariboo Forest Region

VAC Initial Value

The initial value for Visual Absorption Capability (VAC) is determined using the default calculation (see Section 4.2) as follows:

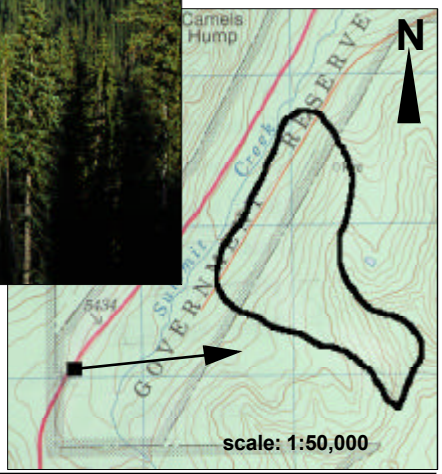
Total of numeric values of contributing factors	Initial value of VAC
10 - 12	H
7 - 9	M
3 - 6	L

Record the initial value of VAC on the VSU Classification Form.



Example 1

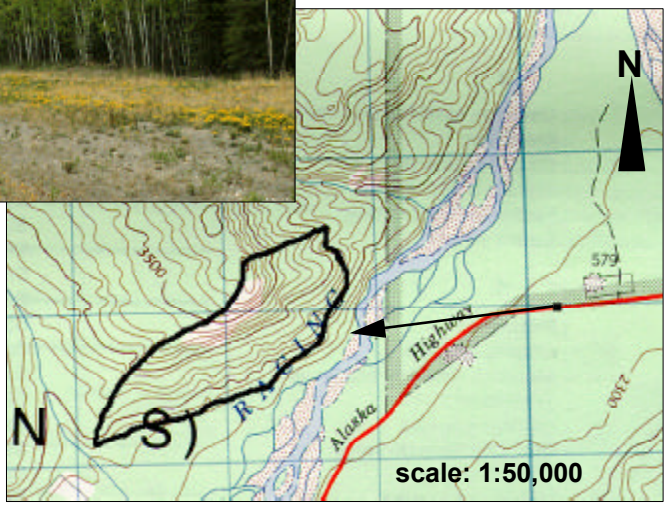
Moderate slope facing west. Little surface variation - one topographic break above the cutblock. Vegetative variety provided by rock outcrops.



Visual Absorption Capability (VAC)				VAC Rationale:
16 Slope	H (3)	M (2)	L (1)	
17 Aspect	H (3)	M (2)	L (1)	
18 Surface Variation	H (3)	M (2)	L (1)	
19 Rock/Soil/Vegetative Variety	H (3)	M (2)	L (1)	A B C D
VAC Initial Value	H (10-12)	M (7-9)	L (4-6)	
20 VAC Final Value	**H**	**M**	**L**	

Example 2

Steep slope facing south. Moderate surface variation provided by the gullies and ridges. High vegetative variety with rock openings and different vegetation types.



Visual Absorption Capability (VAC)				VAC Rationale:
16 Slope	H (3)	M (2)	L (1)	
17 Aspect	H (3)	M (2)	L (1)	
18 Surface Variation	H (3)	M (2)	L (1)	
19 Rock/Soili/Vegetative Variety	H (3)	M (2)	L (1)	A B C D
VAC Initial Value	H (10-12)	M (7-9)	L (4-6)	
20 VAC Final Value	**H**	**M**	**L**	

20) VAC Final Value

The final value of Visual Absorption Capability (VAC) is determined by using the override methodology where necessary (see Section 4.2).

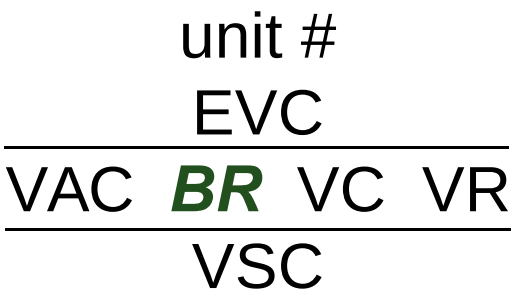
While for VAC there are no modifying factors, professional judgment should be used to decide whether any other considerations should be taken into account in determining the final value for VAC.

Record the final value, and any rationale for change between the initial value and final value on the VSU Classification Form.

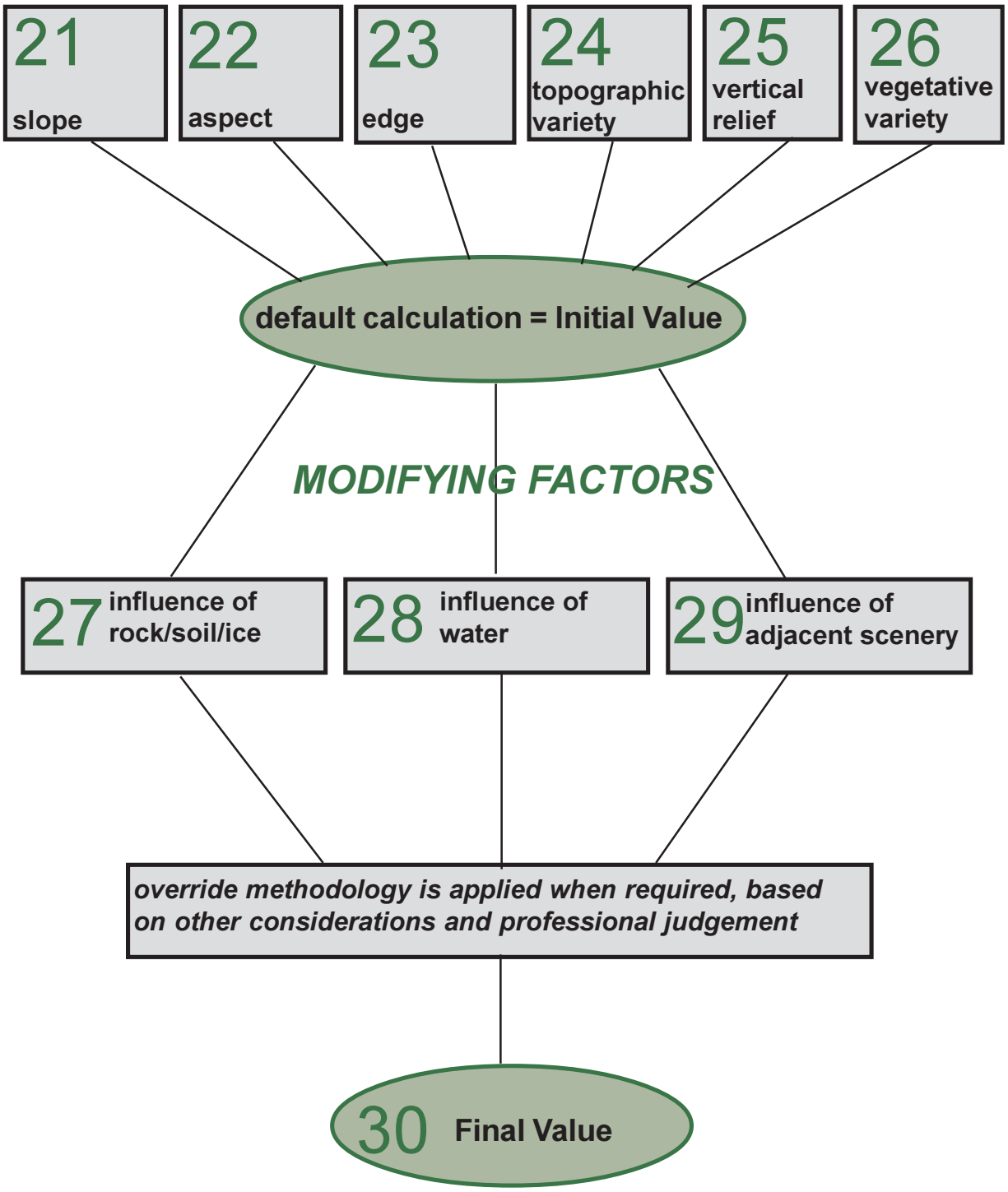
4.6 Standards for Classifying Biophysical Rating

Biophysical Rating (BR)	A measure of the degree to which the biophysical characteristics of a Visual Sensitivity Unit (VSU) creates visual interest and draws peoples' attention. The more biophysical characteristics create visual interest and draw peoples' attention, the more sensitive the VSU is to change. BR is expressed in terms of a relative rating as follows:
High (H)	Biophysical attributes have high visual interest and a high ability to attract viewer attention
Moderate (M)	Biophysical attributes have moderate visual interest and a moderate ability to attract viewer attention
Low (L)	Biophysical attributes have low visual interest and a low ability to attract viewer attention

Biophysical Rating includes the characteristics that make a VSU attractive or scenic. Although there are exceptions, most people find the same type of scenery attractive - steep, rocky mountains with vegetation along the lower slopes and a lake in the foreground. Think of Beautiful BC magazine and calendars when rating factors.



The observations, factors and methods used to determine BR are illustrated below.
The initial value for BR is determined by six factors. Three modifying factors are considered in determining the final BR value.



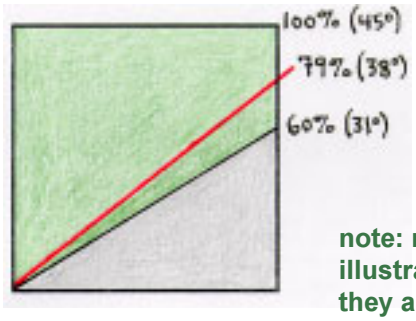
21) Slope

Slope is a measure of the steepness of the VSU's surface. As the steepness of a VSU increases, the landscape becomes more strongly presented to the viewer and increasingly more sensitive to alteration. *Slope* also affects both perspective, scale and vegetative screening effectiveness. Although Slope is the same factor used to determine BR and VAC, it affects BR opposite to VAC. Namely, the steeper a landform, the more likely it will be noticed and the higher the rating. Note that the ratings are reversed on the classification form.

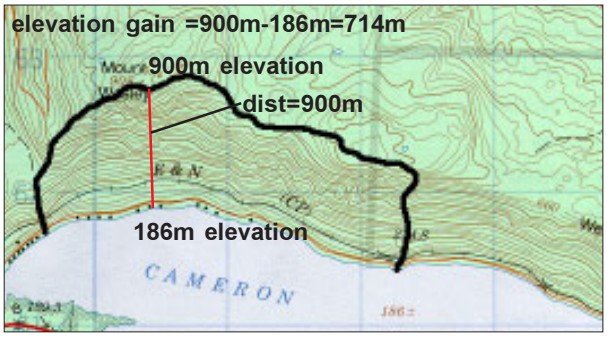
The rating for *Slope* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.

Note: "rise over run" as determined by the contours on the topographic map is used to determine slope class in cases where a determination cannot be made by observing the VSU. If the VSU has varying slopes, then topographic maps can be used to measure slopes at various locations within the VSU to determine an average slope. When determining slope, measure perpendicular to the contours and use a long run of where possible to give a more accurate representation.

High (steep) greater than 60%.

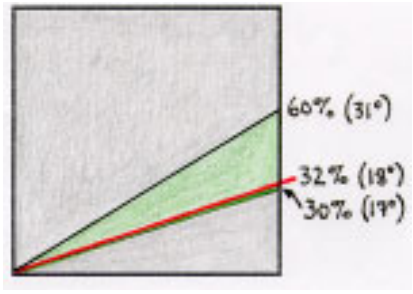


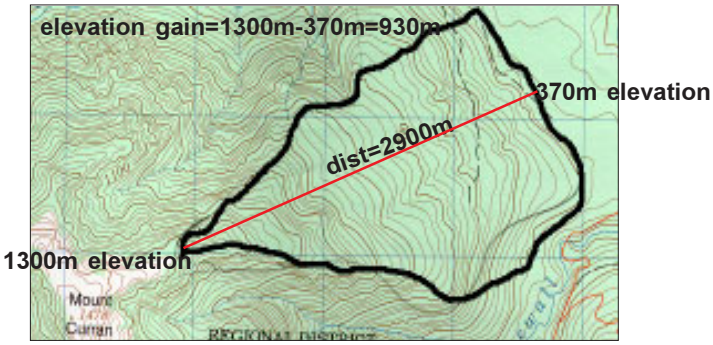
note: maps are illustrations, they are at different scales



slope=714m/900m=79%

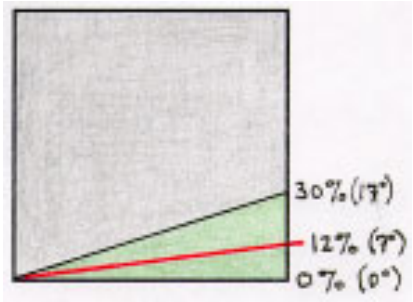
Moderate 30-60%

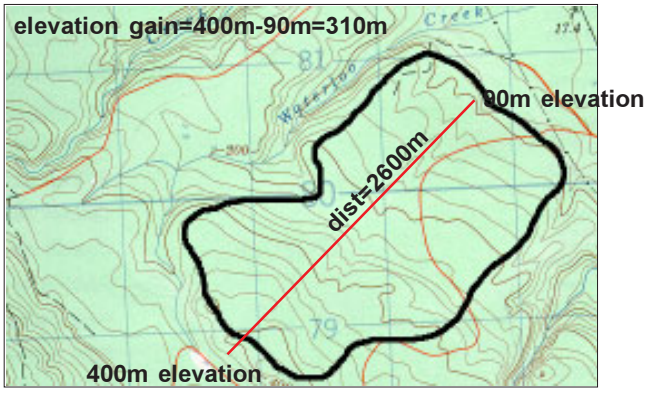




slope=930/2900=32%

Low (gentle) less than 30%





slope= 310/2600=12%

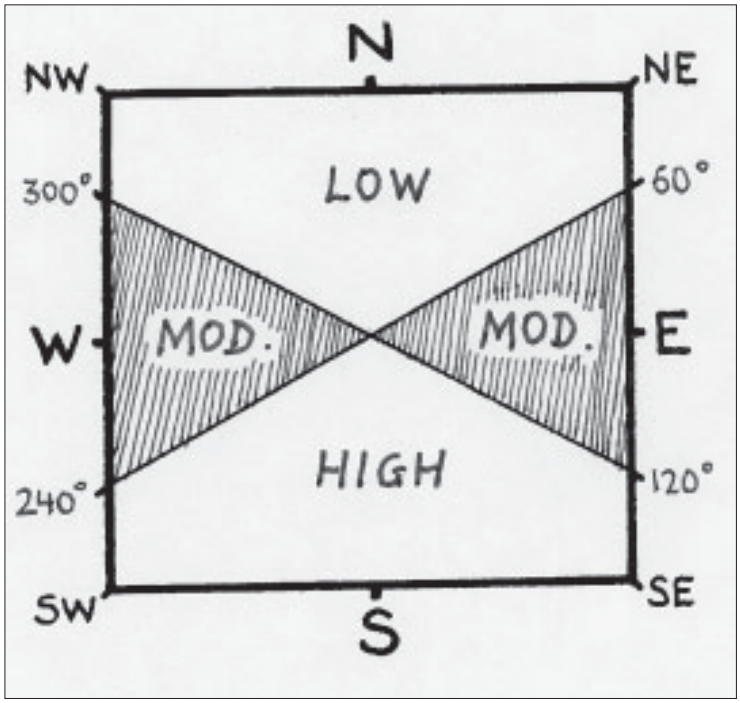
22) Aspect

Aspect is a measure of the direction a slope faces and influences how light strikes it. The amount, quality and direction of light which strikes the slope determines how vividly site details and human-caused alterations may be seen. North facing slopes are generally back lit (more shaded), resulting in a dull landscape with little detail, colour or texture visible. This makes them less sensitive to alterations than south facing slopes that are front lit and whose colour and texture become more dominant.

Although *Aspect* is the same factor used to determine BR and VAC, it affects BR opposite to VAC. Namely, a landform with a southerly aspect is more likely to be noticed and has a higher rating. Note that the ratings are reversed on the classification form.

The rating for *Aspect* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.

Low
north, northwest or
northeast facing slopes
or flat topography



Moderate
west facing
slopes

Moderate
east facing
slopes

High
south, southwest or
southeast facing
slopes

23) Edge

Edge is the boundary or interface **between Visual Sensitivity Units** (VSUs) **or between bio-physical features (natural and human made) within a VSU**. Edge can provide interest or variety to a landscape making it more sensitive to alteration (e.g. the sinuous edge of a shoreline or the graded edge of forest/alpine transition). Hard, defined edges such as ridgelines or skylines are sensitive in that any alteration to them disrupts line and creates visual tension. Some type and degree of edge will be present in every VSU.

The rating for *Edge* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs below, then record the appropriate rating on the VSU Classification Form.

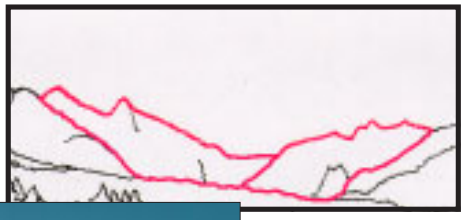
Note: The edge type which is most dominant is identified using the list below.
Record the appropriate letter on the Visual Sensitivity Unit Classification Form.

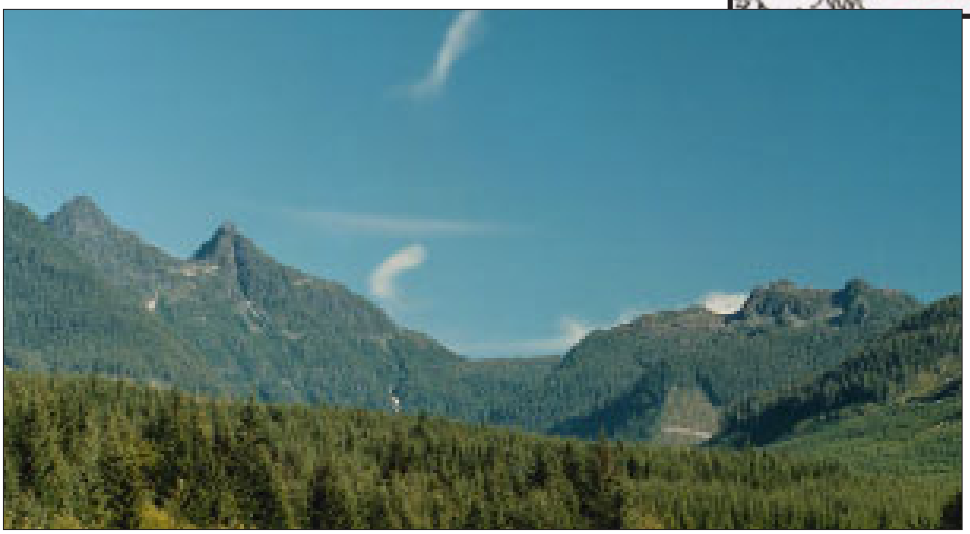
Type of Edge (TE) **CHOOSE ONLY ONE**

TE Code:	Type:	TE Code:	Type:
A	water/landform		
B	water/vegetation	**G**	vegetation/vegetation
C	water/land use*	**H**	skylines
D	land use*/landform	**I**	rock/soil/vegetation
E	land use*/vegetation	**J**	landform/landform
F	land use*/land use*	**K**	ridgelines

***land use includes cutblocks, mines, roads, structures, buildings, trails, marinas, docks etc.**

High
edge is obvious, strong and is a major attraction; the viewer's eye spends considerable time following the edge (e.g. complex, striking or dominant shoreline feature or skyline)





Example of an attractive, striking skyline, High (H), in both VSUs.
Bonanza Lake near Port McNeill, Vancouver Forest Region.

Moderate
edge is less obvious and is a minor attraction; the viewer spends a moderate amount of time following the edge (features are not as complex or striking)

Two different edge types that are equally dominant. The skyline is an immediate attraction, but the scalloped, repetitive line between the dark green lobes of conifer forest and the pale green slide and regenerating forest vegetation keeps the viewer's attention longer. Either Moderate (G or H) is acceptable. Ashlu Creek drainage, north of Squamish, Vancouver Forest Region.

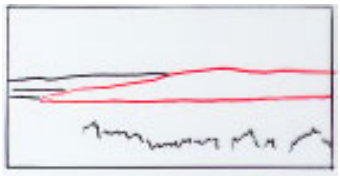
Skylines are the most common type of edge

An unattractive edge can be a dominant feature. For example, a straight line road cut across a cutblock. Although unattractive, it draws the viewer's attention. Depending on the situation, this type of edge could be classed as E,F,or I.

Low
edge is weak, indistinct and provides minimal attraction; the viewers eye moves beyond the edge to other features. Edge is uninteresting.

A somewhat distinct, but uninteresting skyline - Low (H). The viewer's attention is drawn to the detail in the trees between the viewpoint and the VSU and to the cutblock within the VSU. Nazko, Cariboo Forest Region.

An edge may be distinct, but if it is uninteresting it will be classified as Low.



24) Topographic Variety

Topographic Variety is a measure of the roughness of the terrain within a VSU horizontally and vertically. Landscapes with greater variety have greater visual interest and are more sensitive to alteration. The number, size and definition of surface features are used to predict *Topographic Variety*. Examples of landscape features include benches, knobs, hoodoos, canyons, gullies, escarpments, karst, fluting and talus hogsback ridges.

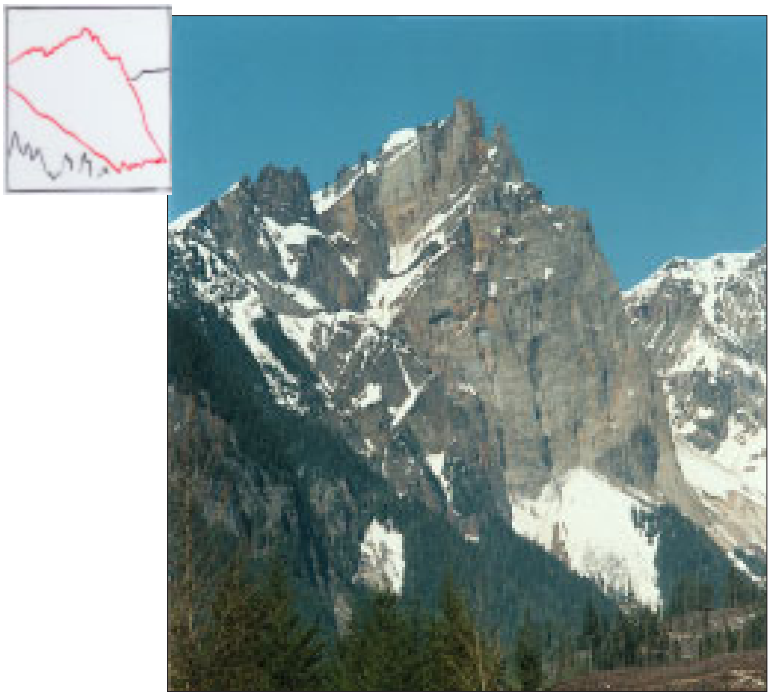
The rating for *Topographic Variety* is determined as follows: observe the VSU; compare the observation with the descriptions in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letters (below) on the VSU Classification Form.

High

A. single, very distinctive feature (e.g. Hope Slide or a spectacular incised ravine)

B. many features of the same type (e.g. 4 or more topographic breaks/benches or a hierarchy of ridges)

C. many features of different types (e.g. many hollows, knobs, benches or breaks in topography)

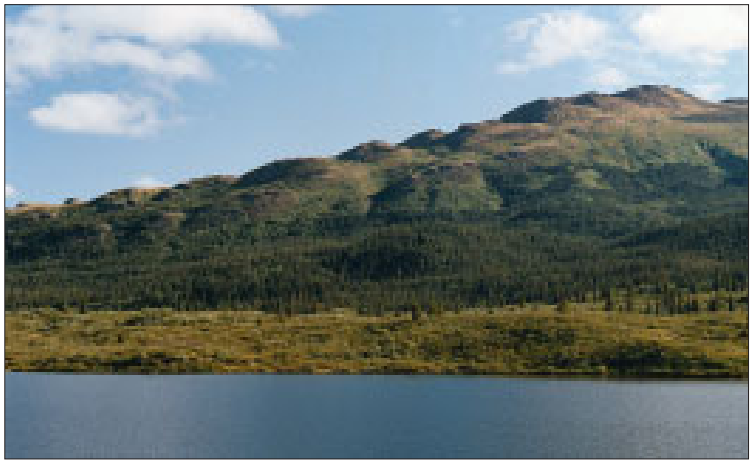


The mountain is a very distinctive feature - High (A).
Mt. Cayley, Squamish River, Vancouver Forest Region.

Topographic Variety is similar to, but not the same as Surface Variation. It is not mandatory to choose the same response for both factors.

Biophysical Rating factors, including Topographic Variety, aim to classify which features makes a landscape attractive or scenic to viewers.

A hierarchy of ridges - High (B).
Near Gold River, Vancouver Forest Region.



An attractive, highly varied landscape. Many knobs, hollows and changes in topography - High (C).
Gnat Lake, south of Dease Lake, Prince Rupert Forest Region.

Moderate

A. single moderately distinctive feature (e.g. avalanche track or broad, shallow gully)

B. some features of the same type (e.g. 2-3 topographic breaks/ benches)

C. some features of different types

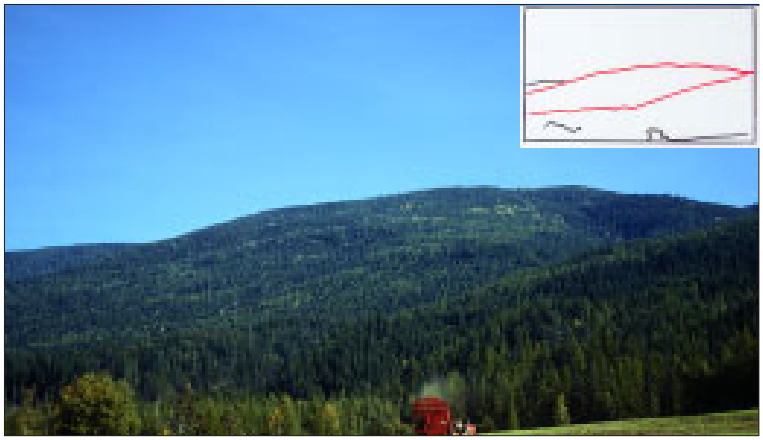
The escarpment is a distinctive feature - Moderate (A).
Williston Lake, Prince George Forest Region.

Low

A. single non distinctive (subtle) feature (e.g. a small localized slide or a midslope bowl)

B. one features (e.g. 1 or no topographic breaks/ benches)

C. few features of any type



One subtle topographic break and a small creek draw - Low (B).
Enderby, Kamloops Forest Region.

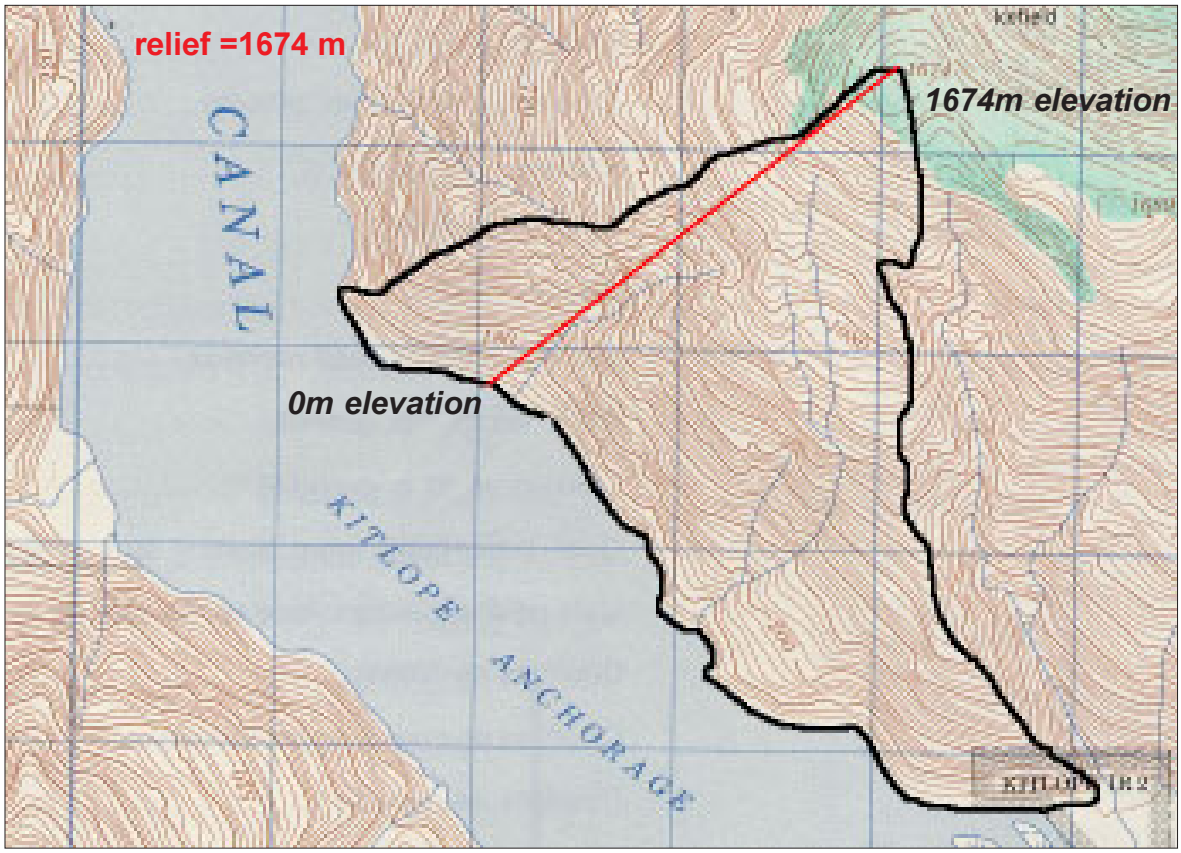
25) Vertical Relief

Vertical Relief is a measure of the VSU's vertical relief (extent or height from bottom to top). The greater the relief, the more attractive it is and the more sensitive the VSU becomes.

Note: The difference in elevation between the top and bottom of a VSU is determined using topographic maps.

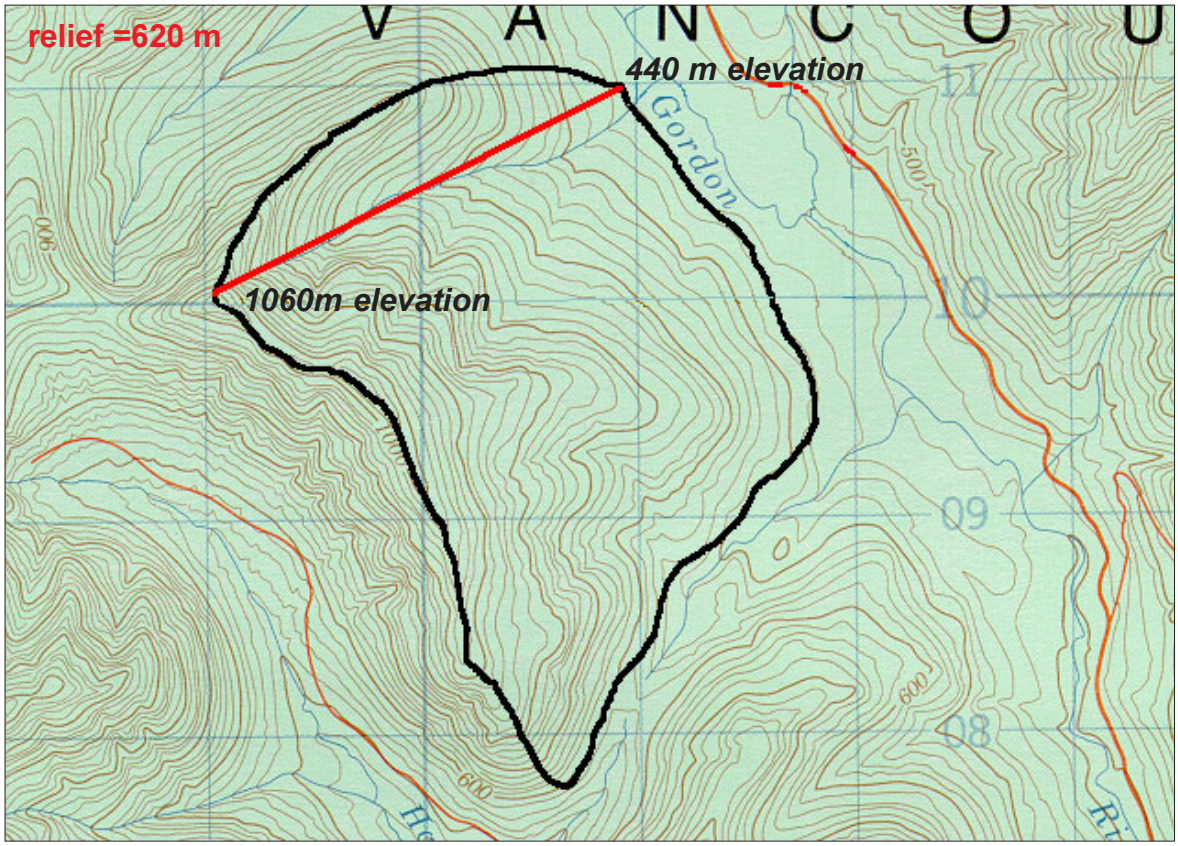
The rating for *Vertical Relief* is determined as follows: observe the VSU; compare the observation with the descriptions and illustrations below, then record the appropriate rating on the VSU Classification Form.

High
high vertical relief - over 800 metres

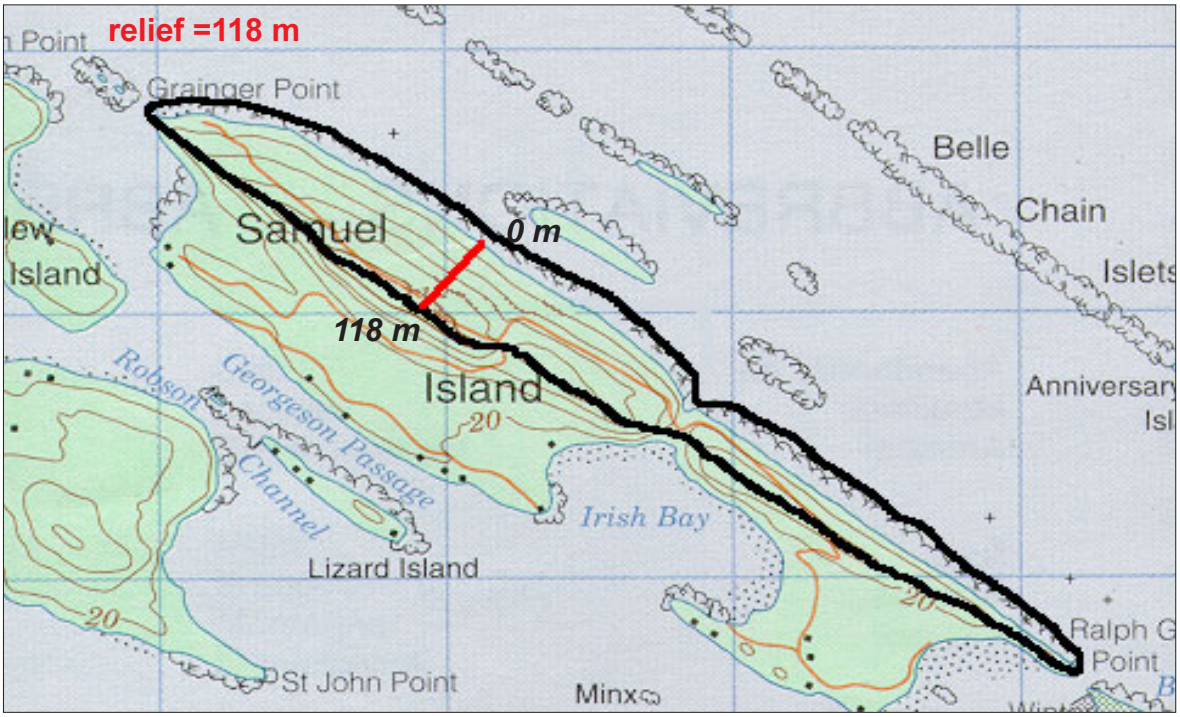


Maps are for illustration only and are not to the same scale. Original scale was 1:50,000.

Moderate
some vertical relief - rolling or inclined terrain - 200 to 800 metres



Low
little vertical relief - under 200 metres



26) Vegetative Variety

Vegetative Variety is a measure of the variety of the vegetative cover present. The significance of the vegetation cover is based on its ability to evoke visual interest. The viewscapes which usually attract the most visual interest are those with either a high or very low variety. The key example of such very low variety viewscapes are the uninterrupted expanses of continuous, dark green forest cover such as are found adjacent to large water bodies in many coastal areas.

The rating for *Vegetative Variety* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs below, then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the VSU Classification Form.

High

A. high level of variety in vegetative pattern

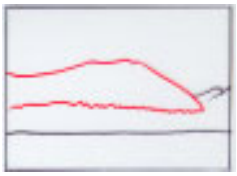
B. very uniform colour, texture and pattern

A varied and interesting vegetative pattern with only two vegetation types - High (A). Ashlu Creek drainage, north of Squamish, Vancouver Forest Region

Vegetative Variety is similar to, but not the same as Rock/Soil/ Vegetative Variety. It is not mandatory to choose the same response for both factors.

Distinctive and attractive fall colour highlights vegetative variety - High (A). Tuya River Lookout, between Dease Lake and Telegraph Creek, Prince Rupert Forest Region

Biophysical Rating factors, including Vegetative Variety, aim to classify what features makes a landscape attractive or scenic to viewers.



Continuous green slopes are typical of the west coast of Vancouver Island. The uniformity is attractive when it forms a backdrop to the ocean and the pale-coloured beaches - High (B).
Flores Island, Clayoquot Sound, Vancouver Forest Region.

Moderate

A. some variety in vegetative pattern, colour and texture (e.g. mixture of conifers and deciduous)

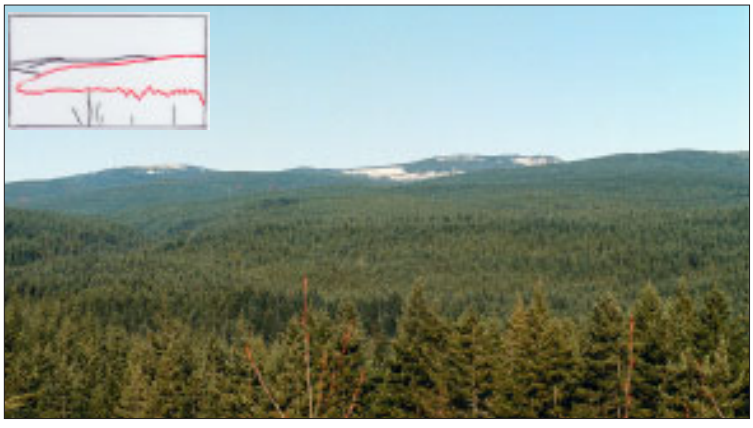
B. some uniformity in colour and texture, makes the unit moderately sensitive to alteration

Some variety in vegetation provided by a mixture of tree types - Moderate (A).
Mitten Lake, Prince Rupert Forest Region.

Low

A. vegetative cover that, because of its absence of either continuity or variety, has low visual interest

Vegetative cover that is unattractive because of poorly designed cutblocks is classified as Low.



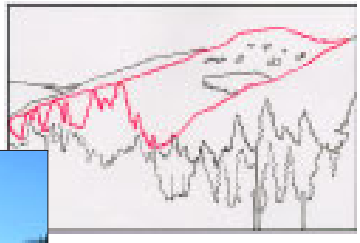
Uniform, monotonous second growth that is uninteresting because it lacks variety - Low (A).
Chemainus River, Vancouver Forest Region.

BR Initial Value

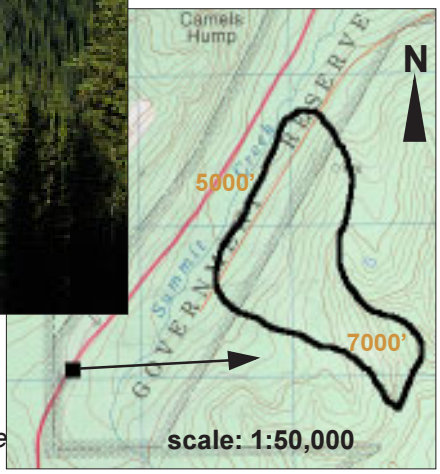
The initial value for Biophysical Rating (BR) is determined using the default calculation (see Section 4.3) as follows:

Total of numeric values of contributing factors	Initial value of BR
15-18	H
10-14	M
6-9	L

Record the initial value of BR on the VSU Classification Form.



Example 1



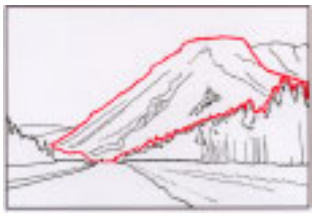
Moderate slope (44%), west aspect. Skyline is distinctive but not spectacular. The flat-top peak is a moderately distinctive feature. Vertical relief is 610 m (7000' - 5000' = 2000' = 610 m. Vegetative variety is provided by the rock outcrops and is at the low end of moderate..

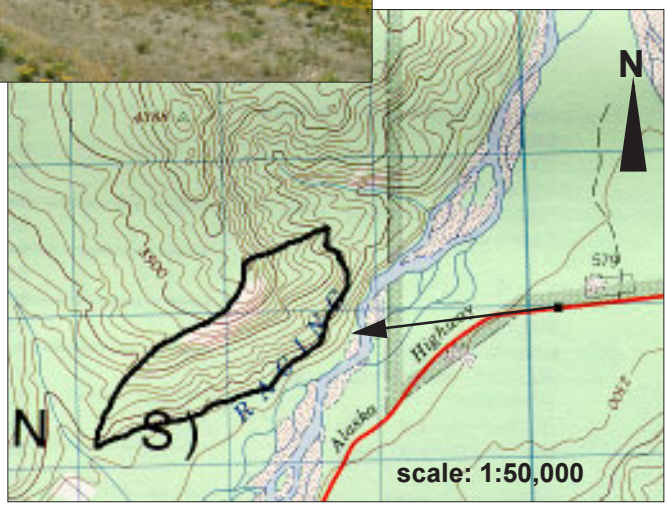
Biophysical Rating (BR)

BR Rationale:

21 Slope	H (3)	**M (2)**	L (1)		
22 Aspect	H (3)	**M (2)**	L (1)		
23 Edge	H (3)	**M (2)**	L (1)		TE: A B C D E F G **H** I J K
24 Topographic Variety	H (3)	**M (2)**	L (1)		**A** B C
25 Vertical Relief	H (3)	**M (2)**	L (1)		
26 Vegetative Variety	H (3)	**M (2)**	L (1)		**A** B
BR Initial Value	H (15-18)	**M (10-14)**	L (6-9)		
27 Influence of Rock/Soil/Ice	H	M	L	N/A	A B
28 Influence of Water	H	M	L	N/A	A B C
29 Influence of Adjacent Scenery	H	M	L	N/A	
30 BR Final Value	**H**	**M**	**L**		

Example 2





Steep slope facing south. Distinct but not spectacular edge. Attractive and varied topography with the gullies, ridges and the flat top. Highly attractive vegetative variety with different shades of green and exposed rock.

Biophysical Rating (BR)

BR Rationale:

21 Slope	H (3)	M (2)	L (1)		
22 Aspect	H (3)	M (2)	L (1)		
23 Edge	H (3)	M (2)	L (1)		TE: A B C D E F G H I J K
24 Topographic Variety	H (3)	M (2)	L (1)		A B C
25 Vertical Relief	H (3)	M (2)	L (1)		
26 Vegetative Variety	H (3)	M (2)	L (1)		A B
BR Initial Value	H (15-18)	M (10-14)	L (6-9)		
27 Influence of Rock/Soil/Ice	H	M	L	N/A	A B
28 Influence of Water	H	M	L	N/A	A B C
29 Influence of Adjacent Scenery	H	M	L	N/A	
30 BR Final Value	**H**	**M**	**L**		

27) Influence of Rock/Soil/Ice

Influence of Rock/Soil/Ice is a measure of the prominence and pattern of rock, soil and ice in a VSU. Prominence is determined by the presence of outstanding or dominant rock/soil/ice features, and their degree of uniqueness. Pattern is determined by the rock/soil/ice distribution within a unit and its ability to evoke interest. Ice refers to permanent year-round ice and pockets of snow such as glaciers, icefields and snowfields.

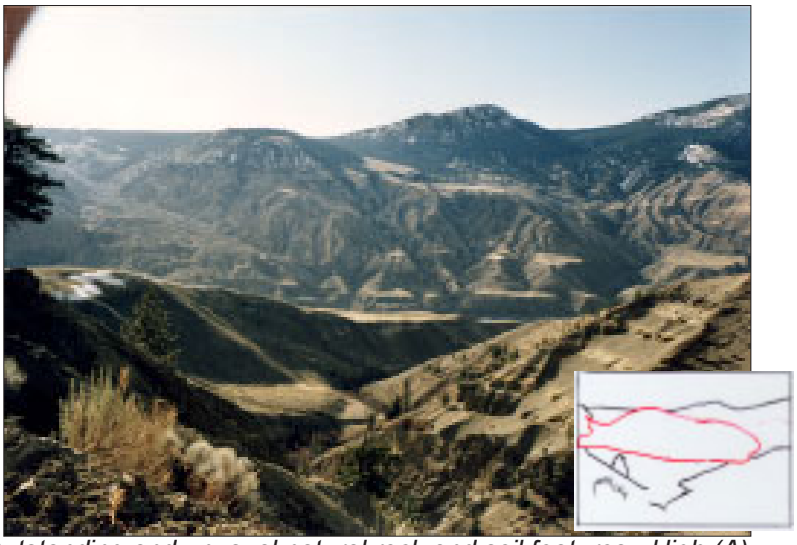
Note: Human-made disturbances which expose rock/soil are **not included** in this rating and where the ratings for prominence and pattern differ, the highest is selected as the factor rating.

The rating for *Influence of Rock/Soil/Ice* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs below, then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter on the VSU Classification Form.

High

A. Prominence
unusual, outstanding or dominant natural rock, soil or ice features; such as basalt columns, hoodoos or a large glacier

B. Pattern
rock or soil intermingled with vegetation, in proportions that provide great variety in pattern, texture and colour, and evoke high viewer interest.



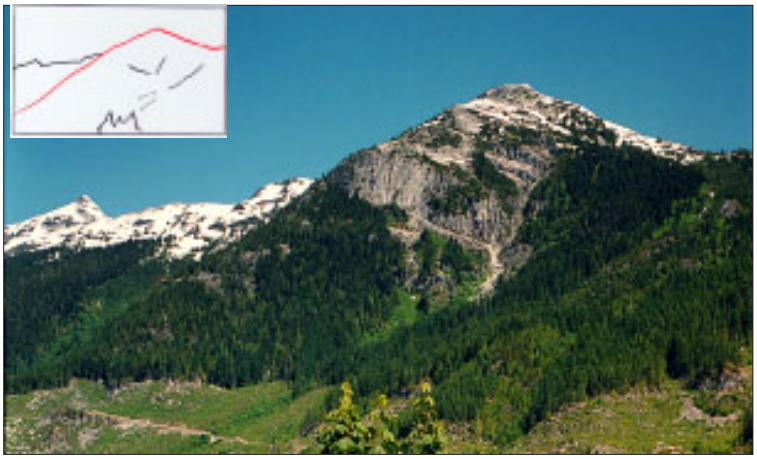
Outstanding and unusual natural rock and soil features - High (A).
Farwell Canyon, Cariboo Forest Region

Very striking and attractive pattern created by bands of rock and vegetation - High (B).
Tuchodi River, Prince George Forest Region

Moderate

A. Prominence
natural rock, soil or ice features present, but not outstanding or dominant

B. Pattern
rock or soil intermingled with vegetation, in proportions that provide some variety in pattern, texture and colour, and evoke moderate viewer interest.



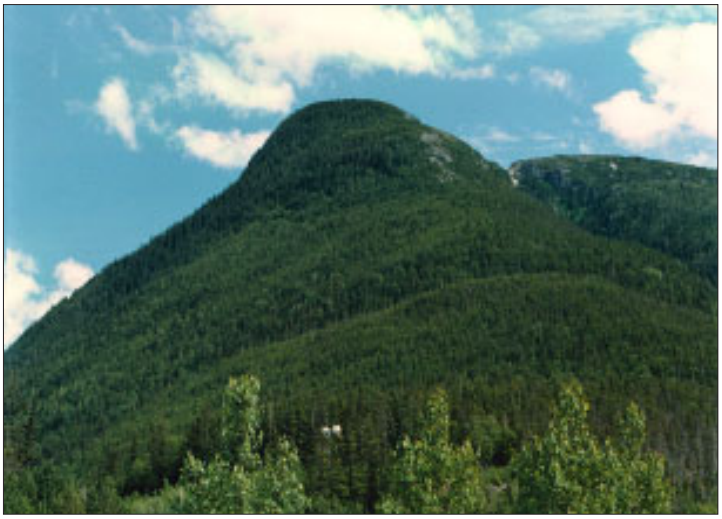
Prominent rock features that do not dominate the VSU - Moderate (A).
Ashlu Creek drainage, north of Squamish, Vancouver Forest Region

An attractive, but not striking rock pattern - Moderate (B).
Comox Lake, Vancouver Forest Region

Low

A. Prominence
natural rock, soil or ice features are only slightly apparent

B. Pattern
rock or soil intermingled with vegetation, in proportions that provide low variety in pattern, texture and colour, and evoke low viewer interest. VSU is homogeneous in appearance.



The small outcrops of rock near the skyline are only slightly apparent - Low (A)
Nass Valley, Prince Rupert Forest Region

N/A (Not Illustrated)
A. no rock or soil visible in the VSU

28) Influence of Water

Influence of Water is a measure of the presence, dominance and quality of water that is readily visible within or near a Visual Sensitivity Unit (VSU). The more influence and dominance water has on a VSU, the greater its sensitivity. In general, forest visitors value the aesthetic qualities of water features (e.g. oceans, lakes, rivers, and waterfalls) and prefer landscapes with water over those without water. Water provides an interesting variety, contrast and ephemeral effect to many landscapes.

Note: The location of the water feature (adjacent to, near, contained within or surrounded by the VSU) should be recorded on the VSU Classification Form.

The rating for *Influence of Water* is determined as follows: observe the VSU; compare the observation with the descriptions and photographs below, then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the Form.

Water does not have to be close to a VSU to have an influence. VSUs that are some distance from water, but are viewed over water are considered more sensitive.

When rating this factor, image the VSU without the water and decide if it loses scenic quality, and if it does, how much does it lose. A VSU that remains scenic after water features are removed is rated low. A VSU that loses some of its scenic quality after water features are removed is rated moderate. A VSU that loses most of its scenic quality after water features are removed is rated High. The following images illustrate removing the water from the scene and the subsequent impact.

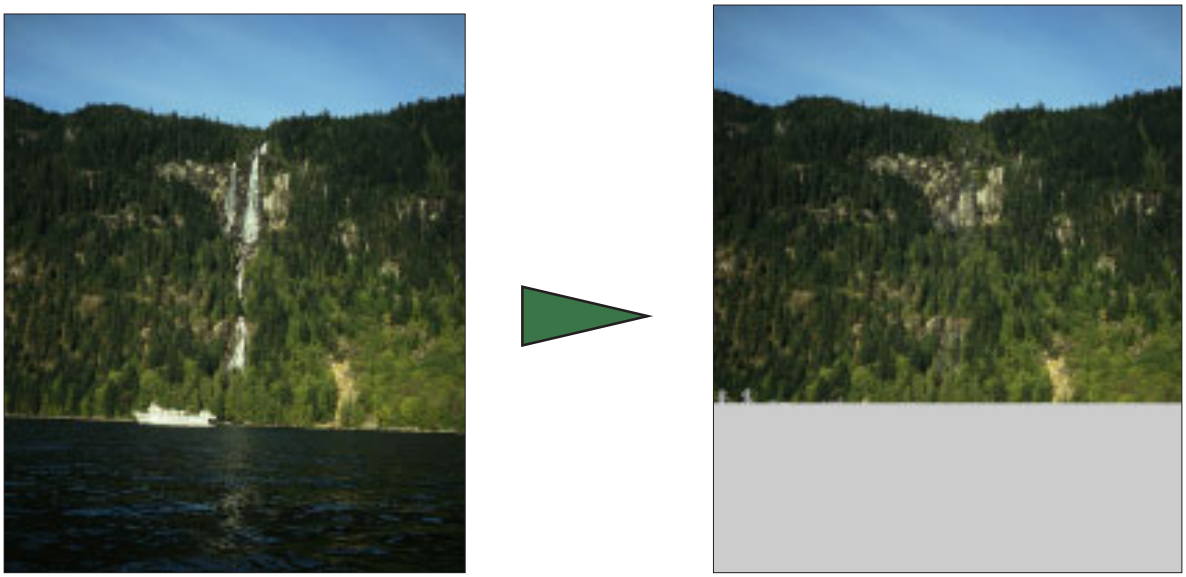
High

A. water has a high influence

B. water features are dominant

C. water is clear, clean and/or colourful

High (A,B). Water is both contained within and adjacent to the VSU. Note that the unit loses much of its scenic quality without the waterfall and the ocean. The eye is drawn to the waterfall.
Sunshine Coast, Vancouver Forest Region



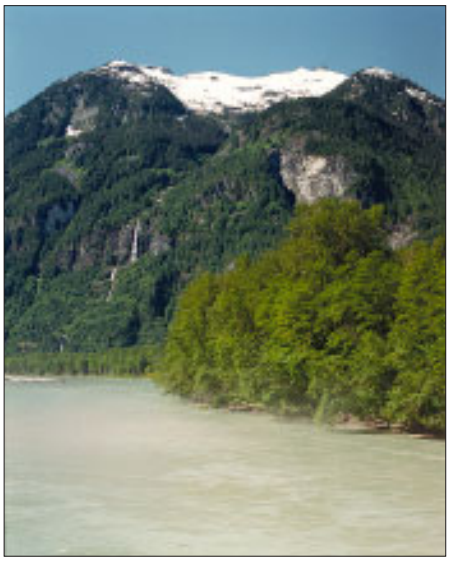
Moderate

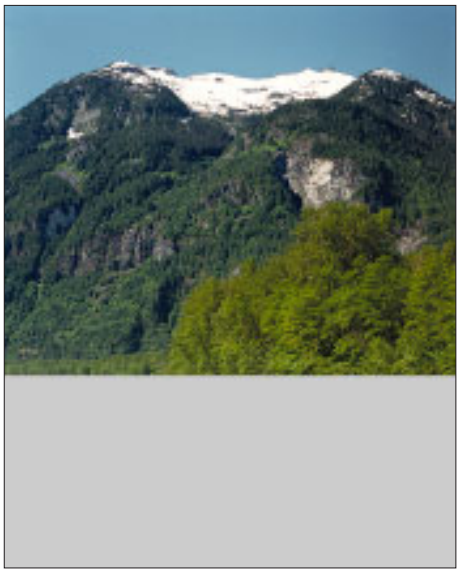
A. water has a moderate influence

B. water features are present but subordinate

C. water is not clear or is somewhat turbid

Water is contained within and adjacent to the VSU. The unit loses some of its scenic quality without the waterfall and the river. The VSU does not lose all its scenic value because there are other features such as rock and topographic variety that make the VSU attractive. Moderate (B,C).
Squamish River, Vancouver Forest Region





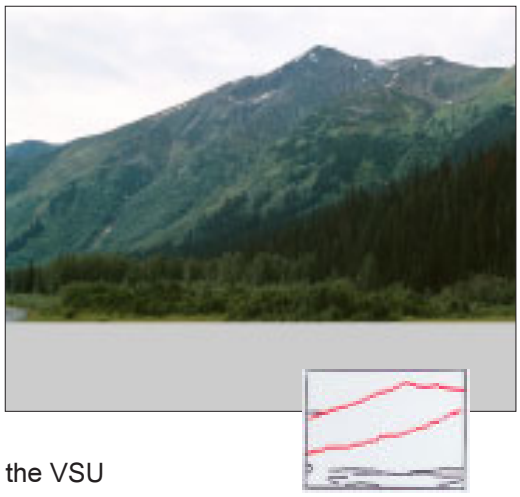
Low

A. water has a low influence

B. water features are present but insignificant

C. water appears murky or is very turbid

Water is near the VSU. The VSU is some distance from the water, but, because the water is in the foreground of the scene, it still has some influence on the VSU. There is little or no loss of scenic quality when the water is removed. Also, the water is murky. Low (A,B,C).
Ningunsaw Pass, Prince Rupert Forest Region



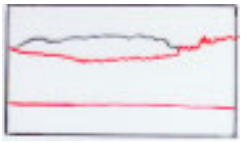
N/A (not illustrated) no water present in, or adjacent to the VSU

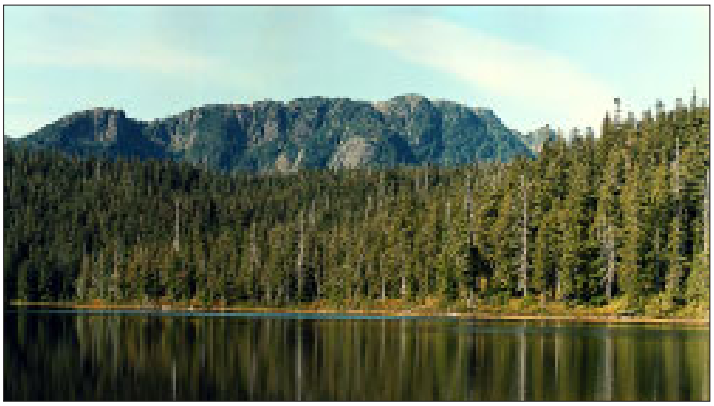
29) Influence of Adjacent Scenery

Influence of Adjacent Scenery is a measure of the potential for surrounding scenery to affect the sensitivity of the VSU being rated. Surrounding scenery with biophysical characteristics that are similar to, or are considered to have the same sensitivity as, the assessed VSU will tend to have less influence than adjacent scenery that is contrasting or different. Adjacent scenery may affect the sensitivity of the VSU being rated by either increasing or decreasing its sensitivity, e.g., logged units adjacent to an unlogged unit being rated, may increase the sensitivity of the unlogged unit. Unlogged units surrounding an unlogged unit would have little effect on sensitivity.

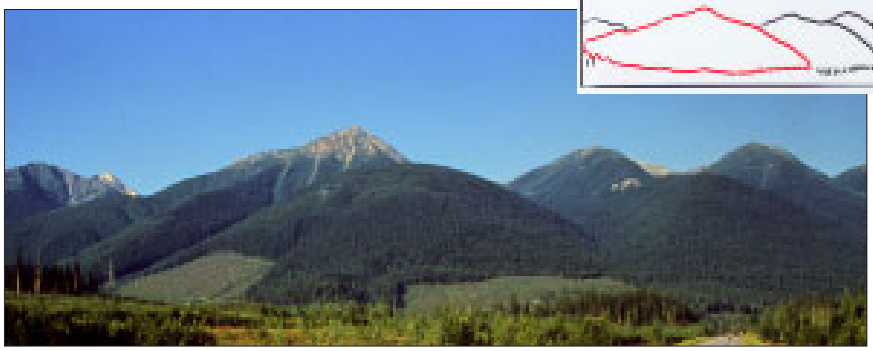
Note: Water features are excluded from this rating.

High
adjacent scenery and/or VSU has a strong influence on the assessed VSU. (i.e. may increase or decrease the overall scenic value or sensitivity of the unit)

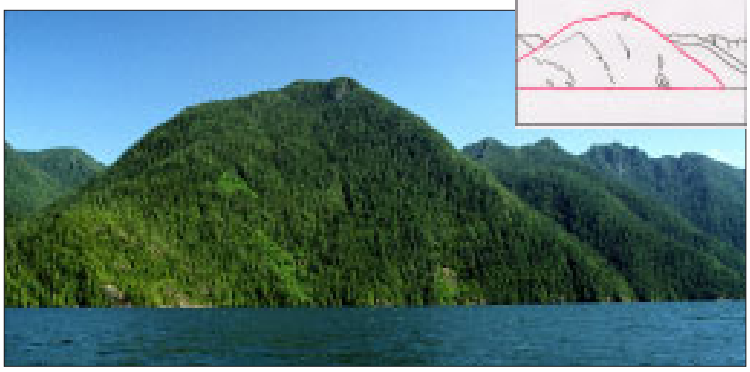




Moderate
adjacent scenery and/or VSU has some influence on the assessed VSU. (i.e. may somewhat increase or decrease the overall scenic value or sensitivity of the unit)



Low
adjacent scenery and/or VSU has little influence on the assessed VSU. (i.e. does not increase or decrease the overall scenic value or sensitivity of the unit)



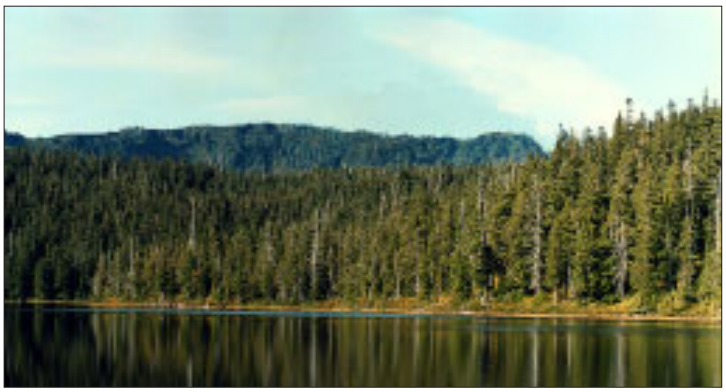
Bedwell Sound, Vancouver Forest Region

N/A (not illustrated) no adjacent VSUs

The rating for *Influence of Adjacent Scenery* is determined as follows: observe the VSU; compare the observation with the descriptions and images below; then record the appropriate rating on the VSU Classification Form.

To rate this factor consider the differences, or lack of them, between the VSU and the scenery around it. Include both artificial (e.g. logging, ski lodge) and natural (e.g. slope, presence of rock) biophysical characteristics. To visualize the differences, imagine the adjacent scenery to have the same biophysical characteristics as the VSU. The less imagining you have to do, the less the influence of adjacent scenery, because the adjacent scenery has similar characteristics.

Compare the modified images on this page with the original images on the opposite page.



Moriarty Lake, near Nanaimo, Vancouver Forest Region

High
The rocky mountain is quite different from the VSU- it is steep and has a lot of rock. These differences accentuate the VSU and make it more sensitive.

In the modified image the mountain has been made more like the VSU. The scene is no longer as attractive. Note that water features are not counted as adjacent scenery.

Kootenay Forest Region

Moderate
The VSU and adjacent scenery (neighbouring mountains) have the same natural biophysical characteristics, but different artificial characteristics (logging). The adjacent scenery has a moderate influence on the VSU.

Low
The adjacent scenery is the same as the VSU and has no influence on its sensitivity. There is no modified image for this photograph.

30) BR Final Value

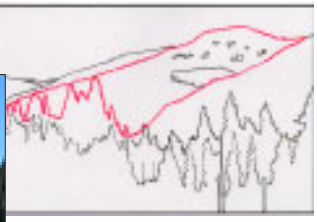
The final value of Biophysical Rating (BR) is determined by using the override methodology where necessary, (see Section 4.2).

The BR override methodology involves modifying factors 27) *Influence of Rock/Soil/Ice*, 28) *Influence of Water* and 29) *Influence of Adjacent Scenery* as applicable to the VSU, and other modifying considerations. BR modifying factors can only 'bump up' the initial BR value; one, two or three low modifier ratings would not justify a shift in the initial BR value.

Professional judgment should be used to decide whether any other considerations should be taken into account in determining a final value for BR.

Record the final value, and any rationale for change between the initial value and final value on the VSU Classification Form.

Example 1

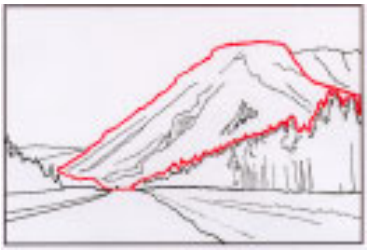


Rock and soil pattern (natural only) is at the low end of moderate. There is no water visible. Adjacent scenery is difficult to determine from a single photograph, but appears to be similar in natural characteristics and different in artificial characteristics.

Biophysical Rating (BR)					BR Rationale:
21 Slope	H (3)	M (2)	L (1)		
22 Aspect	H (3)	M (2)	L (1)		
23 Edge	H (3)	M (2)	L (1)		TE: A B C D E F G H I J K
24 Topographic Variety	H (3)	M (2)	L (1)		A B C
25 Vertical Relief	H (3)	M (2)	L (1)		
26 Vegetative Variety	H (3)	M (2)	L (1)		A B
BR Initial Value	H (15-18)	M (10-14)	L (6-9)		
27 Influence of Rock/Soil/Ice	H	M	L	N/A	A B
28 Influence of Water	H	M	L	N/A	A B C
29 Influence of Adjacent Scenery	H	M	L	N/A	
30 BR Final Value	**H**	**M**	**L**		

For determination of Initial Value, see page 102.

Example 2



Rock and soil pattern is high. There is no water visible. Adjacent scenery is difficult to determine from a single photograph. From this photograph the rating would be high, as the only adjacent scenery is the line of trees along the side of the road and the hills on the left of the photograph. The VSU is very different from these.

Biophysical Rating (BR)

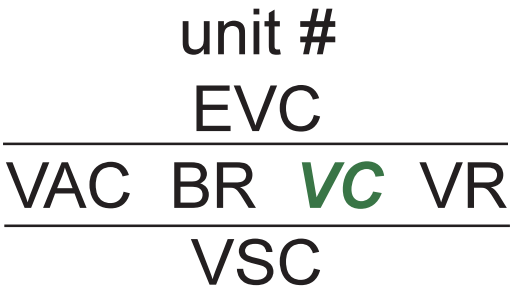
BR Rationale:

21 Slope	H (3)	M (2)	L (1)		
22 Aspect	H (3)	M (2)	L (1)		
23 Edge	H (3)	M (2)	L (1)		TE: A B C D E F G H I J K
24 Topographic Variety	H (3)	M (2)	L (1)		A B C
25 Vertical Relief	H (3)	M (2)	L (1)		
26 Vegetative Variety	H (3)	M (2)	L (1)		A B
BR Initial Value	H (15-18)	M (10-14)	L (6-9)		
27 Influence of Rock/Soil/Ice	H	M	L	N/A	A B
28 Influence of Water	H	M	L	N/A	A B C
29 Influence of Adjacent Scenery	H	M	L	N/A	
30 BR Final Value	H	M	L		

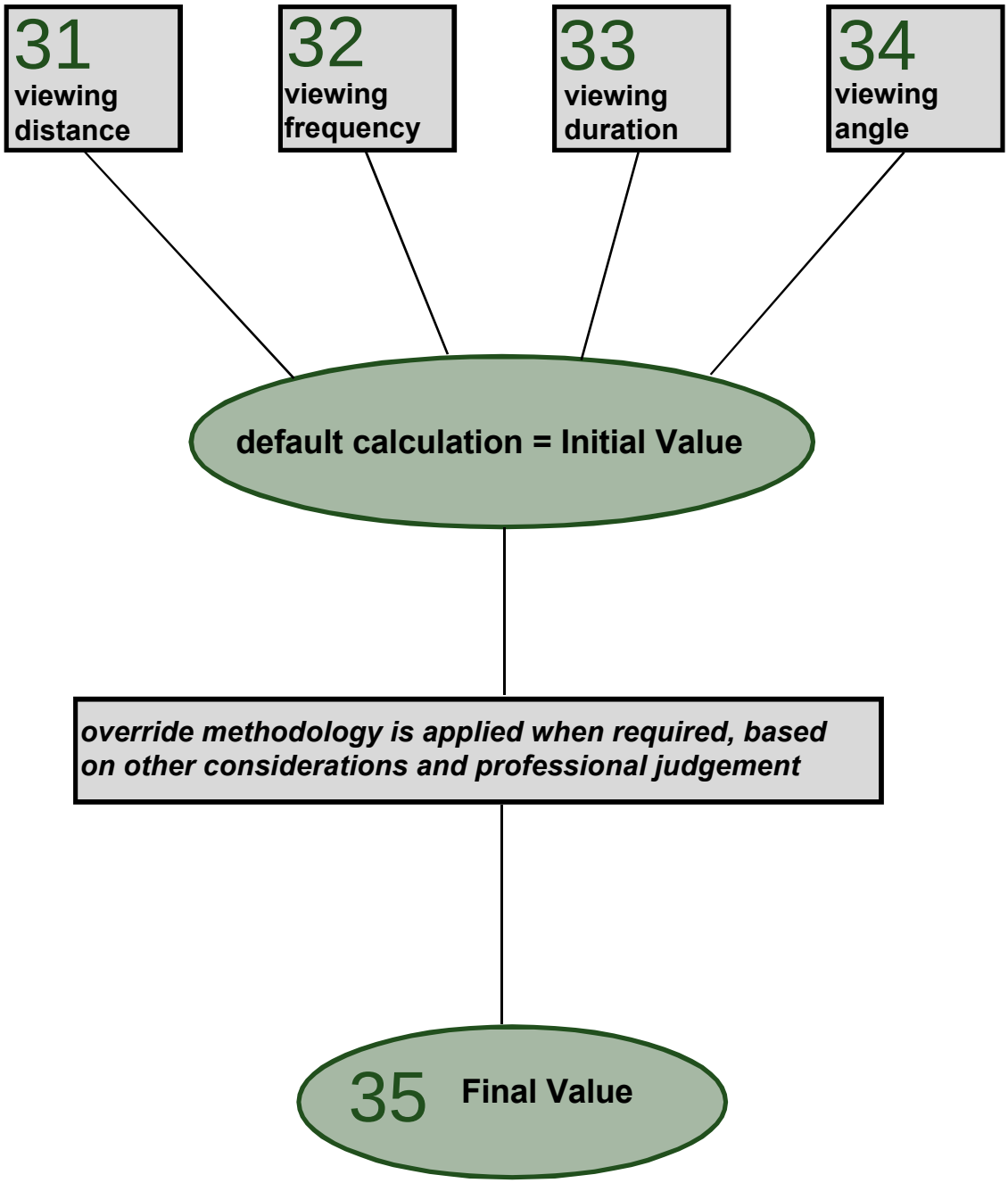
For determination of Initial Value, see page 103.

4.7 Standards for Classifying Viewing Condition

Viewing Condition (VC)	A measure of the condition under which the Visual Sensitivity Unit (VSU) is most commonly viewed. VC is expressed in terms of a relative rating as follows:
High (H)	Viewing condition has high influence on VSU sensitivity.
Moderate (M)	Viewing condition has moderate influence on VSU sensitivity.
Low (L)	Viewing condition has low influence on VSU sensitivity.



The observations, factors and methods used to determine VC are illustrated below.
The initial value of VC is determined by four factors.

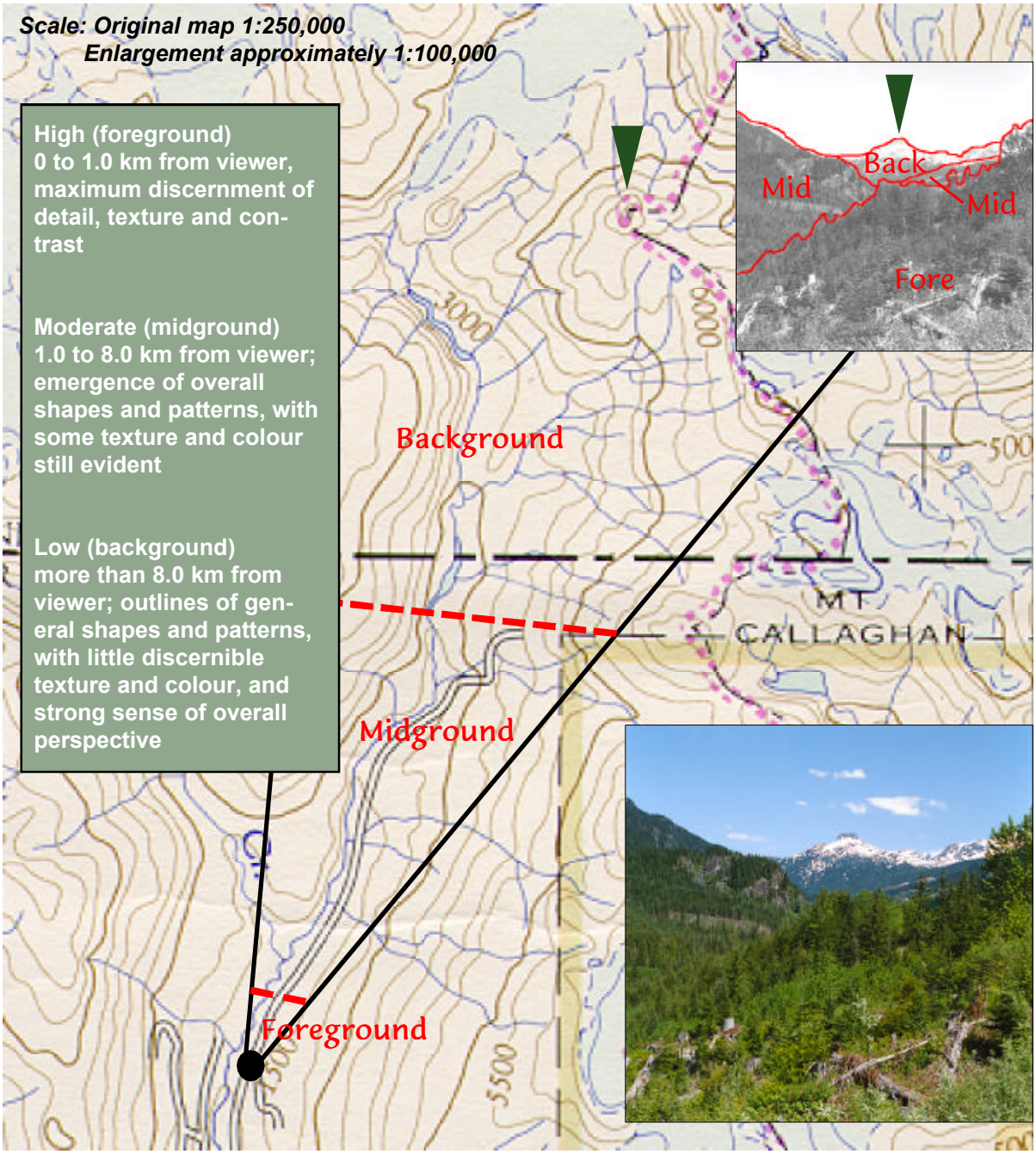


31) Viewing Distance

Viewing Distance is a measure of the distance from the viewing location to the VSU. Viewing distance affects colour, contrast, texture and the resulting level of detail visible in the landscape. A landscape feature that is closer is viewed in greater detail and will be more sensitive as a result. As distance increases, detail and sensitivity decrease. Viewing Distance is measured in terms of three general distance zones: foreground, midground, and background.

Note: where a VSU is visible from more than one distance zone (e.g. continuous viewing opportunity on a large water body or along a road corridor), the viewing distance which offers the best view or the full view of the VSU is used.

The rating for *Viewing Distance* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.



32) Viewing Frequency

Viewing Frequency is a measure of the viewing opportunities of a Visual Sensitivity Unit (VSU). The more opportunity there is to view a landscape, the greater its sensitivity. *Viewing Frequency* is based on the number of viewpoints for that VSU. While viewpoints usually represent static viewing opportunities, a single point may be used to represent a significant moving view (e.g. a straight stretch along a highway or open views on a ferry route). Landscapes may be viewed from a single viewpoint, from many viewpoints, or from no specific viewpoint (e.g. glimpse views from a moving vehicle or continuous viewing along a marine travel corridor).

The rating for *Viewing Frequency* is determined as follows: determine how many viewpoints the VSU is visible from; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form.

Note: Record on the VSU Classification Form the identification number of each major, minor or potential viewpoint from which the VSU is viewed.

High (many)
five or more viewpoints or continuous viewing opportunities

Moderate (some)
three or four viewpoints or intermittent viewing opportunities

Low (few)
one or two viewpoints, glimpses or no specific viewing opportunities

33) Viewing Duration

Viewing Duration is a measure of how much time people have to observe the landscape. As the duration of viewing increases beyond a quick glance, the landscape becomes more scrutinized, more familiar and generally more visually sensitive. Landscapes may be viewed for short periods of time (e.g. from a moving vehicle) or for longer periods of time (e.g. from a stationary viewpoint, such as a campground or ski lodge).

The rating for *Viewing Duration* is determined as follows: observe the VSU; compare the observation with the descriptions below, then record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the form.

High (long)

Land

A. opportunity to travel towards or view a VSU for > 1 minute (e.g. communities, campgrounds)

Water

B. viewpoints on still waterbodies where people can stop or slow down to view scenic features or participate in recreation activities

Picnic ground at the entrance portal to Strathcona Provincial Park with views across Buttle Lake. The picnic ground is an example of High(A) and Buttle Lake is an example of High(B). Vancouver Forest Region

Moderate (not illustrated)

Land

A. opportunity to view a VSU from a static viewpoint of temporary nature for 10 seconds to 1 minute (e.g. highway rest stops)

Water

B. viewpoints on slow moving waterbodies where people cannot stop without anchoring, but have time to scrutinize the VSU

Low (not illustrated)

Land

A. opportunity to view a VSU is limited to glimpses of < 10 seconds

Water

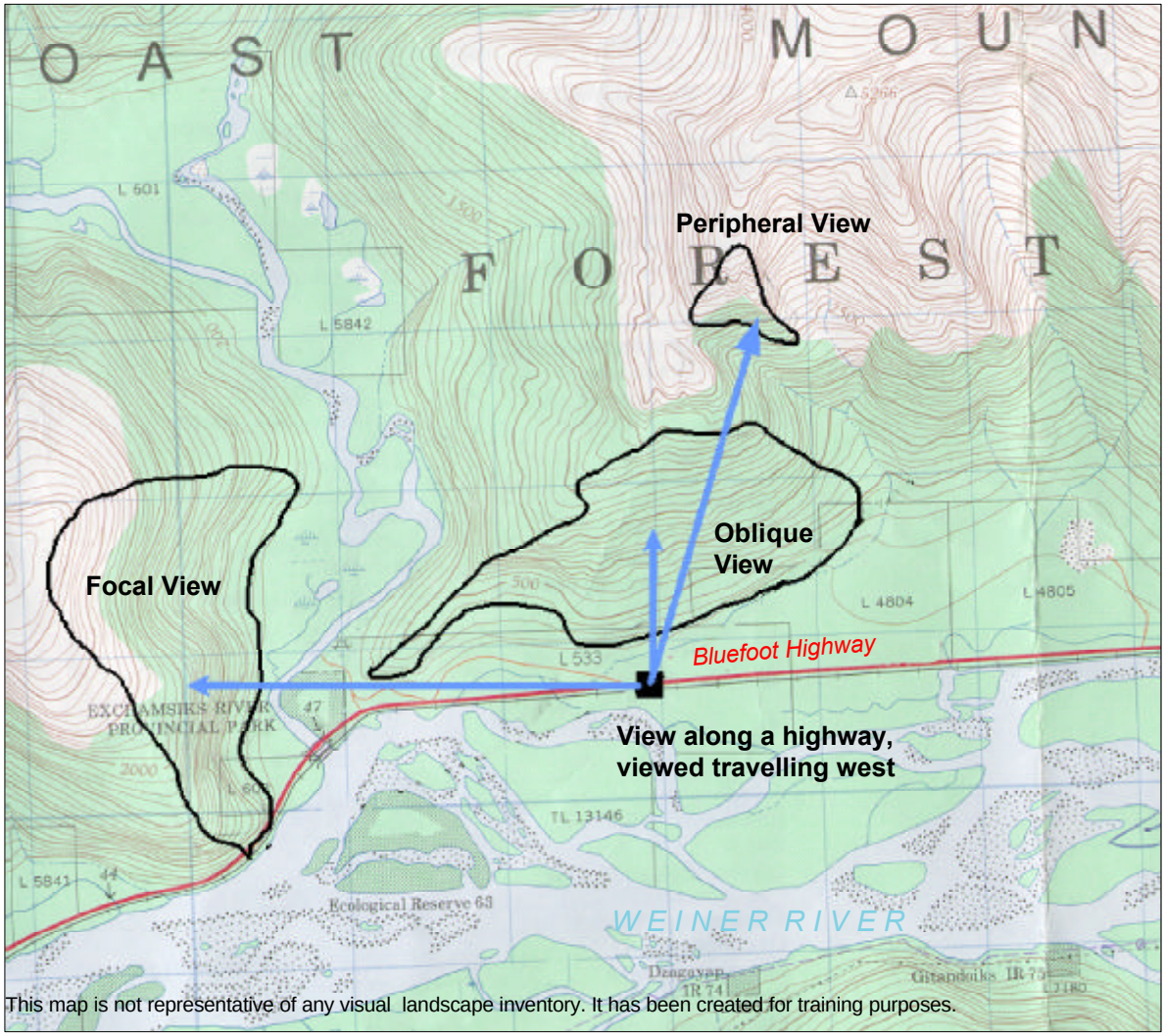
B. viewpoints on fast moving waterbodies providing only a passing, short view of the VSU

34) Viewing Angle

Viewing Angle is a measure of the type of viewing generally involved in observing the VSU. Landscape features may attract and hold viewers attention based on the predominant direction from which they are viewed. Slopes which are aligned perpendicular to sections of a highway are more focal and consequently more sensitive than slopes which parallel a highway (i.e. tangent). Slopes which face lookouts, campsites, residential areas and other viewpoints are more sensitive than slopes adjacent to or behind these viewpoints.

The rating for *Viewing Angle* is determined as follows: observe the VSU, compare the observation with the descriptions and map below, then record the appropriate rating on the VSU Classification Form.

High	Moderate	Low
VSU immediately or directly in front of observer	VSU parallels travel corridor or is at right angles to observer (oblique/tangent)	VSU is at the periphery of observer's vision



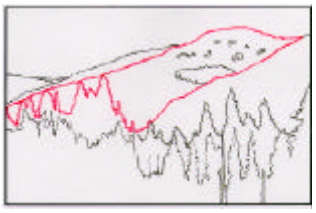
VC Initial Value

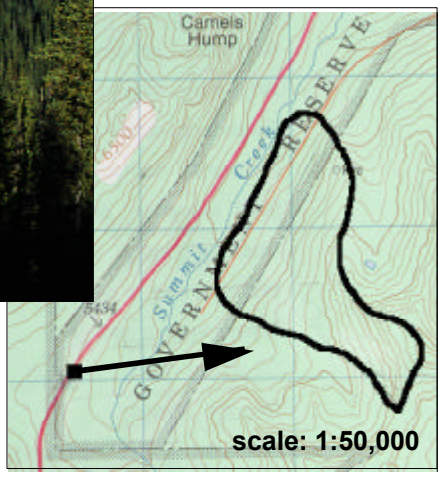
The initial value for Viewing Condition (VC) is determined using the default calculation below (also see Section 4.2).

Total of numeric values of contributing factors	Initial value of VC
10 - 12	H
7 - 9	M
4 - 6	L

Record the initial value of VC on the VSU Classification Form.

Example 1

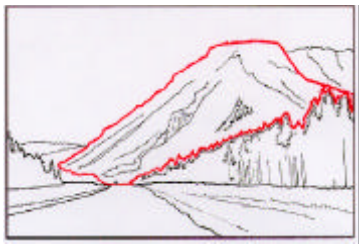




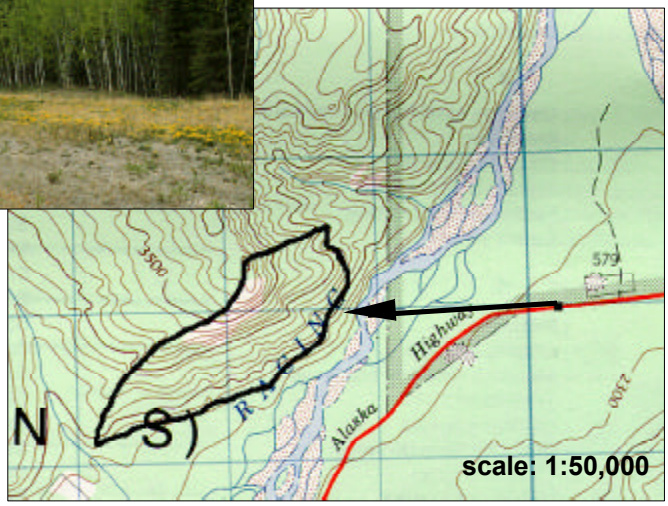
Average viewing distance is 1.5 km. Frequency and duration are difficult to determine from one photograph. Assume low as it is a small VSU along a stretch of highway with no obvious pullouts. Angle is mostly focal.

Viewing Condition(VC)				VC Rationale
31 Viewing Distance	H (3)	M (2)	L (1)	
32 Viewing Frequency	H (3)	M (2)	L (1)	VPT#s
33 Viewing Duration	H (3)	M (2)	L (1)	A B
34 Viewing Angle	H (3)	M (2)	L (1)	
VC Initial Value	H (10-12)	M (7-9)	L (4-6)	
35 VC Final Value	H	M	L	

Example 2



Viewing distance from this viewpoint is 2 km. Frequency and duration are difficult to determine from one photograph. Assume moderate for both as the VSU is viewed while travelling along the straight stretch and probably round the corner. Also there are few trees in front to obscure the view. Angle is oblique from this viewpoint.



Viewing Condition(VC)				VC Rationale
31 Viewing Distance	H (3)	M (2)	L (1)	
32 Viewing Frequency	H (3)	M (2)	L (1)	VPT#s
33 Viewing Duration	H (3)	M (2)	L (1)	A B
34 Viewing Angle	H (3)	M (2)	L (1)	
VC Initial Value	H (10-12)	M (7-9)	L (4-6)	
35 VC Final Value	**H**	**M**	**L**	

35) VC Final Value

The final value of *Viewing Condition* is determined by using the override methodology where necessary (see Section 4.2).

While for *Viewing Condition* there are no modifying factors, professional judgment should be used to decide whether any other considerations should be taken into account in determining the final value.

Observer position may influence final value.

Record the final value, and any rationale for change between the initial value and final value on the VSU Classification Form.

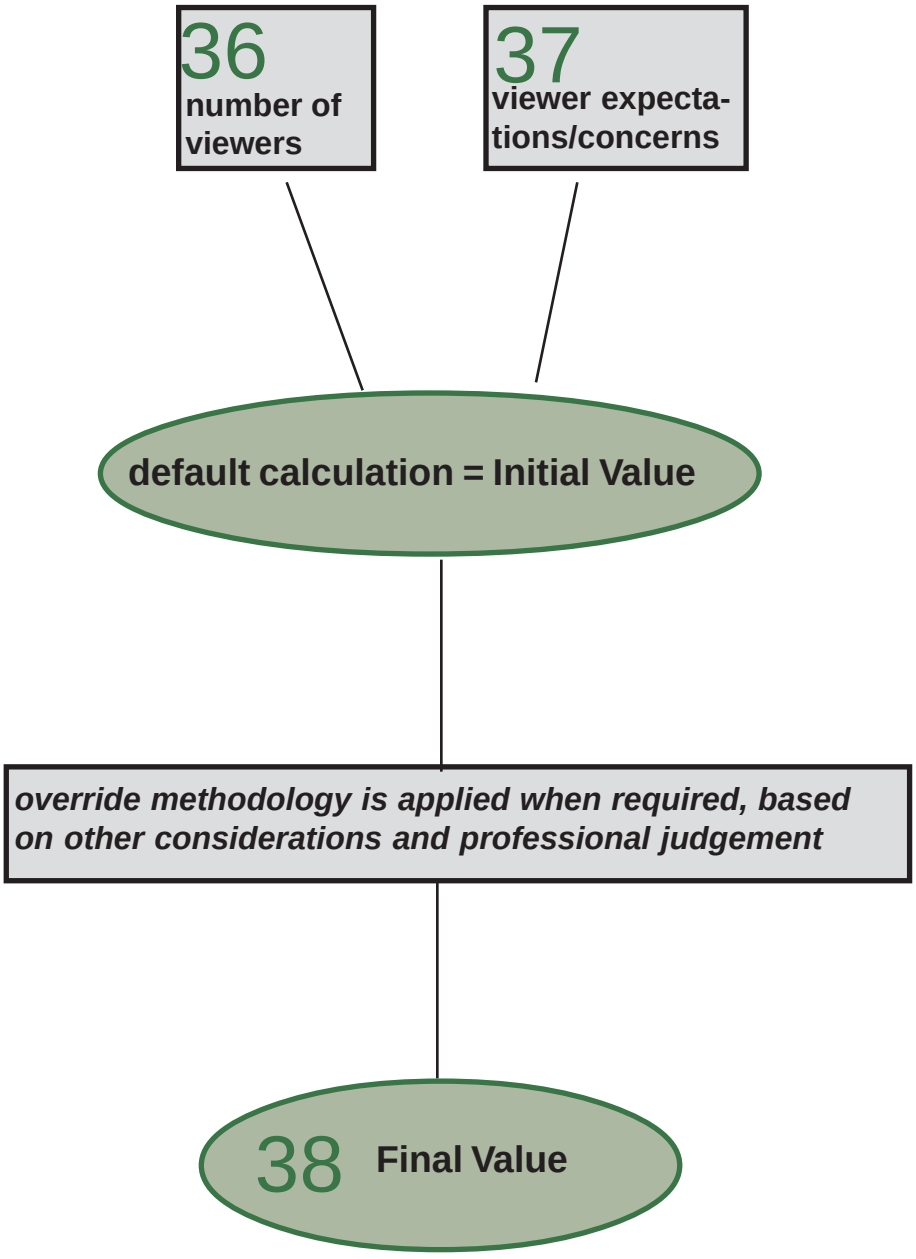
4.8 Standards for Classifying Viewer Rating

Viewer Rating (VR)	A measure of the number of people likely to view the Visual Sensitivity Unit (VSU) and the preferences, expectations or concerns they have about how they would like the VSU to look. VR is expressed in terms of a relative rating as follows:
High (H)	Number of viewers and their expectations have a high influence on visual sensitivity.
Moderate (M)	Number of viewers and their expectations have a moderate influence on visual sensitivity.
Low (l)	Number of viewers and their expectations have a low influence on visual sensitivity.

unit #
EVC
VAC BR VC ***VR***
VSC

The observations, factors and methods used to determine VR are illustrated below.

The initial value of VR is determined by two factors.



36) Number of Viewers

Number of Viewers is a measure of the number of people who view or look at a VSU. The greater the number of viewers, the more sensitive the VSU. The type of activity pursued by viewers will often determine whether viewer numbers are large or small. The size of a nearby community may also determine the number of viewers.

The rating for *Number of Viewers* is determined as follows: using local knowledge of use patterns, results of visitor surveys (if available) and information from the public input process (see Section 2.1), compare what is known about viewer numbers to examples below, then record the appropriate rating on the VSU Classification Form. Circle the representative description letter on the VSU Classification Form.

Note: The primary viewers are recorded. Any information collected during the course of completing the Visual Landscape Inventory should also be included (e.g. The Department of Fisheries and Oceans angler rod day count for Nootka Sound in 1992 was 8,000).

High

A. large numbers of viewers relative to type of activity being pursued

B. 5,000 vehicles per day or 500,000 vehicles per year over a given highway

C. >5,000 users per year at a BCFS recreation site

D. 1,000 kayakers per year

E. 1,000 hikers per year on a given trail

F. other

Sources of user numbers include:
BC Parks campsite and trail records, Ministry of Forests Recreation Site records, BC Ministry of Transportation and Highways Traffic Counts, commercial tourism facilities records, community Chamber of commerce or Tourism Association records, estimates from regular visitors, observations during fieldwork, population statistics, recreation organization records or estimates, and licensee records for campsites or roads (if gated).

Moderate

A. moderate numbers of viewers relative to type of activity being pursued

B. 1,000 vehicles per day or 100,000 vehicles per year

C. 500 - 5,000 users per year at a BCFS recreation site

D. 200 kayakers per year

E. 200 hikers per year on a given trail

F. other

Low

A. low numbers of viewers relative to type of activity being pursued

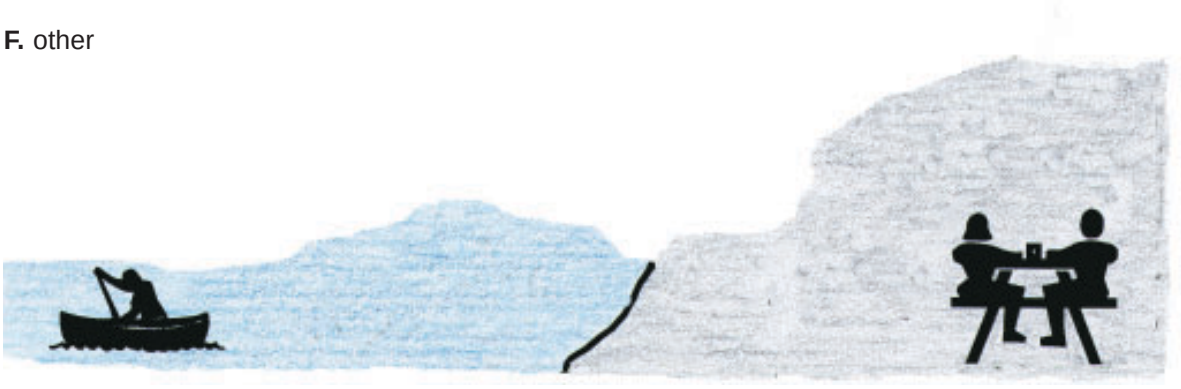
B. 200 vehicles per day or 20,000 vehicles per year over a given highway

C. 0 - 500 users per year at a BCFS recreation site

D. 50 kayakers per year

E. 50 hikers per year on a given trail

F. other



37) Viewer Expectations/Concerns

Viewer Expectations/Concerns is a measure of the importance the public places on the Visual Sensitivity Unit (VSU). The higher the importance, the more sensitive the VSU. Landscapes are viewed by a wide range of people, often with different values, perceptions and expectations. Some landscapes, such as back country lake settings, may be viewed by relatively few people, but are visually sensitive due to the viewer's high expectations for a natural setting. People with an economic interest (e.g. tourism operators), or personal attachment (e.g. resident, repeat recreationist) to a particular landscape will generally have a higher level of concern for its visual quality than people passing through the same landscape (e.g. highway traveller). On the other hand, some people who make their living from the natural resource industries (forestry, mining, BC Hydro) may have a different expectation for the visual quality.

Note: Public input is solicited as part of completing a Visual Landscape Inventory (e.g. formal advertisement in the local newspapers, public contact in the field, etc.). Government agencies, as well as First Nations, industrial/commercial businesses, tourism operators, recreation groups and other non-government organizations that may have an interest in the landscape values of the area are invited to identify their concerns and may help to identify viewpoints (see Section 2.1).

The rating for *Viewer Expectations/Concerns* is determined as follows: using local knowledge of resident expectations, results of public perception studies (e.g. *Logging in Kootenay Landscapes: The Public Response* 1989, *Clearcutting and Visual Quality: A Public Perception Study*, 1996), and information from the public input process, compare what is known about viewer expectations or concerns to the descriptions below, then determine which best describes viewer expectations. Record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the VSU Classification Form.

Expectations are determined for each VSU, not for each rating point. From the rating point, a VSU that is further away or not as interesting may have lower expectations than a foreground or attractive VSU.

High

A. scenic quality is of primary importance to the activity or experience pursued (e.g. kayaking, cruise ships, commercial tourism operations)

B. majority of viewers have high expectations/ concerns for visual quality

Example of High (A,B) - a commercial tourism operation. Pacofi Bay Lodge, Moresby Island, Vancouver Forest Region

Moderate (not illustrated)

A. scenic quality is of secondary importance to the activity or experience pursued (e.g. sport fishing, BC Ferry passenger, highway traveller)

B. majority of viewers have moderate expectations/ concerns for visual quality

Low (not illustrated)

A. scenic quality is of little interest or importance to the activity or experience pursued (e.g. resource development activities such as logging, mining, fish-farming)

B. majority of viewers have low or no expectations/ concerns for visual quality

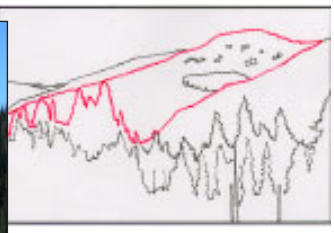
VR Initial Value

The initial value for Viewer Rating (VR) is determined using the default calculation (see Section 4.2) as follows:

Total of numeric values of contributing factors	Initial value of VR
6	H
4 - 5	M
2 - 3	L

Record the initial value of VR on the VSU Classification Form.

Example 1



Both factors are difficult to determine without completing a VLI with public input. Traffic counts for Highway #3 near this viewpoint indicate 2900-3000 vehicles per day during July and August 1990-1993. This part of Highway #3 is the Salmo-Creston summit and is a major scenic highway. Assume a larger number of viewers because the traffic statistics are dated and this is a major highway. Remember that expectations are VSU specific and that this is not the most scenic landscape along the drive.

Viewer Rating (VR)				*VR Rationale:*
36 Number of Viewers	H (3)	M (2)	L (1)	A B C D E
37 Viewer Expectations	H (3)	M (2)	L (1)	A B
VR Initial Value	H (6)	M (4-5)	L (2-3)	
38 VR Final Value	**H**	**M**	**L**	

Example 2

Both factors are difficult to determine without completing a VLI with public input. The closest traffic counts for Highway #97 indicate 1600-1700 vehicles per day during July and August 1990-1993. This part of Highway #97 is the Alaska Highway. This VSU is attractive and quite prominent so expectations would be higher than for example 1.

Viewer Rating (VR)				*VR Rationale:*
36 Number of Viewers	H (3)	M (2)	L (1)	A B C D E
37 Viewer Expectations	H (3)	M (2)	L (1)	A B
VR Initial Value	H (6)	M (4-5)	L (2-3)	
38 VR Final Value	**H**	**M**	**L**	

38) VR Final Value

The final value of VR is determined by using the override methodology where necessary (see Section 4.2).

While for VR there are no modifying factors, professional judgment should be used to decide if any other considerations should be taken into account in determining the final value.

Record the final value, and any rationale for change between the initial value and final value on the VSU Classification Form

4.9 Standards for Classifying Visual Sensitivity Class

Visual Sensitivity Class (VSC)

An overall measure of the sensitivity of the Visual Sensitivity Unit (VSU) to visual alteration. It is an assessment of the likelihood that carrying out forest practices or other resource development activities in the VSU would give rise to some degree or kind of criticism or concern. This could be of an economic nature (negative impact on a tourism operation) or a social nature (negative impact on a public recreation opportunity or the public's appreciation or enjoyment of an existing natural or previously altered visual landscape).

VSC is not a direct measure or quantitative assessment of the way or amount that a VSU could be altered without causing concern. It is not an analysis of the prescriptions that would be required to enable an alteration to be made to the VSU without causing concern. That is, VSC is not a recommended VQO or a visual landscape design solution. However, on a relative scale, and when comparing VSUs, the higher the VSC, the more likely a given visual alteration to the VSU would cause concern and/or the less the VSU could be altered before causing concern.

Visual Sensitivity Class Description

VSC is expressed in terms of the following five classes:

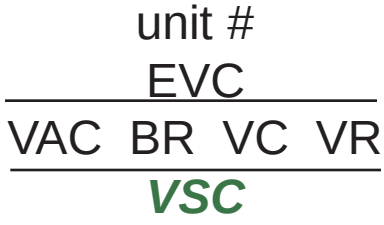
1 Very high sensitivity to human-made visual alteration. The area is extremely important to viewers. There is a very high probability that the public would be concerned if the Visual Sensitivity Unit was visually altered in any way or to any scale.

2 High sensitivity to human-made visual alteration. The area is very important to viewers. There is a high probability that the public would be concerned if the Visual Sensitivity Unit was visually altered.

3 Moderate sensitivity to human-made visual alteration. The area is important to viewers. There is a probability that the public would be concerned if the Visual Sensitivity Unit was visually altered.

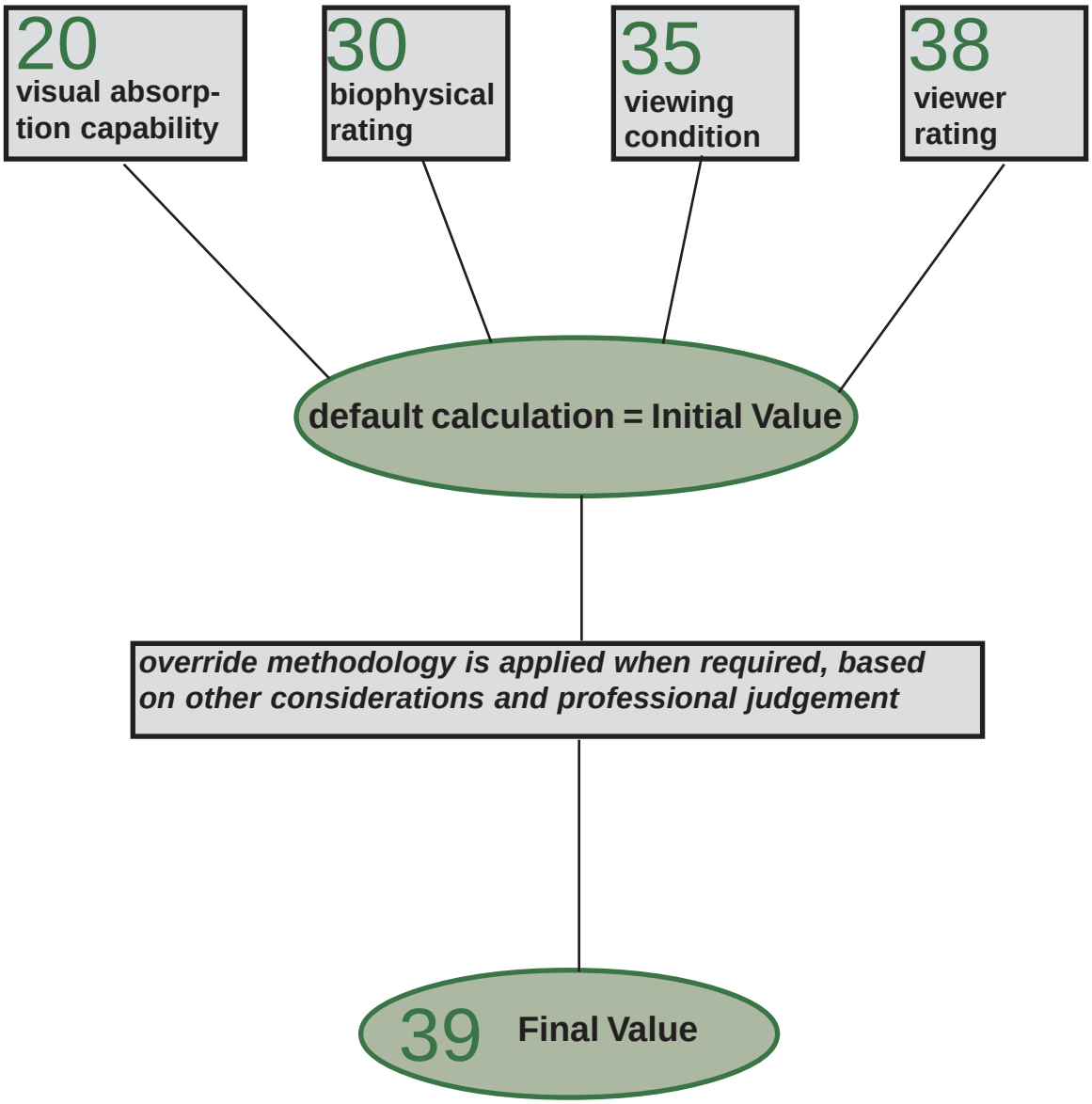
4 Low sensitivity to human-made visual alteration. The area is moderately important to viewers. There is a probability that the public would be concerned if the Visual Sensitivity Unit was visually altered.

5 Very low sensitivity to human-made visual alteration. The area may be somewhat important to viewers. There is a small probability that the public would be concerned if the Visual Sensitivity Unit was visually altered.



The parameters and modifying considerations used to determine VSC are illustrated below.

The initial value of VSC is determined by four parameters.



Examples of Visual Sensitivity Classes 1 through 5

Mt. Robson. A spectacular, very attractive, famous mountain. Instantly recognizable. Viewed and photographed by millions of people per year. A low VAC with no vegetation. This is an example of the top end of VSC 1.

Mountain along the Tuchodi River. Another spectacular, attractive mountain. However, unlike Mt. Robson, this peak is in a remote area where the viewer numbers are low. Also, the VAC is moderate. The area is used mainly for ATV riding and hunting.

Range of mountains in the Kootenay Region. The VSU is still scenic, but not as spectacular as the preceding VSUs. The BR is at the low end of high.

Viewing is from a Highway for a short time frame and at an angle. Expectations are lower because of alterations in the scene and the similarity of adjacent scenery.

An uninteresting VSU in the midground. It is viewed infrequently from a secondary road and from the farm.

An uninteresting VSU in the midground. It has a high VAC. Infrequent, short term viewing opportunities are from a gravel road with low traffic numbers.

increase in VAC and viewing distance

increase in scenic quality, viewer numbers and expectations, viewing duration and frequency

VSC 1

P
L H H H
1

A VSC 1 is extremely rare. The only way to get a VSC 1 by default is 3 Highs and a Low VAC. Much more common is 3 Highs combined with a moderate VAC. The combination of rocks, vegetation and surface variation that makes a landform attractive also gives it a moderate VAC. For this combination of factors on a spectacular landform viewed by many people who have high expectations, you will have to override to get a VSC 1.

VSC 2

P
M H H M
2

A VSC 2 is the second most common rating.

VSC 3

M
M H M M
3

A VSC 3 is the most common rating. It has the widest range of factor combinations that add up to a default VSC of 3.

A VSC 4 is the third most common rating. It also is often got through override of a default VSC 3. Background VSUs or VSUs viewed for short time periods are the most common examples of VSC 4.

VSC 4

P
M L M L
4

A VSC 5 is extremely rare. Like a VSC 1, there is only one combination of factors that produces a default VSC 5 - three Lows and a High VAC. This combination is unusual, so a VSC 5 is usually produced by the override of a VSC 4 that has moderate VAC.

VSC 5

P
H L L L
5

VSC Initial Value

The initial value for Visual Sensitivity Class (VSC) is determined using the default calculation (see Section 4.2) as follows:

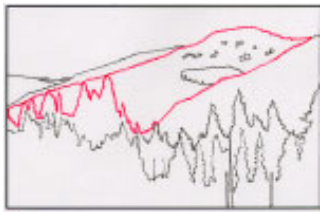
- For Biophysical Rating (BR), Viewing Condition (VC) and Viewer Rating (VR), and Visual Absorption Capability (VAC) the final numeric values are: High = 3, Moderate = 2, Low = 1
- The calculation for the Initial VSC value is: (BR + VC + VR) - VAC = Initial Value of VSC

Subtracting VAC to determine the VSC Initial Value in no way minimizes it's importance as a parameter value.

Total of numeric values of contributing parameters	**Initial Value of VSC**
8	1
6 - 7	2
3 - 5	3
1 - 2	4
0	5

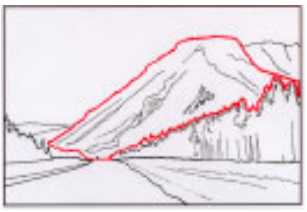
Record the initial value of VSC on the VSU Classification Form.

Example 1



Visual Sensitivity Class (VSC)						*VSC Rationale:*
VSC Initial Value	VSC 1	VSC 2	VSC 3	VSC 4	VSC 5	BR / VC / VR / VAC final values: H=3, M=2, L=1
score:	(8)	(6-7)	(3-5)	(1-2)	(0)	(BR 2 +VC 2 +VR 2) - VAC 2 = 4 (score)
39 VSC Final Value	**VSC 1**	**VSC 2**	**VSC 3**	**VSC 4**	**VSC 5**	

Example 2



Visual Sensitivity Class (VSC)						*VSC Rationale:*
VSC Initial Value	VSC 1	VSC 2	VSC 3	VSC 4	VSC 5	BR / VC / VR / VAC final values: H=3, M=2, L=1
score:	(8)	(6-7)	(3-5)	(1-2)	(0)	(BR 3 +VC 2 +VR 2) - VAC 2 = 5 (score)
39 VSC Final Value	**VSC 1**	**VSC 2**	**VSC 3**	**VSC 4**	**VSC 5**	

39 VSC Final Value

The final value of Visual Sensitivity Class (VSC) is determined using the override methodology where necessary (see Section 4.2). The initial value of VSC as determined by VAC, BR, VC and VR, and their use in the default calculation, provides a useful benchmark. This benchmark is based on relatively consistent and understandable statements and assessments. It should have a relatively high degree of reliability and quality control. However, it may not provide the most accurate or appropriate value of VSC for a particular VSU. This benchmark, therefore, should be evaluated based on other considerations not specifically provided for, and modified as required and based on professional judgment and experience. Modifying considerations may include:

- unequal importance among the four determining parameters. For example, in some regions of the province or situations, visual landscapes may be generally biophysically similar or of low visual significance or interest and VSC may depend primarily on viewing considerations;

- extreme value of one or more of the determining parameters. In some cases, VAC, BR, VC and/or VR may have extreme ratings (very high or very low) which fall outside the range of observations and descriptions provided for them in Sections 4.4 - 4.7;

- Existing Visual Condition. In some cases, Visual Sensitivity Class may be greater if EVC is Preserved (or possibly Retained) or Excessively Modified, rather than Partially Retained, Modified or Maximally Modified. That is, introducing an alteration to a currently natural or pristine viewscape, or further altering a landscape that has already been altered enough to evoke concern, may increase VSC over what the default calculation would otherwise suggest;

- future viewing. Some alterations (e.g. second or third passes in already accessed drainages) would not cause VR (i.e. present viewer related circumstances) to change significantly over the next few years. Other alterations (e.g. first passes in currently not accessed drainage) would specifically and directly increase VR in the future. Such an increase in VR, attributable to the proposed alteration may warrant a higher VSC. In general, the lower the *Visual Recovery* and/or the higher *Years to VEG* (Visually Effective Greenup*)*, the more important is this modifying consideration;

- scenic attractiveness. The Visual Landscape Inventory, including BR, VC, VR and VSC, is not intended as a measure of inherent beauty or scenic attractiveness. If, however, scenic attractiveness is believed to influence VSC, it may be considered here;

- double counting. Despite efforts to make each factor and parameter distinct (e.g. BR vs. VAC, *Viewer Frequency* vs. *Viewer Duration*, BR vs. *Viewer Expectations*) some duplication of measurement may take place;

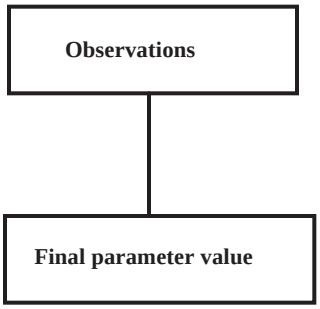
- other. Any other considerations.

- Record the final value, and any rationale for change between the initial and final value on the VSU Classification Form. **Note:** The purpose and objective of the override methodology is to help in making the most accurate determination of VSC. It is not to arrive at a VSC which would convert to, or be interpreted as, a particular recommended Visual Quality Objective (RVQO).

4.9A Standards for Classifying Additional Parameters (Optional)

There are three additional parameters, illustrated below that may provide useful information for Visual Landscape Management. However, these parameters are not required for the determinations of Visual Sensitivity Class (VSC) and may more appropriately be determined through the visual landscape analysis or visual landscape design rather than visual landscape inventory. This data therefore is optional. But the complete standards for their determination are included here.

Overall methodology for determining parameter values for Years to VEG; Visual Recovery & Rehabilitation/ Enhancement Opportunity



These parameters may be determined as follows:

40) Years to VEG

Years to Visually Effective Green-up is a measure of the years it will take for regeneration to be seen by the public as newly established forest (see Ministry of Forests*, A First Look at Visually Effective Green-up in BC: A Public Perception Study 1994)*. When VEG is achieved the forest cover generally blocks views of tree stumps, logging debris and bare ground. Distinctions in height, colour, and texture may remain between a cutblock and adjacent forest but the cutblock will no longer be seen as recently cut-over.

The rating for *Years to VEG* is determined as follows: observe the VSU; compare the observation with the descriptions in the table below; record the appropriate rating on the VSU Classification Form.

5 years or less	5 to 10 years	10 + years	N/A

Note: N/A is used in cases where a VSU has no alterations and Y*ears to VEG* is not applicable.

41) Visual Recovery

Visual Recovery is a measure of the potential of the VSU as a whole to recover or green-up from a potential alteration. Alterations include site disturbances as well as vegetative changes such as cutblocks.

The rating for Visual Recovery is determined as follows: observe the VSU; compare the observation with the descriptions in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the VSU Classification Form.

Note: Soil productivity estimates may come from several sources:

- forest cover maps and data;
- soil maps; and
- field estimates.

In most instances, a field estimate will be made and later verified in the office, where necessary, with reference to forest cover maps. Because VSUs usually comprise many forest polygons, individual site class ratings must be generalized for the entire VSU.

High	Moderate	Low
A. high site class	**A.** medium site class	**A.** poor or low site class
B. evidence of deep, well-drained soils with adequate soil moisture, and/or vigorous vegetative growth	**B.** evidence of soils with some moisture deficient or poor drainage, and/or moderate vegetative growth	**B.** evidence of shallow soils with numerous bedrock outcrops, or boggy, poorly drained soils, and/or slow or chlorotic vegetative growth

42) Rehabilitation/Enhancement Opportunity (RH/EH)

Rehabilitation/Enhancement Opportunity is the recognition of an opportunity to improve the visual impact of past practices by taking action, rather than not taking action and relying on natural vegetative change over time. Rehabilitation refers to the opportunity to mitigate or restore the effects of previous alterations, in particular by improving the visual landscape design of existing poorly designed cutblocks. Enhancement refers to the opportunity to add to the visual interest, or otherwise enhance a currently natural landscape.

Indicate in the rationale section of the VSU classification form the possible practices or actions that could be taken to rehabilitate or enhance the landscape.

The rating for *Rehabilitation/Enhancement Opportunity* is determined as follows: observe the VSU; compare the observation with the descriptions in the table below; record the appropriate rating on the VSU Classification Form.

Opportunity for Rehabilitation (RH)	Opportunity for Enhancement (EH)	N/A

Exercises

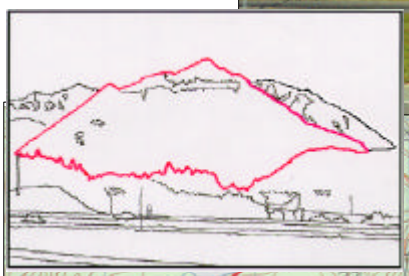
DIRECTIONS:

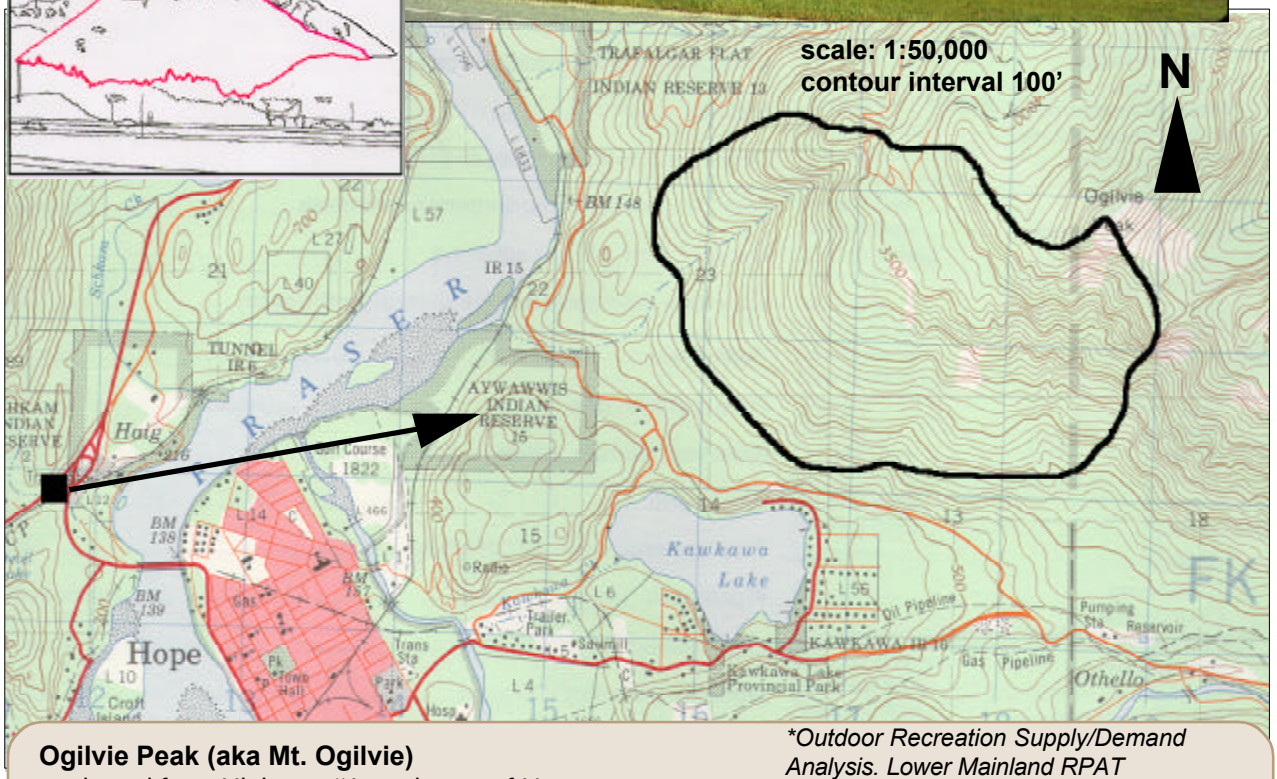
The following pages contain six VSU Classification exercises. Each exercise consists of a photograph(s), map, illustration and background information. Complete a VSU Classification form for each exercise.

Compare results with the instructor or with the answers in Appendix II.

The more you practise VSU Classification, the more familiar you will become with the range of each High, Moderate and Low factor rating.

Exercise 1: Ogilvie Peak, Hope, Vancouver Forest Region



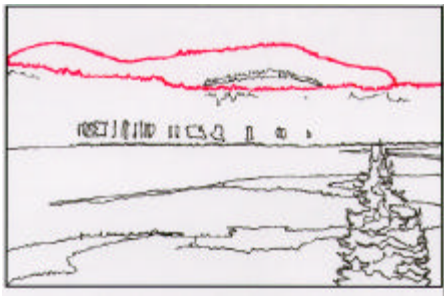


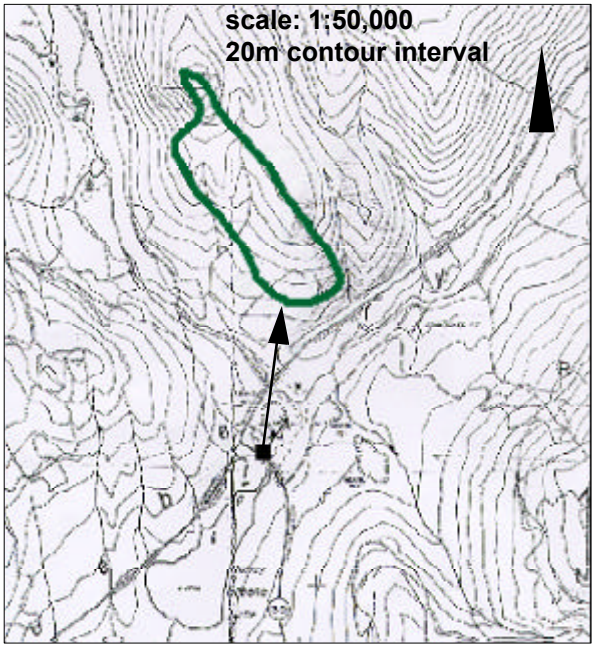
**Outdoor Recreation Supply/Demand Analysis. Lower Mainland RPAT*

Ogilvie Peak (aka Mt. Ogilvie)

- viewed from Highway #1 northwest of Hope.
- summer traffic counts for the Hope interchange for 1994 range from 4300 vehicles per day on the secondary roads to 23,500 vehicles per day on the main Route 1/Route 3 freeway.
- Population estimates for the Fraser-Cheam area for 1993, 2003 and 2021 are 74,338, 88,462 and 109,227 respectively.*
- Coquihalla Tulameen area (includes Ogilvie) considered to have high scenic resources*
- Ogilvie Peak considered a low use, high potential area for backcountry hiking.*
- Ogilvie Peak viewed from numerous locations along Highways #1 and #3, from Hope and from Kawkawa Lake.

Exercise 2: Nancy Greene Park, Nelson Forest Region

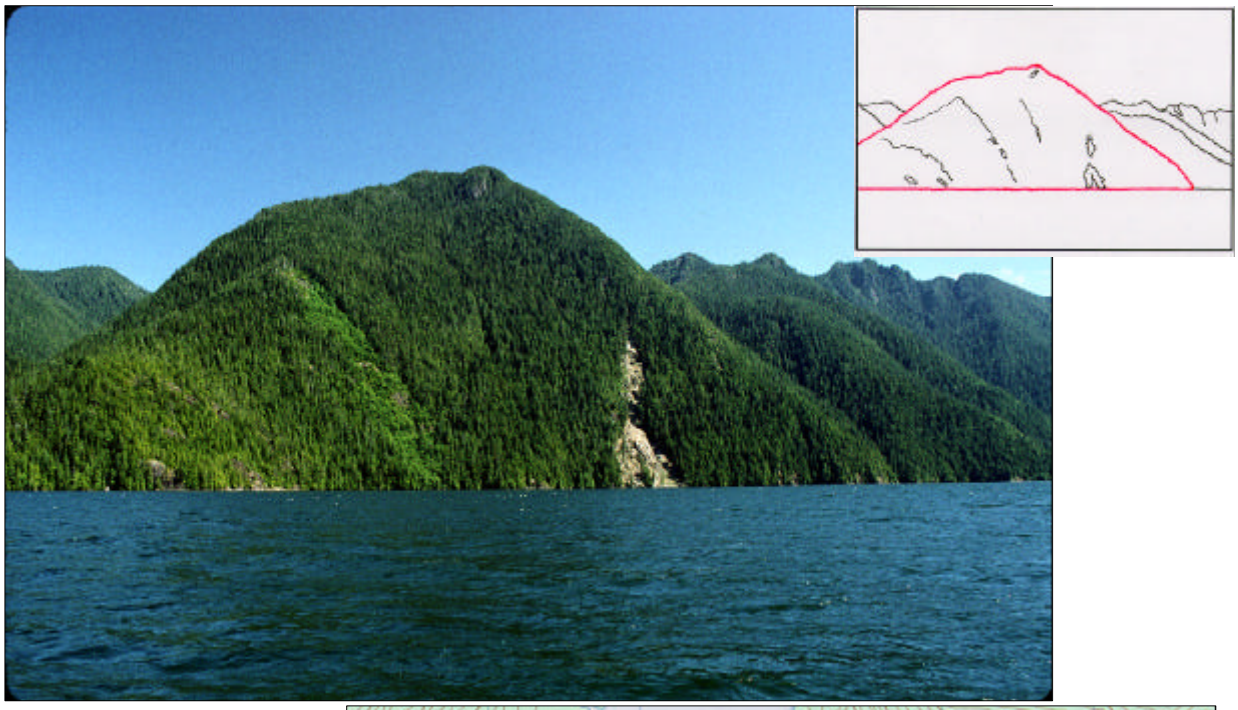


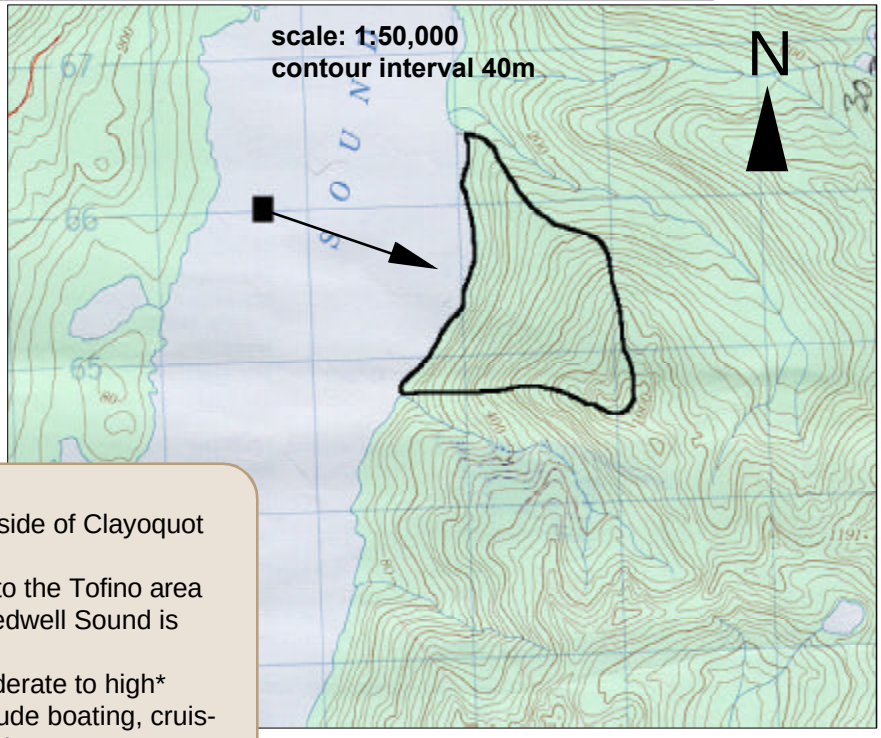


Nancy Greene Provincial Park area

- viewed from Highway #3B and Nancy Greene Provincial Park (Park not shown on map, location is close to rating point).
- summer traffic counts for Highway #3B at Nancy Greene Lake are 1100-1250 vehicles per day in 1990 and 1992.
- Nancy Greene Park encompasses Nancy Greene Lake, a subalpine lake with 45 km of hiking and cross country skiing trails. The park has a boat launch, 10 campsites, 50 day use sites and RV camping is allowed in the parking lot. Other recreation activities include swimming, fishing, canoeing and kayaking.
- elevation of upper VSU boundary - 1551m, lower boundary - 1320 m.
- no statistics available for park use.

Exercise 3: Bedwell Sound, Vancouver Forest Region



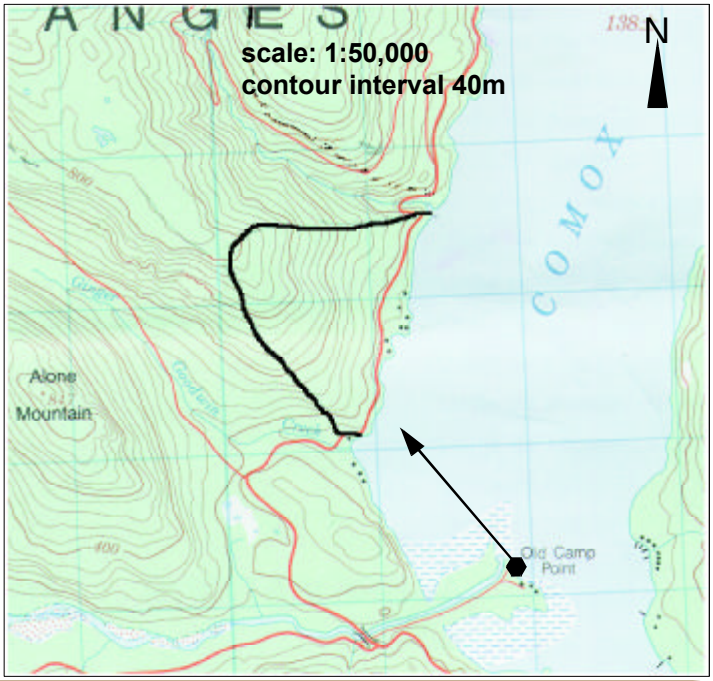


Bedwell Sound

- located along the north side of Clayoquot Sound
- 800,000 visitors a year to the Tofino area
- existing public use in Bedwell Sound is moderate*
- potential public use moderate to high*
- recreation activities include boating, cruising, fishing, wildlife viewing*
- sides of inlet are highly visible from Use Areas*
- Bedwell or Ominits Trail along Bedwell River at head of inlet.

**Clayoquot Landscape Inventory Phase 2 Final Report*

Exercise 4: Comox Lake, Vancouver Forest Region

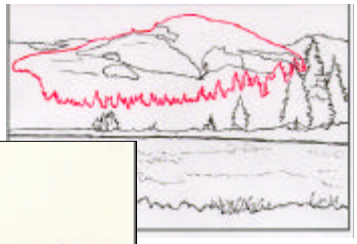


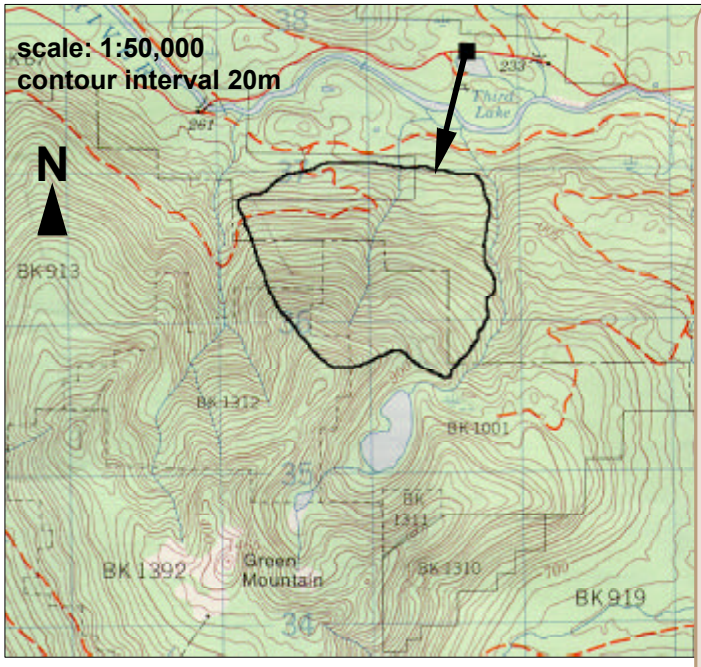
**Recreation Analysis - MFU #8, TFL 47, Blocks 13 & 14.*

Comox Lake

- nearest community is Cumberland (population 2614). Other nearby communities are Courtenay-Comox (29,173), Royston (1219) and Union Bay (615).
- At the east end of Comox Lake is a 50 site campground with trails, a beach and lake access
- logging road access to north and west sides of lake
- recreation activities include boating, year-round fishing
- 30 private cabins are located around the south end of the lake
- Comox Lake is a destination lake, that supports a broad range of high quality recreation activities. Management of viewscapes is important*
- Comox Lake is along the access route to trails within Strathcona Park
- lake elevation 138 m.
- Old Camp Point is an informal campsite.

Exercise 5: Nanaimo Lakes, Vancouver Forest Region

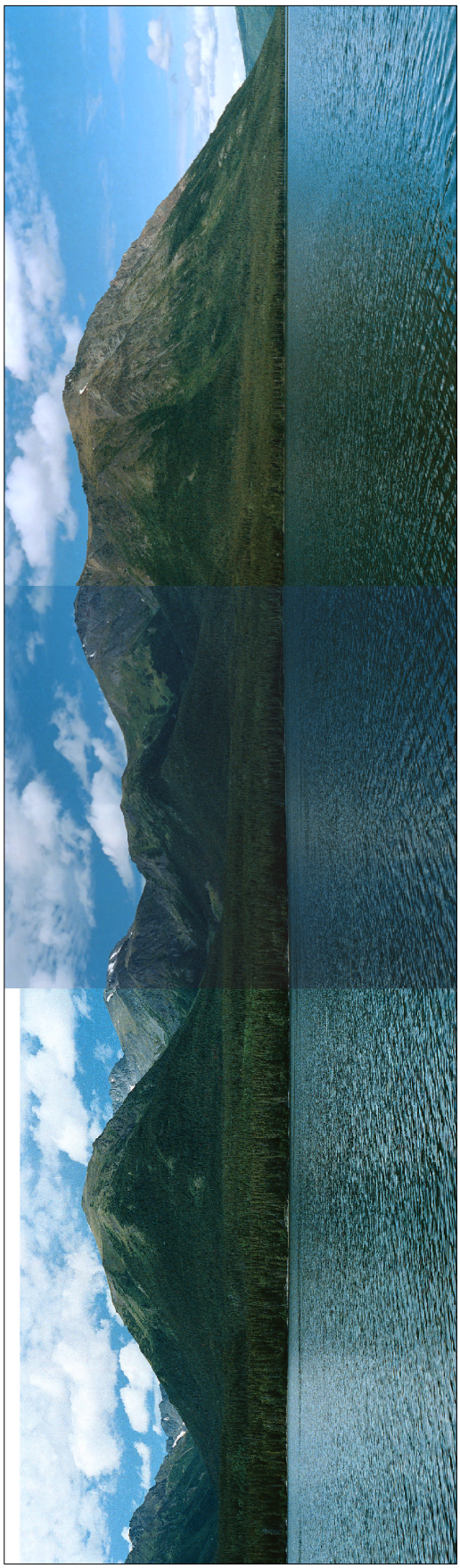


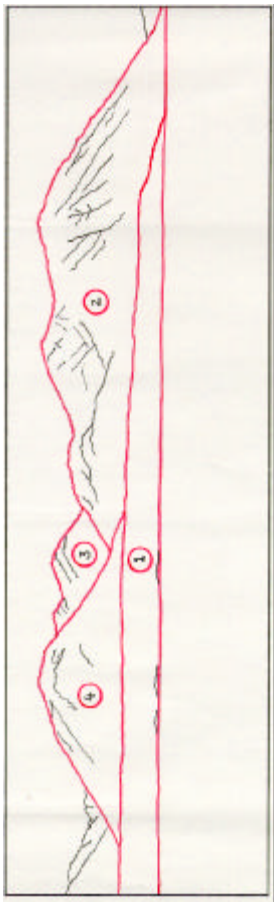


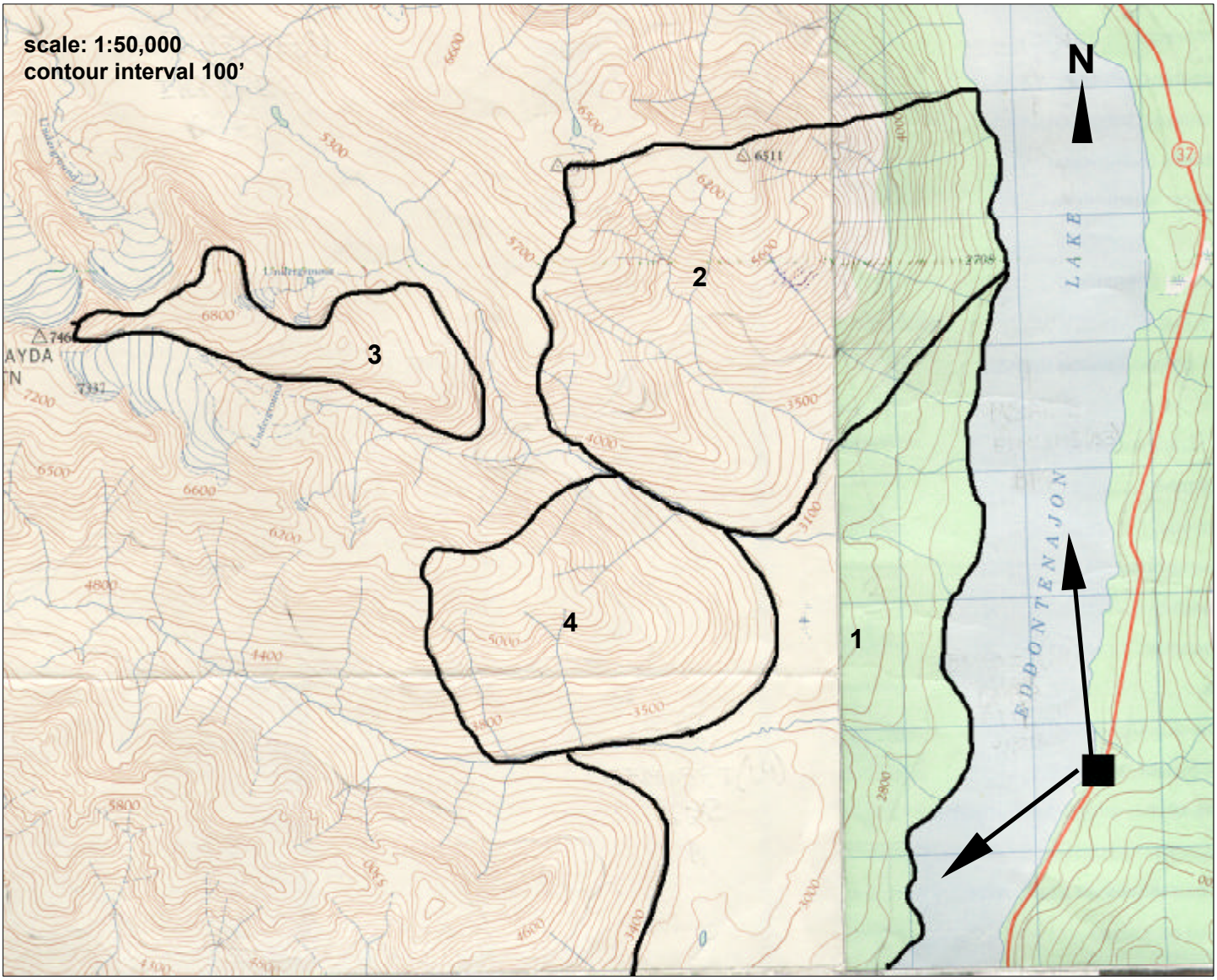
Third Lake

- informal picnic site and campsite.
- lake used for fishing, canoeing
- user numbers decreasing since road on south side of Nanaimo River became the main route.
- estimated user numbers for 1995-1997 range from 50-100 users per year.
- most use during fall steelhead runs and hunting season
- Nanaimo Lakes is a High Intensity Area (managed for timber)
- Nanaimo Lakes is a popular recreation area for residents of southern Vancouver Island
- adjacent scenery to the east consists of mountains covered with second growth trees of varying ages. Some recent harvesting.
- public concerns for the Nanaimo Lakes area include: too high temperatures in the river for fish, too many roads being deactivated, long term camping in the recreation sites, and paying to get into the area.

Exercise 6: Eddontenajon Lake, Prince Rupert Forest Region







Eddontenajon Lake

- located along Highway 37, south of Iskut
- viewpoint is at a rest area and boat launch, the only access to the lake.
- Iskut population 350
- traffic counts at the Stikine River bridge (north of Eddontenajon Lake) for 1990-1994 indicate 500-800 vehicles per day during July and August
- traffic counts north of Meziadin Junction (south of Ed Lake) for 1990-1994 indicate 600-1100 vehicles per day during July and August.
- views across the lake to the VSUs when driving along the Highway

Post Fieldwork

Introduction

Broad Scale Assessment

Pre-Fieldwork

VSU Delineation

VSU Classification

Post-Fieldwork

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5.0 DETAILED ASSESSMENT - POST FIELDWORK

The detailed assessment is done in the field and is generally carried out at a 1:50 000 scale to identify Visual Sensitivity Units (VSUs) or classify Visually Sensitive Areas (VSAs) into VSUs with visual sensitivity classes. The detailed assessment is carried out where more detailed information about a particular VSA is required for operational planning. The purpose of this detailed assessment is to:

- identify the portion of the landscape that is visually sensitive as viewed from on-the-ground or on the water and in special circumstances high elevation viewing locations;
- delineate Visually Sensitive Areas into Visual Sensitivity Units (in this case, the detailed assessment (VSUs) replaces the broad scale assessment (VSAs);
- describe each VSU in terms of its existing visual condition, visual absorption capability, and biophysical and viewing characteristics, and classify it into a visual sensitivity class.

Each component contains a number of steps.

The detailed assessment consists of four components, each of which is described in separate chapters:

2.0 Pre-fieldwork and Public Input

3.0 VSU Delineation

4.0 VSU Classification

5.0 Post Fieldwork

5.1 Procedure - Post Fieldwork

1. **Plot Sightlines**
2. **Prepare Final Products**

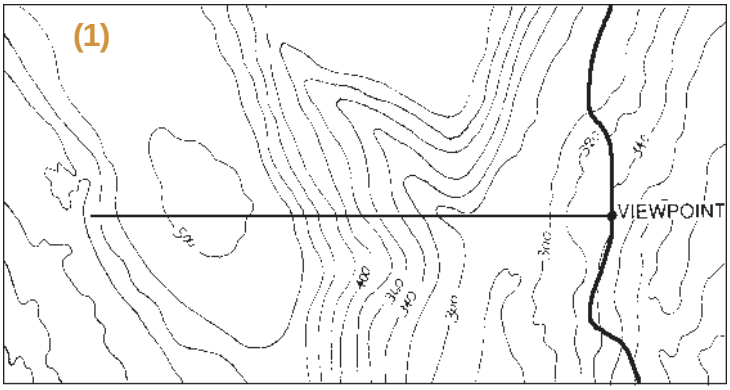
STEP 1: Plot Sightlines

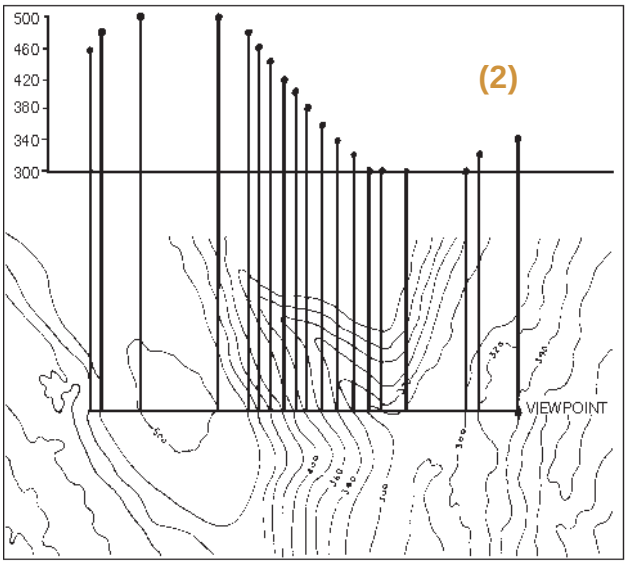
Sightlines are not always required, but are useful when mapping complex landscapes

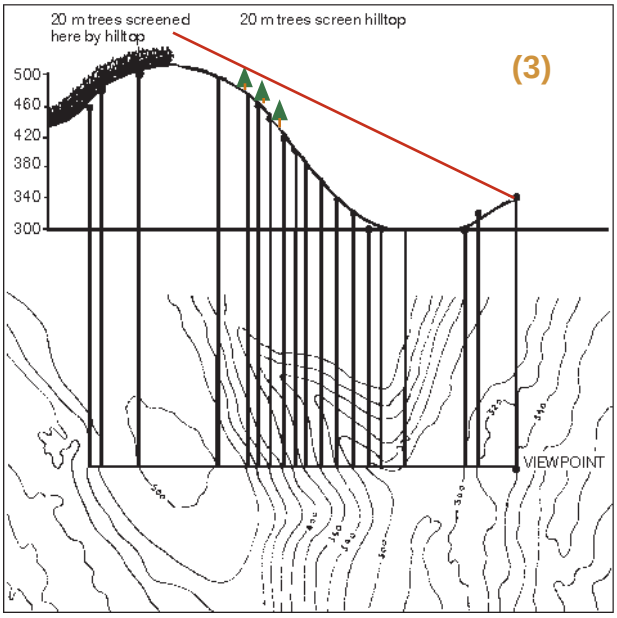
1) Plot sightlines from major viewpoints or develop computer generated visible area maps to confirm viewshed mapping when dealing with complex landscapes or where it is difficult to interpret what is visible. (Sightline standards are outlined in Appendix 1 of the *Visual Impact Assessment Guidebook*.) Plot as many profiles as necessary to cover the Visual Sensitivity Unit (VSU) visible in the foreground and midground (up to 8 km) from each major viewpoint and adjust the line work mapping if necessary. Sightline plots can be done either by hand or through the use of a computer.

Sightline Presentation Criteria
(Modified from Appendix 1, Visual Impact Assessment Guidebook)

- Sightlines (also called “topographic sections or profiles”) should be plotted using the best scale (preferably at 1:10,000 scale or larger) available from each key viewpoint.
- Based on the sightline plots, indicate on the visual landscape inventory map the areas that are visible
- Provide an elevation bar on the upslope end of the profile and a distance scale on the horizontal bar.
- Vertical exaggeration is to be minimised. Use a maximum vertical exaggeration of 1 to 1.5.







Making topographic sections from a contour map (modified from VIA Guidebook).

(1) Draw line of section on map from viewpoint across the relevant part of the terrain.

(2) Project lines at right angles from where the line of section cuts the contour to the corresponding heights on the sectional drawing above.

(3) Connect the points on the section and draw line(s) of sight from the viewpoint.

This can also be done on a separate piece of paper by using a light table.

(Modified from *The Design of Forest Landscapes* by Oliver W.R. Lucas, Forestry Commission, Oxford University Press, 1991)

STEP 2: Prepare Final Products

1) Transfer from the field maps to either 1:20,000 or 1:50,000 scale digital files or to topographic mylar base maps using ministry drafting standards, the following information:

- Visual Sensitivity Unit (VSU) boundaries and identification number;
- viewpoint type, location, view arrows, and identification numbers;
- map label ratings;
- photograph locations and numbers; and
- screening.

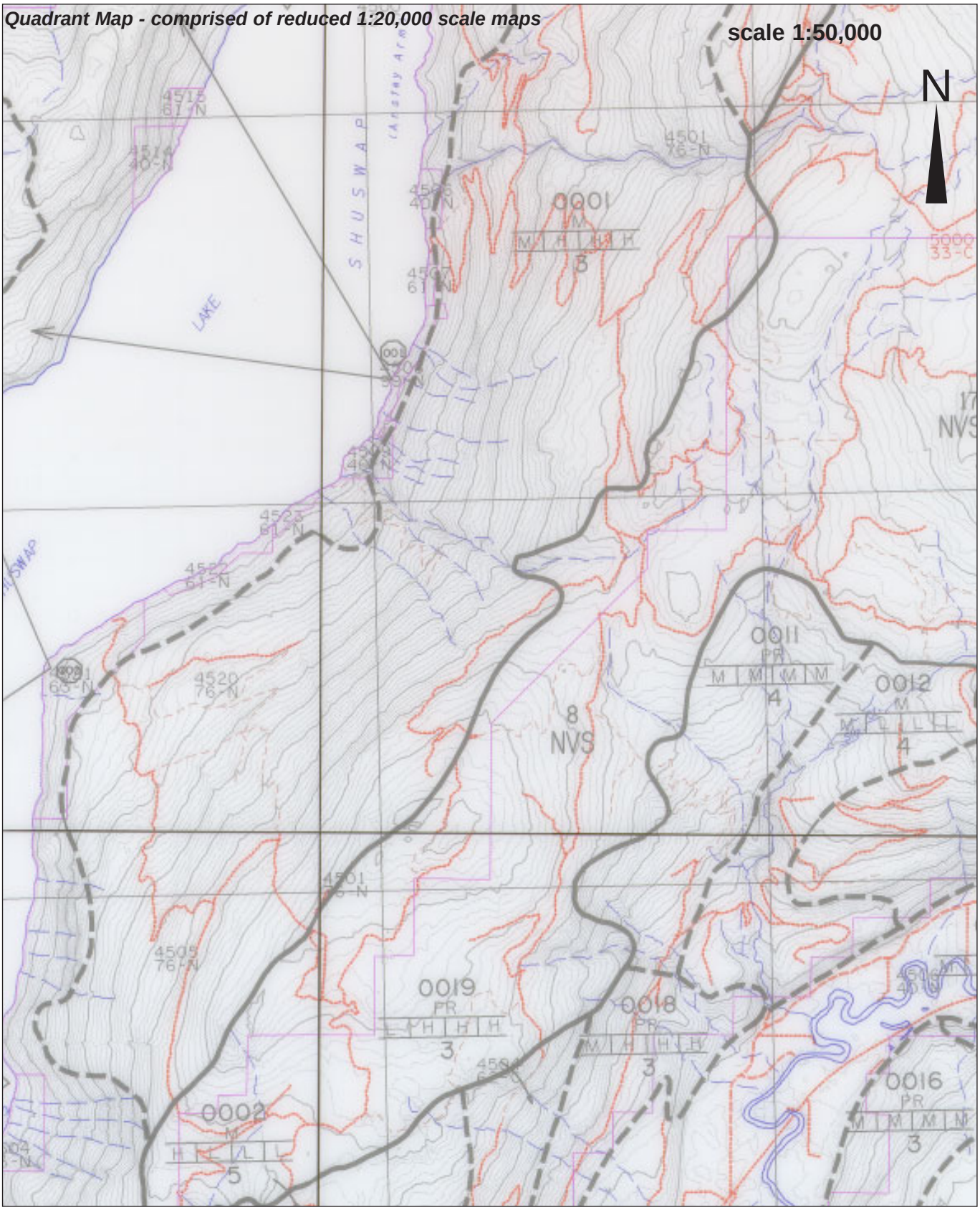
Refer to map example on opposite page. The map is a "quadrant map" - a format designed for the Ministry of Forests that reduces four 1:20,000 scale TRIM maps to a single map at 1:50,000 scale

2) Prepare a final report as required (see following pages for content standard).

3) Produce and prepare all photographic prints, negatives, slides and/or tapes (see following pages or contract documents under separate cover for presentation standard).

4) The completed inventory will be available for review at the district office. This will provide members of the public who provided input with an opportunity to see how their input was reflected in the inventory.

Example of Finished Map



5.2 Standards for Visual Landscape Inventory Reports

All Visual Landscape Inventory (VLI) mapping should be accompanied by a brief, typewritten, report which should include:

a) An introduction to the study area with an overview map, including general landscape character, access, project objectives and outputs. The introduction should also record the length of the travel corridor or perimeter of waterbody mapped.

b) An explanation of the mapping/project process and methodology (i.e. refer to the VLI Standards & Procedures used and explain any variations to these standards and procedures, if applicable).

c) A summary table for each BCGS "Quad" mapsheet listing for each Visual Sensitivity Unit: VSU Number; Gross Area (hectares), if readily available; and, the following inventory parameters: EVC, VAC, BR, VC, VR & VSC.

d) A summary table for the entire project area listing: BCGS QUAD Mapsheet Numbers; VSU #s and Gross Area (subtotals by VSU and mapsheet, and total for entire project area).

e) *(Optional)* A description of activities or development in or adjacent to the unit that could affect management decisions. This description can also include the statement of values of special concern and any applicable management recommendations, including recommendations for visual landscape rehabilitation or enhancement, if any, and the reasons for these recommendations.

f) A summary of project personnel and involvement, including actual field and office time spent in completing the project.

g) Other relevant professional comments, recommendations and a description of the problems encountered (if any) while completing the project.

h) Appendices to include:

- Copies of advertisement and/or letter requesting public involvement;
- List of public/agencies contacted with their mailing address and phone number and any feedback provided, formal and informal, written and verbal;
- Copies of all original Visual Sensitivity Unit Classification Forms, fully completed;
- Photographs and/or slides (catalogued in an album with roll number, frame number, photo point/rating point #, VSU # and date). All photographs comprised in a panoramic view must be spliced together. Minimum print size: 4" x 6";
- Negatives (stored in plastic archival sleeves labelled with project number, roll number and frame numbers identified);
- Copies of Photography Data Forms completed for photos taken from locations other than VSU rating points;
- Copies of all sightline plots produced from each major viewpoints with a corresponding map (e.g., copy of final Visual Landscape Inventory map) showing the plotted location and view directions of each sightline; and
- One set of hardcopy mylar (Production standards to be defined in another document or in a contract Schedule "A": under separate cover).

Note: Any additional report requirements may be stipulated directly in VLI Contract Schedule "A". Also, any digitizing requirements may be stipulated in VLI contract Schedule "A".

Appendix I: Forms and Forest District Codes

Visual Sensitivity Area Classification Form
Visual Sensitive Unit Classification Form
Photography Data Form
List of Forest District Codes

Visually Sensitive Area Classification Form

1. Forest District Code:			3. Date:		5. NTS/BCGS Map Number:
2. Rated By:			4. Project Number:		6. NTS/BCGS Map Scale:
7. VSA #	8. Cross Mapsheet #	9. VSA Name	10. VSA Code	11. VSUs Classified (Y/N)	12. VSA Rationale Statement

Visual Sensitivity Unit Classification Form

VSUCF May 1997

1. Forest District Code: _____
2. Rated by: _____
3. Date: _____
4. Project: _____
5. VSA #: _____
6. VSU #: _____
7. VRU # _____
8. Cross Mapsheet VSU # (optional): _____
9. BCGS Map #: _____
10. VSU Rating Point #: _____

VSU #____

EVC			
VAC	BR	VC	VR
VSC			

Existing Visual Condition (EVC)

EVC Rationale:

11 Scale of Existing Alteration	0%	0-1.5	1.5-7	7-20	20-30	>30	
EVC Initial Value	P	R	PR	M	MM	EM	
12 Influence of Visual Landscape Design	H		M		L		N/A
13 Influence of Site Disturbance	H		M		L		N/A
14 Influence of Veg. Colour & Texture	H		M		L		N/A
15 **EVC Final Value**	**P**	**R**	**PR**	**M**	**MM**	**EM**	

TA: 1 2 3 4 5 6 7 8 9 10

A B C D

Visual Absorption Capability (VAC)

VAC Rationale

16 Slope	H (3)	M (2)	L (1)		
17 Aspect	H (3)	M (2)	L (1)		
18 Surface Variation	H (3)	M (2)	L (1)		
19 Rock/Soil/Vegetative Variety	H (3)	M (2)	L (1)		A B C D
VAC Initial Value	H (10-12)	M (7-9)	L (4-6)		
20 **VAC Final Value**	**H**	**M**	**L**		

Biophysical Rating (BR)

BR Rationale:

21 Slope	H (3)	M (2)	L (1)		
22 Aspect	H (3)	M (2)	L (1)		
23 Edge	H (3)	M (2)	L (1)		TE: A B C D E F G H I J K
24 Topographic Variety	H (3)	M (2)	L (1)		A B C
25 Vertical Relief	H (3)	M (2)	L (1)		
26 Vegetative Variety	H (3)	M (2)	L (1)		A B
BR Initial Value	H (15-18)	M (10-14)	L (6-9)		
27 Influence of Rock/Soil	H	M	L	N/A	A B
28 Influence of Water	H	M	L	N/A	A B C
29 Influence of Adjacent Scenery	H	M	L	N/A	
30 **BR Final Value**	**H**	**M**	**L**		

Viewing Condition (VC)

VC Rationale:

31 Viewing Distance	H (3)	M (2)	L (1)		
32 Viewing Frequency	H (3)	M (2)	L (1)		VPT #S ____ ____ ____ ____
33 Viewing Duration	H (3)	M (2)	L (1)		A B
34 Viewing Angle	H (3)	M (2)	L (1)		
VC Initial Value	H (10-12)	M (7-9)	L (4-6)		
35 **VC Final Value**	**H**	**M**	**L**		

Viewer Rating (VR)

VR Rationale:

36 Number of Viewers	H (3)	M (2)	L (1)		A B C D E
37 Viewer Expectations	H (3)	M (2)	L (1)		A B
VR Initial Value	H (6)	M (4-5)	L (2-3)		
38 **VR Final Value**	**H**	**M**	**L**		

Visual Sensitivity Class (VSC)

VSC Rationale(reverse page)

VSC Initial Value	VSC 1	VSC 2	VSC 3	VSC 4	VSC 5
score:	(8)	(6-7)	(3-5)	(1-2)	(0)
39 **VSC Final Value**	**VSC 1**	**VSC 2**	**VSC 3**	**VSC 4**	**VSC 5**

BR / VC / VR / VAC final values: H = 3, M = 2, L = 1

(BR_____+ VC_____+ VR_____) - VAC_____= _____
vsc score

Other (Optional)

Other Rationale:

40 Years to VEG	< 5 years	5-10 years	> 10 years	N/A
41 Visual Recovery	H	M	L	A B
42 Rehabilitation/Enhancement	RH	EH	N/A	

See other side for VSU Rating Point Data & factor descriptions +

10. VSU Rating Point Data:	Print:	Slide:	Digital Image	Videocassette
VSU Rating Point Number				
10.1 Viewpoint Type: rating point (V0), major (V1); minor (V2); potential (V3)				
10.2 Elevation of the VSU Rating Point (meters)				
10.3 Latitude and Longitude (UTM) Coordinates (optional)				
10.4 BCGS Map Number of VSU Rating Point				
10.5 Compass Bearing (0-360 degrees)				
10.6 Vertical Viewing Angle (0-90 degrees ±)				
10.7 Roll Number (start-end frame number)	/ /	/ /	/ /	/ /
10.8 Focal Length of Lens (mm)				

EVC			
11 Scale of Existing Alteration			
12 Influence of Vis. Landscape Design	H (greater)	M (moderate)	L (lesser)
13 Influence of Site Disturbance	H (dominant)	M (moderate)	L(subordinate)
14 Influence of Veg. Colour & Texture	H (strong)	M (moderate)	L (weak)
15 Existing Visual Condition	P - R - PR - M - MM		

VAC			
16 Slope	H (0 - 30%)	M (30 - 60%)	L (>60%)
17 Aspect	H (NW/N/NE)	M (E-W)	L (SW/S/SE)
18 Surface Variation	H (high)	M (moderate)	L (low)
19 Rock/Soil/Vegetative Variety	H (high)	M (moderate)	L (low)
20 Visual Absorption Capability	H (high)	M (moderate)	L (low)

BR			
21 Slope	H (>60%)	M (30-60%te)	L (0 - 30%)
22 Aspect	H (SW/S/SE)	M (E-W)	L (NW/N/NE)
23 Edge	H(high)	M(moderate)	L(low)
24 Topographic Variety	H(high)	M(moderate)	L(low)
25 Vertical Relief	H (800m+)	M (200-800m)	L (<200m)
26 Vegetative Variety	H(high)	M(moderate)	L(low)
27 Influence of Rock/Soil	H(high)	M(moderate)	L(low)
28 Influence of Water	H(high)	M(moderate)	L(low)
29 Influence of Adjacent Scenery	H(high)	M(moderate)	L(low)
30 Biophysical Rating	H(high)	M(moderate)	L(low)

VC			
31 Viewing Distance	H (0-1km)	M (1-8km)	L (8km +)
32 Viewing Frequency	H (> 5 vpts)	M (3-4 vpts)	L (<2 vpts)
33 Viewing Duration	H (long)	M (moderate)	L (short)
34 Viewing Angle	H (focal)	M (tangent)	L (peripheral)
35 Viewing Condition	H (high)	M (moderate)	L (low)

VR			
36 Number of Viewers	H (high)	M (moderate)	L (low)
37 Viewer Expectations	H (high)	M (moderate)	L (low)
38 Viewer Rating	H (high)	M (moderate)	L (low)

VSC	
VSC Initial Rating	VAC, BR, VC, VR: H=3 M=2 L=1
39 Visual Sensitivity	1 2 3 4 5

Other (Optional)			
40 Years to VEG	< 5 yrs	5-10 yrs	> 10yrs
41 Visual Recovery	H (high site)	M (med. site)	L (Low site)
42 RH/EH/NA	Rehabilitation	Enhancement	N/A

Further Notes

Photography Data Form

Project: _____ Date: _____
Photographs taken by: _____
District: _____
Title/affiliation: _____

Viewpoint Photopoint #	Viewpoint Type	VSU Number	Elevation of Viewpoint	Longitude & Latitude Coordinates	BCGS Map #	Compass Bearing To VSU	Vertical Viewing Angle	View Direction #	Roll Number	Focal Length of Lens	Print/Slide/ Video
(#)	Photopoint Major (V1) Minor (V2) Potential (V3)	(#)	(m)		(#)	(0-360°)	(+/-) ± degrees	(#)	(Start/End Frame #)	(mm)	(P,S,V) Digital

Complete this form where photographs are taken from viewpoints which are not VSU Rating Points.

List of Forest District Codes

DAR	Arrow Forest District
DBO	Boundary Forest District
DBU	Bulkley Forest District
DCA	Cassiar Forest District
DCB	Cranbrook Forest District
DCH	Chilcotin Forest District
DCK	Chilliwack Forest District
DCL	Clearwater Forest District
DCR	Campbell River Forest District
DDC	Dawson Creek Forest District
DDU	Duncan Forest District
DFN	Fort Nelson Forest District
DGO	Golden Forest District
DHO	Horsefly Forest District
DIN	Invermere Forest District
DJA	Fort St. James Forest District
DJO	Fort St. John Forest District
DKA	Kamloops Forest District
DKI	Kispiox Forest District
DKM	Kalum Forest District
DLA	Lakes Forest District
DLI	Lillooet Forest District
DMC	Mid-Coast Forest District
DME	Merritt Forest District
DMH	100 Mile House Forest District
DMK	Mackenzie Forest District
DMO	Morice Forest District
DNC	North Coast Forest District
DPA	Port Alberni Forest District
DPE	Penticton Forest District
DPG	Prince George Forest District
DPM	Port McNeill Forest District
DQC	Queen Charlotte Islands Forest District
DQU	Quesnel Forest District
DRE	Revelstoke Forest District
DRV	Robson Valley Forest District
DSA	Salmon Arm Forest District
DSC	Sunshine Coast Forest District
DSQ	Squamish Forest District
DVA	Vanderhoof Forest District
DVE	Vernon Forest District
DWL	Williams Lake Forest District

Appendix II: Answer Keys to Exercises

Some variation from the answer keys is to be expected, because of the subjective nature of the material. The variation should be in the individual factors, not in the parameters (#s 15,20,30, 35,38,39). If you are finding deviations from the parameters values, return to the appropriate section and review). Factor variations should be within a rating of the given answer. For example, if the answer to #22 is L, M is a possibility, but H is definitely wrong.

	Exercise 1: Ogilvie Peak	**Exercise 2: Nancy Greene Park**	**Exercise 3: Bedwell Sound**	**Exercise 4: Comox Lake**
11	1.5-7% (measures 5%)	7-20% (measures 12%)	0%	0-1.5%
	PR	M	P	R
12	M (1)	M	N/A	N/A - VEG is fully recovered
13	H	H	N/A	N/A
14	M (B)	L (AB)	N/A	H (C)
15	**PR**	**M**	**P**	**R**
16	M (50-65%)	H (10%)	L (52-77%)	M (44-55%)
17	L	L	M	M
18	M	M	L	L
19	M (ABC)	M (ABC)	M(C) low end of m	M (AB)
	M (7)	M (8)	L (6)	M (7)
20	**M**	**M**	**L**	**M**
21	M	L	H	M
22	H	H	M	M
23	M (H)	M	M (H)	M (H)
24	M (A or C)	L (B)	M (A or B)	M (A)
25	H (1400m)	M (231m)	H(1040m)	M (662m)
26	M (A)	H (A)	M (B)	M (A)
	M (14)	M (12)	M (14)	M (12)
27	L (B)	N/A	L (A)	M (B) low end of M
28	N/A	H (AC) consider swamp as water	H (A)	H (A)
29	M	M	L	L
30	**M**	**M**	**M**	**M**
31	M	M	H (Actual dist is m, but on water would see from close up)	H (from VP M, but viewed also from lake)
32	H	L	L (only viewed for short stretch)	M
33	M (A)	H (A)	M (B)	H (AB)
34	H	M	H	H (from lake)
	H (10)	M (8)	M (9)	H (11)
35	**H**	**M**	**M**	**H**
36	H (B)	M (C)	M (A)	M (A)
37	H (B)	H (A)	H (A)	M (B)
	H (6)	M (5)	M (5)	M (4)
38	**H**	**M**	**M**	**M**
	2+3+3-2=6	2+2+2-2=4	2+2+2-1=5	2+3+2-2=5
39	**VSC 2**	**VSC 3**	**VSC 3**	**VSC 3**

	Exercise 5: Nanaimo Lakes	Exercise 6: Eddontenajon Lake (VSU 1)	Exercise 6: VSU 2	Exercise 6: VSU 3	Exercise 6: VSU 4
11	>30%	0%	0%	0%	0%
	EM	P	P	P	P
12	L (1)	N/A	N/A	N/A	N/A
13	M	N/A	N/A	N/A	N/A
14	N/A (B)	N/A	N/A	N/A	N/A
15	**MM**	**P**	**P**	**P**	**P**
16	M (52-63%)	H	M (28-61%)	H (28%)	M (32-70%)
17	H	M	M	M	M (3 aspects)
18	M	H	M	M	M (B)
19	M (ABC)	L (A)	H(C)	H (C)	M (AB)
	M (9)	M (9)	M (9)	H (10)	M (8)
20	**M**	**M**	**M**	**H**	**M**
21	M	L	M	L	M
22	L	M	M	M	M
23	M (e or H)	L (A)	M (H)	M (H)	M (H)
24	M (C)	M (A) the long flat bench is distinctive	H (C)	M (C)	M (A)
25	H (880m)	L (182m)	H (1237m)	H (841m)	H (883m)
26	L (A)	H (B)	M (A)	M (A)	M (A or B)
	M (11)	M (10)	M (14)	M (12)	M (14)
27	N/A	N/A	H (A)	H (A)	L (A)
28	M (A)	H	H (A)	M (removed from water)	H
29	L	H	M	L	M
30	**M**	**M**	**H (override based on modifying factors)**	**M**	**M**
31	M (to middle)	H (from lake)	M (middle of VSU)	M	M
32	M	M (from lake + highway)	M	L (not viewed as often as other VSUs)	M
33	H (AB)	H (AB)	H (AB)	H (AB)	H (AB)
34	H	H	H	H	H or M
	H (10)	H (11)	H (10)	M (9)	H (10) or M (9)
35	**H**	**H**	**H**	**M**	**H or M**
36	L (C)	M (B)	M (B)	M (B)	M (B)
37	L (B)	M (B)	H (B)	M (B)	H (B)
	L (2)	M (4)	M (5)	M (4)	M
38	**L**	**M**	**M**	**M**	**M**
	2+3+1-2=4	2+3+2-2=5	2+3+3-2=6	2+2+2-3=3	2+(3 or 2)+2-2=4 or 5
39	**VSC 3 (could also override to VSC 4)**	**VSC 3**	**VSC 2**	**VSC 3**	**VSC 3**

Appendix III: References

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