FOREST RECREATION

VISUAL LANDSCAPE INVENTORY

Procedures & Standards Manual

Province of British Columbia
Ministry of Forests

Forest Practices Branch
May 1997

VISUAL LANDSCAPE INVENTORY

Procedures & Standards Manual

prepared by:
B.C. Ministry of Forests
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prepared for:
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FOREWORD

This document is one of a family of procedures and standards documents that is currently being developed for the various component inventories of the Recreation Resources Inventory. This document replaces the *Visual Landscape Inventory: Checklist Key, Version 2.0*, as the ministry's procedures and standards for the Visual Landscape Inventory. That checklist document, in turn, had replaced Section 11.3: Forest Landscape Management of the *Recreation Manual* (under separate cover).

The procedures and standards set out in this document are intended to:

- clarify the purpose and role of the Visual Landscape Inventory. In particular, to better distinguish between the task of delineating and classifying areas that are sensitive to visual alteration;

- clarify the portion of the provincial land base that is to be covered by the Visual Landscape Inventory. Namely, to move away from a relatively ad hoc compilation of inventories of key travel corridors and other "visible" areas, to an upfront, explicit delineation of the portion of the land base that is considered visually sensitive (broad scale assessment), followed by a classification of these visually sensitive areas (detailed assessment);

- restrict the Visual Landscape Inventory to the inventory function and remove from it any analysis, planning or management functions. This includes deleting Visual Quality Objectives (recommended, approved or established) from the inventory maps;

- introduce a more visible, systematic and derivational methodology for determining the various inventory parameters, including the use of more objective criteria and measures for assigning values to them;

- improve the quality control of inventory data by achieving greater consistency in inventory projects carried out within and between districts and regions - a major concern with previous Visual Landscape Inventories; and

- give more attention to the changing clients of the Visual Landscape Inventory and their needs, including the need for improved communication between the inventory specialists who carry out inventory projects and the decision-makers who use the inventory information.

The procedures and standards set out in this document have not been fully tested. Testing will continue through the application of these standards at this time. Key to this testing is the use of the Visual Landscape Inventory classification forms, and the careful recording of initial factor and parameter ratings and values (based on default calculations), final factor and parameter ratings and values (based on override methodologies), and the rationales for any differences between the initial and final ratings and values. Additional projects may be initiated to more fully examine specific aspects of these procedures and standards such as client needs, benefits/costs or quality control.

This document may undergo revision as a result of further testing of the procedures and standards which it currently sets out. It may also need to be revised as a result of development of the Visual

Resources Inventory and further understanding of the relations between the Visual Resources and Visual Landscape Inventories. This document may also be affected by the incorporation and consolidation of the family of component inventory documents into a planned comprehensive revision of Chapter 6 and 11 of the *Recreation Manual*. This revision is scheduled for later this year.

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Common Acronyms used in this Manual:

BCGS	British Columbia Geographic System	RH	Rehabilitation Opportunity
BR	Biophysical Rating	RVQO	Recommended Visual Quality Objective
EH	Enhancement Opportunity	TRIM	Terrain Resource Inventory Mapping
EM	Excessive Modification	UA	Unclassified Area
EVC	Existing Visual Condition	VAC	Visual Absorption Capability
M	Modification	VC	Viewing Condition
MM	Maximum Modification	VLI	Visual Landscape Inventory
VEG	Visually Effective Greenup	VLU	Visual Landscape Unit
NTS	National Topographic Series	VQO	Visual Quality Objective
NVSA	Not Visually Sensitive Areas	VR	Viewer Rating
P	Preservation (visual)	VSA	Visually Sensitive Area
R	Retention	VSC	Visual Sensitivity Class
PR	Partial Retention	VSU	Visual Sensitivity Unit

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1.0 INTRODUCTION

1.1 Mandate

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, including for 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.

1.2 Purpose and role

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, and for which district managers or higher level plans may wish to establish Visual Quality Objectives.

More specifically, the Visual Landscape Inventory:

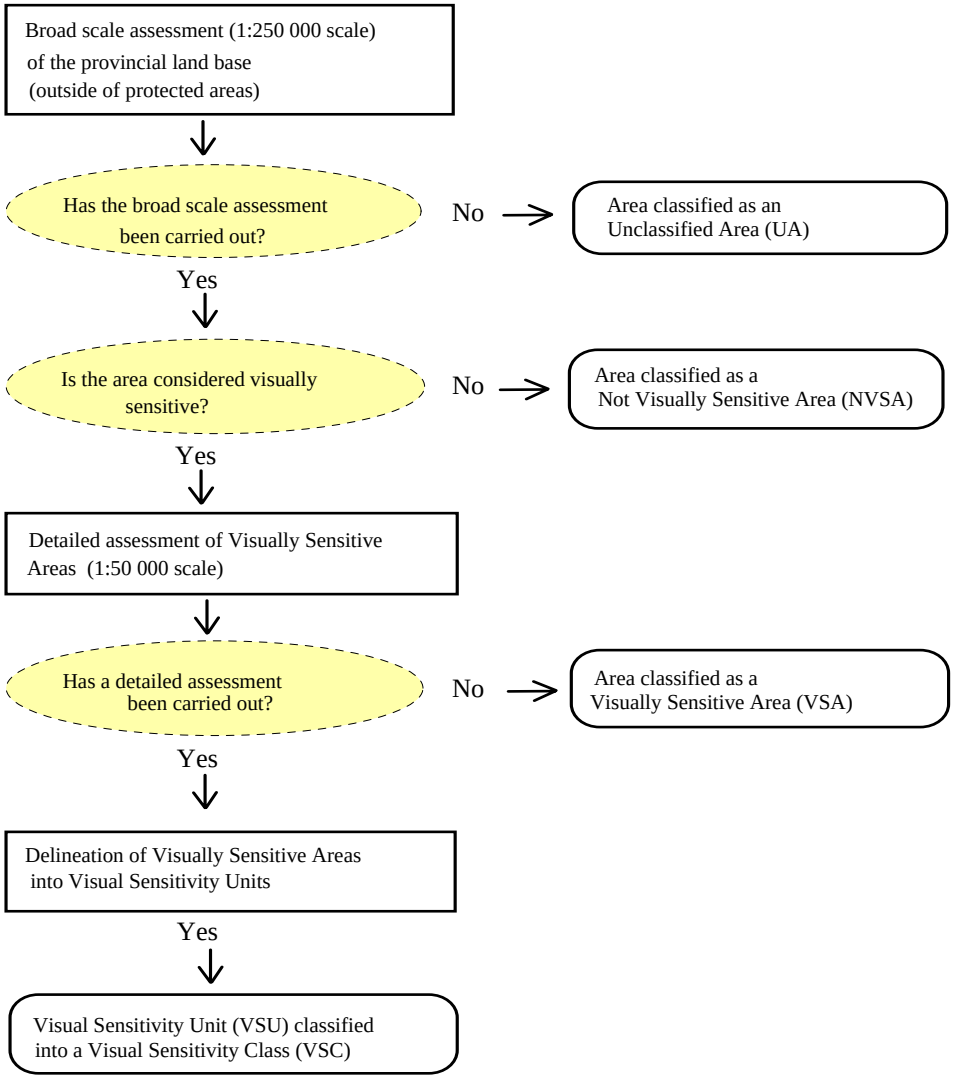
- classifies the provincial land base into Visually Sensitive Areas versus Not Visually Sensitive Areas. Areas classified as not visually sensitive are not assessed or described further;

- delineates Visually Sensitive Areas into Visual Sensitivity Units; and

- describes each Visual Sensitivity Unit in terms of its existing visual condition, visual absorption capability, and biophysical and viewing characteristics, and classifies it into a Visual Sensitivity Class.

The Visual Landscape Inventory, therefore, classifies the provincial land base as illustrated in Figure 1.

Figure 1. The Visual Landscape Inventory classification of the landbase

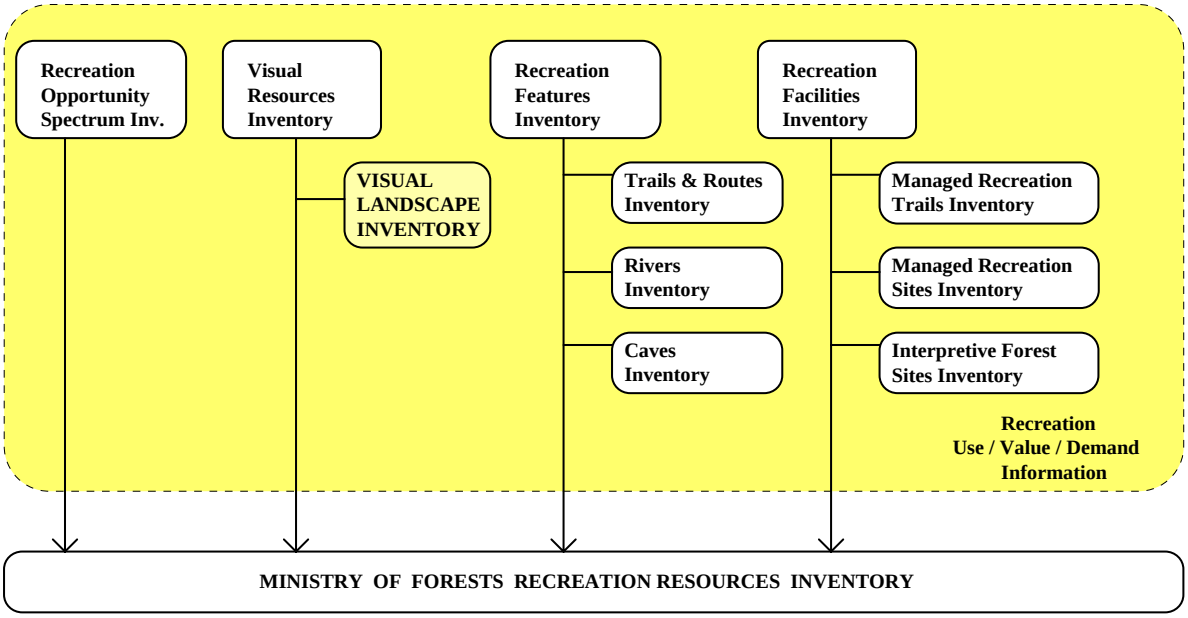


As shown in Figure 1, and depending upon the status of the inventory, the Visual Landscape Inventory classifies provincial Crown land throughout the province, except protected areas which are not subject to industrial development, as either unclassified, not visually sensitive or visually sensitive. The inventory further subdivides visually sensitive areas into visual sensitivity units and classifies them into visual sensitivity classes.

1.3 Relationship to the Recreation Resources Inventory

The relationship of the Visual Landscape Inventory to the Recreation Resources Inventory is illustrated in Figure 2.

Figure 2. Relationship of the Visual Landscape Inventory to the Recreation Resources Inventory



As shown in Figure 2, 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 standards set out in Section 4.0. These visually sensitive areas will provide the primary context for classification of visually sensitive units.

The Visual Landscape Inventory, therefore, is **not**:

- an inventory of visual resources. The Visual Landscape Inventory is not an assessment and classification of the provincial land base in terms of visual landscapes or scenic viewscapes for their ability to provide a recreation opportunity;
- an inventory of scenic beauty. The Visual Landscape Inventory is not an assessment and classification of landscapes or areas in terms of their inherent scenic attractiveness; or
- restricted to the "visible land base." The Visual Landscape Inventory is not necessarily restricted to areas of the province that are directly visible from major communities or travel corridors. Some areas that are less viewed, or not yet accessed and therefore not yet frequently viewed, may, after consideration of the determinants of visual sensitivity, be classified as visually sensitive.

A more detailed comparison of changes is set out in Section 1.5.

1.4 Relationship to the Visual Landscape Management Process

The relationship of the Visual Landscape Inventory to the Visual Landscape Management Process is illustrated in Figure 3.

Figure 3. Relationship of the Visual Landscape Inventory to the Visual Landscape Management Process

PHASE *(Visual Landscape Management Process)*		**OUTPUTS** *(Visual Landscape Inventory: Recreation Manual)*		**OUTPUTS** *(Visual Landscape Inventory: this document)*
PHASE I Visual Landscape Inventory	⇒	Identified visual values	⇒	• Delineation and classification of the provincial landbase into visually sensitive/not visually sensitive areas • Delineation of visually sensitive areas into visual sensitivity units (VSUs) and their classification into visual sensitivity classes (VSCs)
PHASE II Visual Landscape Analysis	⇒	Recommended Visual Quality Classes ("old RVQOs")	⇒	• Assessment of implications and options • Recommendations, including recommended Visual Quality Classes ("new RVQCs") • Modeling of current management practices for timber supply reviews
PHASE III Setting of objectives, priorities and guidelines	⇒	Approved VQOs	⇒	• Identification of scenic areas • Establishment of VQOs • Approval of operational plans
PHASE IV Visual Landscape Design	⇒	Visual simulations and design solutions	⇒	• Visual simulations • Visual impact assessments • Visual landscape design solutions
PHASE V Implementation	⇒	Achieved visual conditions	⇒	• Achieved visual conditions
PHASE VI Monitoring	⇒	Program audits	⇒	• Monitoring/inspections of field activities

As shown in Figure 3, the Visual Landscape Inventory is phase one of the six-phase Visual Landscape Management Process.

The Visual Landscape Inventory identifies areas which, because of their visual sensitivity, may be negatively impacted if managed without the application of the concepts, principles and practices set out in the Visual Landscape Management Process.

A Visual Landscape *Inventory* is not a Visual Landscape *Analysis* which is carried out, as required, to identify options, assess implications, and make recommendations regarding proposed forest development plans and practices.

The Visual Sensitivity Class (VSC) is not the "old RVQO" that traditionally was determined at the time of the inventory and recorded on the Visual Landscape Inventory polygon label. The VSC is a relative rating of visual sensitivity; the higher the sensitivity, the greater the risk that visual alteration would cause concern. VSC is an inventory classification and is expressed as a number (1 to 5).

In contrast, the former Recommended Visual Quality Objective (RVQO) was an assessment of the amount and kind of visual alteration that could be made to a Visual Sensitivity Unit (VSU), beyond which it was forecast there would be public concern. It was expressed as a Visual Quality Class (Preservation; Retention; Partial Retention; Modification; and Maximum Modification). Its meaning and status were often unclear.

For example, was the former RVQO:

- a recommended objective, or only a description or assessment?;
- an input to planning processes, or an output?;
- a consideration of all resources or only visual resources?;
- approved or not, especially where it had been determined after public input, shown on inventory maps for a number of years, and used as a basis for review and approval of operational plans?

Furthermore, the old RVQO is not the "new RVQO" that under the current standards may still be provided through Visual Landscape Analysis. The current RVQO is an assessment of implications and options, carried out by visual landscape, planning, timber supply or other staff specialists in response to, and for input into, a planning process or management decision.

A visually sensitive area (an inventory classification) is not a known scenic area (a district manager Forest Practices Code decision). A RVQO (a visual landscape specialist assessment) is not an established VQO (a district manager or higher level plan Forest Practices Code decision).

1.5 Relationship to previous visual landscape inventories

Previous ministry procedures and standards for Visual Landscape Inventory were:

- Pre 1981 - none;
- *Forest Landscape Handbook* (Part II, Step 1, pp. 30 - 31) (May 1981);
- *Recreation Manual* (Chapter 11, Section 3, pp. 11-11 - 11-17) (August 1991);
- *Sample Visual Landscape Inventory contract with Checklist* (June 26, 1994);
- *Recreation Resource Inventory Standards & Procedures* (March 31, 1995);
- *Visual Landscape Inventory: Checklist Key, Version 2.0* (June 18,1996).

A comparison of key terms and features of the Visual Landscape Inventory as it has previously been carried out and as it is set out in this document is illustrated in Figure 4.

Figure 4. A comparison of previous and current Visual Landscape Inventory parameters

Previous	Current	*Comments*
Recreation Features Inventory "V[1]" Feature	Visually Sensitive Area (VSA)	*The dropping of the "V" feature from the Recreation Features Inventory, and whatever role it may or may not have played in providing a broad scale classification of the land base according to sensitivity to visual alteration, has moved this classification function from the Recreation Features Inventory to the Visual Landscape Inventory. Some V feature polygons may be considered to be VSAs.*
Visual Landscape Unit (VLU)	Visual Sensitivity Unit (VSU)	*Procedures for delineation have been refined.*
Existing Visual Condition (EVC)	Existing Visual Condition (EVC)	*No change.*
Visual Absorption Capability (VAC)	Visual Absorption Capability (VAC)	*Aspect is now included as a factor in determining VAC. VAC is one of the determinants of VSC.*
Rehabilitation/Enhancement Opportunity (RH/EH)	Rehabilitation/Enhancement Opportunity (RH/EH)	*Clarification that RH/EH is an identification of opportunity not a management objective.*
Visually Effective Green-up (VEG)	Visually Effective Green-up (VEG)	*No change.*
Visual Sensitivity Rating (VSR)	Biophysical Rating (BR) plus Viewing Condition (VC) plus Viewer Rating (VR)	*The basis for determining the previous VSR was not always clear. On average, VSR was based on biophysical and viewing characteristics of the Visual Landscape Units (VLUs).*
VACSEN Matrix	Default calculation for determining Visual Sensitivity Class (VSC)	*Procedures and values do not necessarily correspond. Override methodologies are given more explicit consideration.*
VACSEN Matrix element	Visual Sensitivity Class (VSC)	*Procedures and values do not necessarily correspond. An overall sensitivity to alteration is now recorded on polygon label.*
Visual Quality Objective (VQO - recommended, approved, established)	None	*VQOs no longer recorded on polygon label. RVQCs (recommended Visual Quality Classes) or established VQOs may be recorded in an administrative data base.*

[1] The "V" feature is a recreation feature which indicates visible areas where the visual values are expected to be significant in the course of completing a recreation features inventory of the past.

In addition to comparisons shown in Figure 4 (previous page), the Visual Landscape Inventory polygon label has changed as follows:

From:

001

VSR	**VAC**
EVC	**VQO**

To:

0001

EVC

VAC	**BR**	**VC**	**VR**

VSC

key:

001	=	sample polygon number
BR	=	Biophysical Rating
EVC	=	Existing Visual Condition
VAC	=	Visual Absorption Capability
VC	=	Viewing Condition
VQO	=	Visual Quality Objective
VR	=	Viewing Rating
VSC	=	Visual Sensitivity Class
VSR	=	Visual Sensitivity Rating

When comparing previous and current inventory parameters there are two key points which must be emphasized.

- Visual Quality Objectives (VQOs) will continue to be used to express visual quality objectives for an area. The Forest Practices Code enables VQOs to be established through a planning process or by the district manager where and when required. An administrative data base/layer will be created which will be linked to inventory Visual Sensitivity Unit (VSU) polygons and may be used to record approved VQOs of old and established VQOs and Visual Quality Classes of the future.

- There is no direct link or relationship between recommended VQOs of old and the new VSC. A VSC is an inventory parameter which provides an indication of a VSUs sensitivity to visual alteration. In general the higher the sensitivity the greater the risk that visual alterations would cause concern. The only correlation between VQOs and VSCs may be, that in general the higher the visual sensitivity class the more restrictive the VQO that may be prescribed. This being said there is not direct translation, i.e., a Visual Sensitivity Class 1 (refer to Section 5.8) does not automatically equate to a Visual Quality Objective of Preservation.

1.6 Role and contents of this document

This document sets out the ministry's procedures and standards for the Visual Landscape Inventory. These procedures and standards will be consistent with any overall procedures and standards for the Recreation Resources Inventory and the Visual Landscape Management Process that will be set out in the revised *Recreation Manual* (Chapters 6 and 11 - under separate cover).

This document is intended to serve as the primary reference document for matters related to Visual Landscape Inventory procedures and standards. This document is intended for use by qualified contractors, licensees, ministry staff and other persons carrying out Visual Landscape Inventory projects. This document is not intended to explain or substantiate the field of Visual Landscape Inventory (see research and development documents) or train individuals on how to carry out a Visual Landscape Inventory (see training material).

Section 2.0 of this document sets out the administrative, technical and contractual procedures specific to carrying out a Visual Landscape Inventory. Section 3.0 provides a general overview of the standards for which a Visual Landscape Inventory should be carried out and introduces the classification forms on which to record information collected. Section 4.0 sets out the specific standards for determining and classifying Visually Sensitive Areas. Section 5.0 sets out the specific standards for classifying Visual Sensitivity Units. Section 6.0 contains the standards for an inventory report. Section 7.0 sets out the standards for inventory rollover that is carried out to convert existing digital data to the new standards. Section 8.0 provides information on the use of the Visual Landscape Inventory. Section 9.0 provides a list of references. Section 10.0 contains a glossary of terms. Appendices 1 and 2 are the Visually Sensitive Area and Visual Sensitivity Unit Classification Forms. Appendix 3 is the Photography Data Form. Appendix 4 contains a list of forest district name codes and Appendix 5 has a copy of an inventory map legend.

2.0 PROCEDURES

2.1 Administrative procedures

The roles and responsibilities for the Visual Landscape Inventory are set out in Figure 5, as follows:

Figure 5. Roles and responsibilities for the Visual Landscape Inventory.

Participants	Roles and Responsibilities	Outputs
Branch[2]	• Administer the inventory function (ministry, Forest Renewal BC, Resources Inventory Committee etc.) • Develop recommended policy for executive approval • Develop and maintain procedures and standards for data collection and data management • Provide technical advice, training and extension services • Monitor implementation of standards	• Administration • Recommended policies • Procedures and standards • Advice, training and extension services • Monitoring reports
Region[3],[4]	• Coordinate inventory activities and ensure consistency between districts • May carry out inventories on behalf of districts where requested • Review draft policy, procedures and standards • Provide technical advice, training and extension services • Review TFL licensee inventories and accepts inventory on behalf of Chief Forester • Monitor implementation of standards	• Coordination • Review comments • Advice, training and extension services • Recommendations • Monitoring reports
District[3]	• Carry out inventories (in-house or contract services) • Review Tree Farm Licence (TFL) inventories and provide comments to region	• Inventories • Review comments
TFL Licensees[5]	• Carry out inventories within their licence area to ministry standards (in-house or contract services)	• Inventories
Other Agencies	• Provide input to Branch in the development of policies, procedures and standards • Provide input to districts and Tree Farm Licensees in carrying out inventories	• Input
Consultants	• Carry out inventories in accordance with contracts	• Inventories
Public	• Identify areas they consider to be visually sensitive • Provide input on viewer numbers, expectations/concerns	• Input

[2] A number of branches work together at headquarters level. These include the Forest Practices Branch, Resources Inventory Branch, Business Design Branch, and Information Services Branch.
[3] Regional and branch staff work together in providing assistance to districts.
[4]It is essential that region and district staff develop and maintain sufficient knowledge and expertise (i.e. core competency) in the inventory to enable them to meet their responsibility for reviewing inventory work (i.e. TFL licensees and contractors).
[5]In some instances Forest Licensees carry out Visual Landscape Inventories with FRBC funding.

2.2 Technical procedures

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

- 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).

2.2.1 Broad Scale Assessment

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 been not yet undergone detailed assessment.

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

- ministry staff should be familiar with inventory methodology and each district 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 that a few days to complete this component of the inventory; and

- results of the broad scale assessment are critical to planning processes, timber supply analyses (TSA), and to the Detailed Assessment (Visual Landscape Inventory).

The broad scale assessment of the inventory consists of three steps:

- Information assembly;

- Visually Sensitive Areas mapping; and

- Public input.

The technical procedures for completing the broad scale assessment are as follows:

Information assembly, Broad Scale Assessment (STEP 1)

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 maps.

Visually Sensitive Areas mapping, Broad Scale Assessment (STEP 2)

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

4) Delineate and map areas where previous Visual Landscape Inventories have been completed. Smaller VSUs or not visually sensitive pockets may be combined into broader units.

5) Delineate Scenic Areas which have been identified and made known by a district manager or a higher level plan, but which have not yet had a detailed Visual Landscape Inventory completed. This broad scale mapping usually includes all areas from valley bottom to height of land.

6) Delineate areas identified as having visual values in a regional or sub-regional land use plan (Commission on Resources and the Environment or land and resource management planning).

7) VSAs are delineated using a combination of biophysical and social attributes described in Section 4.0 standards. Where no previous Visual Landscape Inventories, higher level plans or district manager decisions have previously identified a Visually Sensitive Area (VSA), height of land on either side of a highway/water corridor, or the height of land encircling a lake or regional feature will be used to draw VSA polygon boundary.

8) Transfer the above information to the 1:250 000 map. Based on local knowledge, delineate any further areas as VSAs if they meet the criteria in Section 4.0.

9) Delineate areas where visual values have been identified as important to other agencies such as the Ministry of Small Business, Tourism and Culture (MSBTC). **Note:** it is expected that MSBTC will identify visual values which are important to their needs by providing copies of tourism resource inventory maps to the district manager.

10) Delineate and classify as NVSAs areas with no potential to be altered. Although non-forested areas such as alpine are not subject to timber harvesting, they may be subject to visual alteration by other resource development activities such as mining, seismic lines, etc. These areas should be delineated and classified as VSAs or NVSAs as are forested areas using the standards set out in Section 4.0.

11) After line work has been completed (polygons delineated), assign a unique identification number to each Visually Sensitive Area 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'.

12) Complete a VSA Classification Form (Appendix 1) for each visually sensitive area in accordance with the standards set out in Section 4.0.

13) 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.

Public input, Broad Scale Assessment (STEP 3)

14) 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.

2.2.2 Detailed Assessment

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.

This component of the inventory consists of four steps:

- Pre-fieldwork;
- Public input;
- Fieldwork; and,
- Post fieldwork.

The technical procedures for completing the detailed assessment are as follows:

Pre-fieldwork, Detailed Assessment (STEP 1)

This step in the detailed assessment is carried out by the following tasks:

1) Become fully acquainted with the procedures and standards for carrying out a detailed Visual Landscape Inventory as described in this document, 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.

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

   - topographic maps for contours, travel routes, communities, recreation lakes and land uses;
   - maps showing existing and planned highways and related developments (viewpoints, rest stops, road realignments, etc.);
   - sub-regional plans which may identify potential travel routes;
   - forest cover maps for vegetation information, forest road networks, history of past opening 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 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; and

- statistics, if available, on traffic volume counts for travel corridors, tourism, fishing, hunting and recreation oriented developments (sites, trails, commercial developments).

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

4) 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.

Public input, Detailed Assessment (STEP 2)

This step is carried out by the following tasks:

5) Involve the public up front[6]. 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 are to provide 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 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 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. 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.

[6] Before soliciting input during the inventory, approval should be obtained from the district manager.

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.

Fieldwork, Detailed Assessment (STEP 3)

This step is carried out by the following tasks:

6) Carry out the Visual Landscape Inventory using travel methods which would be used by the average forest visitor or traveler so that similar viewing opportunities can be assessed. As a first step, determine the character of the landscape by traveling 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.

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

   - 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);

   - Delineate the visible area into VSUs based on like attributes (e.g. landform, homogeneity of landscape characteristics, viewing conditions and visual sensitivity). VSUs can be components of a panorama or may be seen as individually distinct units. 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. Special considerations for delineating VSUs include:

     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. 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 can also be defined and mapped as separate units 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 in fact a distinct landform, the diagonal ridgelines as 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 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. It is extremely important to recognize that 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.

8) Before, during or after completing the line work, indicate visual screening/barriers (by topography or vegetation) using standard symbols. See Visual Landscape Inventory (VLI) legend in Appendix 5. In cases of flat or low level topography behind a vegetation screen, delineate a Visual Sensitivity Unit (VSU) with an approximate width of 200 meters[7] (may vary with density of vegetation cover), which is mapped on each side of highways, roads, and along lake or river shores. These polygons are Visual Sensitivity Units in their own right and must be classified accordingly.

9) 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'.

10) Complete a Visual Sensitivity Unit Classification Form (Appendix 2) for each Visual Sensitivity Unit (VSU) in accordance with the standards set out in Section 5.0. In many cases, a Visual Sensitivity Unit will be visible from more than one formal viewpoints 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, otherwise known as the VSU Rating Point. Each VSU Rating Point should be assigned a number and this number entered on the Classification Form and on the

[7] Forest Practice Code GuideBooks may help in determining an appropriate width for vegetative screens (i.e. Lake Classification and Lakeshore Management Guidebook: Prince George Forest Region, September 1996)

inventory map. In many cases a VSU Rating Point will be a major, minor or potential viewpoint and will be identified by a symbol on the inventory map. In other cases, the best possible view of the unit will not be an actual mapped viewpoint (e.g., major, minor or potential viewpoints), but will still be used as the VSU rating point (describe the location of this incidental view in the statement of rationale).

11) If necessary, adjust Visual Sensitivity Unit (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.

12) 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.

13) 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). 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 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 provided in Appendix 3.

14) Record panoramic views of the VSU with VHS format color videotape (This procedure is optional).

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

Post fieldwork, Detailed Assessment (STEP 4)

This step is carried out by the following tasks:

16) 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 middleground (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.

17) 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 (under separate cover), 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 number; and
- screening.

18) Prepare a final report as required (see section 6.0 for content standard).

19) Produce and prepare all photographic prints, negatives, slides and/or tapes (see section 6.0 or contract documents, under separate cover, for presentation standard).

20) 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.

2.3 Contract administration

A Visual Landscape Inventory may be carried out through contract services. All contracts must be awarded and administered in accordance with statutory requirements and ministry policy for contract services.

For information on these requirements and policies see the *Ministry Contract Administration Manual*, which sets out contracting policy and procedures, and Appendix 3 of the *Recreation Manual*, which provides guidance specific to managing recreation contracts (both under separate cover).

Visual Landscape Inventories should normally be contracted through an Invitation to Tender rather than a Request For Proposals. This is because the nature of the work to be completed is clearly defined and does not involve the development of procedures or standards. Provisions should be included in the tender that enable ministry staff to adequately determine consultants' qualifications and acceptable standards of work.

A sample Visual Landscape Inventory contract package approved by Technical and Administration Services Branch is available to guide district staff (under separate cover). This document incorporates most of the contracting standards and procedures spelled out in the Ministry Contract Administration Manual. If discrepancies are found refer to the Ministry Contract Administration Manual.

Visual Landscape Inventory contracts should normally require the consultant to follow the procedures and standards set out in this document. This may be done by referring to this document in Schedule A of the contract (under separate cover).

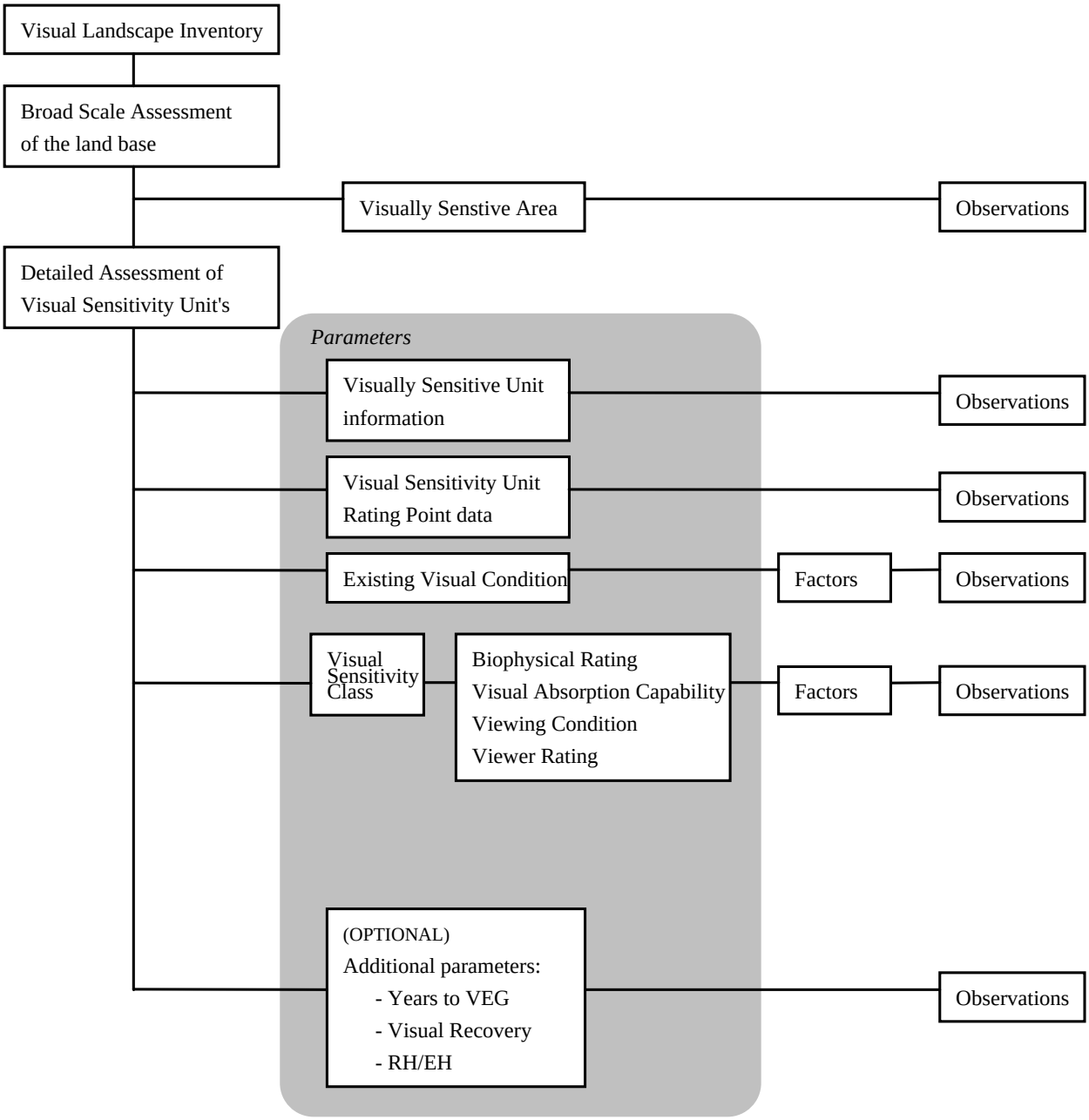
Visual Landscape Inventory contracts should normally provide for review and evaluation of the consultants' work at appropriate stages throughout its completion.

3.0 Standards and classification forms

3.1 Standards

Visual Landscape Inventory standards are the parameters that have been chosen to describe and classify Visually Sensitivity Areas (VSAs) and Visual Sensitivity Units (VSUs), and the observations, factors and methods by which values are assigned to these parameters. The standards are organized and set out for each Visual Landscape Inventory parameter as illustrated in Figure 6.

Figure 6. Structure of the Visual Landscape Inventory standards



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

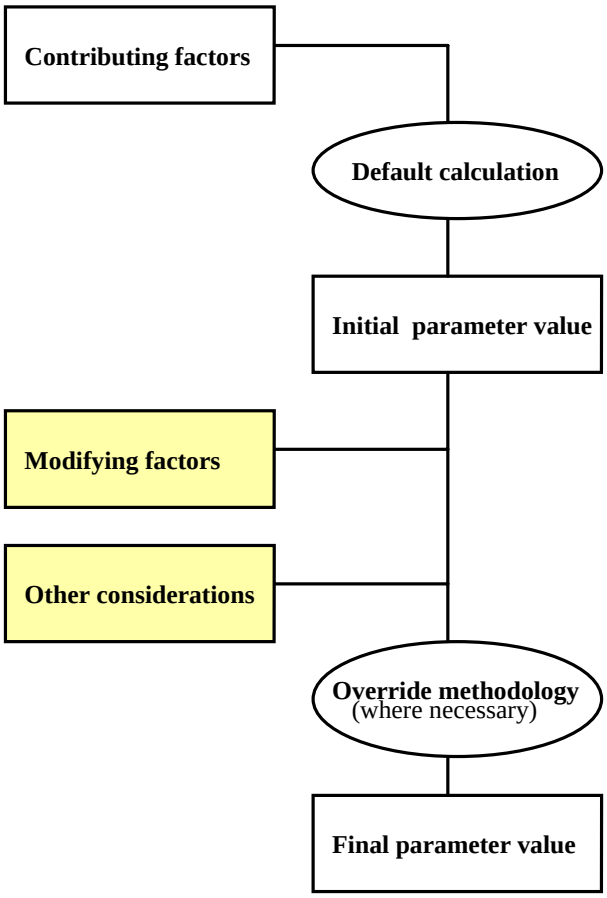
Observations are the unit criteria or specific measures of the observed characteristics of a Visually Sensitive Area (VSA) or Visual Sensitivity Unit (VSU) that are used to assign a rating to a factor, and in some cases a parameter. Observations can be qualitative (descriptive) or quantitative (measured), 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 are the identifiable and distinguishable characteristics or aspects of a Visual Sensitivity Unit (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), in the case of some factors : Not Applicable (N/A);

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

Methods are the comparisons, default calculations and override methodologies, which are used to determine ratings or values for the factors or parameters illustrated in Figure 6.

Figure 7: Overall methodology for determining derived parameter values



While the methods used are specific to each factor and parameter, the overall method for determining the ratings or values for factors, and in some cases parameters, is: observe the VSA or VSU; compare the observation with the descriptions in the table provided; record the appropriate rating or value and any other associated information (if applicable). The overall method for determining the values for the remaining parameters is illustrated in Figure 7.

The method consists of default calculations (to make initial determinations) and override methodologies (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.

The **override methodology** is: 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.

Default calculations may be altered:

- where modifying factors are present (the manner in which modifying factors will affect the default parameter value will vary); and
- where any other conditions that affect the Visually Sensitive Area (VSA) or Visual Sensitivity Unit (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.

3.2 Classification forms

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

Two classification forms have been developed. The Visually Sensitive Area Classification Form (see Appendix 1), to be completed for each mapsheet, and the Visual Sensitivity Unit Classification Form (see Appendix 2), to be completed for each VSU.

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

In Section 4.0 (for the VSA Classification Form) and Sections 5.1 - 5.9 (for the VSU Classification Form), factors and parameters are introduced and numbered in the order in which they appear on their respective classification forms.

4.0 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, travel corridors including roadways and waterways and any other viewpoint so identified through a referral or planning processes.

A Visually Sensitive Area (VSA) classification form (shown in Appendix 1) must be completed for each mapsheet which contains one or more visually sensitive area.

4.1 Visual Sensitivity Area information

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 4: 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 NTS/BCGS map number on which each Visually Sensitive Area occurs. Include the leading zero for map numbers under 100 (e.g. 093G). Where a VSA straddles mapsheets list all the mapsheets that the polygon occurs on.

6) NTS/BCGS map scale

Record the National Topographic Series (NTS) or British Columbia Geographic System (BCGS) map scale.

7) Visually Sensitive Area Number

Assign a unique[8] number to each Visually Sensitive Area polygon (refer to Section 2.2.1, Broad-scale Assessment, for instructions on assigning a unique number). 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).

9) Visually Sensitive Area Name

Record the name by which the Visually Sensitive Area (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 Visually Sensitive Area (VSA) using the table below and based on the procedures for delineating VSAs (Section 2.2.1).

Unclassified (U)	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 expectation for scenic quality is well above average (viewshed around back country 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 value; **6** Areas identified as visually sensitive or scenic through referral or planning processes (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 by 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. That is areas with no significant potential to be visually altered by human activities between inventory updates. For example relatively inaccessible area, with difficult access, no commercial forest and no mineral potential; and • Areas not possessing any characteristics identified under Visually Sensitive.

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

11) Visual Sensitivity Unit Classification

Record whether the Visually Sensitive Area (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 was 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.

It is important to note that a Visually Sensitive Areas inventory is a broad inventory which may be replaced by the more detailed Visual Landscape Inventory described in the next section (5).

5.0 STANDARDS FOR CLASSIFYING VISUAL SENSITIVITY UNITS

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

A Visual Sensitivity Unit classification form (shown in Appendix 2) must be completed for each Visual Sensitivity Unit (polygon) mapped. This form replaces the Data Attribute Sheet: F.S. 347. The requirement to fully complete this form for every unit and other efficiency savings will be reviewed after the first full season of implementation. *Important note: this form is to be completed in the field at the time the VSUs are mapped.*

5.1 Visual Sensitivity Unit information

Using the following numbered list as a guide, complete a Visual Landscape Inventory Classification Form (shown in Appendix 2) 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 Appendix 4: 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) Project Name

If available, record the project name for the area inventoried. Usually this name reflects the geographic area.

6) 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.

7) Visual Sensitivity Unit Number[9]

A VSU polygon is a distinct topographic unit as viewed from special viewpoints and/or from travel corridors and is not restricted or defined by BCGS mapsheet neatlines/boundaries.

The Visual Sensitivity Unit (VSU) number identifies a complete VSU polygon which may be wholly or partially within a BCGS mapsheet. Each VSU polygon will be assigned a four-digit unique[10] number (0001 - 9999) listed in ascending order as seen along a travel corridor, regardless of how many 1:20 000 BCGS mapsheets it crosses (also refer to Section 2.2.2: Detailed Assessment).

8) 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.

~~**8) Cross-Mapsheet VSU Number**~~ (deleted)

9) BCGS Map Number

Record the BCGS map number and include the leading zero for mapsheet numbers under 100
(e.g. **0**93G004). A 6' X 12' size BCGS mapsheet may be used and is most commonly plotted individually at a 1:20 000 scale or as one of four combined 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).

[9] In the past, the VSU number was recorded by BCGS mapsheet.
[10] The Visual Sensitivity Unit number combined with the forest district code and project number makes the polygon number unique within the province.

5.2 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 VSU Classification Form should identify for each VSU Rating Point if the photography is a slide, print, digital image and/or videotape recording, and enter the following information in the appropriate data field (note: one VSU Rating Point may contain all several types):

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). 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. 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. A minor viewpoint would have a moderate to low value and may include a highway pull-out, a point of interest along a trail or a dispersed use camping area. 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).

10.2) Elevation of the VSU Rating Point

Record the elevation of the Visual Sensitivity Unit (VSU) rating point (which may be obtained from TRIM or NTS topographic maps or by using an altimeter or global positioning system in the field).

10.3) Latitude and Longitude Coordinates (optional)

Record the latitude and longitude or UTM coordinates (using a Global Positioning System device if available).

10.4) BCGS Map Number of the VSU Rating Point

Record the BCGS map number which contains the Visual Sensitivity Unit (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 azimuth degree of a view, as seen from the VSU Rating Point to the **center** 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 **center** 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 Visual Sensitivity Unit (VSU) Rating Point on the separate Photography Data Form (see Appendix 3).

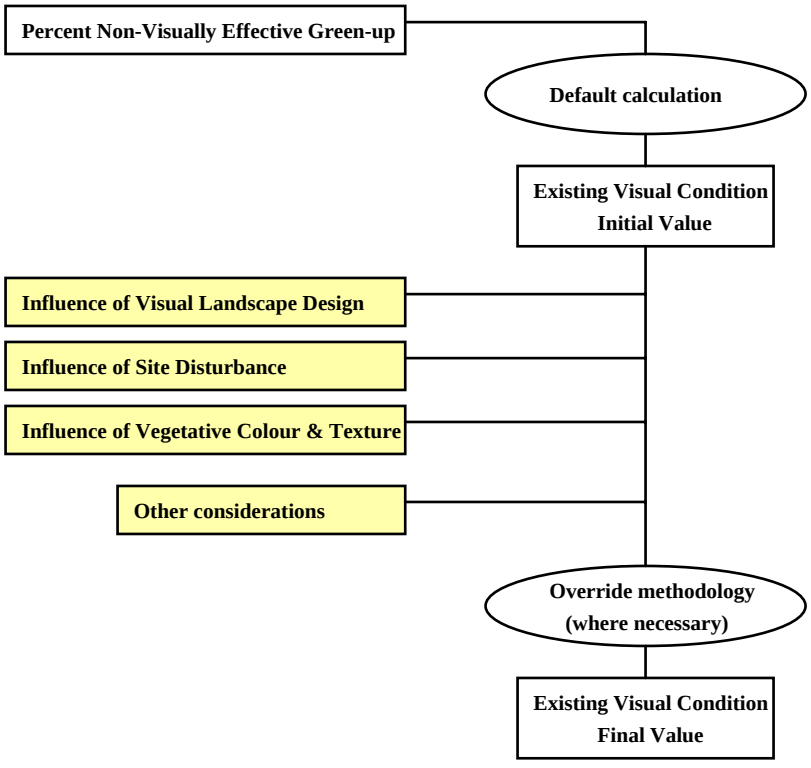
5.3 Existing Visual Condition (EVC)

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 alterations are dominant but have natural appearing characteristics
Maximally Modified	**MM**	Human-caused alterations are dominant and out of scale
Excessively Modified	**EM**	Human-caused alterations are excessive and greatly out of scale

The observations, factors and methods used to determine EVC are organized as illustrated in Figure 8.

Figure 8. Determination of EVC



As shown in Figure 8, the initial rating of EVC is determined by one factor. Three modifying factors (represented by shaded boxes in Figure 8) are considered in determining the final EVC value.

11) Scale of Existing Alteration

Scale of existing alteration is the amount of area that is not yet visually effectively greened-up within the Visual Sensitivity Unit (VSU). This factor is a measure of the scale (in perspective) of human-caus**ed alteration to the landscape.** Note: natural openings such as rock, alpine or grassland is not be considered in this estimate.

The rating for Scale of Existing Alteration is determined as follows: observe the VSU; compare the observation with the percentages below; 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:

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

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

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. (See Ministry of Forests, *Visual Landscape Design Training Manual).* The poorer the design the greater the influence.

The rating for *Influence of Visual Landscape Design* 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.

High (greater)	Moderate	Low (lesser)	N/A
square or angular in shape, contradicts or breaks natural lines of force causing tension, stark contrasting boundaries	some natural character reflected in design, major lines of force recognized some effort to mitigate contrast evident.	shape borrows from natural character of landscape, utilizes natural lines of force, boundaries are feathered and stratified to reduce contrast	no human-made alterations visible.

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 it is an important feature of the VSU.

Types of Alteration (TA)

TA Code:	Type:
1	timber harvesting openings
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)

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 visually evident. Site disturbance means exposed/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 greater the site disturbance the greater the influence.

The rating for *Influence of Site Disturbance* 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.

High (dominant)	Moderate	Low (Subordinate)	N/A
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.	site disturbances begin to dominate unit, little or no evidence of side-casting or erosion.	site disturbances are subordinate to Visual Sensitivity Unit, no side-casting, landing or erosion evident.	no visible site disturbances.

14) Influence of Vegetative Color and Texture

Influence of Vegetative Color 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 color and texture.

The rating for *Influence of Vegetative Color and Texture* 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 or letters on the VSU Classification Form.

<table>
<tr><th>High (Strong)</th><th>Moderate</th><th>Low (Weak)</th><th>N/A</th></tr>
<tr><td>A. some ground may still be visible</td><td>A. roads and logging debris are still visible</td><td>A. new clearcuts, roads and/or mass wasting are still clearly visible</td><td>A. no existing alterations</td></tr>
<tr><td>B. regenerating forest is well advanced</td><td>B. cutblocks have a green hue</td><td>B. cutblocks have little new vegetation</td><td rowspan="3">B. no partial VEG of existing alterations</td></tr>
<tr><td>C. distinctions in height, color and texture remain between cutblocks and adjacent forest but cutblocks are no longer seen as recently cut over</td><td rowspan="2">C. vegetation plays a moderate rehabilitating role and may ameliorate effects of harvesting in a VSU within a Visual Quality Class</td><td rowspan="2">C. vegetation plays a small rehabilitating role in ameliorating effects of harvesting in a VSU</td></tr>
<tr><td>D. vegetation plays a strong role and may ameliorate effects of harvesting in a VSU by at least one Visual Quality Class</td></tr>
</table>

15) EVC Final Value

The final value of Existing Visual Condition (EVC) is determined using the override methodology where necessary (see Section 3.1).

The EVC modifying factors are: *Influence of Visual Landscape Design*; *Influence of Site Disturbance;* and *Influence of Vegetative Color and Texture*. These factors influence by increasing or decreasing the initial value of EVC. For example, if the initial EVC rating is Partial Retention as predicted by a 7% alteration and is contains poor design, 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.

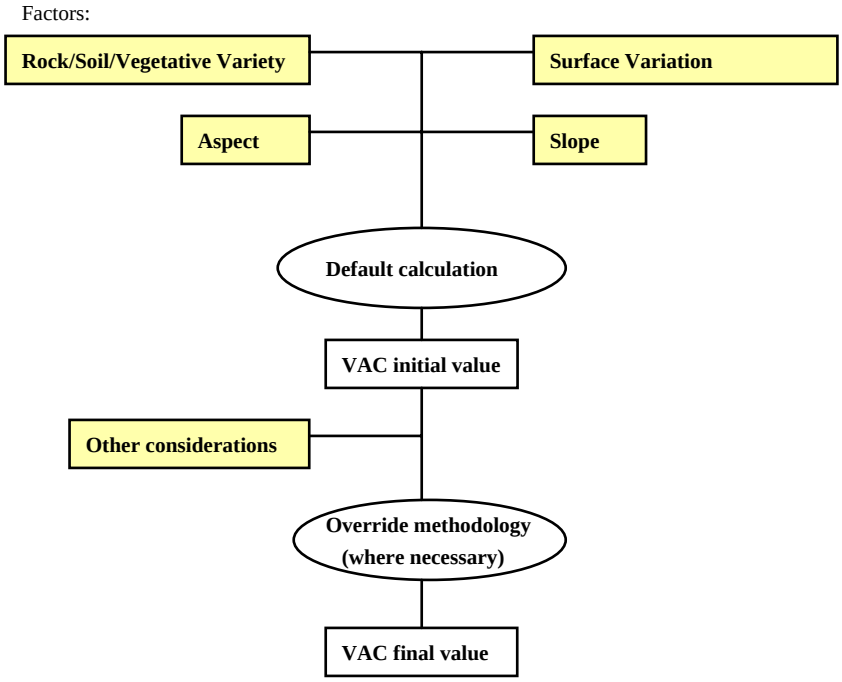
5.4 Visual Absorption Capability (VAC)

Visual Absorption Capability (VAC) is a measure of a landscapes' 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

The observations, factors and methods used to determine VAC are organized as illustrated in Figure 9.

Figure 9. Determination of VAC



As shown in Figure 9, the initial value of VAC is determined by four factors.

16) Slope

Slope is a measure of the steepness of the Visual Sensitivity Units (VSUs) 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 vegetation screening effectiveness.

The rating for *Slope* 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. **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.

(3) High (gentle)	(2) Moderate	(1) Low (steep)
less than 30%	30 - 60%	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, color or texture visible. This enables them to absorb alterations more easily than south facing slopes that are front lit and whose color and texture become more dominant.

The rating for *Aspect* 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.

High (3)	Moderate (2)	Low (1)
north, northwest or northeast facing landscape slopes or flat topography for which aspect is not applicable.	due east or due west facing landscape slopes.	south, southwest or southeast facing landscape 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.

The rating for *Surface Variation* 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.

High (3)	Moderate (2)	Low (1)
high level of variety in topography (e.g. many hollows, knobs, benches and breaks in topography)	some variety in topography (e.g. some hollows, knobs, benches and breaks in topography)	little or no variety in topography (e.g. steep, uniform slopes)

19) Rock/Soil/Vegetative Variety

Rock/Soil/Vegetative Variety is a measure of the color 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 color 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 in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter or letters on the VSU Classification Form.

High (3)	Moderate (2)	Low (1)
A. diverse variations in vegetation patterns	**A.** some variations in vegetation patterns	**A.** uniform, continuous vegetation cover
B. numerous natural or human-made openings in the tree canopy	**B.** some natural or human-made openings in the tree canopy	**B.** few natural or human-made openings in the tree canopy
C. weak or very little visual contrast between exposed rock/soil and vegetation	**C.** some visual contrast between exposed rock/soil and vegetation	**C.** strong visual contrast between exposed rock/soil and vegetation
D. diverse color/texture variations in vegetation, rock and/or soil	**D.** some color/texture variations in vegetation, rock and/or soil	**D.** little or no color/texture variations in vegetation, rock and/or soil
E. other	**E.** other	**E.** other

VAC Initial Value

The initial value for Visual Absorption Capability (VAC) is determined using the default calculation (see Section 3.1) 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.

20) VAC Final Value

The final value of Visual Absorption Capability (VAC) is determined by using the override methodology where necessary (see Section 3.1).

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.

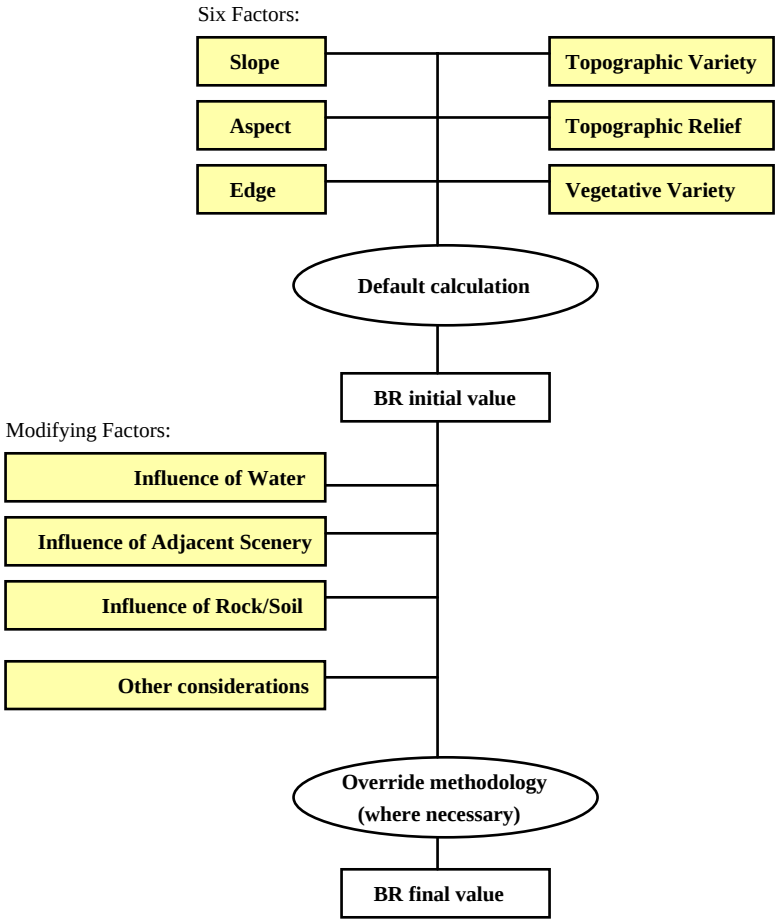
5.5 Biophysical Rating (BR)

Biophysical Rating (BR) is 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

The observations, factors and methods used to determine BR are organized as illustrated in Figure 10.

Figure 10. Determination of BR



As shown in Figure 10, 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 Visual Sensitivity Units (VSUs) 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 vegetation screening effectiveness. Although *Slope* is the same factor used to determine BR and VAC, it affects BR opposite to VAC. Namely, the steeper the landform, the more likely the land form will be noticed and the higher the rating.

The rating for *Slope* 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.

High (3)	Moderate (2)	Low (1)
steep slopes (>60%)	moderate slopes (30-60%)	gentle slope (0-30%)

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, color or texture visible. This makes them less sensitive to alterations than south facing slopes that are front lit and whose color and texture become more dominant.

The rating for *Aspect* 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.

High (3)	Moderate (2)	Low (1)
south, southwest or southeast facing slopes	due east or due west facing slopes	north, northwest or northeast facing slopes or flat topography

23) Edge

Edge is the boundary or interface between Visual Sensitivity Units (VSUs) or between biophysical features 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 in the table below; record the appropriate rating on the VSU Classification Form.

High (3)	Moderate (2)	Low (1)
edge is obvious, strong and is a major attraction; the viewers eye spends considerable time following the edge (e.g. complex, striking or dominant shore feature or skyline)	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)	edge is weak, indistinct and provides minimal attraction; the viewers eye moves beyond the edge to other features

Type of Edge (TE)

The edge type which is most dominant is identified using the table below. Record the appropriate letter or letters on the Visual Sensitivity Unit Classification Form.

A water/landform	E. land use/vegetation	I. rock/soil/vegetation
B. water/vegetation	F. land use/land use	J. landform/landform
C. water/land use	G. vegetation/vegetation	
D. land use/landform	H. skylines	

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 hogback 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 (3)	Moderate (2)	Low (1)
A. single very distinctive feature (e.g. Hope slide a spectacular incised ravine)	**A.** single moderately distinctive feature (e.g. avalanche track broad shallow gully)	**A.** single non distinctive (subtle) feature (e.g. a small localized slide sweeping midslope bowl)
B. many features of the same type. (e.g. 4 or more topographic breaks/benches hierarchy of ridges)	**B.** some features of the same type (e.g. 2-3 topographic breaks/benches)	**B.** few features of the same type (e.g. 1 or no topographic breaks)
C. many features of different types (e.g. many hollows, knobs, benches, or breaks in topography)	**C.** some features of different types	**C.** few features of any type

25) Vertical Relief

Vertical Relief is a measure of the VSUs vertical relief (extent or height from bottom to top). The greater the relief, the more attraction it evokes and the more sensitive it 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 in the table below; record the appropriate rating on the VSU Classification Form.

High (3)	Moderate (2)	Low (1)
high vertical relief - over 800 meters	some vertical relief - rolling or inclined terrain - 200 - 800 meters	little vertical relief - under 200 meters

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 in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the VSU Classification Form.

High (3)	Moderate (2)	Low (1)
A. high level of variety in vegetative pattern	**A.** some variety in vegetative pattern, color and texture (e.g. mixture of conifers and deciduous)	**A.** vegetative cover that because of its absence of either continuity or variety has low visual interest
B. very uniform color texture and pattern	**B.** some uniformity in color and texture, makes the unit moderately sensitive to alteration	

BR Initial Value

The initial value for Biophysical Rating (BR) is determined using the default calculation (see Section 3.1) as follows:

Total of numeric values of contributing factors	Initial value of BR
15 - 18	High
10 - 14	Moderate
6 - 9	Low

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

27) Influence of Rock/Soil

Influence of Rock/Soil is a measure of the prominence and pattern of rock and soil in a VSU. Prominence is determined by the presence of outstanding or dominant rock/soil features, and their degree of uniqueness. Pattern is determined by the rock/soil distribution within a unit and its ability to evoke interest.

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* 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 on the VSU Classification Form.

High	Moderate	Low	N/A
Prominence **A.** unusual, outstanding or dominant natural rock or soil features; such as basalt columns or hoodoos	**A.** natural rock or soil features present, but not outstanding or dominant	**A.** natural rock or soil features are only slightly apparent	**A.** no rock or soil visible in the VSU
Pattern **B.** rock or soil intermingled with vegetation, in proportions that provide great variety in pattern, texture and color, and invoking high viewer interest	**B.** rock or soil intermingled with vegetation, in proportions that provide some variety in pattern, texture and color, and invoking moderate viewer interest	**B.** rock or soil intermingled with vegetation, in proportions that provide low variety in pattern, texture and color, and invoking low viewer interest. VSU is homogeneous in appearance	

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 in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the Form.

High	Moderate	Low	N/A
A. water has a high influence	**A.** water has moderate influence	**A.** water has low influence	**A.** no water present in, or adjacent to, the VSU
B. water features are dominant	**B.** water features are present but subordinate	**B.** water features are present but insignificant	
C. water is clear, clean or colorful	**C.** water is not clear or is somewhat turbid	**C.** water appears murky or is very turbid	

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.

The rating for *Influence of Adjacent Scenery* 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.

High	Moderate	Low	N/A
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)	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)	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 unit)	no adjacent VSUs

30) BR Final Value

The final value of Biophysical Rating (BR) is determined by using the override methodology where necessary, (see Section 3.1).

The BR override methodology involves modifying factors 27. *Influence of Rock/Soil*, 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.

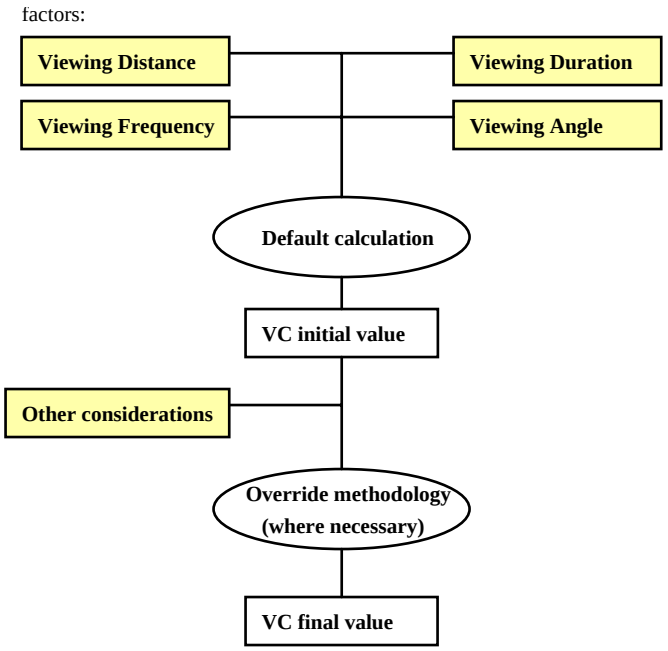
5.6 Viewing Condition (VC)

Viewing Condition (VC) is 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 organized as illustrated in Figure 11.

Figure 11. Determination of VC



As shown in Figure 11, 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 color, contrast, texture and the resulting level of visible detail in the landscape. A landscape feature that is closer will provide greater detail and will be more sensitive as a result. As distance increases, detail and thus, sensitivity, decreases. Viewing Distance is measured in terms of three general distance zones: foreground, mid-ground, 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 in the table below; record the appropriate rating on the VSU Classification Form.

(3) High (foreground)	(2) Moderate (midground)	(1) Low (background)
0 to 1.0 km from viewer; maximum discernment of detail, texture and contrast	1.0 to 8.0 km from viewer; emergence of overall shapes and patterns, with some texture and color still evident	more than 8.0 km from viewer; outlines of general shapes and patterns, with little discernible texture and color, and strong sense of overall perspective.

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 in the table below; record the appropriate rating on the VSU Classification Form.

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

(3) High (many)	(2) Moderate (some)	(1) Low (few)
five or more viewpoints or continuous viewing opportunity	three or four viewpoints or intermittent viewing opportunities	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 in the table below; record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the form.

(3) High (long)	(2) Moderate	(1) Low (short)
Land **A.** opportunity to travel towards or view a VSU for > 1 minute (e.g., communities, campgrounds etc.)	**Land** **A.** opportunity to view a VSU from a static viewpoint of a temporary nature for 10 seconds to 1 minute (e.g., highways rest stops)	**Land** **A.** opportunity to view a VSU is limited to glimpses of < 10 seconds
Water **B.** viewpoints on still waterbodies where people can stop/slow down to view scenic features or participate in recreation activities	**Water** **B.** viewpoints on slow moving waterbodies where people cannot stop without anchoring but have the time to scrutinize the VSU	**Water** **B.** viewpoints on fast moving waterbodies providing only passing, short view of the VSU

34) Viewing Angle

Viewing Angle is a measure of the type of viewing generally involved in observing the a Visual Sensitivity Unit (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 in the table below; record the appropriate rating on the VSU Classification Form.

(3) High	(2) Moderate	(1) Low
VSU immediately or directly in front of observer (focal)	VSU parallels travel corridor or is at right angles to observer (oblique/tangent)	VSU is at the periphery of observers vision

VC Initial Value

The initial value for Viewing Condition (VC) is determined using the default calculation below (also see Section 3.1). Record the initial value of VC on the VSU Classification Form.

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

35) VC Final Value

The final value of *Viewing Condition* is determined by using the override methodology where necessary (see Section 3.1).

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.

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

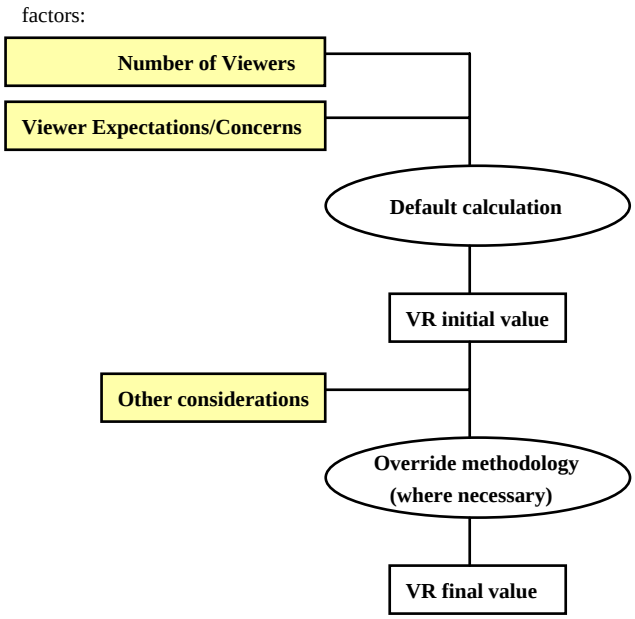
5.7 Viewer Rating (VR)

Viewer Rating (VR) is 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**	Numbers of viewers and expectations have a high influence on visual sensitivity
Moderate	**M**	Numbers of viewers and expectations have a moderate influence on visual sensitivity
Low	**L**	Numbers of viewers and expectations have a low influence on visual sensitivity

The observations, factors and methods used to determine VR are organized as illustrated in Figure 12.

Figure 12. Determination of VR



As shown in Figure 12, 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 (see Section 2.2), compare what is known about viewer numbers to examples in the table below; record the appropriate rating on the VSU Classification Form. Circle the representative description letter (below) on the VSU Classification Form.

Examples:

High (3)	Moderate (2)	Low (1)
A. large numbers of viewers relative to type of activity being pursued	**A.** moderate numbers of viewers relative to the activities being pursued	**A.** low numbers of viewers relative to the type of activity being pursued
B. 5,000 vehicles per day or 500,000 vehicles per year over a given highway	**B.** 1,000 vehicles per day or 100,000 vehicles per year	**B.** 200 vehicles per day or 20,000 vehicles per year
C. >5,000 users per year at a BCFS recreation site	**C.** 500 - 5000 users per year at a BCFS recreation site	**C.** 0 - 500 users per year at a BCFS recreation site
D. 1,000 kayakers per year	**D.** 200 kayakers per year	**D.** 50 kayakers per year
E. 1,000 hikers per year on a given trail	**E.** 200 hikers per year	**E.** 50 hikers per year
F. other	**F.** other	**F.** other

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).

37) Viewer Expectations/Concerns

Viewer Expectations/Concerns is a measure of the importance the public places on a 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 operator's), 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 traveler). On the other hand, some people who have an attachment to the landscape (i.e. make their living from the forest) 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.

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 (see Section 2.2), compare what is known about viewer expectations or concerns to the descriptions in the table below best describes viewer expectations. Record the appropriate rating on the VSU Classification Form. Circle the appropriate description letter(s) on the VSU Classification Form.

High (3)	Moderate (2)	Low (1)
A. scenic quality is of primary importance to the activity or experience pursued (e.g. kayaking, cruise ships, commercial tourism operations)	**A.** scenic quality is of secondary importance to the activity or experience pursued (e.g. sport fishing, BC Ferry passenger, highway traveler)	**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 high expectations/concerns for visual quality	**B.** majority of viewers have moderate expectations/concerns for visual quality	**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 3.1) 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.

38) VR Final Value

The final value of VR is determined by using the override methodology where necessary (see Section 3.1).

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

5.8 Visual Sensitivity Class (VSC)

Visual Sensitivity Class (VSC) is 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).

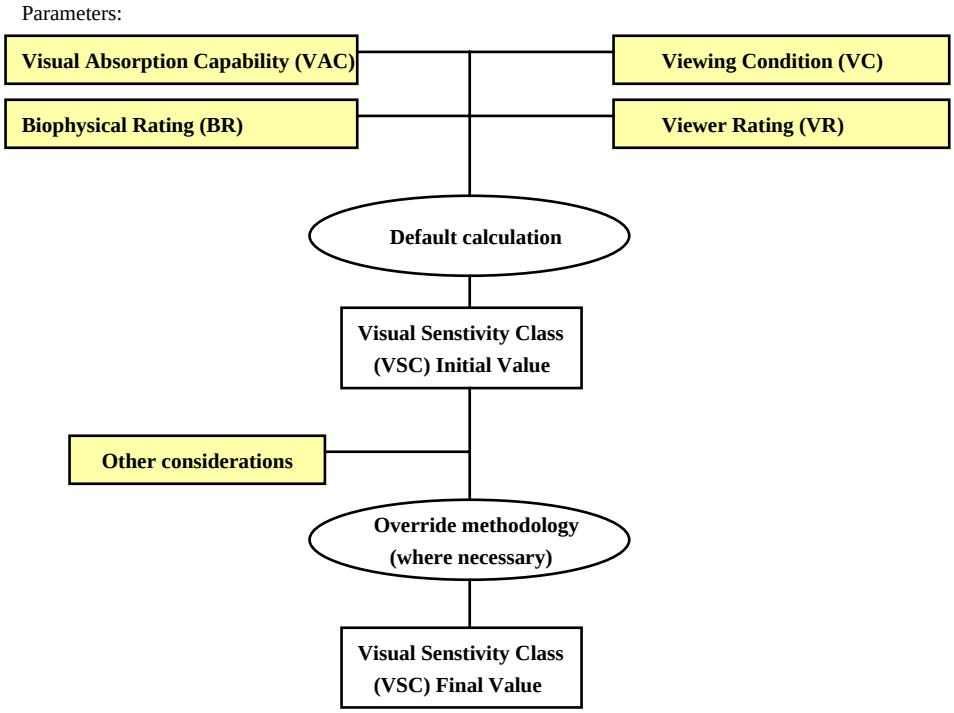
VSC is not a direct measure or quantitative assessment of the way or amount that a VSU could be altered without causing concern. It is not an analysis of the prescriptions that would be required to enable an alteration to be made to the VSU without causing concern. That is, VSC is not a recommended VQO 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.

VSC is expressed in terms of 5 classes as follows:

VSC Class	Description
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 risk 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 risk that the public would be concerned if the Visual Sensitivity Unit was visually altered.

The parameters and modifying considerations used to determine VSC are organized as illustrated in Figure 13 (following page).

Figure 13. Determination of VSC



As shown in Figure 13, the initial value of VSC is determined by four parameters.

VSC Initial Value

The initial value for Visual Sensitivity Class (VSC) is determined using the default calculation (see Section 3.1) 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[11] = Initial Value of VSC

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.

[11] Important note: subtracting VAC to determine the VSC Initial Value in no way minimizes it's importance as a parameter value.

39 VSC Final Value

The final value of Visual Sensitivity Class (VSC) is determined using the override methodology where necessary (see Section 3.1). 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:

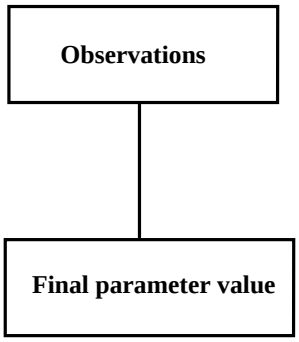
- unequal importance among the four determining parameters. For example, in some regions of the province or situations, visual landscapes may be generally biophysically similar or of low visual significance or interest and VSC may depend primarily on viewing considerations;
- extreme value of one or 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 5.4 - 5.7;
- 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 drainage's) 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).

5.9 Additional parameters *(Optional)*

There are three additional parameters, illustrated in Figure 14 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.

Figure 14: 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, color, 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

6.0 STANDARDS FOR VISUAL LANDSCAPE INVENTORY REPORT

All Visual Landscape Inventory (VLI) mapping should be accompanied by a brief, type-written, 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 (sub-totals 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 labeled 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".

7.0 STANDARDS FOR INVENTORY ROLLOVER

Inventory rollover is the "quick fix" that may be applied to existing inventory data whenever inventory standards are changed. Rollover is normally restricted to the automated conversion of existing digital data. It is carried out in accordance with prescribed rules or "logic", to enable maps, summaries and other inventory products to be generated and displayed in the new standards. This includes formats, terminology, etc.

Inventory *rollover* is not inventory *update*. Inventory update is the application of new versus old standards to obtain new data.

Inventory rollover leads to three categories of inventory data, any or all of which may be the most appropriate to use in a particular area or application. These categories are:

old data - data collected to old standards and displayed in old standards;

rolled-over data - data collected to old standards and displayed in new standards;

new data - data collected to new standards and displayed in new standards.

Under the Visual Landscape Inventory standards set out in this document, and after rollover, the Visual Landscape Inventory will cover and classify the entire provincial land base outside of protected areas. It will classify each hectare or polygon in one of four ways:

- Unclassified Area (UA);
- Visually Sensitive Area (VSA);
- Not Visually Sensitive Area (NVSA); or
- Visually Sensitive Unit (VSU) with a Visual Sensitivity Class (VSC).

Digital Standards for Inventory Rollover

The standards for inventory rollover of the old (existing) Visual Landscape Inventory digital data to new Visual Landscape Inventory digital data are as follows:

- management of old data (including digital files, maps, reports, summaries, etc.) in accordance with the ministry's Operational Records Classification System (ORCS) and Administrative Records Classification System (ARCS). Old data may be of use where:
  - it is of greater validity, in a particular situation, for decision-support than rolled over data;
  - it was the legal basis for a management decision and is needed to defend that decision; and
  - historical records or comparisons are of interest;
- clear distinction and identification of all Visual Landscape Inventory data and records as to their category (old, rolled over, new). This should be done:

- digitally, at the polygon level; and

- in hard copy, on all maps, reports, etc.;

- no change in polygon boundaries. That is, old "V", visual resource feature (Recreation Features Inventory) and old Visual Landscape Unit (old Visual Landscape Inventory) polygon boundaries remain unchanged except where required to correct graphic errors, neat line matching, etc. to enable the handling of digital files;

- examination of old Recreation Features Inventory and old Visual Landscape Inventory data for decision whether to rollover. Data should be rolled over unless doing so would make the data unreliable or more misleading. For data that is rolled over:

  - if no Visual Landscape Inventory and no Recreation Features Inventory, then the area is classified as "UA";

  - if no Visual Landscape Inventory, a Recreation Features Inventory but no V feature, then the area is still classified as "UA";

  - if no Visual Landscape Inventory, a Recreation Features Inventory, and a V0 feature, then the area is classified as "VSA";

  - if no Visual Landscape Inventory, a Recreation Features Inventory, and a V1, V2 or V3 then the area is classified as follows:

    V1 (high VSR) = VSC of 2
    V2 (moderate VSR) = VSC of 3
    V3 (low VSR) = VSC of 4;

  - if no Visual Landscape Inventory, a Recreation Features Inventory, and a V4, V5, V6, V7, V8 or V9 visual resource feature then the area is classified as follows:

VACSEN matrix element[12]:		Visual Sensitivity Class as follows:
V4	=	1
V5	=	2
V6	=	3
V7	=	2
V8	=	3
V9	=	4

Note: Many recreation inventories contain management codes for recommended or approved VQOs. These should be moved to the administrative data base.

[12] Based on the following VACSEN matrix:

		Visual Absorption Capability		
		L	**M**	**H**
Visual Sensitivity Rating	**H**	V4	V5	V6
	M	V7	V8	V9
	L	V3	V3	V3

- if there is a Visual Landscape Inventory, then:

OLD digital data	digital Rollover to new standards
Visual Absorption Capability, VAC	Visual Absorption Capability, VAC
Existing Visual Condition, EVC	Existing Visual Condition, EVC
Visual Sensitivity Rating, VSR High	Visual Sensitivity Class, VSC 2
Visual Sensitivity Rating, VSR Moderate	Visual Sensitivity Class, VSC 3
Visual Sensitivity Rating, VSR Low	Visual Sensitivity Class, VSC 4
VQO (recommended or established)	This information is moved to an administrative database that will contain scenic area and VQO information.

Manual Standards for Inventory Rollover

Where there is currently only hard copy rather than digital data, inventory update should normally be favored over manual inventory rollover. However, if manual rollover is done, it should normally follow the same rules as digital rollover.

8.0 USE OF THE VISUAL LANDSCAPE INVENTORY

8.1 Clients

The primary clients of the Visual Landscape Inventory are:

- Land use planning processes (Regional plans, Land and Resource Management Plans, Local Resource Use Plans, etc.);
- District Managers (Forest Practices Code decisions);
- Chief Forester (Annual Allowable Cut determinations); and
- Operational staff (administration and referral of plans and activities);
- Public;
- Licensees; and
- Other Government Agencies.

8.2 Testing

The Visual Landscape Inventory procedures and standards set out in this document may be tested during 1997/98. Results of this testing will be incorporated into the revision to Chapter 6 and 11 of the *Recreation Manual* (under separate cover) scheduled for later this year.

8.3 Related Revisions

Visual Landscape Inventory procedures and standards are incorporated into a number of other ministry records. These records need to be updated to remain consistent with the procedures and standards set out in this document (which will become part of the *Recreation Manual*). These associated ministry records are:

- *Visual Impact Assessment Guide Book*;
- Visual Landscape Management Policy, (#4.2, *Resource Management*, *Ministry Policy Manual*);
- Visual Landscape Management Process (Chapter 11, *Recreation Manual*);
- Visual Landscape Management training material;
- *Visual Landscape Inventory and Analysis Contract Document;*
- Regional Standard Operating Procedures; and
- Digitizing standards, including map labels and legends.

9.0 REFERENCES

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US Department of Agriculture, 1974. Forest Service. *National Forest Landscape Management, Volume 2*.

Walker, Havens and Erickson, 1974. *Visual Resource Analysis of the Oregon Coastal Zone*, 1974. Prepared for The Oregon Coastal Conservation and Development Commission, by Walker, Havens and Erickson, Eugene Oregon.

Yeomans, William C., 1983. *Visual Resource Assessment, A User Guide*. British Columbia Ministry of Environment, Surveys and Mapping Branch, August 1983.

10.0 GLOSSARY OF TERMS

ARCS: Administrative Records Classification System. The provincial government system of administrative records classification.

British Columbia Geographic System (BCGS): A cartographic system in which the coverage in minutes and seconds of longitude is double the coverage in minutes and seconds of latitude for mapsheets of all scales
(e.g., standard map scales of 1: 20 000 or less)

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.

Clearcut: a silvicultural system that removes the entire stand of trees in a single harvesting operation from an area that is 1 hectare or greater and at least two tree heights in width, or is designed to manage the area as an even aged stand.

classification form: paper field sheets used to record the ratings and values of the various inventory factors and parameters.

cutblock: a specific area of land identified in a forest development plan, or in a licence to cut, road permit or Christmas tree permit, within which timber is to be or has been harvested.

default calculations: the sum of numeric values associated with the contributing factors used to determine the initial rating or value of a parameter.

Existing Visual Condition (EVC): a component of the Visual Landscape Inventory that presents the level of human-made landscape alterations caused by resource development activities of a VSU and expressed in terms of the visual quality classes.

factors:. the identifiable and distinguishable characteristics or aspects of a VSU which are used to determine some VSU parameters.

Forest Development Plan (FDP): an operational plan guided by the principles of integrated resource management (the consideration of timber and non-timber resource values), which details the logistics of timber harvesting usually over a period of five years. Methods, schedules, and responsibilities for accessing, harvesting, renewing, and protecting forest resources are set out to enable site-specific operations to proceed.

focal length: the length of cameral lens used for taking photographs.

inventory update: application of the new standards versus old standards in the field, to obtain new data.

inventory rollover: the automated conversion of existing digital inventory data from one standard to another using predetermined rules.

Higher Level Plan (HLP): according to *the Forest Practices Code of British Columbia Act Bill 40 - 1994*, a Higher Level Plan is a plan formulated pursuant to *section 4(c) of the Ministry of Forests Act*; a management plan; an objective for a resource management zone; an objective for a landscape unit or sensitive area; an objective for a recreation site, recreation trail or interpretive forest site; and a plan or agreement declared to be a higher level plan by the ministers, or the Lieutenant Governor in Council under this or any other act.

human-caused alteration: any type of disturbance to a landscape caused by human activity.

Land and Resource Management Plan (LRMP): an integrated, sub-regional consensus building process that produces a land and resource management plan for review and approval by government. The plan establishes direction for land use and specifies broad resource management objectives and strategies.

Local Resource Use Plan (LRUP): a strategic plan for a portion of a timber supply area or tree farm licence that provides management guidelines for integrating resource use in the area.

modifying factors: are identifiable and distinguishable characteristics or aspects of a VSU which are not used initially to derive a parameter, but which if present and rated high may influence the choice of final parameter rating.

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

neat-line: a line defining the map border.

Not Visually Sensitive Area (NVSA): an area that is not considered to be sufficiently sensitive to visual alteration to warrant special consideration over and above normal Forest Practices Code Requirements because of its visual sensitivity. It is an area for which the normal "clear cut/3-pass/3 meter green-up" harvesting and silviculture regime, and its associated forest cover and adjacency considerations, could be carried out unless constrained by considerations other than visual sensitivity. (**Note**: this regime normally results in an EVC of EM (in plan view). However, visual landscape design should still be applied where possible.

National Topographic Series (NTS): Of Mapping, a geographic system under which Canada is divided into numbered primary quadrangles each 4 degrees latitude by 8 degrees longitude (e.g., standard map scales greater than 1:25 000)

observations: the unit criteria or specific measure of the observed characteristics of a VSA or VSU that are used to assign a rating to a factor and in some cases a parameter.

override methodology: a subjective means of determining the final values of select parameters by evaluating the accuracy of the initial value determined by the default calculation; use of

professional judgment to alter the default calculation, if required, and including a rationale statement whenever a default calculation is altered.

ORCS: Operational Records Classification System. . The provincial government system of operational records classification.

parameters: the characteristics or features used to describe and classify the Visual Sensitivity Unit. Parameters may be derived by aggregating factors and/or other parameter ratings.

polygon: an area/unit of land and/or water with boundaries on a map that have similar features or values.

pristine viewscape: a landscape untouched by human influence.

procedures: a series of steps or instructions, describing a way of doing things.

Recommended VQO: a specialist's recommendation to a manager or planning process regarding the level of human-made alteration that would be acceptable on a landscape given, Visual Sensitivity Class, viewer numbers and expectations, as well as biological, technical and economic factors.

Recreation Facilities Inventory: the identification, classification and recording of the types and locations of recreation facilities.

Recreation Feature: means the biological, physical, cultural or historic feature that has recreation significance or value.

Recreation Features Inventory: the identification, classification and recording of the types and locations of recreation features.

Recreation Resource: a recreation feature; a scenic or wilderness feature or setting that has recreation significance or value; or a recreation facility.

Recreation Opportunity Spectrum Inventory: an inventory of outdoor settings based on remoteness, area size, and evidence of humans, which allows for a variety of recreation activities and experiences.

Recreation Resources Inventory: the identification, classification and recording of the types and locations of biological, physical, cultural, historical, scenic, or wilderness feature that have recreation significance or value, or any recreation facility.

Referral: the process by which applications for permits, licenses, leases, etc. made to one government agency by an individual or industry are given to another agency for review and comment.

resource development activities: activities such as timber harvesting, mining and road construction which derive products or commodities from forest lands.

scenic area: any visually sensitive area or scenic landscape identified through a Visual Landscape Inventory or planning process carried out or approved by the district manager.

travel corridors: a route, highway or waterway used by the public to travel from one geographic area to another.

TRIM: Terrain Resource Inventory Mapping.

Unclassified Area (UA): areas outside of the Ministry of Forest jurisdiction (e.g. federal crown lands, private lands, parks and other protected areas).

V feature: an attribute used in the old Recreation Features Inventory, to identify areas where visual values were expected to be significant and where a Visual Landscape Inventory had not yet been completed.

VACSEN Matrix: a matrix which uses Visual Absorption Capability and Visual Sensitivity to derive a V feature subscript in the recreation inventory of 1990.

Viewing Condition (VC): a measure of the condition under which the Visual Sensitivity Unit (VSU) is most commonly viewed.

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.

viewpoint: an on-the-ground or water based location, from which the surrounding landscape can be viewed or observed.

viewshed: a physiographic area composed of land, water, biotic, and cultural elements which may be viewed and mapped from one or more viewpoints and which has inherent scenic qualities and/or aesthetic values as determined by those who view it.

Visual Absorption Capability (VAC): a component of the Visual Landscape Inventory that rates the relative capacity of a landscape to absorb visual alterations and still maintain its visual integrity.

visual alteration: human-made landscape alterations caused by activities such as forestry, mining, road construction, utility corridor, and agriculture.

Visual Landscape Analysis: the process of recommending Visual Quality Objectives based on the Visual Landscape Inventory and social factors.

Visual Landscape Design: the organization of a place in a way which reconciles the conflicting requirements of use while ensuring an attractive appearance.

Visual Landscape Inventory (VLI): the identification, classification, and recording of the location and quality of visual resources that may be problematic if not managed to the concepts, principles and practices set out in the visual landscape management process.

Visual Landscape Management: the identification, assessment, design, and manipulation of the visual features or values of a landscape, and the consideration of these values in the integrated management of provincial forest and range lands.

Visual Quality Objective (VQO): a resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area.

Visual Quality Class (VQC): a classification which refers to the character and/or condition of the visual resource.

visual resources: the quality of the environment as perceived through the visual sense only.

Visual Resources Inventory (VRI): an assessment and classification of the provincial landbase in terms of visual landscapes or scenic viewscapes for their scenic attractiveness and ability to provide recreation opportunity.

Visual Resource Unit: an area with similar physiographic landscape characteristics or biophysical attributes, that are linked together to make up a scene, or are considered a unit for strategic or operational planning purposes.

Visually Sensitive Area (VSA): an area that is considered to be sufficiently sensitive to visual alteration to warrant special consideration in strategic and operational planning. It is an area for which the Visual Landscape Management Process should be applied. These areas may include viewsheds that are visible from communities, public use areas, travel corridors including roadways and waterways and any other viewpoint so identified through a referral or planning processes.

Visual Sensitivity Class (VSC): a component of the Visual Landscape Inventory that rates the sensitivity of the landscape based on biophysical characteristics and viewing and viewer related factors.

Visual Sensitivity Unit (VSU): a distinct topographical unit as viewed from one or more viewpoints, delineated based on the homogeneity of the landform and of biophysical elements comprised in a scene.

Visual Sensitivity Unit Rating Point: the on the ground or water location that offers the vest viewing opportunity of the VSU, and is the location from which the VSU Classification Form is completed.

APPENDIX 1

Visually Sensitive Area Classification Form

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

APPENDIX 2

Visual Sensitivity Unit Classification Form

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	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**		

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 E
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
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 (0)	A B
28 Influence of Water	H		M		L		N/A (0)	A B C
29 Influence of Adjacent Scenery	H		M		L		N/A (0)	
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

APPENDIX 3

Photography Data Form

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^{o})	(+/-) ± degrees	(#)	(Start/End Frame #)	(mm)	(P,S,V) Digital

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

APPENDIX 4

List of Forest District Codes

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 5

Visual Landscape Inventory Map Legend