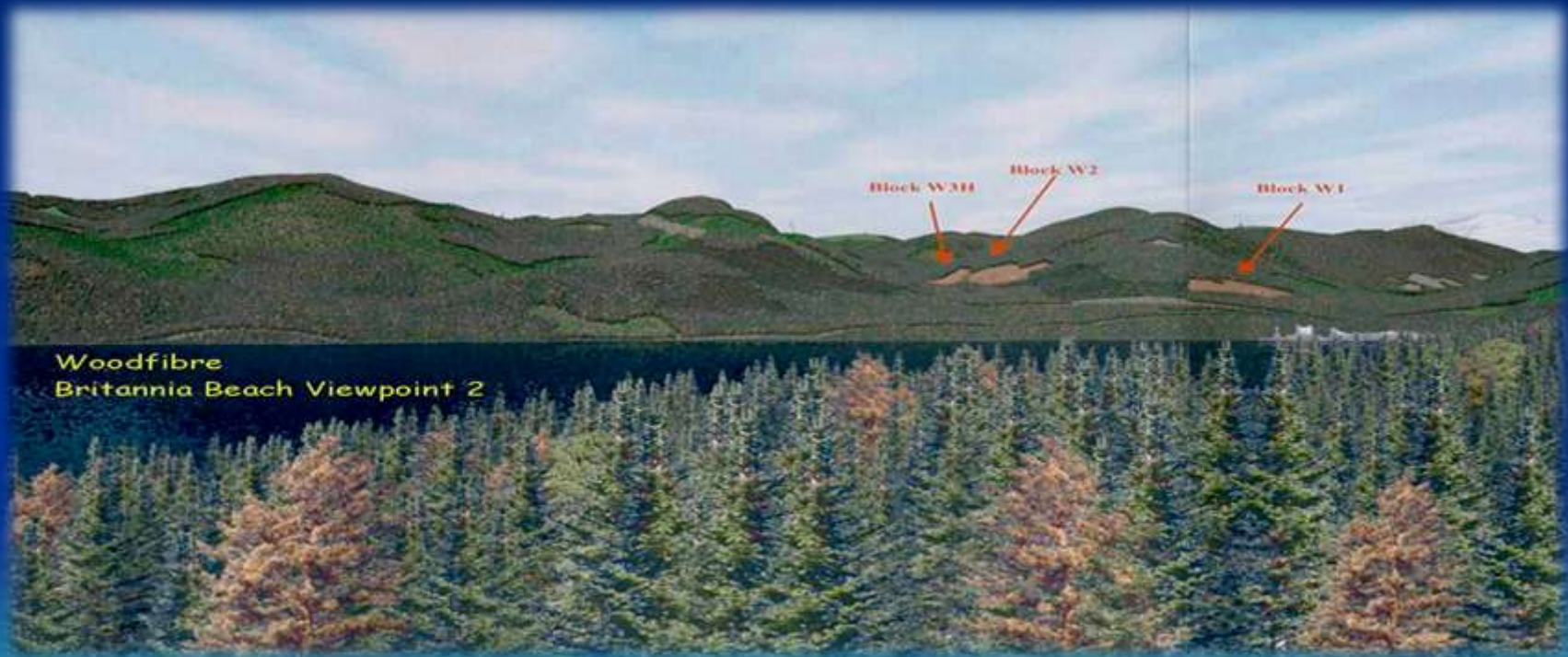


Visual Impact Assessment

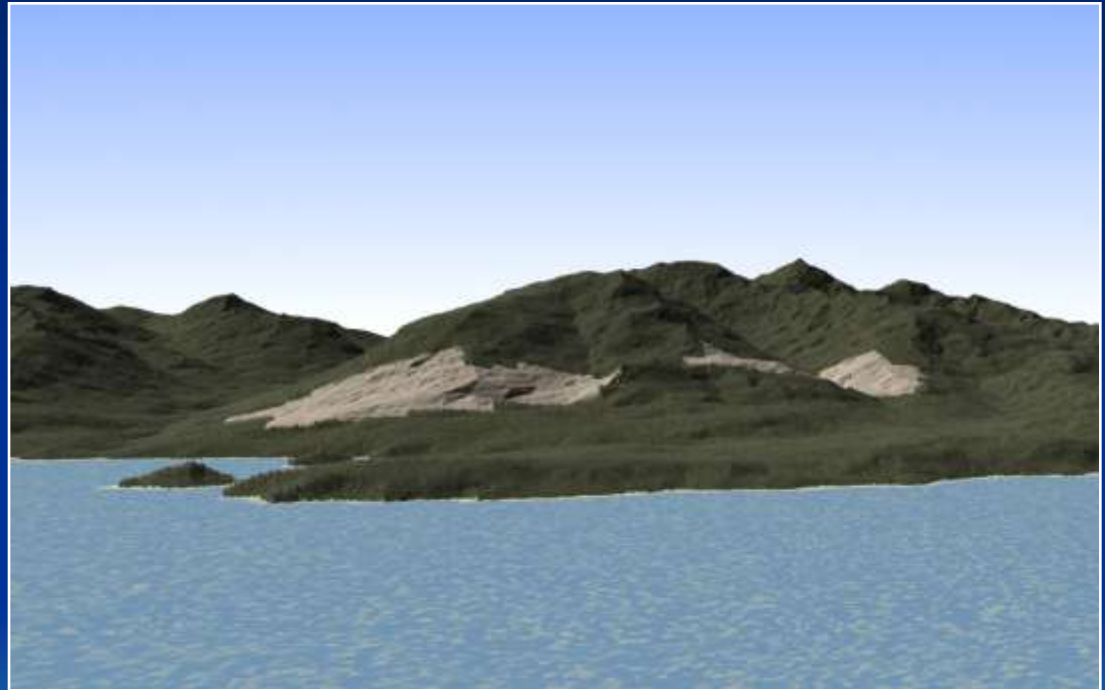
Evaluating the proposed Visual Impact of Forestry Operations



Visual Impact Assessment

What is a Visual Impact Assessment (VIA)?

It is an assessment of the predicted visual impact of a forestry operation in perspective view.



Visual Impact Assessment

A VIA is not just a visual simulation!

It is an iterative process that involves:

- Selecting viewpoints
- Describing the landscape's visual character
- Simulating views of proposals from the viewpoints
- Reviewing the simulations to determine if VQOs will be achieved.
- Adjusting block pattern and shape as necessary
- Documentation of the process used.

Visual Impact Assessment

Visual Impact Assessments were a legal requirement under the Code.

They are not a legal requirement under FRPA.

However, **due diligence** suggests that some level of assessment is required in order for a professional to demonstrate that the results/strategies prescribed in the FSP will be consistent with VQO for an area.

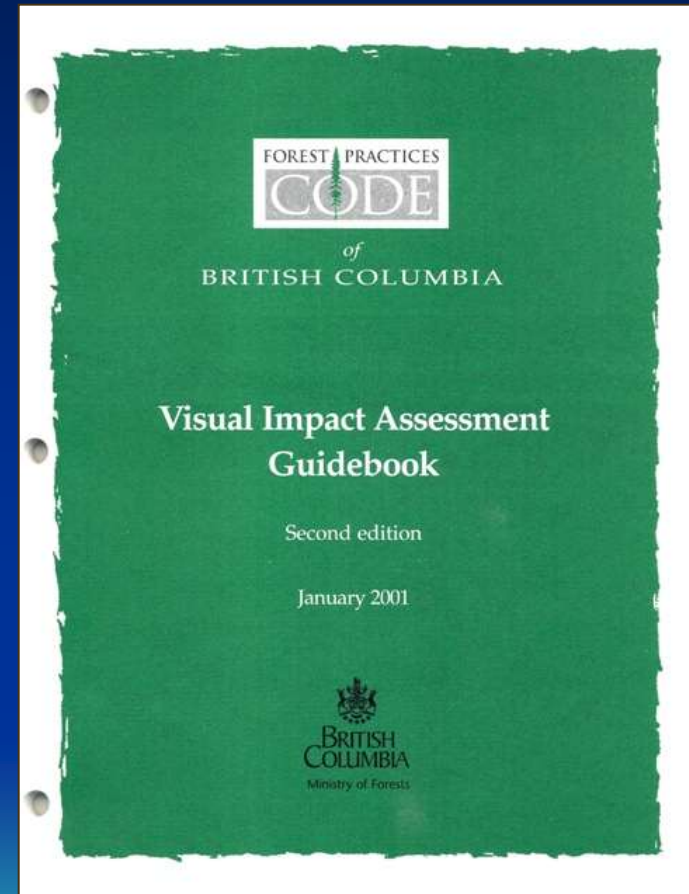
The ABCFP Standards of Professional Practice require RPFs and RFT's to exercise due diligence in completing their work. Completing a VIA to an appropriate standard would be evidence of this when managing for visual quality.

Visual Impact Assessment

The VIA Guidebook was released as part of the Forest Practices Code and still provides sound technical advice.

It suggests that the level and detail of a VIA may vary depending on a number of factors e.g. VSC, numbers of people, level of public concern, range of viewing opportunities, and established VQO.

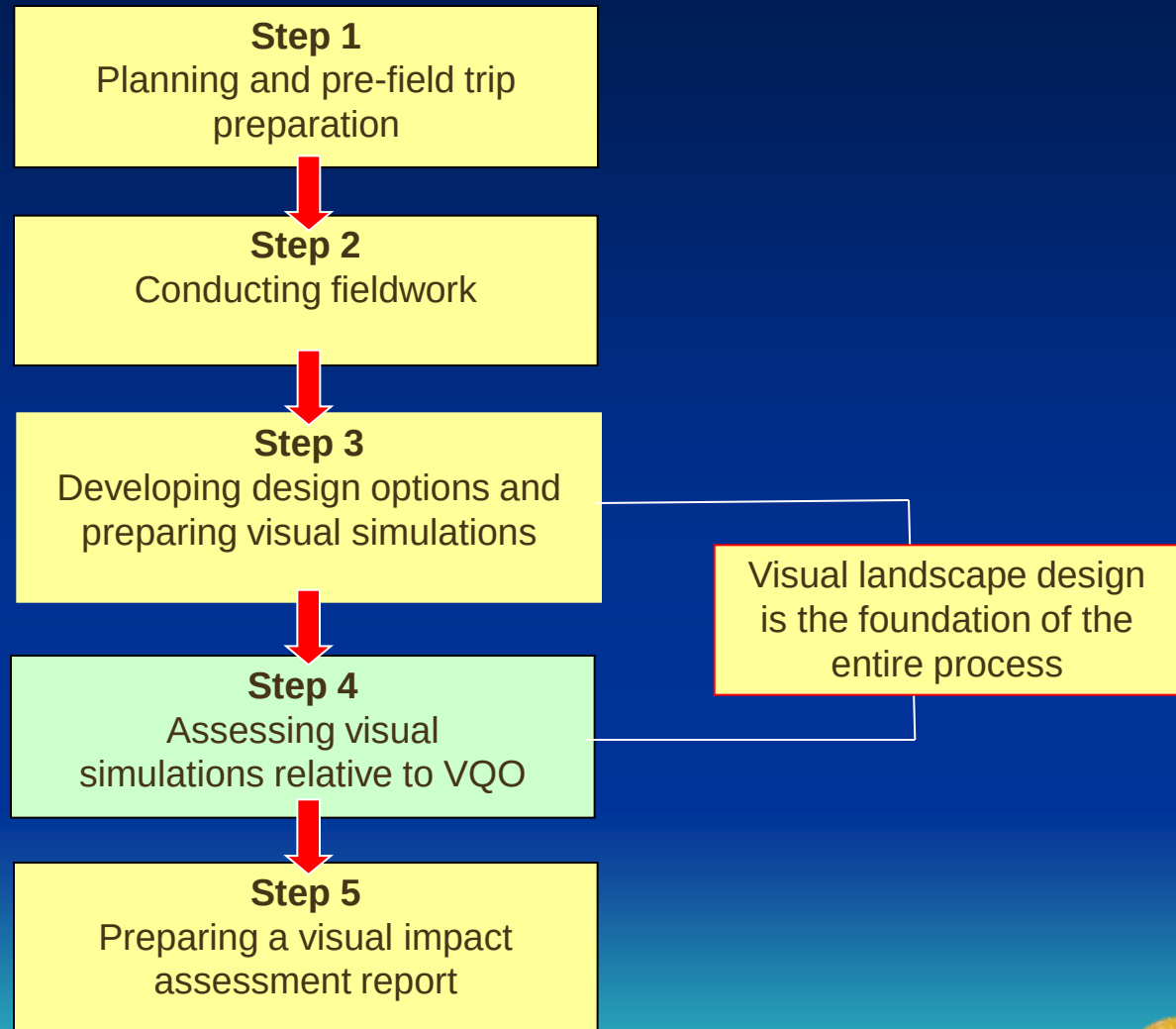
One Caution: The VQO definitions used in the VIA Guidebook have been replaced with legal definitions in s.1.1 of FPPR.



Visual Impact Assessment

- In situations with a **highly sensitive landscape** and/or large numbers of viewers an intensive VIA may be required.
- An intensive VIA would include digital terrain modeling, photographic panoramas and TRIM contour mapping with viewpoints identified.
- In situations with a **less sensitive landscape** a map, form, and photograph of the area with an overlay showing relative block size, location and configuration may be appropriate.

Visual Impact Assessment Approach



Visual Impact Assessment

Step 4: Assessing visual simulations

- The purpose of this step is to evaluate whether the proposed operation will achieve the established VQO.
- The Forest Planning and Practices Regulation S.1.1 defines 5 categories of altered forest landscapes relating to VQOs, which are assessed from a significant public viewpoint.
- **A significant public viewpoint means:** *a place or location on the water or land that is accessible to the public and has relevance to the landscape being assessed. (Note: under the Interpretation Act singular means plural.)*
- In addition to the proposed operation, existing non-visually greened-up alterations within the unit must be considered.

Visual Impact Assessment

DEFINITION: To be consistent with a VQO, all existing and proposed operations must meet the definition for the specific altered landscape (VQO) from each viewpoint. This is an ocular assessment which examines size, shape and design of the alterations relative to the landform being assessed.

SCALE OF ALTERATION: Based on research, we have learned that some numerical data such as % landform alteration for clear cutting and stems/volume removed for partial cutting can be good predictors of VQOs.

DESIGN: Visual design of proposals is also critical to achieving VQOs. Alterations that borrow from natural characteristics will more easily achieve VQOs and also get public support. We will examine visual design concepts & principles in day two.

Definitions of Altered Landscapes

Preservation:	very small in scale, and not easily distinguishable from the pre-harvest landscape
Retention:	(i) difficult to see, (ii) small in scale, and (iii) natural in appearance.
Partial Retention:	(i) easy to see, (ii) small to medium in scale, and (iii) natural and not rectilinear or geometric in shape.
Modification:	is very easy to see, and is (A) large in scale and natural in its appearance, or (B) small to medium in scale but with some angular characteristics;
Maximum Modification:	very easy to see, and (ii) is (A) very large in scale, (B) rectilinear and geometric in shape, or (C) both

Scale of Alteration for Clear-cutting

The table below shows the VQO likely to be achieved given planned scale of alteration.

<u>VQC/VQO</u>	<u>% Alt Range by VQO</u> <u>In Perspective</u>
Preservation	0
Retention	0 - 1.5
Partial Retention	1.6 - 7.0
Modification	7.1 - 18.0
Max Modification	18.1 - 30.0

(Source: *Clear cutting and Visual Quality*, 1996)

Volume/Stems Removed for Partial Cutting

The table below shows VQO likely to be achieved given planned retention levels.

		Tree Height (Metres)									
		5	10	15	20	25	30	35	40	45	50
Volume (Stems) Removed in %	10	R	R	R	R	R	R	R	R	PR	PR
	20	R	R	R	R	R	R	PR	PR	PR	PR
	30	R	R	R	R	PR	PR	PR	PR	PR	PR
	40	R	R	PR	PR	PR	PR	PR	PR	PR	M
	50	PR	PR	PR	PR	PR	PR	PR	M	M	M
	60	PR	PR	PR	PR	PR	M	M	M	M	M
	70	PR	PR	PR	M	M	M	M	M	M	M
	80	PR	PR	M	M	M	M	M	M	M	M
	90	M	M	M	M	M	M	M	M	M	M

(Source: *Visual Impacts of Partial Cutting*, 1997)

Visual Impact Assessment

Key Design Criteria:

- Response to visual force lines
- Borrows from natural features
- Edge treatments
- Opening shape
- Tree retention
- Road and landing visibility



The above are a few key design criteria discussed in the VIA Guidebook and Effectiveness Evaluation procedures and standards. The Ministry's *Visual Design Training Manual* and on-line training (<http://www.for.gov.bc.ca/hfp/values/visual/index.htm>) are recommended references as they deal with visual design in much more detail.

Visual Impact Assessment

Questions to ask when assessing a simulation.

Basic definition:

Does a proposed operation meet the category of alteration (VQO) definition?

Visual design:

Does a proposed operation exhibit elements of good visual design?

Numerical assessment:

In perspective view, what proportions of the landform or unit are represented by existing non-visually effective green-up alterations and a proposed operation? What percent volume or stems will be left in the block?

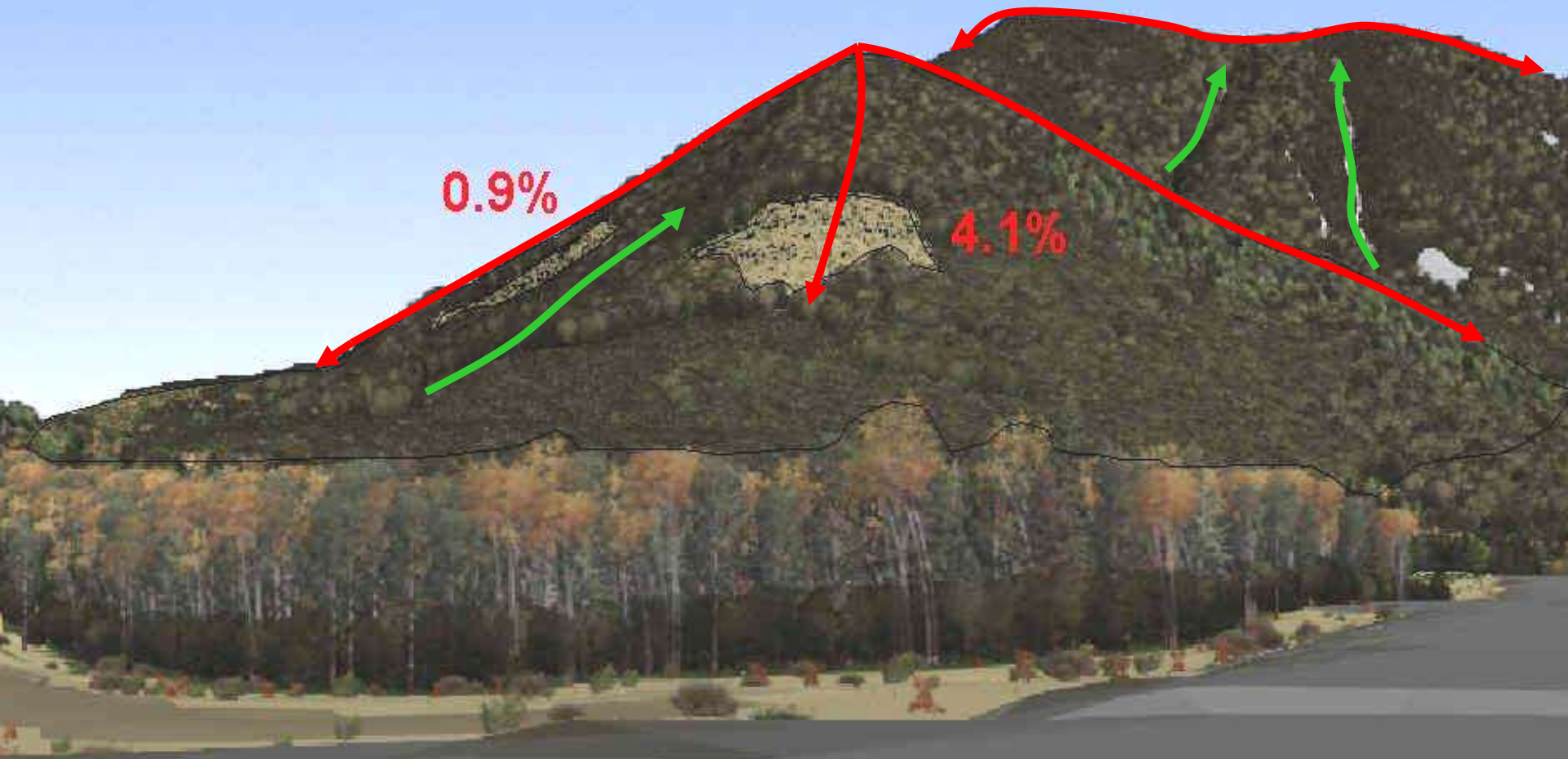
Exercise #4a Assessing a Clear Cut Simulation

What VQO will this proposal achieve?

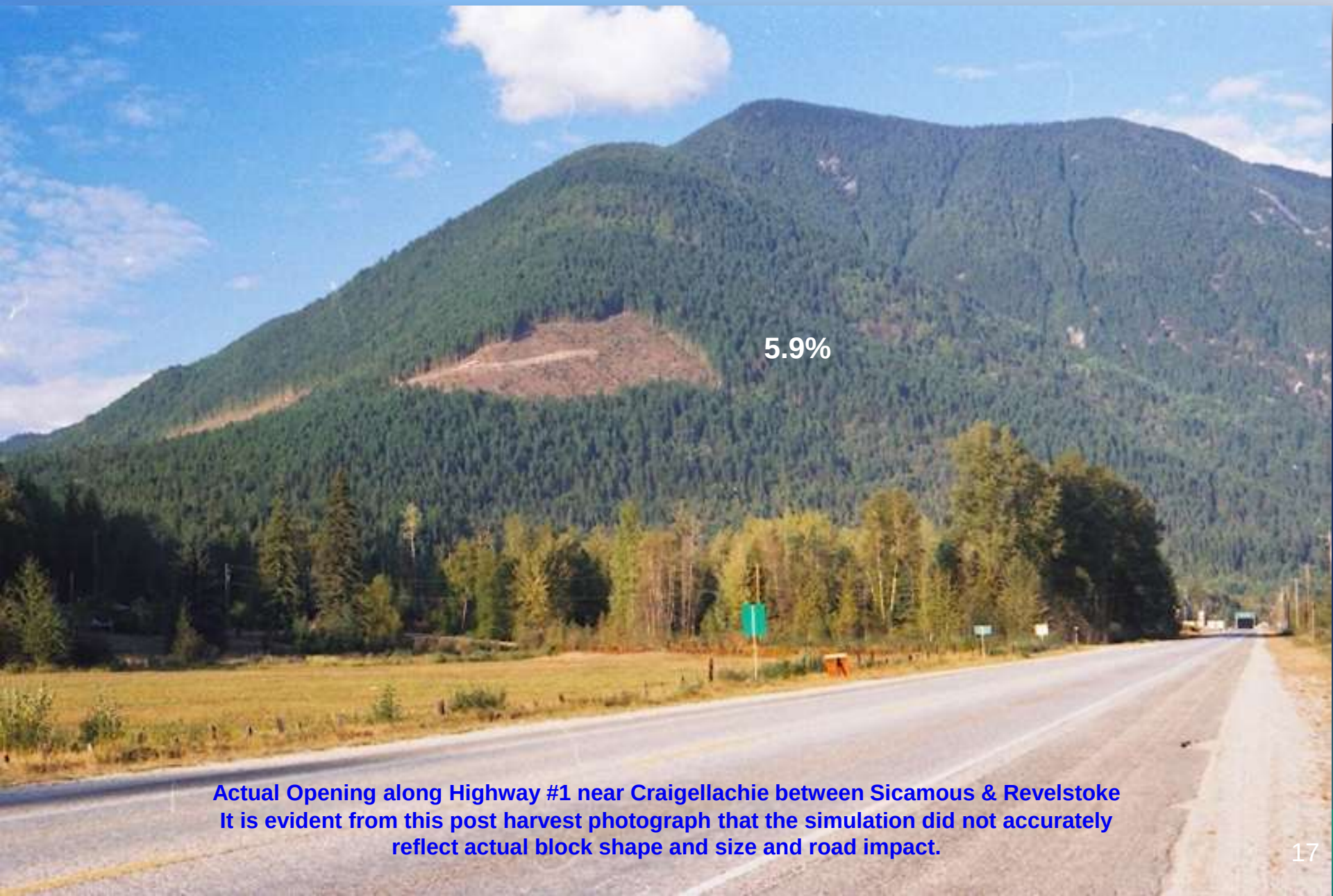


1. Define landform unit for analysis purposes.
2. Conduct ocular assessment using definitions.
3. Evaluate design.
4. Conduct numerical assessment.

Results?



1. Ocular assessment = Modification
2. Numerical Assessment = 5% PR
3. Design = Poor (Block mid-slope, on center of ridge, focal point, slightly angular in shape. and conflicts with lines of force)



5.9%

Actual Opening along Highway #1 near Craigellachie between Sicamous & Revelstoke
It is evident from this post harvest photograph that the simulation did not accurately reflect actual block shape and size and road impact.

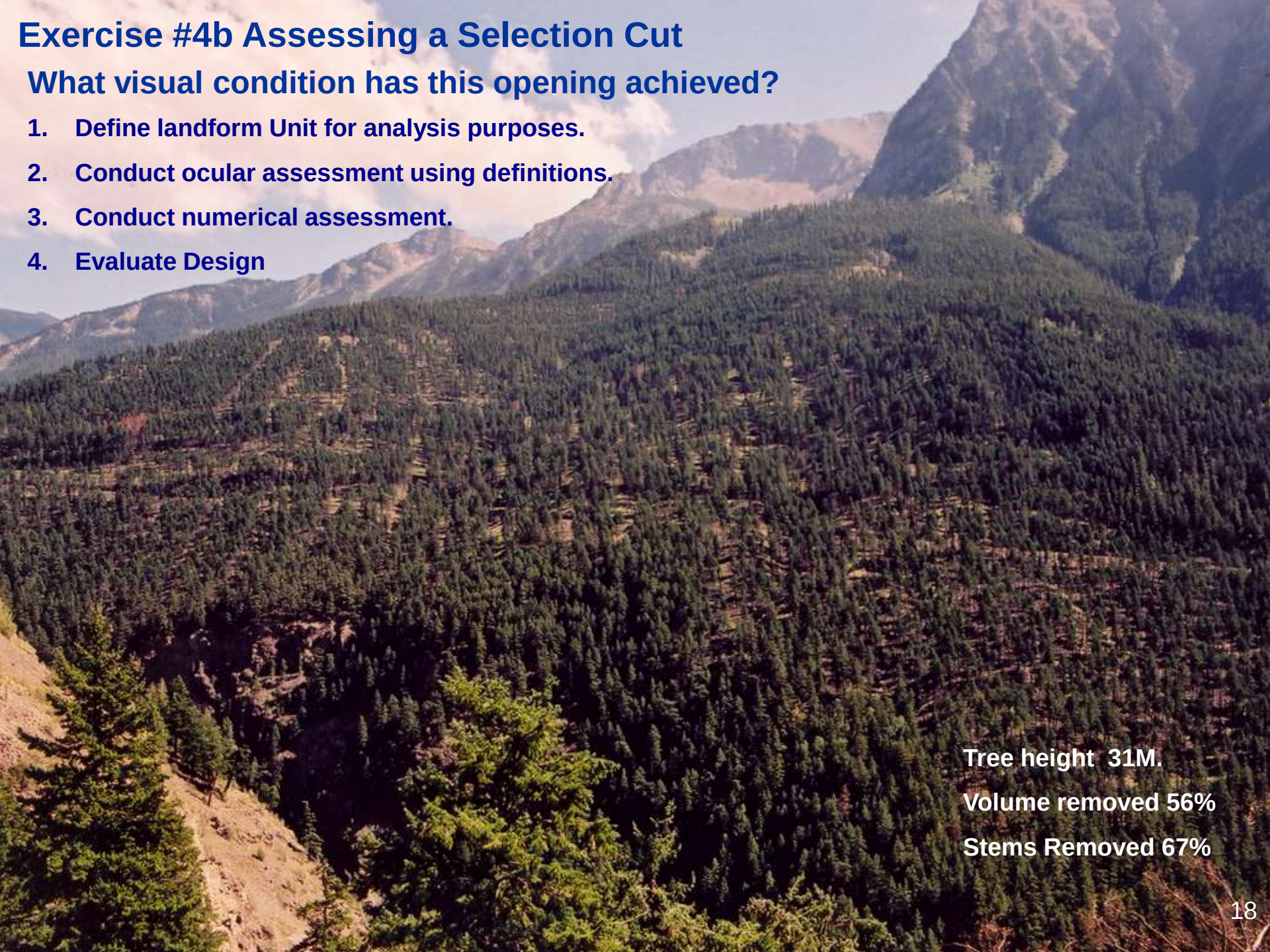


November 2013

Exercise #4b Assessing a Selection Cut

What visual condition has this opening achieved?

1. Define landform Unit for analysis purposes.
2. Conduct ocular assessment using definitions.
3. Conduct numerical assessment.
4. Evaluate Design



Tree height 31M.
Volume removed 56%
Stems Removed 67%

What VQO has this opening achieved?

1. Ocular assessment = PR
2. Numerical Assessment = PR

Volume (Stems) Removed in %	Tree Height (Metres)									
	5	10	15	20	25	30	35	40	45	50
10	R	R	R	R	R	R	R	R	PR	PR
20	R	R	R	R	R	R	PR	PR	PR	PR
30	R	R	R	R	PR	PR	PR	PR	PR	PR
40	R	R	PR	PR	PR	PR	PR	PR	PR	M
50	PR	PR	PR	PR	PR	PR	PR	PR	M	M
60	PR	PR	PR	PR	PR	PR	PR	PR	M	M
70	PR	PR	PR	M	M	M	M	M	M	M
80	PR	PR	M	M	M	M	M	M	M	M
90	M	M	M	M	M	M	M	M	M	M

Tree height 31M.

Volume removed 56%

Stems Removed 67%

3. Design = Moderate. (organic shape, even distribution of leave trees, some response to LoF)
Yarding Corridors visible.