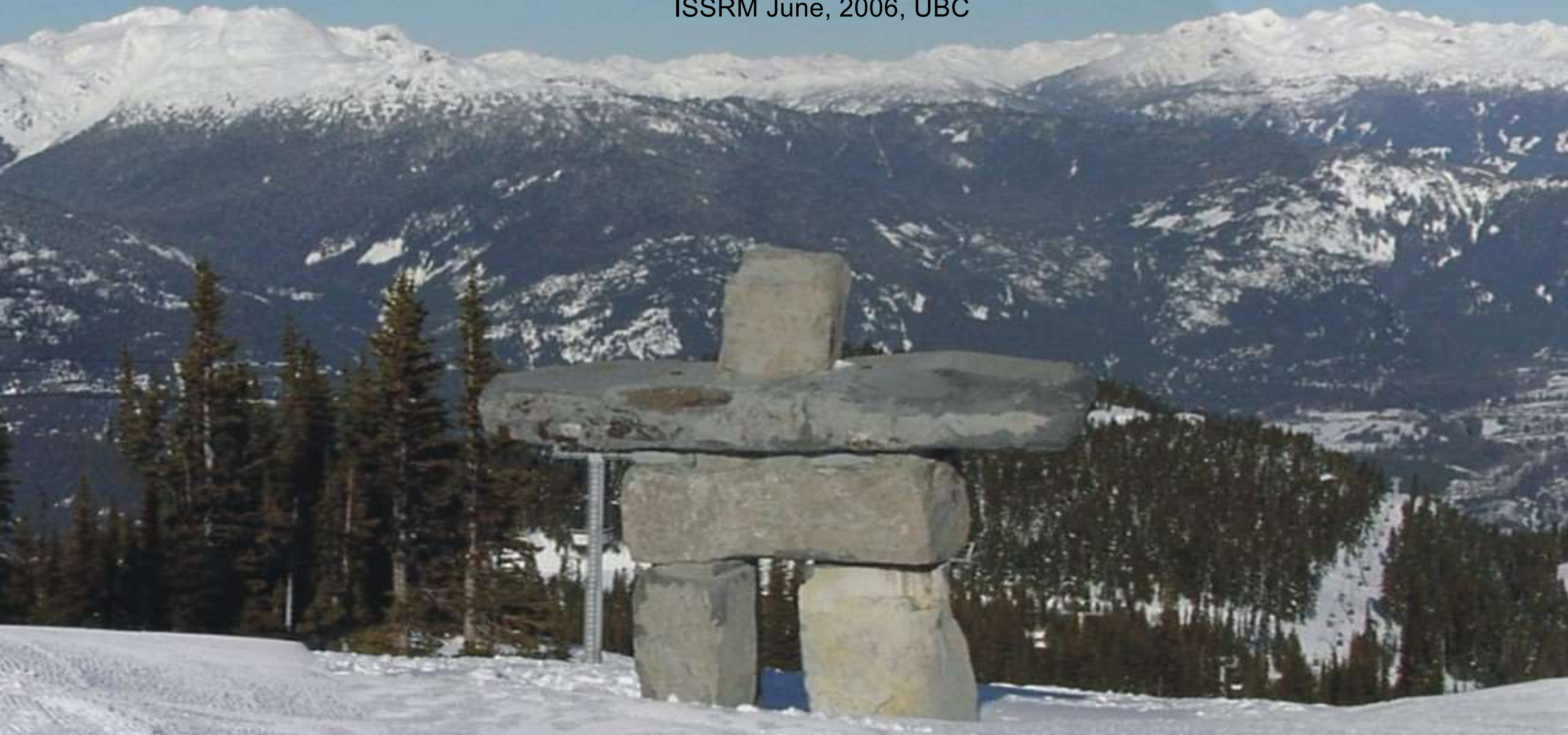
Visual Landscape Strategies

Vancouver - Whistler Corridor

in Advance of the 2010 Olympic Winter Games

ISSRM June, 2006, UBC



Ken B. Fairhurst, Ph.D. Candidate, Forest Resources Management, UBC

International Symposium on Society and Resource Management
now called the International Association on Society and Resource Management (IASNR)
The University of British Columbia

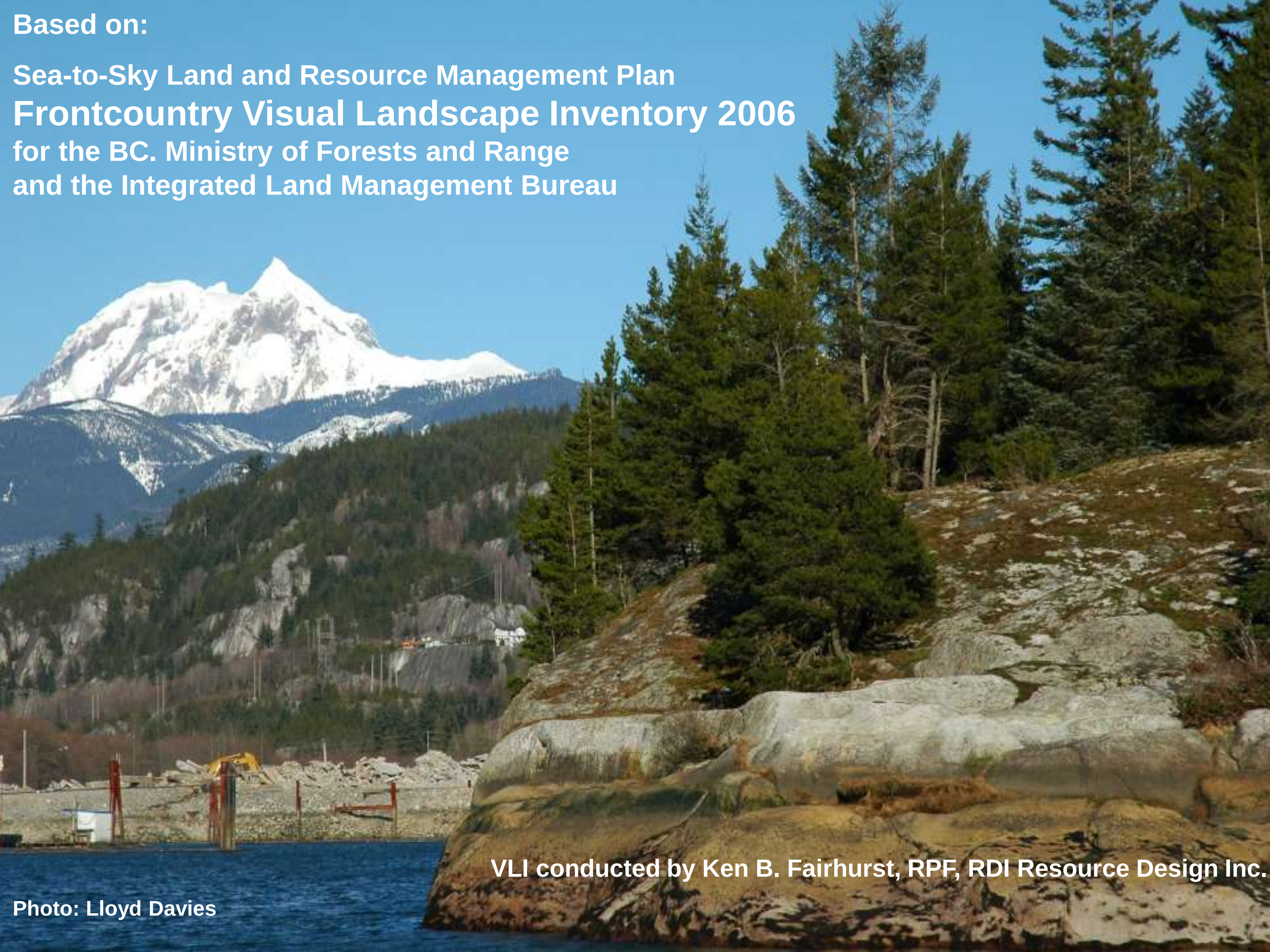
hoto: Tom Cole

Based on:

Sea-to-Sky Land and Resource Management Plan

Frontcountry Visual Landscape Inventory 2006

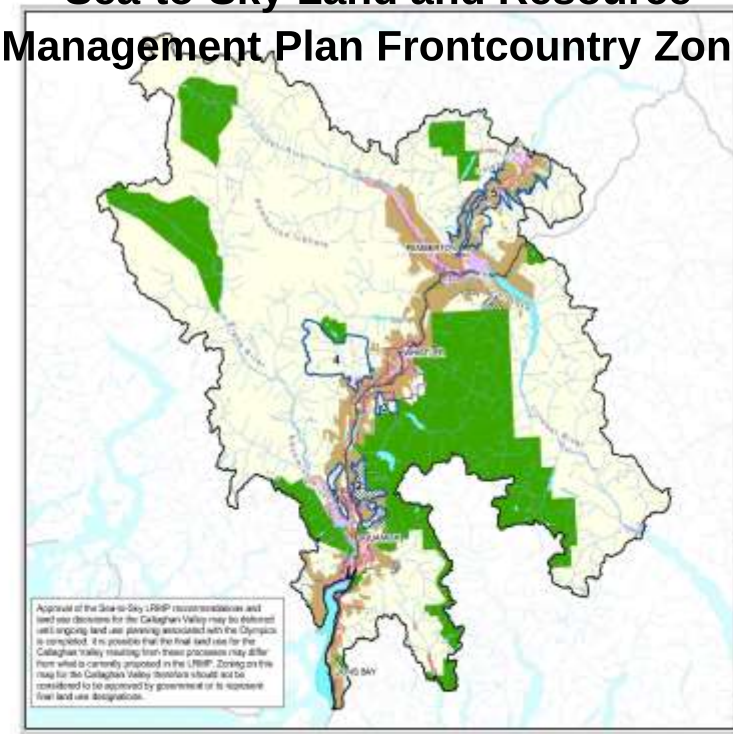
for the BC. Ministry of Forests and Range
and the Integrated Land Management Bureau



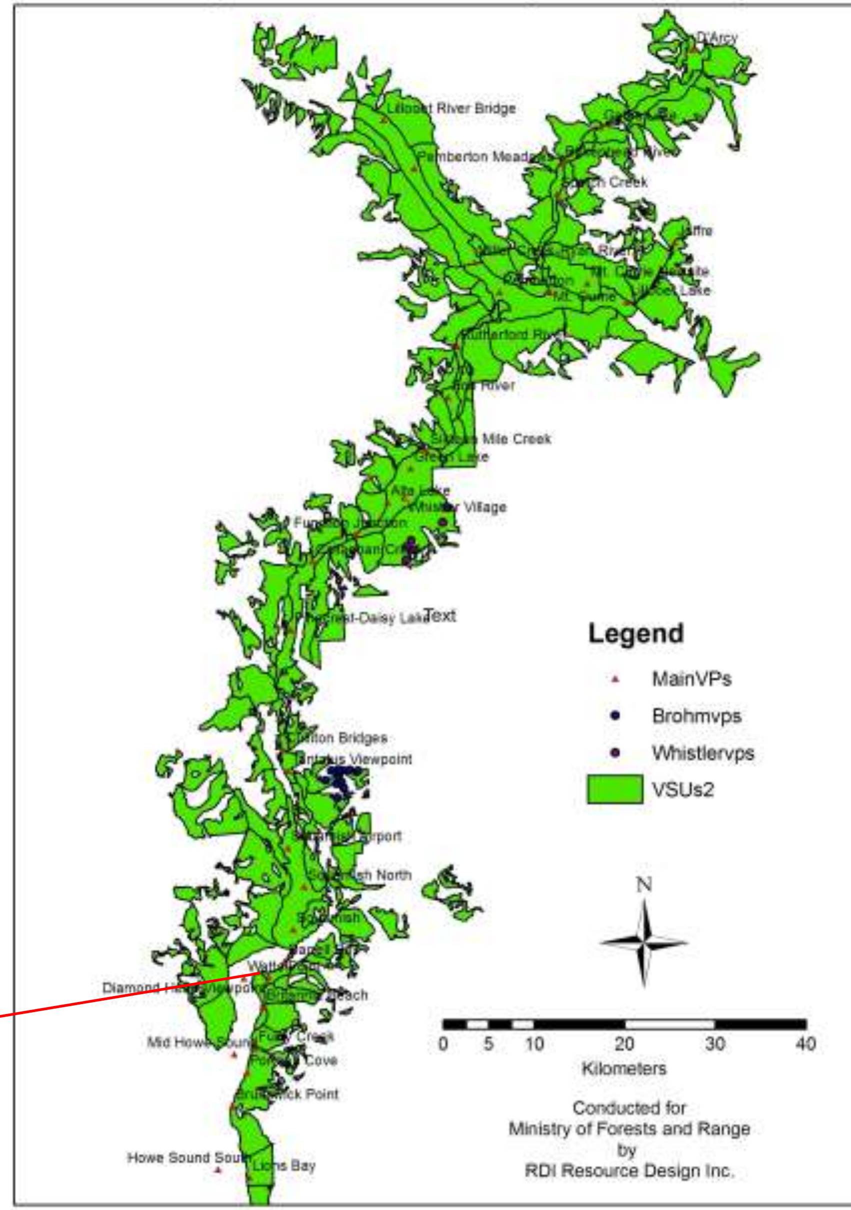
VLI conducted by Ken B. Fairhurst, RPF, RDI Resource Design Inc.

Photo: Lloyd Davies

Sea-to-Sky Land and Resource Management Plan Frontcountry Zone



Sea-To-Sky Visual Landscape Inventory 2006



Visual Sensitivity Unit Classification Form - Page 1

1. Forest District: DSQ
2. Rated by: K. B. Fairhurst
3. Date: 2006/02
4. Project: 2006-02: S2S Frontcountry Zone VLI Update
5. VSA #: 2. Westside Howe Sound Squamish - Tantalus Range
7. VSG #: 2.1 Westside Howe Sound - Tantalus Range - Woodfibre
8. Cross Mapsheet VSU # :

9. BCGS Map # 092G064

##

Ministry of Forests and Range

R D I Resource Design Inc
Forest and Land Planning Services

6. VSU #		201	
M			
M	H	H	M
2		PR	

VSU Label & Legend

EVC			
VAC	BR	VC	VR
VSC		rVQC	

Electronic VSU Classification Form produced by RDI Resource Design Inc 2006 using MOFR 1997 Standard

Existing Visual							Scores		Type	*EVC Rationale:*
11 Scale of Existing Alteration	0%	0.1-1.5	1.6-7.0	7.1 - 18.0	18.1 - 30.0	>30		12		*hydroline at base; pulp mill*
EVC Initial Value	P	R	PR	M	MM	EM		M		*upper blocks white in winter*
12 Influence of Visual Landscape Design	H		M		L		N/A	Type:	1	Type of Alteration (TA) - see p. 3 and VLI Standards: 12
13 Influence of Site Disturbance	H		M		L		N/A		H	
14 Influence of Vegetative Colour & Texture	H		M		L		N/A	Type:	LB	*Vegetative . influence type: see VLI Standards: 14*
15 EVC Final Value	P	R	PR	M	MM	EM		M		*enter final EVC value in VSU label (automatic on e-form)*

Visual Absorption Capability (VAC)				Scores		Type	*VAC Rationale*
16 Slope	H (3)	M (2)	L (1)	1			*also SW and NE aspects*
17 Aspect	H (3)	M (2)	L (1)	2			(if N/A assign 0)
18 Surface Variation	H (3)	M (2)	L (1)	3			
19 Rock/Soil/Vegetative Variety	H (3)	M (2)	L (1)	2	Type:	M-C	*Variety type: see VLI Standards: 19*
20a VAC Initial Value	H (10-12)	M (7-9)	L (3-6)	8			*select within range*
20b VAC Final Value	H (3)	M (2)	L (1)	2	M		*enter final VAC value in VSU label (automatic on e-form)*

Biophysical Rating (BR)						Type	*BR Rationale:*
21 Slope	H (3)	M (2)	L (1)	3			
22 Aspect	H (3)	M (2)	L (1)	2			(if N/A assign 0)
23 Edge	H (3)	M (2)	L (1)	3	Edge Type	*A water / landform*	
24 Topographic Variety	H (3)	M (2)	L (1)	3	Type	H-C	*Variety type: see VLI Standards: 24*
25 Vertical Relief	H (3)	M (2)	L (1)	3			
26 Vegetative Variety	H (3)	M (2)	L (1)	3	Type	H-B	
BR Initial Value	H (15-18)	M (10-14)	L (5-9)	17	H		*select within range*
(BR Modifying Factors - add only)							
27 Influence of Rock/Soil	H	M	L	N/A	Type	N/A	*Type: see VLI Standards: 27*
28 Influence of Water	H	M	L	N/A	Type	H-A	*Type: see VLI Standards: 28*
29 Influence of Adjacent Scenery	H	M	L	N/A		M	
30 BR Final Value	H (3)	M (2)	L (1)	3	H		*enter final BR value in VSU label (automatic on e-form)*

Legend

L-A Type selector drop down

1 Rating selector

Visual Sensitivity Unit Classification Form - Page 2

Ministry of Forests and Range

VSU #	201

Electronic VSU Classification Form produced by RDI Resource Design Inc 2006 using MOFR 1997 Standard

Viewing Condition (VC)				Scores		Type	VC Rationale:
31 Viewing Distance	H (3)	M (2)	L (1)	2			
32 Viewing Frequency	H (3)	M (2)	L (1)	3	VPs:		117-122
33 Viewing Duration	H (3)	M (2)	L (1)	3	Type:	H-B	Duration: see VLI Standards: 33
34 Viewing Angle	H (3)	M (2)	L (1)	3			
VC Initial Value	H (10-12)	M (7-9)	L (4-6)	11			select within range
35 VC Final Value	H (3)	M (2)	L (1)	3	H		enter final VC value in VSU label (automatic on e-form)

Viewer Rating (VR)				Scores			VR Rationale:
36 Number of Viewers	H (3)	M (2)	L (1)	3	Viewer #'s:	H-B	Viewer Numbers: see VLI Standards: 36
37 Viewer Expectations	H (3)	M (2)	L (1)	2	Type:	M-B	See VLI Standards: 37
VR Initial Value	H (6)	M (4-5)	L (2-3)	5			select within range
38 VR Final Value	H (3)	M (2)	L (1)	2	M		enter final VR value in VSU label (automatic on e-form)

Visual Sensitivity Class (VSC) Scores						
Component Scores	BR	VC	VR	VAC	VSCi Score	VSC Score Formula
	3	3	2	2	6	BR+VC+VR-VAC=VSCi Score

Visual Sensitivity Class (VSC)								VSC Rationale: see page 4
using VSCi Score:	8+	6 to 7	3 to 5	1 to 2	0	6		VSCi score from above
VSC Initial Value:	VSC 1	VSC 2	VSC 3	VSC 4	VSC 5	2		enter VSCi value related to VSCi score above
39 VSC Final Value	VSC 1	VSC 2	VSC 3	VSC 4	VSC 5	2		select final VSC, enter rationale on page 4, enter final VSC value in VSU label (automatic on e-form)

Other (Optional)					Type	Other Rationale:
40 Years to VEG	< 5 years	5-10 years	> 10 years	N/A	N/A	See VLI Standards: 40
41 Visual Recovery	H	M	L		M-A	See VLI Standards: 41
42 Reh./Enh.	RH	EH	N/A	N/A		

Recommended Visual Quality Class (rVQC)						rVQC Rationale:	
43 rVQC	Typical Initial rVQC Range					VSC	2
VSC (final)	P	R	PR	M	MM	Initial rVQC:	PR
1	<------->					select initial rVQC within appropriate range in matrix	
2			<------->			enter rationale for final rVQC selection on page 4	
3			<------->				
4				<------->		enter final rVQC value in VSU label (automatic on e-form)	
5					<------->	Final rVQC:	PR

Legend

<-------> indicates most common part of range for rVQC selection

< > indicates less common part of range for rVQC selection

lower-end (most restrictive) — upper-end (less restrictive)

(terms apply both within a given VQC and across VQCs in VSC range)

L-A Type selector drop down

1 Rating selector

Visual Quality Class Recommendation (RDIs S2S Approach)

Recommended Visual Quality Class (rVQC)						*rVQC Rationale:*	
43 rVQC	Typical Initial rVQC Range					*VSC*	2
VSC (final)	**P**	**R**	**PR**	**M**	**MM**	*initial rVQC:*	**PR**
1		<------>	?			*select initial rVQC within appropriate range in matrix*	
2			<------>	?		*enter rationale for final rVQC selection on page 4*	
3			<------>				
4				<------>	?	enter final rVQC value in VSU label (automatic on e-form)	
5					<------>	*Final rVQC:*	**PR**

Legend

<------> indicates most common part of range for rVQC selection

? Outside of FRPA 9.2

< > indicates less common part of range for rVQC selection

lower-end (most restrictive)

upper-end (less restrictive)

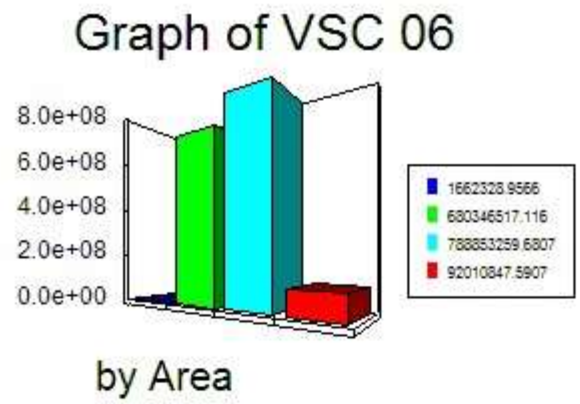
(terms apply both within a given VQC and across VQCs in VSC range)

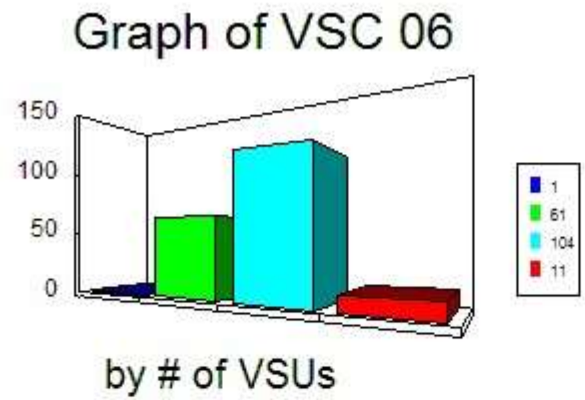
L-A Type selector drop down

1 Rating selector

the Forest and Range Practices Act (FRPA) identifies scenery as one of the 11 forest values to be managed and includes provisions to establish visual quality objectives (VQOs). The Minister or designate will establish VQOs. ***rVQCs are just the first step.***

Visual Sensitivity Class





1

2

3

4

The current VLI procedure tends to generate mid-value ratings. Possible cause - VAC cancels or negates other ratings in the process.

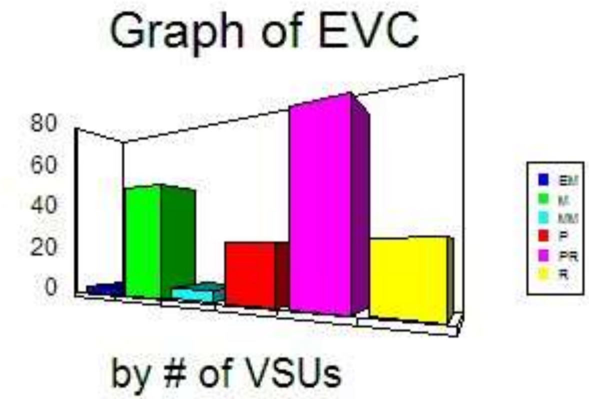
FOREST PLANNING AND PRACTICES REGULATION

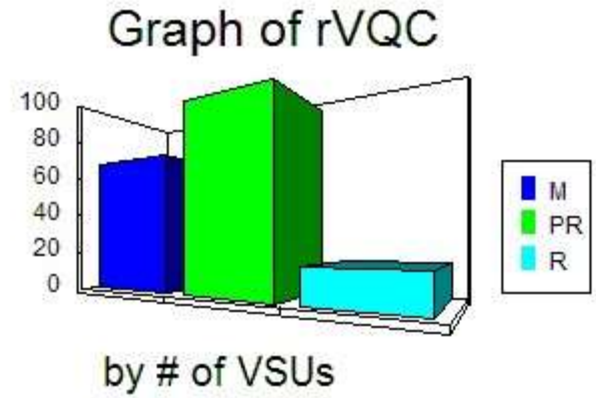
1.1 Categories of Visually Altered Landscape

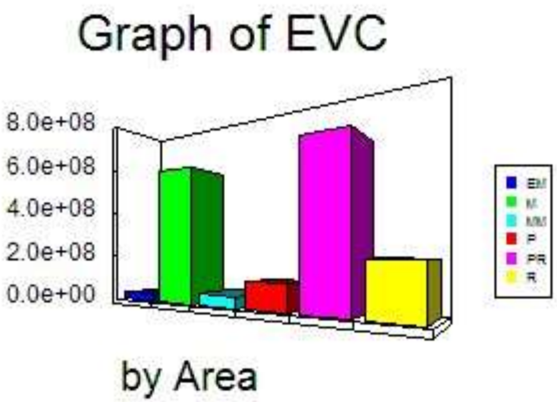
P – Preservation: very small in scale, not easily distinguished
R – Retention: difficult to see, small in scale , natural appearance
PR – Partial Retention: easy to see, small to medium scale, natural shape
M – Modification: very easy to see, large scale and natural appearance or small but rectangular
MM – Maximum Modification: very large scale, rectilinear, may be both

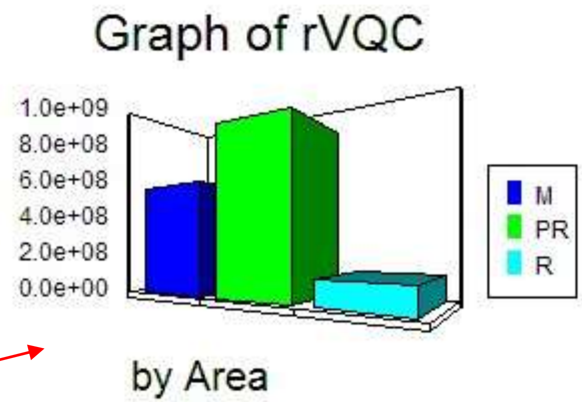
See: Procedures for Effectiveness Evaluation of Visual Quality Management

http://www.for.gov.bc.ca/HFP/frep/repository/vis_procedure.pdf









Each of these 3 VQC classes, Retention, Partial Retention and Modification require a high degree of visual design to be implemented for land-use activities to achieve that class with the given VSU.

S2S Results

VSUs were numbered based on a hierarchy of geographic location.
VSA – VSG – VSU

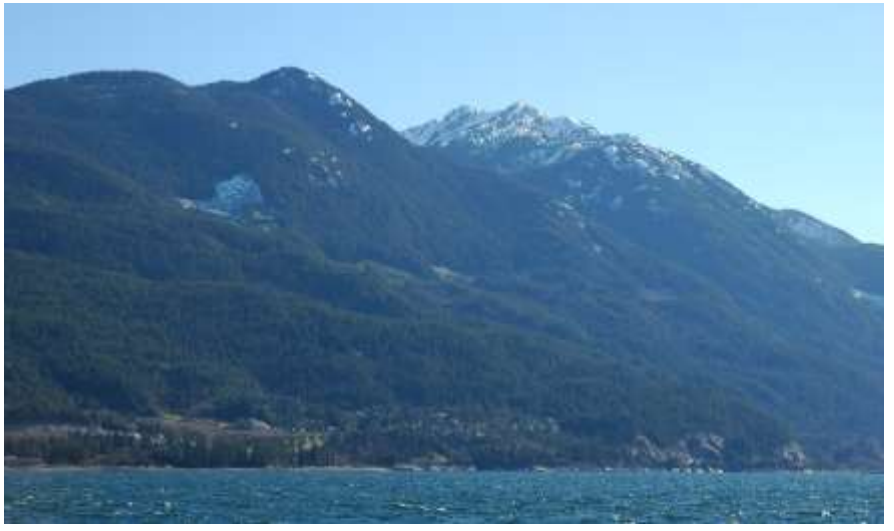
At the top of hierarchy is the Visual Sensitivity Area (VSA). Five VSAs were defined, based on their general location in the project area.

Within them, 23 Visual Sensitivity Groups (VSGs) were defined based on more local geographic location.

177 VSUs were defined and classified.

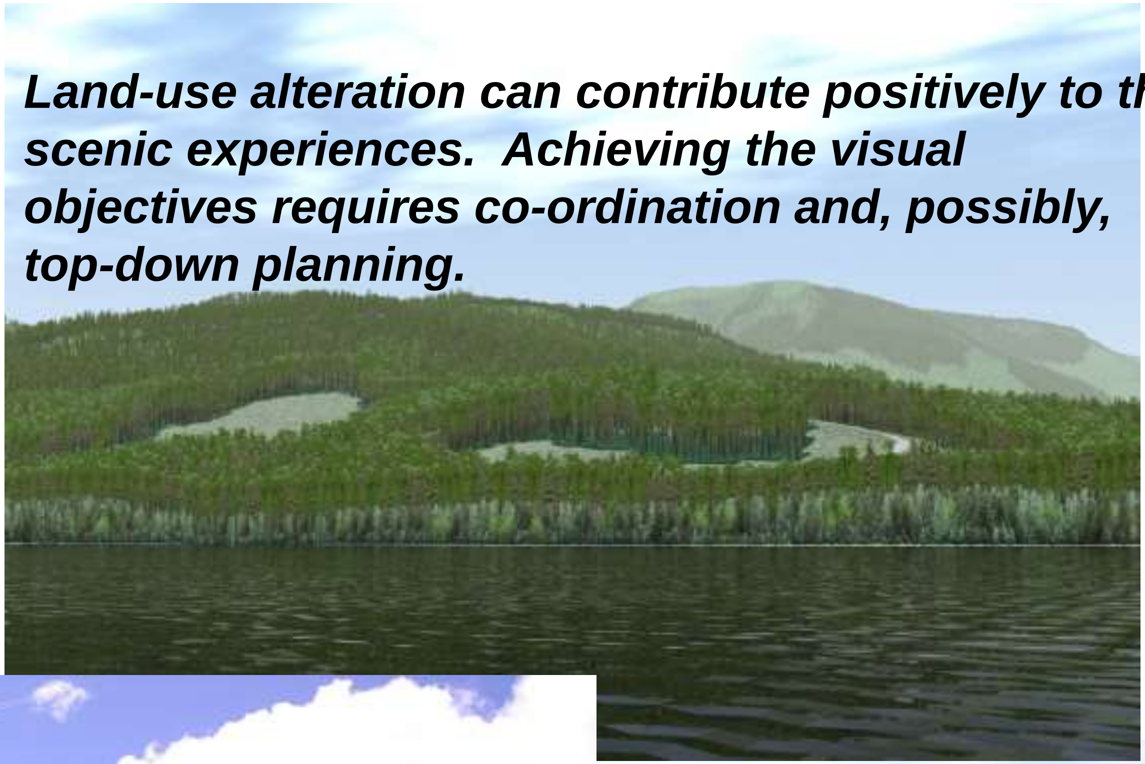
Total Visible landbase: 156287 ha / Avg VSU size 882 ha

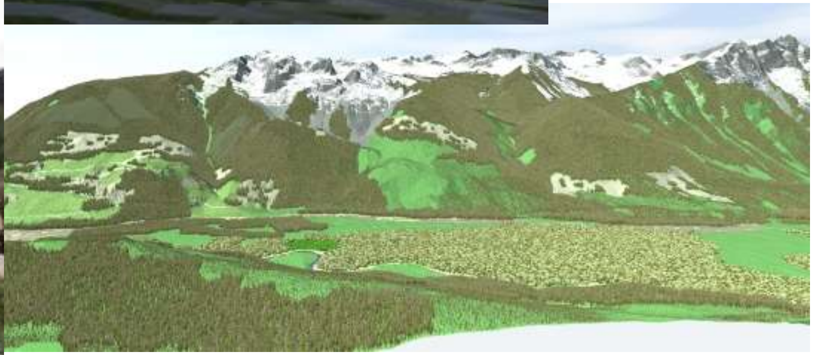
(1 hectare = 2.27 acres / 1 acre = 0.4 ha
1 kilometre = 0.6 miles / 1 mile = 1.6 km
1sq. Km = 100 ha = 0.4 sq. mi.)




The Frontcountry landscape has a moderately high capacity to visually absorb land-use alteration while providing high-quality viewing experiences, however, good design is imperative.

Land-use alteration can contribute positively to the scenic experiences. Achieving the visual objectives requires co-ordination and, possibly, top-down planning.





RDI was asked to discuss the advantages, challenges and issues of different visual management options, and make recommendations as to a future visual zonation system.

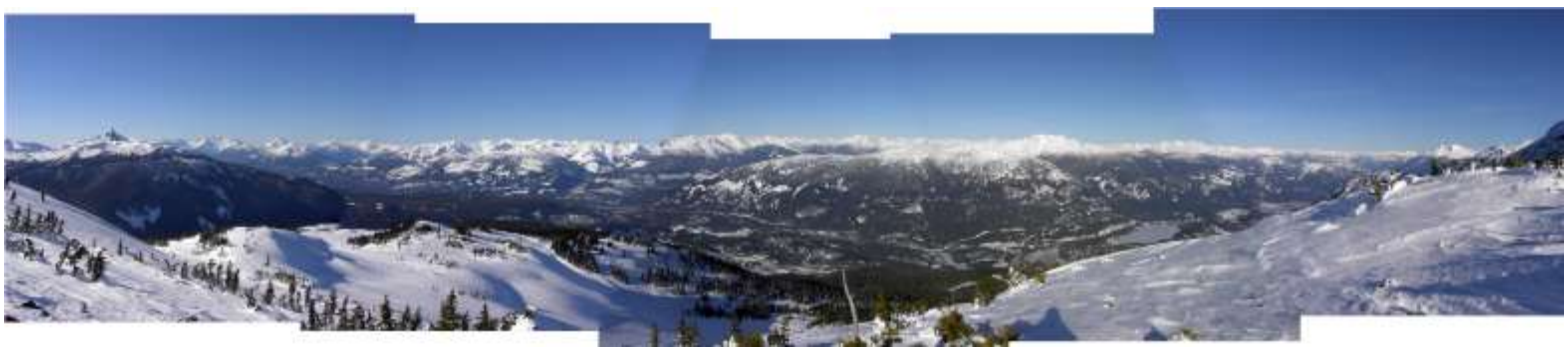


Photo: Tom Cole

Visual Management Systems

✓*USFS Scenery Management System (Terry Slider update tomorrow at the VRM Forum)*

✓*US BLI Visual Resource Management System*

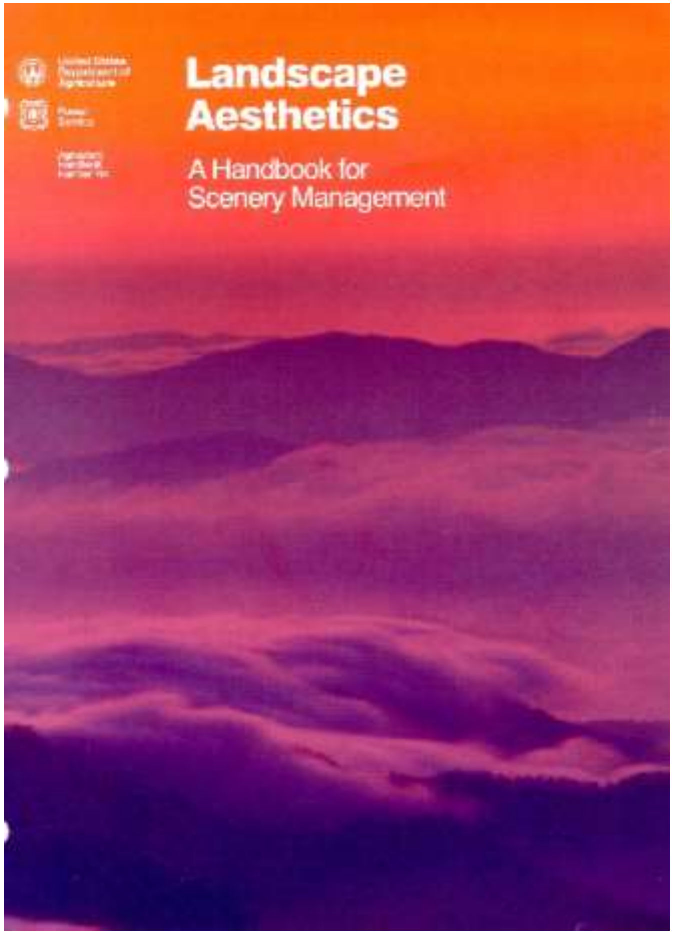
✓*Visual Management System of the Forestry Commission in Tasmania – based on USFS*

✓*Visual Management System of the Forestry Commission in the United Kingdom.*

✓*Cumulative Visual Landscape System (CVLS) developed by Ken Fairhurst, RDI for the Oil Sands area of Alberta.*

✓*The Central Coast Land and Resource Management Plan (CCLRMP) Visual Management Agreement proposal for large visual management zones.*

✓*GEOptics Research (Ken Fairhurst)*



The USFS Visual Management System provided a model for the BCMOF system.

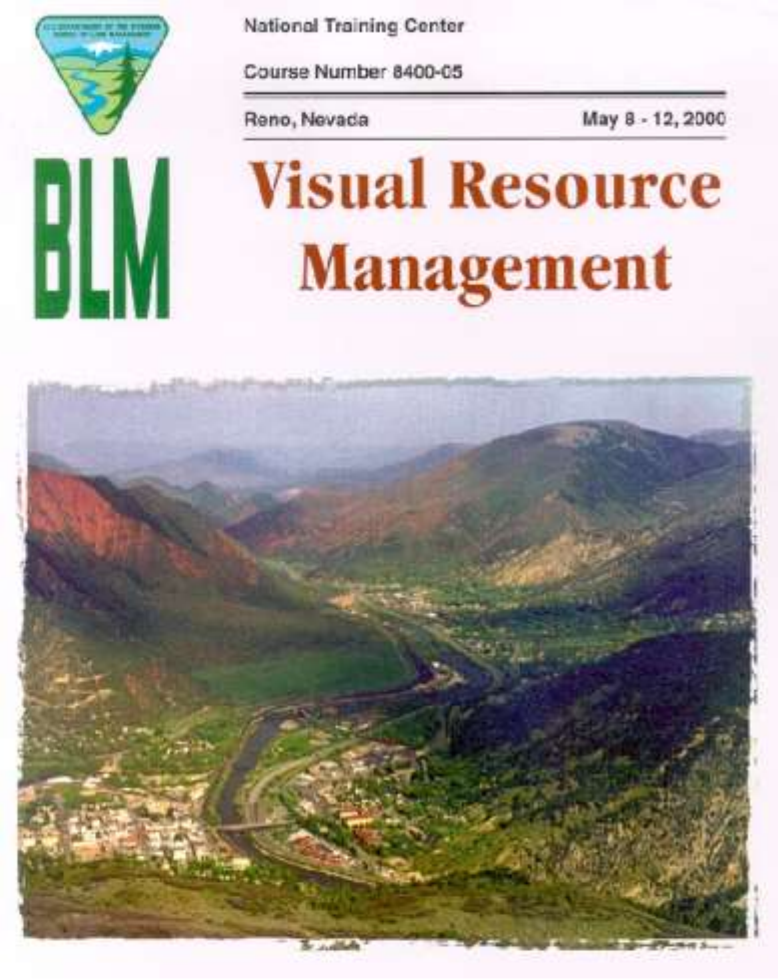
Scenery Management System now expanding "sense of place' and GIS.

As the process is identifying desired scenic condition across large management units, it is considered a "top-down" target-setting approach that is informed from the bottom-up valuation.

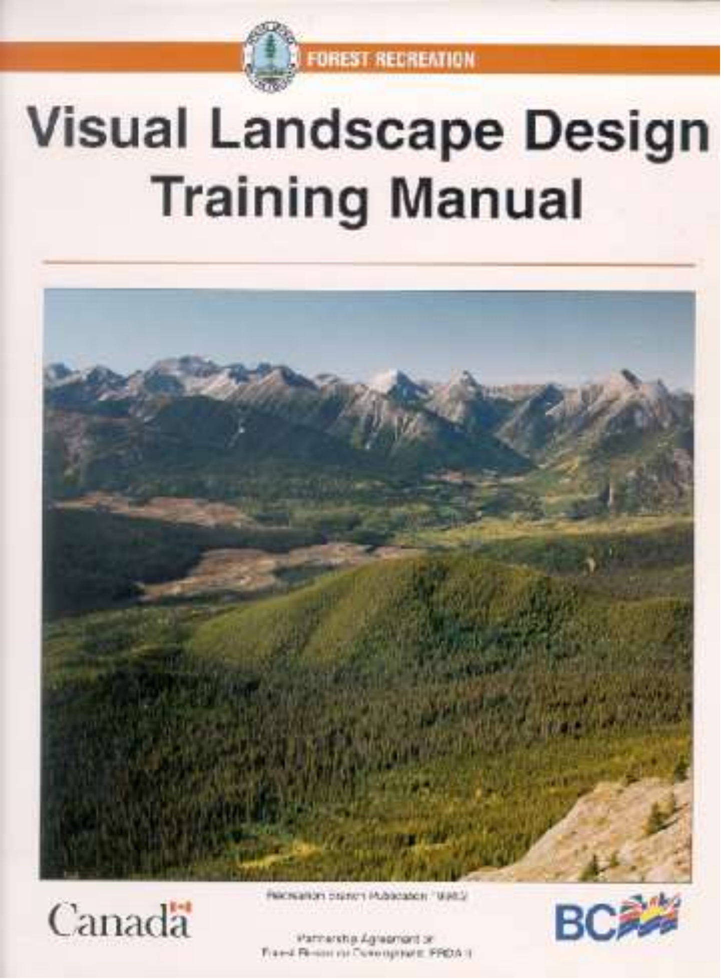
Key elements ("attributes" or meanings) of sub-regional areas are identified across all land ownerships, with the areas identified by participants as socially meaningful units.

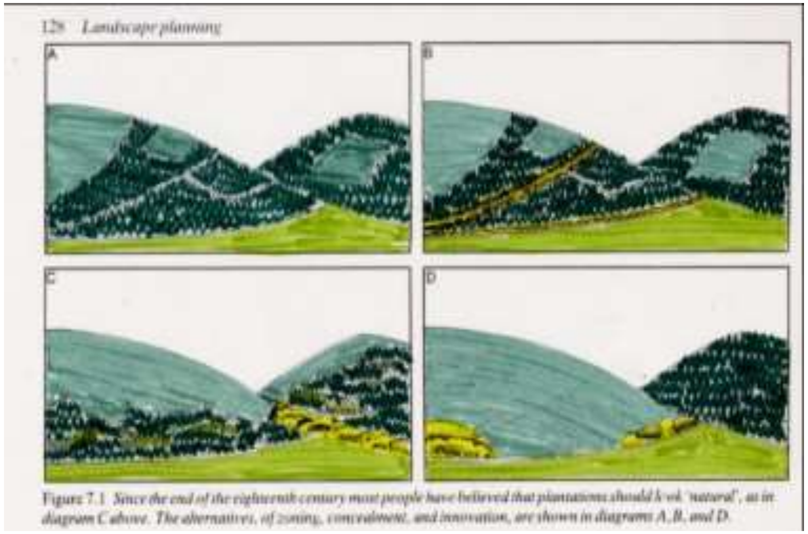
Terry Slider, Region 6 Landscape Architect will be at the RM Forum Tuesday 1:45 PM BU A104)

MOF system was also closely related to BLM system. Tthe Resource Management Planning process (RMP) considers all values in a holistic approach "top-down" approach in which visual values are but one element which may take precedence where appropriate.



Brad Cownover former BLM's Chief Landscape Architect, and now Director of Scenic Conservation Service for Scenic America, is also a panelist at the VRM Forum tomorrow afternoon.





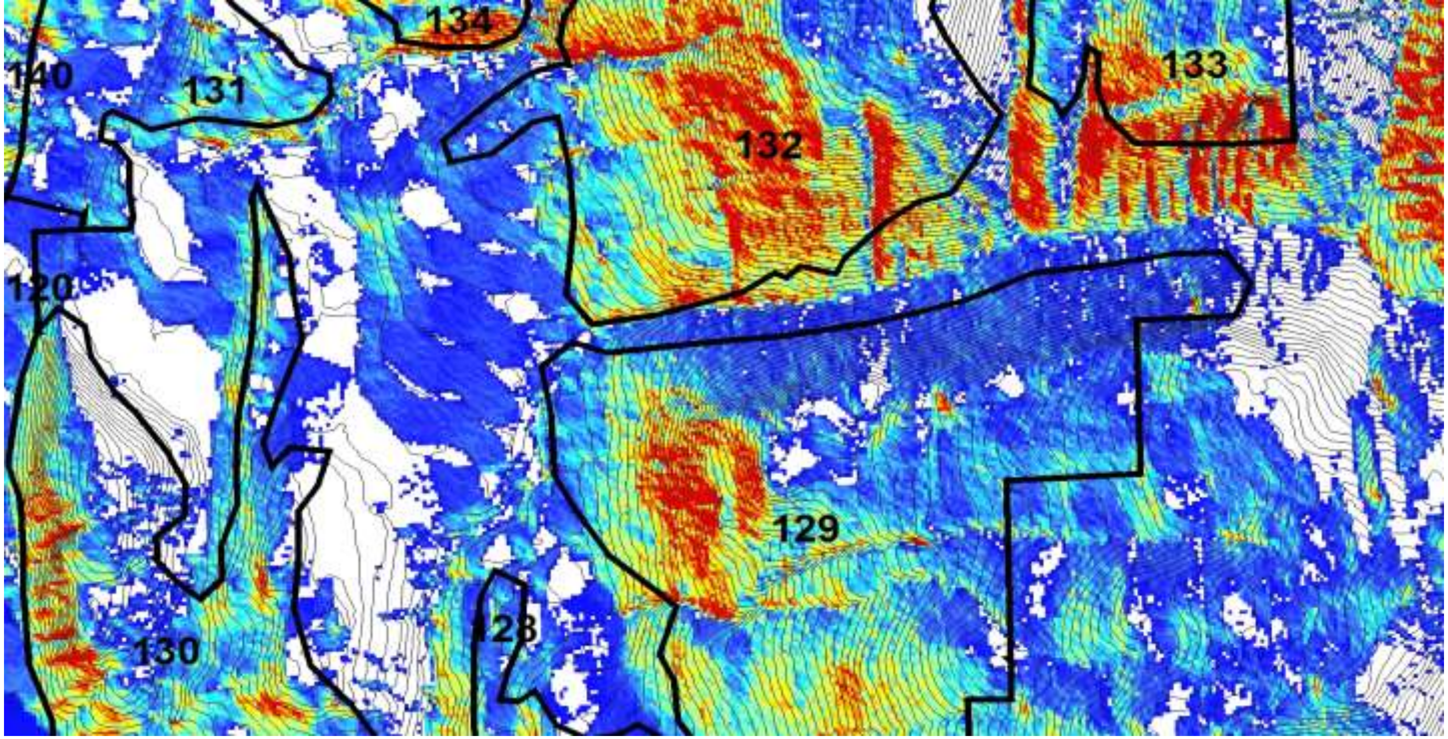
The UK system which provides a total design for each landscape but avoids setting objectives visual quality except that things must fit. The UK system heavily influenced the BCMOF Visual Landscape Design approach (BCMoF 1995).

Oliver Lucas, author of Aesthetic Considerations in British Forestry (1997), *will describe the UK process in the VRM Forum Tuesday at 1:45pm, Buchanan A104.*

Alberta Cumulative Visual Landscape System (RDI)

The CVLS was developed by Ken Fairhurst, RDI, to assist with the planning of large scale oil and gas and forestry, with the objective of managing cumulative visual impacts over the long term.

The Alberta CVLS also sets targets for landscape integrity with a bottom up approach, but also uniquely introduces a “top-down” planning approach which allows a determination of the desired supply of each level of landscape integrity (visual quality).



Fairhurst GEOptics Ph.D. Dissertation
Complementary to VLI
Useful in strategic and operational planning
Better predictor than topographic slope.
Provides a mapping layer
Cumulative visual angle of incidence throughout the landscape
Stratification of the landscape based on visual absorption capability or its converse, visual risk.
The S2S database has been very generously made available by the Squamish Forest District, Ministry of Forests and Range.

The Central Coast Land and Resource Management Plan

The Central Coast Land and Resource Management Plan (CCLRMP) Visual Management Agreement proposed large visual management zones:

> *Wild*
>
> *Natural Variability*
>
> *Landscape Forestry*
>
> *Special Viewscape (tourism facility-specific)*

These zones which have descriptions and prescriptions that are comparable to present rVQCs, but which are more broadly applied.

Conclusions

The VLI process is familiar and produces consistent results.

Results tend towards middle (moderate) values

A zonation approach could be applied to the S2S Frontcountry. The RDI-built hierarchy of VSA-VSG-VSU classification in the 2006 S2S VLI provides the basic units that lend themselves to zonation.

RDI considers a top-down approach to be potentially useful in a S2S Frontcountry visual management strategy.

See you at
the VRM Practices and the Practitioner Forum
Tuesday 1:35 – 3:15 Buchanan A104

Ken Fairhurst *– Organizer/Panelist*
Oliver Lucas*, Planning Manager, Peninsula Forest District, the Forestry Commission of Great Britain*
Stephen R. J. Sheppard*, PH.D., University of British Columbia, Brad Cownover, Director, Scenic Conservation Services, Scenic America, Washington D.C.*
Terry Slider*, Regional Landscape Architect, U.S. Dept. of Interior, Forest Service. Region 6 Portland, OR USA*
Pat Caughey*, FASLA, President-Elect, American Society of Landscape Architects, Principal, Wimmer Yamada Caughey, San Diego, USA*
David Miller*, Ph.D., Professor, The Macaulay Institute, Landscape Change Programme, Aberdeen United Kingdom*
Brent Ingram, Ph.D*., Associate Dean for Campus Development, Ras Al Khaimah, UAE, and Assoc. Professor of Environmental Science and Policy, Office of the Provost, George Mason University, Washington, DC; Principal, side stream environmental design, Vancouver*