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Notes on Grassy (Temont) Fire Salvage Involvement of RDI

K.B. Fairhurst, RDI Resource Design Inc, was contacted by Brad White on May 3, 2023 with the following questions, accompanied with links to reports and IPAC imagery regarding the Grassy (Tremont) fire salvage operation.

"Terri (Worthen) had started a FSP exemption through the district for a Tremont fire salvage and I am picking it up with the intentions of completing soon. Ipac had completed a VIA and I am hoping you might help me interpret the outcome as the district has some questions.

Questions that have come up on our side:

- 1. Do you believe the Landforms that have been completed meet the intention?
- 2. The district and Kane spoke about distance to viewscapes and the possibility of not considering a couple View points
 - a. Mostly question Viewpoint 9, 11, 12 and 13
- 3. Would be interested to know your thoughts on either doing an FSP exemption (FPPR 12(7)) or an FSP Amendment (FRPA S 16 or 17)
 - a. At the moment it is submitted under and exemption but could be changed (Similar amount of work)
- 4. Is there other questions or comments that jump out at you that you think should be brought to our attention."

In my response to Brad White on June 15, 2023, in consideration of files provided, and of the adjacent table prepared by RDI, I said:

"I agree that VPs9, 11, 12, and 13 are in the distance as well as VP 2.

My preliminary review of the visual simulations is that the four VSUs containing the analysis cutblock, and with the same PR VQO, coalesce into one large landform in which the PR VQO can be generally applied. Only one viewpoint – VP 11 exceeds the percent alteration across the landform – VP 11 at 8.77% which is in the far background and could be reasonably disqualified as not significant. The degree of well-shaped cutblock design showing on the back hills is a good indicator of PR achievement, broadly-speaking.

When I consider whether FPPR Exemption or FRPA Amendment, I see the two principles to be very similar and therefor can't offer a preference. Given that the Worthen analysis letter of June 27, 2022 appears to be sufficiently comprehensive regarding **exemption under FPPR 12 (7)** (presented on pages 4 and 5 herein), the exemption procedure should likely take precedence in my opinion.

If assessed for the broader landform rather than individual VSUs, neither exemption nor amendment should be necessary, but if the process has progressed to that point, I support it, with the landform measures providing further support.

The IPAC viewing distances don't indicate what targets were used for measurement. It would be helpful to have a KML/KMZ with the viewpoints, VSUs and cutblocks by which to conduct my own measures.

Viewpoints 1, 4, 6, and 10 have no predicted alteration.

I welcome your feedback and suggestion of where to go from here."

Ken B. Fairhurst, PhD, RPF RDI Resource Design Inc June 21, 2023

	RDI La	andform / \	/SU Percer	t Alteratio	n Summar	y Table (So	urce: IPAC)
Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
1	0		No V	isible Alter	ation		3.3
2	2	4.44%				31.09%	10.5
3	1	3.42%				17.41%	8.2
4	0		No V	isible Alter	ation		2.8
5	3	0.44%				13.19%	2.7
6	0		No V	isible Alter	ation		6.9
7	5	4.83%	32.14%	2.73%	20.75%		7.3
8	2	5.77%		5.23%	20.60%		8.5
9	2	1.13%	0.88%		31.81%		11.9
10	0		No V	isible Alter	ation		10.6
11	5	8.77%	25.01%	10.03%	15.91%		14.0
12	4	0.81%		3.69%	28.20%	2.01%	10.9
13	5	0.83%	11.73%				15.8
14	5	1.79%	6.81%	1.47%	15.88%		5.0
15	1	2.28%		1.29%	19.34%		6.0

Landform(s) / VSU(s) above PR limit of 7% alteration

FRPA s. 17 FSP Amendment - Approval in emergency cases

If the minister determines that timber subject to a forest stewardship plan, a woodlot licence plan, or an amendment to either should be harvested without delay because it is in danger of being damaged, significantly reduced in value, lost or destroyed, the minister, in prescribed circumstances, may approve the plan or amendment even though the plan or amendment does not comply with section 16.

FPPR 12 FSP Exemption

(7) If the minister determines that it is not practicable, given the circumstances or conditions applicable to a particular area, for the person otherwise required to do so, to specify a result or strategy consistent with an established objective for that area, the minister must exempt the person from that requirement in relation to that area.

Viewpoint Significance (IPAC)

- (0) not visible
- (1) glimpse view, less than 10 seconds
- (2) sustained side view;
- (3) sustained focal view or traveling toward the alteration for more than 1 minute
- (4) VP at a rest stop, campsite, or other static short-term view location
- (5) VP at the location of a community, commercial tourist-related enterprise, or other static long-term view site



^{*}Highlighted VPs in background - Specific Viewing Distance Target not identified by IPAC. Landform percent alteration exceeds PR limit from VP11 only which is in far background (15.8km).

Letter Requesting an exemption under FPPR 12 (7) within specific Visual Landscape Inventory (VLI) Polygons within the Tremont Creek (K21849).

File: 10765-25 – KA 2020-2025

27 Jun. 22 from Terri Worthen, RPF, Planning Forester, BCTS Kamloops

To: Edi Torrans, District Manager for Thompson Rivers District.

This exemption request is specific to the recovery of fire damaged timber by the 2021 Tremont Creek Fire (K21849) that is located within visually sensitive areas within FDU #3 - Ashcroft and FDU #6 Upper Guichon of BCTS' FSP#671. Due to the large-scale landscape level timber damage caused by the 2021 wildfires, combined with any pre-existing forest landscape alterations resulting from past harvesting, BCTS believes it is no longer practicable to specify a result or strategy that is consistent with the Visual Objective of Partial Retention within specified Visual Landscape Inventory (VLI) polygons. The Visual Quality Objectives (VQOs) established in these areas constrain BCTS's ability to effectively salvage damaged timber, quickly returning these areas back to a productive forest. Nor do we believe that it is in the public's best interest to leave these areas 'as is' and allowing for natural processes to occur. The timber within these specified VLIs should be harvested without undue delay to help prevent: the spread of pests, help reduce the hydrologic risk, help mediate potential range issues and lessen the significant reduction in economic value. Salvaging this timber quickly also allows for prompt reforestation, returning these areas to a productive forest. Therefore, within the specified VLI polygons where BCTS intends to recover timber damaged due to the 2021 Tremont Wildfire, BCTS is requesting an exemption under *FPPR 12 (7)* from having to specify a result or strategy.

Background

The Tremont Fire caused extensive landscape level damage to areas within the Kamloops TSA. Within our Glossy Operating area, 194,429 ha's (50% of the operating area) and 1,189,458.5m3 (27% of the total volume) was burnt. 84%; or 375550.2 m3, was burnt in moderate to high severity. In our Ware Operating area 3106.09 ha's (98% of operating area) and 210,079.54m3 of the total volume was burnt.

The forest landscape alterations which will be occurring in the VLIs specified for this exemption request have been identified through on-ground experience (Pre- and post-wildfire reconnaissance), aerial overview flights, post-wildfire satellite imagery, and burn severity mapping.

Currently we have approximately 450,000m3 actively being developed. Our proposed salvage plans in each operating area will take a 'phased' approach. Our primary focus (phase 1) is to immediately salvage stands that were severely burnt and are predominantly black (ie no red needles and no green trees). As 'needle fall' begins to occur on the red trees over the next year, these will be added to our salvage plans (phase 2). Areas of lower intensity where green crowns persist will be monitored for pest infestation. As pest infestation begins to occur, we will add these to our salvage plans (phase 3).

Within the Tremont Fire, the affected VLI polygons in the Glossy Mountain area (west of Savona) are visible from various points when traveling along the Hwy 1 corridor. In the Chartrand Creek area, the VLI polygons are predominantly visible from the recreational trails in that area: Rim Lake Trail, picnic area at Jacks Lake, and the Highland Valley Outdoor Assoc. ski/bike trails.

Socio-economic considerations

Info Sharing with Indigenous Communities and Stakeholders in Wildfire Areas.

The Chief Forester Guidelines 2017 and the Elephant Hill Guiding Principles 2017 were used to build the BCTS Kamloops Wildfire Salvage Guiding Principles. All forest landscape alterations have been designed with these guiding principles in mind. BCTS has been working with Indigenous Communities whose territories were impacted by these wildfires since the late fall of 2021. We continue to work with these communities to incorporate/integrate their guiding principles with ours. And to jointly develop mitigative strategies to lessen the impacts of salvage harvesting on their various resource values. The BCTS Kamloops Wildfire Salvage Guiding Principles can be provided upon request.

All stakeholders whose interests will be impacted by our salvage plans have also been sent referral packages outlining our salvage plans, informing them of our wildfire salvage guiding principles that we will be following and to solicit comments and feedback. To date, we have received very little response. As comments/feedback is received, we will work with the interest holders to help mitigate their concerns. Specialist Advice

We have also consulted with a hydrology specialist to discuss watershed concerns in these two operating areas. The advice we've been given by the hydrology specialist is to follow the phased approach that we are implementing. By harvesting the severely burnt stems, we will not be incrementally increasing the ECA as the fire has already done this. Black trees with no needles have no snow interception ability and therefore act as a clearcut in terms of snow interception. Salvage logging in the severely burnt areas, can (if done correctly) help with hydrologic recovery by breaking up hydrophobic soils. Hydrophobic soils are at greater increased risk of flash flooding and soil erosion. If left alone (ie soil is not disturbed by some form), these hydrophobic soils could take a year or more to break down. Flash flooding is a concern in the Glossy and Ware operating areas as there are several dry draws/gullys, some of which lead to private homes, roads, and infrastructure. Salvage logging also allows for the scattering of logging slash, which helps with over surface flow and soil erodibility. Salvage logging also allows for planting to occur which results in faster hydrologic recovery. The hydrologist report can be provided upon request. In addition to seeking hydrology advice, representatives from BCTS attended a TSA wide field tour to review fire impacted areas. The regional wildlife specialist was in attendance and provided some recommendations on how best to mitigate some impacts to wildlife (eg critter piles vs scattered CWD). BCTS will be implementing his recommendations.

Alternatively, if BCTS were to choose not to salvage, there could be an increase in forest health and pest infestation, thus increasing future fire hazards; increased flash flooding – impacting domestic water intakes, irrigation infrastructure, roads/access infrastructure and productive soils; and take on a slower growth curve if the stands were left to naturally regenerate. Additionally, in past discussions prior to the 2021 Tremont Fire, some of the range lease/licence holders in this area had concerns with cattle movement due to the amount of pine falldown in these stands. While the fire has taken care of the previous pine falldown issues, leaving the dead fire damaged trees standing, will begin to cause the same issue.

We believe that by following the various guidance documents, specialist's advice, and working with interest holders to incorporate their feedback, we are balancing the economic factors associated with recovering fire damage timber with the social and environmental issues that can arise from such large-scale harvesting.

Rationale and Specific Circumstances to which this Exemption Request will apply.

Due to the severe impact of these large fires on the landscape, the scale of wildfire damaged timber salvage will be significant. The VQOs established in these areas is Partial Retention (PR). To be consistent with the objective of PR we would need to ensure that the forest alterations within these VLIs meet the following definition "consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is (i)easy to see, (ii)small to medium in scale, and (iii)natural and not rectilinear or geometric in shape". To be consistent with this VQO will constrain BCTS's ability to effectively recover damaged timber, and quickly return these areas back to a forested landscape. BCTS has conducted a preliminary visual assessment of the 'worst case scenario' (eg clear cut, no reserves) which shows us that our planned forest alterations will be very easy to see, large to very large in scale and maybe be rectilinear and/or geometric in shape. See results from the preliminary assessment attached to this rationale as supporting documentation.



Guidance in <u>FRPA General Bulletin No: 10 Beetle Wood Salvage and Visual Quality</u> (pg 5) recommends that when 'salvage is on a much larger scale than the VQO, use FPPR 12 (7)'. Additionally, <u>FRPA General Bulleting No: 25 A Comparison of FSP Results or Strategies Flexibility Options</u> (pg 5) recommends that 'if circumstances and conditions applicable to a particular area have deteriorated or changed so significantly that it is no longer practicable to even specify a result or strategy that is consistent to the extent practicable with an objective' than the agreement holder can seek an exemption under 12 (7). We believe that the conditions within the specified VLIs have deteriorated so significantly that it is no longer practicable to write a result or strategy that will be consistent with the VQO as it is currently established.

Therefore, in the following VLI's (see Table 1 opposite) BCTS is requesting a *FPPR 12 (7)* exemption to enable BCTS to recover/salvage timber damaged by the 2021 Tremont Creek Wildfire (K21849). Attached are examples of our viewshed analyses' showing the specific VLIs and our proposed cutblocks. Also attached for reference are some example perspective views showing some of our proposed cutblocks.

As with any scenic area or visually sensitive area within BCTS FSP #671, BCTS will ensure that a qualified registered professional (QRP) conducts a visual assessment of the burned areas. When designing the forest landscape alterations, the QRP will employ a range of techniques to attempt to create as 'natural' an appearance as possible. Where practicable, such techniques may include:

- The use of irregular boundaries; avoiding unnatural straight lines or angled corners
- locating harvest boundaries that follow natural landscape boundaries
- retention of single or clumped green trees to provide visual screening and structure
- retention of clumps of dead trees to provide visual structure.

We are requesting prompt approval of this exemption as the scale of the planned recovery of wildfire damaged timber in the Tremont Fire within BCTS' operating areas is extensive. Early approval of this exemption will provide certainty regarding this planned salvage. Yours truly,

Terri Worthen, RPF Planning Forester BCTS Kamloops

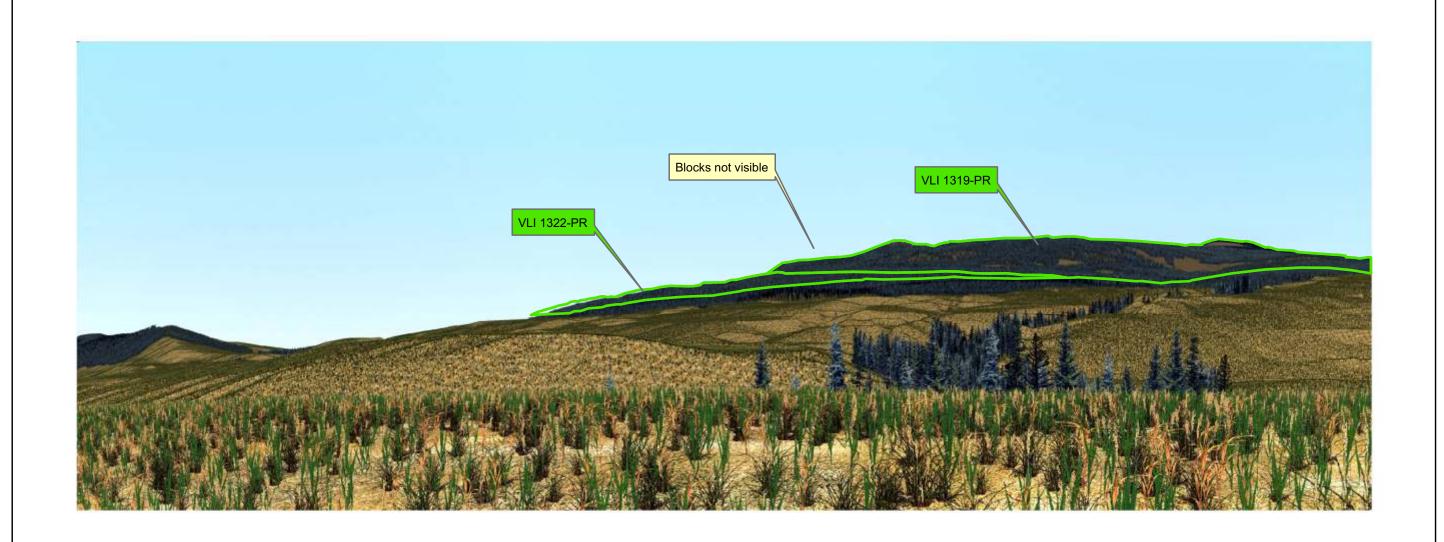
Table 1 – Specific VLIs within the Tremont Creek Wildfire

FDU	Geographic Location	Wildfire Identification	VLI Polygon	Org Unit No.	Established VQO
3	Ashcroft	Tremont Creek Fire	1261	21	Partial Retention
3	Ashcroft	Tremont Creek Fire	1270	21	Partial Retention
3	Ashcroft	Tremont Creek Fire	1302	21	Partial Retention
3	Ashcroft	Tremont Creek Fire	1322	21	Partial Retention
3	Ashcroft	Tremont Creek Fire	1319	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	1480	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	1493	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	2289	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	2373	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	1452	21	Partial Retention
6	Upper Guichon	Tremont Creek Fire	2371	21	Partial Retention



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 1: Sundance Ranch





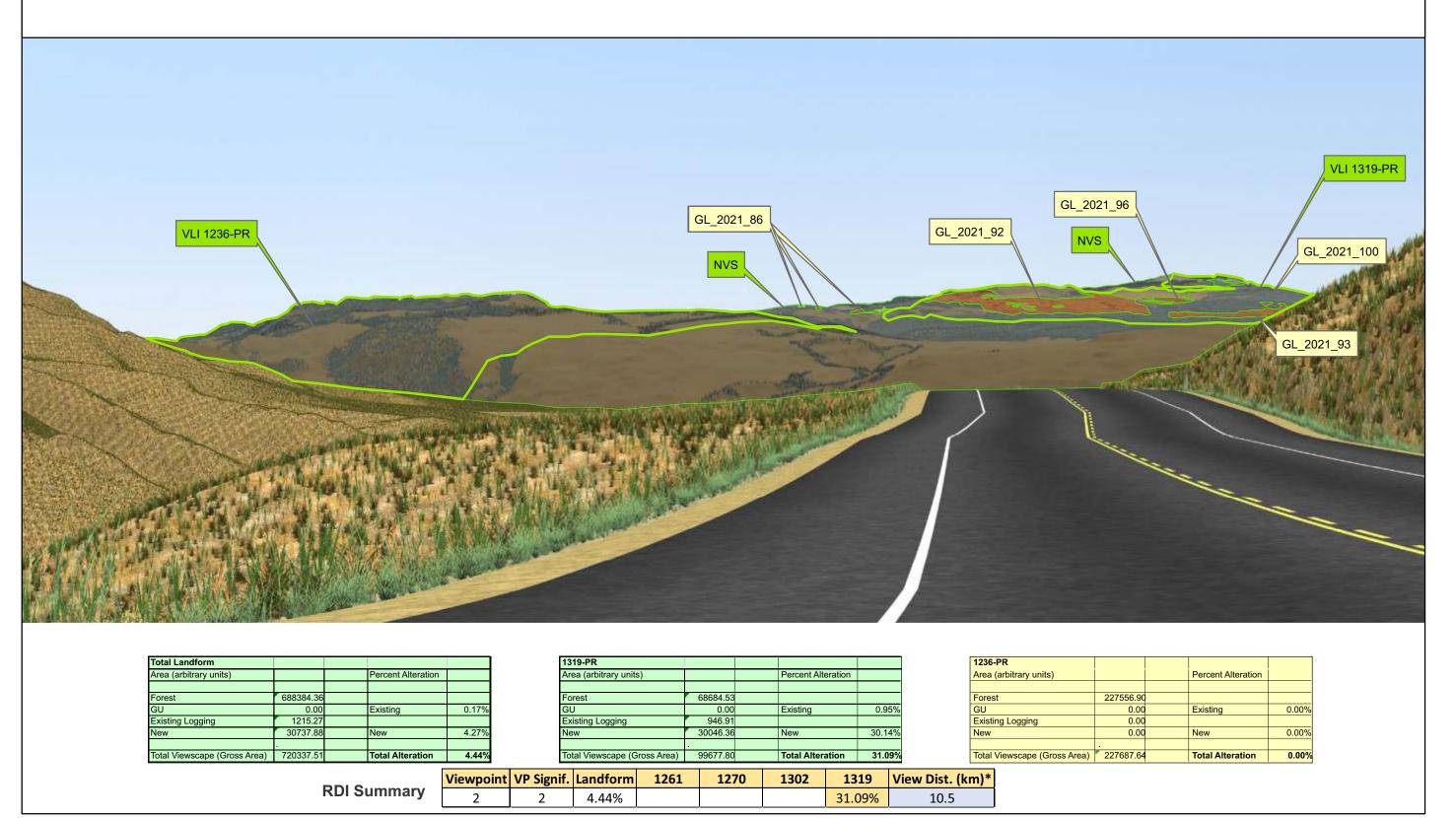
Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
1	0		No V	isible Alter	ation		3.3





Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 2: Hwy 97C



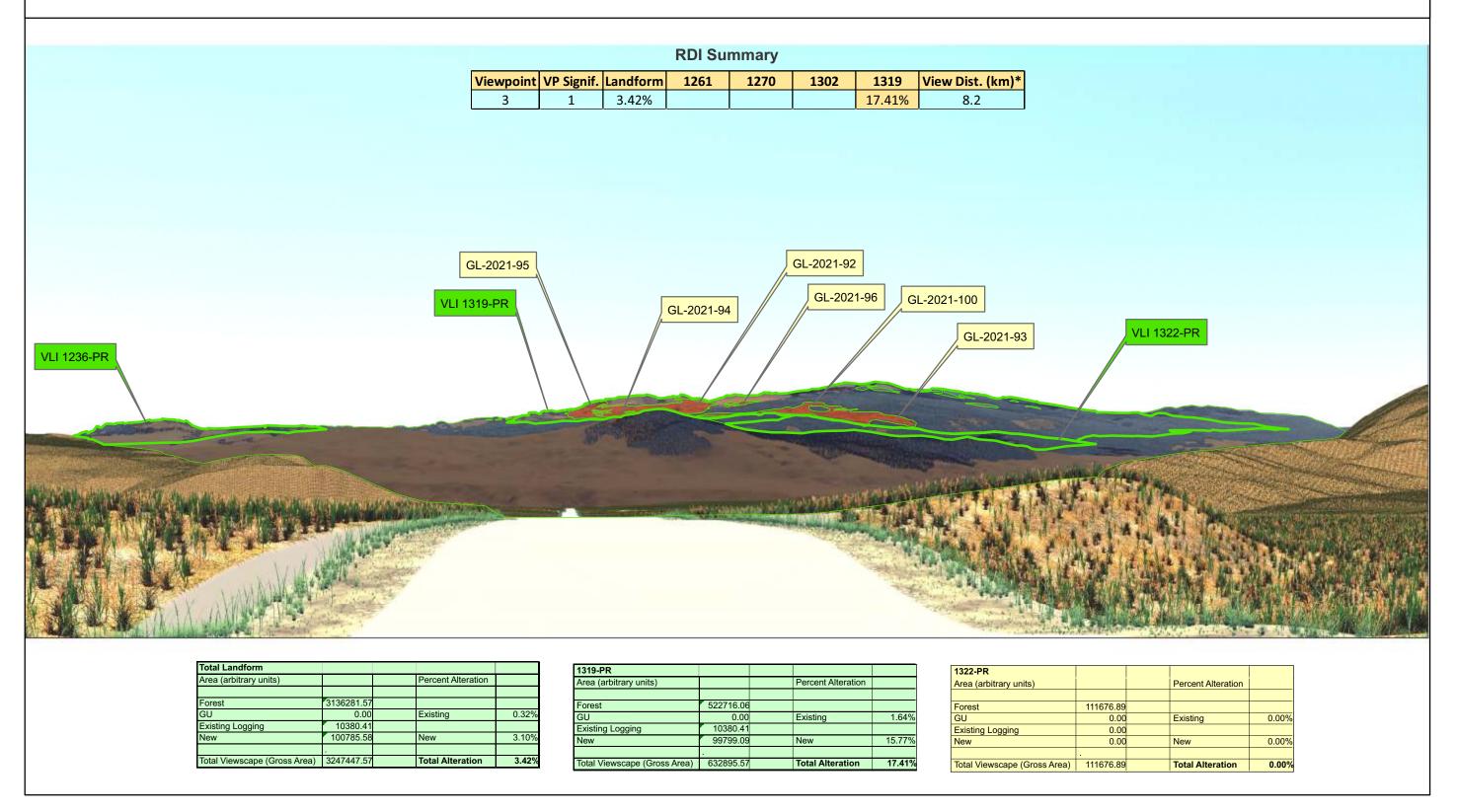






Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 3: Hwy 24 Junction with Cornwall Rd

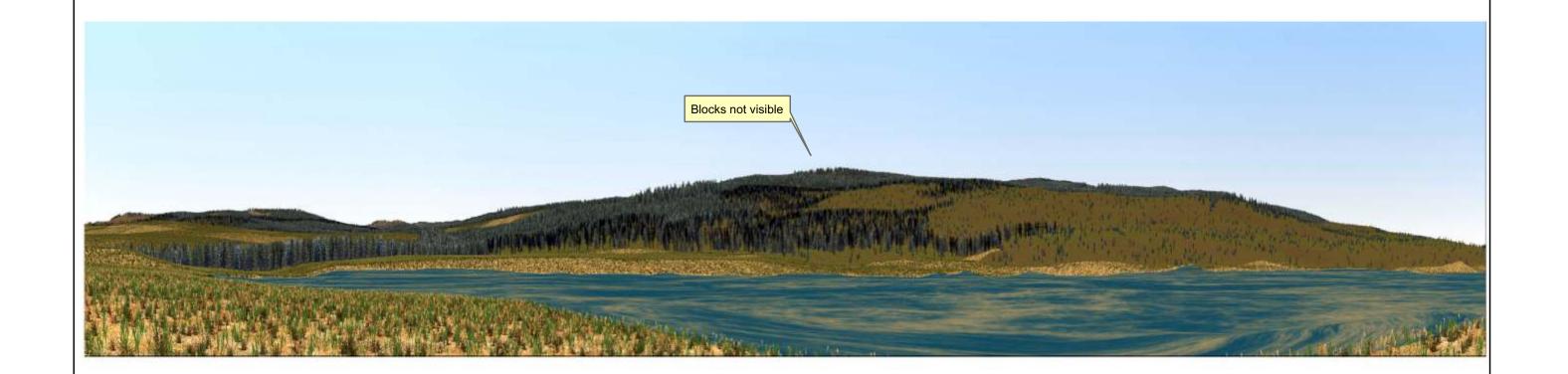






Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 4: Barnes Lake Rec Site 2





RDI Summary

Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
4	0		No V	isible Alter	ation	•	2.8

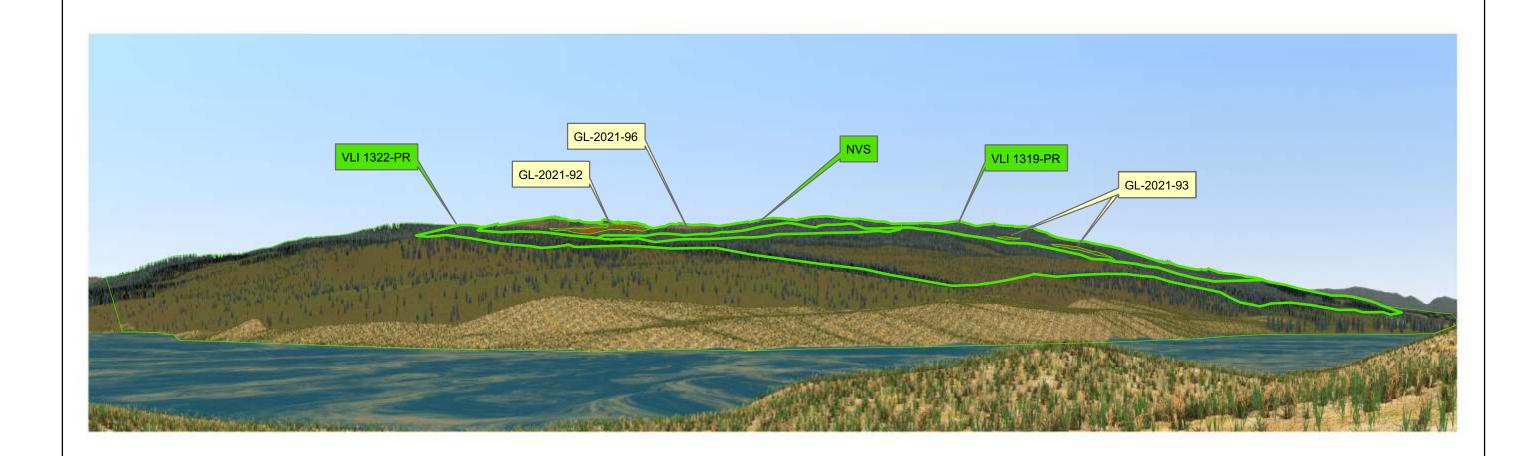


Viewpoint 4



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 5: Barnes Lake Rec Site





Total Landform			
Area (arbitrary units)		Percent Alteration	
Forest	4493596.62		
GU	0.00	Existing	0.00%
Existing Logging	0.00		
New	19732.21	New	0.44%
Total Viewscape (Gross Area)	4513328.83	Total Alteration	0.44%

1319-PR			
Area (arbitrary units)		Percent Alteration	
Forest	243610.86		
GU	0.00	Existing	0.00%
Existing Logging	0.00		
New	19732.21	New	7.49%
Total Viewscape (Gross Area)	263343.07	Total Alteration	7.49%

1322-PR			
Area (arbitrary units)		Percent Alteration	
Forest	668547.96		
GU	0.00	Existing	0.00%
Existing Logging	0.00		
New	0.00	New	0.00%
Total Viewscape (Gross Area)	668547.96	Total Alteration	0.00%

RDI Summary

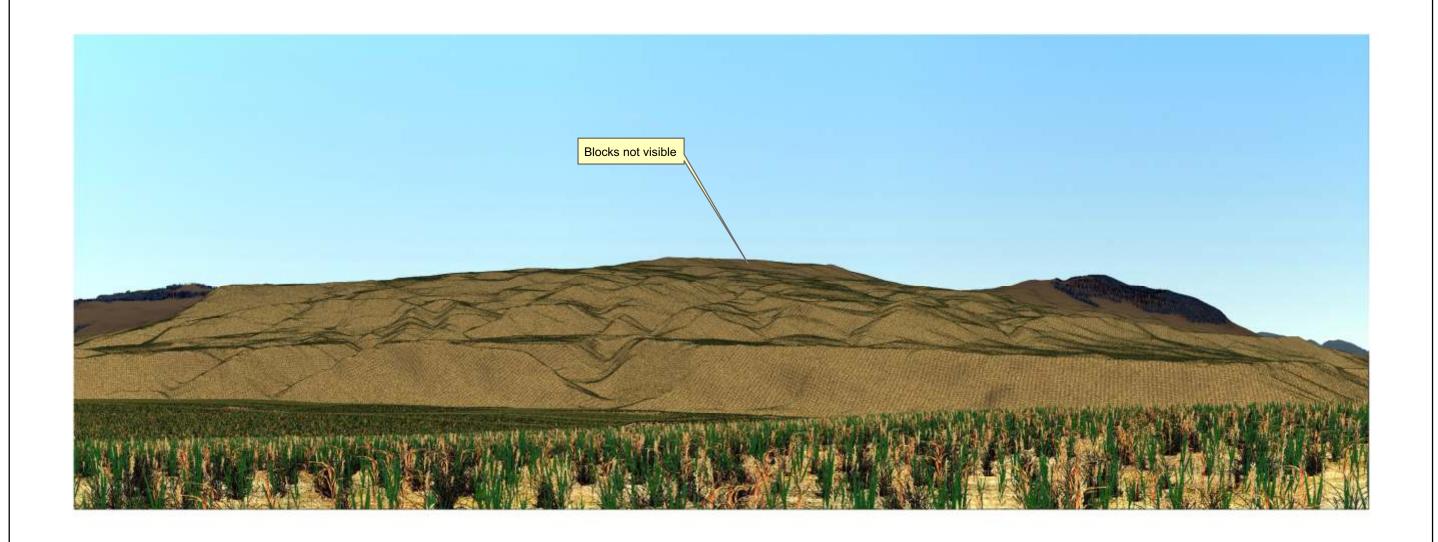
Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
5	3	0.44%				13.19%	2.7

10 REST RESSURCE DESIGN IN



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 6: Ashcroft Swimming Pool





Viewpoii	t VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
6	0		No V	isible Alter	ation		6.9



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 7: Deadman Gas Station

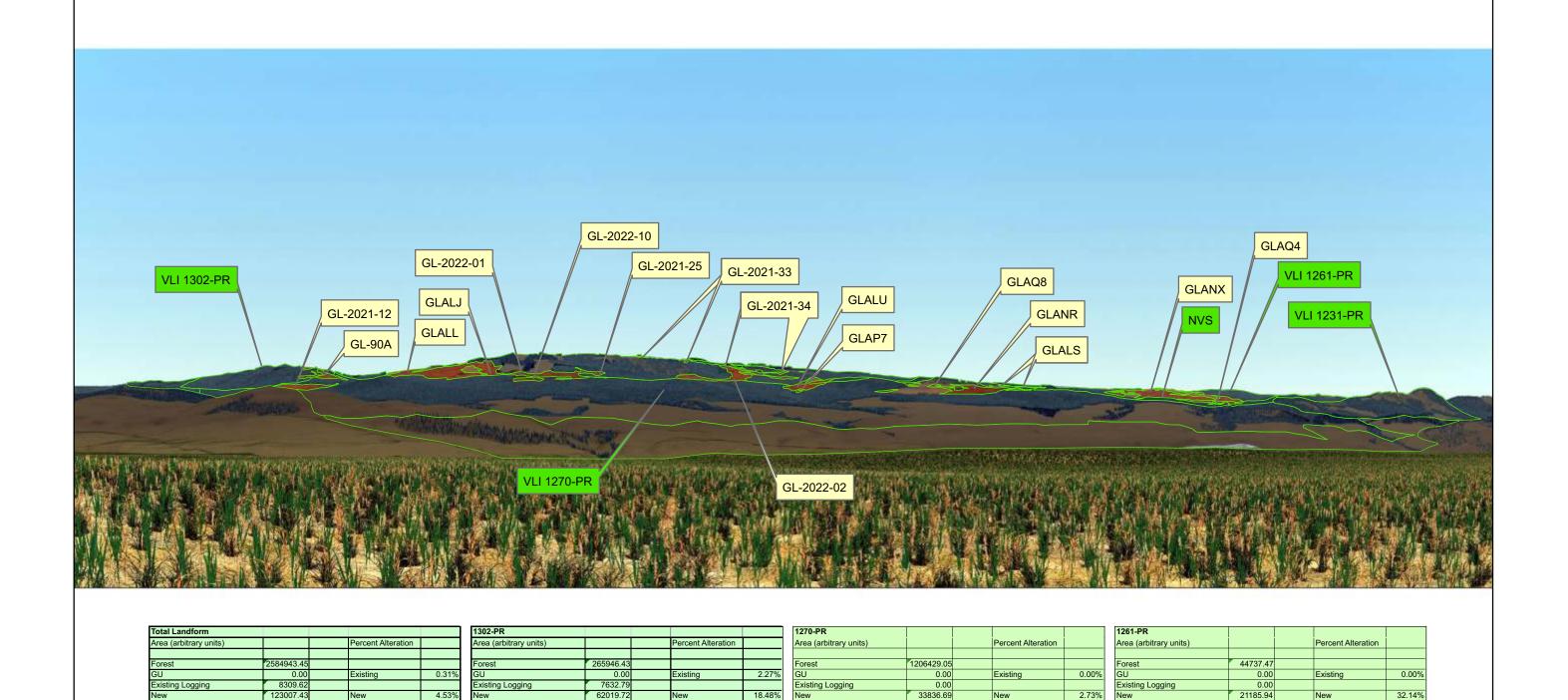


Total Viewscape (Gross Area) 65923.41

View Dist. (km)*

7.3

Total Alteration 32.14%



1270

2.73%

1302

20.75%

1319

18.48%

1261

32.14%

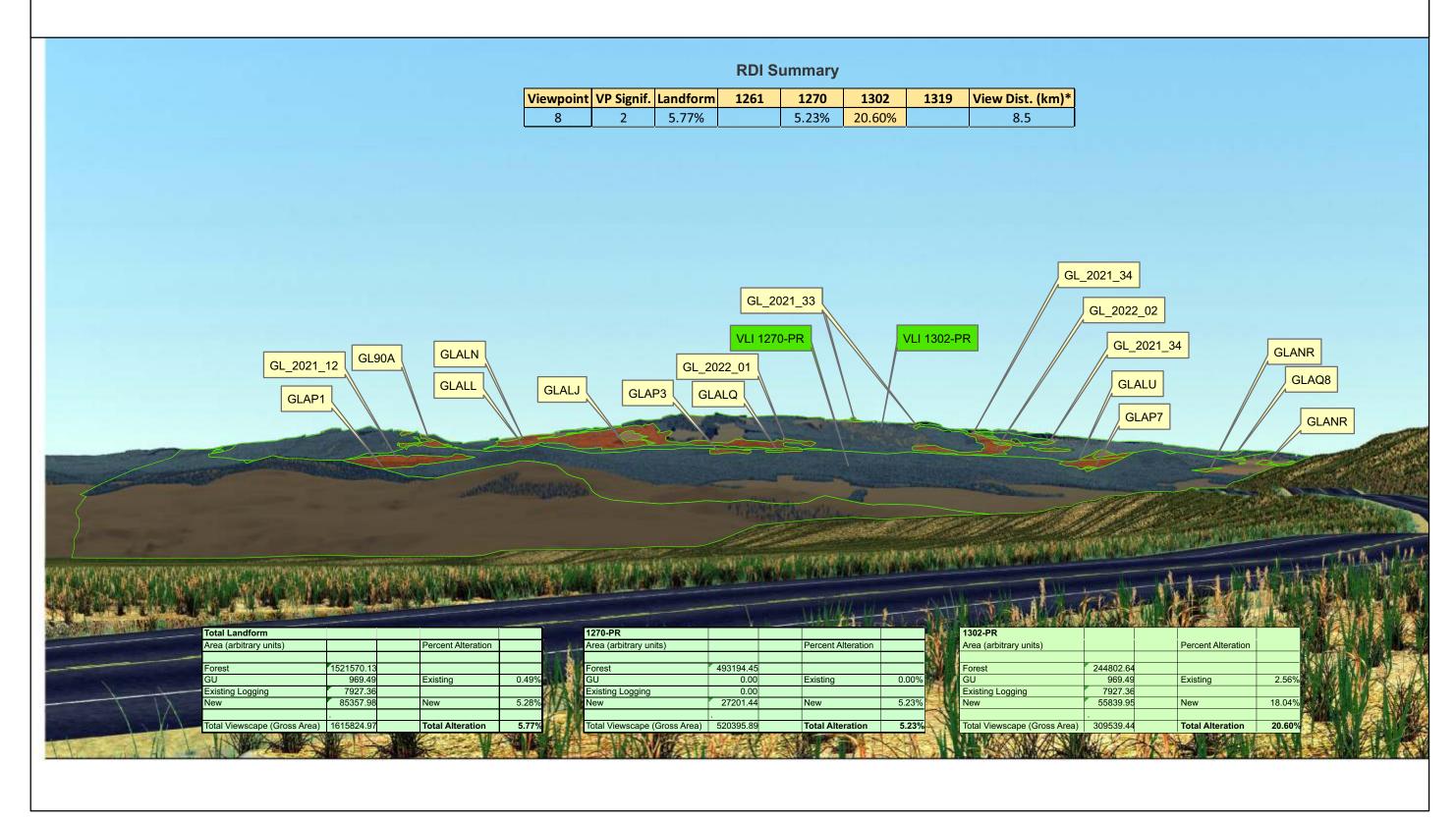
4.83%

Viewpoint VP Signif. Landform



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 8: Dean & Hwy 1

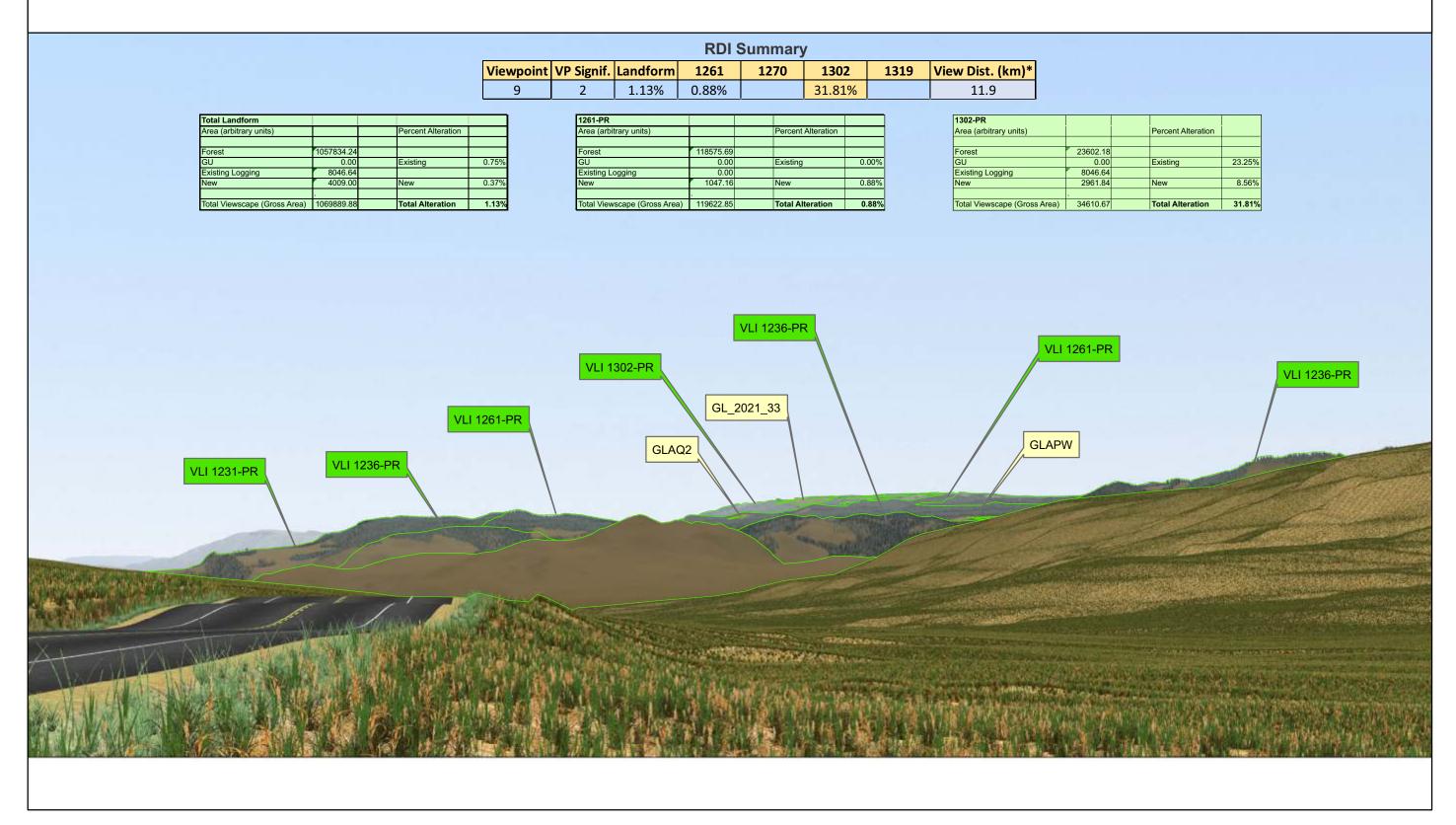






Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 9: Highway 1

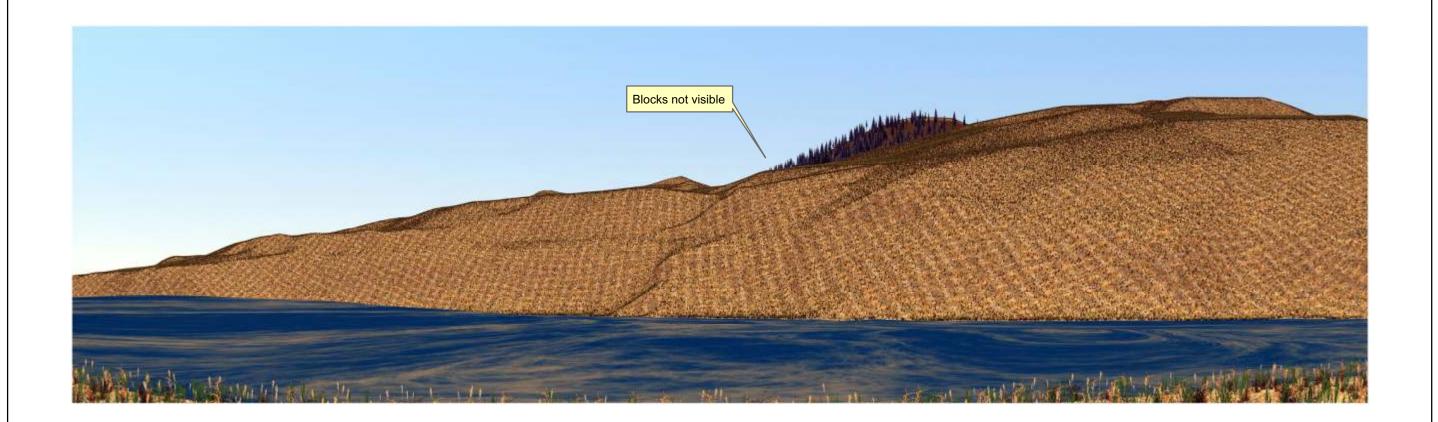






Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 10: Juniper Beach Park





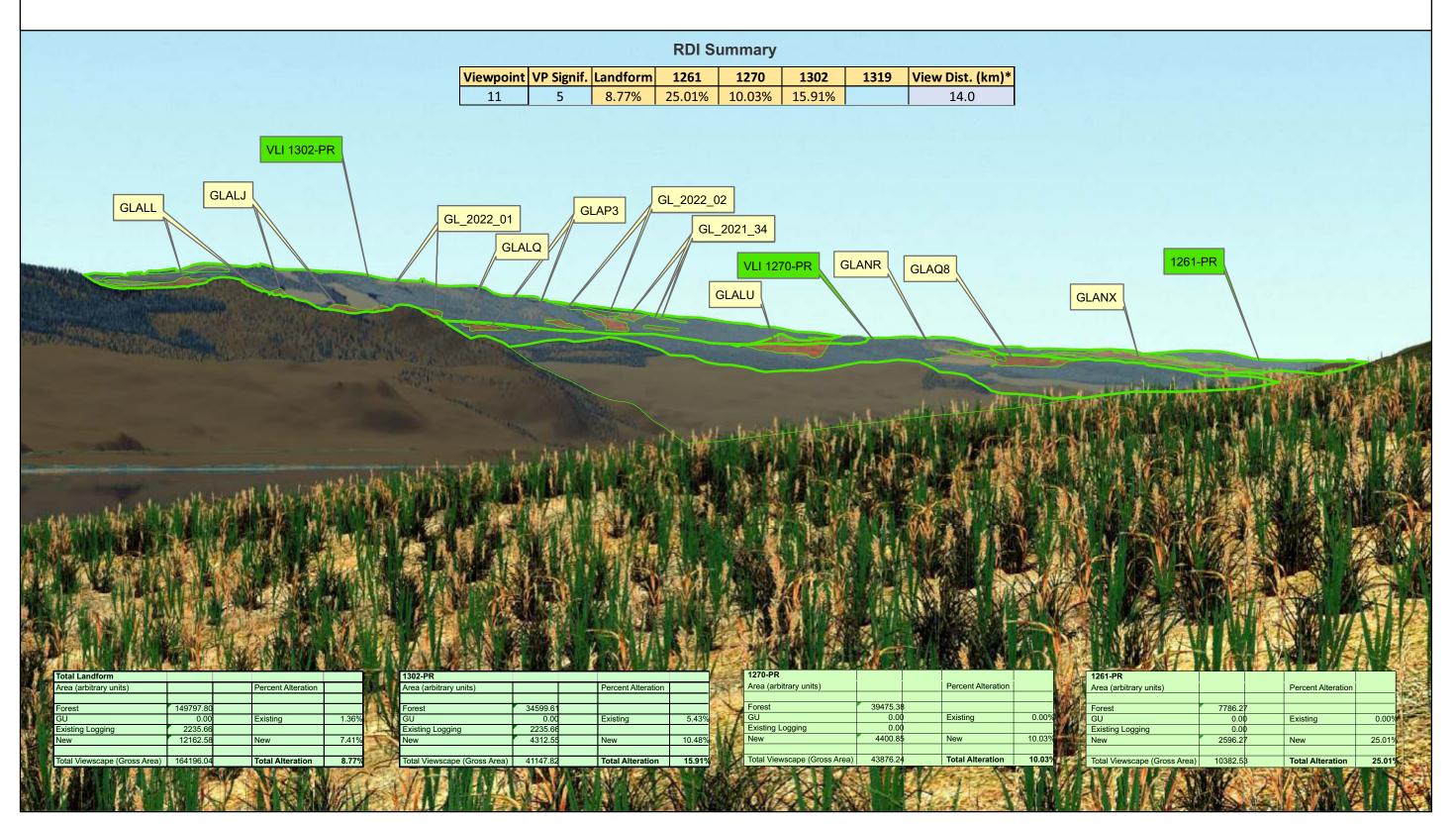
RDI Summary

Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
10	0		No Visible Alteration				



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 11: Kamloops Lake - Caliente Lakside Resort



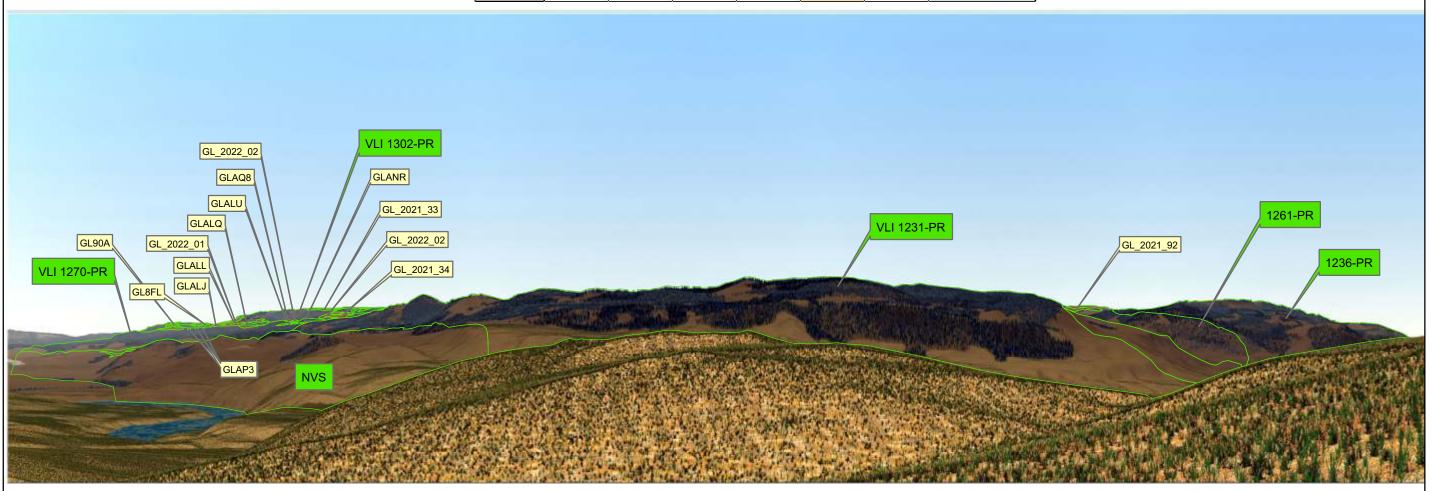




Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 12: Rest Stop



Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
12	4	0.81%		3.69%	28.20%	2.01%	10.9



Total Landform			
Area (arbitrary units)		Percent Altera	ition
Forest	2331221.69		
GU	0.00	Existing	0.20%
Existing Logging	4778.64		
New	14203.97	New	0.60%
Total Viewscape (Gross Area)	2350204.30	Total Alterati	on 0.81%

1270-PR			
Area (arbitrary units)		Percent Alteration	
Forest	81865.14		
GU	0.00	Existing	0.00%
Existing Logging	0.00		
New	3136.95	New	3.69%
Total Viewscape (Gross Area)	85002.08	Total Alteration	3.69%

1302-PR			
Area (arbitrary units)		Percent Alteration	
Forest	35046.03		
GU	0.00	Existing	9.79%
Existing Logging	4778.64		
New	8983.91	New	18.41%
Total Viewscape (Gross Area)	48808.58	Total Alteration	28.20%

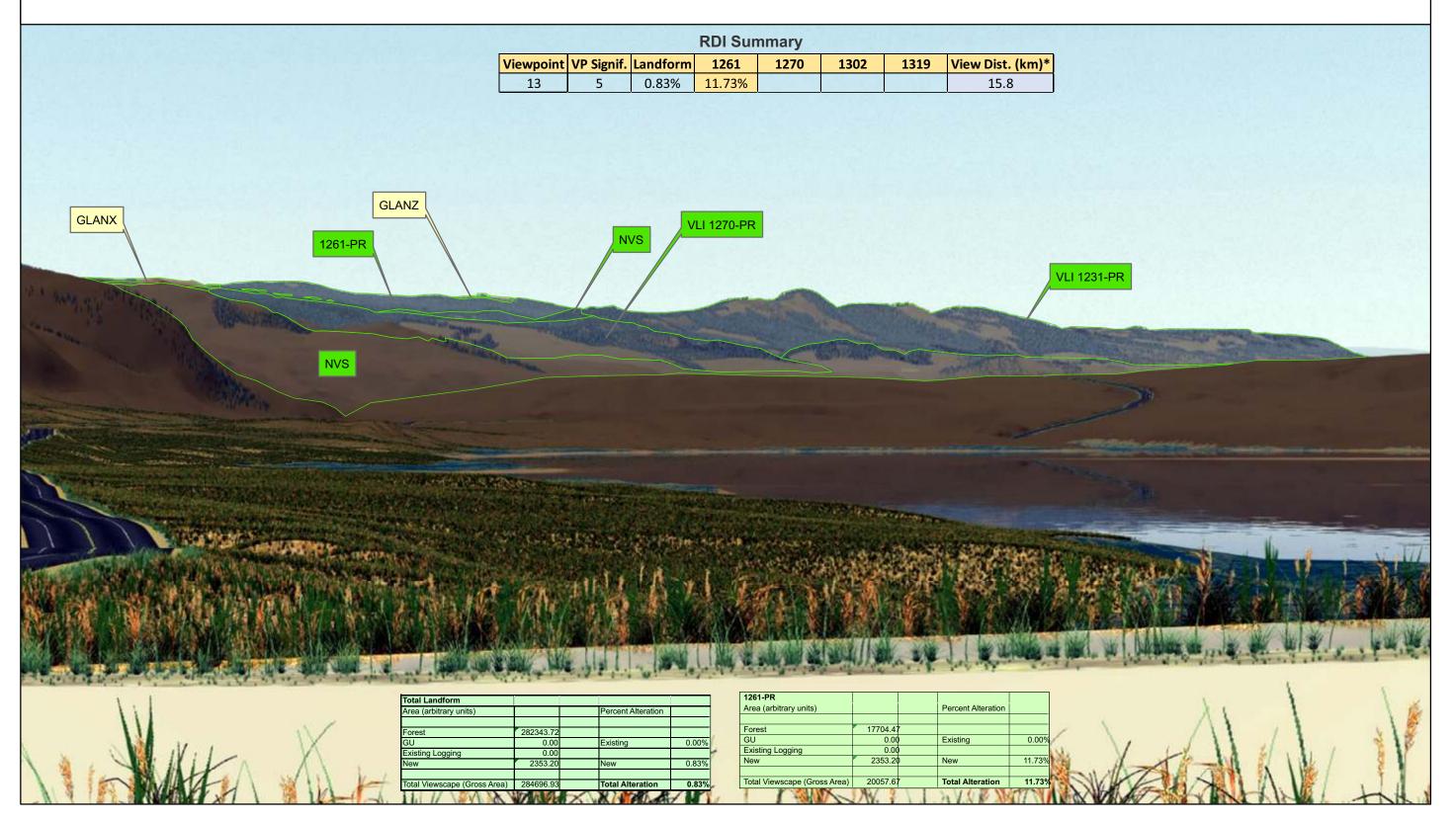
Total Viewscape (Gross Area)	103719.2	ô	Total Alteration	2.01%
New	2083.1		New	2.019
Existing Logging	0.0)		
GU	0.0)	Existing	0.00%
Forest	101636.1	5		
Area (arbitrary units)			Percent Alteration	
1261-PR			Daves at Alteretion	





Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 13: Savona



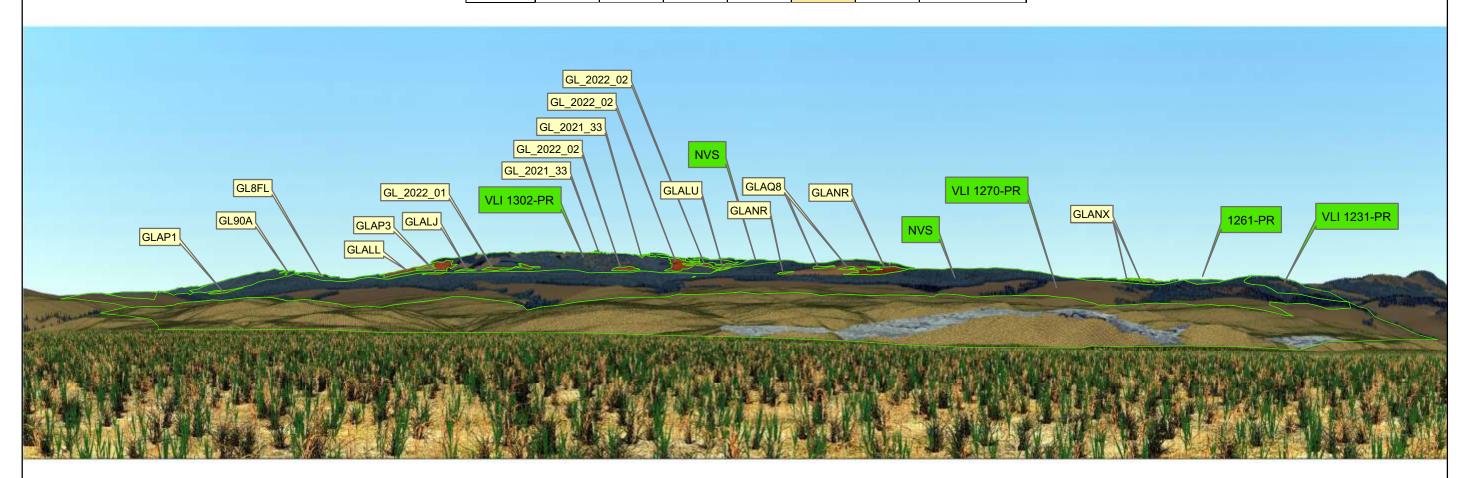




Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 14: Thompson River Estates



Viewpoint	VP Signif.	Landform	1261	1270	1302	1319	View Dist. (km)*
14	5	1.79%	6.81%	1.47%	15.88%		5.0



Total Landform			
Area (arbitrary units)		Percent Alteration	
Forest	2593828.66		
GU	0.00	Existing	0.27%
Existing Logging	7214.87		
New	40109.52	New	1.52%
Total Viewscape (Gross Area)	2641153.05	Total Alteration	1.79%

1302-PR			
Area (arbitrary units)		Percent Alteration	
Forest	172779.24		
GU	0.00	Existing	3.51%
Existing Logging	7214.87		
New	25405.68	New	12.37%
Total Viewscape (Gross Area)	205399.80	Total Alteration	15.88%

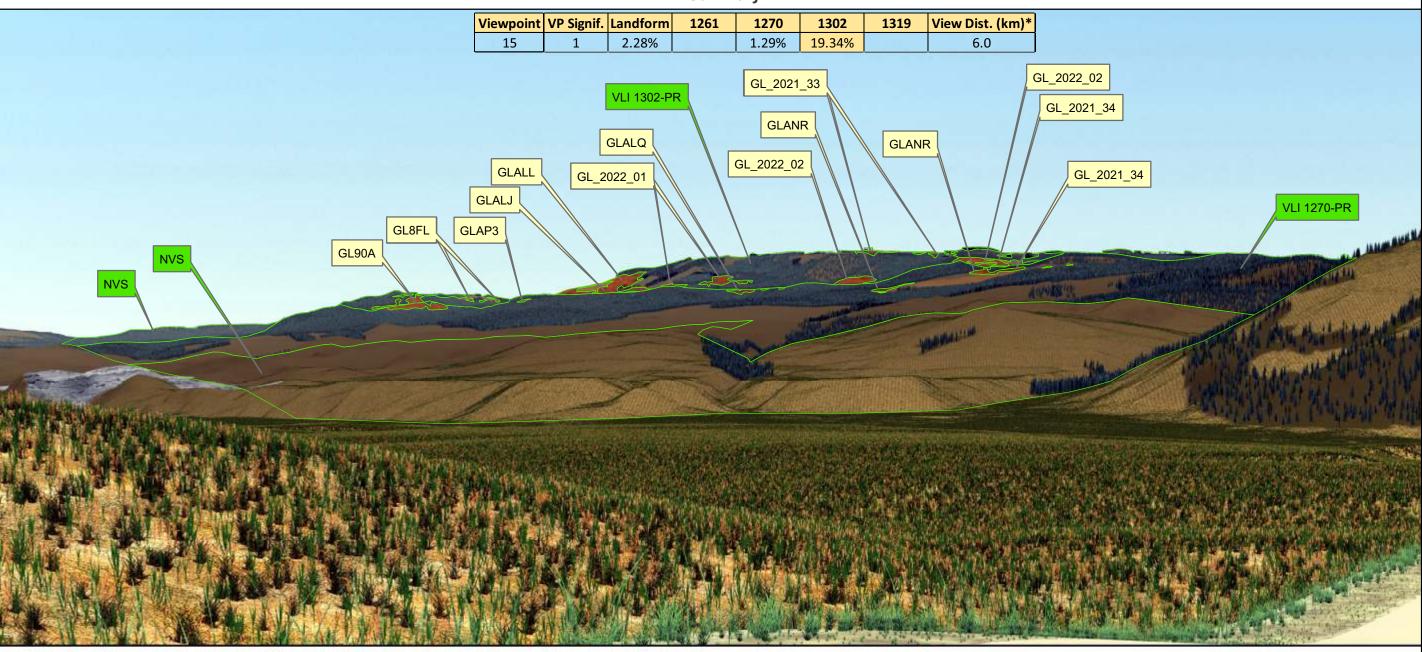
1270-PR				
Area (arbitrary units)			Percent Alteration	
Forest	886740.07	7		
GU	0.00)	Existing	0.00%
Existing Logging	0.00)		
New	13269.25	5	New	1.47%
Total Viewscape (Gross Area)	900009.32	2	Total Alteration	1.47%

1261-PR				
Area (arbitrary units)			Percent Alteration	
Forest	13647.6)		
GU	0.00)	Existing	0.009
Existing Logging	0.00)		
New	997.0	1	New	6.819
Total Viewscape (Gross Area)	14644.6)	Total Alteration	6.81



Glossy Operating Area Visual Impact Assessment Percent Alteration Calculation Viewpoint 15: Wallachin Road





Total Landform			
Area (arbitrary units)		Percent Alteration	
Forest	991039.26		
GU	0.00	Existing	0.57%
Existing Logging	5761.60		
New	17382.34	New	1.71%
Total Viewscape (Gross Area)	1014183.20	Total Alteration	2.28%

1302-PR			
Area (arbitrary units)		Percent Alteration	
Forest	77894.34		
GU	0.00	Existing	5.97%
Existing Logging	5761.60		
New	12915.09	New	13.37%
Total Viewscape (Gross Area)	96571.03	Total Alteration	19.349

1270-PR				
Area (arbitrary units)			Percent Alteration	
Forest	342907.8	4		
GU	0.00)	Existing	0.00%
Existing Logging	0.00)		
New	4467.2	5	New	1.29%
Total Viewscape (Gross Area)	347375.0	9	Total Alteration	1.29%

