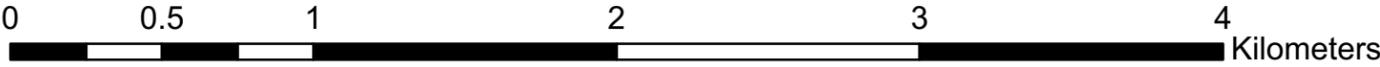


TSL A89160 Visual Assessment
RDI Resource Design Inc
April, 2020

Legend

- A89160_Viewpoints
 - April_20_2020_Road
 - Road_Adams_River
 - 82M065_CTRClip
 - 82m064_CTR_Clip
 - TRIM_WATER_LINES
 - A89160_CTR_Clip
 - Roads
 - Main_River
 - Lakes
 - TA_PEP_SVW_polygon
 - Existing_Cutblocks
 - TRIM_EBM_WATERBODIES
 - April_9_2020_A89160_WTRA's
 - A89160_Block_Shapes
 - Existing_WTRA's_&_Road_PAS
 - TRIM_WATER_LINES
 - Roads_for_RDI_July_23_2013
 - TRIM_EBM_WATERBODIES
 - TRIM_EBM_WATERCOURSES
 - 20kbcgrid
- RC_VM_VLI**
- NVS
 - M
 - MM
 - P
 - PR
 - R
 - 082m084vri
 - RDI_trim_transportation
 - RDI_TRIM_watercourse
- EVQO_CD**
- NVS
 - M
 - MM
 - P
 - PR
 - R
 - 082m084vri
 - RDI_trim_transportation
 - RDI_TRIM_watercourse
- Landform 1
 - > Open View
 - - -> Partially or Fully Screened View



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Findings and Conclusions

Visual Assessment – Southwest Harbour Area – North Adams River

This report is the visual assessment for TSL A89160, cutblocks SB7LL (north and south openings), SB7LN, and SB7LP. Data used for this assessment was received from Ches Clem, RPF, Planning Forester, BCTS Kamloops Business Area on April 1, 2020. RDI also obtained directly the most recent forest VRI file update from the BC Data Catalogue for the 082M block. The data was used by RDI to create an ArcGIS project for map production and orientation, and a Visual Nature Studio model for visualization. The Forest VRI file was further refined by RDI with recent cutblocks provided by Ches.

The landform containing the first 2 cutblocks is primarily in VSU 298 (VLI-Poly-No 1013) on the east side of Adams River with a Modification rVQO. An upper landform directly behind VSU 298, VSU 293 (VLI-Poly-No 1009), also having a Modification rVQO, contains cutblock SB96U. All cutblocks and VSUs for the 2017 project are located within Mapsheet 082M054.

As there was no opportunity afforded by BCTS for on-site determination, RDI made clearings in the 3-d model to provide generally open views from the upper road (NT2 and NT3) and more filtered views from the riverside locations (NT2 river and NT3 river). All of the viewpoints are located on roads on the west side of the river. The clearings reveal most of the project area and cutblocks, and would be reasonable if such clearings were to occur, either man-made or natural. RDI sought further information from BCTS as to potential viewpoint locations and related photography before committing to any design variations. Photography was obtained by Tyson Leudtke for viewpoints NT2, NT3 (both fully screened, and NT2 (River) – partially screened. No coverage was obtained from NT1 or NT3 (River). The latter viewpoint was deemed too steep for access in the limited time available and was presumed to have greater screening than NT2 (River). In advance of receipt of photography, the 2 viewpoint simulations on the upper main road were given full analysis with Visual Force and Percent Alteration, and simulations only from the river views. All are presented on subsequent pages of this report.

Findings

Viewpoint NT2 and NT2 River

The open view trial projection from Viewpoint NT2 could achieve the Modification VQO in percentage (under 14%) while the design of SB95C is overly lineal and angular to meet the definition of the Modification Category of Altered Forest (see pictorial examples on the back page of this report). If truly visible, the cutblock could benefit from the addition of some leave patches. The view from the NT2 River viewpoint is more treed and would easily meet the VQO. NT2 was determined to be fully screened during the photographic expedition. NT2 (River) was more open, but tree heights along the far shore of the river screened all potential visibility of the proposed cutblocks. As such, current viewing conditions will permit the cutblocks in their present configuration to meet the rVQO of Modification.

Viewpoint NT3 and NT3 River

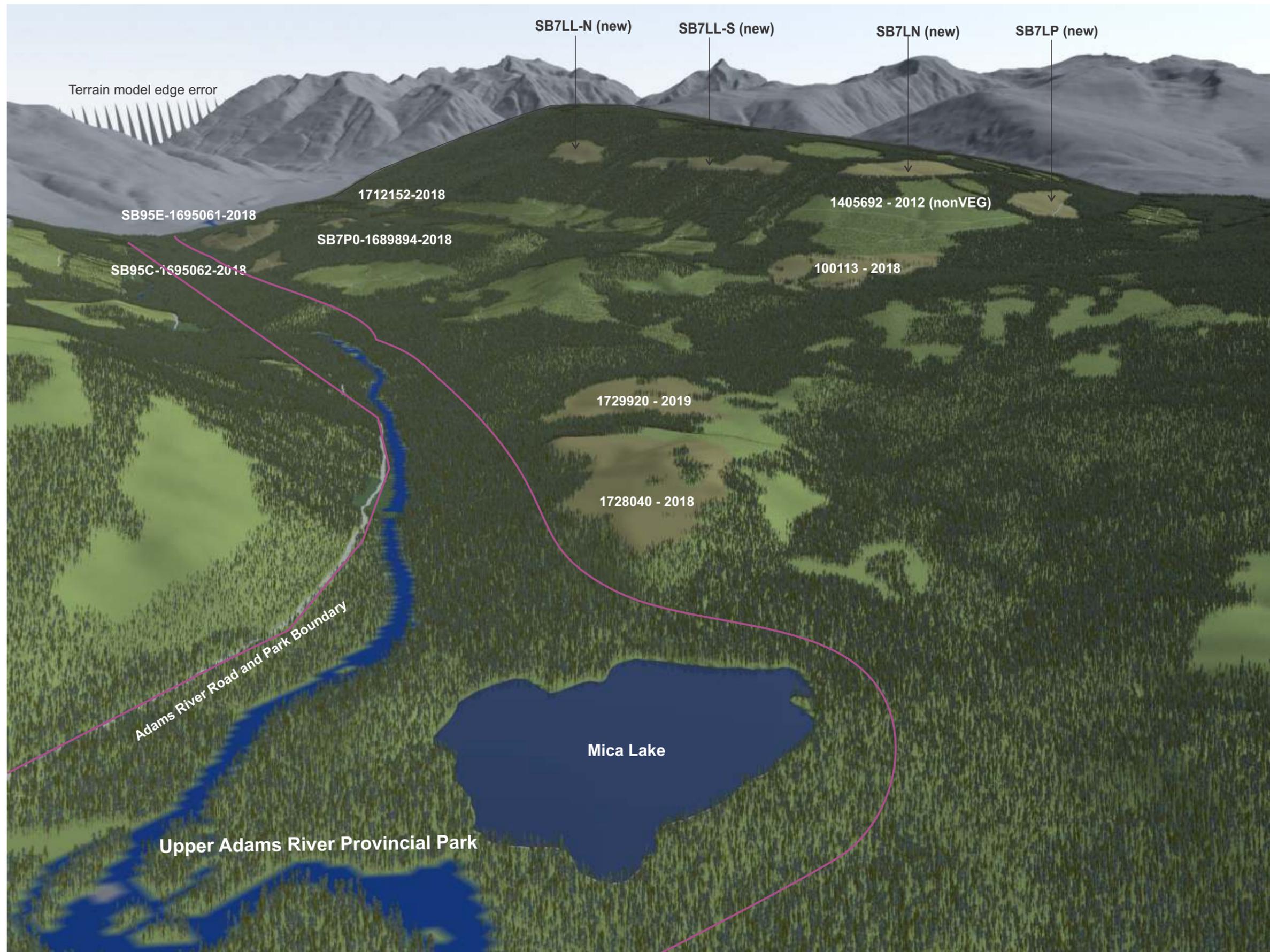
The NT3 viewpoint is close to SB95E as seen in the trial projection. If open visibility were to exist from NT3, the cutblock would greatly exceed the VQO (29%). A significant reduction in scale would be required unless no open viewing opportunities exist. The NT3 River viewpoint also exhibits excess scale. Photography indicated full screening from NT3. Although no photos could be taken due to time constraints, T. Leudtke indicated that due to steepness and cover, NT3 (River) would be more screened than NT2 (River). As such, current viewing conditions will permit the cutblocks in their present configuration to meet the rVQO of Modification.

Conclusions

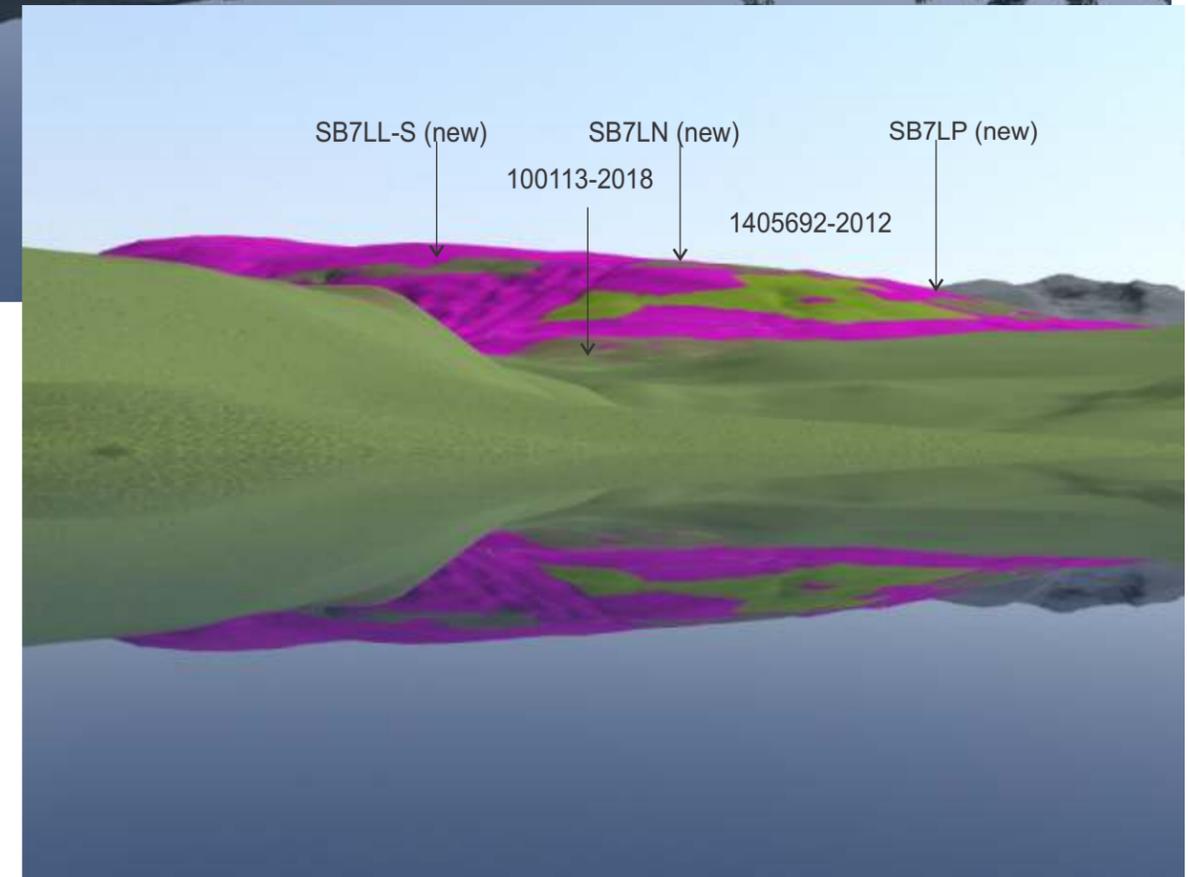
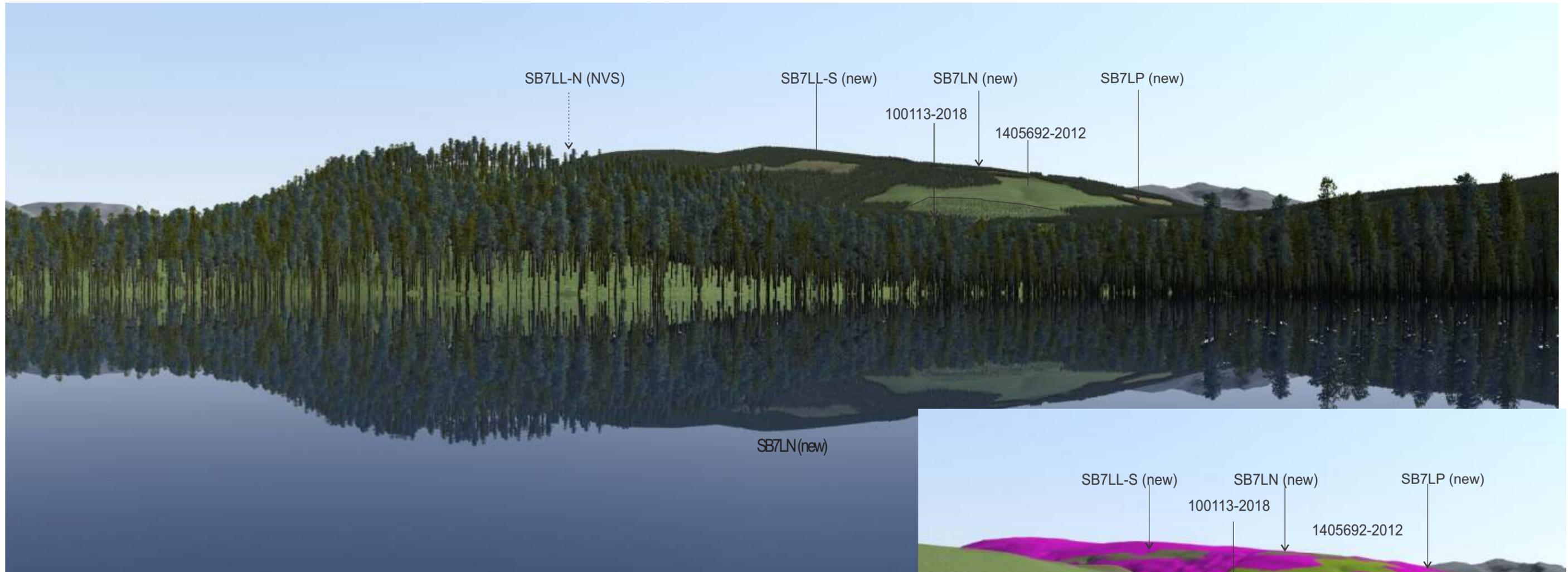
The photography indicates non-visibility of the cutblocks from the viewpoints tested with photography, thereby permitting the VQO to be met. The open views simulations derived by RDI provide useful information and if not truly representative of present conditions, can be used to predict the visual results if clearing occurs by nature or human design.



Ken B. Fairhurst, PhD, RPF
RDI Resource Design Inc
October 22, 2017

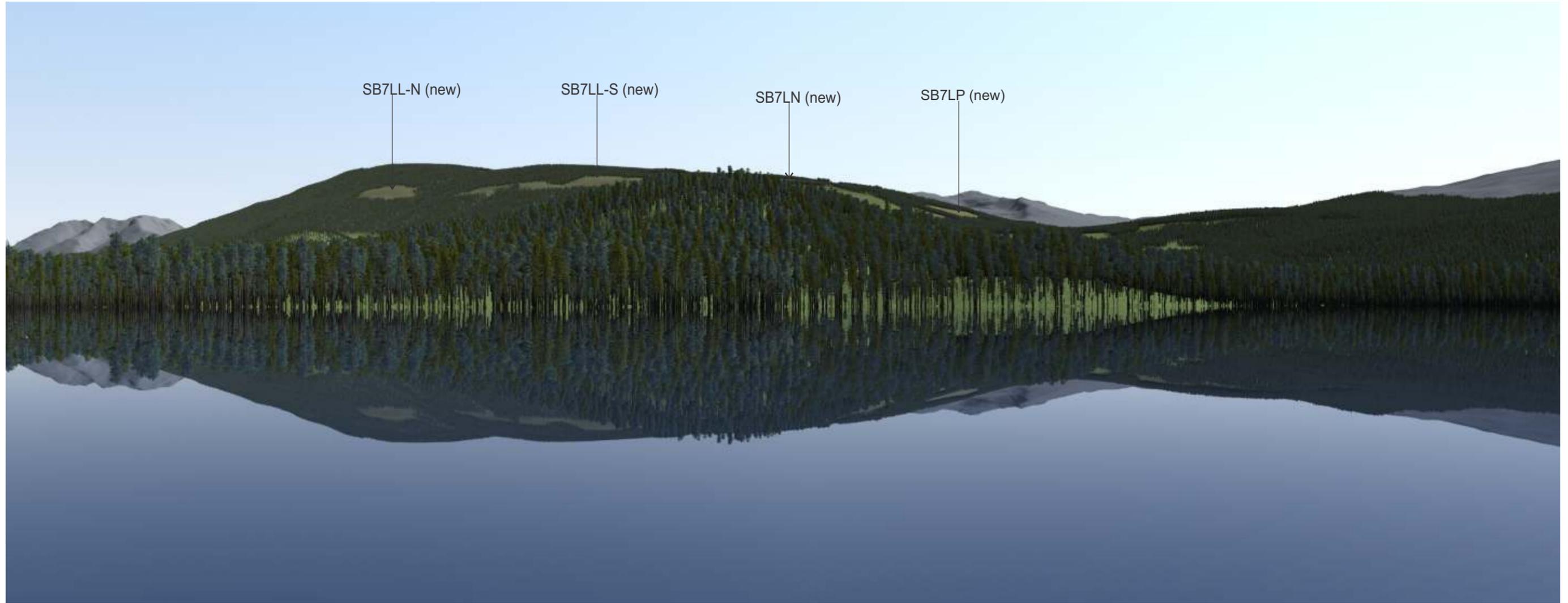


Overview from above Mica Lake

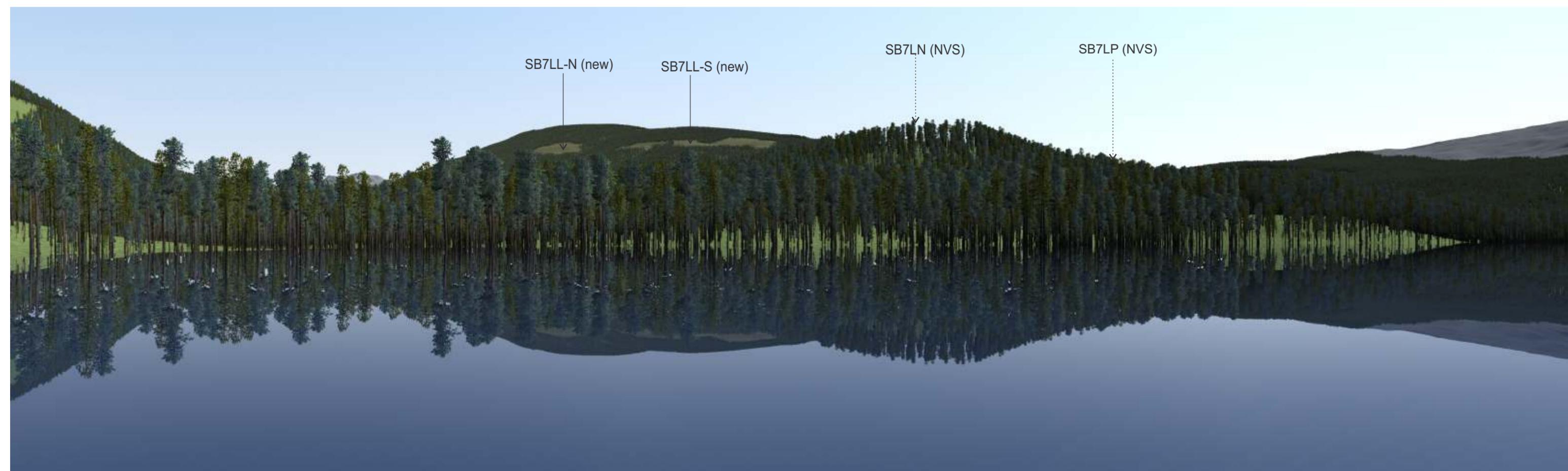


VNS Bare - Landform 1

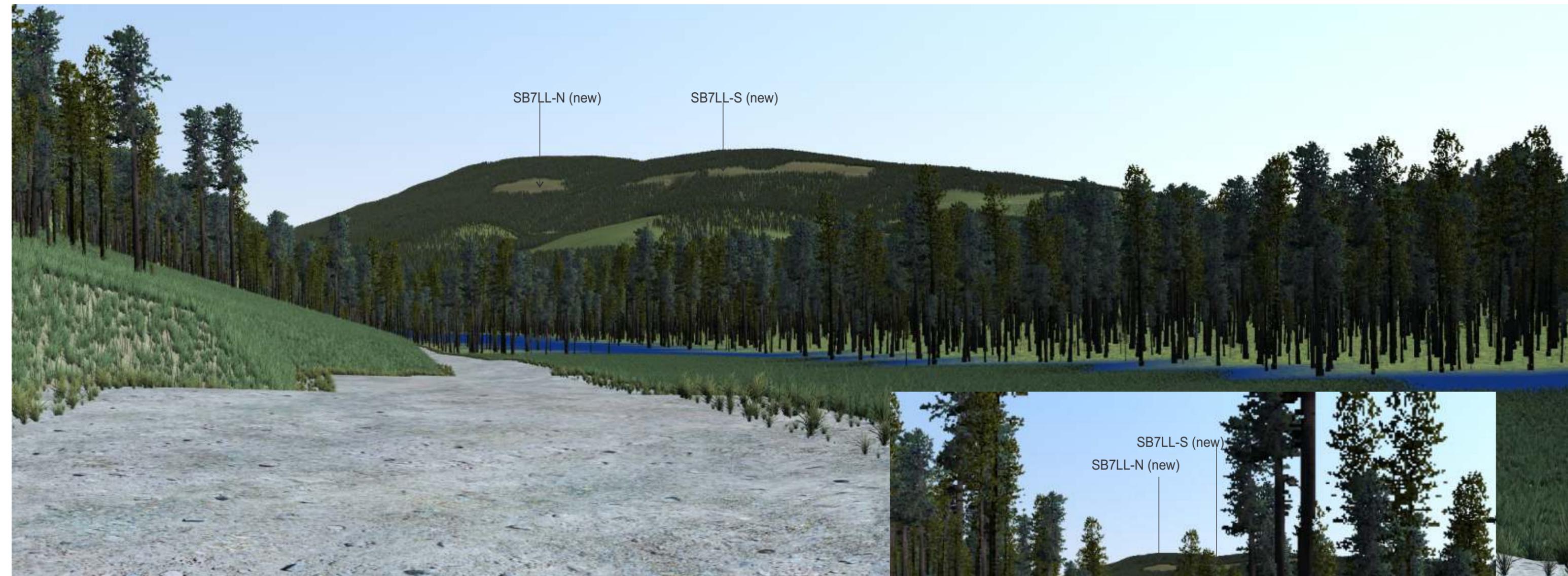
Viewpoint Mica Lake 2



Viewpoint Mica Lake 1



Viewpoint Mica Lake 2



Viewpoint Adams 1 (cleared for identification purposes only)

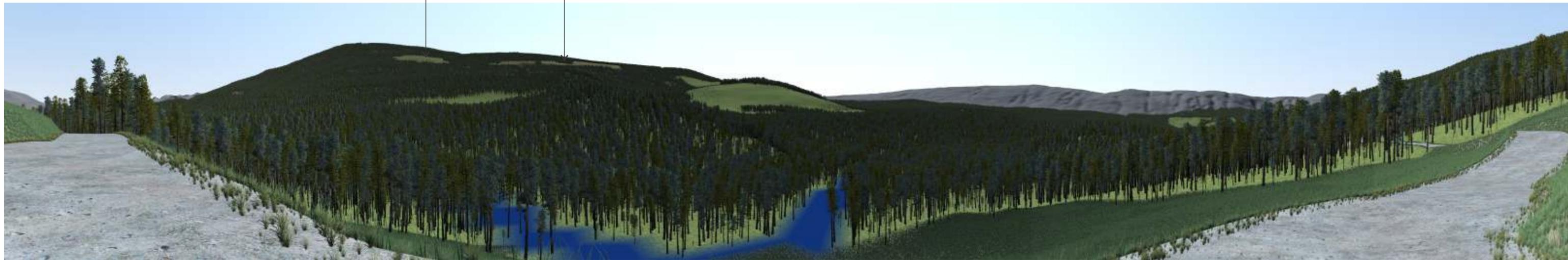


VNS Rendering with Roadside Trees per VRI

Viewpoint Adams 1

SB7LL-N (new)

SB7LL-S (new)



Viewpoint Adams 2 (cleared for identification purposes only)

SB7LL-N (new)

SB7LL-S (new)



VNS Rendering with Roadside Trees per VRI

Viewpoint Adams 2

SB95E
 SB95U (minor)
 SB95C
 SB7LL-N (new)
 SB7F0 (NVS or non-existing)
 SB7LL-S (new)
 SB7VJ?

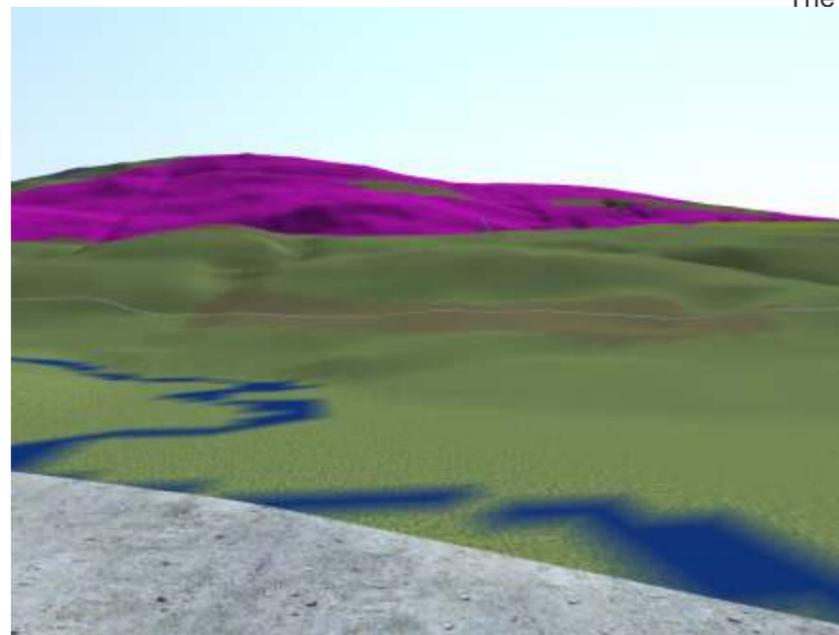
Viewpoint NT2 (cleared for identification purposes only)



The landform (VSU 298) has a Modification eVQO (M) east of the river. The VQO may be very easy to see, and: A. large in scale and natural in appearance, or B. small to medium in scale but with some angular but with some angular characteristics. SB95C has strongr linearity and angularity in the simulation. SB95E is large but with good form. SB96U is NVS and existing cutblock SB7F0 is a minor sliver. Overall, the appearance somewhat exceeds the VQO if visible in its entirety. As the viewpoint simulation was produced with minor clearing in the model in front of the viewpoint, on-site determination of viewability was requested, with photographs and GPS. These were obtained by Tyson Leudtke. The photos reveals full roadside screening. The VQO of Modification for VSU 298 (VLI-Poly-No 1013) will be met. The simulation results will be useful if roadside clearing were to be contemplated in the future.



Photos by Tyson Leudtke September, 2017

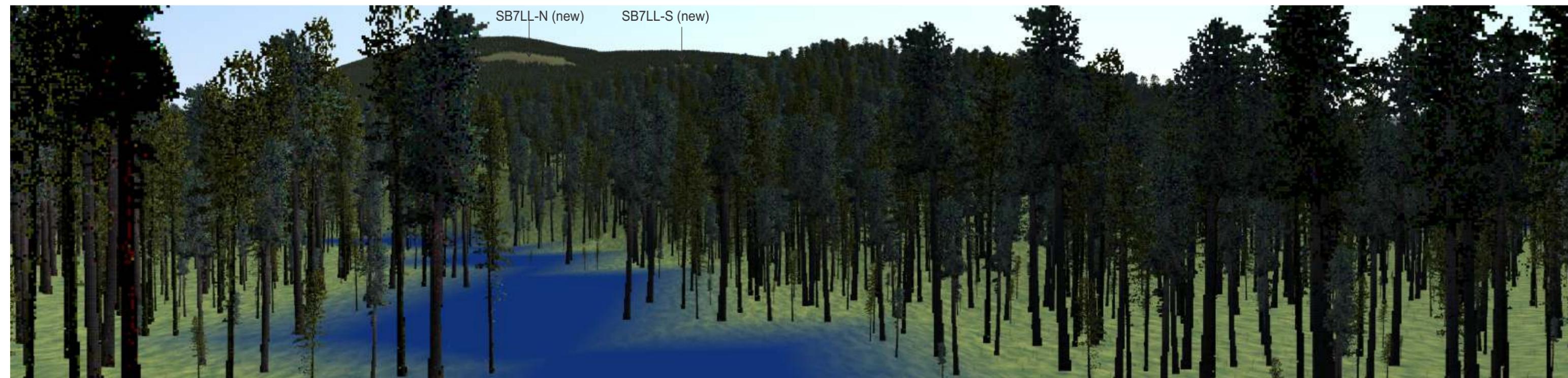


VNS Bare - Landform 1



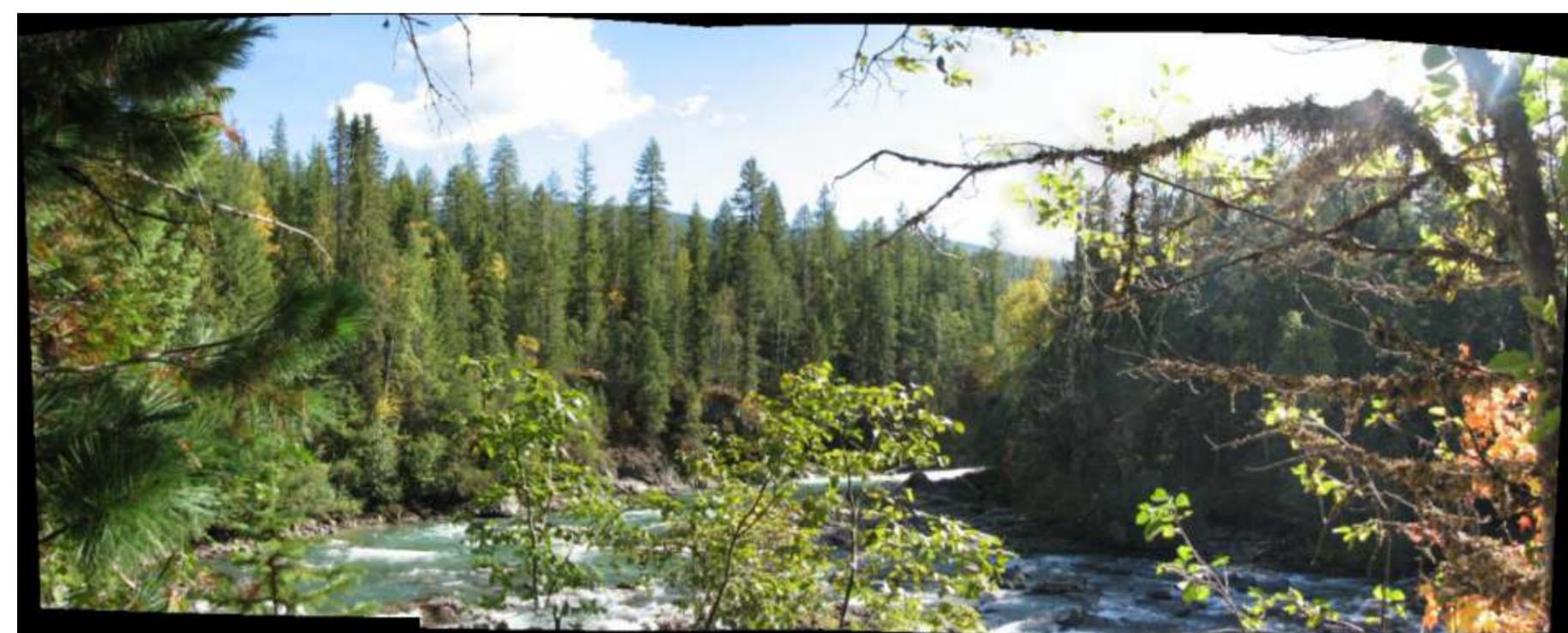
VNS Rendering with Roadside Trees per VRI

Viewpoint NT2



Viewpoint NT2-Riverbend- no VP clearing - slightly raised viewpoint elevation

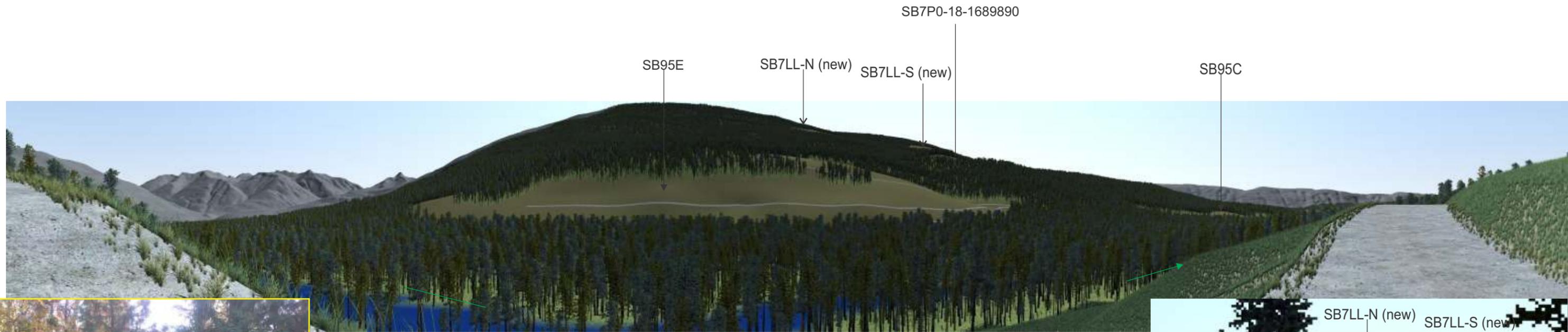
5236 pixels



Photos by Tyson Leudtke September, 2017

The landform (VSU 298) has a Modification eVQO (M) east of the river. The VQO may be very easy to see, and: A. large in scale and natural in appearance, or B. small to medium in scale but with some angular but with some angular characteristics. SB95C has minor linearity and angularity in the simulation. The other new blocks (SB95E, SB96U) are NVS and existing cutblock SB7F0 is a minor sliver. Overall, the appearance easily meets the VQO. As the viewpoint simulation was produced with minor clearing in the model in front of the viewpoint, on-site determination of viewability was requested, with photographs and GPS. These were obtained by Tyson Leudtke. The photos reveal greater trees heights along the river than in the simulation which screen all proposed alteration. The VQO of Modification for VSU 298 (VLI-Poly-No 1013) will be met. The simulation results will be useful if clearing near the river were to be contemplated in the future.

Viewpoint NT2 River



Viewpoint NT3 (cleared for identification purposes only)

Composite (stitched) 48 mm camera lens (40 degree field of view). 4.5 images road to road (180 degrees).

Viewpoint NT3- with VP clearing- no on-site viewpoint determination



VNS Rendering with Roadside Trees per VRI



Photos by Tyson Leudtke September, 2017

Percent Alteration Viewpoint NT3 (cleared)		
Features	AREA2	% Alt.
Landform (VSU 298)	939378.95	
SB95E	267449.90	28.47%
SB7F0	1622.73	0.17%
SB95C	7856.07	0.84%
Total Percent Alteration	276928.70	29.48%

The landform (VSU 298) has a Modification eVQO (M) east of the river. The Percent Alteration is 29.48% in the cleared view from the road. The allowable VQO Percent Alteration range is 7.1% to 18%. The definition of the Modification Category of Altered Forest is very easy to see, and is: A. large in scale and natural in appearance, or B. small to medium in scale but with some angular but with some angular characteristics. SB95E is very large (28.47% alteration) and would require a significant reduction in scale to meet the VQO if visibility is as open as the trial cleared view predicts. SB95C is small (0,84% alt.) and successfully follows visual force lines and requires no adjustment from this viewpoint. On-site determination of viewability from the best observation point was requested from BCTS with GPS locations and photography. Full screening was indicated in the NT3 photo (see inset). The VQO will be met and no adjustments are suggested at this time. SB96U is not seen in the upper landform (VSU 293) as it is behind the leading ridge. The existing SB7F0 cutblock successfully follows the major lines of force, namely the ridgeline delineating the landform VSU. The simulation results will be useful if roadside clearing were to be contemplated in the future.

Viewpoint NT3

Visual Quality - Categories of Alteration

Visual Quality Objectives are defined in Section 1.1 of the Forest Planning and Practices Regulation. Visual Quality research shows that percent alteration for clear cuts and volume/stems per hectare for partial cuts are also good predictors of visual quality if applied correctly.

Clear Cuts

Retention Harvest

Partial Cuts

Preservation: very small in scale, and not easily distinguishable from the pre-harvest landscape.
0% ground may be visible.



Retention: is difficult to see, small in scale, and natural in appearance
0 - 1.5% ground may be visible.



Partial Retention: easy to see, small to medium in scale, and natural and not rectilinear or geometric in shape.
1.6 – 7% ground may be visible.



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.
7.1-18% ground may be visible.



Maximum Modification: is very easy to see, and is (A) very large in scale, (B) rectilinear and geometric in shape, or (C) both
18.1-30% ground may be visible.



Percent Alteration	Per VQO
Preservation	0
Retention	0 - 1.5
Partial Retention	1.6 - 7.0
Modification	7.1 - 18.0
Max Modification	18.1 - 30.0

Note: % Alteration numbers must be applied to a readily distinguishable landform. They were not derived for application against entire landscapes.



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	R	R
20	R	R	R	R	R	R	R	R	R	R
30	R	R	R	R	R	R	R	R	R	R
40	R	R	R	R	R	R	R	R	R	R
50	R	R	R	R	R	R	R	R	R	R
60	R	R	R	R	R	R	R	R	R	R
70	R	R	R	R	R	R	R	R	R	R
80	R	R	R	R	R	R	R	R	R	R
90	M	M	M	M	M	M	M	M	M	M

Note: The Partial Cutting table may be applied across the landscape as this measure is landform Independent.