

Visibility Analysis
Mahood West_East Side and Mahood East
RDI Resource Design Inc
October 22, 2020
Legend

- Contours
- NE_Mahood_Lake_VP
- Aug_8,_2020_Operating_Area's
- m20_Lake_Inside
- MahoodLake
- m20W2_inside
- m20_Falls_within
- m20W1-simple
- WhitehorseEnd
- WhitehorseStart
- FallsTrue
- ◆ Mahood2020Viewpoints
- Aug_8,_2020_Existing_WTRA's



Cumulative Viewshed - All Viewpoints - Mahood West - East Side and Mahood East

Visible: West-E - 823 ha; East - 184 ha

Contents

Mahood Lake West (East End) and Mahood Lake East Visibility Study	
Page	Description
1	Key Map; Cumulative Viewshed
2	Contents; Summary
3	White Horse Bluffs Trail Start/End Viewpoint Simulations
4	White Horse Bluffs Trail Start Viewshed
5	White Horse Bluffs Trail End Viewshed
6	Helmcken Falls Viewpoint Simulation
7	Helmcken Falls Viewshed
8	Northeast Mahood Lake Viewpoint Simulation
9	Northeast Mahood Lake Viewshed
10	Green Mountain Tower Viewpoint Simulation (NVS)

Visibility Analysis Summary

RDI was requested by Ches Clem, RPF, Planning Forester, Clearwater Field Team, BC Timber Sales Kamloops Business Area, to conduct a visibility study of the Mahood Lake West (East Side), and Mahood Lake East Operating Areas. Ches advanced five viewpoints for consideration: White Horse Bluffs Trail Start, White Horse Bluffs Trail End, Helmcken Falls, Green Mountain Tower Lookout, and a view from northeast Mahood Lake itself. Photos were provided for each of the viewpoints except from the lake surface.

RDI proceeded with 2 procedures: 1) Arc Map bare land viewshed production and 2) Visual Nature Studio visual simulations with tree cover rendered according to stand heights. Viewshed production was based on 20m resolution bare ground terrain. The VNS model was assigned forest cover stand heights from the BC Vegetation Resources Inventory. At Ches' request, the viewshed raster grids were converted to shapefiles. RDI produced a summary of viewshed coverage from each viewpoint by digitizing around the primary viewshed boundaries while ignoring the small non-visible areas within those boundaries. A cumulative tally was also prepared, excluding the Tower (NVS).

Results

The dual methodologies provide good insight into both the extent and visual influence of visibility within the 2 operating areas. The planimetric extents of visibility by viewpoint are shown in the following table:

Viewshed Summary in Hectares		
Viewpoint	Mahood West (East End)	Mahood East
	Area (ha)	Area (ha)
Bluffs Start	325	162
Bluffs End	374	126
Falls	669	42
Lake	253	0
Tower	0	0
Cumulative	823	184

The simulations and viewsheds are provided for each viewpoint in the following pages as indicated in the adjacent Legend. Each method has its own utility: the viewsheds provide precise locations useful when developing harvest layout plans; the simulations provide advance awareness of exposure potential to guide shape and scale.

RDI offers that a logical next step in the process might be preparing a pre-engineering "Integrated Visual Design Plan" which brings together all resource constraints and opportunities. Two such plans were produced by RDI within the Clearwater area:

1. Foghorn IVDP 2010 - rdi3d.com/BCTS/Foghorn_IVDP_RDI_100319-2.pdf
2. Tshinakin IVDP 2012 - rdi3d.com/BCTS/RDI_Tshinakin_IVD-8.pdf

The benefits of considering a full IVPD or lighter version by RDI, are that the models are now built and provide quick interactive visual response to design alternatives.



Ken Fairhurst, PhD, RPF
RSI Resource Design Inc
October 23, 2020

Mahood East (Blue Colour)

Mahood West (East Side)

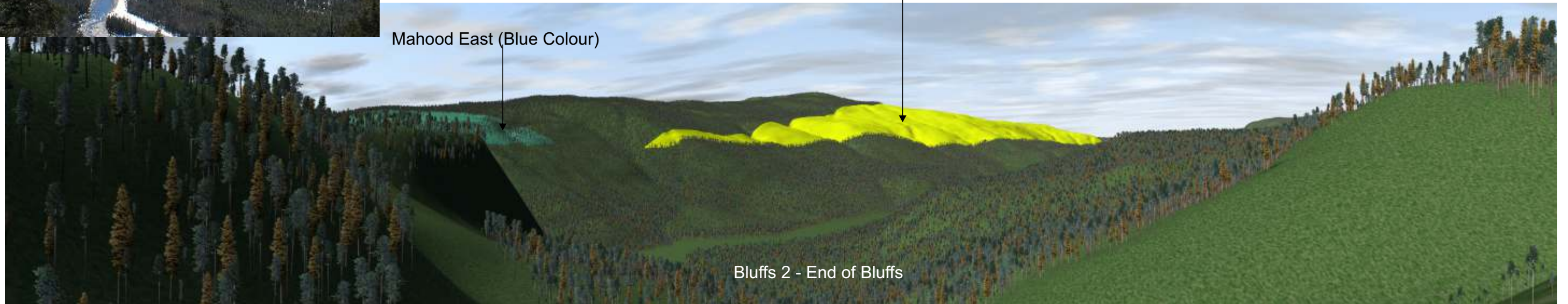


Bluffs 1 — Start of Bluffs



Mahood West (East Side)

Mahood East (Blue Colour)



Bluffs 2 - End of Bluffs



9317



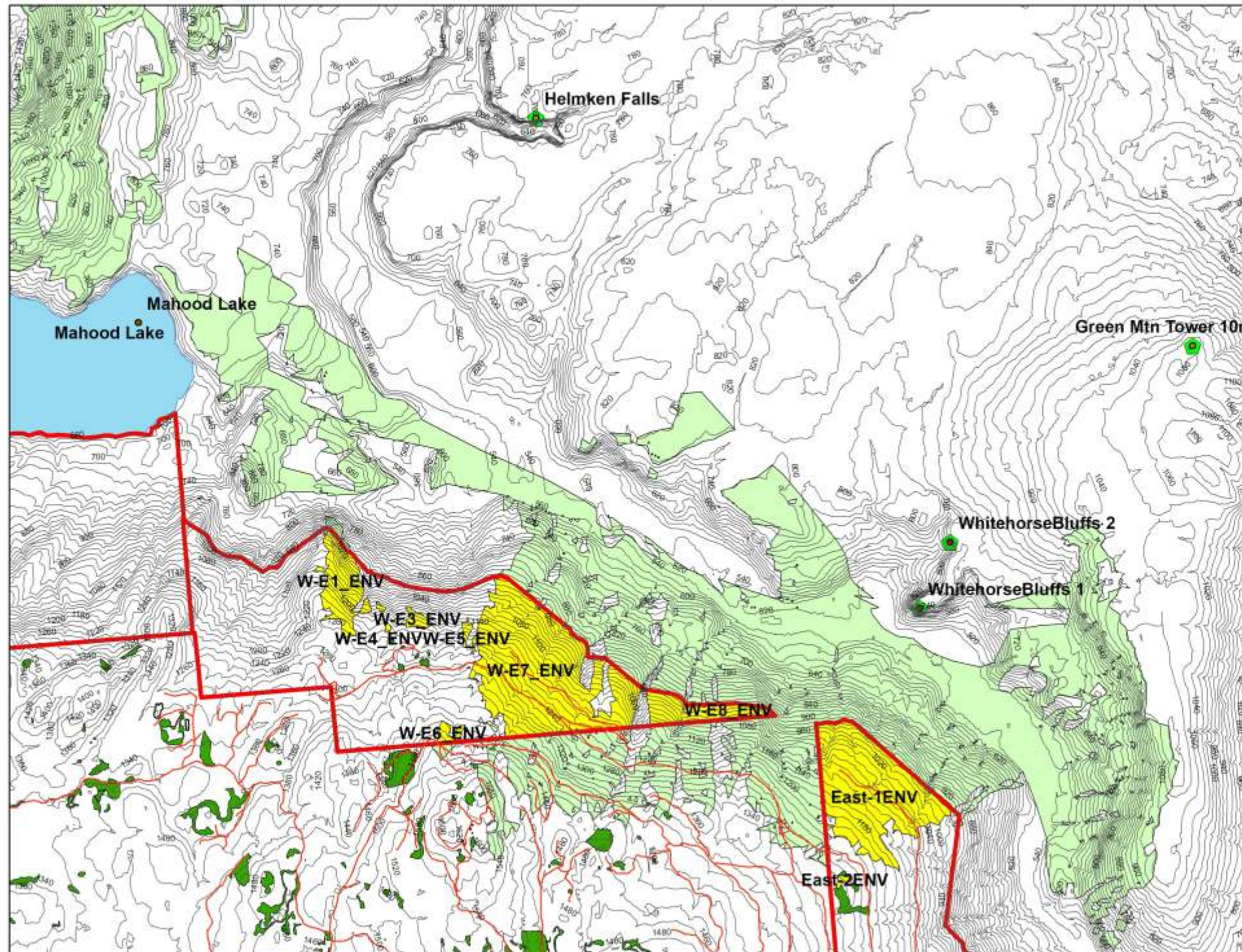
9308



9312

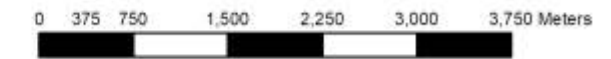
Photos by Ches Clem

Bare Ground Visibility Analysis



Visibility Analysis
Mahood West_East Side and Mahood East
RDI Resource Design Inc
October 22, 2020
Legend

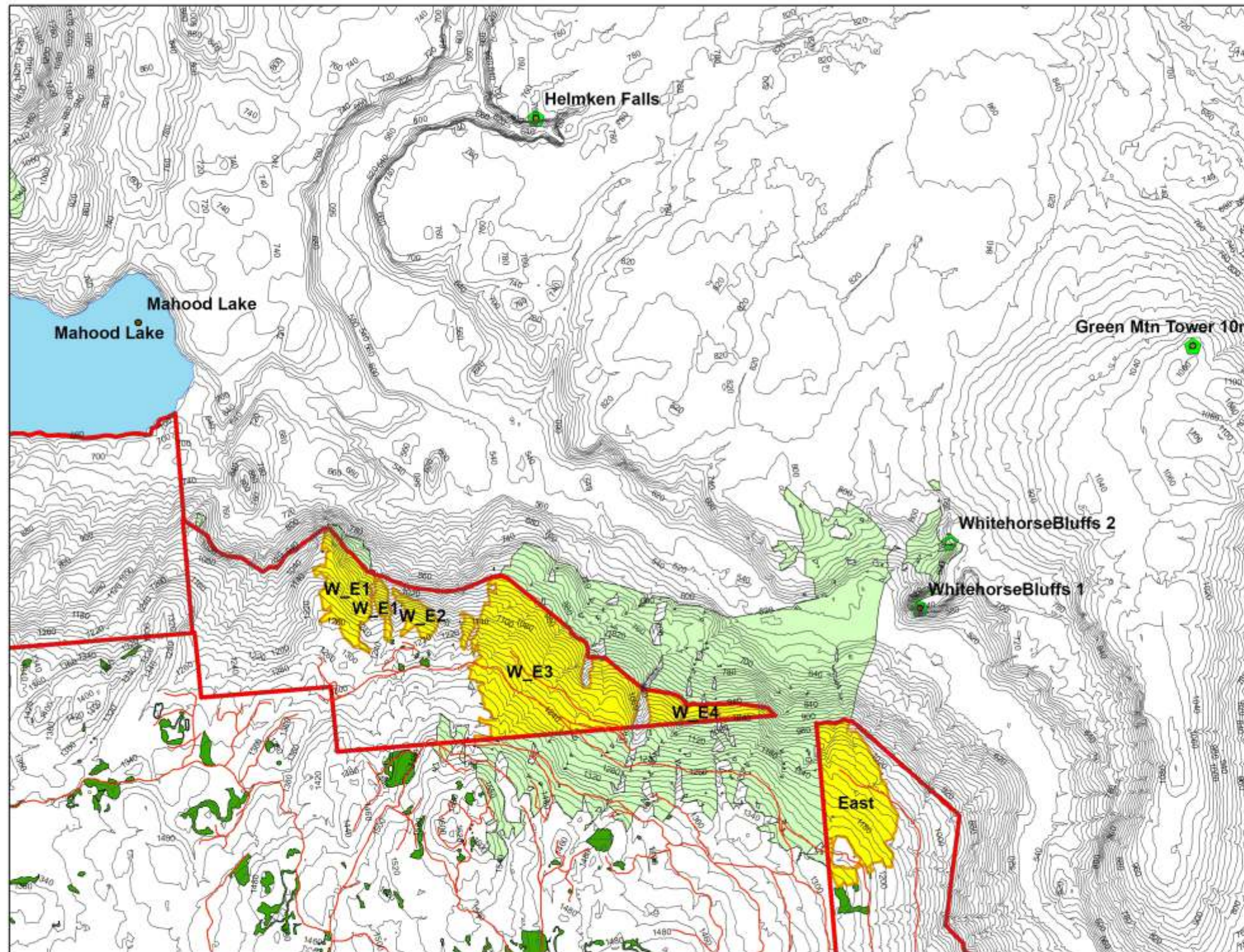
- Contours
- NE_Mahood_Lake_VP
- Aug_8_2020_Operating_Area's
- MahoodLake
- m20W1-simple
- WhitehorseEnd
- WhitehorseStart
- FallsTrue
- Mahood2020Viewpoints
- m20W1
- Aug_8_2020_Existing_WTRA's



White Horse Bluffs 1 (Trail Start) Viewpoint Visibility

Visible: West-E - 325 ha; East - 162 ha

Bare Ground Visibility Analysis



Visibility Analysis
Mahood West_East Side and Mahood East
RDI Resource Design Inc
October 22, 2020
Legend

- Contours
- NE_Mahood_Lake_VP
- ▭ Aug_8,_2020_Operating_Area's
- MahoodLake
- m20W2_inside
- m20W2ok
- WhitehorseEnd
- WhitehorseStart
- FallsTrue
- Mahood2020Viewpoints
- Aug_8,_2020_Existing_WTRA's



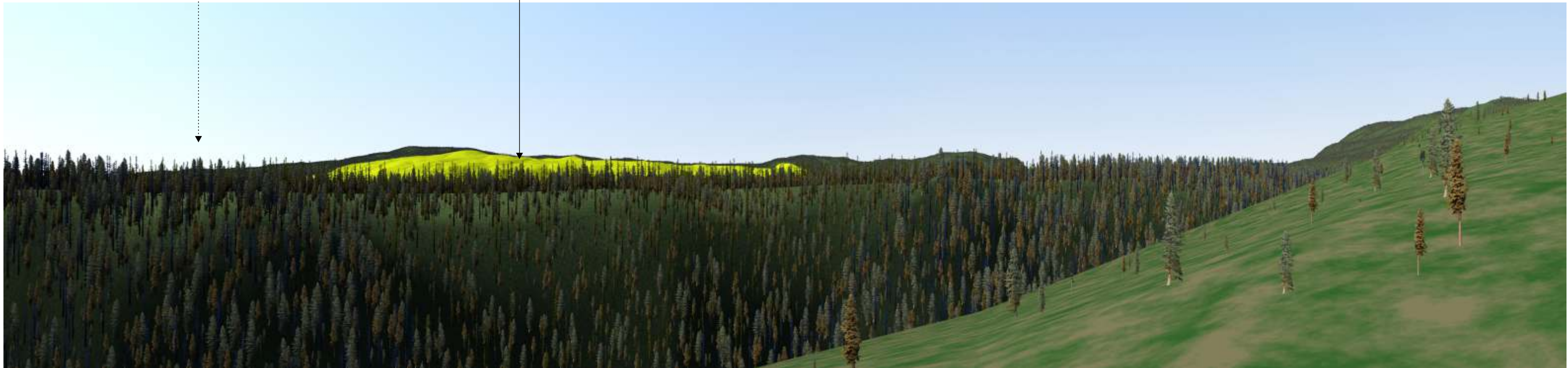
0 375 750 1,500 2,250 3,000 3,750 Meters

White Horse Bluffs 2 (Trail End) Viewpoint Visibility

Visible: West-E - 374 ha; East - 126 ha

Mahood East NVS

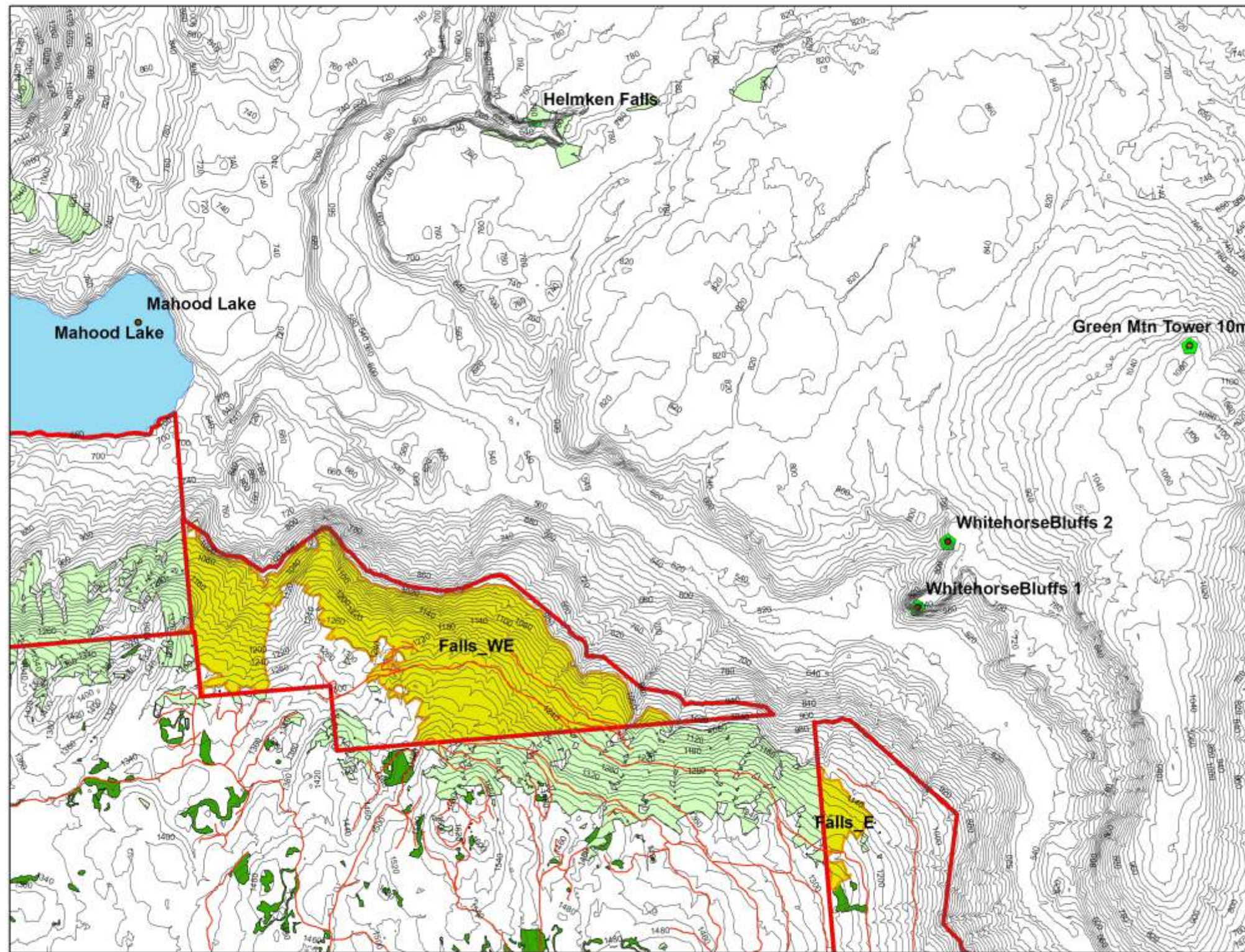
Mahood West (East Side)



Photos by Ches Clem

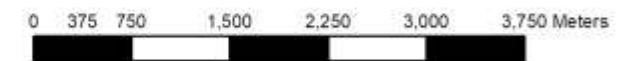
Helmcken Falls Viewpoint

Bare Ground Visibility Analysis



Visibility Analysis
 Mahood West_East Side and Mahood East
 RDI Resource Design Inc
 October 22, 2020
Legend

- Contours
- NE_Mahood_Lake_VP
- Aug_8_2020_Operating_Area's
- MahoodLake
- m20_Falls_within
- m20FallsUse
- WhitehorseEnd
- WhitehorseStart
- FallsTrue
- Mahood2020Viewpoints
- Aug_8_2020_Existing_WTRA's



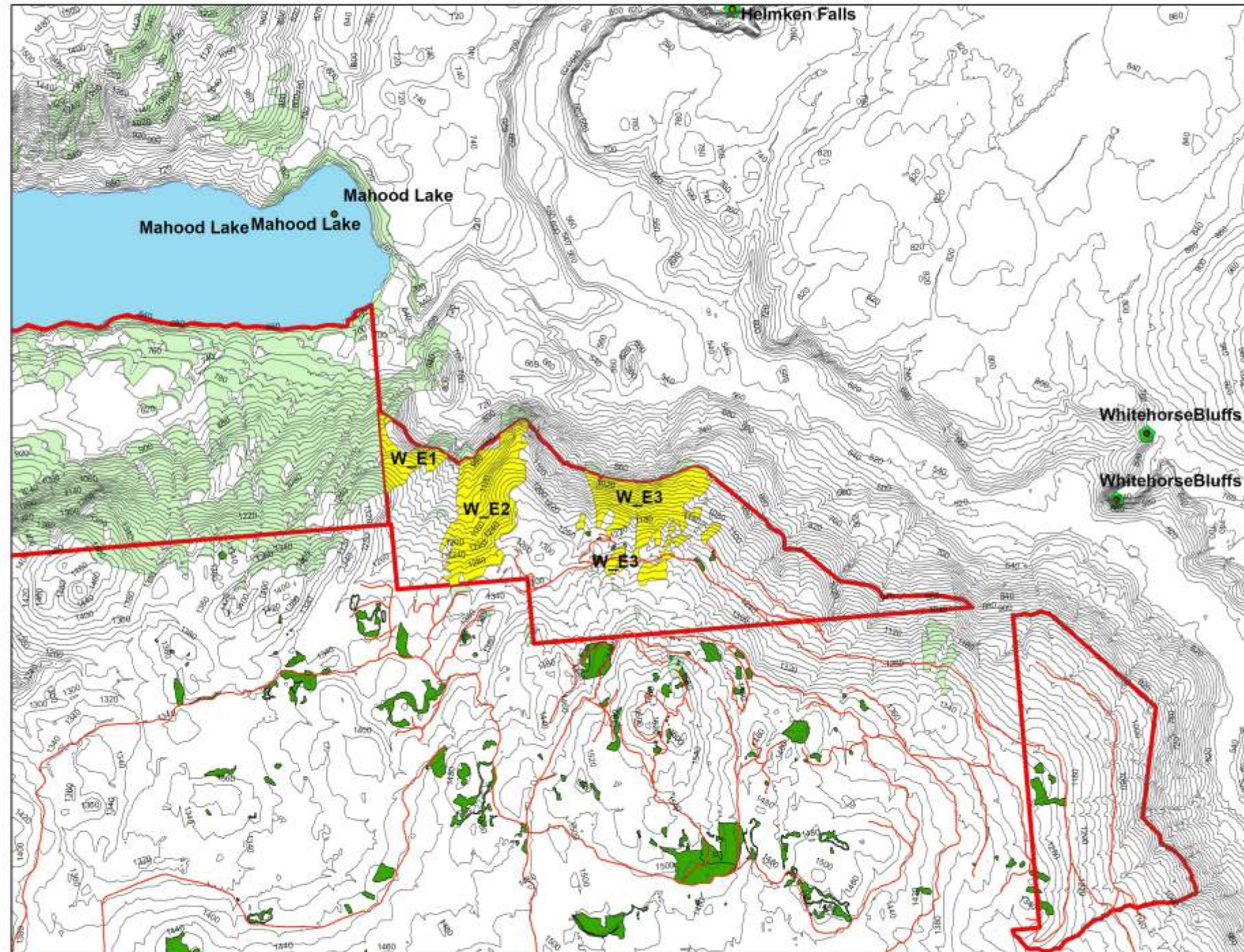
Visible: West-E - 669 ha; East - 42 ha

Helmcken Falls Viewpoint Visibility



Northeast Mahood Lake Viewpoint

Bare Ground Visibility Analysis



Visibility Analysis
Mahood West_East Side and Mahood East
RDI Resource Design Inc
October 22, 2020
Legend

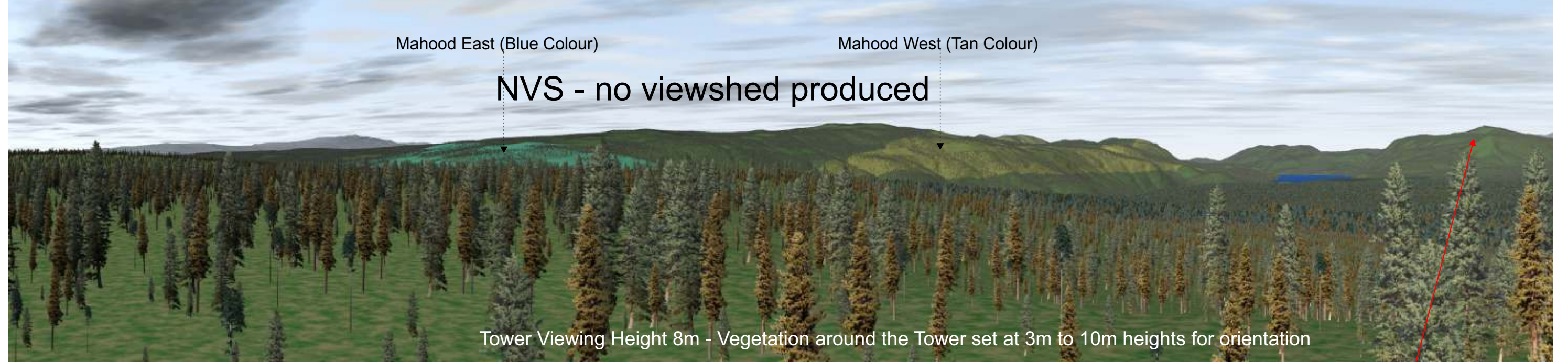
- Contours
- NE_Mahood_Lake_VP
- m20_Lake_Inside
- Aug_8_2020_Operating_Area's
- MahoodLake
- m20_LakeAll
- WhitehorseEnd
- WhitehorseStart
- FallsTrue
- Mahood2020Viewpoints
- Aug_8_2020_Existing_WTRA's



0 375 750 1,500 2,250 3,000 3,750 Meters

Mahood Lake NE Viewpoint Visibility

Visible: West-E - 253 ha; East - NVS



Mahood Operating Areas NVS in Photos

Photos by Ches Clem

NVS - no viewshed produced

Visible: West-E - 0 ha; East - 0 ha