

Alberta's Wet Areas Mapping Initiative

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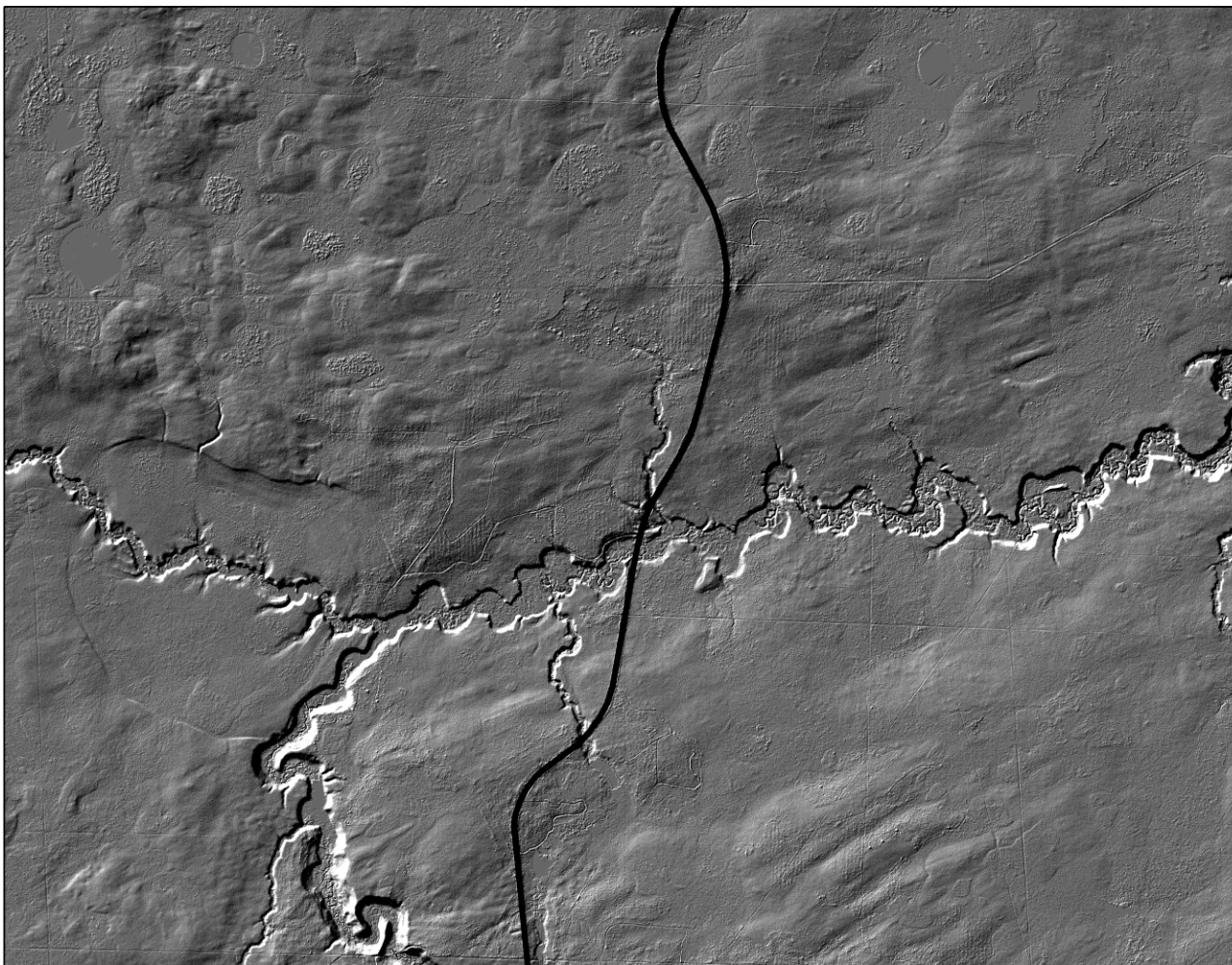


Alberta Sustainable Resource Development

- ✓ Our mission is to contribute to the provincial economy and sustain Alberta's public lands and natural resources.
- ✓ We accomplish this through the application of leading practices in management, science and stewardship.
- ✓ Our ministry recognizes the value of partnerships. We work collaboratively with Albertans, to develop and implement policies, plans, strategies and legislation to achieve desired outcomes for Albertans.





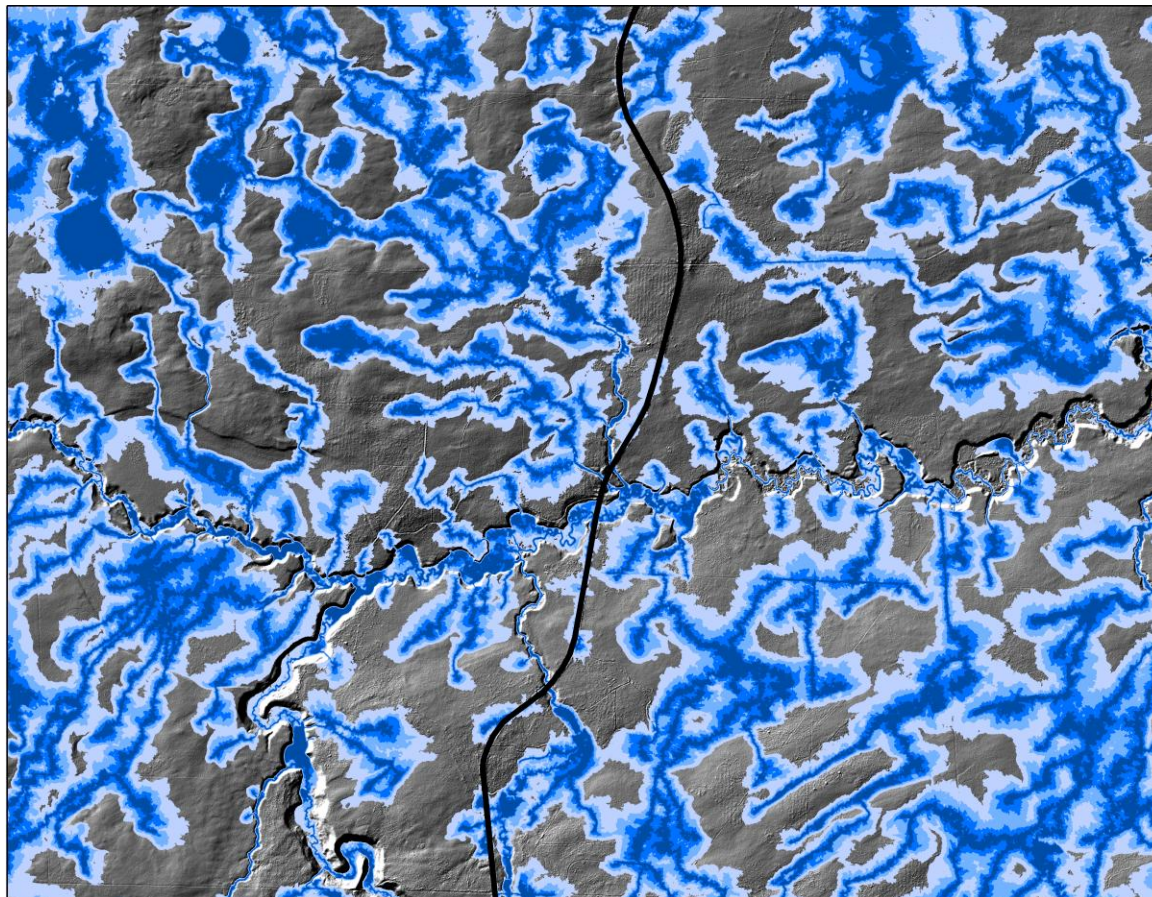


Bringing LiDAR information to *life*
to inform *policy* and *practice*

to inform *risk* and *opportunities*, and

to maximize *return on investment*

Alberta's areas mapping initiative



Alberta's areas mapping initiative

Initiative started in 2004 by the Government of Alberta as a partnership between academia, government & industry

1 Post doctoral fellow, 9 MSc. Students

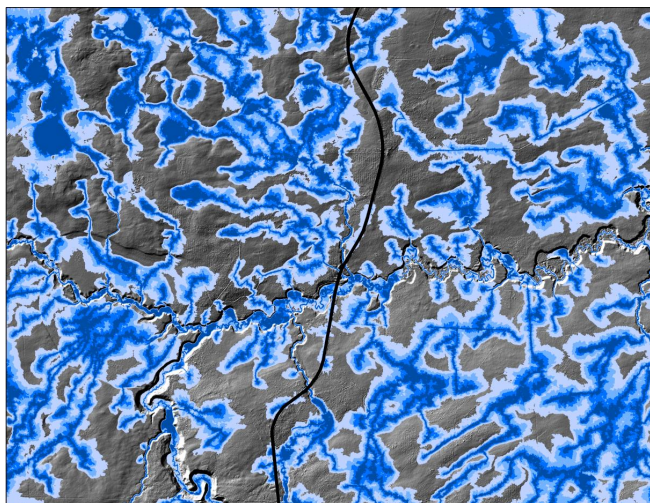
A legacy of the SFMN Centre of Excellence, and FRIAA

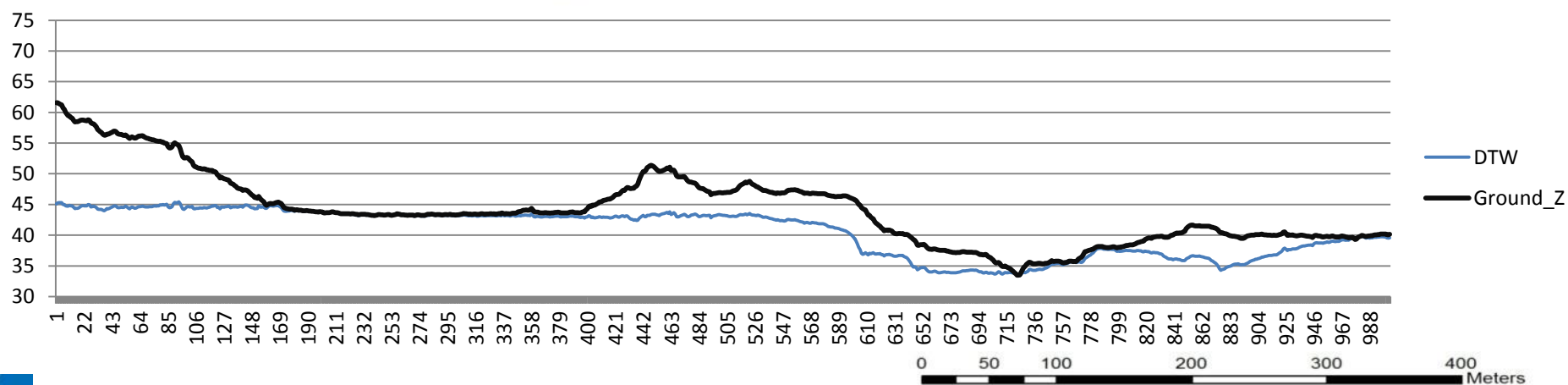
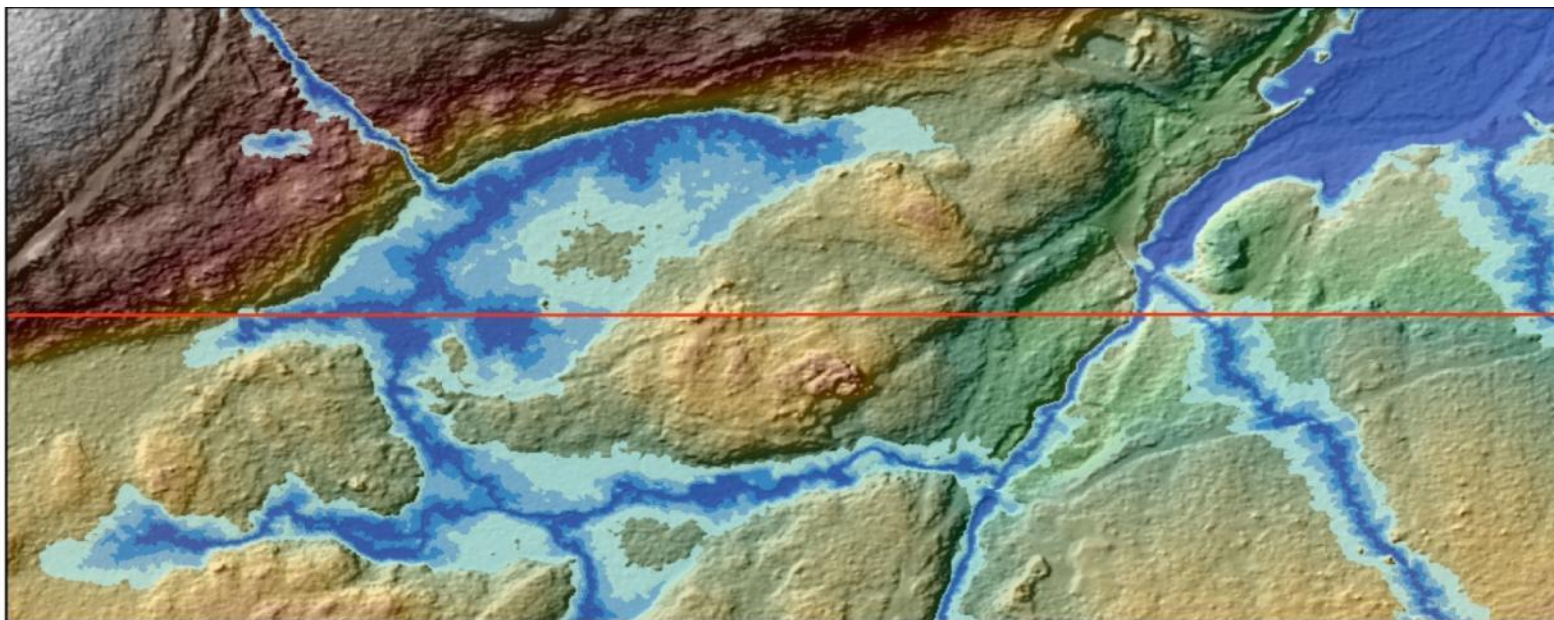
Seamless output based on Bare Earth LiDAR DEMs at 1 metre resolution, field verified to be accurate +/- 5 metres, 80% of the time

Currently Completed (11 mill. ha)

650 GB of Input Data

7.5 TB of Output Data







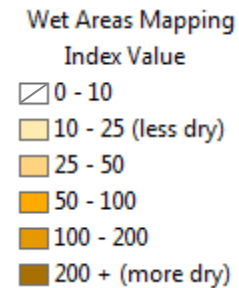
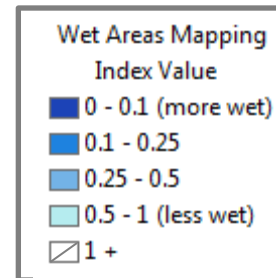
Wet Areas Mapping

Index Value

- 0 - 10
- 10 - 25 (less dry)
- 25 - 50
- 50 - 100
- 100 - 200
- 200 + (more dry)

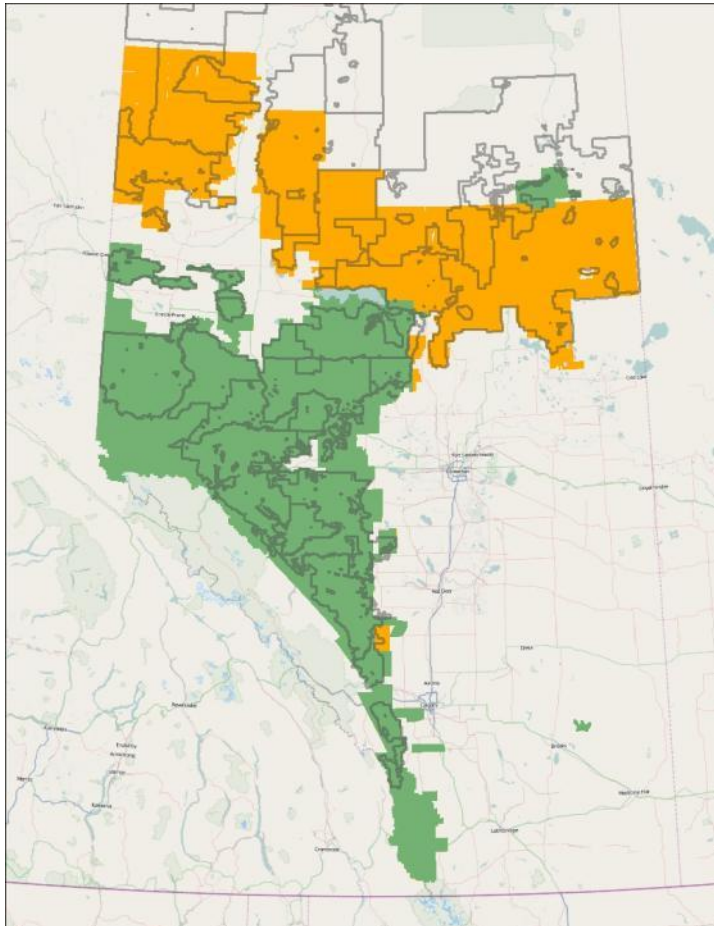
Since the model output predicts “wetness” it also predicts “dryness”

The same model output, symbolized differently, will show something completely different.



Combining these two mapping products can provide a great interpretation of predicted topographic moisture gradients in the landscape.

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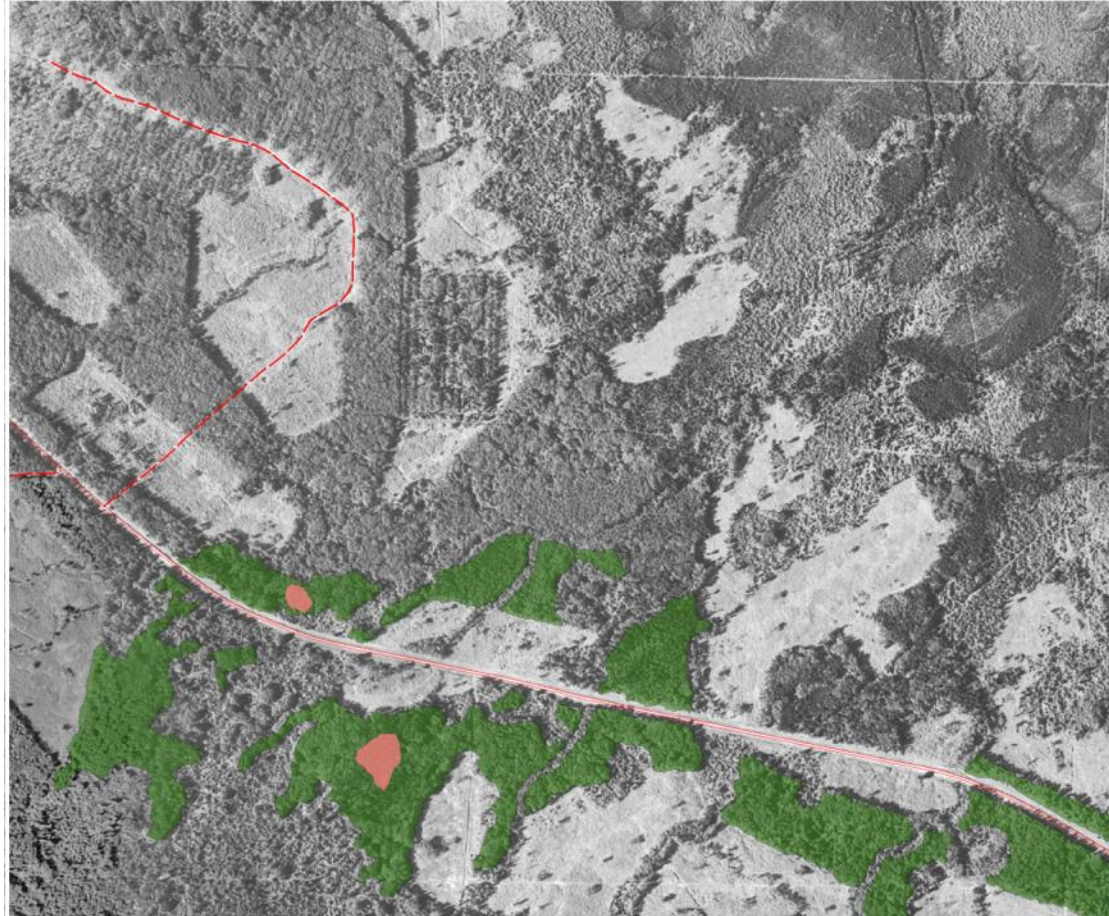
Government of Alberta Users:

Alberta Sustainable Resource Development
Alberta Culture and Community Services
Alberta Environment and Water
Alberta Parks, Tourism and Recreation
Energy Resources Conservation Board

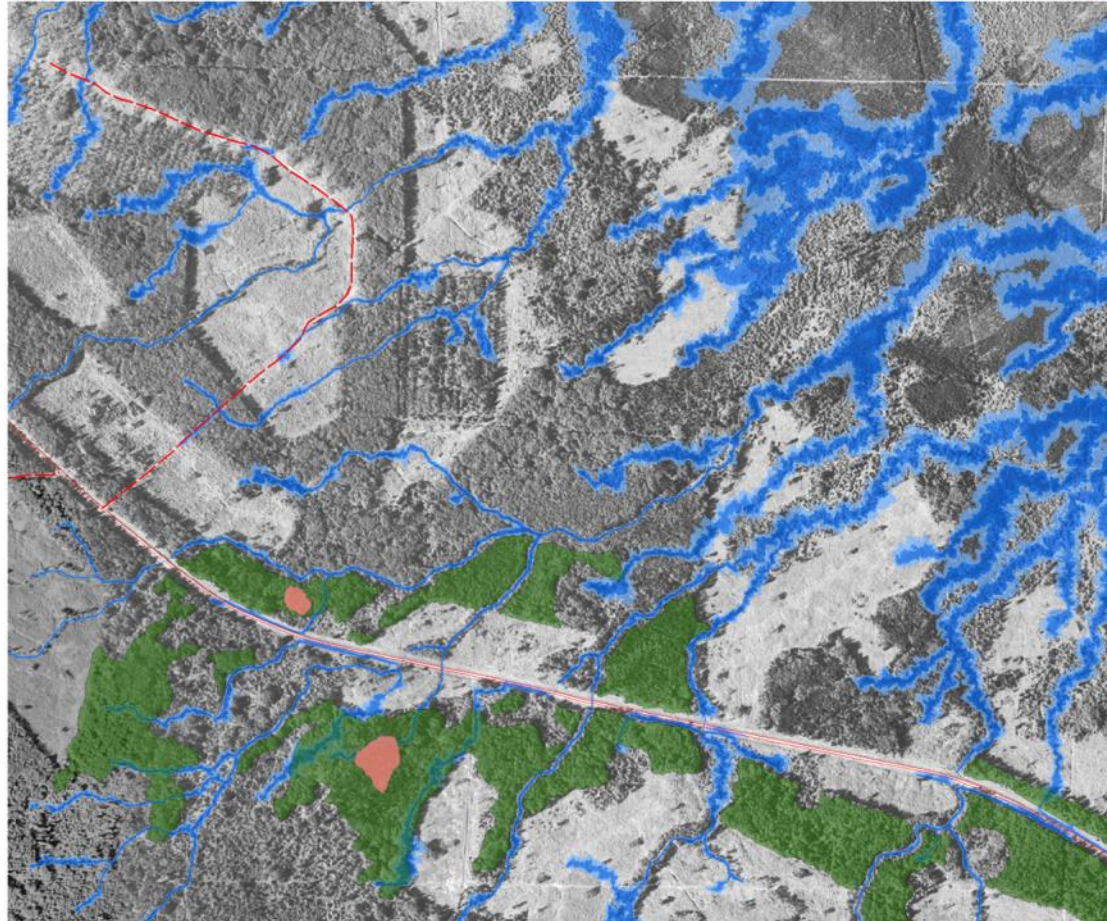
Industry Release:

Ainsworth Lumber Company
Alberta Newsprint Company Ltd.
Alberta Plywood Ltd.
Blue Ridge Lumber Inc.
Canadian Forest Products Ltd.
Daishowa-Marubeni International Ltd.
Miller Western Forest Products Ltd.
Slave Lake Pulp Corporation
Spray Lakes Sawmills Ltd.
Sundance Forest Industries Ltd.
Sundre Forest Products Inc.
West Fraser Mills Ltd.
Weyerhaeuser Company Ltd. (Grande Prairie and Edson Divisions)

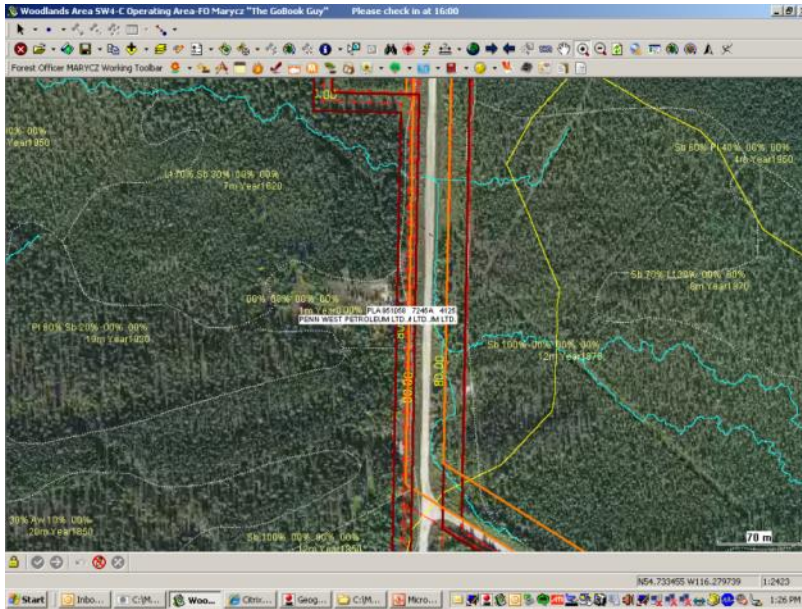
Government Efficiencies



Government Efficiencies



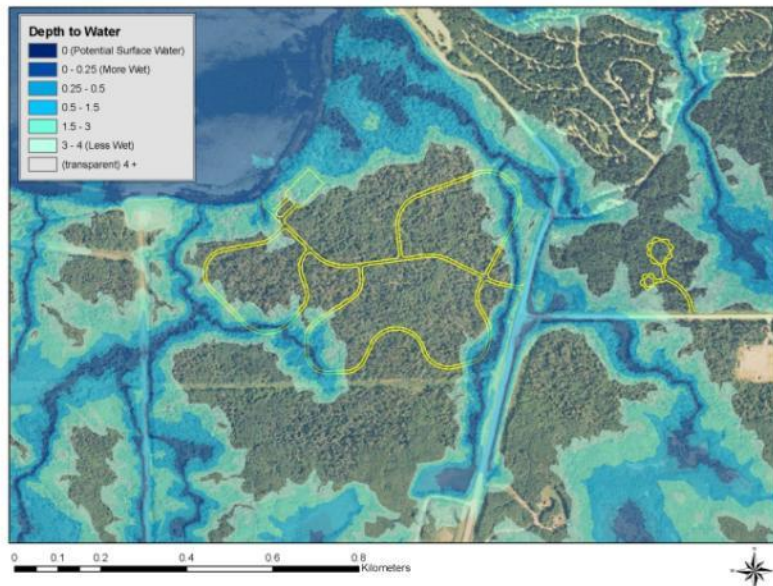
Government Efficiencies



Mobile Office Initiative

The right data, the right time, the right place.

Government Efficiencies

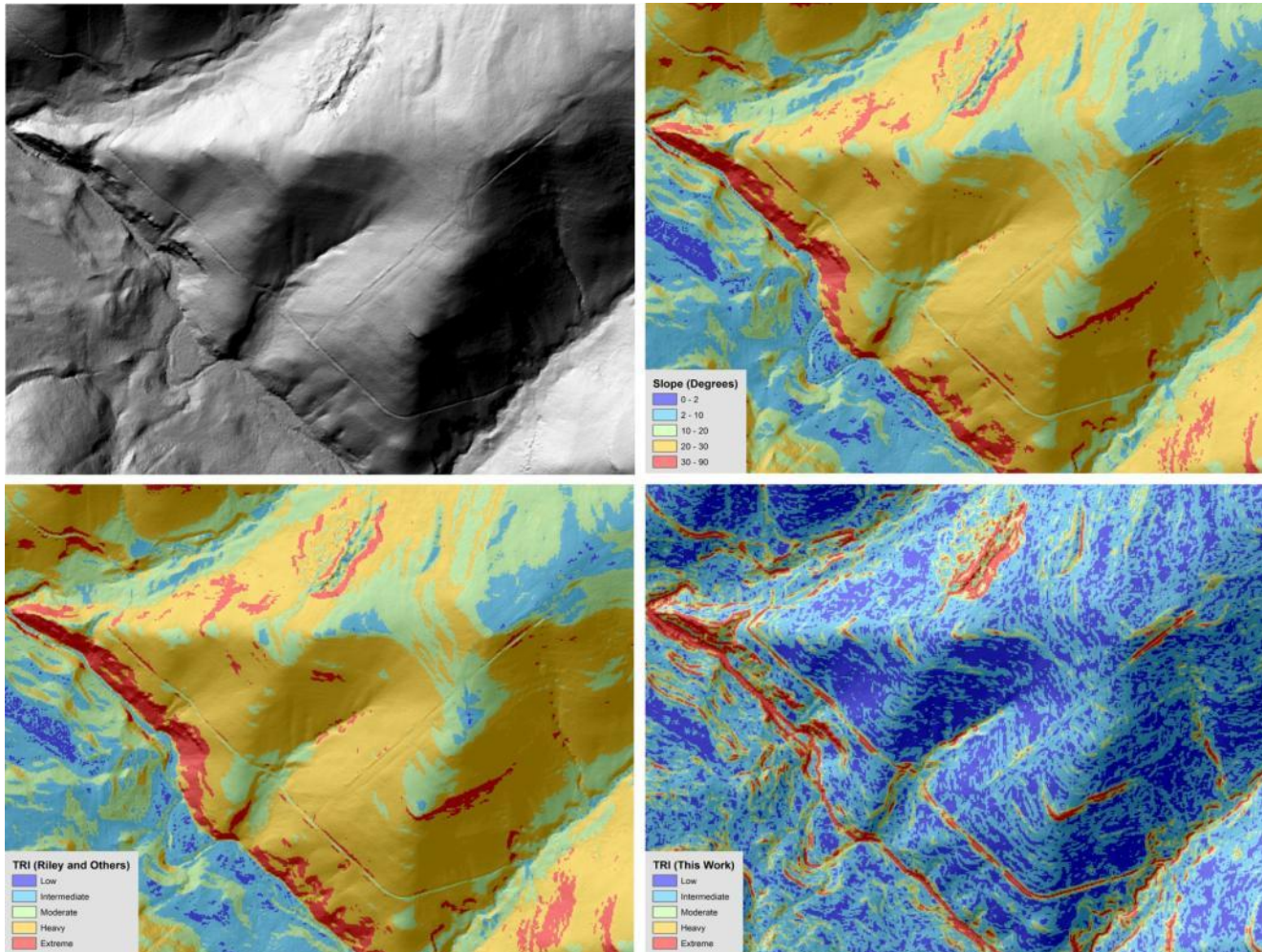


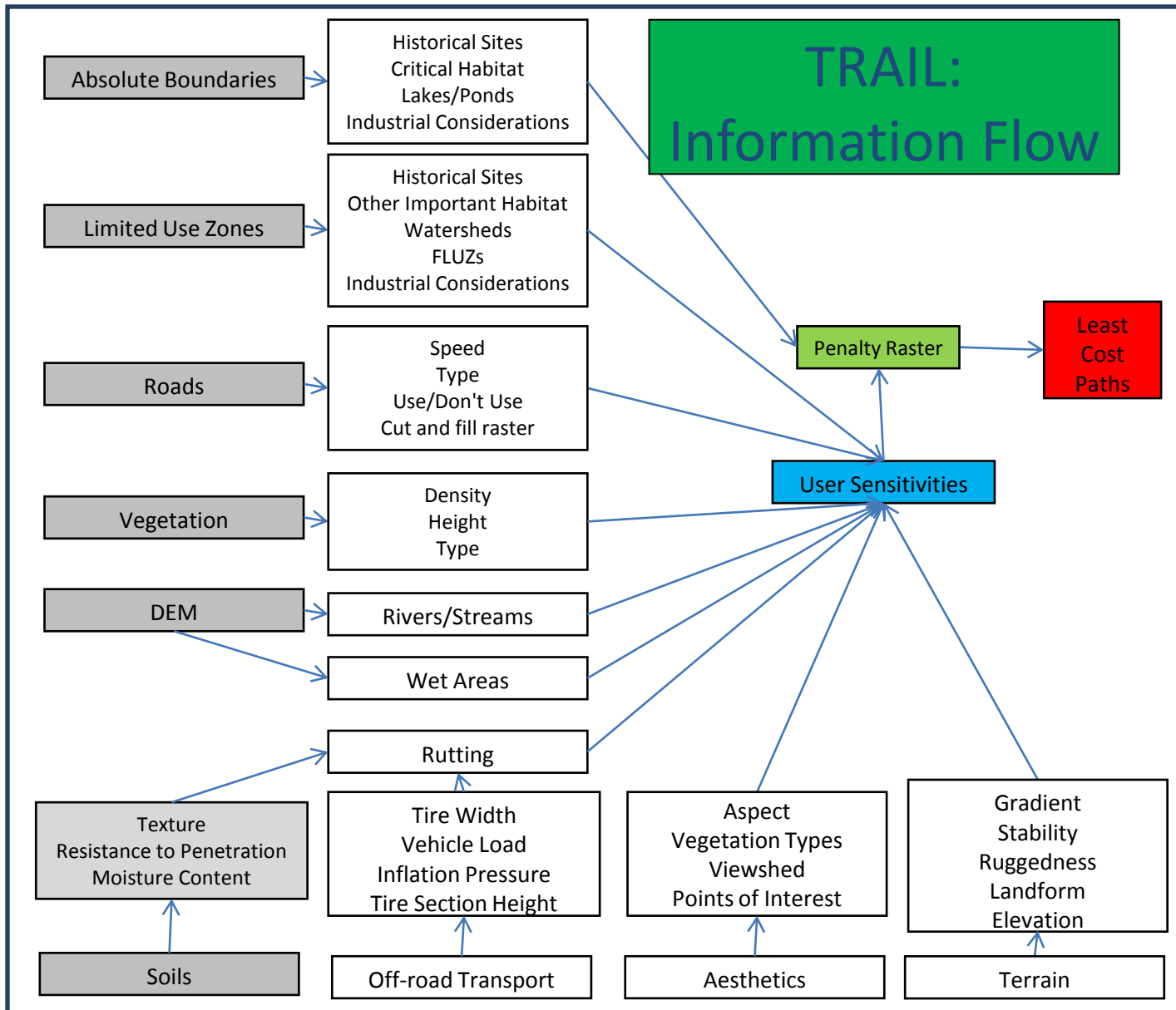
Carson-Pegasus Provincial Park
located north of Whitecourt.

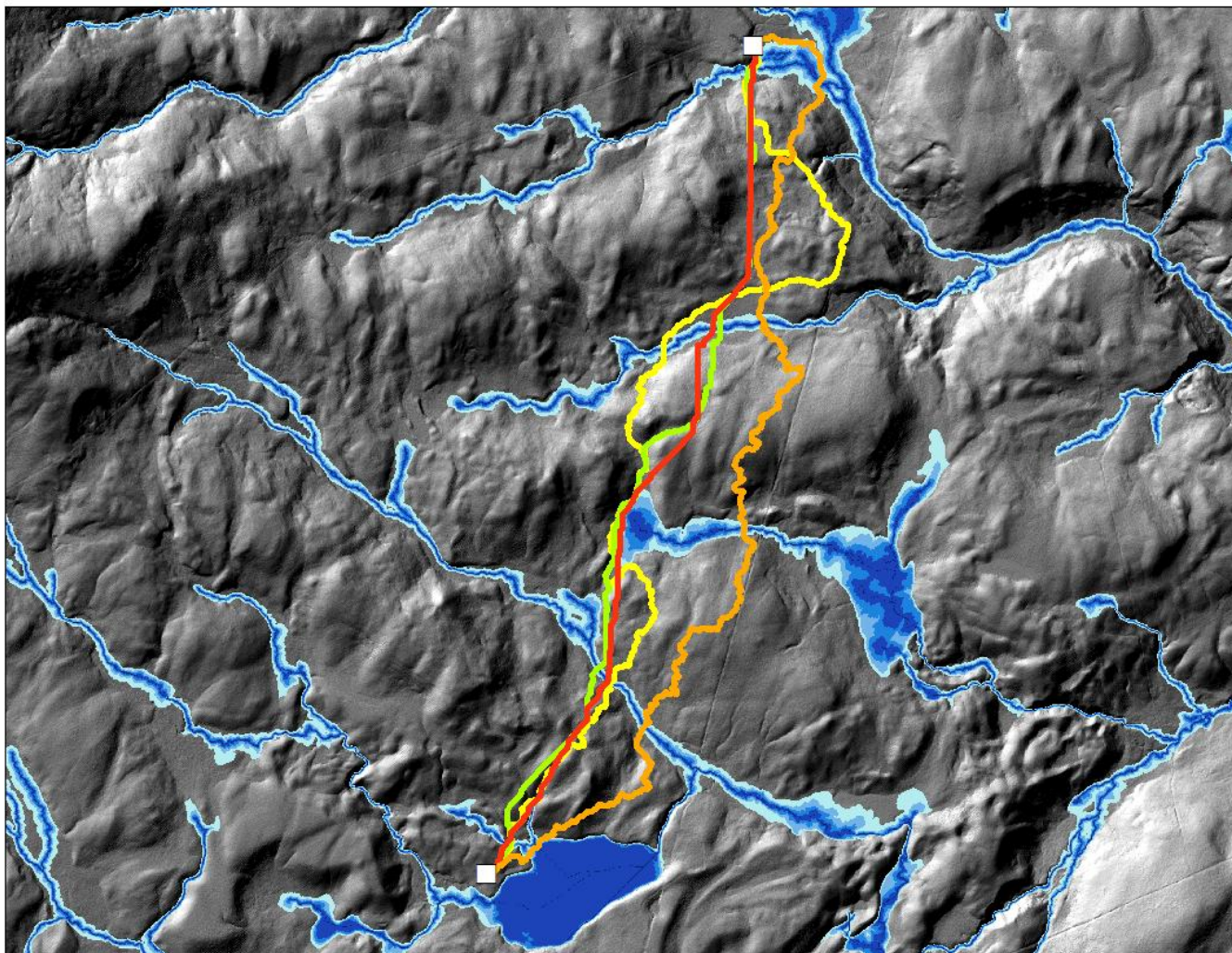
Land base (excluding lakes) is
1226 hectares.

Total cost of producing the wet
areas maps to Alberta: **\$85.82.**

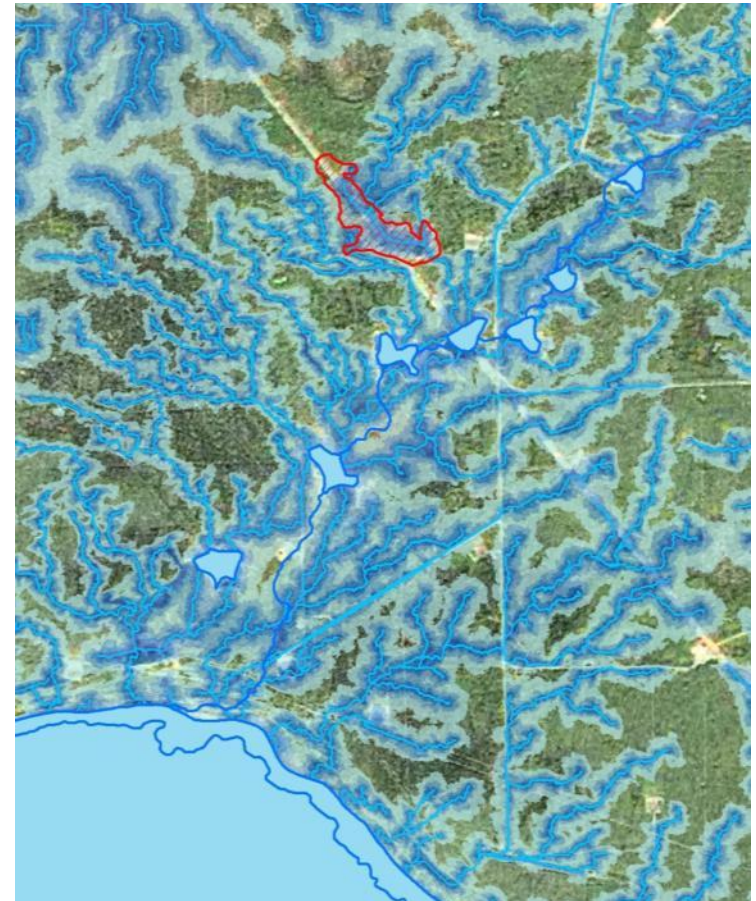
Spatially identifying risk to inform planning



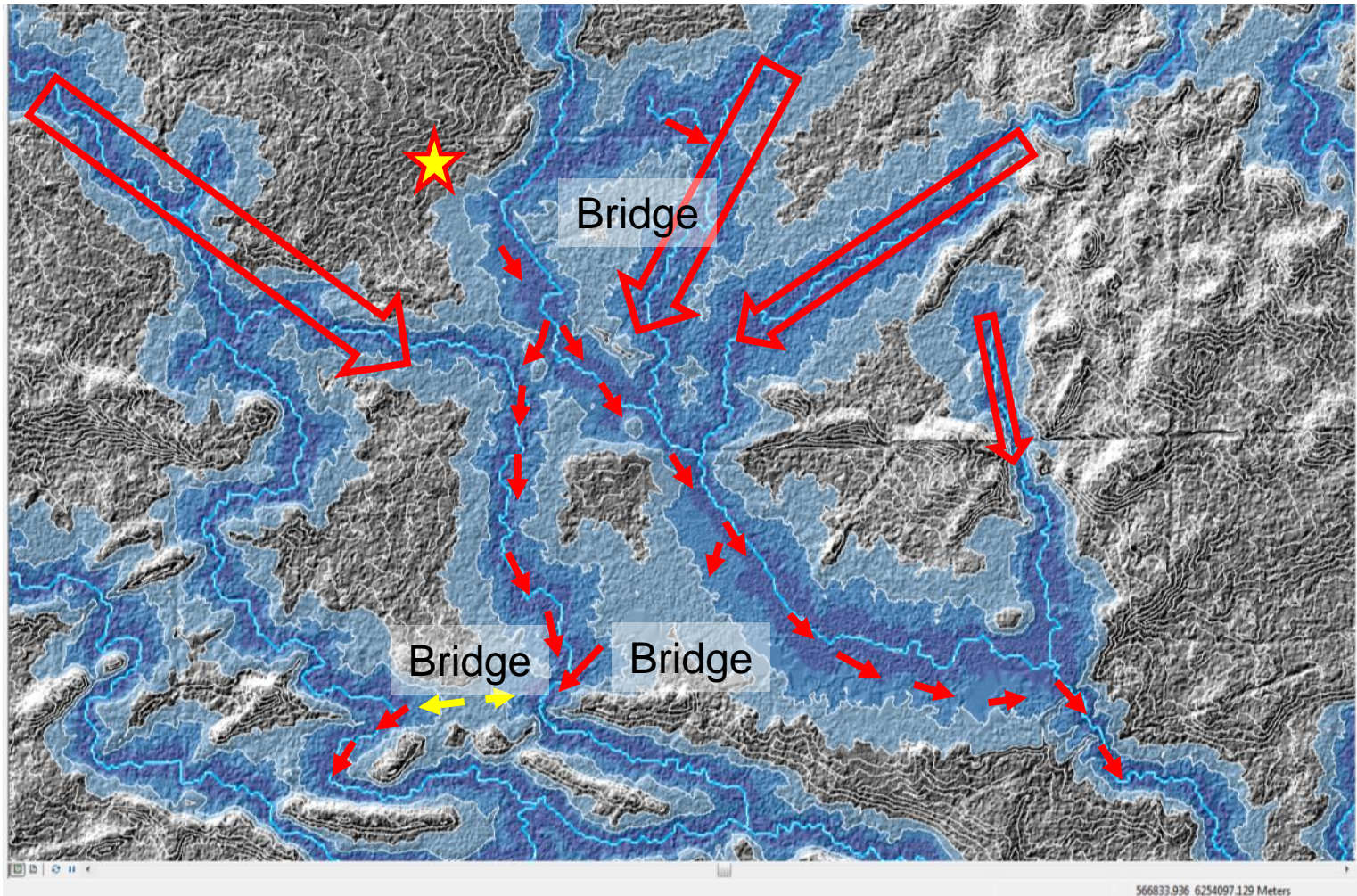


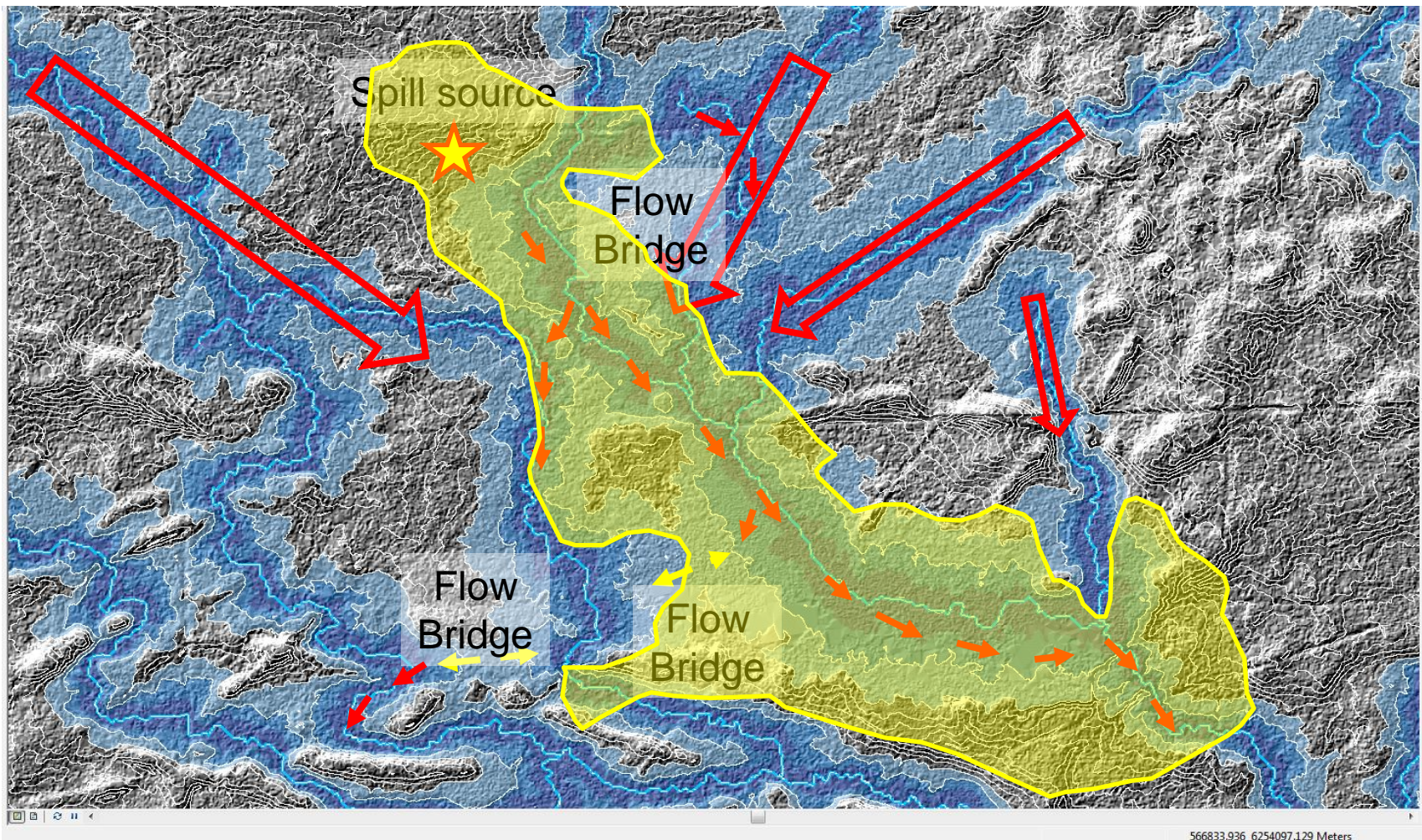


Spatially identifying risk to inform planning

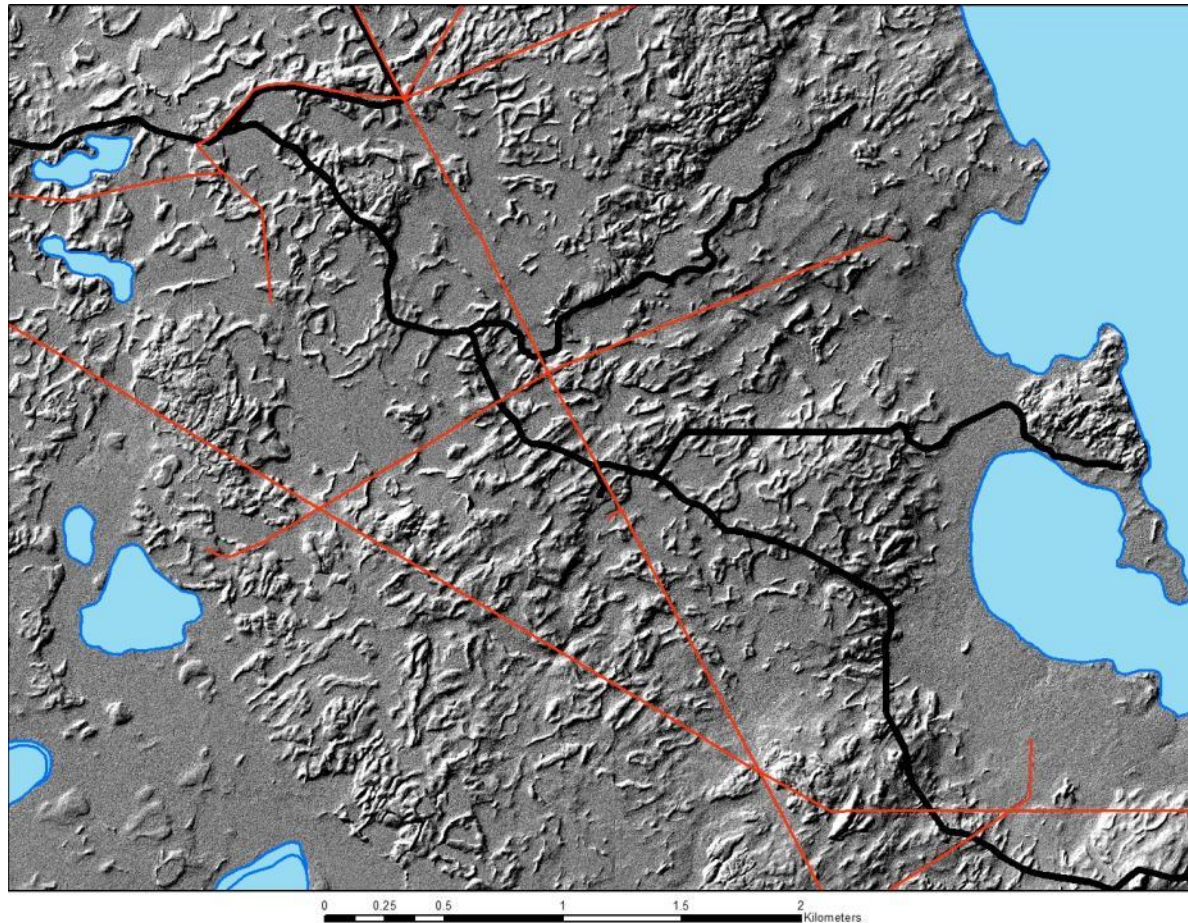


Spatially identifying risk to inform planning

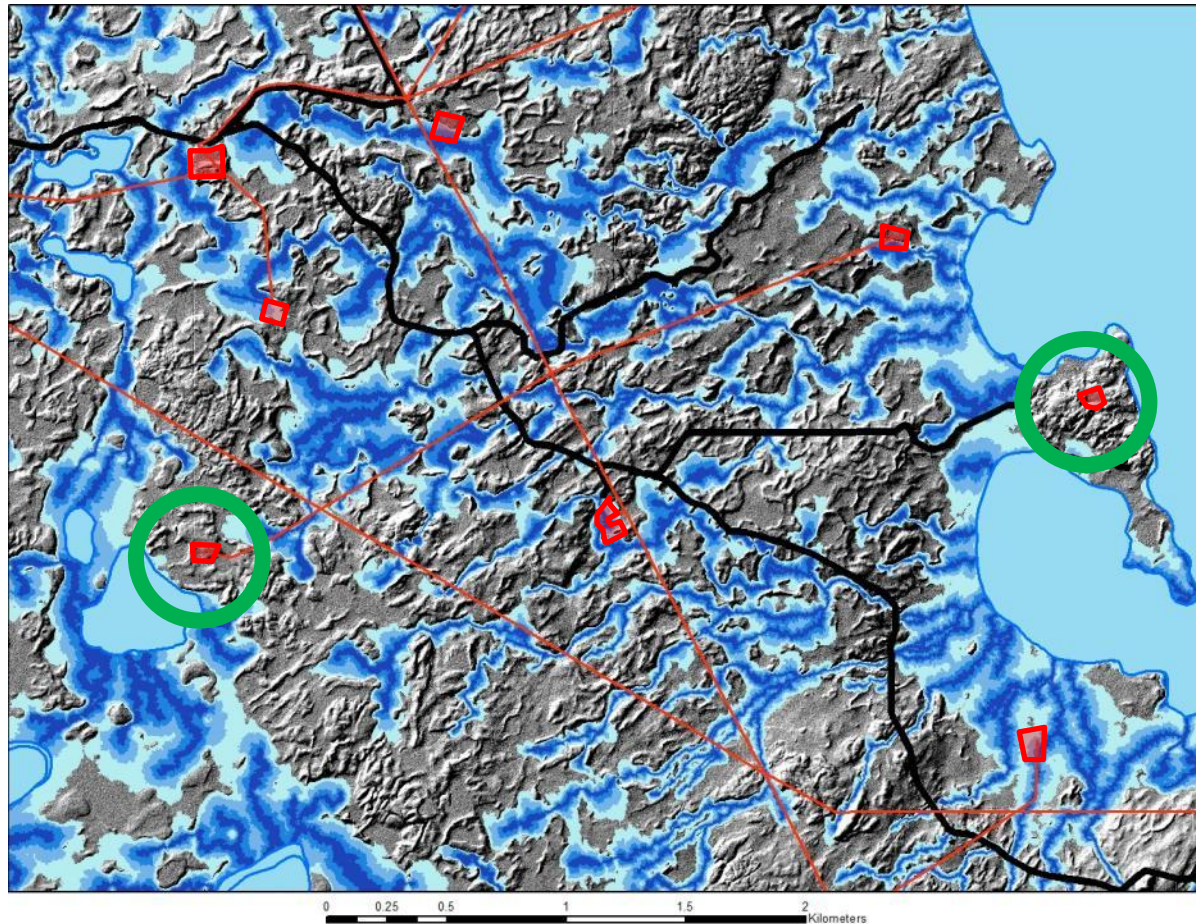




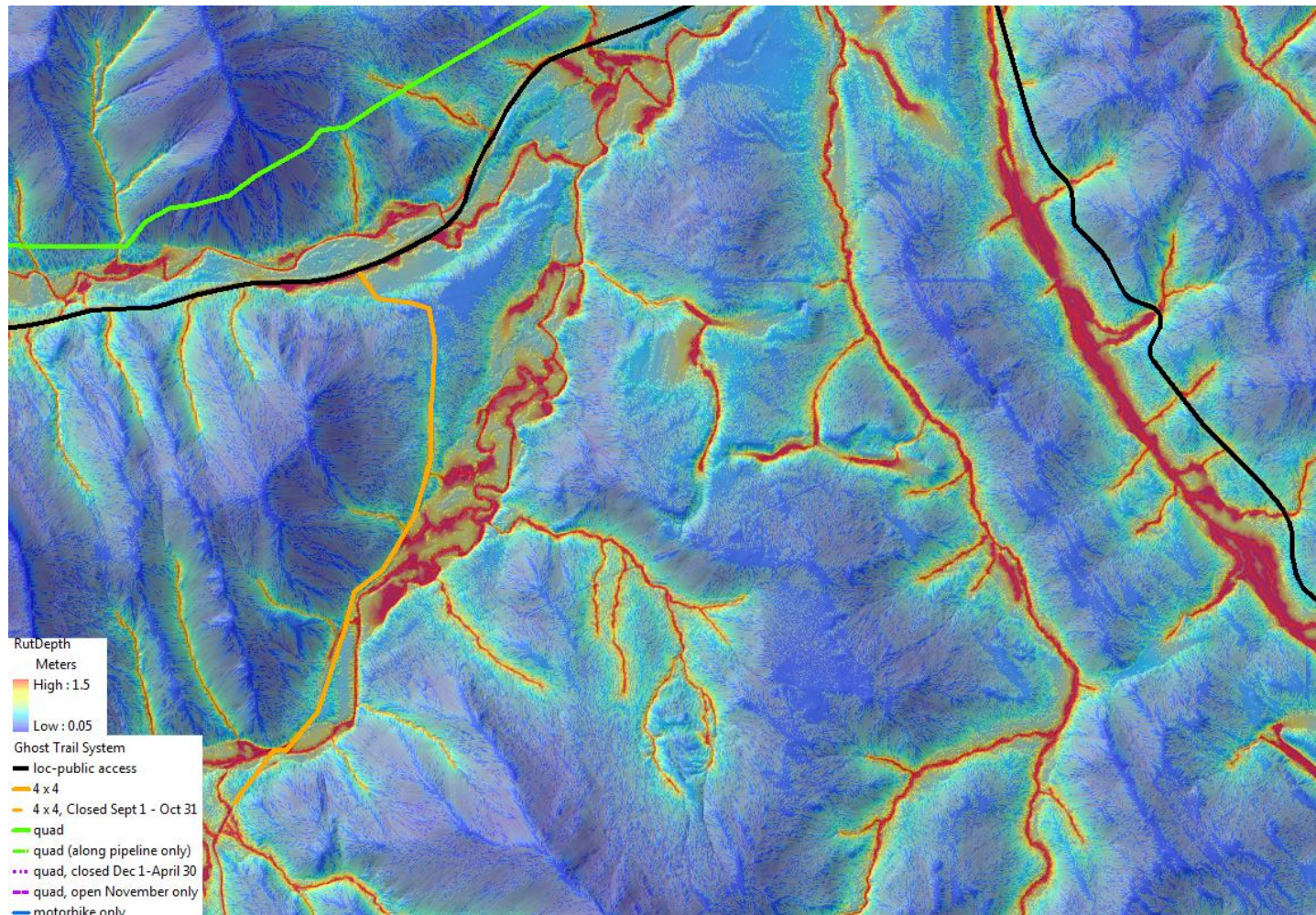
Spatially identifying risk to inform planning



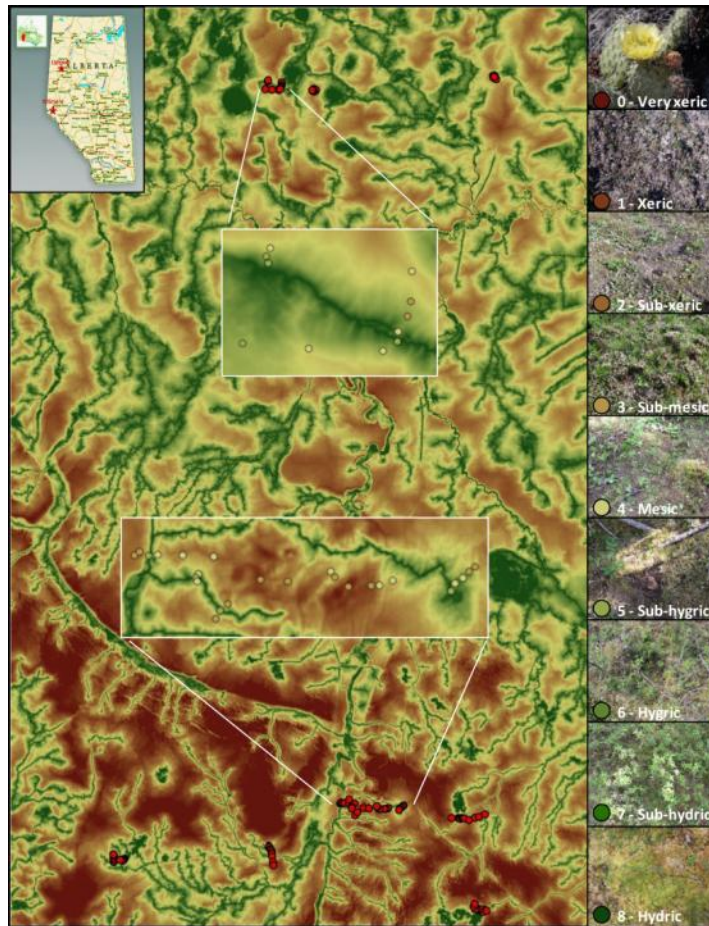
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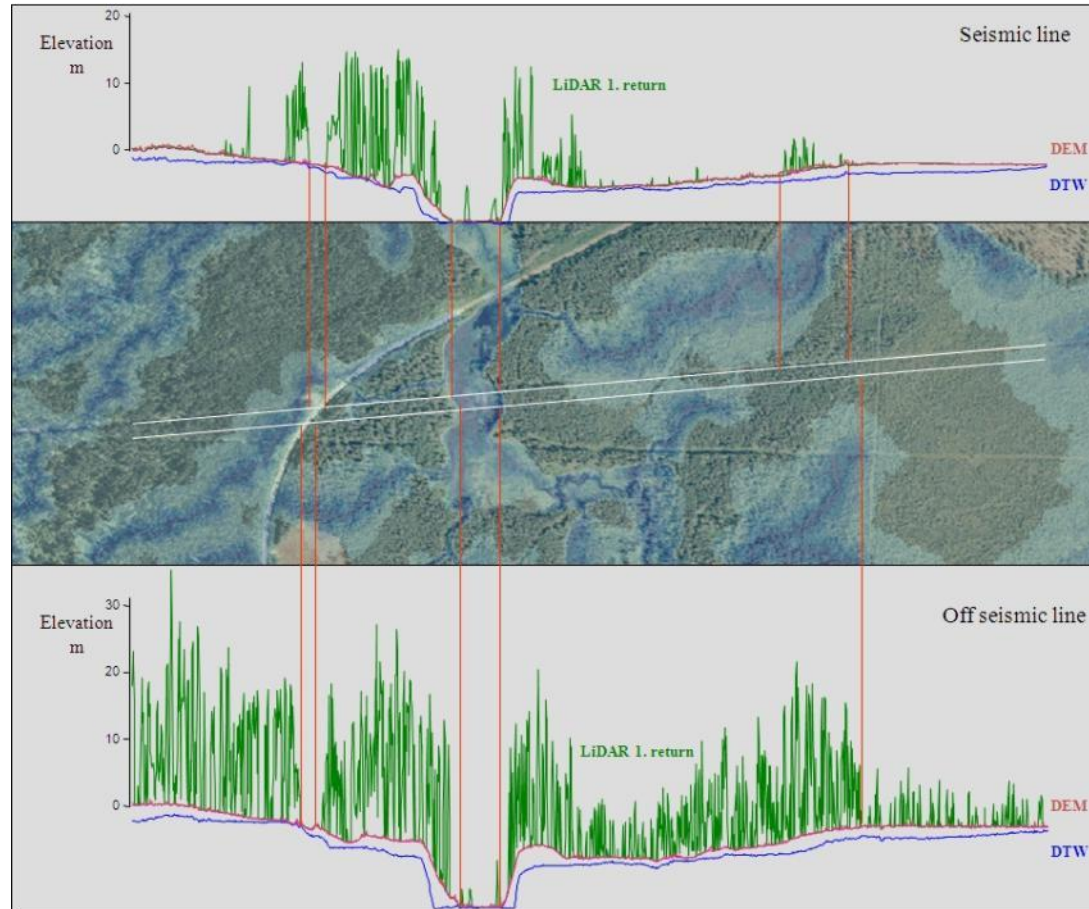
Spatially identifying opportunities



Landscape prediction of
vegetation community
types ... implications for
invasive species
management, site
classification, and
strategic investments in
silviculture



Reclamation?



Empowering all Albertans to be better land stewards



Data availability

- Public release of data for the first 11 million hectares is currently being planned for late April.
- SRD is placing a priority on releasing information for northern boreal as the data becomes available.
- Data will be distributed by SRD's Resource Information Management Branch in Edmonton.

Acknowledgements



SUSTAINABLE **FOREST**
MANAGEMENT NETWORK

