

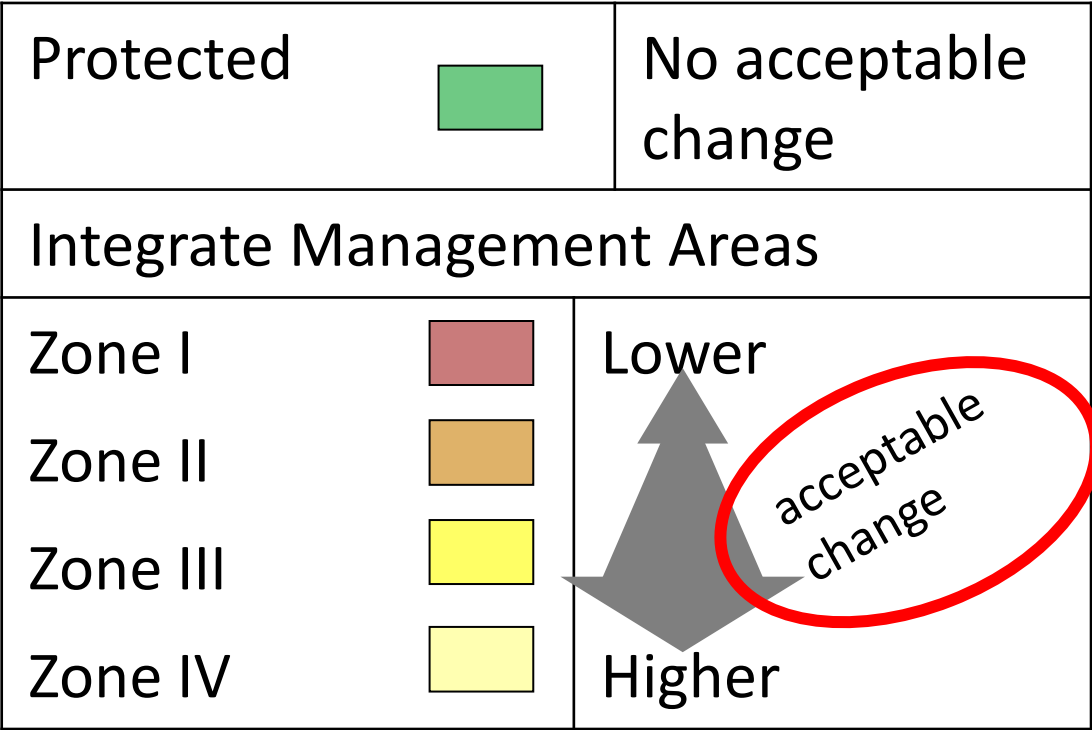
Implementing the North Yukon CE Framework: It's Easy, Right?

Sam Skinner – Yukon Land Use Planning Council

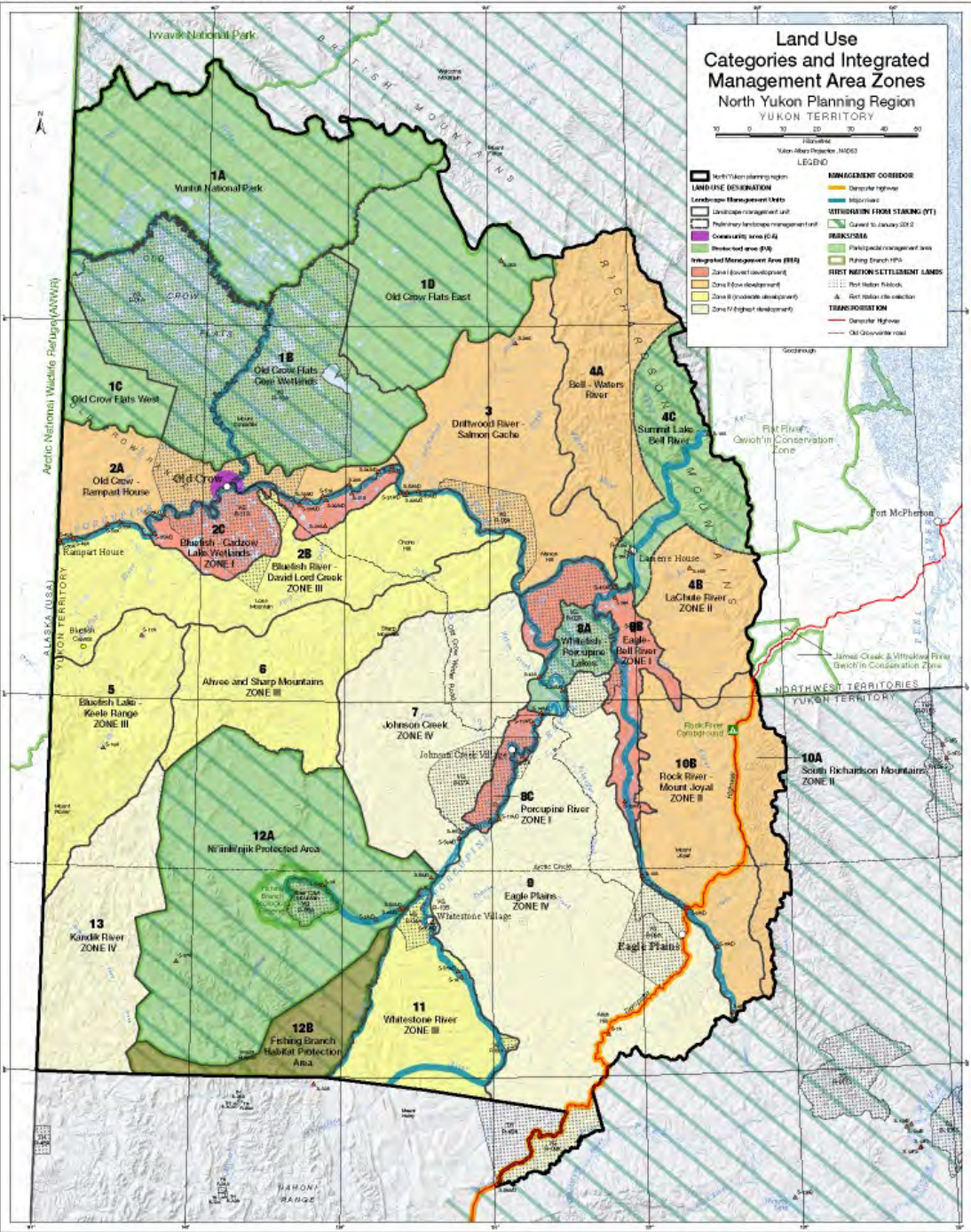
PIBC 2021: North of Normal
June 17th, 2021
Whitehorse,



North Yukon Cumulative Effects (CE) Framework



North Yukon Land Use Plan: Map 1 (Amended January 2012)





Commission was asked to provide “certainty and flexibility”

- A CE Framework provides flexibility
- CE provides certainty if:
 - Everyone knows current level of CE
 - Everyone knows how CE metrics are determined in the conformity check
 - Everyone can self-assess upcoming projects

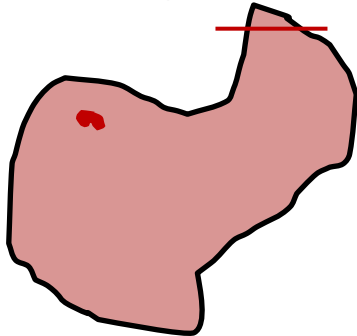




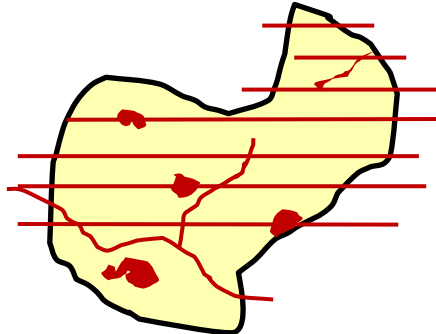
CE Indicators & Levels

- 2 indicators
- 2 levels (~thresholds)

Zone I

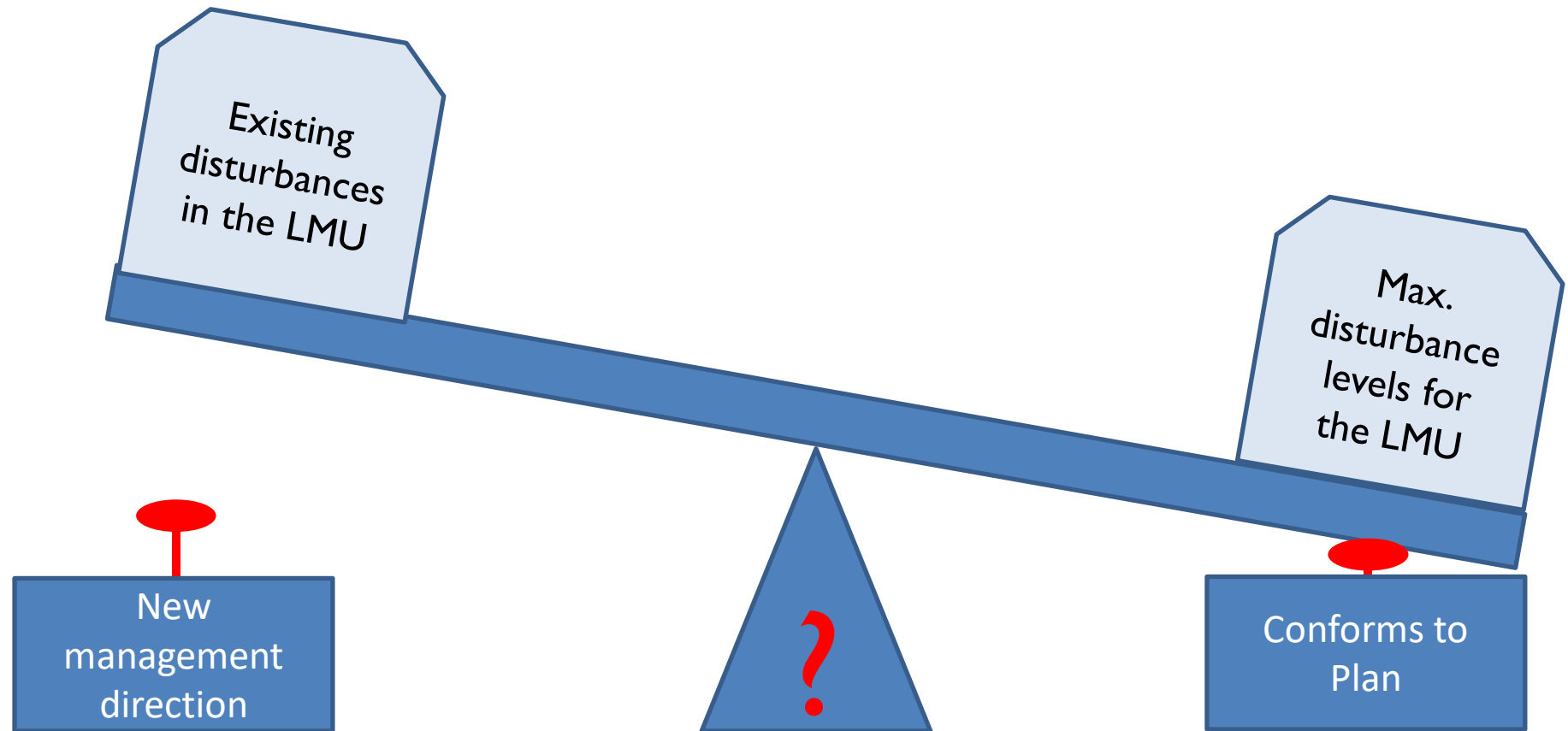


Zone IV

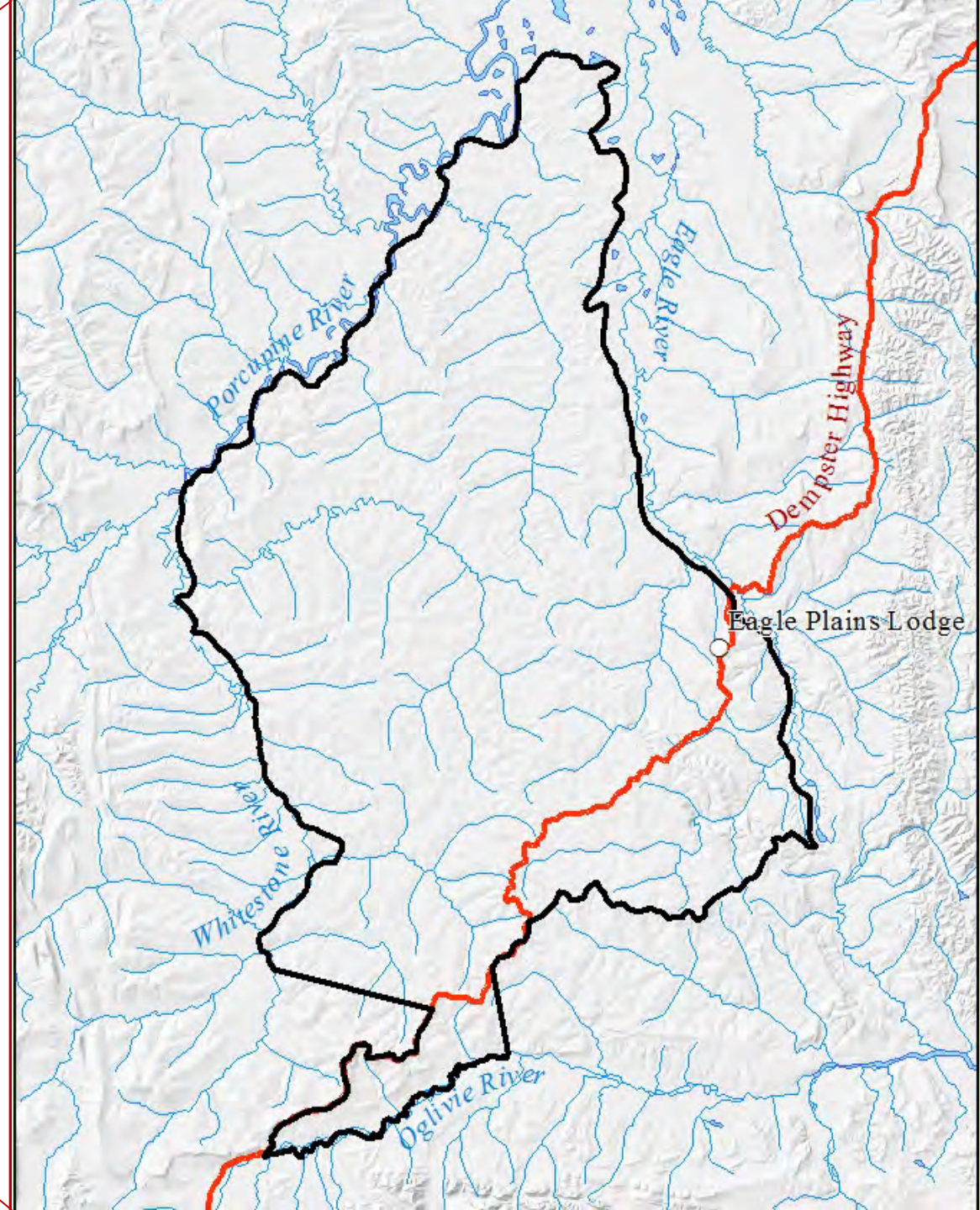
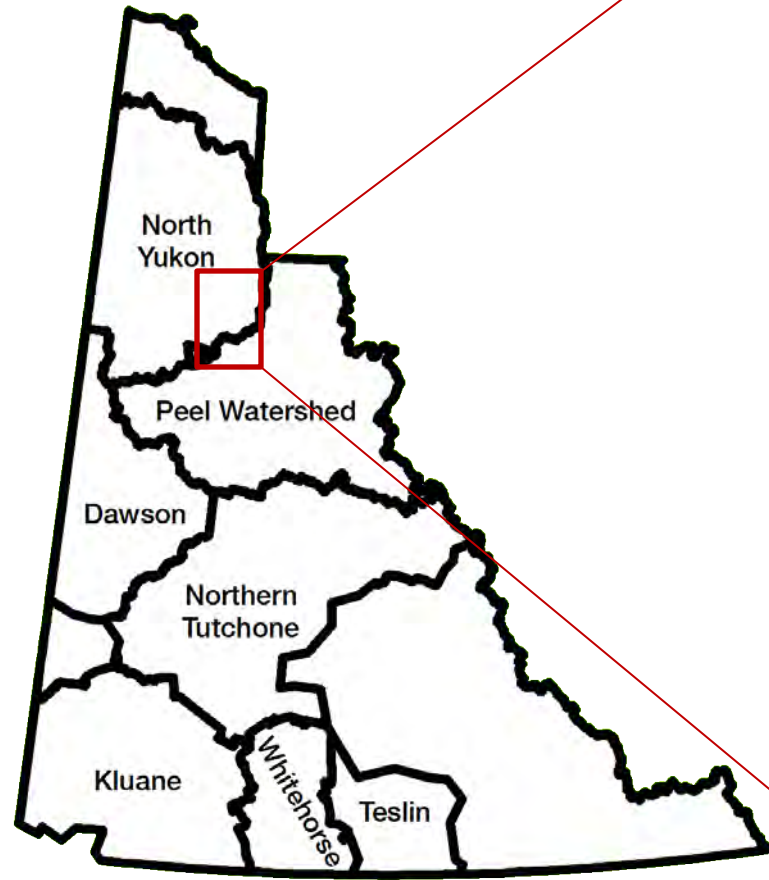


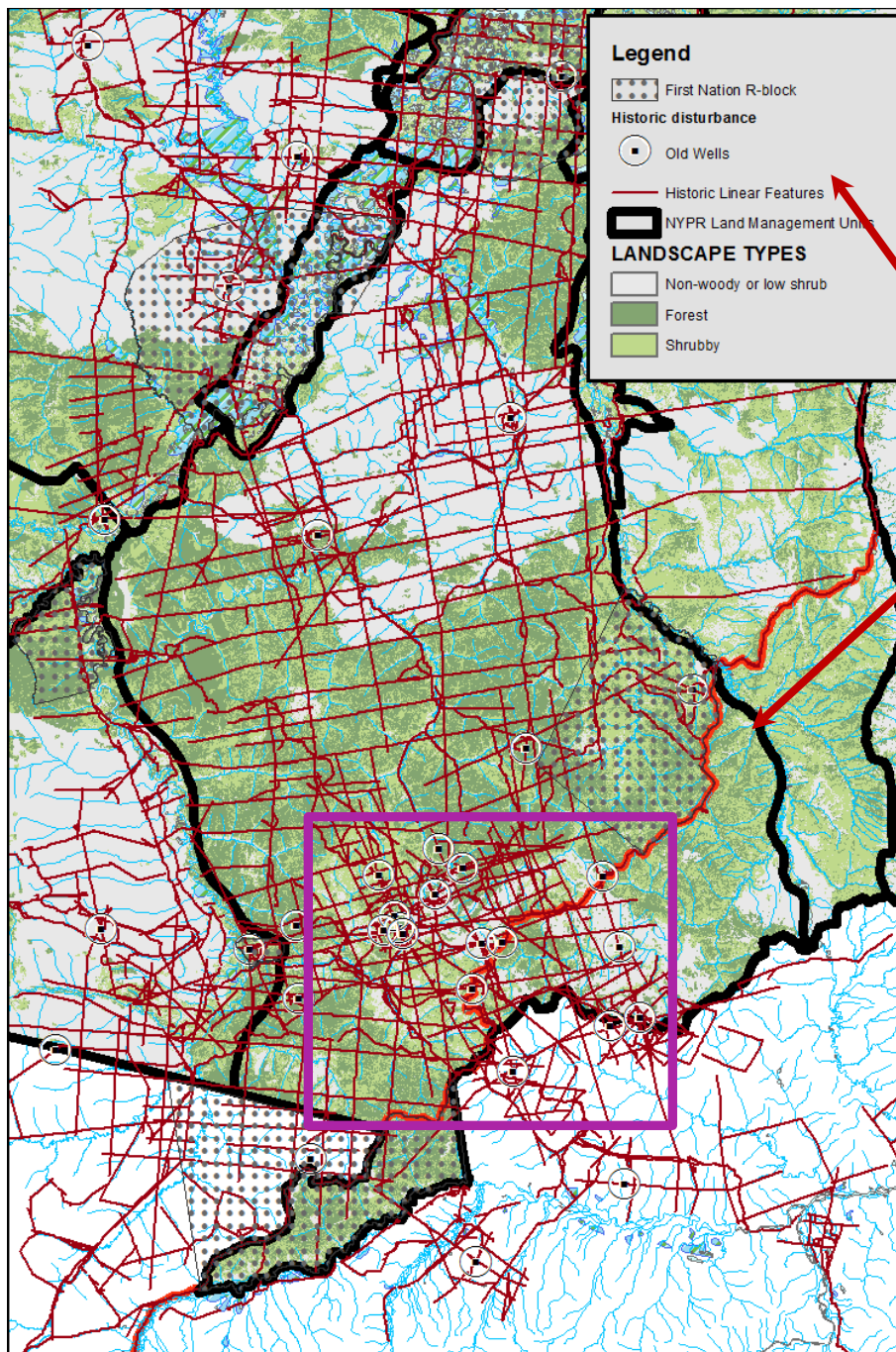
IMA Zone	Management Intent	Cumulative Effects Indicators	Cautionary Level ¹	Critical Level
Zone I ²	Lowest development	Surface disturbance	0.075%	0.1%
		Linear density	0.075 km/km ²	0.1 km/km ²
Zone II	Low development	Surface disturbance	0.15%	0.2%
		Linear density	0.15 km/km ²	0.2 km/km ²
Zone III	Moderate development	Surface disturbance	0.375%	0.5%
		Linear density	0.375 km/km ²	0.5 km/km ²
Zone IV	Highest development	Surface disturbance	0.75%	1.0%
		Linear density	0.75 km/km ²	1.0 km/km ²

How is Conformity Determined?



Pilot Study: Eagle Plains

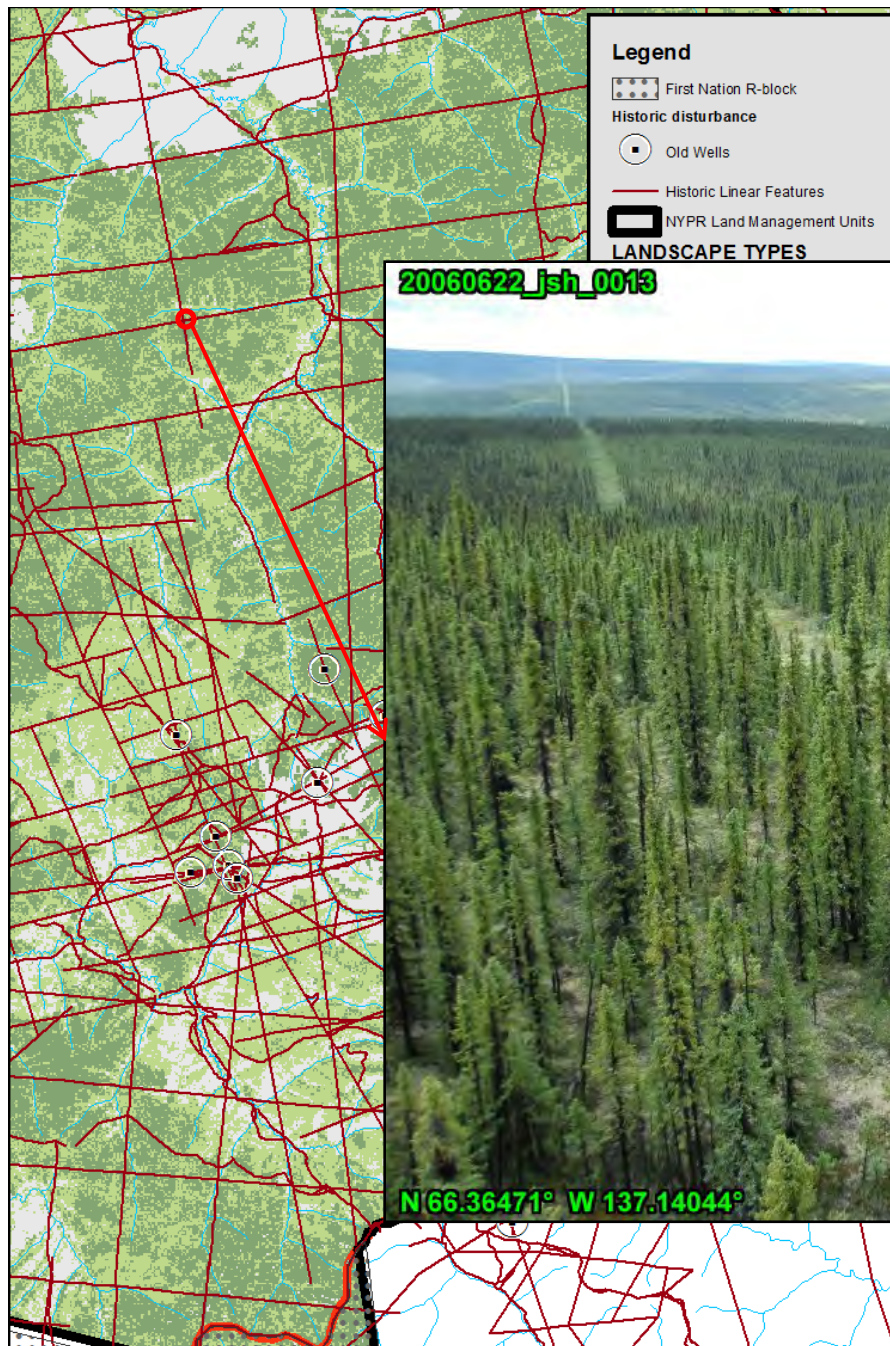




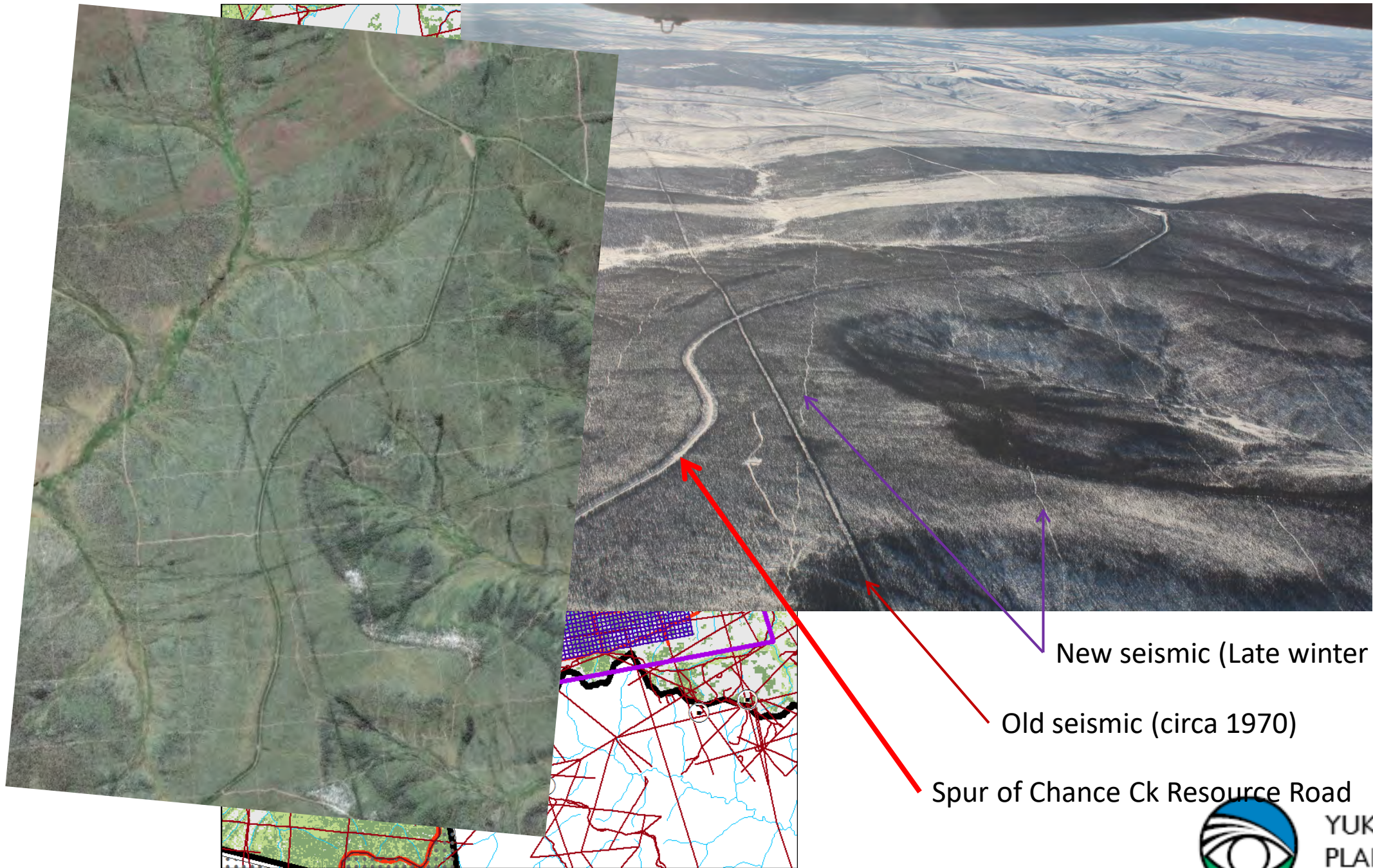
Historical disturbances
in
LMU 9 = Eagle Plains:



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New seismic (Late winter 2014)

Old seismic (circa 1970)

Spur of Chance Ck Resource Road

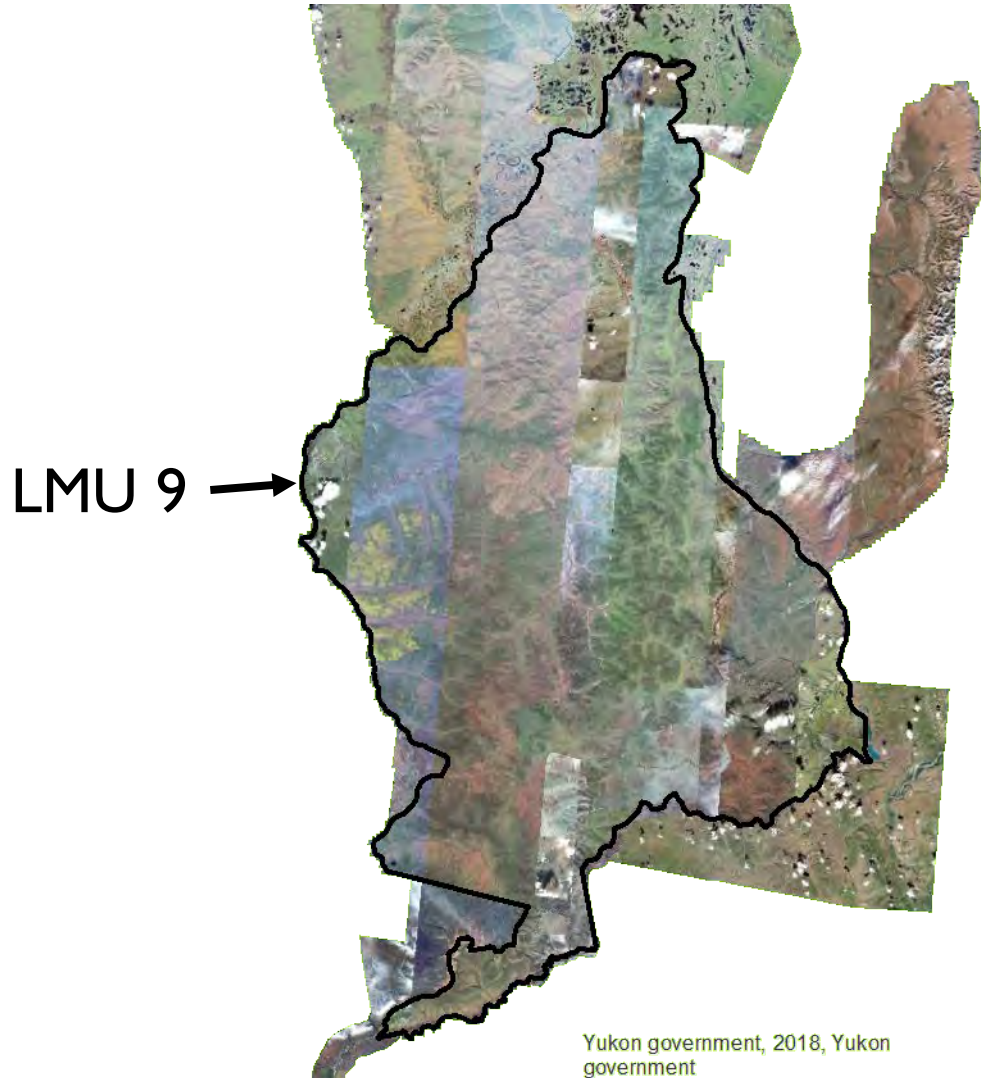


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How can Disturbance Levels be Determined?

Step 1: Get satellite images



Step 2: “Digitize” disturbances

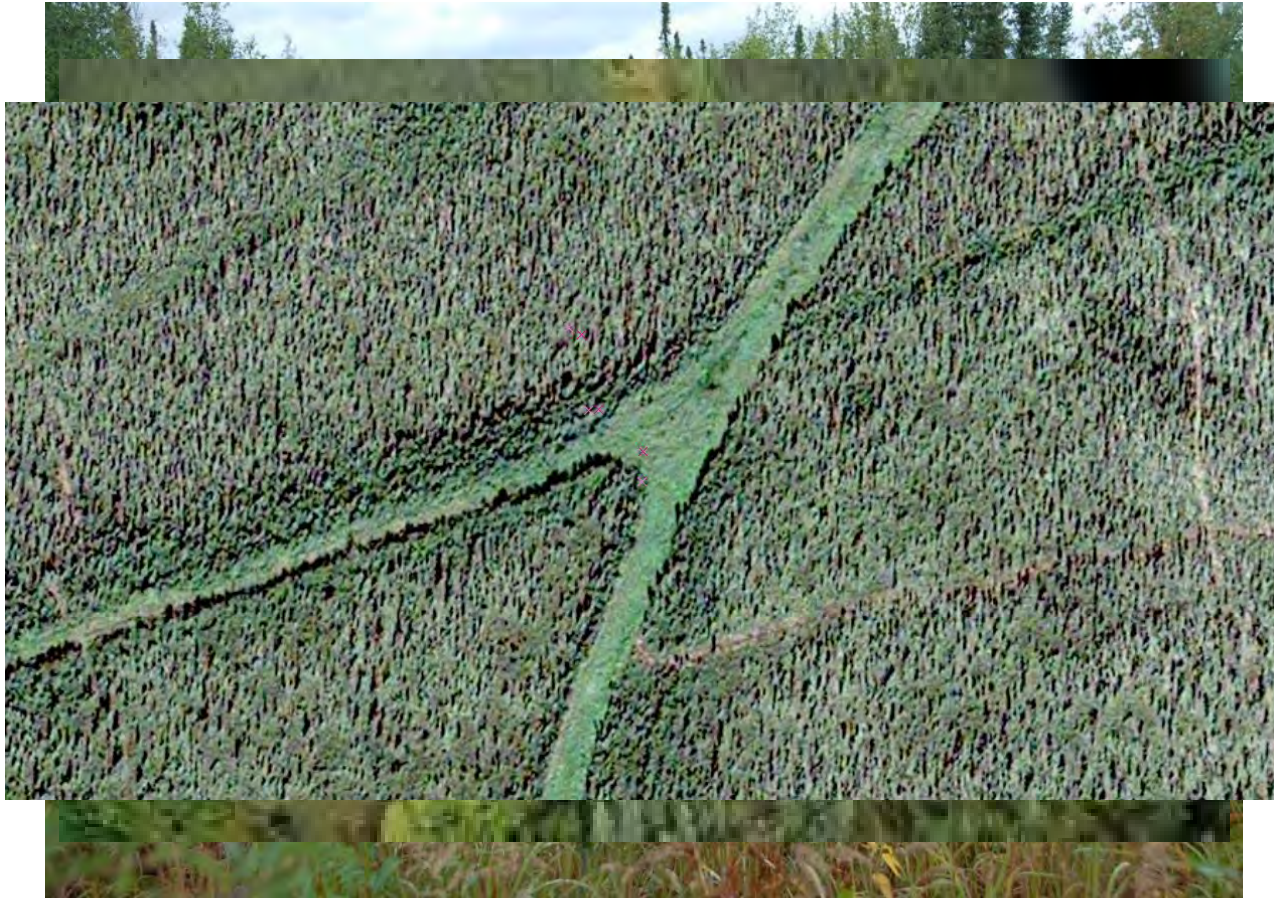


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Definitions

Disturbance



Recovery



Photo: Yukon Government, Energy Mines and Resources.
Linear Disturbance Study.



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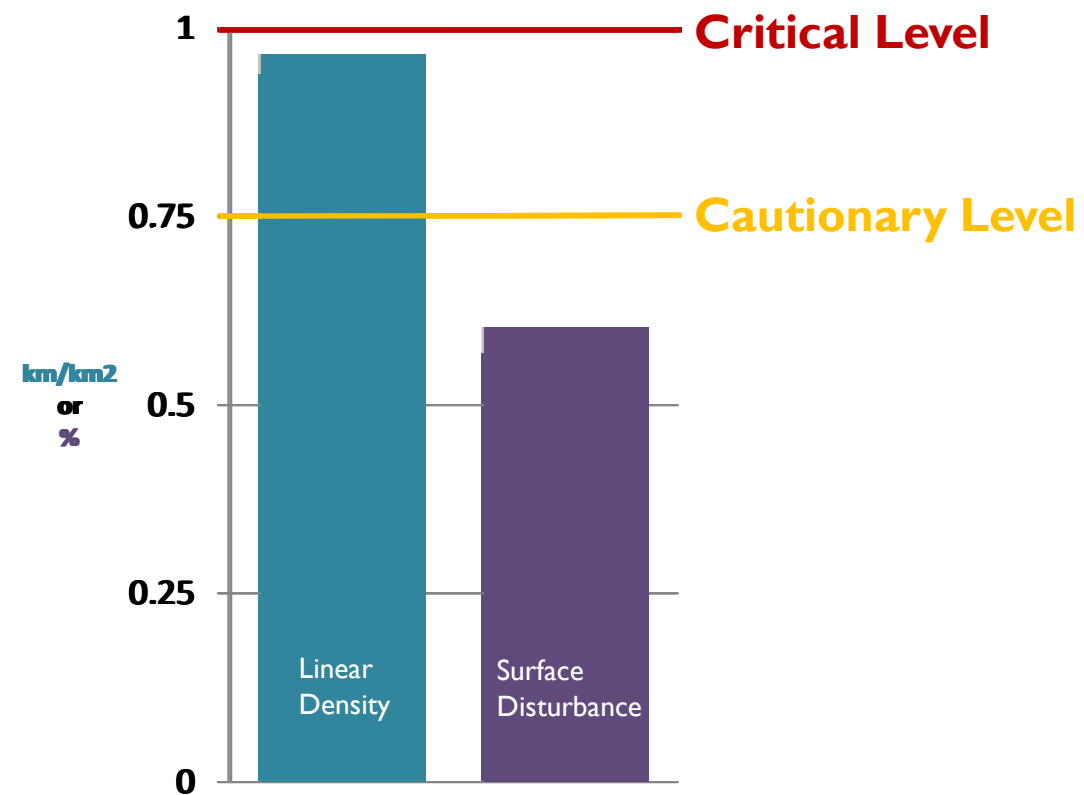
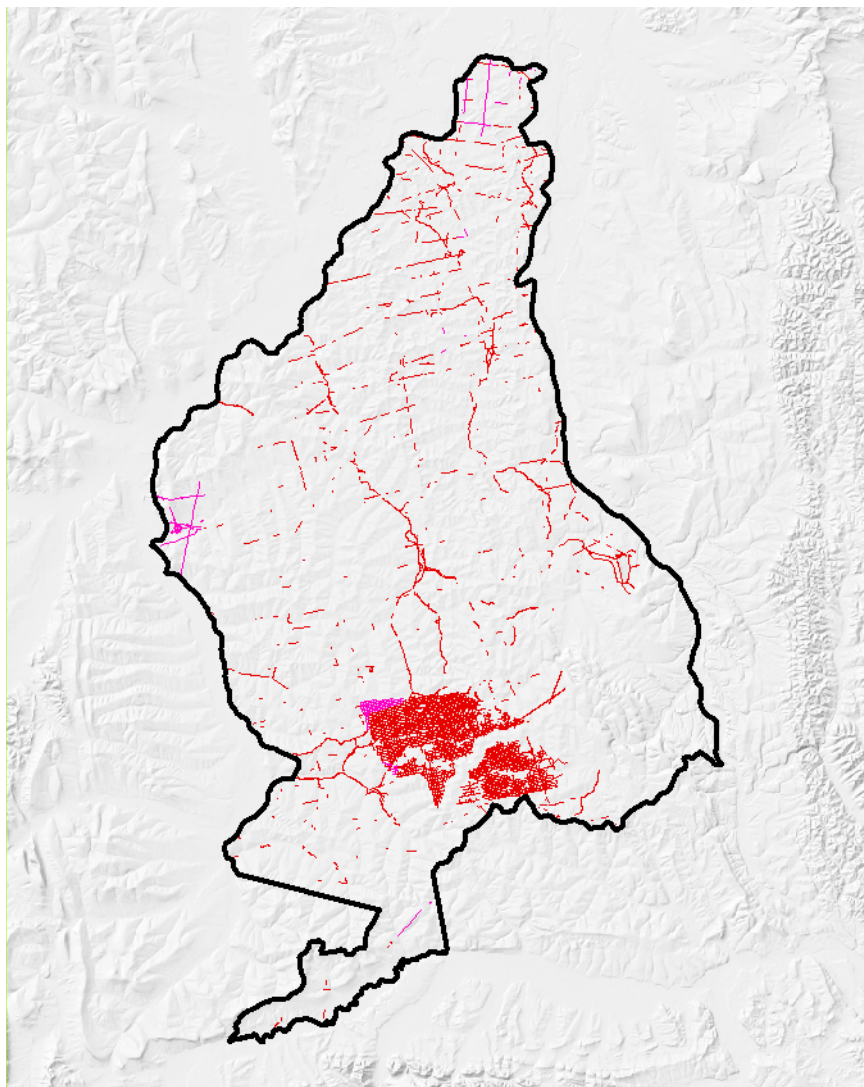


What is a tree? What is a forest?



How can Disturbance Levels be Determined?

Step 3: Tally disturbances that “count”



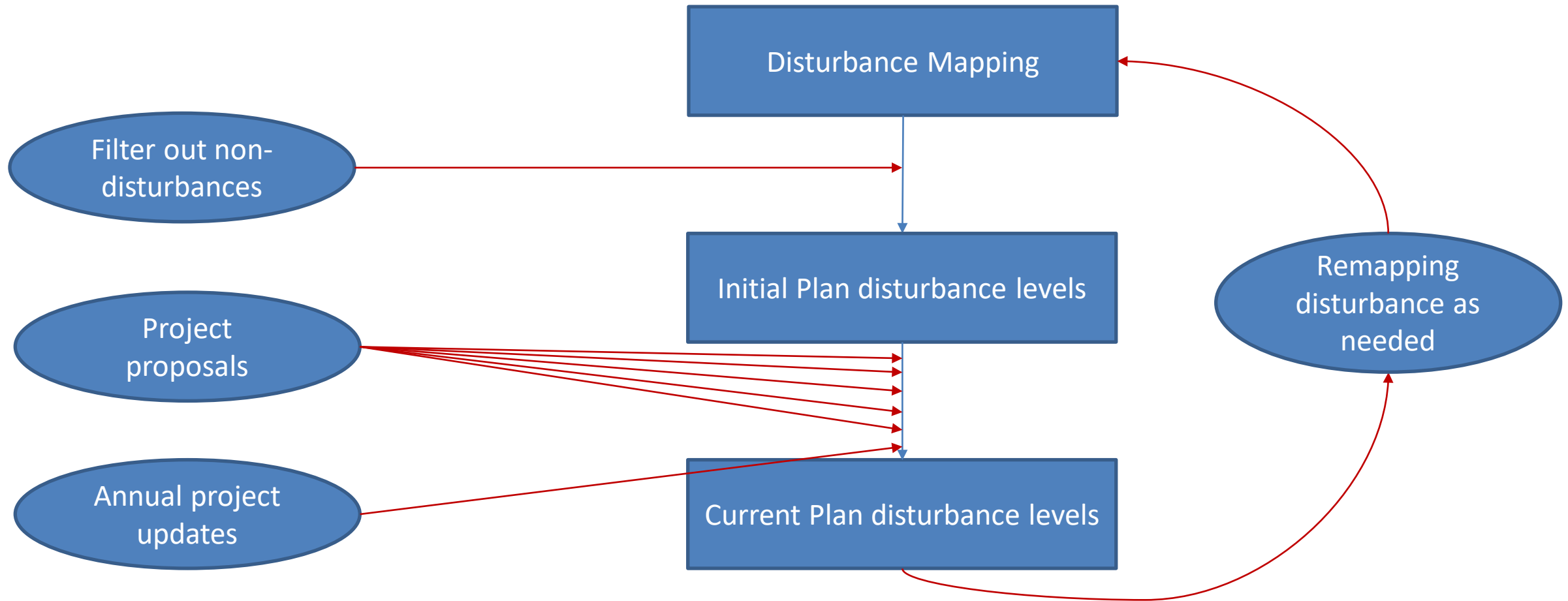
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LMU 9 NEWS FLASH:

Surface Disturbance: 11.82 km², or 0.1905%

Linear Disturbance: 2359 km, or 0.3804 km/km²

Keeping it up-to-date



Summary

- Indicators linked to land use and ecological values
- Methods may change by region
- Indicators need to be measurable
- \$ ➡ prioritize “busy” places
- **Doable!**



Questions?

Photo: Canadian Wildlife Service.

N 66.25064° W 137.15344°

WGS 84 717 m

2006/06/22 11:45:10

Extra Slides



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Definitions

Disturbance



Photo: Yukon Government, Energy Mines and Resources.
Linear Disturbance Study.

Recovery



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Digitize vegetation status on feature								
Marginally visible	Distinctly visible							
<div>(only visible b/c continuous with more visible disturbances)</div> <div>NOTE: The interpreter of LMU 9 in 2017 did not digitize these features</div>	Surrounded by forest <div>(tree cover >10%, trees > ~1.5m height)</div>				Not surrounded by forest <div>(e.g.: alpine, tundra, burns with trees ~<1.5m height)</div>			
	Different from surrounding community			Similar to surrounding community	Similar to surrounding community	Different from surrounding community		
	No woody growth		Woody Growth of different species or density	Woody Growth of similar species	No evident soil/hydrological/thermokarst modifications	No woody growth		Woody growth (height ~>1.5m implied)
	No evident soil/hydrological/thermokarst modifications <div>(e.g., recent woody vegetation clearing with little soil disturbance, or clearing in naturally unproductive site)</div>	Soil/ hydrological/thermokarst modification evident <div>(e.g., gravel pit, ponding, different vegetation response)</div>	POSSIBLE soil/hydrological/thermokarst modification	<div>(May be less dense or tall, but should have a similar species composition to surroundings)</div>		No soil/hydrological/thermokarst modification evident	Soil/ hydrological/thermokarst modification evident <div>(indication of water/drainage and/or possible nutrient change)</div>	<div>(Vegetation response (or enhanced growth) may indicate water/drainage and/or nutrient change)</div>
X: Marginally visible	D: In forest + no woody regrowth	E: In forest + soil disturb <div>+no woody regrowth</div>	B: Different woody growth	A: Visible but similar to surrounding environment <div>No visible hydro/thermokarst difference</div>		G: Not in forest + no soil disturb evident <div>BUT different</div>	F: Not in forest + soil disturb <div>Including intermittent changes</div>	C: Not in forest + woody regrowth
NYLUP: Recovered/ Not Disturbed	NYLUP: Not Recovered/ Disturbed	NYLUP: Not Recovered/ Disturbed	NYLUP: Recovered/ Not Disturbed	NYLUP: Recovered/Not Disturbed		NYLUP: Recovered/ Not Disturbed	NYLUP: Not Recovered/ Disturbed	NYLUP: Recovered/ Not Disturbed

More to do...

- Research: ecological and remote sensing
- Policy development
 - Try to use these data to better understand recovery
→forecast the future?
- Test results with field work
- Test assumptions between caribou, hunting and disturbances
- Compare cost/benefit with other methods
- **Integrate permitting, year-end project reporting with regional disturbance database**

