



Flood and debris flow risk assessment in the urban-wildland interface of the Thompson watershed



Guichon Creek 2017; photo Jason Miller

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Fraser Basin Council



Outline

- Fraser Basin Council overview
- Thompson River Watershed Flood and Debris Flow Risk Assessment project
- Next steps
- Questions





About the Fraser Basin Council

- Sustainability mandate – integration of environmental, economic and social issues
- Non-profit organization, 38 directors, 24 staff
- Formed in 1997
- Facilitate “messy issues” that cross many jurisdictions, that require multiple parties to find solutions
- No agenda – we are convenors, facilitators, or “cat herders”
- Consensus-based and inclusive





Clear water flooding





Debris flow



Figure 2-4. Debris flow blocking Highway 97 south of Clinton, BC on July 31, 2018 (MOTI, 2018). This area was burned in 2017 by the Elephant Hill Wildfire.



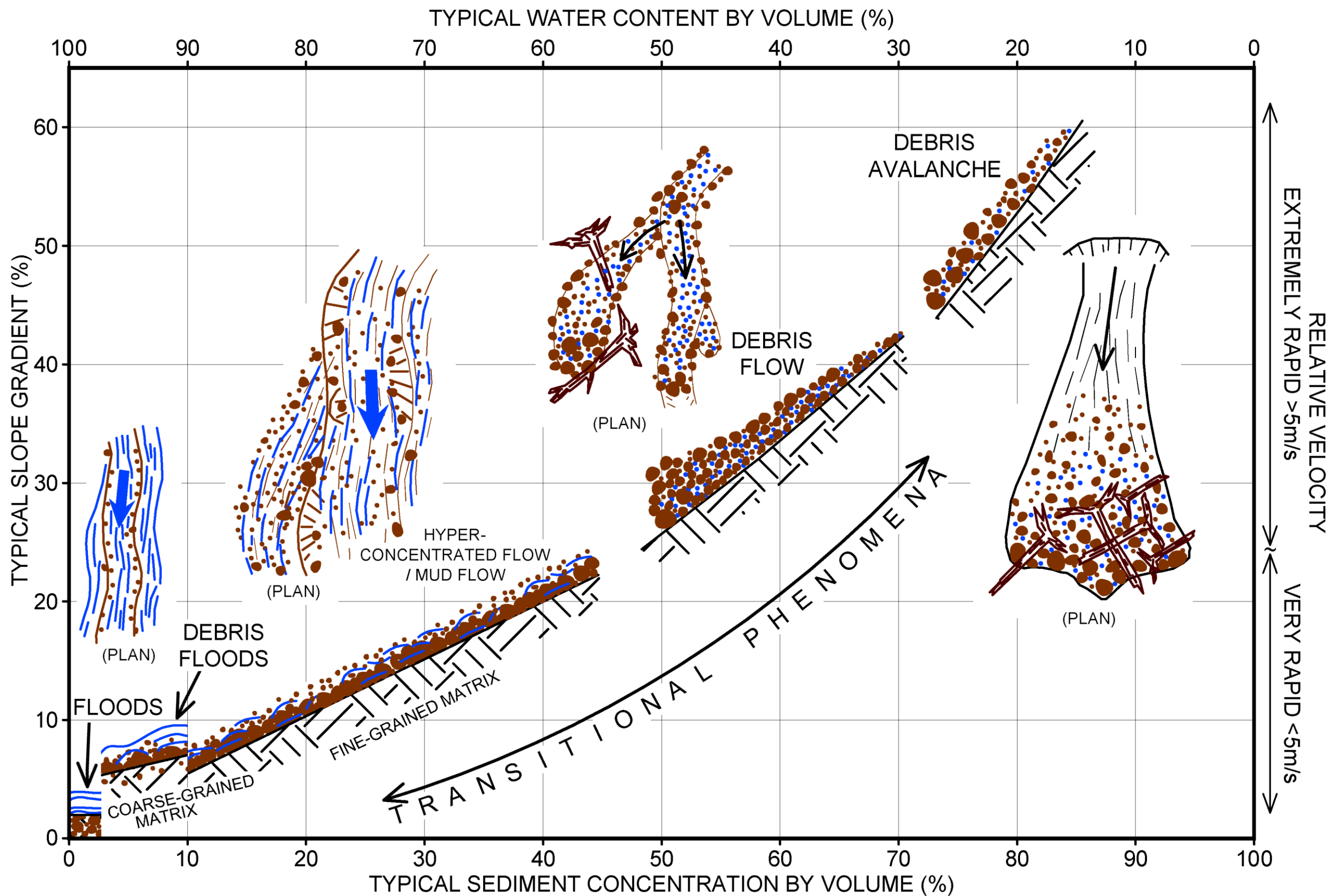


Landslide-induced flooding

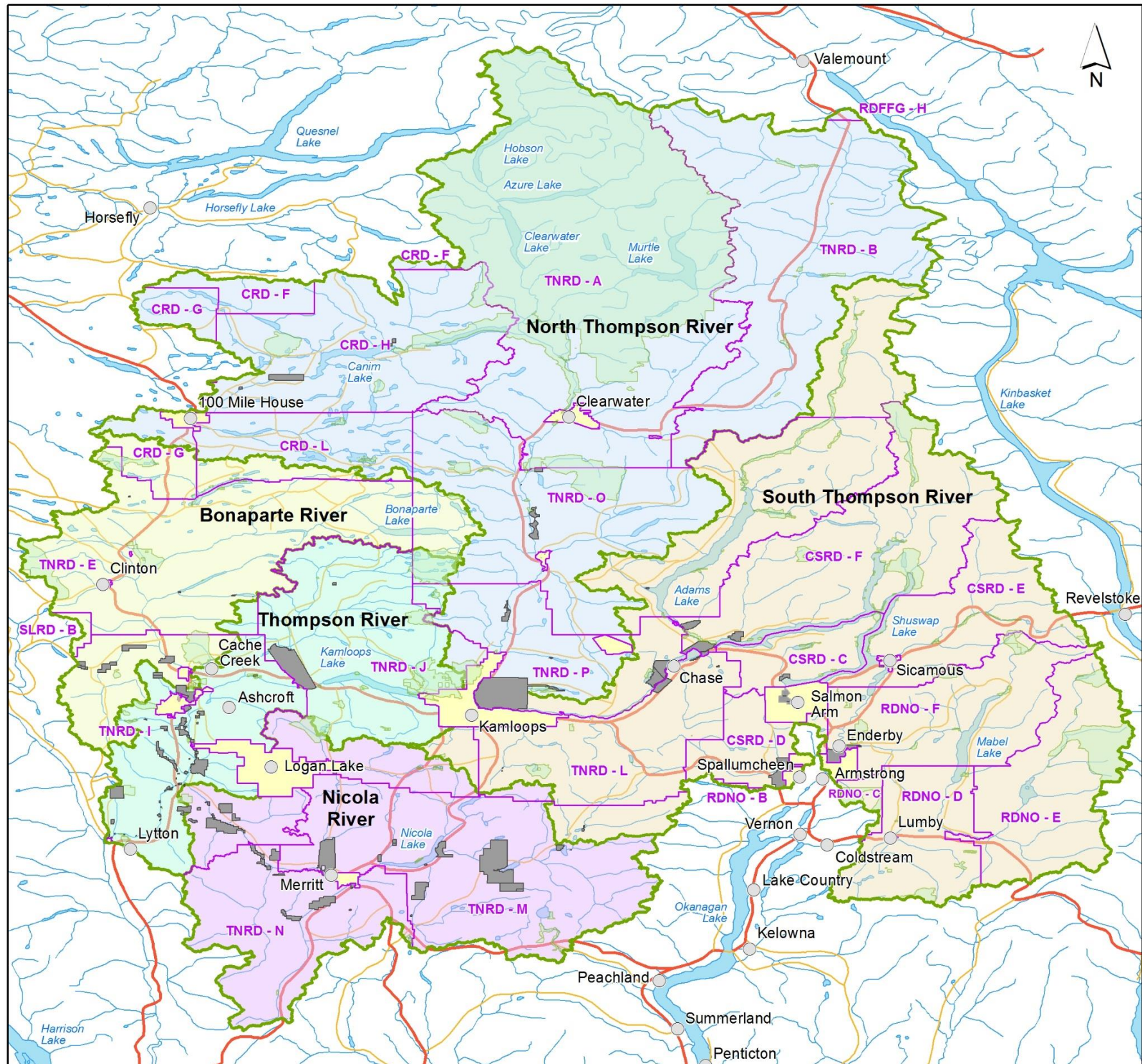


Figure 5-1. Upstream flooding caused by a landslide dam near Spences Bridge in August 1905 (Cooks Ferry Band, 2015).





Jurisdictions within the Thompson Watershed





Thompson River Watershed – basic info

- 4 regional districts
- 15 municipalities
- 26 First Nations
- 200 000 people
- 5.6M hectares or 6% of BC





Thompson Watershed Flood and Debris Flow Risk Assessment

- Currently underway, completion by March 2019
- \$600 000 – half federal, half provincial
- BGC Engineering Inc.
- Final products will be common map of the built environment, values at risk, risk prioritization





Thompson Watershed Flood and Debris Flow Risk Assessment

Why? Isn't it obvious which areas are at risk?

- No common map developed for whole watershed
- Many areas have no, or very old information

Useful for:

- Emergency response
- Future planning and development

To be shared with all orders of government

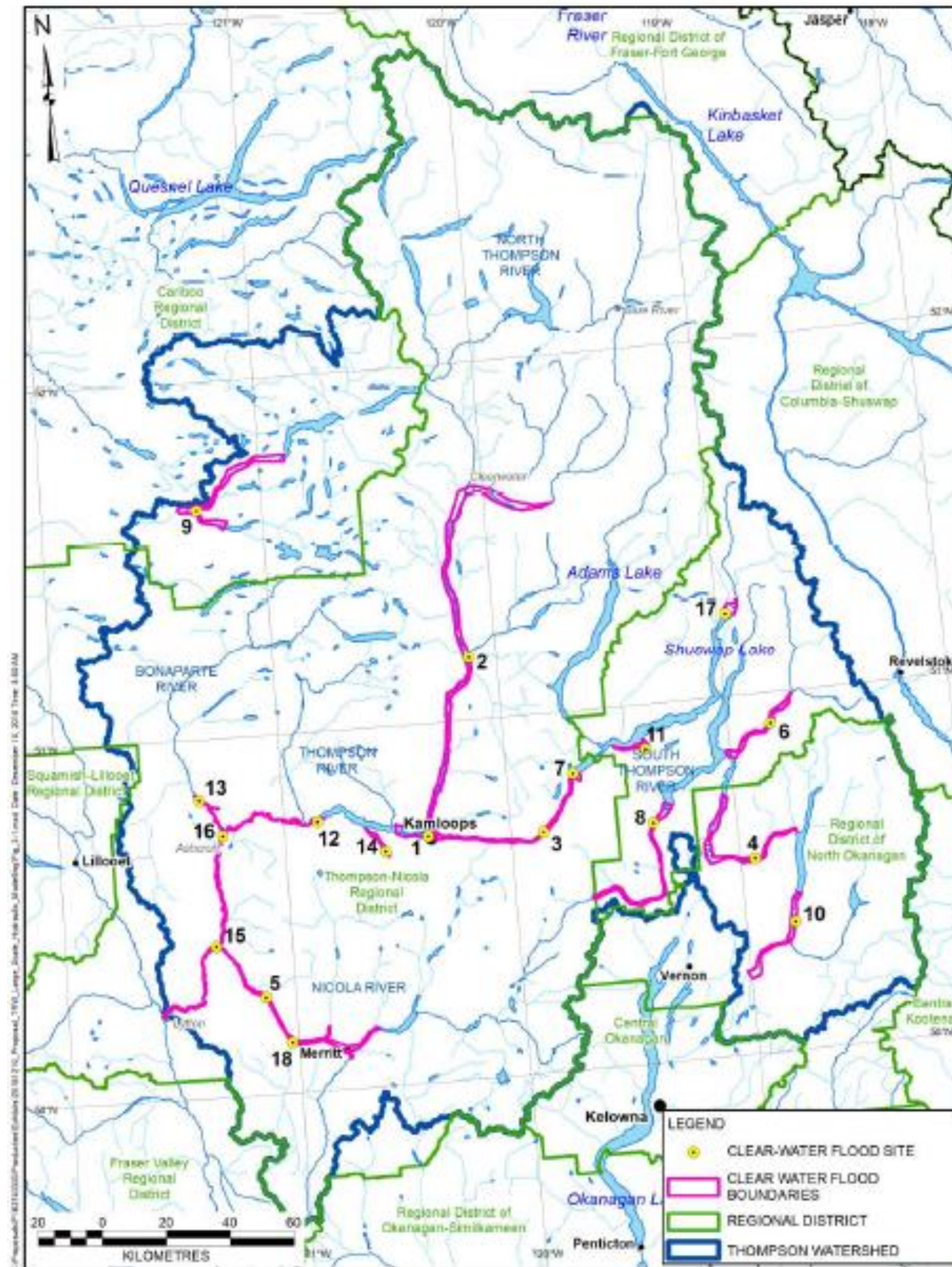




Thompson Watershed Flood and Debris Flow Risk Assessment

- Risk Assessment
 - Identify flood hazards (events), vulnerability (what values exist) = consequences (impacts, people affected)
 - Likelihood (chance of occurring)
 - Assign overall risk
- Clear water flooding
- Debris flows
- Landslide-induced flooding







Next steps:

Applications submitted for:

- LiDAR acquisition in areas with gaps, for future flood mapping
- Screening level hydraulic modelling

Get tools, maps and products to orders of government





Questions? Contact and more info:

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