



## Regional District of Bulkley-Nechako HRVA Electoral Area 'B' Committee

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# Summary - Hazard Identification Workshop

**Date:** February 7<sup>th</sup>, 2022

**Time:** 12 noon - 3 pm

**Format:** Zoom

## Overview

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On Monday, February 7<sup>th</sup>, 2021, participants from the HRVA Committee for Electoral Area 'B' came together on Zoom to discuss and select the hazards that will be included in the process. This document provides a summary of what was discussed throughout the session. Thank you to everyone who took the time out of their work week to contribute to this session.

The Hazard Identification workshop objectives were as follows:

- select hazard for the electoral area "B" HRVA project focus;
- review and discuss known and historical hazards in electoral area "B";
- discuss, define, and identify on a map any unique local hazards in electoral area "B";
- identify additional hazard information needs/ sources.

## Participants

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Name	Organization
Area B Director	Michael Riis-Christianson
Burns Lake Fire Rescue	Rob Krause, Fire Chief
Lake Babine Nation	Rick Dobbs
SD 91 Board Trustee	Rick Pooley
RCMP	Shaunna Lewis, Staff Sargent
Burns Lake Band – Health and Wellness, Youth Coordinator	Rhea Brown
Babine - Hampton Lumber	Doug Bysouth
Area Search Manager Search and Rescue / EPC Village of Burns Lake	John Rempel
MOTI	Lauren Bell
Deborah Jones-Middleton	RDBN
Christopher Walker	RDBN
Liliana Dragowska	RDBN

## Overview

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The session began with a welcome and a round table of introductions. This was followed by a presentation from Liliana reviewing the objectives of the meetings, overview of the HRVA committee process, summary of the hazard identification background paper, and presenting the results of the hazard identification survey for Electoral Area 'F'. The hazards identified in the backgrounder were discussed by participants during the presentation and comments and notes were recorded and included in the hazard discussion notes below.

The results of the HRVA committee hazard selection survey helped to inform the discussion and focus of the conversation and can be found below:

## Hazard Discussion

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Participants were broken out into two breakout groups, groups were given 30 minutes in the first round, and 25 min in subsequent round to discuss the following questions?

- Should this hazard be included in Area B HRVA?
- Is the hazard confined to a specific location in the electoral area? ID on map.
- What do you know about this hazard?
- What do we need to know about this hazard?

Participants were asked to refer to the two reference documents and join into one of two live google jam boards that were used to record the breakout room conversations.




The discussion notes and additional hazard research have been added to the Hazard Identification Background paper for Area 'B'. The revised hazard background paper will be distributed and used by the advisory committee to assist in scoring the likelihood and consequence of hazards on the Electoral Area.









**The reference documents used included [RDBN Hazard Identification Backgrounder](#) and [All 57 Hazard Definitions](#).**

The notes below summarize the group discussions.

## Natural Hazards / Disease, Pest Infestations, Epidemics Hazards




The notes below summarize the discussion. Additional information and notes can be viewed on the [Google Jam Board #1](#):


Hazard Grouping	Notes	Include
<p><b>Atmospheric</b></p> 	<ul style="list-style-type: none"> <li>➤ Springtime road dust being PM 10 becomes a challenge.</li> <li>➤ High winds are of concern.</li> <li>➤ Heavy Rainstorms.</li> <li>➤ Impact is on our transportation corridors, impedes emergency services and is impacted by distances and lack of manpower in the region.</li> <li>➤ High wind events have an impact on our forested areas</li> <li>➤ Freshet, heavy snowpack combined with rains and fast melts in the spring are concerning.</li> <li>➤ Most of these events are not request or not of high impact when they occur, leading to lack of preparation.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ Interest in lightening strike data as a hazard map.</li> <li>➤ What are the long-term effects of these hazards on each other?</li> <li>➤ Due to atmospheric hazard increases, how much the maintenance demands are affecting the quality of service provided on our infrastructure.</li> </ul>	<p>Yes</p>
<p><b>Hydrological</b></p> 	<ul style="list-style-type: none"> <li>➤ Localized flooding along Burns Lake and Endako River.</li> <li>➤ Hauz Loop Road is a flooding concern.</li> <li>➤ No specific areas but anyplace near water bodies. Houses near Burns Lake could get impacted.</li> <li>➤ Beaver dams cause an increase flooding as they build up greater volume of water and then let go.</li> <li>➤ Burns Lake Band Reserve floods when the lake levels rise.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ Is there a study on water supply in regard to climate change for our area?</li> </ul>	<p>Yes Add flash flooding</p>
<p><b>Fire</b></p> 	<ul style="list-style-type: none"> <li>➤ Highest hazards of concern in our area.</li> <li>➤ Corridor closures are possibility if a fire is nearing transportation routes.</li> <li>➤ Pest infestations caused higher risk of wildfire hazards.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ How on-going logging is creating open areas, is it helping or hindering fire behavior and risk?</li> <li>➤ Could BCWS show modeling on the affects of removing brush and debris from the forests and how windspeed may impact fire behavior?</li> </ul>	<p>Yes</p>

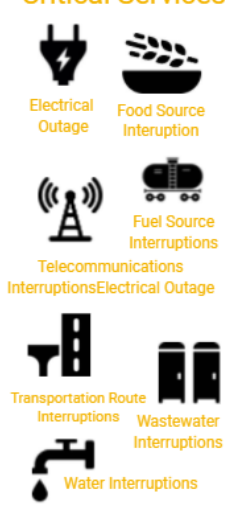
Hazard Grouping	Notes	Include
<p>Geological</p>  <p>Landslide/ Avalanche</p>  <p>Land Subsidence</p>  <p>Earthquake</p>	<ul style="list-style-type: none"> <li>➤ Unstable ground along creeks in the region.</li> <li>➤ Fort Babine has avalanche terrain along its single transportation route.</li> <li>➤ Gully in Burns Lake could be a landslide consideration.</li> <li>➤ After a wildfire, all the vegetation is gone leading to soil instability which increase the risk of landslides.</li> <li>➤ Low possibility but high consequence.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ Landslides in coastal inlets could create localized tidal waves. Is that applicable to lakes?</li> </ul>	<p>Yes Remove land subsidence Add Avalanche</p>
<p>Disease and Epidemics</p>   <p>Human Disease</p>  <p>Public Health Crisis</p>  <p>Animal Disease</p>  <p>Plant Disease and Pest Infestation</p>	<ul style="list-style-type: none"> <li>➤ While we do not have direct responsibility, we need to remain well informed to the situation.</li> <li>➤ Concern about Radon. Is this a natural Hazard or human health result? How widespread is radon in the region? Known traces of uranium at the bed rock in this region.</li> <li>➤ Insect based vectoring of disease- limes disease, West Nile less likely. Hampton has researched Limes disease and have a safety plan for their bush working staff.</li> <li>➤ How to report Invasive Plant and animal Species: App to report invasive species: <a href="https://apps.apple.com/us/app/report-invasives-bc/id1004208197">https://apps.apple.com/us/app/report-invasives-bc/id1004208197</a> i.e. reporting invasive fish species in rivers and lakes?</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ What are the health risks of Radon and how do we know if this is a risk and something that could create a human health issue?</li> </ul>	<p>Yes</p>

## Human-Caused Hazards

The notes below summarize the discussion in each group. Additional information and notes can be viewed on the [Google Jam Board #2:](#)

Hazard Grouping	Notes	Include
<p>Transportation</p>  <p>Rail Incident</p>  <p>Motor Vehicle Incident</p>  <p>Aircraft Incident</p>	<ul style="list-style-type: none"> <li>➤ 5km east of Burns Lake, Tintagel Rd, 2021 there was a coal train derailment.</li> <li>➤ May 10<sup>th</sup>, 1967 major train derailment in Decker Lake. Derailment was caused by a washout of the tracks under the Powderhouse Creek that was experiencing heavy runoff where water covered the highway and the tracks on the shore of Decker Lake. The derailment caused a fire from the engines. Took two days to clear the line.</li> <li>➤ Mid 90's a coal train derailment near the mill, memory that the train cars almost ended up on the highway.</li> <li>➤ Late 60's or early 70's train derailment containing grain.</li> <li>➤ Train is of concern with fuels, and exports along the tracks.</li> <li>➤ One committee member stated they put out a fire on the railway tracks in 2021.</li> <li>➤ Possibility of aircraft accidents increasing in the summer months due to wildfire.</li> <li>➤ Highway 16 there is a risk of hazardous materials incidents, we do not know what is travelling on the highways.</li> </ul>	<p>Yes</p>

Hazard Grouping	Notes	Include
	<ul style="list-style-type: none"> <li>➤ Extra-ordinary events affecting the highways and the contractors may not have the equipment to address these conditions.</li> <li>➤ Human factor when it comes to motor vehicle incidents.</li> <li>➤ Death in community around rail lines - need to find ways to increase education and awareness for youth on crossing tracks. Issues with rail safety and education and how to portray them to youth - particularly when it comes to youth with Burns Lake Band.</li> <li>➤ Rail danger and foot traffic - i.e., kids in school would walk across the rail line as short cuts - small in terms of community impact but public education component.</li> <li>➤ Hampton is directly along the rail line and risk.</li> <li>➤ EOC for Burns Lake and RDBN is in the rail hazardous evacuations zones.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ What do we know about how many wildfires have been started from the rail lines?</li> <li>➤ Can we have two suggested evacuation zones, one for rail hazardous materials and one for highway hazardous materials?</li> <li>➤ Concerns and consequences on hazardous materials spill in burns and area - how many people would be impacted?</li> </ul>	
<p>Infrastructure</p> 	<ul style="list-style-type: none"> <li>➤ Beaver Dams are a concern in the area.</li> <li>➤ Salmon enhancement project in the Endako River, looking at damming the Endako River by Burns Lake.</li> <li>➤ November 28<sup>th</sup>, 2002 a sudden natural gas leak near Neville Road, a section of the 10" pipeline suddenly cracked and a large amount of gas under pressure caused a deafening sound to ring in the community. Wet'suwet'en reserve and Polling Road were evacuated- no injuries PNG responded.</li> <li>➤ Response times to oil and gas pipeline spills - doesn't take much to disrupt rural infrastructure in a big way and can take lots of time to be usual again.</li> <li>➤ Mainline north of Polling East Rd where the pipeline crosses the Highway - could impact the highway. History of pipelines causing fire, or other impacts.</li> <li>➤ Example out of PG - FN reserve was impacted by an LNG incident.</li> <li>➤ Dams - Environmental impact - maybe not as much related to people, but could have environmental consequences.</li> <li>➤ Think of impact of Mount Polley and the water shed and relate it to Equity affecting the water shed in the region - the amount of damage it causes.</li> <li>➤ MOTI - permits on lengths and weights not so much on contents. - CVSC may potentially be able to id what is on larger industrial trucks, but not regulated and monitored. - but some of the higher consequence transportation vehicles are ones with smaller retail items and chemicals.</li> <li>➤ Cyber Attack - depends on timing - who what where is impacted. What if a cyber-attack happens during an EOC?</li> <li>➤ If a structural fire occurred in town and wind correct, could take out a large section of business sector in Burns Lake.</li> </ul>	<p>Yes Add explosions</p>

Hazard Grouping	Notes	Include
	<ul style="list-style-type: none"> <li>➤ Volunteer fire department response to the mill explosion - their task was much bigger than what they have been trained for - blown away by demand as it was rare and consequential - trained for structural firefighting, however in this incident injured people needed support from fire department, burns lake was under resourced by ambulance and fire - during that response the weather was extreme snow, cold temperatures, at decker lake the power flickered. What would have happened if the power went out in the village? The social and community impacts to the people of the community were drastic, there were large crowds of concerned family members at the hospital. The Doctor on call that event was skilled in triage and was able to respond to the event efficiently. The consequences were huge and could have been even larger. The community rebuilt the mill which was a huge recovery success.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ Would like to share with the community in Burns Lake - what is going through on rail.</li> </ul>	
<p><b>Interruptions to Critical Services</b></p>  <p>Electrical Outage</p> <p>Food Source Interruption</p> <p>Fuel Source Interruptions</p> <p>Telecommunications Interruptions Electrical Outage</p> <p>Transportation Route Interruptions</p> <p>Wastewater Interruptions</p> <p>Water Interruptions</p>	<ul style="list-style-type: none"> <li>➤ How many resources do we have locally to sustain the communities and residents in the event of transportation interruptions of food supply shortages.</li> <li>➤ Food security is critical because of the rural nature and our only source of contact to the outside world is Hwy 16.</li> <li>➤ Observed Panic Buying in 2021;</li> <li>➤ Public education around food sources - ie. grocery stores have backup plans in place - but through public education we could preserve our food quantities in time of emergencies - limit panic buying</li> <li>➤ <a href="#">Bulkley-Nechako Emergency and Public Alerts</a> – need to share and advertise this service to residents. The system will communicate via landline, cell, app, and email, however individuals need to sign up.</li> <li>➤ Partner opportunity to look at advertising for RDBN Voyent and seeing if it could be a valuable tool to the SD?</li> <li>➤ SD/schools is a great resource regarding contacting families - ie Vanderhoof shooting event - very first time the provincial warning system had been used to advise the community. SD and kids and staff were not prepared for the communication element this situation provided.</li> <li>➤ Telecommunications - impacting communication during emergencies. so dependent on hydro and communications - but if cell tower or phone lines gone, we would be in trouble.</li> <li>➤ During Y2K - 2010 fear that the telecommunications would have gone down - Burns did planning and communication.</li> <li>➤ Forest fire that came close to highway 16 - information that was circulated that a threat from the fire was potentially going to damage the fiber optic line. Is this a realistic concern? are lines buried - TELUS is above ground.</li> </ul> <p><b>Comments and questions for consideration and further research:</b></p> <ul style="list-style-type: none"> <li>➤ How can the School District fit it's plans in with the Regional District and strengthen communications? There is an interest</li> </ul>	<p>Yes</p>

**Summary – Hazard ID Workshop Electoral Area B**

February 7<sup>th</sup>, 2022

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Hazard Grouping	Notes	Include
	<p>to meet and talk on a regular basis to ensure we are prepared in our region.</p> <ul style="list-style-type: none"><li>➤ Amateur radio being useful - but need to better understand their resource. Contact Jim Theisen south of Burns Lake amateur Radio?</li><li>➤ How are indigenous communities and rural water/sewage systems impacted by electrical or other interruptions?</li><li>➤ RDBN Food hub being a resource - add link to backgrounder and is a community resource.</li><li>➤ How many homes listen to or have regular non-internet radio?</li></ul>	

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# Summary of Hazards Selected

The first step in the HRVA process was to identify the possible hazards that will need to be analyzed in the study area. The list below is an adaptation of hazards identified in the BC Emergency Management Regulation and a reflection of the HRVA Committees Selection of Hazards as discussed. Climate change is recognized as having impacts on the frequency and intensity of many hazards and may also cause new hazards to emerge. This list will guide the HRVA analysis moving forward. The objective moving forward will be to prioritize the mostly likely hazards and consider historic experiences and future likelihood when scoring the frequency, severity, and consequence of each specific hazard.



## Regional District Bulkley Nechako HRVA 2022

### HRVA Hazard List

Community: Electoral Area B

Date: 14-February-2022

This hazard list is an adaptation of hazards identified within the BC Emergency Management Regulation

#### Atmospheric

- 1. Air Quality ↗
- 2. Extreme Heat ↗
- 3. Extreme Cold ↗
- 4. Fog ↗
- 5. Freezing Rain or Drizzle ↗
- 6. Space Weather ↗
- 7. Hail ↗
- 8. Hurricane/Typhoon/High Wind Event ↗
- 9. Lightning ↗
- 10. Snowstorms and Blizzards ↗
- 11. Tornado ↗

#### Disease & Epidemic

- 12. Animal Disease ↗
- 13. Human Disease (Includes Pandemic/Epidemic) ↗
- 14. Plant Disease and Pest Infestation ↗
- 15. Public Health Crisis

#### Fire

- 16. Structure Fire
- 17. Wildfire ↗

#### Geological

- 18. Avalanche ↗
- 19. Landslide/Debris Flow ↗
- 20. Land Subsidence (and Sinkholes) ↗
- 21. Submarine Slides

#### Seismic

- 22. Earthquake
- 23. Liquefaction
- 24. Tsunami (Telegenic and Terrestrial)

#### Volcanic

- 25. Ash Fall
- 26. Volcanic Flow (Pyroclastic, Lava, Lahars)

#### Hazardous Materials and Explosions

- 27. Explosions
- 28. Hazardous Materials Spill
- 29. Mine Incident

- 30. Nuclear Incident
- 31. Oil or Gas Pipeline Spill
- 32. Space Debris

#### Hydrological

- 33. Drought ↗
- 34. Seiche ↗
- 35. Storm Surge ↗

#### Flooding

- 36. Lake, River, and Stream Flooding ↗
- 37. Coastal Flooding ↗
- 38. Storm Water Flooding (urban, local, pluvial) ↗
- 39. Flash Flooding ↗

#### Infrastructure Failure

- 40. Dam and Spillways Failure ↗
- 41. Dike Failure ↗
- 42. Structure Failure ↗

#### Interruptions to Critical Services

- 43. Electrical Outage ↗
- 44. Food Source Interruption (supply chain, or community food stores) ↗
- 45. Telecommunications Interruption ↗
- 46. Transportation Route Interruption ↗
- 47. Wastewater Interruption ↗
- 48. Water Service Interruption (Includes shortage and contamination) ↗
- 49. Fuel Source Interruption ↗

#### Security

- 50. Cyber Security Threat
- 51. National Security Threat
- 52. Public Disturbance
- 53. Major Planned Event

#### Transportation

- 54. Aircraft Incident
- 55. Marine Vehicle Incident
- 56. Motor Vehicle Incident
- 57. Rail Incident

**Note:** Climate change is recognized as having impacts on the frequency and intensity of many hazards and may also cause new hazards to emerge. Those hazards identified as being impacted by changing climatic conditions are indicated with a "↗".



## Next Steps

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Committee members discussed the need for Liliana to share a summary of selected hazards to be confirmed at the next committee meeting to be incorporated into the provinces online tool.

Committee members are asked to review the notes and selected hazard and provide additional thoughts, comments, stories, and experiences to form part of the project documentation.

Committee members were asked to complete an evaluation of the meeting once a summary is sent out and to complete the doodle poll for availability on a next meeting day on understanding community resiliency to the selected hazards.

Liliana has gathered additional information and resources on hazards identified by the committee and included them in the revised Hazard Background document for reference as the committee moves through the process. This document will be sent out to committee members and posted on the RDBN's website under the HRVA project update.

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