



Regional District of Bulkley-Nechako HRVA Electoral Area 'D' Committee

Summary - Hazard Identification Workshop

Date: November 29th, 2021

Time: 12 pm – 3 pm

Format: Zoom

Overview

On Monday, November 29th, 2021, participants from the HRVA Committee for Electoral Area 'D' 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:

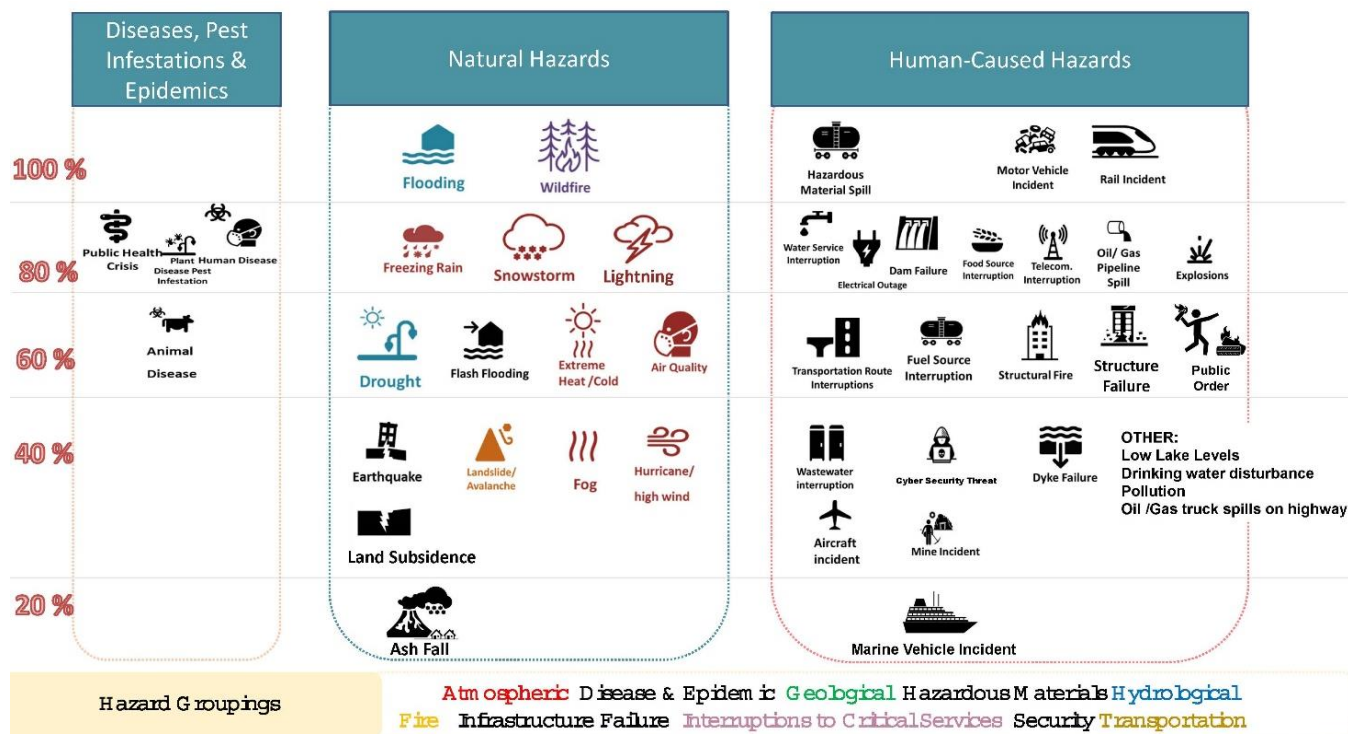
- select hazard for the electoral area "D" HRVA project focus;
- review and discuss known and historical hazards in electoral area "D";
- discuss, define, and identify on a map any unique local hazards in electoral area "D";
- identify additional hazard information needs/ sources.

Participants

Name	Organization
Mark Parker	Area D Director
Joe Pecheco	Village of Fraser Lake
Yvan Laramée	Fort Fraser Volunteer - Fire Chief
Juan Cereno	Nadleh Whut'en First Nation
Bob Storey	Long Time Resident
Bryan Adams	Fort Fraser livestock association
Jo-Anne Fiske	Glennan Association on Francois Lake
Dave Christie	SD 91 Board, Vice Chair, Economic Development..
Alana Legere	West Fraser Saw Mills
Kristin Levy	Village of Fraser Lake - Intern
Christopher McLean	EMBC
Deborah Jones-Middleton	RDBN Staff
Christopher Walker	RDBN Staff
Liliana Dragowska	RDBN Staff

12:00- 12:30 Welcome, Introductions, Goals and Outcomes

The session began with a welcome from Director Parker and a round table of introductions., This was followed by a short presentation from Liliana reviewing the objectives of the meetings, overview of the HRVA committee process, and reviewed the results of the hazard identification survey for Electoral area 'D'. The results of the survey the HRVA committee members completed before the workshop were as follows and discussed:



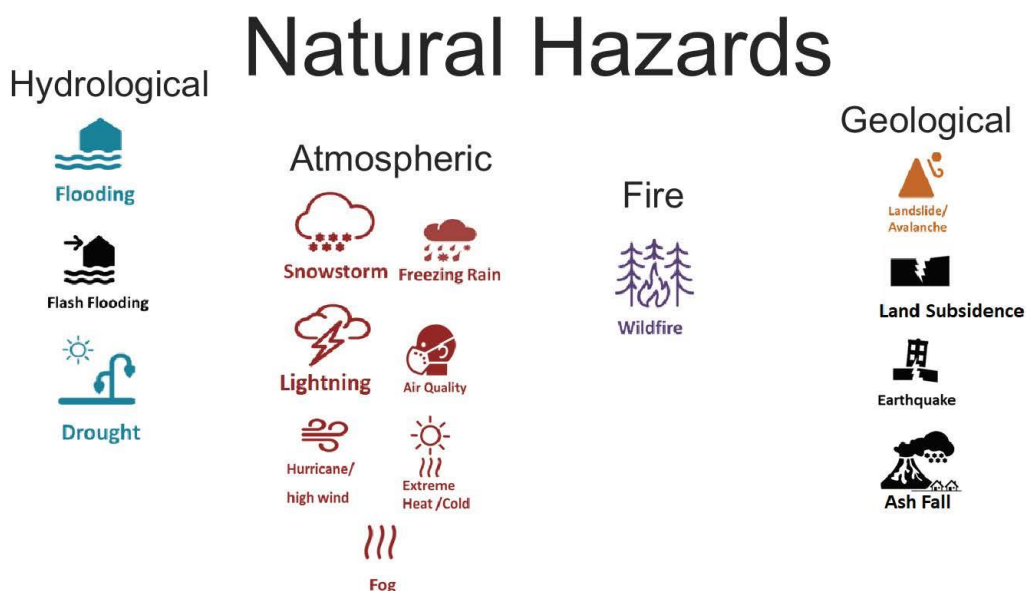
12:30 – 2:50 pm - Large Group Hazard Discussion

Zoom malfunctioned during this workshop shifting breakout groups to one large group discussion that explored Natural, Human-caused, and Disease & Pest infestation Hazards with participants. Participants were asked to discuss the following questions?

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

Participants were asked to refer to the two reference documents and join into discussion. The google Jam Boards Summarize the discussions in each group. These discussions and additional hazard research will be added to the Hazard Identification Background paper for area 'D'. 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](#).

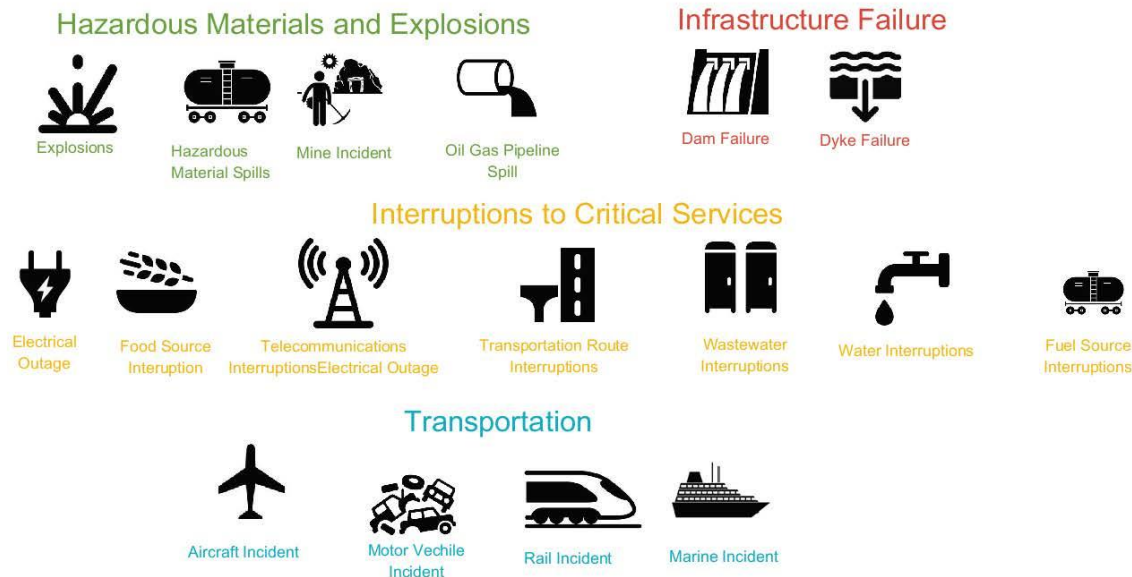


The notes below summarize the discussion. Additional information and notes can be viewed on the [Google Jam Board for Natural Hazards](#):

Hazard Grouping	Notes	Include
Atmospheric	<ul style="list-style-type: none"> ➤ Include extreme heat/cold, fog, freezing rain, Hail, high wind, snowstorms. Lightning. ➤ Example hail event around Saik'us that caused \$35,000 worth of damage to one property. ➤ Logging truck have earlier shift than in history – ex. November we would have freeze up but that is not the case in 2021. ➤ Warmer temperatures are resulting in more fog from Fraser Lake, causing driving concerns. ➤ Seeing changes on the landscape due to climate change. <p>Comments and Questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Are there trend or records of the date freeze up historically happened in industry? ➤ Logger have said more logging, more wind. Are there facts to back this up? ➤ Can infrastructure withstand atmospheric events? 	Yes
Flooding	<ul style="list-style-type: none"> ➤ Flooding in the Downtown core of Fraser Lake 52mm in a short window of time caused flooding and storm water drains to back up. ➤ Ice jams down the Nechako River and telegraph road in 2020 winter, Horn Road Subdivision. ➤ During flooding contaminations from fertilizers, septic system, and livestock. ➤ Flooding -> pests -> disease <p>Comments and Questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Identify organizations that are responsible for mitigation activities. ➤ What are the potential contaminants: septic systems, mine tailings ponds? ➤ Land stewardship has started to step up in fencing and education, ➤ Look up farmland water stewardship initiatives. ➤ Large systems – Alcan controls materials and resources that have cascading effects on the natural waterways and flood impacts. 	yes

Fire	<ul style="list-style-type: none"> ➤ Nadleh Whut'en has 500 hectares of land threatening the community. 16 hectares of land per year has been receiving fuel mitigation treatment. ➤ Wildfire is the #1 hazard for the Glennan community, with only one road for access. ➤ Fort Fraser Fire Department in the spring identifies properties that need fire smart activities implemented. ➤ The Regional District runs an active Fire Smart program and has been involved in several community mitigation projects. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Recognition that joints evacuations, communication and information sharing across local government and first nations is very important. ➤ Need to identify additional rural areas that need fuel mitigation in the region. ➤ Public education is a key element in fire protection. 	Yes
Geological	<ul style="list-style-type: none"> ➤ Logging and wildfire contribute to minor landslide events in the region. ➤ Landslides need to be included. 	Yes
Seismic	<ul style="list-style-type: none"> ➤ Local stories of a large earthquake in 1984, where locals remember the tremors felt and the water in the toilets shaking. This earthquake may have been linked to a large earthquake in Alaska. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ What is the impact of an earthquake on the Kenny Dam? Need additional information on the effects. 	yes
Ash Fall	<ul style="list-style-type: none"> ➤ Ashfall can come from anywhere depending on the predominant winds. ➤ This area might be affected by volcanos in the North – Mount Edziza. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ What are the predominant winds? 	Yes

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
Hazardous Material and Explosions	<ul style="list-style-type: none"> ➤ Mine incidents occurs it very specific to Endako tailings and effects. ➤ Hazardous materials spills on the highway are a risk since the highway meanders by many waterways. ➤ Unknown substances and quantities traveling through highways. For examples cyanide pellets to the mines up north. ➤ With increase in industrial activity and the Port in Prince Rupert there are more hazardous materials traveling by train and Motor Vehicle. ➤ Fraser Lake Fire department responded to an MVI over the <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Need for more information on what is being transported on the highway and train before it is happening. ➤ Contact the Fire Commissionaire to better understand if there is record of MVI fire responses in our region. 	Yes
Infrastructure Failure – dam and dike failure	<p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Need to research orphan dikes - https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/integrated-flood-hazard-mgmt/kwl_riskassess_orphandikes-summaryreport-20201209.pdf there appear to be no known orphan dikes in the RDBN. 	Yes dam no to dikes
Interruptions to Critical Services	<ul style="list-style-type: none"> ➤ Include electrical outage, food source interruptions, telecommunications interruptions, transportation route interruptions, wastewater and water interruptions, fuel source interruptions. ➤ Impacts of food supply and fuel supply interruptions when evens happen in the lower mainland. ➤ Historically a lightening strike in saskatoon shut down all the co-op gas station card locks across the entire north. <p>Comments and questions for consideration and further research:</p>	Yes

	<ul style="list-style-type: none"> ➤ When the flood in Abbotsford happened in Nov 2021, the cell towers went out in the north, why? ➤ What impacts does an event in the south have on our infrastructure? How connected are we to the south? ➤ Where does our food and fuel come from? 	
Transportation	<ul style="list-style-type: none"> ➤ Aircraft, motor vehicle, rail and marine incidents to be included. ➤ Early spring of 2021 a personal aircraft went down into Fraser Lake, re-occurring incident injuring people and spilling fuel into the lake. RCMP advises transportation safety board and this agency contacts other agencies for rescue and remediation. ➤ Prevailing winds should be considered during any emergency response event, particularly with hazardous materials in vehicles and trains. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Can we find out the legislation on how many train cars one train can carry at one time? 	Yes

Disease / Human Caused Hazards

Disease and Epidemic



Animal Disease



Human Disease



Plant Disease and
Pest Infestation



Public Health
Crisis

Infrastrucutre



Structure
Failure



Structural Fire

Security



Cyber Security Threat



Public
Order

The group discussion did not include the hazards seen above or on the [Google Jam Board #3](#) as participants ran out of time to discuss these hazards. Many of the hazards are know concern within the area and have been included in the updated Hazard ID Background paper distributed to committee member.

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 consider the mostly likely hazards and consider historic experience data when scoring the frequency, severity, and consequence of each specific hazard.



Hazard Selection EA D

HRVA Hazard List

Community: Fraser Lake/Fort Fraser/ Nadleh

Date: 29-November-2021

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 (Tectonic 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 "✓".

Unique Hazards

Committee members discussed unique hazards that are not covered by the list above, these included:

- Low lake levels
- Drinking water disturbance
- Pollution
- Oil and Gas truck spills on highway – Concern about unknown hazardous materials and quantities travelling down the highways through communities.

2:50 PM - 3:00 PM Wrap up and next steps

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

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 the new year on 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.