



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

Summary - Hazard Identification Workshop

Date: November 30th, 2021

Time: 6 pm – 9 pm

Format: Zoom

Overview

On Monday, November 30th, 2021, participants from the HRVA Committee for Electoral Area 'G' 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:

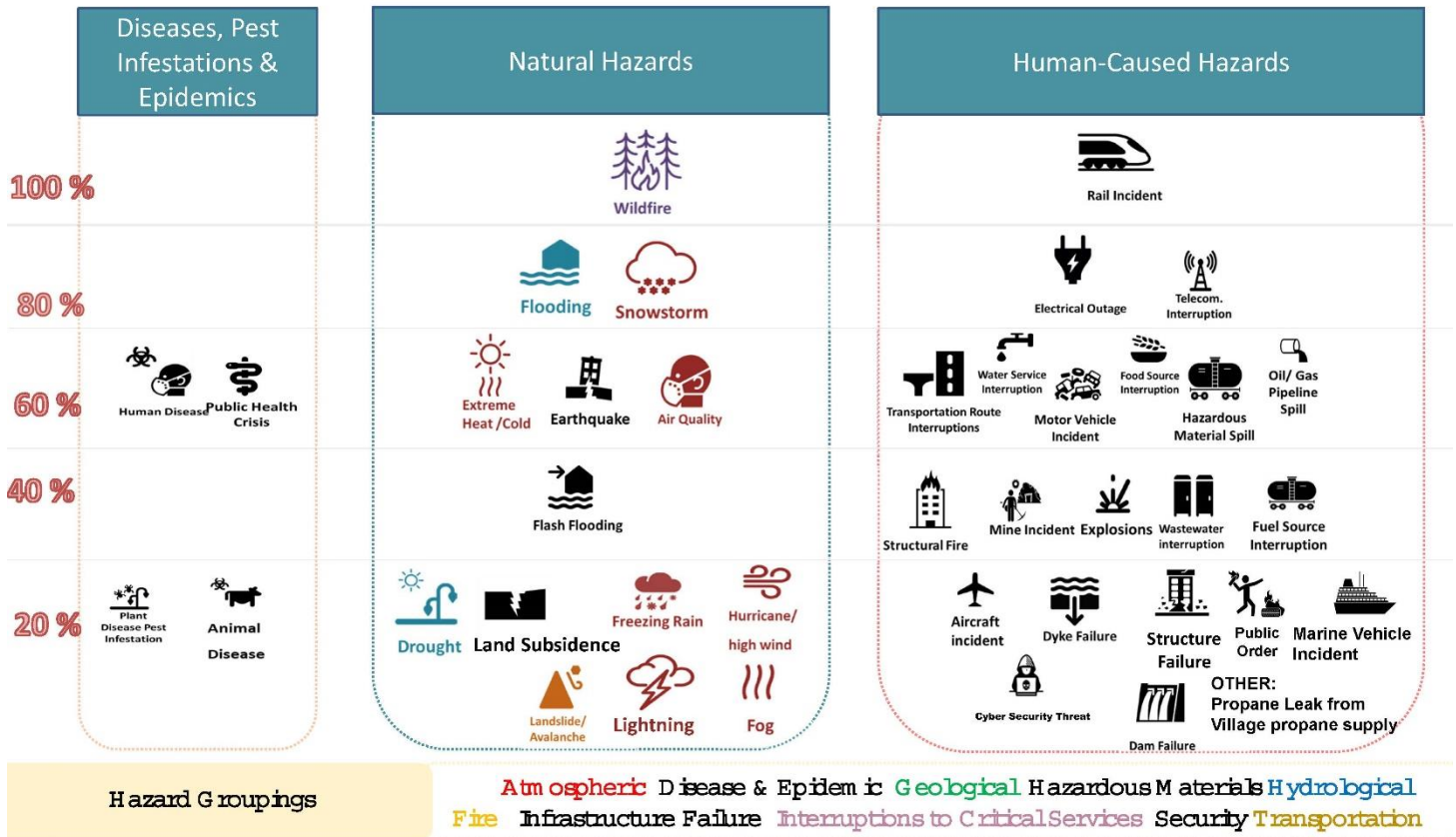
- select hazard for the electoral area "G" HRVA project focus;
- review and discuss known and historical hazards in electoral area "G";
- discuss, define, and identify on a map any unique local hazards in electoral area "G";
- identify additional hazard information needs/ sources.

Participants

Name	Organization
Christopher Newell	RDBN
Jim Daigneault	District of Houston Fire Chief
Tim Anderson	District of Houston, Councillor
Jerry Madden	Community Director Fort Babine – EOC Committee Lake Babine Nation
Laura Blackwell	Operations Manager EOC Contact Fort Babine
Sandy Anaka	Pleasant valley Cattlemen's Association
Byron Sketchly	Topley Fire Chief -
Clare Sketchly	Topley Fire Department Volunteer and Ambulance Attendant
Mark Smail	RCMP, Staff Sargent Houston
Andy Muma	SAR, President
Wendy Curtis	Granisle Better At Home, Program Coordinator
Alana Dickson	BC Ambulance Granisle Unit chief
Vince Ross	Long Time Resident
Dwayne Anderson	SD54
Cindy Cackle	Houston Health Centre Health Director
Christopher Walker	RDBN Staff
Deborah Jones-Middleton	RDBN Staff
Liliana Dragowska	RDBN Staff

6:00 PM - 6:30 PM Welcome, Introductions, Goals and Outcomes

The session began with a welcome from Director Newell 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, overview of the hazard identification background paper, and review the results of the hazard identification survey for Electoral area 'G'. The results of the survey the HRVA committee members completed before the workshop were as follows:



6:30 PM – 8:45 PM - World Café Breakout Groups

Participants were broken out into groups under each of the three sub-topic areas. 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 G 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 three 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 'G'. 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](#).

Natural Hazards

Hydrological



Flooding



Flash Flooding



Drought

Atmospheric



Snowstorm



Freezing Rain



Lightning



Air Quality



Hurricane/
high wind



Extreme
Heat /Cold



Fog

Fire



Wildfire

Geological



Landslide/
Avalanche



Land Subsidence



Earthquake

Round 1	Round 2	Round 3
Claire Jerry Jim Vince	Chris N Dwayne Mark Sandy	Andy Wendy Byron

Breakout Room #1

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

Hazard Grouping	Notes	Include
Atmospheric	<ul style="list-style-type: none"> ➤ Include extreme heat/cold, freezing rain, Hail, high wind, snowstorms. Lightning. ➤ Maybe not fog. ➤ Air quality can be a seasonal issue due to open burning in rural areas, in Spring Houston has a lot of issues with road dust. ➤ Road Access issues after a snowstorm especially in rural areas. <p>Comments and Questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Is an increase in freezing rain something we can expect more of moving forward? ➤ What are the mitigation strategies for air quality issues? 	Yes
Flooding	<ul style="list-style-type: none"> ➤ Flood season has now extended into the Fall and Winter months. ➤ Residents remember both the Bulkley and Buck Creek being reduced to a trickle in past drought years. <p>Comments and Questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ How are salmon bearing rivers affected by fall flooding? ➤ How is the flooding between Topley and Houston affecting the railway? ➤ What are the capabilities and resources of response to flooding? I.E. SAR, RCMP, Fire? 	yes
Fire	<ul style="list-style-type: none"> ➤ Forests tend to be dry, there is still lots of dead bug wood that is fuel for fires. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ How do we mitigate fire? ➤ Ranchers need to build stronger relationships with BCWS and MOA to enable faster movement of livestock. 	Yes

Geological	<ul style="list-style-type: none"> ➤ Landslides need to be included. ➤ Forestry roads are more prone to landslide events, and along the Bulkley River ➤ No knowledge of land subsidence. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Will we see an increase in landslides along Buck Creek, and between the Bulkley and North Road? 	Yes
Seismic	<ul style="list-style-type: none"> ➤ Lake Babine Nation closer and more at risk for earthquakes ➤ Low risk earthquakes. <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

Human-Caused Hazards

Transportation



Rail Incident



Motor Vehicle Incident



Aircraft Incident

Interruptions to Critical Services



Electrical Outage



Food Source Interruption



Telecommunications Interruptions
Electrical Outage



Transportation Route Interruptions



Wastewater Interruptions



Water Interruptions



Fuel Source Interruptions

Hazardous Materials and Explosions



Explosions



Oil Gas Pipeline Spill



Mine Incident



Hazardous Material Spills

Round 1	Round 2	Round 3
Andy Wendy Dwayne	Byron Claire Jim Vince	Chris N Mark Sandy Jerry

Breakout Room #2

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"> ➤ Concern about unknown hazards being transported on the highways. ➤ Concern about propane tank near Granisle office. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Is there a time when the equity tailings will be no longer a concern? ➤ What are the compounds in the tailings ponds found on the two closed mines at Babine lake? 	Yes
Infrastructure Failure – dam and dike failure	<ul style="list-style-type: none"> ➤ Equity Tailing ponds unlikely failure but if they did Buck Creek is of concern. In the Spring Equity uses lots of lime in the tailings ponds and silos. <p>Comments and questions for consideration and further research:</p>	Yes

	<ul style="list-style-type: none"> ➤ Is there a time when the equity tailings will be no longer a concern? ➤ What are the compounds in the tailings ponds found on the two closed mines at Babine lake? 	
<p>Interruptions to Critical Services</p>	<ul style="list-style-type: none"> ➤ Vulnerable students in schools who rely on the School District food program, groceries are expensive, and access is limited in Houston. ➤ Food programs for vulnerable families do not cover weekends in Houston. ➤ Water systems in the Buck Flats area are connected to the creeks combined with Equity mines. ➤ If we do not have fuel, we cannot run emergency equipment. ➤ Fort Babine transporting drinking water. There is no water treatment plant in place. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ What can be done about the food panic when disasters hit and the supply chain is affected? 	<p>Yes</p>
<p>Transportation</p>	<ul style="list-style-type: none"> ➤ Houston is on the flight path of planes coming from the south and towards Smithers ➤ Topley 6-mile hill is a challenge for transportation Trucks. ➤ Concern about MVI with hazardous materials and casualties closing the Highway. ➤ Incidents of vehicles driving off logging roads. ➤ Creosote rail ties stacked in Topley are a fire hazard. ➤ Reported railroad concerns, and a year later this was not fixed. ➤ Concern that local first responders do not have the resources to deal with large or significant hazardous materials spills. ➤ Concerns about livestock on rail lines, with local experience being that ranchers are not permitted to fix rail line fencing and CN will not fix it upon request. ➤ District of Houston has been working on rail crossing safety improvements. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Concern regarding the unknown hazardous materials traveling through towns on the highways. ➤ Need or interest in a community safety plan which it comes to hazardous material spill on the rail in the District of Houston and surrounding area. 	<p>Yes</p>

Disease / Human Caused Hazards

Disease and Epidemic



Infrastrucutre



Security



Round 1	Round 2	Round 3
Byron Chris N Mark Sandy	Andy Wendy Jerry	Dwayne Claire Jim Vince

Breakout Room #3

The notes below summarize the discussion in each group. Additional information and notes can be viewed on the [Google Jam Board #3:](#)

Hazard Grouping	Notes	Include
Disease and Epidemics	<ul style="list-style-type: none"> ➤ Yes, include animal, human and plant disease, pest infestation and public health to some degree they are a high consequence but currently a low to moderate likelihood ➤ Invasive species up and down rail lines and highways taking over farm fields – knapp weed, hock weeds. This results in spraying along Creeks and rivers causing harm to the environment. ➤ Limited access to health care in rural areas and in Fort Babine, although great vaccine delivery. ➤ Challenge of services reaching people when individuals where in isolation and had a fear of travel because of COVID. ➤ Granisle created a community grocery shop initiative during COVID as a response to support individuals who were at higher risk during COVID. ➤ Drugs are infiltrating the communities, opioids are increasing, local health care and mental health crisis. ➤ In Fort Babine in November 2021 someone lost their life to opioids. ➤ BC Government has requested Canadian Government to decriminalize drugs and small amounts – up to 4 oz- as a prevention and harm reduction response. Houston RCMP are following this advocacy in hopes of some relief in the community. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Need to find out more about the invasive plant Council of BC and what involvement there is locally from the cattlemen’s or other participants in the area. ➤ How do we increase resources in hospitals and health clinics for a major crisis when we are currently understaffed? 	Yes
Infrastructure – Structural fires,	<ul style="list-style-type: none"> ➤ Structural fire is the highest priority in Topley area. 	Yes

<p>Dike Failures, Dams</p>	<ul style="list-style-type: none"> ➤ Need for more education around residential fires, chimney fires and structural fires. ➤ Granisle there are not enough fire fighters to respond to residential homes. There were two structural fires in the recent history, one resulted in a fatality because the response capacity is challenged. ➤ Concern if Houston mill had a fire this would affect the town, questions on how to prevent this. ➤ There is a fire hall and fire truck in Fort Babine but no one is trained to drive or operate the fire truck. ➤ Dike failure in Houston a concern. ➤ Dam at irrigation lake could be a risk. ➤ In 2018 several roofs in Granisle caved in because of the snow load, one being the Granisle hotel. <p>Comments and questions for consideration and further research:</p> <ul style="list-style-type: none"> ➤ Need to build capacity in Fort Babine and Granisle for structural fire response. ➤ Interested in knowing more about the Equity tailings pond risk to the Buck Creek residents. Could be catastrophic to drinking water for buck creek, but also to Houston and fish habitat. ➤ Given recent events in Chilliwack residents want to know what shape the Houston dike is in and if it needs to be fixed now instead of later? ➤ Water is the water quality and environmental risk to Lake Babine if the historic mines tailing ponds were to breach or leach? 	
<p>Security and Cyber</p>	<ul style="list-style-type: none"> ➤ Irritation and concerns with the older populations in rural areas. ➤ Newspaper receives a lot of calls for assistance from the older population. ➤ Public order is a concern during periods of unrest. Takes away from policing resources and creates capacity challenges for enforcement. ➤ Protests against vaccines are more of a nuisance that disruptive, building unrest and resentment in the community. ➤ Protests in the Morice affecting loggers and forestry worked and local RCMP. Most recently a Houston RCMP officer was run off the road by an aggressive protestor. 	<p>Yes</p>

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.

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 “↗”.

8:45 PM – 9:00 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 ion 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.

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