

HRVA

Prioritizing Risk & Resiliency Strategies

September 14, 2022 5:00pm

Microsoft Teams

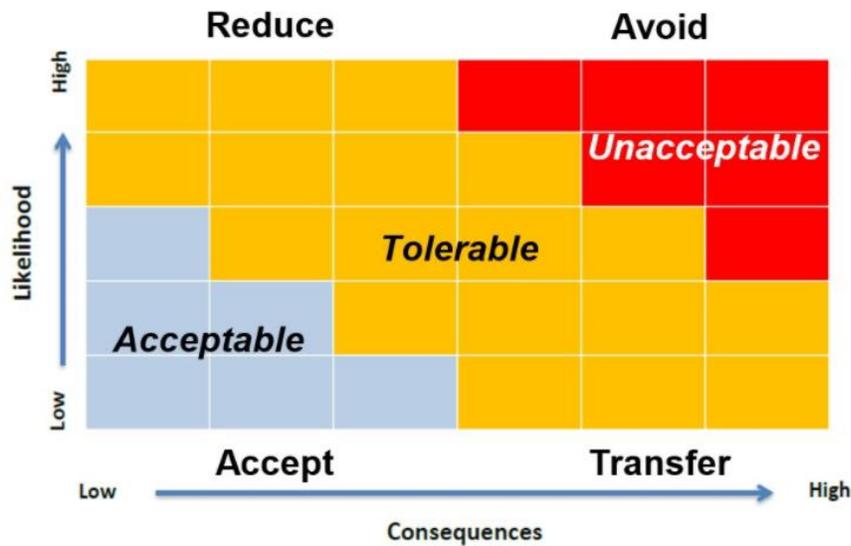
In Attendance

- Michael Riis-Christianson
- Rob Krause
- John Rempel
- Doug Bysouth
- Cori Funk
- Heather Nooski

Regrets

- Rick Dobbs
- Rhea Brown
- Laura Blackwell
- Shaunna Lewis
- Ryan Blood
- Claire Sketchly
- Lauren Bell
- Rick Pooley
- Vicky Rensby
- Lisa Cant
- Kim Campbell
- Kristy Bjarnson
- Richard Vossen

Introduction Summary Hazard Matrix



- This is the common Hazard Risk Matrix.
- The hazard list referenced within this report is based on the 36 of the 57 Hazards. The Hazard Risk Matrix, as shown here, is a useful tool for a local authority during the process of determining the level of risk and the potential consequences to help determine options to reduce, avoid, accept, or transfer responsibility of the four pillars of emergency management (Mitigate, Prepare, Respond, Recover).
- Methodology – How is the matrix created and what does it tell us:
 - For the Likelihood Scoring – we used the Median Score.
 - For the Consequence (impact expressed in numbers) Scoring we used the mean, which is the average score.

Hazard Scoring

- This table summarizes the likelihood scoring and consequence scoring. The different colours represent where they fall on the Hazard Risk Matrix for Acceptable, Tolerable and Unacceptable.

Priority	Hazard List	Current Likelihood	Consequence Total	Future Likelihood
1	 Wildfire	E - Almost Certain	34	E - Almost Certain
2	 Rail Incidents	C - Probable	27	D - Likely
3	 Human Disease	D - Likely	23	E - Almost Certain
4	 Hazardous Material Spill	D - Likely	22	D - Likely
5	 Oil or Gas Pipeline Spill	B - Unlikely	22	C - Probable
6	 Explosions	B - Unlikely	22	B - Unlikely
7	 Lake, River, and Stream Flooding	C - Probable	21	C - Probable
8	 Public Health Crisis	C - Probable	21	D - Likely
9	 Landslide/ Debris Flow	B - Unlikely	19	B - Unlikely
10	 Water Service Interruption	B - Unlikely	19	B - Unlikely
11	 Food Source Interruption	B - Unlikely	18	C - Probable
12	 Electrical Outage	D - Likely	17	D - Likely

Priority	Hazard List	Current Likelihood	Consequence Total	Future Likelihood
13	 Earthquake	A - Rare	17	A - Rare
14	 Dam and Spillways Failure	A - Rare	17	B - Unlikely
15	 Extreme Heat	D - Likely	16	D - Likely
16	 Structural Fire	D - Likely	16	D - Likely
17	 Transportation Route Interruption	C - Probable	16	C - Probable
18	 Flash Flooding	B - Unlikely	16	B - Unlikely
19	 Telecommunication Interruption	D - Likely	16	D - Likely
20	 Wastewater Interruption	C - Probable	16	C - Probable
21	 Motor Vehicle Incident Explosion	C - Probable	16	C - Probable
22	 Snowstorms and Blizzards	D - Likely	15	D - Likely
23	 Structural Failure	B - Unlikely	15	B - Unlikely
24	 Fuel Source Interruption	B - Unlikely	15	C - Probable
25	 Cyber Security Threat	D - Likely	15	D - Likely
26	 Extreme Cold	D - Likely	14	D - Likely
27	 Drought	C - Probable	14	D - Likely
28	 Hurricane/Typhoon/High Wind	D - Likely	14	D - Likely
29	 Freezing Rain or Drizzle	D - Likely	14	D - Likely
30	 Plant Disease and Pest Infestation	C - Probable	12	D - Likely
31	 Lightning	E - Almost Certain	12	E - Almost Certain
32	 Animal Disease	C - Probable	11	C - Probable
33	 Air Quality	D - Likely	11	D - Likely
34	 Aircraft Incident	B - Unlikely	11	B - Unlikely
35	 Space Weather	B - Unlikely	6	B - Unlikely
36	 Avalanche	A - Rare	6	A - Rare

Comments:

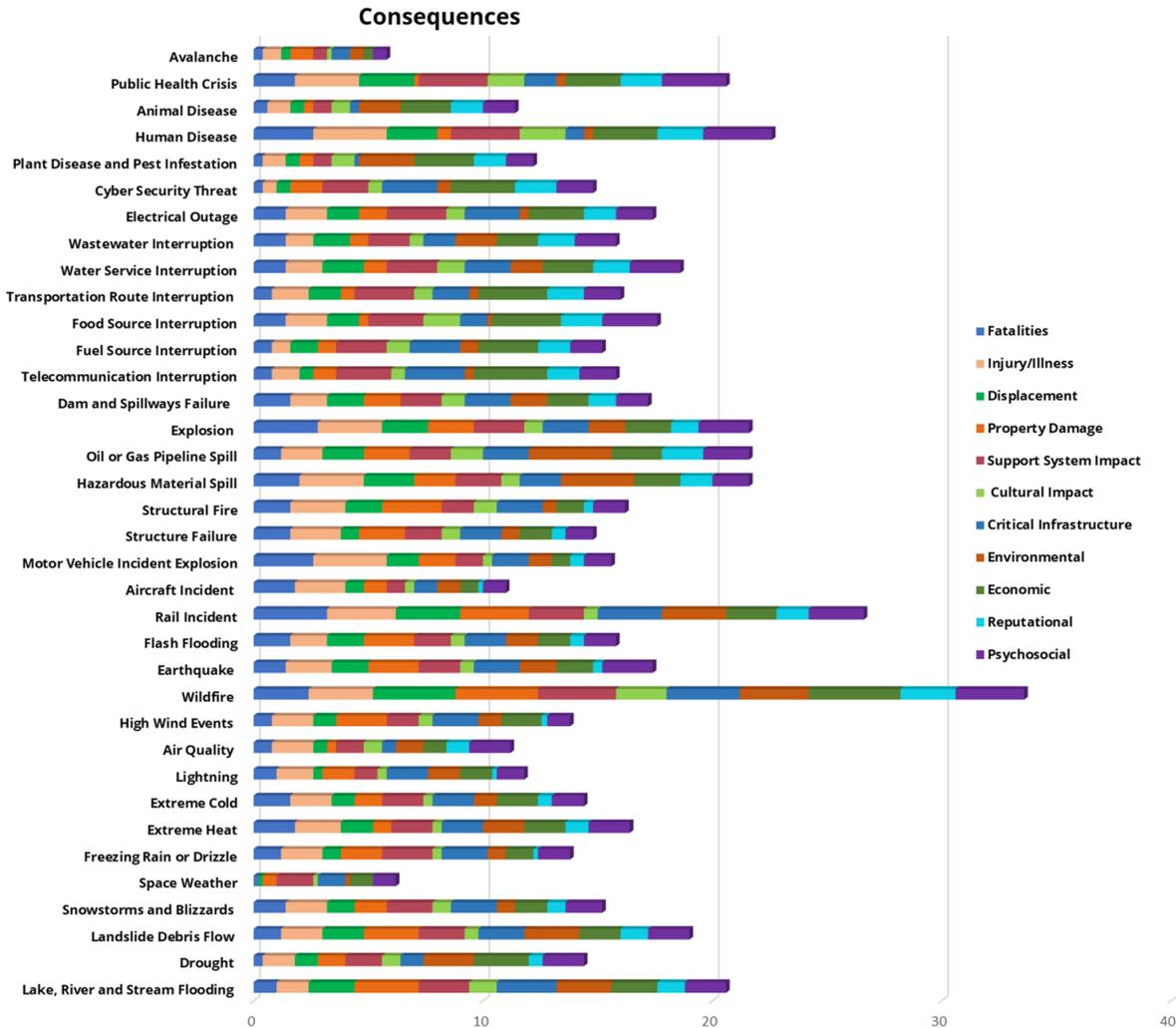
➤ Rail incident:

- One participant shared that it was surprising to see that rail incidents as Likely, with the increase of rail traffic the consequences could be significantly higher.
- It is a concern that the consequence number is high.
- It is hard to gauge the consequence as the consequence could be a large or a small event depending on where the event happens.
- We tend to think of the worst-case scenarios.

Consequence Scoring Summary

0- None	1 - Low	2 - Medium	3 - High	4 - Extreme
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- Here is a visual breakdown of the total scores into each of the sub-categories is reflected in the consequence stacking table.



Comments:

- This chart was a little confusing.
- Wildfire is the biggest risk to our community and potential for the worst consequences.
- Rail incidents and hazard material spill should be identical in the ranking.
- There are small clusters of residential areas along the railway that could be impacted if an incident happened.
- Depending on where the hazards happen it could be a high risk. If an incident happened within the community boundaries, this would be a high risk. If in rural areas where no one has property, there would not be as big of concern.

Hazard Matrix

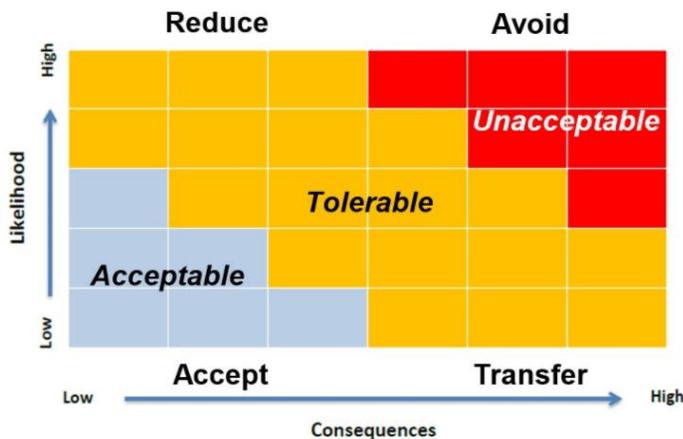
Here are the results shown in the Hazard Risk Matrix.



Comments:

- Great visual representation of the matrix.
- Appropriate positioning of the different hazards.

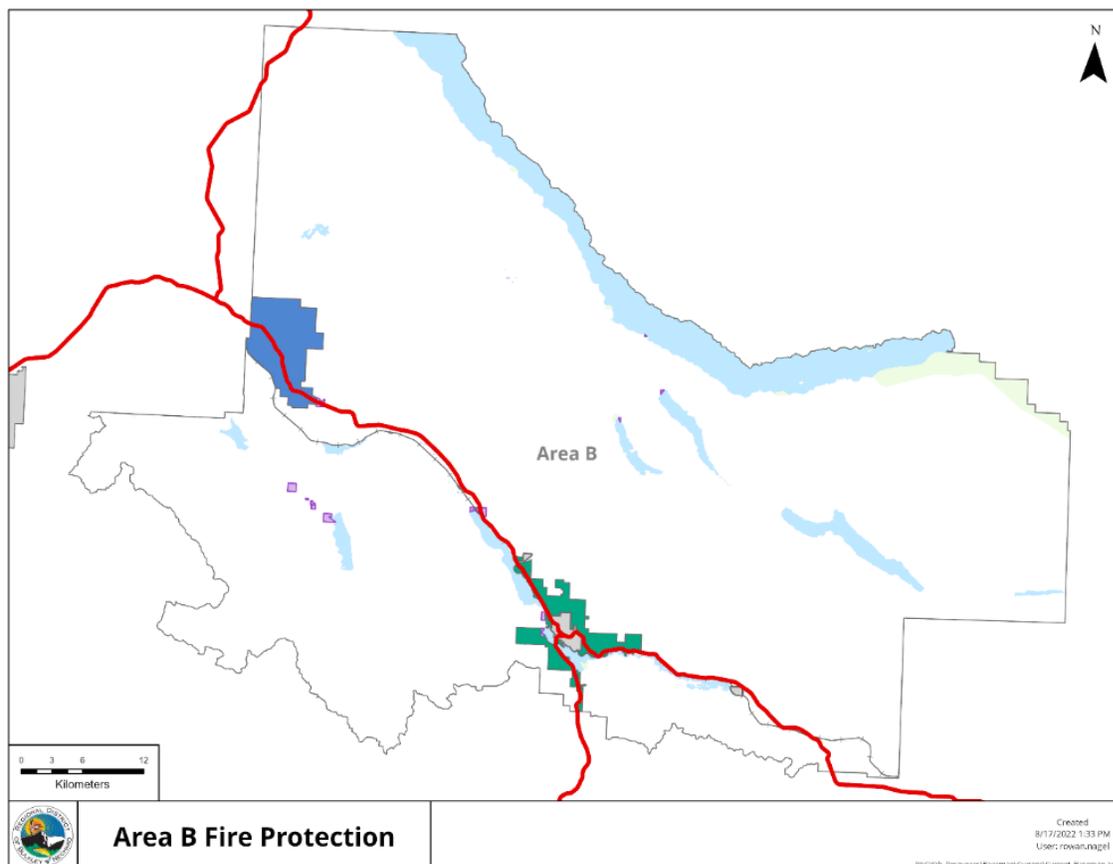
Resiliency Strategies

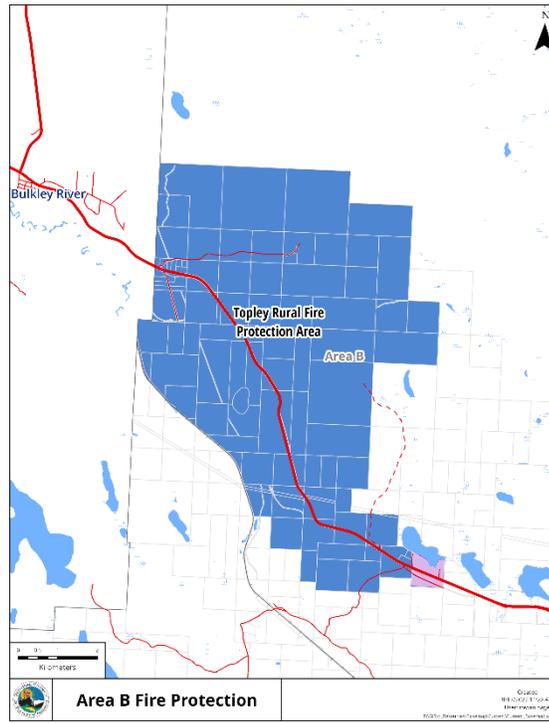
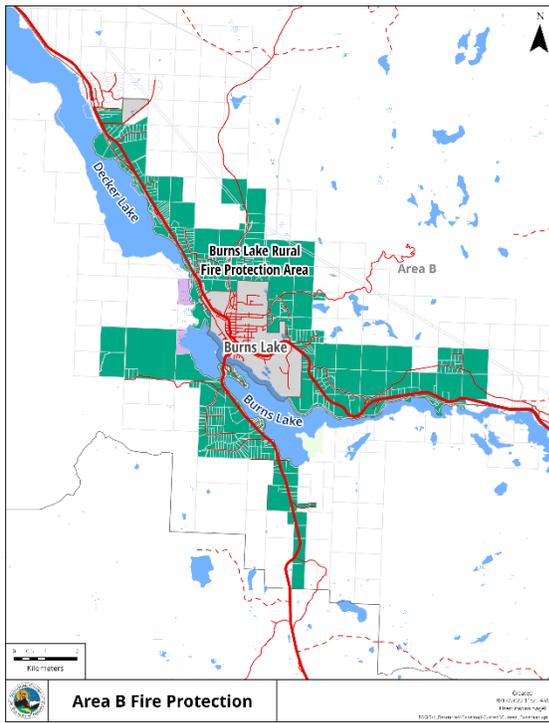


- Going back to the idea of how we use the Hazard Matrix when looking for Resiliency Strategies, the highest priority Risk Reduction Ideas would be for the Unacceptable and Tolerable hazards. Strategies can include ways to reduce the risk, avoid the risk or transfer the risk.

Identifying Risk Reduction Measures

- Emergency Response:
 - Strategies for increasing response capacity and coordination.
- Programs, Services and Education:
 - Strategies for enhancing public awareness and capabilities of response personnel.
- Social and Non-Structural Mitigation:
 - Plans, Bylaws, Regional Strategies for encouraging safer more sustainable communities.
- Environmental Mitigation:
 - Strategies for repairing or preventing further environmental damage.
- Economic Mitigation
 - Strategies for increasing regional economic resilience.
- Structural Mitigation:
 - Strategies for preventing damage to infrastructure and homes.
- The Topley and Burns Lake Rural Fire Protection Service Areas are an example of a strategy providing Fire Protection to a specified area of the Electoral Area.





Risk Reduction Measures Form

- When considering your suggestions please consider:
 - What is Practical?
 - What falls under the jurisdiction of the RDBN? What can the RDBN do?
 - What risks does the RDBN to transfer and advocate for?
 - What risks can external agencies reduce?
 - What risk can residents assist in reducing?
 - How do we reduce, transfer and avoid risks? Where are the opportunities.

Comments:

- Does COMFOR, Chinook Community Forest and Hampton Lumber have wildfire resources they can share with the RD.
 - COMFOR and Chinook Community Forest do have the availability of LiDAR mapping, fuel mapping, and terrain mapping.

Next Steps

- Return completed Risk Reduction Measure Form by **Friday September 30 by 4:30 pm.**
- The RDBN will be hosting a lunch or dinner in Burns Lake once the draft HRVA is completed and will present the document to the committee.