Comments on the Great Bear Gold Project from Sante Enviro Health – February 20, 2026

In the last few years in Canada, the increase of wildfires, specifically in these remote areas, in scope and length of the wildfire season and intensity of fires, time of the season, makes it a very high priority for emergency preparedness.

Access for firefighters, or any kind of emergency response team, requires adept planning, and should be an integral part of any mining operation.

Outreach to those most directly impacted and involved with emergency preparedness systems must be done in advance, akin to fire drills, to better prepare all involved, not just the first responders.

This planning takes place at all three levels of government, federal, provincial and municipal. Coordination is imperative to have a smooth and effective response for any given emergency.

For Kinross as well, any unimagined consequences of a flood or wildfire on their mining territory could be catastrophic. A flood or wildfire may be an event that is not that frequent but if it occurs its consequences would be catastrophic, particularly if not planned for appropriately. Therefore imagined scenarios would be the best approach in these changing climatic conditions.

To add to the requirements that must be provided by the proponent: Requesting descriptions and risk assessments that consider multiple scenarios is essential but providing the underlying methods of how their assessments were done, with ensuing results, and with explanation of how they arrived at their modelling results would be important. How and why the proponent chose their method should also be ascertained.

Sante Enviro Health (SEH) will be reviewing whether these components have been incorporated into their EIS.

Identifying the Potential Effects of the Environment on the Project

The process of identifying all of the potential hazards should be based on the physical components of the project itself intersecting with the natural components. The best example of this has been to use a geo-referenced database identifying all of the stream and river crossing points and vulnerable potential flooding zones in close proximity to the mine site and components on the mine site. This same methodology can be used for all of the most vulnerable ground and water zones.

This would prioritize the areas that require the most urgent attention resulting from climate change related events for one, as well as other potential malfunctions resulting from events other than climate change such as malfunctions and/or accidents.

Again, the same methodology using a geo-referenced database for wildfire risk should be utilized. There should be a comparison of historical and recent wildfire maps of Northern Ontario to identify forest zones that are in close proximity to the mine site that put that area at the highest risk.

In the event of an uncontrolled wildfire that approaches the mine site many of the by-products of the mining processes at the Great Bear Gold Project are at risk of burning and releasing toxics into the environment.

Mapping of all of these locations on the site in conjunction with mapping of the forest cover that could potentially burn depending on unpredictable wind patterns, despite these wind patterns being carefully monitored with respect to wildfires, is essential.

Add to this list of changing weather patterns due to climate change that can affect mining projects, an increase in Canadian tornados in Ontario. This is something to consider in light of the devastating effects that could result.

A quote from a recent article of June 6, 2024 states "*Canada's tornado alley is shifting east according to Western University's Northern Tornadoes Project (NTP) which has tracked and investigated how many tornadoes are hitting Canada to improve awareness and better predict severe weather. Since 2017, Western University's Northern Tornadoes Project (NTP) has tracked and investigated how many tornadoes are hitting Canada to improve awareness and better predict severe weather. Using statistics from 1980, Quebec ranks fourth in the country for tornadoes after Ontario, Saskatchewan and Alberta. But over the past decade, there seems to be more tornadoes happening in Ontario and Quebec and fewer in the Prairies, said NTP executive director Dr. David Sills*."

https://www.cbc.ca/news/canada/montreal/tornadoes-quebec-ontario-preparedness-1.7225633

Flood Risk in Canada

There are many tools and methods of analysis that must be used by the proponent to ensure a valid approach to flood risk assessment and mitigation.

There are new web-based solutions that offer the ability for assessing flood risk at specific locations, using previously conducted flood hazard mapping along with projected future climate conditions.

The Institute for Catastrophic Loss Reduction at Western University in the Department of Civil and Environmental Engineering at Western University in London, Ontario, is one of these web-based solutions.

This Institute provides some valuable insight into flood risk at both regional and local levels that should be considered for any mining projects.

Great Bear should be using one of these web-based approaches.

SEH supports and looks for the use of flood risk assessment tools include flood hazard maps with ever increasing spatial resolution ensuring localized accuracy for both present-day and future climate scenarios.

This approach should also include flood risk classification uses frequency of flooding events and the risk associated with return-periods, which range through extreme, high, moderate and low, to help determine risk for local or regional areas.

Most importantly, the proponent should be preparing and be ready to present future scenarios in their EIS to provide flood risk estimates for current conditions and different climate scenarios, allowing for awareness of how anticipation of flood risk may evolve with climate change, and to factor this into their planning, mitigation and adaptation efforts.

These types of analyses must be included in the Great Bear Gold Project and any project that could be affected by destructive forces such as flooding.

Digital elevation models (DEM), on platforms such as ESRI Canada's ArcGIS, (one example being Active Floods and Droughts in Canada), should be used to be able to predict areas where flood risk is already predicted to be high and could be higher in the future with the impacts of climate change.

Finally, as a result of all of these analyses, adaptation recommendations should be made as well as ERPs that should be informed and aligned with these recommendations.

These types of tools would empower the proponent Kinross to prepare for flood eventualities and support aid in the broader decision-making process needed to prepare and address these increasing risks.

SE H will be looking for these components in the Emergency Response Planning (ERP) of the EIS for the Great Bear Gold Project.

Baseline methodology

The importance of baseline methodology cannot be stressed enough. Most importantly, the choice of where baseline data should be collected is of highest importance. After a thorough analysis of data, the locations used as the baseline data show quite high concentrations to start.

If the baseline data is contaminated, as often is the case when exploratory drilling has been undertaken, it follows then that the modelling done for clarity on the impacts of climate events will not be as accurate as it could or should be. The predictive impacts will possibly be inaccurate. Therefore a true and more representative baseline must be found, further away from the proposed mine site.

The information in the attached PDF document 'Borehole Drilling Muds and Surface Water Contamination Risks at the Great Bear Gold Project', provides an insight into these issues and is provided to ascertain consideration of where the problems arise from the currently used baseline.

In conclusion,

SEH will be approaching all of these aspects from geo-referenced ArcGIS data, as well as Landsat satellite imagery for even more up to date predicted conditions.

The 'Effects of the Environment on the Project' intersect with all the other components, Risk management, Emergency management and Mitigation measures. They are all interconnected in one way or another. Consideration of this interconnectedness will instruct and inform the best decisions and follow through possible, to de-risk the Great Bear Gold Project.

The earlier on in the planning stage of this project these considerations are formulated, the higher will be the subsequent success in arriving at the most appropriate preparedness plans that can be devised.

References or Sources used for these comments

CanVec data was derived from the Canadian Federal Government's website, Geospatial Data Extraction tool

ArcGIS Pro - ESRI Canada

GeoHub Ontario - Geomatics - consists of products, services and tools involved in the collection, integration and management of geographic (geospatial) data.

Land Information Ontario (LIO) data was also cross-referenced with the CanVec data

Google Earth Landsat Copernicus satellite imaging

Flood Risk Canada

Link to flood hazard and flood risk in Canada

https://www.cbc.ca/news/canada/montreal/tornadoes-quebec-ontario-preparedness-1.7225633