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Presentation to the Mackenzie Valley Environmental Impact Review Board Regarding the NICO Project

**MVEIRB Final Hearings
Yellowknife & Behchoko NT**

**Environment Canada
August 2012**

Effluent Management

- Fortune Minerals redesigned the management of waste and wastewater.
- Environment Canada commends the Proponent on proactive planning with respect to mining waste management and the resultant mitigation of potential effects.
- Specifically, the commitment to use a reverse osmosis treatment system will improve effluent quality significantly.
- Improvements in effluent will minimize changes to water quality in the receiving environment



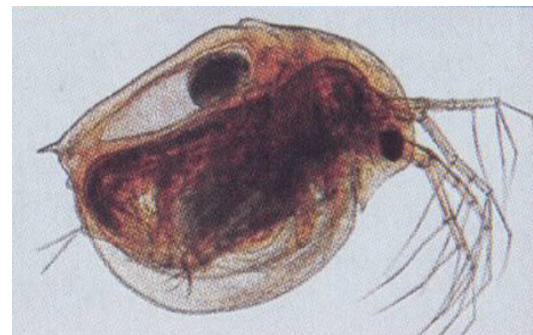
Proposed Site Specific Water Quality Objectives (SSWQOs)

- Fortune has followed a toxicology-based approach with the goal stated as follows:
 - “...to be protective of the most sensitive species, in the most sensitive life stage, over an indefinite period of exposure.”
 - *Fortune Mineral's Appendix B - Section 4.1.1 page 12*
- However, many SSWQOs that were derived by Fortune are above levels that may best serve the protection and uses of the downstream receiving waters.
 - Specifically aluminum, ammonia, nitrate, chloride and sulphate.



Proposed SSWQOs

- SSWQOs should be set to reflect the high level of treatment proposed.
- Predicted effluent quality would meet much more stringent objectives than are currently proposed.



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Receiving Environment SSWQOs

- ***Environment Canada's Recommendations***
 - EC recommends that the proposed SSWQOs not be used as a basis for assessing receiving water impacts nor for developing effluent quality criteria.
 - EC is of the opinion that deferring further discussion of the SSWQOs to the regulatory stage would not compromise the assessment of discharge-related potential impacts ***provided the proposed treatment system and mitigation commitments go forward.***

Fortune agreed with EC's recommendation – *Fortune's Technical Report Recommendations and Responses posted on the public registry*



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Wildlife Issues

- Boreal Woodland Caribou
- Disturbance / destruction of nests and eggs of migratory birds
- Communications Tower – Risk of bird collisions






Boreal Woodland Caribou

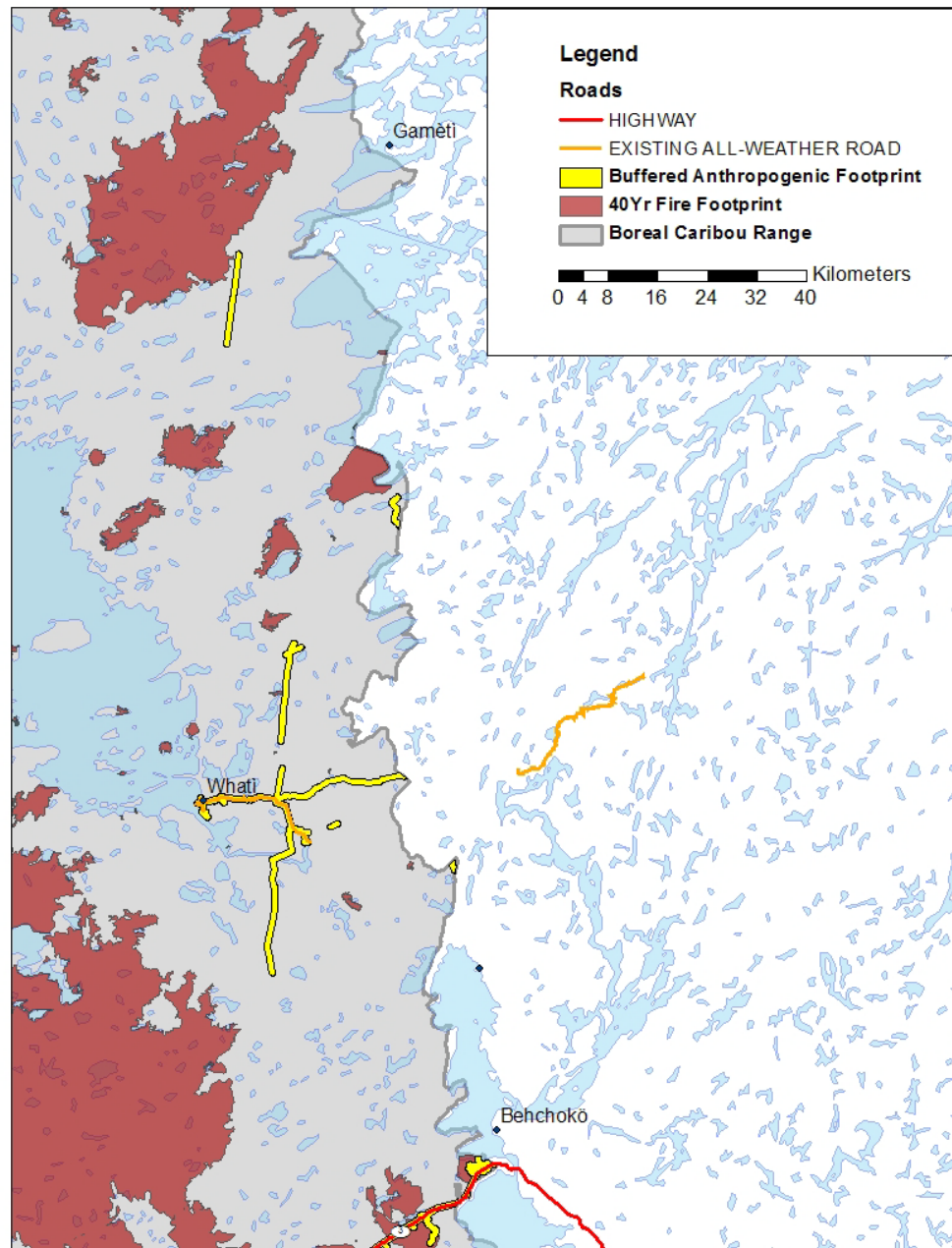


- Listed as Threatened on Schedule 1 of the federal *Species at Risk Act*
- A portion of the NICO Project Access Road falls within the NWT South boreal caribou range identified in the proposed Recovery Strategy for the Boreal Woodland Caribou
- The NICO mine site is outside of the NWT South range
- The NICO Project Access Road and the proposed Tlicho Road could add 26,469 ha of new disturbance to the NWT South range (includes a 500 m buffer on either side of roads)
- This represents a 0.11% increase in habitat disturbance in the range




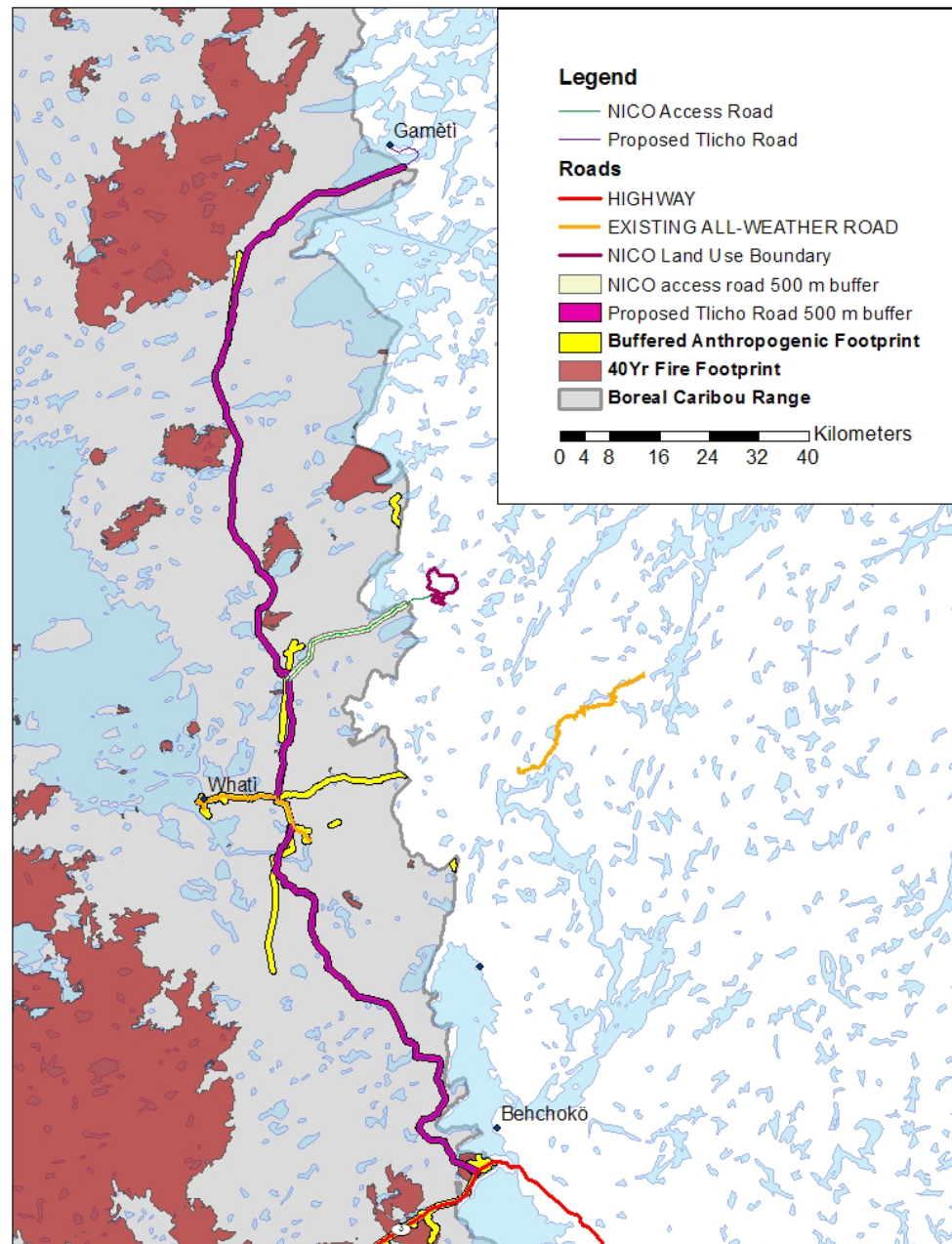
Existing habitat disturbance in the NWT South range

-  Anthropogenic disturbance including 500 m buffer
-  Fires <40 yrs old
-  NWT South boreal woodland caribou range



New disturbance – NICO access road and proposed Tlicho Road

-  NICO access road (10 m ROW + 500 m buffer)
-  Proposed Tlicho Road (25 m ROW + 500 m buffer)
-  Anthropogenic disturbance including 500 m buffer
-  Fires <40 yrs old
-  NWT South boreal woodland caribou range



Boreal Woodland Caribou



Environment Canada's recommendation

- 1) The Proponent consult with GNWT-ENR caribou experts and the Wek'eezhii Renewable Resources Board to determine how the project aligns with management strategies and action plans for boreal caribou and to identify and mitigate any potential negative effects on key biophysical attributes for boreal caribou within the project area, and



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Boreal Woodland Caribou



Environment Canada's recommendation

- 2) The Proponent consult with the Tlicho Government, GNWT-ENR and AANDC to determine the implications of the project for boreal caribou in the context of current and future development activities within the range, and to assess the cumulative impacts on undisturbed habitat.

Fortune agreed to the intent of EC's recommendation – *Fortune's Technical Report Recommendations and Responses posted on the public registry*



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Disturbance / destruction of nests and eggs of migratory birds

- The Proponent is aware that disturbance / destruction of nests and eggs is prohibited under Section 6(a) of the *Migratory Bird Regulations*
- Commitment to conduct most vegetation clearing outside the nesting season
- Construction of the co-disposal facility may take place during summer
- Gradual flooding within the co-disposal facility footprint after construction of the perimeter dyke
- Co-disposal facility will be gradually filled in throughout the year
- Risk of inadvertent disturbance or destruction of nests and eggs of migratory birds due to timing of activities



Disturbance / destruction of nests and eggs of migratory birds

Environment Canada's recommendation

- Avoid habitat disturbance and vegetation clearing during the migratory bird breeding season
- In cases where timing cannot be adjusted, survey for nests before vegetation or habitat destruction
- Active nests should be protected by a buffer zone
- Developer should design and implement a plan to avoid incidental take of migratory bird nests and eggs during construction and operation of the co-disposal facility

Fortune responded it anticipates all clearing will be performed in winter. If that is not the case, Fortune will work with EC to develop a monitoring and mitigation plan. – *Fortune's Technical Report Recommendations and Responses posted on the public registry*



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Communications Tower

- Planning to install a 46 m high communication tower supported by guy wires
- May pose a collision risk for birds

Environment Canada's recommendation

- Guy wires should be fitted with bird diverters
- Use flashing red, red strobe or white strobe lights if lighting is required

Fortune committed to lighting the tower as per the relevant legislation - *Technical Report Recommendations and Responses posted on the public registry*



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