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MVEIRB Public Hearing

Fortune Minerals Ltd.
Nico Mine Project

Fisheries and Oceans Canada



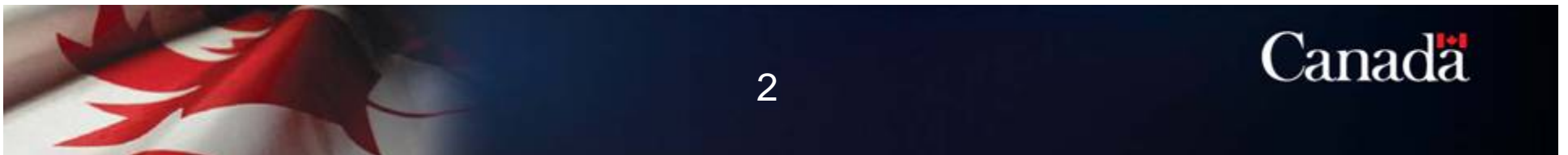
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Potential Physical Impacts to Fish Habitat

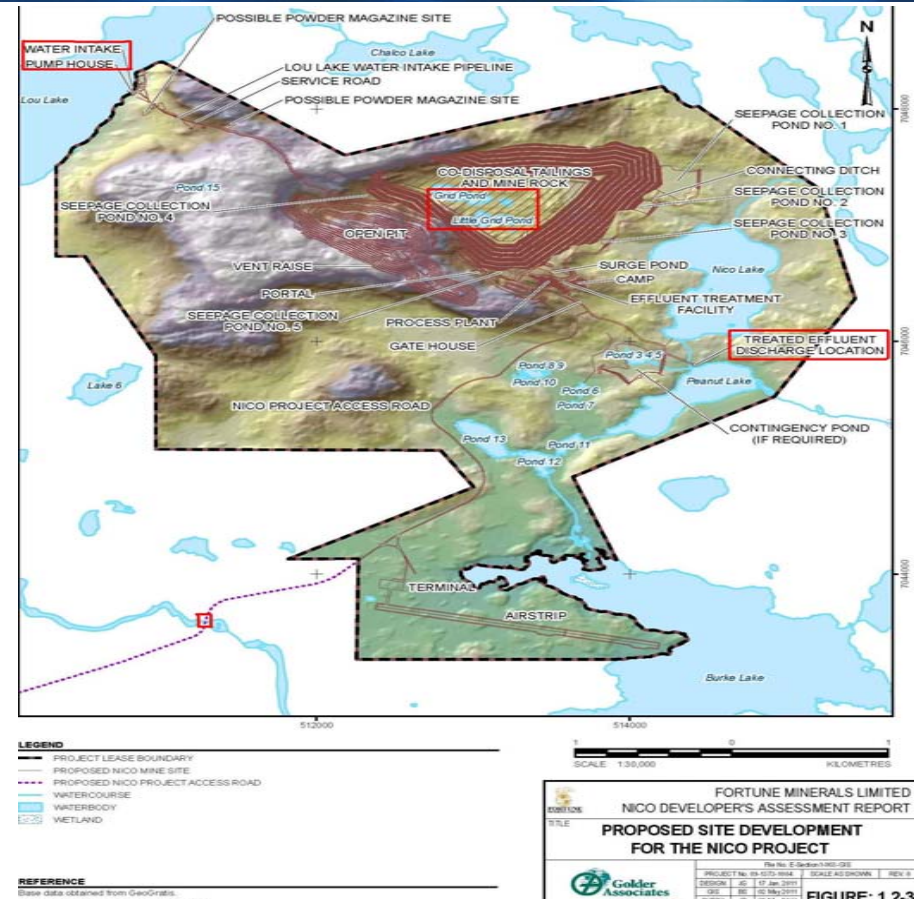
In-water works





DFO review

- Grid Ponds
- Water Withdrawal
- Fish Habitat Assessment – water intake and diffuser
- Water crossings – Marian Bridge

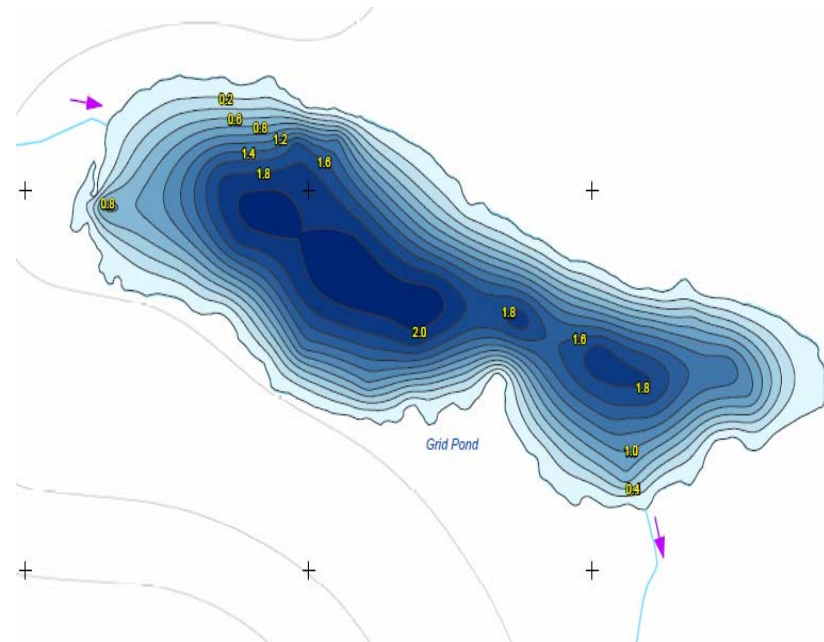




Grid Ponds

Issue

- Determine if Grid Pond and Little Grid Pond can support fish.





Grid Ponds

Review

- Fisheries Assessment – no fish were captured during the September 2003 and the August 2005 program
- Connectivity – lack of a distinct channel between Little Grid Pond and Nico Lake
- Bathymetry – maximum depth of Grid Pond is 2m while Little Grid Pond is 1.4m
- Winter under ice dissolved oxygen –Grid Pond ranged between 1.19-5.02mg/L and Little Grid Pond from 0.33-3.06mg/L



Grid Ponds

Conclusion

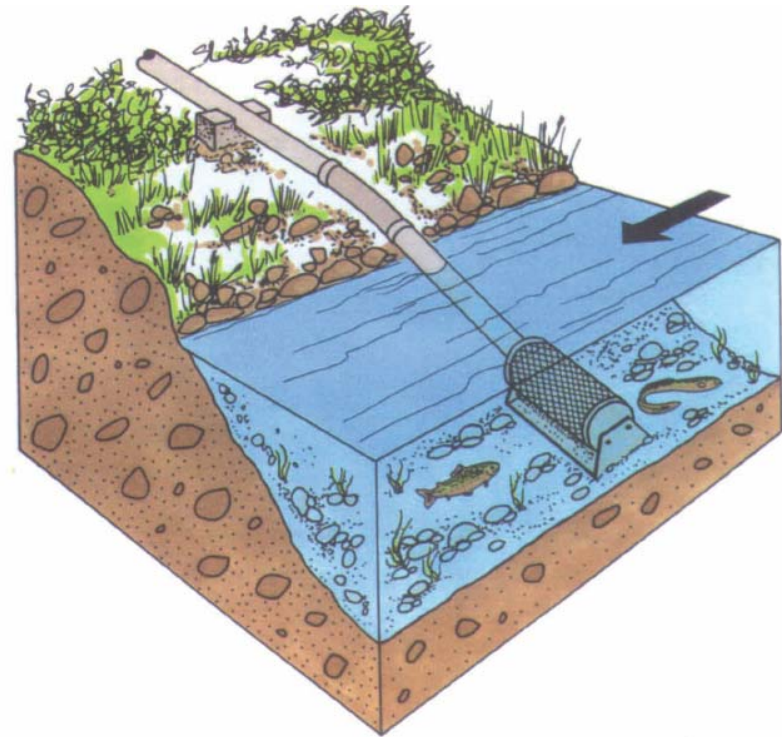
- Based on the information provided by Fortune on the fisheries assessments, connectivity, bathymetry and winter under ice dissolved oxygen, DFO is confident that the Grid Ponds are unlikely to support fish.
- DFO does not have any recommendations regarding the Grid Ponds



Water Withdrawal

Issue

- Excessive amounts of water withdrawn from ice-covered waterbodies can impact fish through oxygen depletion, loss of over-wintering habitat and/or reductions in littoral habitat.





Water Withdrawal

Review

- Lou Lake has fish and is the only water source for the project
- Fortune anticipates a maximum withdrawal of 179,000m³ during a 12-month period.
- Maximum depth is 32 m with an available under ice volume of 9.42Mm³



Water Withdrawal

Conclusion and Recommendation

- Due to the relatively minor amount of water required from Lou Lake, the likelihood of impacts to fish and fish habitat is negligible.
- DFO recommends that Fortune follow DFO's Protocol for Winter Water Withdrawal from Ice-covered waterbodies in the NWT and Freshwater Intake End-of-Pipe Fish Screen Guidelines.



Water Intake and Diffuser

Issue

- In-water works could impact fish and fish habitat.





Water Intake and Diffuser

Review

- Fortune provided a detailed fish habitat assessment for the locations of the water intake in Lou Lake and the diffuser in Peanut Lake.



Water Intake and Diffuser

Conclusion and Recommendation

- While there may be slight changes to habitat near the area of the diffuser and outfall, DFO has determined that the habitat alterations are not likely to be harmful.
- DFO recommends the development of a mitigation and monitoring plan for the construction, operation and decommissioning of the proposed water intake and diffuser.