

Facts about the Sisson Mine Project

Background

- The Sisson Mine Project, if developed, would be one of the world's largest open-pit tungsten and molybdenum mines and would be located in the heart of the Nashwaak watershed, on traditional Wabanaki territory, approximately 60 km northwest of Fredericton.
- The provincial government issued environmental impact assessment approval for the Project in December 2015, [subject to 40 conditions](#), and the Project received federal approval in June 2017.
- Now the Sisson Partnership, owned by Northcliff Resources Ltd. and Todd Minerals Ltd., is carrying out the regulatory stage of the project.

What's going on now

- [The Sisson Partnership is proposing](#) to use portions of Bird Brook and a tributary to West Branch Napadogan Brook, which are frequented by fish, to dispose of the mine waste (tailings and waste rock) that will be generated by the mining operations.
- These waterways provide habitat for species such as [Atlantic salmon, brook trout, slimy sculpin, and the American eel](#), and are currently protected by the *Fisheries Act*, which prohibits the release of deleterious substances into fish-bearing waters and the alteration or destruction of fish habitat.
- The Sisson Partnership is seeking amendments to the *Metal and Diamond Mining Effluent Regulations* (MDMER), enacted in 2002, to have the brooks listed in Schedule 2 of the MDMER, which would redefine these waterways as tailings impoundments areas and allow the Partnership to bury the brooks under mine waste.

Fish Habitat Compensation Plan

- When a waterway is listed in Schedule 2 of the MDMER, the company is required to develop [a plan to compensate for the loss of fish habitat](#).
- The Sisson Partnership is [proposing to remove two barriers to fish passage](#), one partial barrier at Lower Lake Dam and one at the mouth of Nashwaak Lake.
- The Sisson Partnership argues that the removal of these barriers would improve fish passage into the Nashwaak watershed and increase the amount of habitat

available for alewife, a species that was historically present in Nashwaak Lake before construction of the dams.

- In total, 5.44 hectares of fish habitat will be destroyed by the Project, with 1.74 hectares listed in Schedule 2. The Sisson Partnership estimates [removing these barriers would cost \\$954,000](#).
- The Conservation Council of New Brunswick, in its comments to Environment Canada, noted that the habitat proposed for compensation is not the same as the habitat that would be lost. The lost habitat would be from a cold-water, riverine systems that demonstrably supports COSEWIC listed species (Atlantic salmon, American eel), while the proposed offsetting habitat is a lacustrine system that may improve alewife productivity, a fish that is so plentiful in the lower Saint John River system that it is caught and used as bait.

Assessment of Alternatives

- A project seeking to use waterways as tailings impoundment areas must conduct an [assessment of alternatives for mine waste disposal](#) and at least one of these alternatives should not impact a natural waterway that is frequented by fish.
- [The Sisson Partnership has argued](#) that the Project area has a very high density of streams and because of the high volume mine waste that would need to be stored, none of the alternatives could be located to avoid the destruction of waters frequented by fish.

Details of the Sisson Mine

- If developed, the Sisson Mine would be in operation for an estimated 27 years and would [cover 1,253 ha](#).
- The Project would include a 370-metres-deep open pit mine.
- The ore grade (percentage of tungsten and molybdenum) at the proposed site is three to seven times lower than other tungsten mines in the world, so for each ton of ore extracted and processed, [the Sisson mine would produce less than 0.09% marketable metal, and over 99.91% waste in the form of waste rock and tailings](#).
- The Sisson Partnership estimates the tailings storage facility would be [up to 90 metres tall and 8 kilometres long](#)-- twice the height and 16-times the length of the Mactaquac dam.
- Over the life of the mine, [approximately 282 million metric tonnes of tailings and 287 metric tonnes of waste rock will be generated](#).

- After the eighth year in operation, there would be a generation of an [average of 6 million cubic metres per year of waste water requiring treatment](#).
- The Sisson Partnership has provided very little information on how the waste water will be treated. Processes have been referenced but [detailed information](#) on the methods, what contaminants they will need to remove and the efficacy of the methods to remove those contaminants has not been presented.

Lessons from Mount Polley

- On August 4th, 2014 the [Mount Polley tailings dam in British Columbia breached](#), pouring 24 million cubic metres of mine waste into local creeks, rivers, and lakes.
- A state of emergency was declared as drinking water was contaminated, major spawning grounds for sockeye salmon were lost, and a toxic kill zone was created that will remain forever.
- The company that operates the Mount Polley mine and tailings dam, Imperial Minerals, has never been fined by the British Columbia government, Environment Canada, or the Department of Fisheries and Oceans, even though they violated regulations on fish habitat and water quality.
- Following the Mount Polley disaster, an [independent expert panel of engineers recommended](#) that best available technology be required for new mines and that safety should be a priority over economic considerations.
- The proposed tailings storage facility design for Sisson mine [uses the same tailings dam design and water cover approach used at Mount Polley](#).

About CCNB

Established in 1969, the Conservation Council of New Brunswick is a non-profit organization that has remained the province's leading public advocate for environmental protection. A member of the UN's Global 500 Roll of Honour, we work to find practical solutions to help families and citizens, educators, governments and businesses protect the air we breathe, the water we drink, the precious marine ecosystem and the land, including the forest, that support us.