

Overview

As part of the development of the Côté Gold Project, several water features will be fully or partially overprinted. The removal or alteration of lakes, rivers and other smaller waterbodies will result in a loss of fish habitat and potential harm to fish within these areas. The avoidance and mitigation of loss of fish habitat and potential harm to the fishery is an important part of the design and engineering of the Project, but as noted above, the Project is anticipated to permanently alter or destroy some existing fish habitat. Therefore, a Fisheries Act Authorization (FAA) under Section 35 of the *Fisheries Act* is required. Some of the existing waterbodies (ponds and small streams) will be overprinted by mine waste storage facilities (Tailings Management Area and Mine Rock Area). In order to place these storage facilities in areas with fish, an approval under Section 36 of the Fisheries Act, called a Schedule 2 Amendment is required. To obtain a FAA and Schedule 2 Amendment, IAMGOLD has developed a habitat "offsetting plan". This plan is designed to counterbalance unavoidable serious harm to fish (and loss of fish habitat) and, where possible, improve the productivity of the existing fishery. The Offsetting Plan addresses habitat losses under both Section 35 (FAA) and Section 36 (Schedule 2) of the Fisheries Act in a single comprehensive plan. The proposed Offsetting Plan has been developed to comply with the policies of Fisheries and Oceans Canada (DFO) to ensure sustainable



The Côté Gold Project (the Project) is a proposed open pit gold mine that is located approximately 20 km southwest of Gogama and 130 km southwest of Timmins. The Project is a joint venture between IAMGOLD and Sumitomo Metal Mining Co.

productive capacity of the fish communities and habitats associated with the Project. This will be accomplished in several ways:

- 1. implementing a fish salvage and relocation program to reduce the number of fish harmed
- 2. scheduling offsetting activities to limit the length of time and spatial area of fish habitat being affected
- 3. developing new fish habitat in the same areas (watershed) as it is being lost (an "in-kind" approach to offsetting). Habitat that is destroyed or permanently altered will be replaced by similar or improved quality of the same type of habitat, with allowances for time for the new habitat to be fully functional. IAMGOLD proposes to create a New Lake and channel realignment plans
- 4. identifying additional out-of-kind offsetting to contribute to research to improve methods for environmental effect monitoring programs which monitor the aquatic environment and support the environmental management of mine effluents within Canada.



How is fish habitat loss calculated and compensated for?

The predicted loss of fish habitat associated with the Project was assessed relative to the planned habitat to be created (and altered) through the Offsetting Plan considering the net change in productive fish capacity. Habitat units were used as a substitute for fish productivity which is very difficult to effectively measure. Habitat units were considered for lakes and streams separately for five representative resident species (northern pike, yellow perch, walleye, lake whitefish, smallmouth bass) and considered their use of the habitat during their four key life history stages (i.e., spawning and incubation, juvenile rearing, adult foraging, and overwintering for all life stages). Fish habitat was also evaluated for those areas lost under Schedule 2 where only small-bodied forage fish (minnows) were present. The results of this assessment were totaled for each species for both habitat types before and after mine development.

Which areas will be lost?

The Open Pit and Mine Rock Area will partially or fully overprint:

- Côté Lake
- Mollie River
- two small portions of Clam Lake
- several small tributaries and ponds within the Mollie River watershed.

Construction of the Tailings Management Facility will result in the loss of several small unnamed waterbodies, West Beaver Pond, and their associated tributaries.

Figure 1 provides an overview of fish habitat loss.





How will these losses be compensated?

To compensate for these habitat losses:

- streams will be constructed to maintain flow out of Clam Lake and in the Mollie River system
- flow from Clam Lake will be directed south to Chester Lake
- a New Lake will be created over portions of the Mollie River and East Beaver Pond (downstream of Chester Lake). The outlet of the New Lake will flow north to the southwest corner of Upper Three Duck Lake around the Open Pit
- Unnamed Pond outlet will be relocated to flow to the New Lake (to maintain its connection to the watershed
- existing connections between Little Clam and East Clam to Clam Lake and will be improved to allow fish greater access to habitats
- Weeduck Lake will be connected to Upper Three Duck Lake because it is currently cut off and fish cannot move from Weeduck to other habitats in the watershed
- two aggregate pits will be developed into fish habitat to support small-bodied fish communities
- IAMGOLD has also committed to providing in-kind compensation to further eDNA sampling of Environmental Effects Monitoring. However, this makes up a very small part of the offsetting plan which is mostly focused on creating habitat in the local area.



Figure 2 shows the offsetting areas proposed in the Offsetting Plan.



What will happen to these offsets at Closure?

Following operations and pit filling (expected to take approximately 30 years) most of the watercourse realignments will be left as wetland habitat and the watersheds will be returned to their original configuration. The Open Pit will be developed into a lake and the polishing pond will be restored (the low grade ore stockpile and the polishing pond dam will be removed) to the arm of Upper Three Duck. The New Lake will remain, as requested by First Nations during consultation on the approved mine Closure Plan.

Summary and Benefits

The assessment suggests that the proposed Offsetting Plan will result in a net gain in fish habitat with, more offsets being provided through lake habitat compared to stream habitat. While the stream offsets are less, the offsetting stream habitat is expected to be of high quality combining a diversity of habitat (riffles, deep pools, runs) and with a variety of structures for both cover and spawning. It is expected that this habitat will be suitable for a variety of species and promote connections within the watershed and access to a variety of habitats (both stream and lake). In addition, restoring East Clam Lake and Weeduck Lake to their original configuration by removing access roads that are no longer required, the fish populations within these lakes will have access to a variety of habitat and better overwintering conditions in larger lakes (e.g., Clam Lake and Upper Three Duck Lake).

The Offsetting Plan meets the goals of providing new habitat that maintains the flow connections of the watersheds, includes natural channel design to maximize the habitat productivity, and promotes connections within the watershed and between habitats. The Plan has committed to a number of mitigation measures including:

- consideration of fish habitat in construction sequencing
- fish salvages/relocations, construction best management practices
- methods to reduce the time required for the habitat to be fully functional (lag times). These include the construction of physical habitat features and the effective transplanting of various ecosystem components (e.g., plants and invertebrates) to stimulate the establishment of the aquatic ecosystem in the newly constructed habitat

Based on this assessment, the proposed Offsetting Plan, will result in an increase in fish productivity over the existing conditions.



For more information please contact us: cotegold@iamgold.com

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