



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Central and Arctic Region
867 Lakeshore Road
Burlington, ON
L7S 1A1

Région du centre- et de l'arctique
867 chemin Lakeshore
Burlington, ON
L7S 1A1

July 30, 2019

MVEIRB file : EA1819-01

DFO file: 98-HCAA-CA6-00021

Mackenzie Valley Environmental Impact Review Board
Attention: Mark Cliff-Phillips, Executive Director
200 Scotia Centre
Box 938, 5102-50th Ave
Yellowknife, NT
X1A 2N7

Dear Mark Cliff-Phillips:

Subject: EA1819-01 – Diavik Diamond Mines Inc. Processed Kimberlite into Mine Workings Project – DFO Intervention

Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program (DFO-FFHPP) has conducted a technical review of the information provided in Diavik's application to the Wek'èezhii Land and Water Board to amend water license no. W2015L2-0001 and the Mackenzie Valley Environmental Impact Review Board EA 1819-01, and is submitting Interventions as requested by the Mackenzie Valley Environmental Impact Review Board (MVEIRB) on July 10, 2019.

DFO-FFHPP's assessment and recommendations are based on our departmental mandate under the *Fisheries Act*, specifically the management and protection of fish and their habitat in both the freshwater and marine environments

If you or any other parties have any questions, please contact Alexandra Sorckoff at 867-669-4934, or by email at Alexandra.Sorckoff@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

Thomas Hoggarth
Regional Director, Ecosystems Management
Central & Arctic Region, Fisheries and Oceans Canada

Copy: Alexandra Sorckoff, DFO
Tatiana Leclerc-Beaulieu, DFO
Daniel Coombs, DFO
Marek Janowicz, DFO

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FISHERIES AND OCEANS CANADA

Interventions

Diavik Diamond Mines Inc. – Environmental Assessment
1819-01

Submitted to: **Mackenzie Valley Environmental
Impact Review Board**

August 1, 2019

DFO File No.: 98-HCAA-CA6-00021
MVEIRB File No.: EA1819-01

Canada 

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Executive Summary

Diavik (The Project) is a diamond mine owned by Diavik Diamond Mines Inc. (Diavik or the Proponent) on the East Island in Lac de Gras in Northwest Territories. The Project went through a prior Environment Assessment (EA) during the spring of 1999 and is currently in operation and involved the construction and operation of dikes on the shore of the east island to excavate kimberlite from three kimberlite pipes: A121, A154, and A418. Fisheries and Oceans Canada (The Program or DFO-FFHPP) was an active participant in and a responsible authority in the decision of the EA.

The Fish and Fish Habitat Protection Program of Fisheries and Oceans Canada is responsible on behalf of the department for regulatory review of proposed developments occurring in or near Canadian fisheries waters. The Program, in accordance to its mandate, has reviewed Diavik's application and supplemental information provided to the Wek'èzhii Land and Water Board (WLWB) to amend water license no. W2015L2-0001 and the Mackenzie Valley Environmental Impact Review Board (MVEIRB) EA 1819-01 to allow the deposition of processed kimberlite into the pits and underground mine. DFO-FFHPP mandate is to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries, including marine mammals and their habitat. DFO-FFHPP's primary focus in reviewing proposed developments in and around fisheries waters is to ensure that works, undertakings and activities are conducted in compliance with the applicable provisions of the *Fisheries Act*.

The fisheries protection provisions of the *Fisheries Act* (2013), specifically subsection 35(1), state that "*No person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery or to fish that support such a fishery.*" However, under paragraph 35(2)(b) of the *Fisheries Act*, the Minister of Fisheries and Oceans may issue an authorization with terms and conditions in relation to a proposed work, undertaking or activity that may result in serious harm to fish. Serious harm to fish is defined in Section 2 of this Act as the death of fish, or permanent alteration to or destruction of fish habitat.

DFO-FFHPP issued an authorization for serious harm to fish (SC980001), in August 2, 2000. The proposed deposition of processed kimberlite will be within the original geographic footprint of this authorization.

DFO-FFHPP is providing the following interventions in response to the Mackenzie Valley Environmental Impact Review Board's (MVEIRB) work plan provided in correspondence dated July 10, 2019, which states that Interventions are due to the board on August 1, 2019.

Offsetting Plan

Diavik submitted a No Net Loss Plan and No Net Loss Addendum in August 1998 and April 1999, respectively, and approved on August 2, 2000. These plans were developed to mitigate fish habitat losses associated with the project, one of the major components being the construction and operation of dikes on the shore of the East Island in Lac de Gras, as per DFO's *Policy for the Management of Fish Habitat* (1986). Current offsetting plans for the harmful alteration, disruption, and destruction of fish habitat caused by the construction and operation of the dikes include the construction of shallow rearing habitat, spawning shoals, and shoreline habitat within the diked areas following the completion of mining in each open pit, which would provide fish habitat upon reconnection to Lac de Gras. These habitat features would provide in-kind fish habitat offsetting consistent with DFO's Productivity Investment Policy. DFO-FFHPP will continue to work with Diavik to capture any required revisions to the original No Net Loss Plan to mitigate fish and fish habitat losses.

1 Introduction

This technical review submission summarizes Fisheries and Oceans Canada (DFO) – Fish and Fish Habitat Protection Program’s (FFHPP) assessment and recommendations concerning the deposition of processed kimberlite into the pits and underground mine at Diavik Diamond Mine (the Project). The purpose of these interventions is to provide expert advice to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) regarding the completeness of the provided information and identify potential impacts to fish and fish habitat associated with the project changes.

This submission focuses on information provided in Diavik’s application to the Wek’èezhii Land and Water Board (WLWB) to amend water license no. W2015L2-0001 and the Mackenzie Valley Environmental Impact Review Board (MVEIRB) EA 1819-01 . The objective being to analyse the information presented by Diavik Diamond Mines Inc. in support of the water licence amendment, EA and reflects DFO-FFHPP’s mandate.

2 Mandate, Relevant Legislation and Policy

The *Constitution Act* (1982) provides the Federal Government with exclusive authority for coastal and inland fisheries within Canada’s territorial boundaries. DFO exercises this power through the administration of the *Fisheries Act* and some aspects of the *Species at Risk Act*. Under the *Fisheries Act*, DFO is responsible for the management, protection and conservation of fish (which include marine mammals as defined by the *Fisheries Act*) and their habitats. The Minister of Fisheries, Oceans and the Canadian Coast Guard is one of the competent ministers under the *Species at Risk Act* (SARA).

In general, DFO-FFHPP undertakes the review of proposed project in and around fisheries waters to ensure that works, activities and undertakings are conducted in such a way that the proponents are in compliance with the applicable provisions of the *Fisheries Act*.

The mandate of DFO-FFHPP is to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. Sub-section 35 (1) of the *Fisheries Act* states that “No person shall carry on any work, undertaking or activity that results in *serious harm to fish* that are part of a commercial, recreational, or Aboriginal fishery or to fish that support such a fishery.”

Fisheries and Oceans Canada interprets *serious harm to fish* as:

- the **death of fish**;
- a **permanent alteration** to fish habitat of a spatial scale, duration or intensity that limits or diminishes the ability of fish to use such habitats as spawning grounds, or as nursery, rearing, or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes;
- the **destruction of fish habitat** of a spatial scale, duration, or intensity that fish can no longer rely upon such habitats for use as spawning grounds, or as nursery, rearing, or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of these life processes.

However, under Paragraph 35 (2) (b) of the *Fisheries Act*, the Minister of Fisheries, Oceans and the Canadian Coast Guard may issue an authorization with terms and conditions in relation to a proposed work, undertaking or activity that may result in serious harm to fish. Subject to the consideration of the four factors in Section 6 of the *Fisheries Act*:

1. The contribution of the relevant fish to the ongoing productivity of commercial, recreational or Aboriginal fisheries;
2. Fisheries management objectives;
3. Whether there are measures and standards to avoid, mitigate or offset serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or that support such a fishery; and
4. The public interest.

DFO-FFHPP is guided by the “Fisheries Protection Policy Statement (2013)”, which is intended to provide guidance to Canadians and ensure compliance with the *Fisheries Act*. The *Fisheries Protection Policy Statement* strengthens the Federal Government’s ability to address key threats to the productivity and sustainability of our fisheries, through standards and guidelines to avoid, mitigate, and offset impacts to fisheries.

The “Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (2013)” provides guidance on undertaking effective measures to offset serious harm to fish that are part of or that support a commercial, recreational or Aboriginal fishery, consistent with the fisheries protection provisions of the *Fisheries Act*. The objective of offsetting is to counterbalance unavoidable *serious harm to fish* and the loss of fisheries productivity resulting

from a project. For more information, see: <http://www.dfo-mpo.gc.ca/pnw-ppe/pol/index-eng.html>

The *Species at Risk Act* (SARA) is intended to prevent Canadian indigenous species, subspecies and distinct populations of wildlife from being extirpated or becoming extinct. SARA facilitates the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and manage species of special concern (to prevent them from becoming endangered or threatened). The Minister of Fisheries, Oceans and the Canadian Coast Guard is the competent minister for listed aquatic species that are fish as defined in the *Fisheries Act* Section (2) and for marine plants as defined in the *Fisheries Act*, Section 47.

Environmental and Climate Change Canada (ECCC) is responsible for the administration and enforcement of the pollution prevention provisions of the *Fisheries Act*, Sections 34 and 36-42 on behalf of DFO.

For more information, see: <http://www.dfo-mpo.gc.ca/pnw-ppe/pol/index-eng.html>

Bill C-68

As part of the Government of Canada's Review of Environmental and Regulatory Processes, the Minister of Fisheries, Oceans and the Canadian Coast Guard was mandated in 2015 to review the changes made in 2012 to the *Fisheries Act*.

On February 6, 2018, the Government of Canada introduced in Parliament Bill C-68, *An Act to Amend the Fisheries Act and other Acts in Consequence*. On June 21, 2019 the new *Fisheries Act* received royal assent and became law. The new provisions and stronger protections will better support the sustainability of Canada's marine resources for future generations.

The new Act includes:

- Provisions modernizing the *Fisheries Act*;
- Reconciliation with Indigenous peoples;
- Fish and fish habitat protection provisions:
 - Prohibitions against causing the death of fish (other than by fishing) and the harmful alteration, disruption or destruction of fish habitat
 - New tools are enabled including ecologically significant areas, as well as measures relating to authorization and permitting of works, undertakings and activities, establishment of standards and codes of practice, creation of fish habitat banks by a proponent of a project, and establishment of a public registry.
 - Factors that a Minister must consider prior to exercising powers related to authorizations, permits, orders or Ministerial regulations, including cumulative effects and Indigenous knowledge.

Fisheries and Oceans Canada is currently in the process of program revitalization and developing regulations, policies and other program instruments to support the modifications to the *Fisheries Act*. Engagement with Indigenous groups, provinces, territories, partners, stakeholders and other Canadians on these proposed amendments will continue in order to ensure that the proposed fish and fish habitat protection provisions of an amended *Fisheries Act* achieve the right balance.

The Fish and Fish Habitat Protection Provisions, of the new act, did not come into force with Royal Assent, they will come into force at a date yet to be determined. As such this project continues to be reviewed under the older *Fisheries Act* (2012).

3 Interventions

3.1 Offsetting

Review Comment Number	3.1 Offsetting
Subject/Topic	Offsetting habitat losses
References	<ul style="list-style-type: none"> • Diavik Diamonds Project No Net Loss Plan, August 1998. • Addendum to the Diavik Diamond Mines “No Net Loss” Plan, April 1999. • Fisheries and Oceans Canada Authorization for Works or Undertaking Affecting Fish Habitat, DFO File No. SC98001. August 2, 2000. • Fitzsimons, J.D. 2013. Assessment of the Use of Dikes at Diavik Diamond Mine Lac de Gras for Lake Trout Spawning 2011. Department of Fisheries and Oceans. • Diavik Diamond Mines Inc. (DDMI) Fisheries Act Authorization SC98001 – amended conditions. August 22, 2013.
Summary	<p>DFO-FFHPP notes that Diavik has an existing <i>Fisheries Act</i> Authorization for the Diavik Diamond Mine project which authorized the harmful alteration, disruption, and destruction of fish habitat arising from the construction and operation of dikes along the shore of the east island in Lac de Gras.</p> <p>The conditions of the existing <i>Fisheries Act</i> Authorization requires Diavik to create shallow rearing, shoal spawning, and shoreline habitat within the pits and on the exterior of the dikes, as per the No Net Loss Plan and Addendum. The existing No Net Loss Plan and Addendum indicate that the total number of habitat units impacted by the dikes is 2,432 HUs, with 2,618 HUs gained by the proposed offsetting.</p> <p>The existing <i>Fisheries Act</i> authorization was amended in August 2013, with conditions regarding offsetting on the dike exterior replaced to reflect the results in <i>Assessment of the Use of Dikes at Diavik Diamond Mine Lac de Gras for Lake Trout Spawning 2011</i> (Fitzsimons, 2013), which indicated the establishment of lake trout spawning habitat along the exterior of the dikes was unfeasible. As such, offsetting for fish habitat impacts associated with the dikes are currently limited to the creation of habitat within the dikes, which will be reconnected to Lac de Gras via breaching of the dikes.</p>
Importance of issue to the impact assessment process	<p>Diavik’s proposal to deposit processed kimberlite into the pits and underground mine workings is not anticipated to result in further harmful alterations, disruptions, and destruction to fish habitat not covered in the existing <i>Fisheries Act</i> authorization. However, should the impact assessment process indicate that pit reconnections to Lac de Gras would result in significant adverse impacts due to water quality concerns, thus recommending continued containment of the pits rather than breaching</p>

	of the dikes, Diavik would be required to update their offsetting proposal and apply for an amendment to their <i>Fisheries Act</i> authorization to ensure outstanding impacts to fish habitat were effectively offset.
Detailed Review Comment 1. Gap/Issue 2. Disagreement with conclusion 3. Reasons for disagreement with conclusion	DFO-FFHPP is of the understanding that the deposition of processed kimberlite (PK) in the pits and underground mine workings will not result in any additional harmful alterations, disruptions, or destruction to fish habitat not covered by the existing <i>Fisheries Act</i> authorization such that additional offsetting would be required. Reconnection of the pits to Lac de Gras is dependant on the results of water quality monitoring and tailings stability, which falls under the mandate of Environment and Climate Change Canada (ECCC). Should water quality be deemed to be of a quality that would be harmful to aquatic life, thereby rendering reconnection of the pits to Lac de Gras as not viable, Diavik would need to provide an updated offsetting plan to ensure that harmful alterations, disruptions, and destruction of fish habitat accrued from the construction and operation of the dikes is effectively offset, as required by their <i>Fisheries Act</i> authorization.
Recommendation/Request	Recommendation 3.1.1: DFO recommends that Diavik continue to work with DFO-FFHPP to amend the existing authorization to reflect the proposed changes to the mine, and update their offsetting accordingly to ensure that any outstanding impacts to fish habitat are adequately offset.

3.2 Additional References

- DFO (Fisheries and Oceans Canada). 1986. Policy for the Management of Fish Habitat.
- DDMI Water License W2015L2-0001 Amendment Request for the Deposition of Processed Kimberlite to Mine Workings, June 1, 2018.

4 Summary of Recommendations

Offsetting		
1. Offsetting		
1	Ref. 3.1.1	DFO recommends that Diavik continue to work with DFO-FFHPP to amend the existing authorization to reflect the proposed changes to the mine, and update the offsetting accordingly to ensure that any outstanding impacts to fish habitat are adequately offset.