

# WHAT IS EMAB?

EMAB is the independent environmental watchdog for the Diavik Diamond Mine. EMAB makes recommendations to Diavik and the Regulators about water, aquatic life, wildlife, air quality, and mine closure plans. EMAB also makes sure that Diavik uses Traditional Knowledge/Inuit Qaujimajatuqangit (TK/IQ) in their environmental monitoring programs.

EMAB Board members are appointed by the following Parties:

- Yellowknives Dene First Nation (YKDFN)
- North Slave Metis Alliance (NSMA)
- Łutsel K'e Dene First Nation (LKDFN)
- Tłıchǫ Government (TG)
- Kitikmeot Inuit Association (KIA)
- Government of Canada
- Government of Northwest Territories (GNWT)
- Diavik Diamond Mines Inc (DDMI).

## MONITORING THE REGULATORS

How well do the regulators engage in oversight at Diavik and respond to EMAB recommendations.

**Federal Regulators: Environment and Climate Change Canada (ECCC) and the Department of Fisheries and Oceans (DFO):**

- ECCC, and especially DFO, are not involved enough in review of plans and reports.
  - › EMAB continues to recommend they be more involved.

### GNWT:

- GNWT did thorough reviews related to Diavik's Water Licence requirements.
- GNWT took almost a year to respond to EMAB's recommendations on Diavik's 2017 WMP report.
- GNWT did not comment on Diavik's 2017 or 2018 WMP reports.
- EMAB commends GNWT for committing to hold a workshop on caribou, grizzly and wolverine monitoring.
- GNWT did not comment on Diavik's 2018 Air Quality Monitoring Report.

### WLWB:

- The WLWB consistently provides detailed reviews of all documents related to Diavik's Water Licence.

Our 2019/20 Annual Report provides more information on Diavik's Environmental Monitoring Programs and EMAB's recommendations. Go to: [emab.ca](http://emab.ca) or contact us for a hard copy.

## HOW TO CONTACT US

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Environment

ENVIRONMENTAL MONITORING ADVISORY  
BOARD FOR THE DIAVIK MINE



# INTERIM CLOSURE AND RECLAMATION PLAN (ICRP)

Diavik submitted ICRP version 4.1 in spring 2020. Closure plans must be finalized by 2022.

ICRP 4.1 is a big improvement, although EMAB still has concerns with many parts of it:

- Traditional Knowledge (TK): Diavik plans to develop a TK-based monitoring program. This is important and EMAB wants the communities to be fully involved.
- Revegetation: EMAB wants Diavik to revegetate a much larger area than they are planning, and to follow expert advice on how to revegetate.
- Diavik plans to prevent contaminated runoff from the waste rock pile by covering it, to freeze it.
  - › Cover effectiveness is uncertain, especially considering climate warming.
- Size of mixing zones: Diavik is asking for 15 mixing zones around East Island covering about 2 square kilometers, where water coming from the mine would not have to meet health guidelines.
- Wildlife safety: Diavik's plans don't do enough to stop animals from hurting themselves at the mine, or make sure that food and water are safe for wildlife.
- PKC Facility: The plan for closing the tailings pond is risky. Diavik will submit a new plan in 2021.
- Contaminated soil: Diavik wants to bury contaminated soil if it cannot be treated to make it safe. EMAB does not want unsafe soil to stay at the minesite.
- Security: Diavik's security funds may not be enough to fix potential problems in the future:
  - › Diavik will need to monitor some areas longer than they plan to.



# AQUATIC EFFECTS MONITORING PROGRAM (AEMP) - WATER

Water quality is within the Water Licence limits set by the Wek'èezhìi Land and Water Board (WLWB).

Note: EMAB annual report prepared before 2019 AEMP report was received.

Key concerns for 2019/20:

- There is mild nutrient enrichment at Lac de Gras (LDG).
  - › Caused by phosphorus and nitrogen from the Diavik mine.
  - › increases algae and reduces oxygen in the lake.
  - › affects the food that fish eat.
- The amount of LDG affected by nutrient enrichment varies every year.
  - › Diavik only samples far-from-mine areas of LDG every 3 years.
  - › EMAB recommended Diavik sample far-field sites every year.
- Dust from the mine falls on the lake and adds phosphorus to the water.
  - › contributes to nutrient enrichment.

# AEMP - FISH AND OTHER AQUATIC LIFE

Key concerns for 2019/20:

- EMAB has been concerned about mercury levels in fish since 2012, when Diavik stopped scientific monitoring of mercury in lake trout.
- Draft AEMP Design Ver 5.1 would not detect changes very well; WLWB directed Diavik to fix this.
- EMAB recommended lake trout be sampled every 3 years.
  - EMAB is re-analyzing lake trout mercury data back to when the mine started.

# WATER LICENCE AMENDMENT APPLICATION

- EMAB is fully involved in WLWB review of Diavik's plan to put processed kimberlite (PK) in the mine pits instead of the processed kimberlite containment (PKC) facility.
  - › MVEIRB approved the proposal with conditions.
  - › EMAB's main concerns are keeping the pit lake suitable for traditional use, water quality and accuracy of water quality modelling, and how to decide whether to reconnect to LDG.
- Diavik also applied to allow underground mining at the A21 pit.
  - › EMAB requested more information about pit water quality; no major concerns.



# ENVIRONMENTAL AIR QUALITY MONITORING PROGRAM (EAQMP)

Key concerns for 2019/20:

- Diavik stopped monitoring total suspended particulates (TSP) in 2019 (dust in the air):
  - › EMAB recommended Diavik continue to monitor TSP.
  - › Diavik still monitors dust that falls on the ground or the lake.
- Minister is reviewing Diavik's Air Quality Monitoring program as requested by EMAB:
  - › EMAB made several recommendations to fix air quality monitoring.



# WILDLIFE MONITORING PROGRAM (WMP)

Key concerns for 2019/20:

- Zone of Influence (ZOI) for caribou; area around Diavik that caribou stay away from:
  - › Estimated at 14 km. No data since 2012.
  - › Diavik said there is no ZOI.
  - › EMAB and GNWT disagree with Diavik; needs to be resolved.
  - › GNWT should give direction for an updated ZOI survey.
- Differences in caribou behaviour close to Diavik compared to outside the ZOI:
  - › Much fewer Bathurst caribou now; less caribou to observe around the mine.
    - » 8,200 Bathurst caribou in 2018; there were 349,000 when Diavik started.
  - › Diavik did not collect enough far-from-mine behaviour data to do analysis.
- Diavik stopped monitoring changes to caribou migration.
  - › EMAB recommended Diavik find a better way to monitor this.
- Regional grizzly and wolverine monitoring is on hold; EMAB recommended GNWT give direction.
- EMAB recommended Diavik develop an updated description of how it monitors wildlife.

