

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. Making sure that Diavik uses Traditional Knowledge/Inuit Qaujimagatuqangit (TK/IQ) in their environmental monitoring programs is also an important part of EMAB's job.

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)
- Tłı̨chq̓ Government (TG)
- Kitikmeot Inuit Association (KIA)
- The Government of Canada
- Government of Northwest Territories (GNWT)
- Diavik Diamond Mines Inc (DDMI)

This summary highlights EMAB's 2018/19 Annual Report. The full version of our Annual Report provides more information on Diavik's Environmental Monitoring Programs and EMAB's recommendations. You can find it at emab.ca.

MONITORING THE REGULATORS

This section summarizes how well the regulators have engaged in oversight at Diavik and have responded 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 technical reviews.
 - › EMAB has recommended that they be more involved.
 - › Note that DFO and ECCC are only required to comment on Water Licence documents.

GNWT:

- EMAB commends GNWT's thorough reviews related to Diavik's Water Licence.
- GNWT has not responded to EMAB's recommendations on Diavik's WMP.
- GNWT did not make comments on Diavik's 2017 or 2018 WMP reports.
- EMAB commends GNWT for organizing a Regional Wildlife Monitoring Workshop in 2017.
- GNWT did not comment on Diavik's 2017 EAQMP Report.

WLWB:

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

HOW TO CONTACT US

ENVIRONMENTAL MONITORING ADVISORY BOARD FOR THE DIAVIK MINE

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ANNUAL 2018
2019
REPORT
SUMMARY

Working with
the People *for the*
Environment

ENVIRONMENTAL MONITORING ADVISORY
BOARD FOR THE DIAVIK MINE



INTERIM CLOSURE AND RECLAMATION PLAN (ICRP)

The WLWB did not approve Version 4 of Diavik's ICRP. Diavik's closure plans require substantial changes. The plans are supposed to be finalized by 2022.

EMAB has concerns with the following parts of Diavik's closure plans:

- Revegetation: Diavik is proposing to revegetate only 11% of the site.
- Contaminated runoff and seepage from the Waste Rock Storage Area (WRSA):
 - › Waste rock in the WRSA leaches contaminants.
 - › Diavik is putting a cover over the WRSA to help with this.
 - › The effectiveness of the cover is uncertain, especially considering the effects of climate change.
- Size of the mixing zone: Diavik is proposing a 25km² area around East Island where water quality would not have to meet guidelines.
- Wildlife safety: Diavik should make sure that wildlife can not hurt themselves at the mine site and that food and water are safe to consume.
- PKC Facility: The current plan for closing the facility could fail.
- Contaminated soil: Diavik wants to bury contaminated soil if it cannot be treated to make it safe.
- The North Inlet:
 - › Sediment in the North Inlet is contaminated.
 - › Diavik needs to engage with communities about reconnecting the North Inlet.
- Security funds: EMAB is concerned that Diavik's security funds estimate may not be enough to fix potential problems in the future.
- Long-term maintenance and monitoring: Parts of the mine will likely need to be monitored for a long time.



AQUATIC EFFECTS MONITORING PROGRAM (AEMP) - WATER

Water quality at Diavik is generally within the Water Licence limits set by the Wek'èezhii Land and Water Board (WLWB).

Key concerns for 2018/19:

- Lac de Gras (LDG) is experiencing mild nutrient enrichment.
 - › Phosphorus and nitrogen from human activity are the cause.
 - › Nutrient enrichment increases algae and reduces oxygen in the lake.
 - › This can negatively affect fish.
- The amount of LDG affected by nutrient enrichment varies from year to year.
 - › Diavik only samples far-from-mine areas of LDG every three years.
 - › EMAB has recommended that Diavik should test far-field sample sites every year.
- Dust from the mine settles on the lake and adds phosphorus to the water.
 - › Phosphorus in dust contributes to nutrient enrichment.

AEMP - FISH AND OTHER AQUATIC LIFE

Key concerns for 2018/19:

- Mercury levels in fish have been a concern for EMAB since 2012, when Diavik stopped formal monitoring of mercury in lake trout.
- EMAB recommended that lake trout should be sampled every three years.

WATER LICENCE AMENDMENT APPLICATION

Diavik proposed to amend their water licence because they want to dispose of processed kimberlite (PK) in the mine pits instead of in the processed kimberlite containment (PKC) facility. The Mackenzie Valley Environmental Impact Review Board (MVEIRB) referred the project proposal to an environmental assessment. EMAB is participating in the assessment. EMAB supports Diavik's idea if it can be done without harming the environment.



ENVIRONMENTAL AIR QUALITY MONITORING PROGRAM (EAQMP)

Key concerns:

- One of Diavik's Total Suspended Particulate (TSP) monitors was not working for 31% of 2017. The other was out-of-order for 29% of the year.
- Diavik has proposed to stop TSP monitoring.
 - › EMAB disagrees with this proposed change.
 - › EMAB has recommended that the TSP monitoring program be improved.



WILDLIFE MONITORING PROGRAM (WMP)

Key concerns for 2018/19:

- The estimated population size of Bathurst caribou dropped from 349,000 in 1996 to 8,200 in 2018.
- The mines have a Zone of Influence (ZOI) on caribou. Caribou tend to stay away from the ZOI.
- ZOI monitoring has been on hold since 2011. The most recent estimate for the caribou ZOI is 14km around the mine.
 - › GNWT should provide direction for an updated ZOI survey, but has not.
- Current research looks at how caribou behave close to the mine compared to far away.
 - › Diavik did not collect enough far-from-mine behaviour data to do this analysis.
- Monitoring shows caribou migration patterns have changed since the mine was built.
 - › Diavik proposed to stop monitoring the changes to caribou migration.
 - › EMAB recommended that Diavik should find a better way to monitor this.

