



# North Slave Métis Alliance

Mackenzie Valley Environmental Impact Review Board  
Avalon Rare Metals Inc. – Thor Lake Rare Earth Element Project – EA1011-001  
[2010]

February 18 – 22, 2013

# North Slave Métis Alliance

The NSMA represents the Aboriginal rights-bearing Métis of the North Slave area.

The NSMA's mandate includes:

- ▶ The assertion, protection, and implementation of the Aboriginal rights of the North Slave Métis People;
- ▶ The exercise of Métis responsibility to protect the environment and to promote and enhance Métis education, economic, social, and cultural development

The NSMA is vitally concerned with the protection, preservation, and sustainable use of its traditional lands and resources, to the benefit of its members and their children for generations to come.

# Contents

- ▶ Barge incidents
- ▶ Caribou: cumulative effects
- ▶ The Plans: Wildlife Effects Monitoring and Management (WEMMP), Aquatic Effects Monitoring (AEMP), and Air Quality Monitoring and Management (AQMMP)
- ▶ Independent Métis Traditional Knowledge expert
- ▶ Independent Monitoring Agency

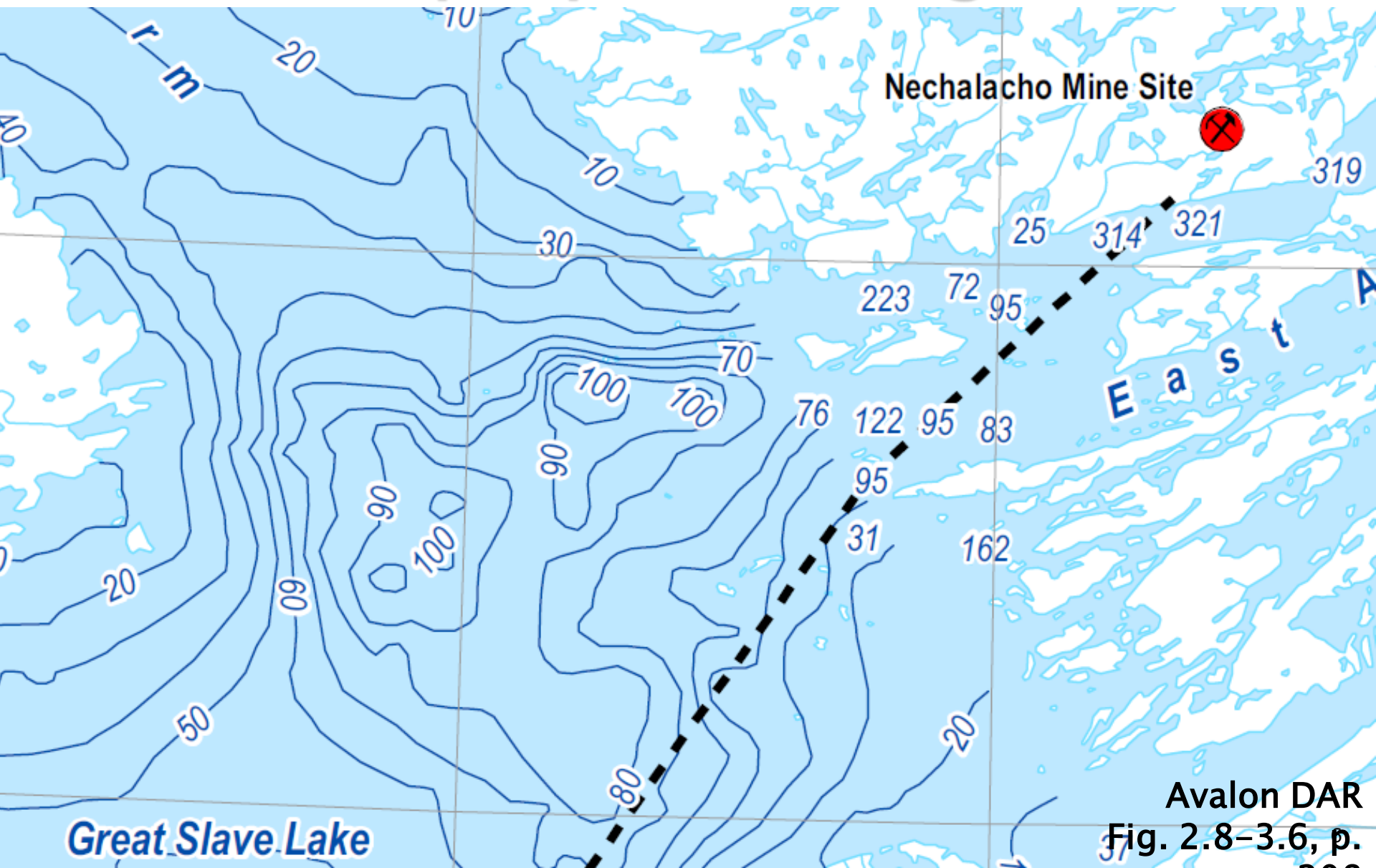
# 1. Barge incidents

- ▶ Avalon assumes 10%, or 171 tonnes, of the concentrate could be released (DAR, p881).
- ▶ Salvage firms will operate in water up to 300 metres in depth using conventional and available underwater salvage techniques (DAR, p881).
- ▶ Avalon has stated that tests show the heavy metals and radionuclides will be inert and will sink to the bottom (DAR, p883).

# Anticipated effects of barge capsizes

- ▶ Avalon states that such an event would effect the following aquatic biota: clams, worms, crustaceans, sculpins, suckers, burbot, deep water lake trout (p. DAR, 884).
- ▶ Thorium has shown significant bioconcentration in lower trophic animals in water (Poston, 1982; Fisher et al. 1987)

# Avalon's proposed barge route



Avalon DAR

Fig. 2.8-3.6, p.

# NSMA concerns

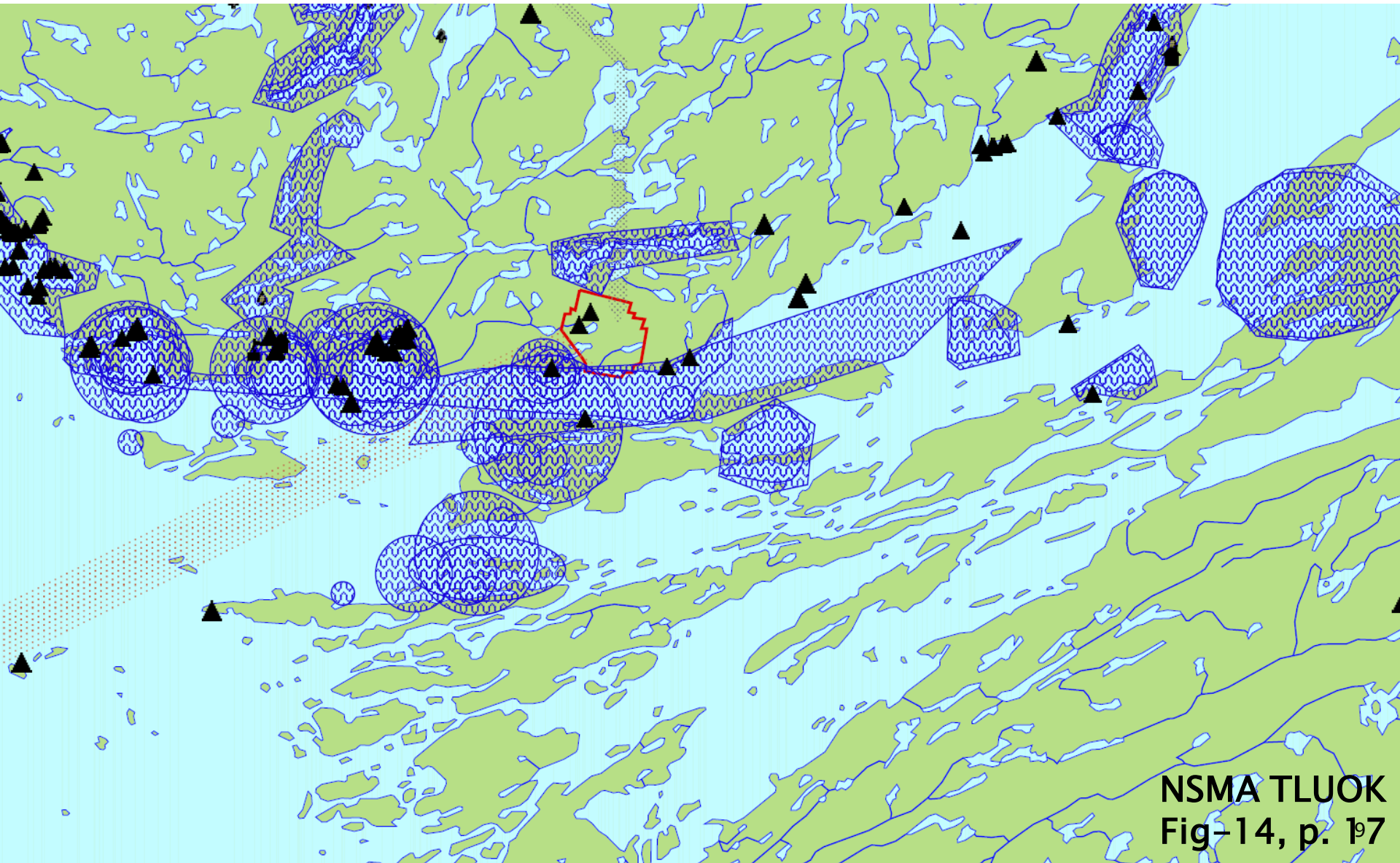
- ▶ The East Arm, including the Hearne Channel, has shown to have the highest concentration of lake trout; more than twice as much as in other areas (Rawson).
- ▶ Uncertainty regarding radionuclide and heavy metal biomagnification in traditionally harvested fish.
- ▶ Avalon's ability to salvage below 300 metres of depth.

# Métis traditional knowledge

- ▶ Métis have stated the importance of fishing to their diet, to their culture, and to their heritage (TLUOK, p.17).
- ▶ The area around the Hearne Channel is mentioned as being *world class* for fishing (TLUOK, p.20).



# North Slave Métis fisheries



# MTK cont.

- ▶ North Slave Métis have mentioned that the area around the islands in Hearne Channel is considered to be especially treacherous during poor weather (TLUOK, p. 13).
- ▶ The weather has become more variable and less predictable (TLUOK, p. 13).
- ▶ There are worries about fluctuating lake levels (TLUOK, p. 18).

# Recommendation 1:

## Barge review panel

The panel will be established prior to the start of the mine operations. It will:

- ▶ Consist of independent, technically qualified individuals capable of reviewing the impact of a concentrate barge spill on the habitat of Great Slave Lake. The panel would assess the potential that spilled concentrate has in altering fish health, abundance, diversity, and how it may impact the ability of traditional users to harvest or consume fish;
- ▶ Develop and adopt a Barge Incident Response Plan; and
- ▶ Facilitate a meeting with the North Slave Métis Alliance members in order to demonstrate and discuss the safety and mitigation measures of barging concentrate, addressing any Métis concerns of radionuclides, heavy metals, biomagnification, and the possible impact on traditional Métis fisheries.

## 2. Caribou: cumulative impacts

- ▶ Caribou from the Bathurst herd can be expected to occasionally over-winter in the Nechalacho Mine Area and the islands in the East Arm of Great Slave Lake from November to May (DAR 6.9.1.1, p.762).
- ▶ Caribou may also be displaced by visual disturbances from the infrastructure, vehicle traffic, people, and aircraft (DAR 6.9.1.1, p.766).

# NSMA concerns

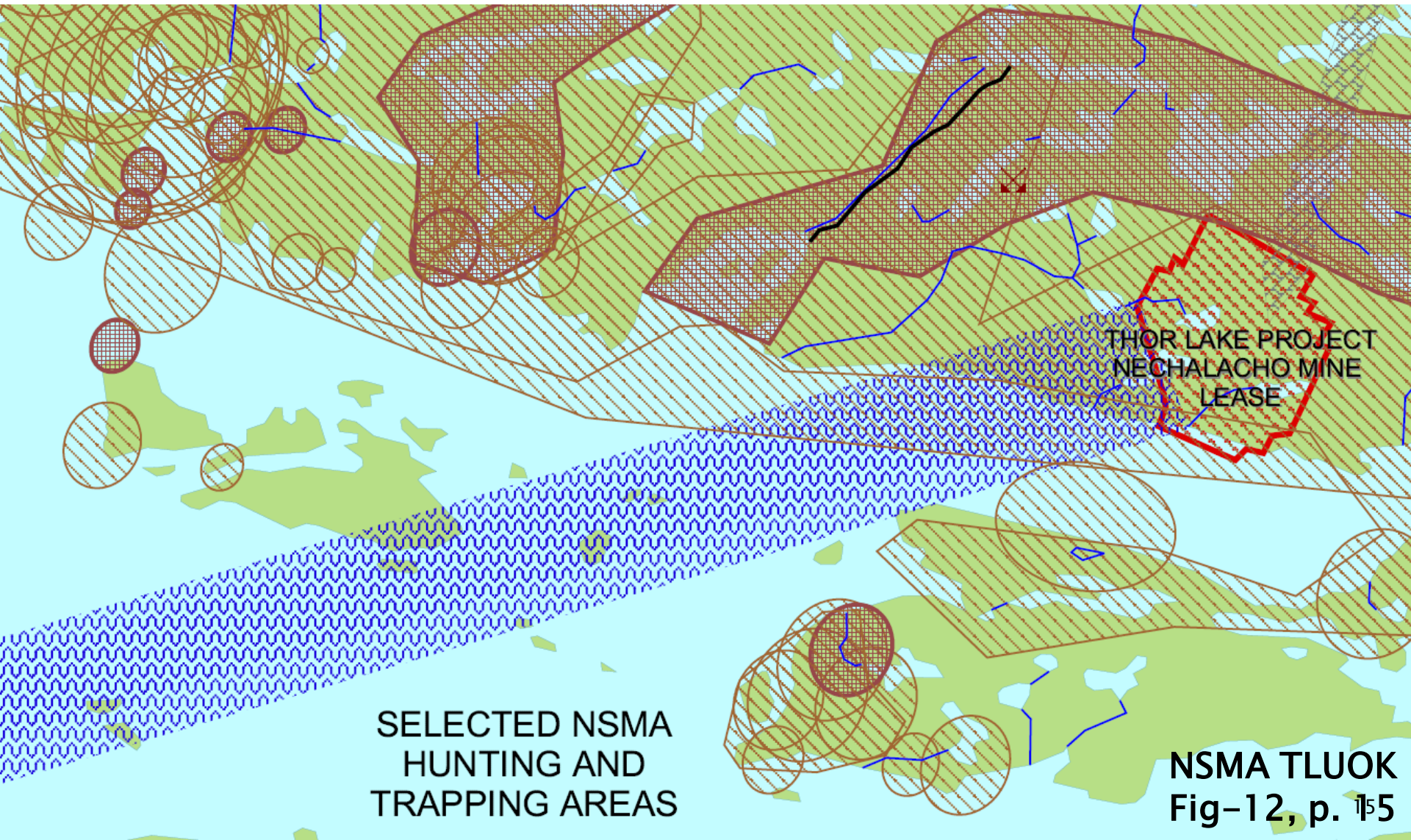
- ▶ Specific cumulative effects concerns include:
    - The increased stress placed on the Bathurst caribou herd;
    - The incremental loss of habitat through increased pressure;
    - The reduced ambient air quality; and
    - The associated effects on wildlife and vegetation.
- (Stiff, 2001)

# Métis traditional knowledge (MTK)

- ▶ Métis members have expressed concern over mineral exploration and development with the recent Bathurst caribou decline (TLUOK, p.16).
- ▶ Members mentioned concerns of caribou feet being sensitive to injury (TLUOK, p.16).
- ▶ Métis members discussed the possibilities of what may change migration patterns with caribou (TLUOK, p.16).
- ▶ North Slave Métis hunt caribou on the islands and along the shore of the East Arm in the winter (TLUOK, p. 15, 21).



# North Slave Métis hunting and trapping areas



# Recommendation 2:

## Caribou working group

The panel will be established prior to the start of the mine operations. It will:

- ▶ Attend and provide input at the upcoming GNWT species-specific cumulative effects workshops;
- ▶ Recommend ways to incorporate the response framework into the GNWT Bathurst caribou management strategies or plans;
- ▶ Include North Slave Métis persons holding traditional knowledge;
- ▶ Develop and implement an adaptive management plan designed to predict, monitor, and prepare for a possible shift in caribou migration patterns that overlap the Thor Lake Project; and
- ▶ Facilitate a meeting with the North Slave Métis Alliance members in order to inform and discuss the long-term effects of the Project on the Bathurst caribou herd.



### 3. The Plans (WEMMP, AEMP, & AQMMP)

- ▶ Wildlife Effects Monitoring and Management (WEMMP), Aquatic Effects Monitoring (AEMP), and Air Quality Monitoring and Management (AQMMP)
- ▶ Continued development and input from the North Slave Métis is required to resolve concerns identified prior to the implementation of the WEMMP, AEMP, & AQMMP by the Mackenzie Valley Land and Water Board.

# Métis concern

- ▶ Métis members want to ensure that monitoring of the wildlife, the aquatic environment, and the air will be exceptional
- ▶ NSMA is concerned about the adverse environmental impacts of the proposed Project
- ▶ The NSMA wants to be sure that monitoring and mitigating is a key area of concern that will be properly addressed and that the NSMA will be appropriately involved or engaged in the processes.

## Recommendation 3: WEMMP, AEMP, & AQMMP measures

The Board recommend the creation of a legally binding mechanism to ensure future commitments are enforceable within the WEMMP, AEMP, & AQMMP. The WEMMP, AEMP, & AQMMP should:

- ▶ Be legally binding;
- ▶ Be developed and reviewed in collaboration with the North Slave Métis;
- ▶ Integrate Métis traditional knowledge;
- ▶ Commit to providing plain language communication summaries to the NSMA on an annual basis; and
- ▶ Commit to training and employing a North Slave Métis member for fulltime WEMMP, AEMP , & AQMMP monitoring.

## 4. Independent traditional knowledge expert

- ▶ To assist Avalon in understanding the environment, air, land, water, aquatic resources, wildlife, archaeological and cultural resources, and the land-based practices that are essential to the way of life and well-being of the North Slave Métis;
- ▶ To facilitate effective communication about the Project with and effective participation of the NSMA;
- ▶ To promote traditional capacity-building for the North Slave Métis respecting project-related environmental matters;
- ▶ To ensure Métis traditional knowledge is utilized and protected within the development and on-going maintenance of the Project;
- ▶ To meet on a regular basis with the NSMA in order to keep them informed and apprised of any incompliances that may infringe on Métis Aboriginal Rights.

# Recommendation 4:

## MTK expert

Contract a full time independent Métis traditional knowledge expert in order to act as an intermediary between the NSMA and Avalon's environmental management team.

# 5. Independent monitoring agency

Due to the nature of this mine, particularly the inherent:

- ▶ Perceived concerns surrounding radionuclides;
- ▶ Community concern regarding environmental damage;
- ▶ Economic inequity regarding the NSMA's capacity to meaningfully comment on highly technical reports; and
- ▶ The need for NSMA to have meaningful engagement in the monitoring process.

# Purpose of the independent monitoring agency

It would:

- ▶ Be funded by Avalon;
- ▶ Tasked with writing an annual report with recommendations that require the response of Avalon and/or government;
- ▶ Support the NSMA's efforts to protect the traditional environmental interests on which they rely;
- ▶ Support Avalon, Canada, and GNWT in their respective efforts to protect the environment;
- ▶ Review and monitor the environmental performance of the Project using technical knowledge and Métis traditional knowledge;
- ▶ Make recommendations to anybody having regulatory or management responsibility for a matter, for the achievement of the purposes and guiding principles in this Agreement;
- ▶ Facilitate programs to provide information to and consult with the members of the NSMA;
- ▶ Participate as an intervener, as appropriate for the achievement of its mandate, in regulatory processes and other legal processes; and
- ▶ Exist until the agreement comes to an end (i.e., when the site is fully closed and reclaimed).

# Recommendation 5: Independent Monitoring Agency

The Board recommends the creation of an independent monitoring agency during the negotiation and signing of the Environmental Agreement prior to the issuance of a Production Water License.





# Recommended measures

1. Barge Review Panel
2. Caribou working group
3. WEMMP, AEMP, & AQMMP measures
4. Independent TK expert
5. Independent regulatory mechanism