Meliadine Extension

Nunavut Water Board Technical Meeting

ᑕᓯᕐᔪᐊᖅ ᐅᐃᒍᒋᐊᕐᓂᖓ

ᓄᓇᕗᕐᒥ ᐃᒪᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᓂᖓ

October 12-13, 2023

Rankin Inlet, NU

ᐅᑭᐅᓛᑦ 12-13, 2023

ᑲᖏᕐᖠᓂᖅ, ᓄᓇᕗᑦ

AGNICO EAGLE

PRESENTATION SUMMARY

ᑕᑯᕿᓐᓈᕿᒥᒃ ᐱᔾᔪᑎᓕᒃ

- Meliadine Extension Description
- Public Engagement and Community Response Update
- Technical Comments
  - Summary
  - Fisheries
  - Water Model
  - Meliadine Lake / AEMP
  - In-pit Deposition Alternative
  - Security
- Conclusion

- ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ
- ᐃᓄᓗᒃᑖᓂᒃ ᐃᓚᐅᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ ᓄᓇᓕᖕᒧᑦ ᐅᐸᓘᑕᐅᔪᓄᑦ ᐅᑉᓗᒥᒨᓕᖅᑐᐃᓂᖅ
- ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᑦ
  - ᓇᐃᓈᖅᓯᒪᔪᖅ
  - ᐃᖃᓗᓕᕆᓂᖅ
  - ᐃᒪᒧᑦ ᐱᓕᕆᐊᖅ
  - ᑕᓯᕐᔪᐊᖅ/AEMP
  - ᓄᓇᒥᑦ ᐃᓗᑦᑐᖅᓯᒪᔪᒧᐊᖅᓯᓂᖅ - ᐋᖅᕿᒃᓯᓂᖅ
  - ᐅᐊᔅᓯᓈᑦ
- ᖃᐅᔨᓴᐅᔪᖅ

MELIADINE MINE – HISTORY

- **Project Certificate**
  - **2015:** issuance of Project Certificate No.006
  - **2018:** Project Certificate Amendment 001
  - **2022:** Project Certificate Amendment 002
  - **2023:** Project Certificate Amendment 003, in progress

- **Water Licence**
  - **2016:** issuance of Water Licence 2AM-MEL1631
  - **2021:** Water Licence Amendment

ᑕᓲᕿᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᖅ - ᐱᔾᕿᑎᖃᖅᑐᑦ

- **ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᖅ**
  - **2015:** ᑐᓂᔭᐅᓂᖓ ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᖅ ᓈᓴᐅᑎ 006
  - **2018:** ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᕐᒥᑦ ᐋᖅᕿᒋᐊᖅᓯᓂᖅ 001
  - **2022:** ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᕐᒥᑦ ᐋᖅᕿᒋᐊᖅᓯᓂᖅ 002
  - **2023:** ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᕐᒥᑦ ᐋᖅᕿᒋᐊᖅᓯᓂᖅ 003

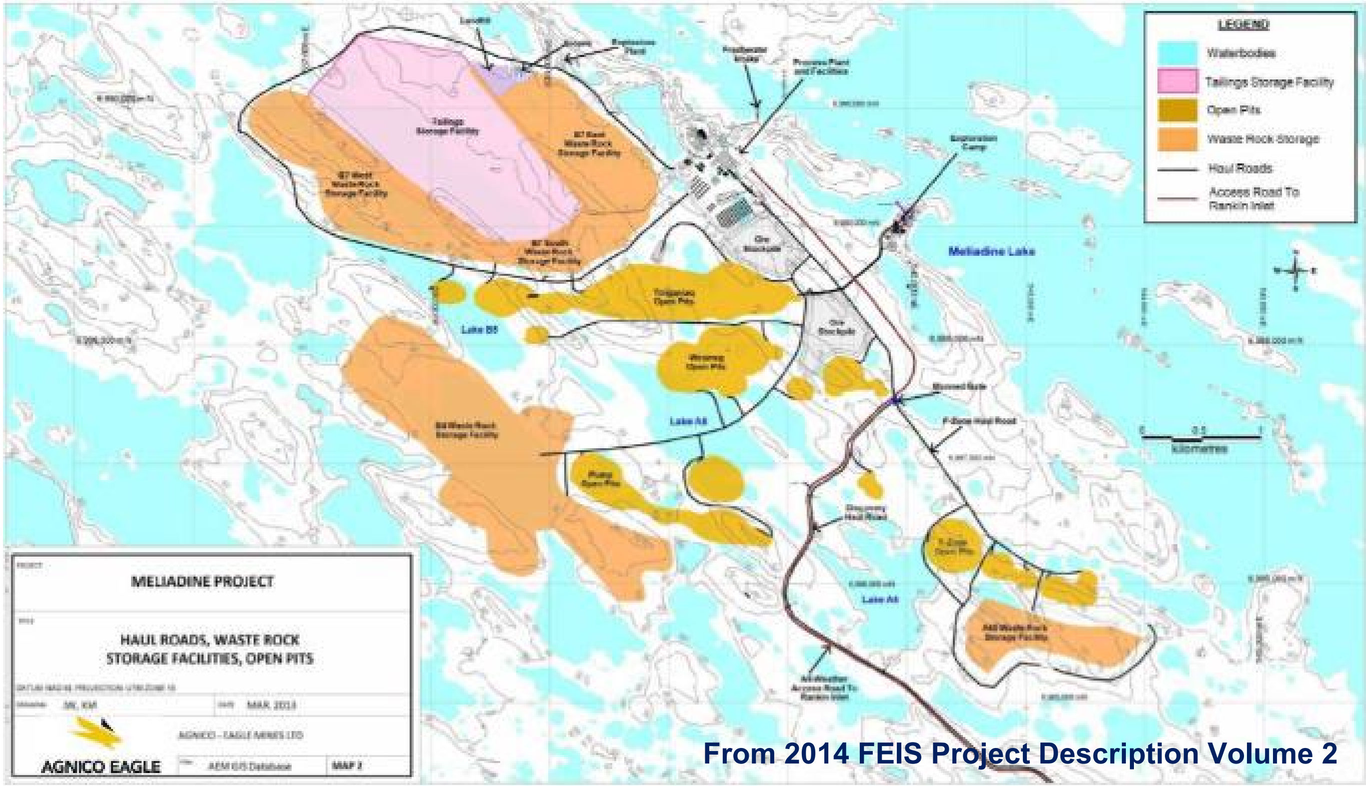
- **ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯ**
  - **2016:** ᑐᓂᔭᐅᓂᖓ ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯ 2AM-MEL1631
  - **2021:** ᐃᒪᕐᒥᒃ ᓚᐃᓴᓐᓯᒥᒃ ᐋᖅᑭᒋᐊᖅᓯᓂᖅ

2014 FEIS HISTORY

2014 FEIS-ᒥᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ

- 2014 assessment included:
  - Tiriganiaq deposit using open pit and underground mining methods
  - Pump, F Zone, Wesmeg, and Discovery deposits using open pit methods
  - All-weather access road
  - Discovery road
  - Ore processing (8,500 tpd)

- 2014 ᖃᐅᔨᓴᐃᓂᕐᒥᑦ ᐃᓚᐅᔪᑦ:
  - ᑎᕆᒐᓂᐊᕐᒥᑦ ᐱᑕᓂᒃ ᐊᑐᖅᖢᑎᒃ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖓᔪᒥᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ
  - Pump-ᒥᑦ, F Zone-ᒥᑦ, Wesmeg-ᒥᑦ, ᐊᒻᒪᓗ Discovery-ᒥᑦ ᐱᑕᓖᑦ ᐊᑐᖅᖢᑎᒃ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖓᔪᒥᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ
  - ᐅᑭᐅᒧᒃᑖᖅ ᐊᖅᑯᑎ
  - ᑎᒃᑲᕗᓇ (Discover) ᐊᖅᑯᑎ
  - ᓴᕕᒃᓴᐅᑉ ᐱᓕᕆᐊᖑᓂᖓ (8,500 tpd)



From 2014 FEIS Project Description Volume 2

WATER LICENCE HISTORY

ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯ

Approved Water Licence

- Only open pit and underground mining of the Tiriganiaq deposit
- Operations to 2027 (plus initial closure to 2031)

2020 Water Licence Amendment

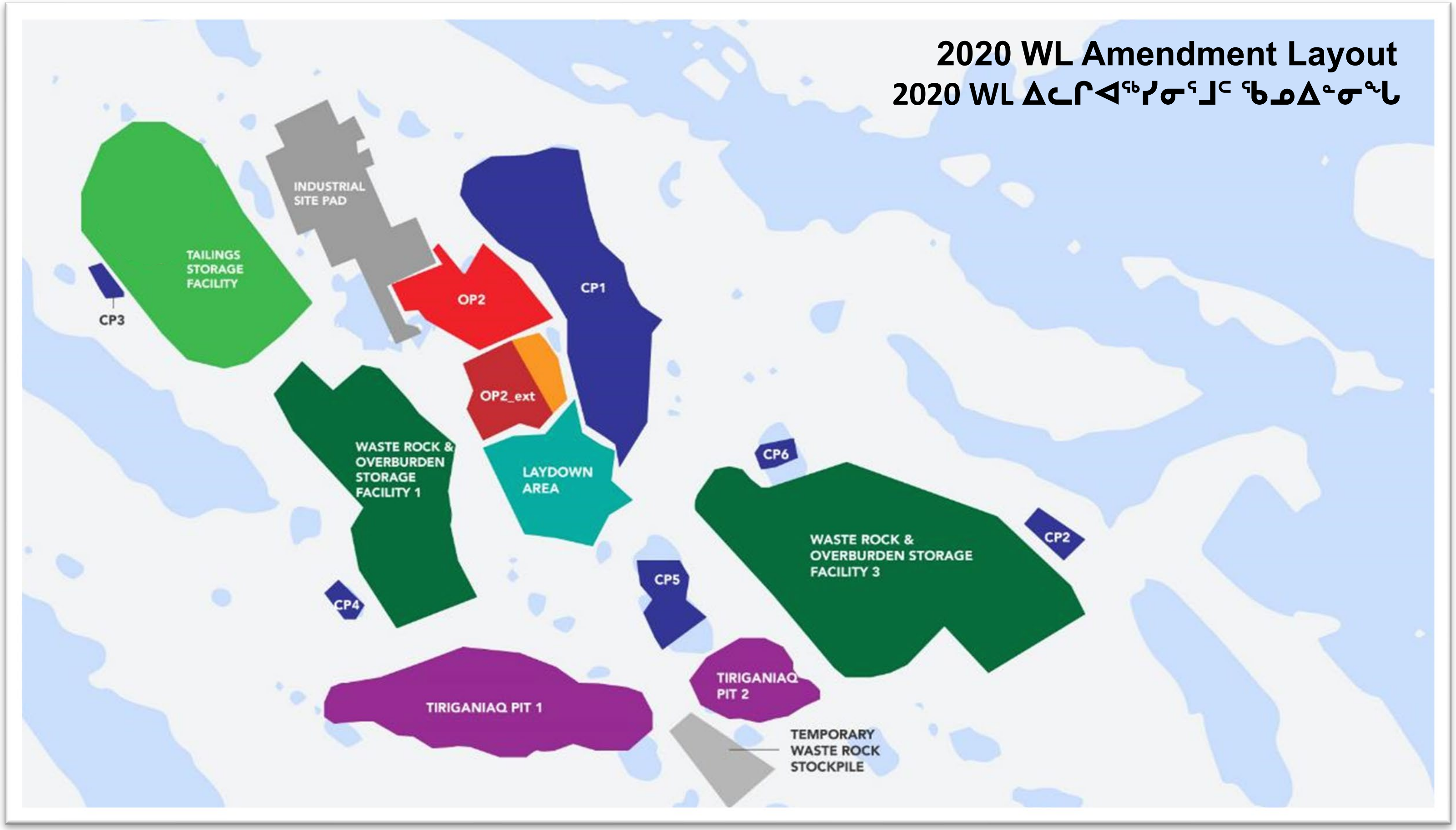
- Construction of access roads
- Additional laydown areas
- Updated waste management strategy

ᐊᖏᖅᑕᐅᓯᒪᔪᑦ

- ᐅᒃᑯᐃᖓᕙᒥᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᕐᒧᑦ ᑎᕆᒐᓂᐊᖅ ᐱᑕᓕᒃ
- ᐊᐅᓚᓐᓃᑦ 2027–ᒧᑦ (ᐅᒃᑯᐊᖅᐸᓪᓕᐊᑎᓪᓗᒍᓗ 2031–ᒧ)

2020 ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯᒥᒃ ᐋᖅᑭᒋᐊᖅᓯᓂᖅ

- ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᐊᑉᕐᑯᓯᐅᕐᓗᑕ;
- ᐱᕐᑯᑎᓄᑦ ᐃᓂᒃᓴᖅᕐᕕᒃᑲᓐᓂᖅ;
- ᐅᑉᓗᒥᒎᓕᖅᑐᖅᓯᒪᔪᖅ ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᖃᓄᖅᑑᕈᑎ



MELIADINE EXTENSION FOR WATER LICENCE AMENDMENT

ᑕᓯᕐᔪᐊᕐᒧᑦ ᐅᐃᒍᕆᐊᕐᓂᖅ ᐃᒪᕐᒥᒃ ᓚᐃᓴᓐᓯᒥᒃ ᐋᕿᒋᐊᖅᓯᓂᖅ

- Continue to mine open pit and underground at Tiriganiaq
- Initiate open pit mining at previously assessed and approved Pump, F Zone, Wesmeg, and Discovery deposits
- Include underground mining of Pump, F Zone, and Discovery deposits
- Extend existing underground mining of Tiriganiaq-Wolf
- Extend the mine of life to 2043

- ᐅᔭᕋᒃᑕᕐᓂᖅ ᑲᔪᓯᓗᓂ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖓᔪᒥᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᑎᕆᒐᓂᐊᕐᒥᑦ
- ᐱᕆᐊᖅᑎᓪᓗᒍ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖓᔪᒥᑦ ᐅᔭᕋᒃᑕᕐᓂᖅ ᖃᐅᔾᔭᖅᑕᐅᕌᓂᓚᐅᖅᑐᓂᑦ ᐊᒻᒪᓗ ᓈᒻᒪᒋᔭᐅᓯᒪᔪᓂᑦ Pump-ᒥᑦ, F Zone-ᒥᑦ, Wesmeg-ᒥᑦ, ᐊᒻᒪᓗ Discovery-ᒥᑦ ᐱᑕᓕᖕᓂᑦ
- ᐃᓚᐅᓗᓂ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᖅ Pump-ᒥᑦ, F Zone-ᒥᑦ, ᐊᒻᒪᓗ Discovery-ᒥᑦ ᐱᑕᓕᖕᓂᑦ
- ᐅᐃᒍᕆᐊᕐᓗᒍ ᑕᐃᒪᐅᔪᖅ ᐱᑕᓕᒃ ᑎᕆᒐᓂᐊᖅ-ᐊᒪᕈᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ
- ᐅᐃᒍᕆᐊᕐᓗᒍ ᐅᔭᕋᒃᑕᕆᐊᑉ ᐊᐅᓛᕐᓂᖓ 2043-ᒧᑦ ᑎᑭᓪᓗᒍ

MELIADINE EXTENSION SEQUENCING

ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᕐᒧᑦ ᐱᕙᓪᓕᐊᔭᐅᓂᖓ

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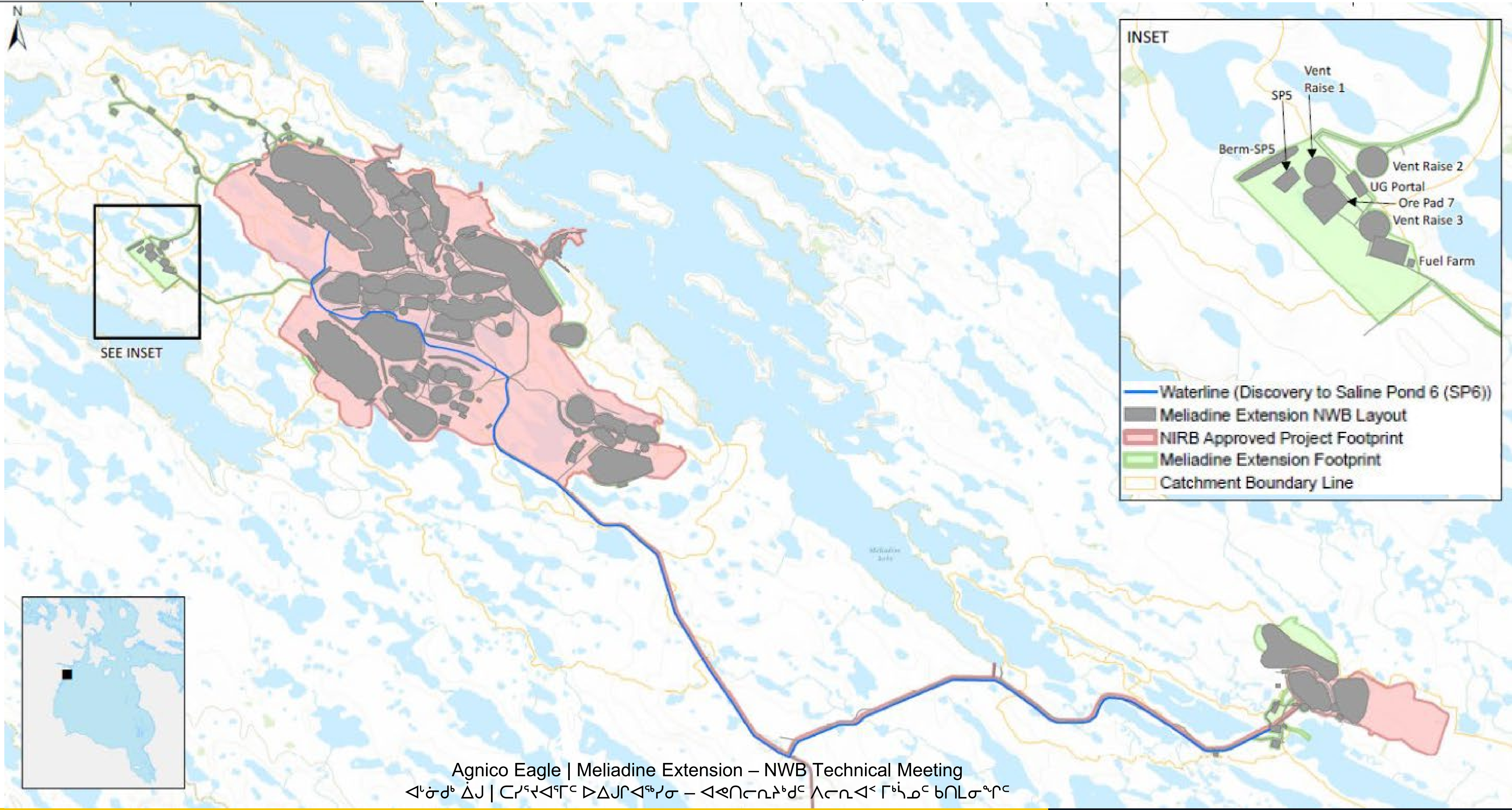
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047-2050	2051-2060
Approved Mining																													
Tiriganiaq Deposit	■	■	■	■	■																								
Construction																													
Infrastructure					■	■	■	■	■	■	■	■	■																
Dewatering & Fish out					■	■	■	■	■	■																			
Tiriganiaq Deposit																													
Open Pit					■	■	■	■										■	■	■	■	■	■	■					
Underground					■	■	■	■	■	■	■	■	■	■	■	■	■	■											
Wesmeg Deposit																													
Open Pit					■		■	■	■	■	■							■	■	■	■	■	■						
Pump Deposit																													
Open Pit									■	■	■	■	■	■	■	■	■												
Underground										■	■	■	■	■	■	■													
F Zone Deposit																													
Open Pit											■	■	■	■	■	■	■												
Underground														■	■	■	■	■	■	■									
Discovery Deposit																													
Open Pit												■	■	■	■	■	■												
Underground							■	■	■	■	■	■																	
Tiriganiaq-Wolf Mining Area																													
Underground															■	■	■	■	■	■	■	■	■	■					
Closure																													
Infrastructure																									■	■	■		
Flooding																									■	■	■	■	
Post-Closure																													
Monitoring																													■

MELIADINE EXTENSION – NIRB APPROVED FOOTPRINT VS MELIADINE EXTENSION

ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ - ᐊᐅᑎᓕᕆᔨᒃᑯᓐᓄᑦ ᓈᒻᒪᒋᔭᐅᔪᖅ ᐃᓂᐅᔪᖅ ᑕᐅᑐᙳᖅᓱᒍ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ



MELIADINE EXTENSION – REFINED SITE LAYOUT

ᑕᓯᕐᔪᐊᕐᒥ ᐅᐃᒍᒋᐊᕐᓂᖓ – ᓇᓗᓇᐃᖅᓯᒪᔪᒥᒃ ᐃᓂᐅᑉ ᖃᓄᐃᖓᓂᖓ

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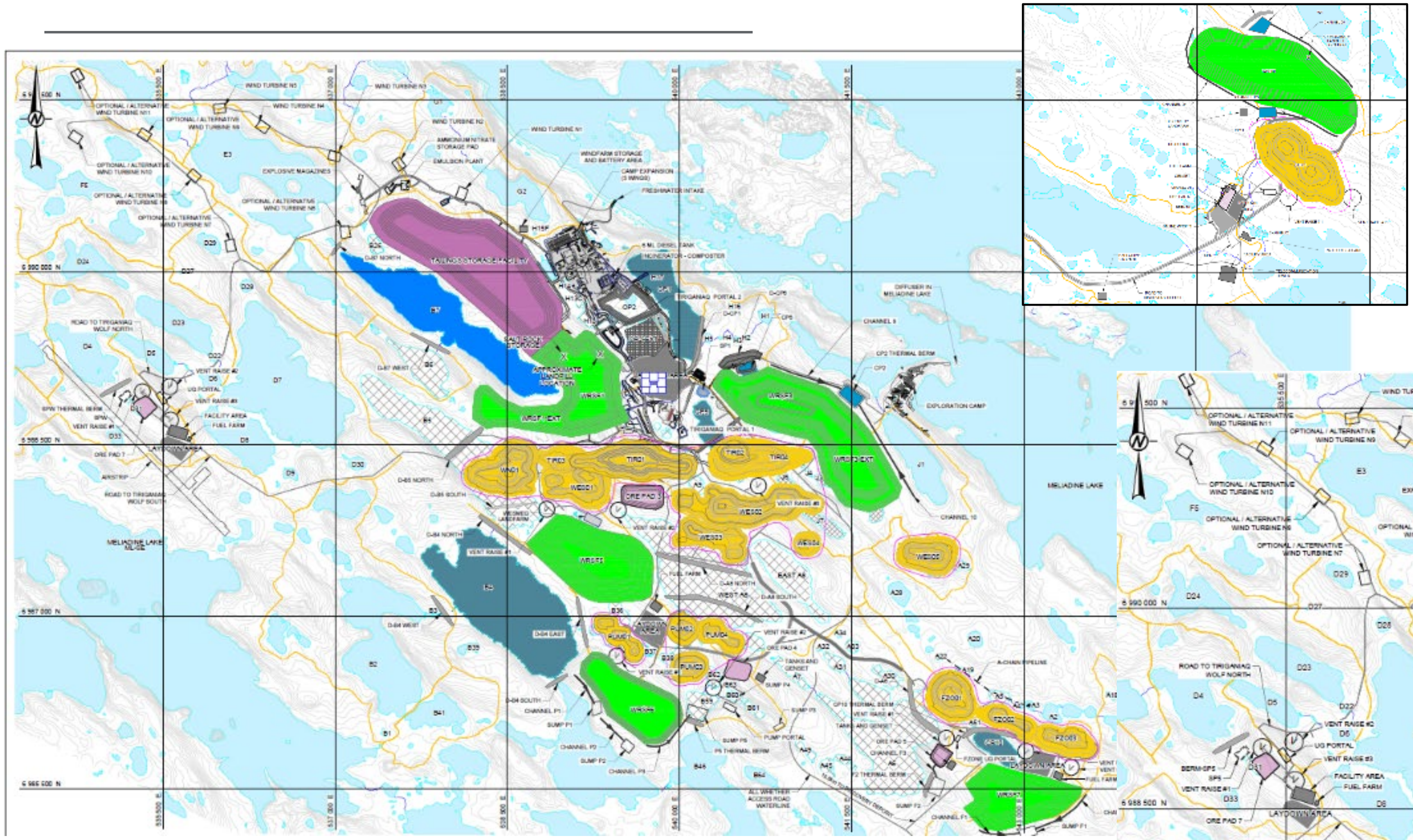
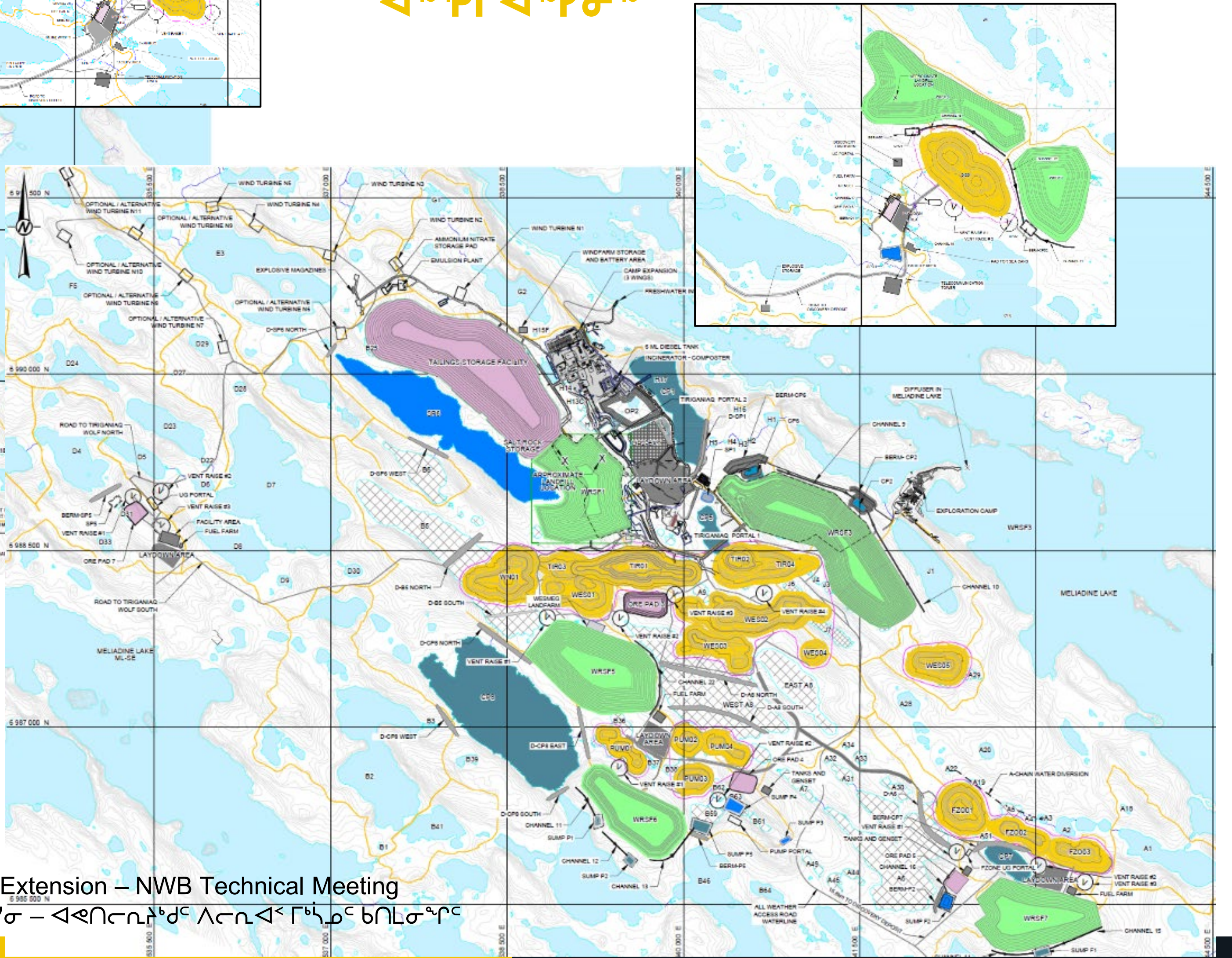


NIRB – 2022 FEIS Addendum

ᐊᕙᑎᓕᕆᔨᒃᑯᑦ – 2022 FEIS-ᒧᑦ ᑎᑎᖅᖃᖅ ᐃᓚᓕᐅᑎᓯᒪᔪᖅ

NWB – Water Licence Amendment

ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔨᒃᑯᑦ – ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯᒥᒃ ᐋᖅᑭᒋᐊᖅᓯᓂᖅ



MELIADINE EXTENSION – ALTERNATIVE IN-PIT DISPOSAL

ᑕᓯᕝᔪᐊᕐᒥᑦ ᐅᐃᒍᓯᐊᖅᓯᓂᖅ - ᐊᑐᖅᑕᐅᔪᖕᓇᖅᑐᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓄᑦ ᐃᓕᐅᖅᖃᐃᓂᕐᒧᑦ

- ᕿᒥᕐᕈᓂᖅ ᐃᓂᐅᔪᓂᒃ ᓄᓇᒥᑦ ᐃᓗᑦᑐᖅᓯᒪᔪᓂᑦ ᕿᒪᒃᑎᑦᑐᓄᑦ ᐊᒻᒪᓗ ᐊᒃᑕᑰᖅᑕᐅᔪᑦ ᐅᔭᖅᖃᐃᑦ ᐃᓕᔭᐅᓂᖏᓐᓄᑦ

- ᐃᑲᔫᑏᑦ
  - ᐱᐅᓯᑎᐊᕐᓗᒍ ᐅᔭᕋᒃᑕᕆᐊᑉ ᐃᓂᑎᔭᙵ
  - ᐃᓂᐅᔫᑦᑐᖅ ᐊᒃᑐᖅᑕᐅᓚᐅᖅᓯᒪᓂᒃᑐᒥᑦ
  - ᒥᒃᓴᑎᐊᖅᓯᔪᖅ ᖄᖓᓂᑦ ᐃᓂᐅᔪᒥᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᖓᓄᑦ

- Evaluating locations for in-pit tailings and waste rock deposition

- Benefits
  - Optimize the site footprint
  - Within areas that has previously been impacted
  - Reduces the surface area impacted

Public Engagement and Community Response Update

ᐃᓄᓗᒃᑖᓂᒃ ᐃᓚᐅᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ ᓄᓇᓕᖕᒧᑦ ᐅᐸᓘᑕᐅᔨᓄᑦ ᐅᑉᓗᒥᒨᓕᖅᑐᐃᓂᖅ

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MELIADINE EXTENSION - ENGAGEMENT EVENTS

- 12 focus group meetings
- 12 meetings
- 4 public sessions at the tent at kilometer 15
- 5 hybrid in-person-virtual public sessions
- Public Open houses in
  - 3 Rankin Inlet
  - 1 Coral Harbour
  - 1 Whale Cove
- 6 Site Visits

ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ - ᐃᓚᐅᖃᑕᐅᑎᑦᑎᓃᑦ

- 12 ᑕᐅᑐᒐᖃᕐᓂᕐᒧᑦ ᑲᑎᒪᑎᑦᑎᓃᑦ
- 12 ᑲᑎᒪᓃᑦ
- 4 ᑭᑐᑐᐃᓐᓇᓂᒃ ᑲᑎᒪᑎᑦᑎᓃᑦ ᑐᐱᕐᒥᑦ ᑭᒦᒥᑕ 15-ᒥᑦ
- ᑕᓪᓚᒪᐃᑦ ᐃᓚᖏᑦ ᑕᒡᕿᐅᑉᐳᑎᒃ-ᖃᕆᑕᐅᔭᒃᑯᑦ ᑭᑐᑐᐃᓐᓇᓂᒃ ᑲᑎᒪᑎᑦᑎᓃᑦ

- ᑭᑐᑐᐃᓐᓇᓄᑦ ᐅᒃᑯᐃᖖᒋᑦᑎᔪᑦ
  - 3 ᑲᖏᖅᖠᓂᖅ
  - 1 ᓴᓪᓕᖅ
  - 1 ᑎᑭᕋᕐᔪᐊᖅ
- 6 ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᑕᑯᔭᖅᑐᐃᓃᑦ

*as of August 18, 2023
ᐊᑯᓪᓗᕈᕐᕕᒃ 18, 2023 ᐱᒋᐊᕐᓗᒍ

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Water Management Engagement 2023

- Discussions surrounding water quality and the health of Meliadine Lake led to the collaborative idea with the KivIA of a site visit to Meliadine Mine
- Firsthand understanding of how water is managed at site
- Included a tea tasting of Meliadine Lake Water (water intake) and accommodations complex water (treated tap water)
- Overview of water quality and tea properties that affect the colour and clarity of brewed tea

ᐃᒪᕐᒥᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐃᓚᐅᖃᑕᐅᑎᑦᑎᓂᖅ 2023

- ᐅᖃᓪᓗᓇᑦᓴᐅᑎᓂᖃᓚᐅᖅᑐᑦ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓᓄᑦ ᐊᒻᒪᓗ ᖃᓄᐃᖕᒋᑦᑎᐊᕐᓂᖓᓄᑦ ᑕᓯᕐᔪᐊᑉ ᐊᓗᖓ ᐱᓕᕆᖃᑎᒌᓗᒋᑦ ᐃᓱᒪᒋᔭᐅᔪᖅ ᑭᕙᓪᓕᕐᒥᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒋᒃᑯᑦ ᐅᔭᕆᒃᑕᕆᐊᕐᒥᑦ ᑕᑯᔭᖅᑐᐃᓂᐊᕐᓗᑎᒃ
- ᐃᖕᒥᖕᓂᒃ ᑐᑭᓯᐅᓕᕐᓂᐊᕐᓗᒍ ᖃᓄᖅ ᐃᒪᖅ ᐊᐅᓚᑕᐅᖕᒪᖖᒋᑦ ᐅᔭᕆᒃᑕᕆᐊᕐᒥᑦ
- ᐃᓚᐅᓚᐅᖅᑐᑦ ᒌᑐᖅᑎᑕᐅᕐᓗᑎᒃ ᖃᓄᐃᒻᒪᖖᒋᑦ ᖃᐅᔨᓂᐊᕐᓗᑎᒃ ᑕᓯᕐᔪᐊᑉ ᐃᒪᖕᒐᓂᑦ (ᐃᒪᖅ ᐱᔭᐅᖃᑦᑕᖅᑐᖅ) ᐊᒻᒪᓗ ᐃᓂᐅᕗᒥᑦ ᐃᒪᖅ ᐊᑐᖅᑕᐅᕗᖅ (ᐱᓕᕆᐊᖑᓯᒪᕗᖅ ᐃᒪᖅ ᑯᕓᕗᒥᑦ)
- ᐱᔾᔪᑎᖃᖅᑐᖅ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓᓂᑦ ᐊᒻᒪᓗ ᒌᑐᖅᑕᐅᕗᒦᑦᑐᑦ ᑲᓚᖓᓂᒃ ᐊᓯᐊᙳᖅᓯᕗᑦ ᐊᒻᒪᓗ ᑲᑭᐊᖕᓂᖓᑕ ᒌᓕᐅᖅᑕᐅᕘᑉ

Technical Comment Summary

ᐱᓕᓂᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖅᑲᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ

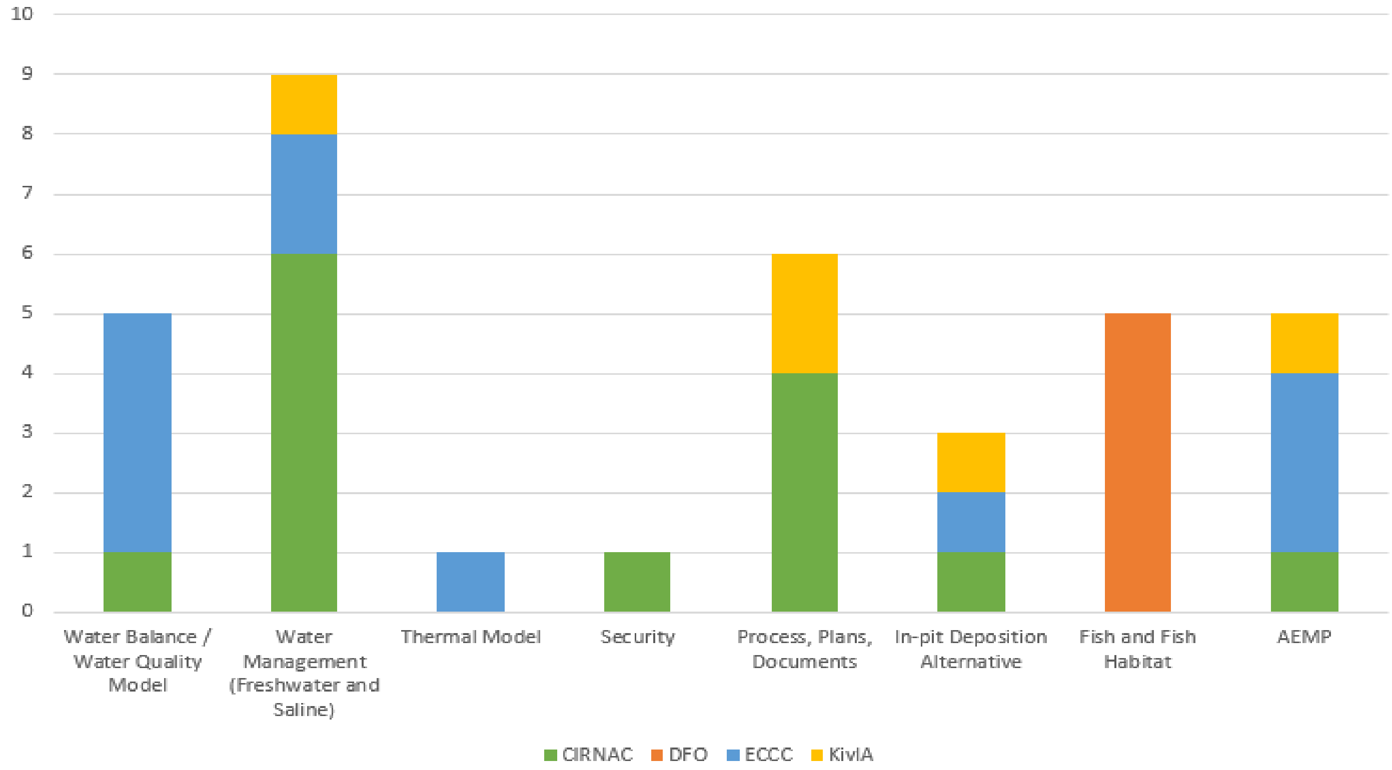
AGNICO EAGLE

TECHNICAL COMMENT SUMMARY

ᐱᓕᕆᐊᒃ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ

AGNICO EAGLE

Resolved through Response to Technical Comments	Resolved based on Current Operations / Annual Reporting	Resolved through Term and Condition, Commitment, NIRB Assessment	Resolved through Existing Conditions of Water Licence for WBWQ Forecast Updates	Resolved through Fisheries Act / Offsetting Plan
KivIA-TRC-04	KivIA-TRC-02	KivIA-TRC-01	KivIA-TRC-05	DFO-TRC-01
CIRNAC-R-03	KivIA-TRC-03	CIRNAC-R-01	CIRNAC-R-04	DFO-TRC-02
CIRNAC-R-05	CIRNAC-R-08	CIRNAC-R-02	ECCC-TRC-03	DFO-TRC-03
CIRNAC-R-06	CIRNAC-R-13		ECCC-TRC-09	
CIRNAC-R-07	ECCC-TRC-04			
CIRNAC-R-09				
CIRNAC-R-10				
CIRNAC-R-11				
CIRNAC-R-12				
CIRNAC-R-14				
ECCC-TRC-01				
ECCC-TRC-02				
ECCC-TRC-05				
ECCC-TRC-06				
ECCC-TRC-07				
ECCC-TRC-08				
ECCC-TRC-10				
ECCC-TRC-11				
DFO-TRC-04				
DFO-TRC-05				



TECHNICAL COMMENT SUMMARY – FISHERIES

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᖃᓗᓕᕆᓂᖅ

AGNICO EAGLE

- Comprehensive understanding of the fish communities and fish habitat within the local study area
- Extensive fisheries studies since 1994
  - Sampled more than 205 waterbodies and 110 watercourses since 2011; and,
  - Undertaken more than 1500 individual fishing events
- Nine freshwater fish species occur in the study area.
- No new species have been identified in the study area in more than 25 years

Common Name (Taxonomic Name) ᑕᐃᔭᐅᒐᔪᒃᑐᖅ (ᑖᒃᓴᓈᒥᒃ ᐊᑎᖅ)	
Arctic Char (*Salvelinus alpinus*)	ᐃᖃᓗᒃᐱᒃ
Lake Trout (*Salvelinus namaycush*)	ᐃᖑᕋᖅ
Arctic Grayling (*Thymallus arcticus*)	ᓱᓗᒃᐸᐅᒐᓕᒃ
Round Whitefish (*Prosopium cylindraceum*)	ᐊᒥᕋᕐᓗᒃᑐᖅ
Burbot (*Lota lota*)	ᑎᒃᑖᓕᒃ
Cisco (*Coregonus artedi*)	ᐊᒥᕋᕐᓗᒃᑐᖅ
Ninespine Stickleback (*Pungitius pungitius*)	ᑲᑭᓚᓴᐃᑦ
Slimy Sculpin (*Cottus cognatus*)	ᑲᓇᔪᕐᓚᐃᑦ
Threespine Stickleback (*Gasterosteus aculeatus*)	ᑲᑭᓚᓴᐃᑦ

- ᑐᑭᓯᐊᓂᖃᑦᑎᐊᕐᓗᓂ ᐃᖃᓗᐃᑦ ᓄᓇᓕᕐᑯᑎᙱᓐᓂ ᐊᒻᒪ ᐃᖃᓗᐃᑦ ᐃᓂᙱᓐᓂ ᖃᐅᔨᓴᖅᑕᐅᔫᑉ ᐃᓂᖓᓂ
- ᐱᓕᕆᓂᑯᖃᑦᑎᐊᖅᑐᖅ ᐃᖃᓗᓕᕆᓂᖅ 1994ᒥ ᐱᒋᐊᖅᓱᓂ
  - ᖃᐅᔨᓴᖅᑕᐅᓂᒃᑯᑦ 205 ᐃᒪᖃᕐᓃᑦ ᐊᒻᒪᓗ 110ᙳᔪᑦ ᐃᒪᕐᒥᒃ ᐃᓚᓐᓂᐊᖅᑕᐅᔪᑦ 2011-ᒥᑦ; ᐊᒻᒪ,
  - 1500-ᓂᒃ ᐃᖃᓗᒐᓱᙱᓂᖅ ᐱᓕᕆᐊᙳᓄᑦ
- ᕿᓚᙱᓗᐊᖅᑐᑦ ᐃᒪᑦᑎᐊᙱᒥ ᐃᖃᓗᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᕐᒦᑦᑐᑦ.
- ᓄᑖᓂᒃ ᐱᕈᖅᑐᓂᒃ ᐱᑕᖃᓚᐅᙱᑦᑐᖅ ᖃᐅᔨᓴᖅᑕᐅᔫᑉ ᐃᓂᖓᓂ 25 ᐅᑭᐅᑦ ᐃᓗᐊᓂ.

TECHNICAL COMMENT SUMMARY – FISHERIES

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᖃᓗᓕᕆᓂᖅ

- Anticipated impacts to fish and fish habitat are well documented and understood.
- Conservative approach to determining losses of fish and fish habitat
- Conservative Assumptions:
  - All impacts occur on day 1 of the extension project
  - More diverse fish communities
  - All impacts are a complete loss of fish habitat
  - Reduced flows to downstream areas are a complete loss of fish habitat
- Fish habitat loss calculations were based on the above assumptions.

- ᐊᒃᑐᐊᓂᖃᕋᓱᒋᔭᐅᔪᑦ ᐃᖃᓗᖕᓄᑦ ᐊᒻᒪᓗ ᐃᖃᓗᐃᑦ ᐃᓂᖏᓐᓄᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᑐᑭᓯᐊᔾᔭᐅᑉᓗᑎᒡᓗ.
- ᐊᑐᖅᑕᐅᔪᒪᔪᑦ ᖃᐅᔨᓂᐊᕐᓗᑎᒃ ᐅᑯᓂᖓ ᐃᖃᓗᐃᑦ ᓄᖑᓂᖏᑦ ᐊᒻᒪ ᐃᖃᓗᐃᑦ ᐃᓂᖏᑦ
- ᐃᓱᒪᒋᔭᐅᔪᑦ
  - ᐊᒃᑐᐃᓂᓗᒃᑖᑦ ᐅᐸᓗᕐᒥ ᐊᑕᐅᓯᕐᒥ ᐅᐃᒍᑎᐊᖅᓯᓂᕐᒥᒃ ᐱᓕᕆᐊᖅ
  - ᐊᖏᓂᖅᓴᖅ ᐃᖃᓗᐃᑦ ᓄᓇᖓ
  - ᐊᒃᑐᐃᓂᓗᒃᑖᑦ ᑕᒪᕐᒥᒃ ᐊᓯᐅᔪᑦ ᐃᖃᓗᐃᑦ ᐃᓂᖏᑦ
  - ᒥᑭᓕᒋᐊᖅᑕᐅᔪᖅ ᐃᒪᐅᑉ ᑯᕕᓂᖓ ᑰᒃᑯᑦ ᐃᓂᒋᔭᐅᔪᖅ ᐃᖃᓗᖕᓄᑦ ᐊᓯᐅᔪᑦ
- ᐃᖃᓗᐃᑦ ᐃᓂᖓ ᐃᓂᐅᔪᓂᒃ ᐊᓯᐅᔾᔨᓂᕐᒧᑦ ᓈᓴᐅᑎᕿᐸᔪᑎᑦ ᐊᑐᖅᓱᒍ ᖁᓛᓃᑦᑐᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ.

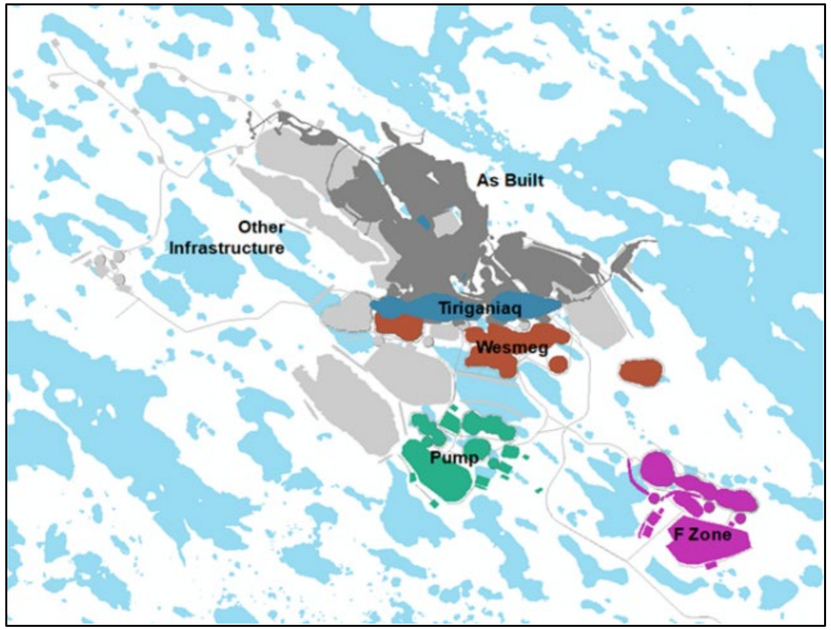


Table 2-5:
Open pit and underground mine water management schedule

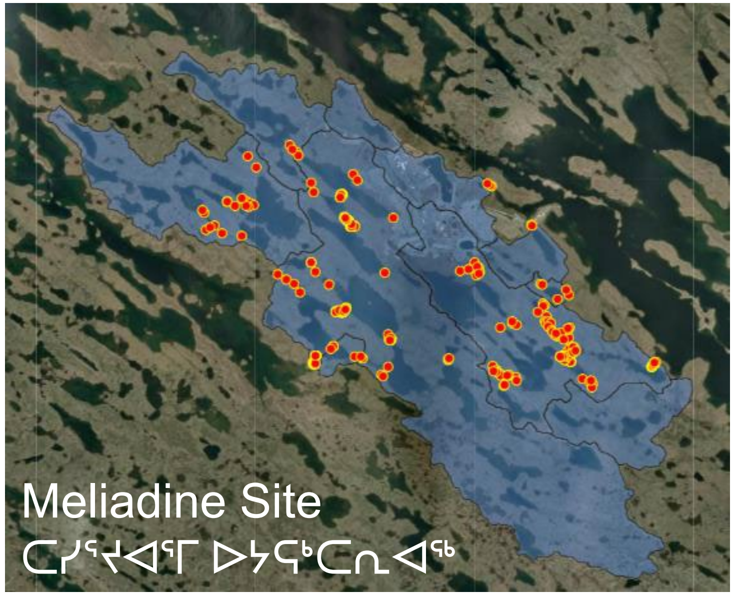
Calendar Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Mine Year	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Approved Mining	M	M	M	M	M																			
TIRI02	M	Saline contact water storage				M	M	D	D	D	D	D	D	D	D	D	D	D	x	x	x	x	x	x
TIRI01	-	M	M	M	M	M	M	M	D	D	D	D	D	D	D	D	D	D	x	x	x	x	x	x
TIRI03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	M	x	x	x
TIRI04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M
TIRI UG	-	-	-	-	U	U	U	U	U	U	U	U	U	U	U	U	U	U	x	x	x	x	x	x
TIRI-Wolf UG	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U	U	U
WES04	-	-	-	-	M	M	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
WES01	-	-	-	-	-	M	M	M	M	D	D	D	D	D	D	D	D	D	x	x	x	x	x	x
WN01	-	-	-	-	-	-	M	M	M	M	M	D	D	D	D	D	x	x	x	x	x	x	x	x
WES02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	M	x	x	x
WES03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	x	x	x
WES05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	x	x
PUMP03	-	-	-	-	-	-	-	-	M	M	M	D	D	D	D	D	x	x	x	x	x	x	x	x
PUMP01	-	-	-	-	-	-	-	-	-	M	M	M	x	x	x	x	x	x	x	x	x	x	x	x
PUMP02	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	x	x	x	x	x	x	x	x
PUMP04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	x	x	x	x	x	x	x
PUMP UG	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	x	x	x	x	x	x	x	x
F ZONE01	-	-	-	-	-	-	-	-	-	-	M	M	M	M	M	D	D	D	D	D	x	x	x	x
F ZONE02	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	M	D	D	D	x	x	x	x
F ZONE03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	D	D	D	x	x	x	x
F ZONE UG	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	x	x	x	x
Discovery	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	M	M	x	x	x	x	x	x	x
Discovery UG	-	-	-	-	-	-	U	U	U	U	U	U	x	x	x	x	x	x	x	x	x	x	x	x

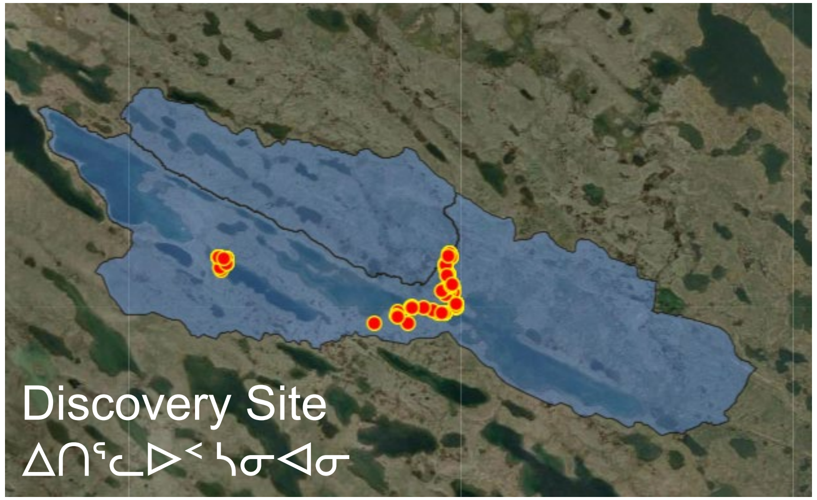
M = Open pit (OP) mining and dewatering
D = finished mining (OP), still dewatering
U = Underground mining
x = finished mining (UG or OP), no dewatering
- = Pre-mining

TECHNICAL COMMENT SUMMARY – FISHERIES – OFFSETTING PLAN

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᖃᓗᓐᓂᒃ – ᐋᖅᑭᒃᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ

- Extensive consultation with Fisheries and Oceans Canada to determine locations and types of data to be collected in 2023.
  - Focus on seasonal use of habitats
  - Connectivity during the freshet
- Detailed field data collection at Pistol Bay in support of the Meliadine Extension Offsetting Plan
  - Hydrology
  - Fisheries (Arctic Char)



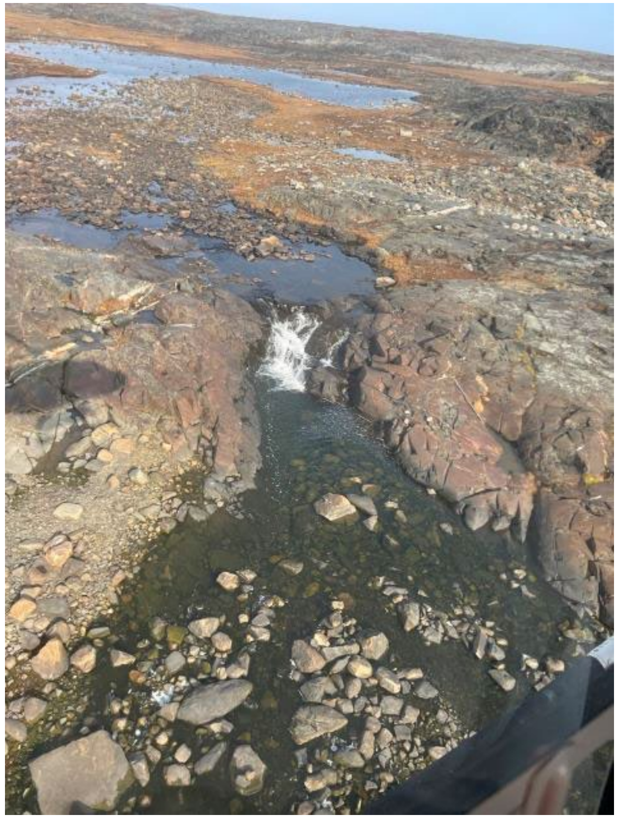


- ᑲᑎᒪᔾᔪᑕᐅᖃᑦᑕᖅᓯᒪᔪᑦ ᐃᖃᓗᓕᕆᔨᒃᑯᓐᓂ ᑲᓇᑕᒥ ᓇᓗᓇᐃᕐᓂᐊᕐᓗᓂ ᐃᓂᒋᔭᐅᔪᓂᒃ ᐊᒻᒪᓗ ᖃᓄᐃᑦᑑᓂᖏᓐᓂᒃ ᑲᑎᑕᐅᓯᒪᔪᓂᒃ 2023-ᒥ.
  - ᑕᐅᑐᙵᖃᕐᓗᓂ ᐅᑭᐅᑉ ᐃᓛᙵᒍᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᖏᓐᓂᒃ
  - ᑲᑎᖃᑦᑕᕐᓂᖅ ᐊᐅᒃᐸᓪᓕᐊᓂᕐᒥ
- ᑎᑎᕋᖅᓯᒪᔪᖅ ᑲᑎᑕᐅᓯᒪᔪᑦ ᐊᐅᓚᓗᒃᑑᑉ ᓄᓈᓂ ᐃᒃᔪᖅᑐᐃᑉᓗᑎᒃ ᑕᓯᕐᔪᐊᑉ ᐅᐃᒍᕆᐊᖅᓯᓂᙵᑕ ᐋᖅᑭᒃᓯᓂᐅᑉ ᐸᕐᓇᐅᑎᙵᓂᒃ
  - ᐃᒪᓕᕆᓂᖅ
  - ᐃᖃᓗᓕᕆᓂᖅ (ᐃᖃᓗᒃᐱᒃ)

TECHNICAL COMMENT SUMMARY – FISHERIES – OFFSETTING PLAN

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᕝᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᖃᓗᙱᒃ – ᐋᖅᑭᒃᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ

- Updates to the offsetting plan:
  - July 2022: Conceptual Plan (submitted to the NIRB)
  - January 2023: Detailed plan (submitted to DFO and the NWB)
  - June 2023: Updates included assumed presence based on nearby observations, losses due to reduced flows (submitted to DFO)
  - July 2023: Updates loss calculations to biomass (submitted to DFO and to the NWB in September)
- Final plan to be submitted with *Fisheries Act* Authorization Package (anticipated Q1 2024)



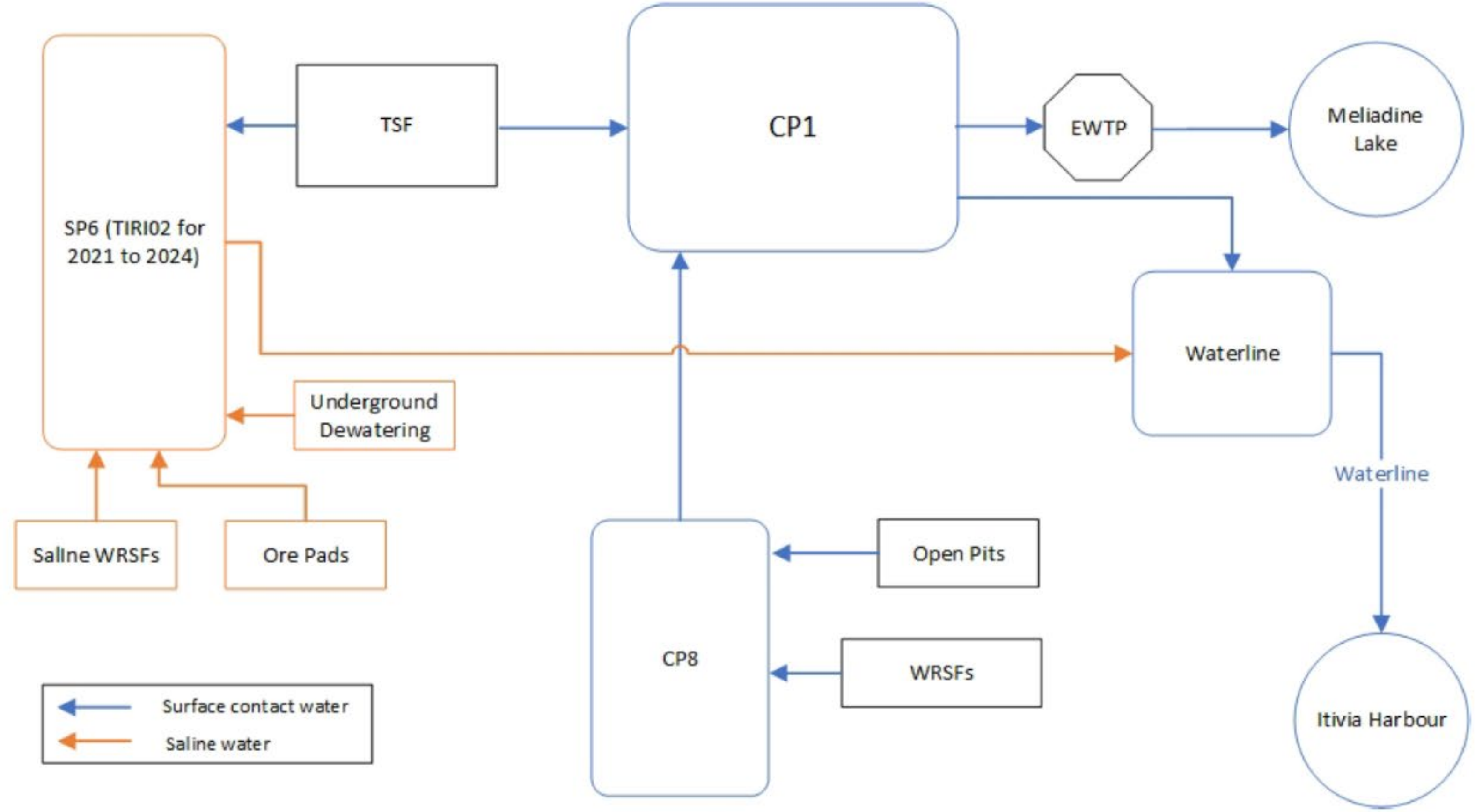
- ᐅᑉᓗᒥᒨᓕᖅᑕᐅᓯᒪᔪᒃ ᐋᖅᑭᒃᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ
  - ᔪᓚᐃᑦ 2022: ᑎᑎᕋᖅᑕᐅᓯᒪᔪᖅ ᐸᕐᓇᐅᑎ (ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓄᑦ)
  - ᒐᓐᓄᐊᕆ 2023: ᐸᕐᓇᒃᑕᐅᓯᒪᔪᖅ ᑎᑎᕋᖅᑕᐅᑦᑎᐊᖅᓯᒪᔪᑦ ᐸᕐᓇᐅᑎ (ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᐃᖃᓗᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ ᓄᓇᕗᑦᒥ ᐃᒪᓕᕆᔨᒃᑯᓐᓄᑦ)
  - ᒫᓐᓂ 2023: ᐅᑉᓗᒥᒨᓕᖅᑕᐅᓯᒪᔪᑦ ᐃᓚᐅᖃᑕᐅᓚᐅᖅᑐᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᑦ ᖃᓂᑦᑐᓂ, ᐊᓯᐅᔨᔭᐅᔪᑦ ᐱᔾᔪᑎᖃᖅᖢᑎᒃ ᐃᒪᐅᑉ ᑯᕕᓂᖓᓂᒃ ᒥᑭᓪᓕᕆᐊᖅᓯᒪᑎᓪᓗᒍ (ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓐᓄᑦ)
  - ᔪᓚᐃᑦ 2023: ᐅᑉᓗᒥᒨᓕᖅᑕᐅᓯᒪᔪᑦ ᐊᓯᐅᔨᔭᐅᓯᒪᔪᑦ ᓈᓴᐃᓂᒃᑯᑦ ᐸᐃᔫᒪᔅ (ᑐᓂᔭᐅᔨᒪᔪᖅ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ ᓄᓇᕗᑦᒥ ᐃᒪᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒥᕋᐃᔭᕐᕕᖕᒥ)
- ᑭᖑᓪᓕᖅᐹᕐᒥ ᐸᕐᓇᐅᑎ ᑐᓂᔭᐅᓚᐅᖅᑐᖅ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐱᕐᑯᔭᖓ ᐱᔪᓇᖅᑎᑦᑎᓂᖅ (ᓂᕆᐅᒋᔭᐅᔪᖅ Q1 2024-ᒥ)

TECHNICAL COMMENT SUMMARY – WATER MODEL

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖄᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᒪᒧᑦ ᐱᓕᕆᐊᖅ

- Site Water Management Flow Diagram

- ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᖅ ᑎᑎᕋᐅᔭᖅᓯᒪᔪᖅ



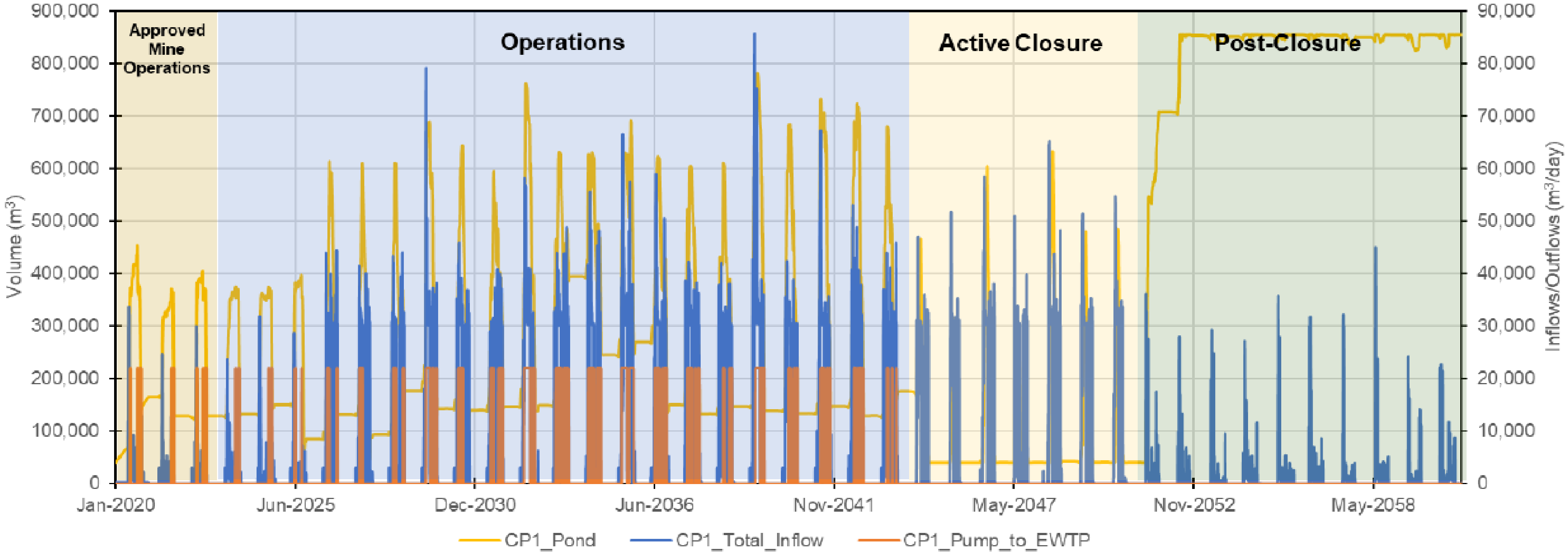
TECHNICAL COMMENT SUMMARY – WATER MODEL

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᒪᒧᑦ ᐱᓕᕆᐊᖅ

AGNICO EAGLE

- Pond volume predictions

- ᑕᓯᐅᑉ ᐅᖃᓕᒫᒐᖅ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ

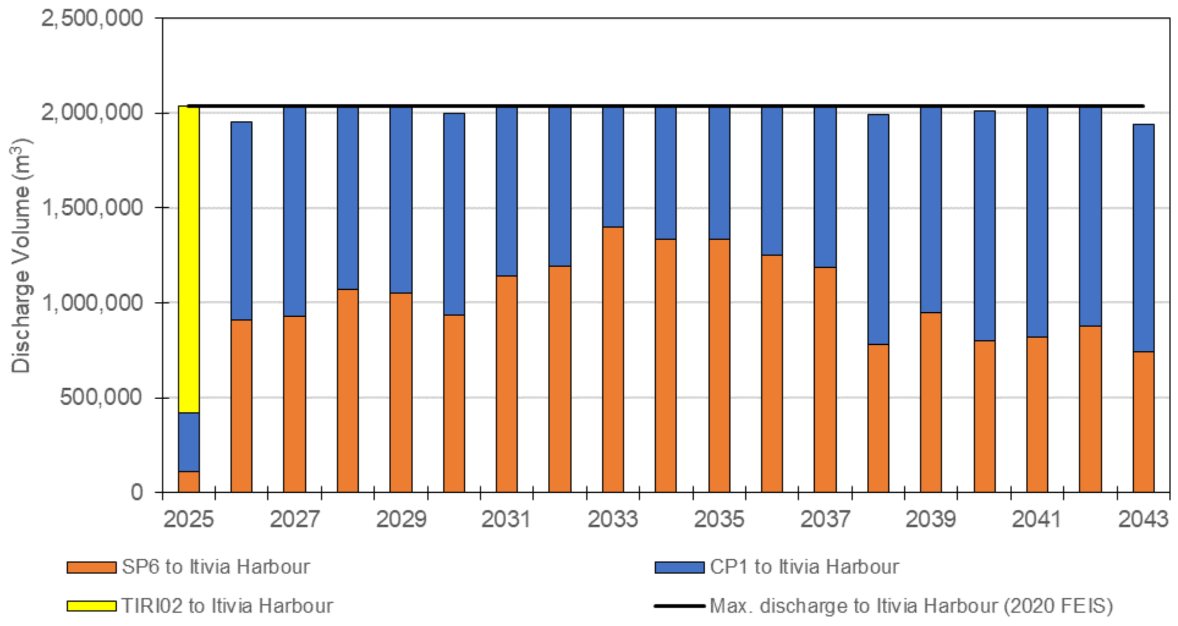


TECHNICAL COMMENT SUMMARY – WATER MODEL

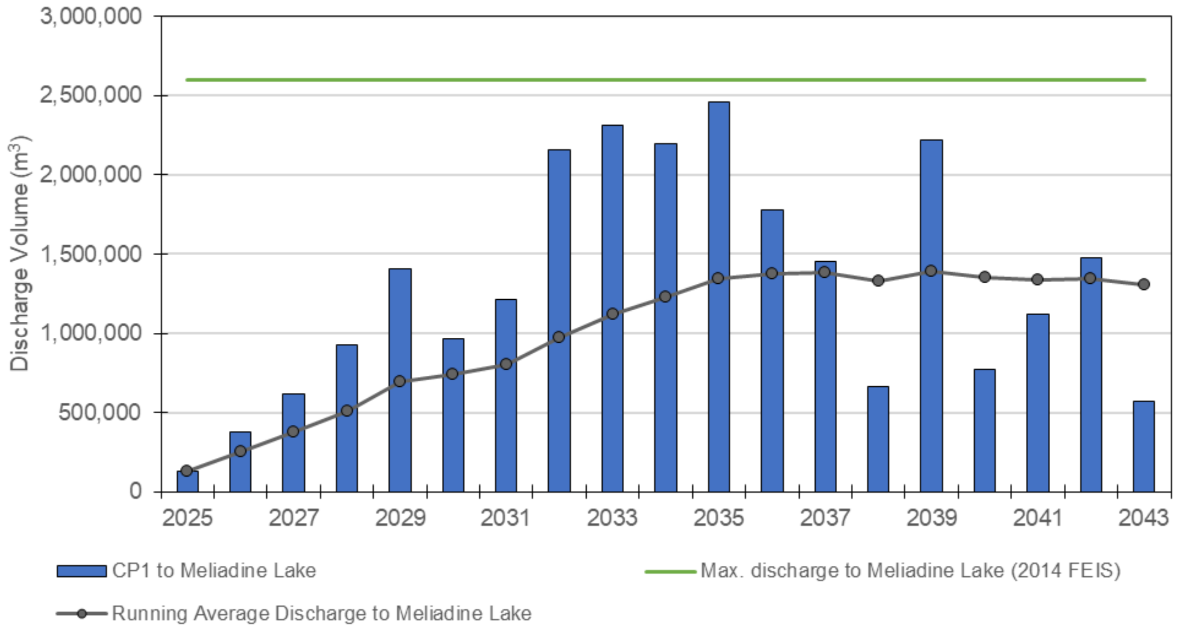
ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᒪᒧᑦ ᐱᓕᕆᐊᖅ

AGNICO EAGLE

- Discharge (saline water) to Itivia Harbour
- ᑯᕕᑦᑎᓂᖅ (ᑕᕆᐅᓕᒃ ᐃᒪᖅ) ᐃᑎᕕᐊᓄᑦ



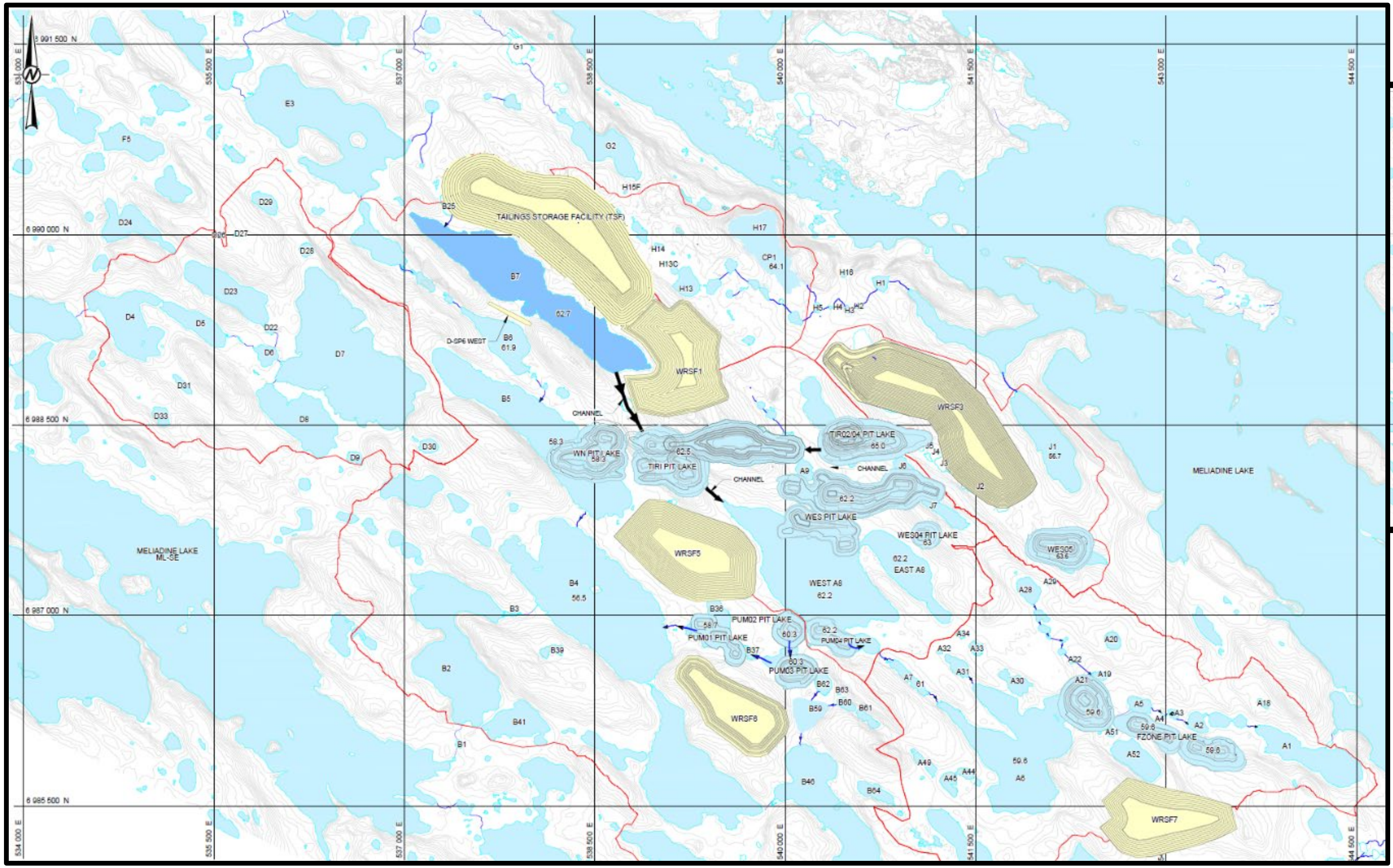
- Discharge (contact water) to Meliadine Lake
- ᑯᕕᑦᑎᓂᖅ (ᐊᒃᑐᖅᑕᐅᓯᒪᔪᒥᒃ ᐃᒪᕐᒥᑦ) ᑕᓯᕐᔪᐊᕐᒧᑦ



TECHNICAL COMMENT SUMMARY – WATER MODEL

ᐱᓕᕆᐊᕐ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᒪᒧᑦ ᐱᓕᕆᐊᖅ

AGNICO EAGLE



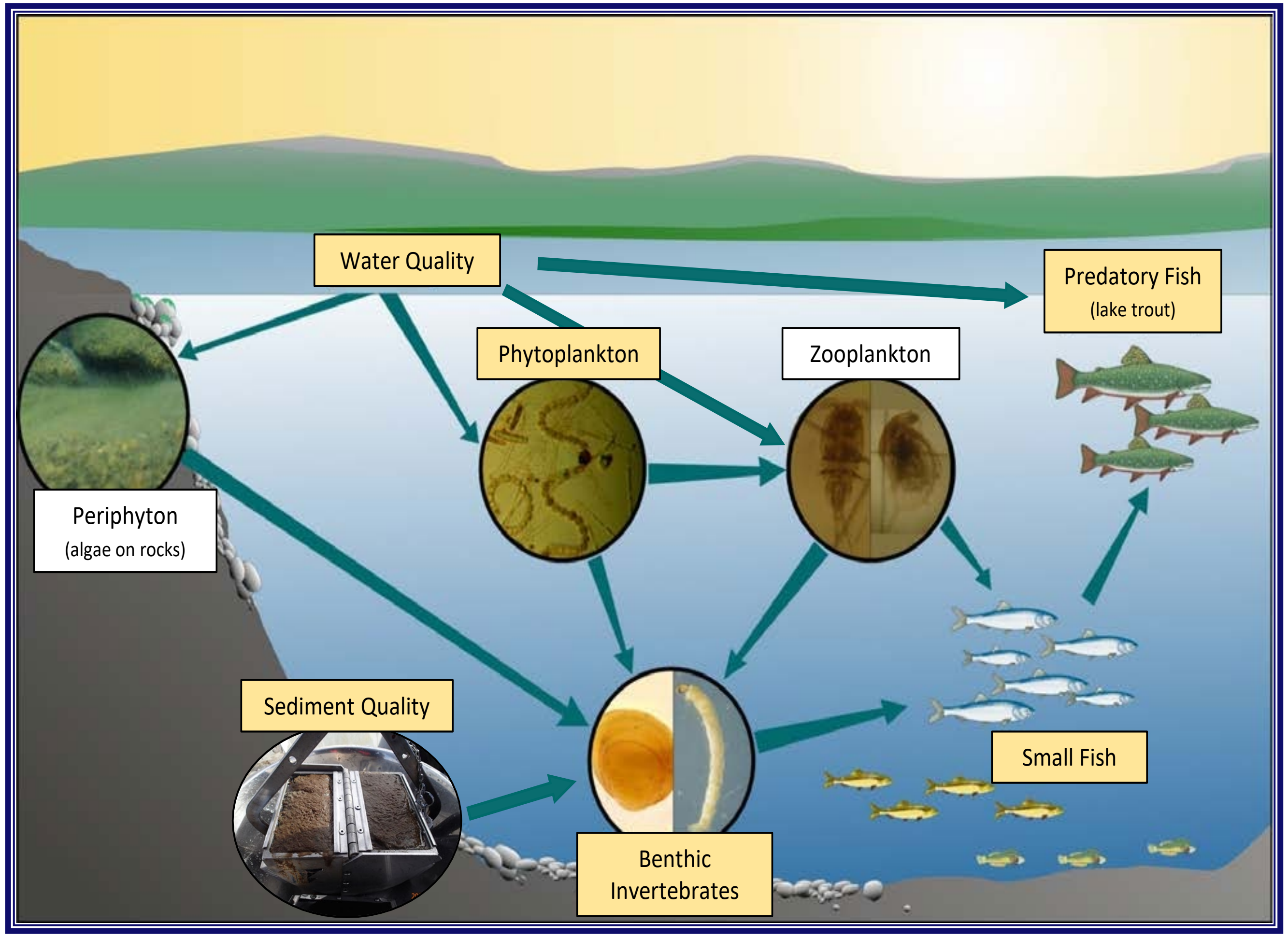
TECHNICAL COMMENT SUMMARY – AEMP

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᕙᓄᑦ ᓇᐃᓈᖅᓯᒪᕙᑦ – ᐃᒪᕐᒥᐅᑕᐃᑦ ᐊᒃᑐᖅᑕᐅᓂᖏᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᓕᕆᐊᖅ

Aquatic Effects Monitoring Program – What is it?

Regular monitoring in Meliadine Lake to make sure that:

1. Water is safe to drink
2. Fish are safe to eat
3. The lake is healthy for fish and other organisms



ᐃᒪᕐᒥᐅᑕᐃᑦ ᐊᒃᑐᖅᑕᐅᓂᖏᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᓕᕆᐊᖅ – ᓱᓇᐅᕙ?

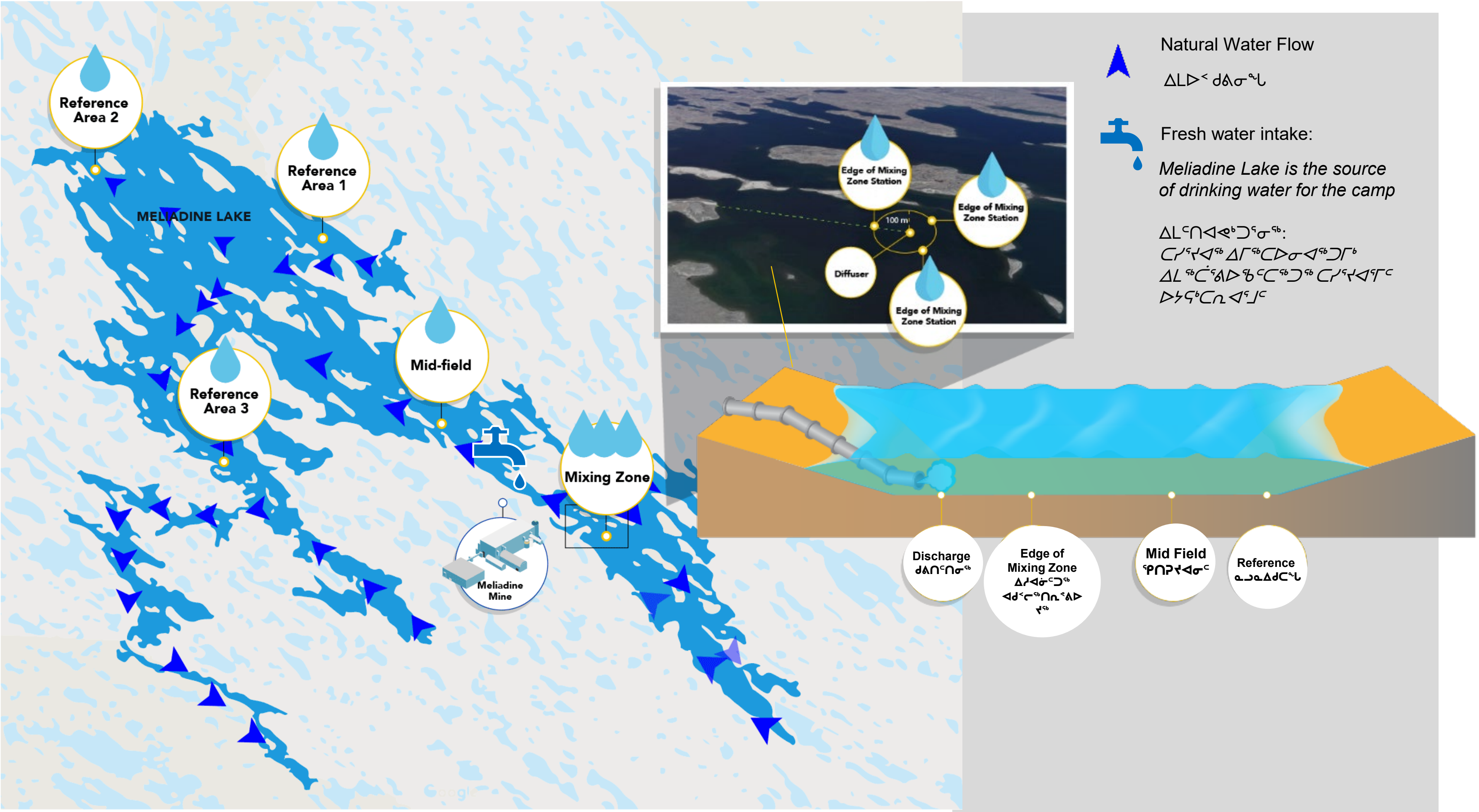
ᖃᐅᑕᒫᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖅ ᑕᓯᕐᕙᐊᕐᒥ ᐃᒪᓐᓇᐃᕐᑯᔭᐅᕗᑦ:

1. ᐃᒪᖅ ᐅᓗᑎᐊᓇᖅᑐᖃᙱᓪᓗᓂ
2. ᐃᖃᓗᐃᑦ ᓂᕆᔭᐅᒍᓐᓇᕐᓗᑎᒃ
3. ᑕᓯᖅ ᐋᓐᓂᐊᕐᓂᖅᑕᖃᙱᓪᓗᓂ ᐊᒻᒪᓗ ᐊᓯᙱᓐᓂᒃ ᐆᒪᔪᕋᑦ

TECHNICAL COMMENT SUMMARY – MELIADINE LAKE MONITORING AREAS

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐃᖃᓗᙵᓂᑦ ᖃᐅᔨᓴᐃᓂᖅ ᑕᓯᕐᔪᐊᕐᒥᑦ

AGNICO EAGLE

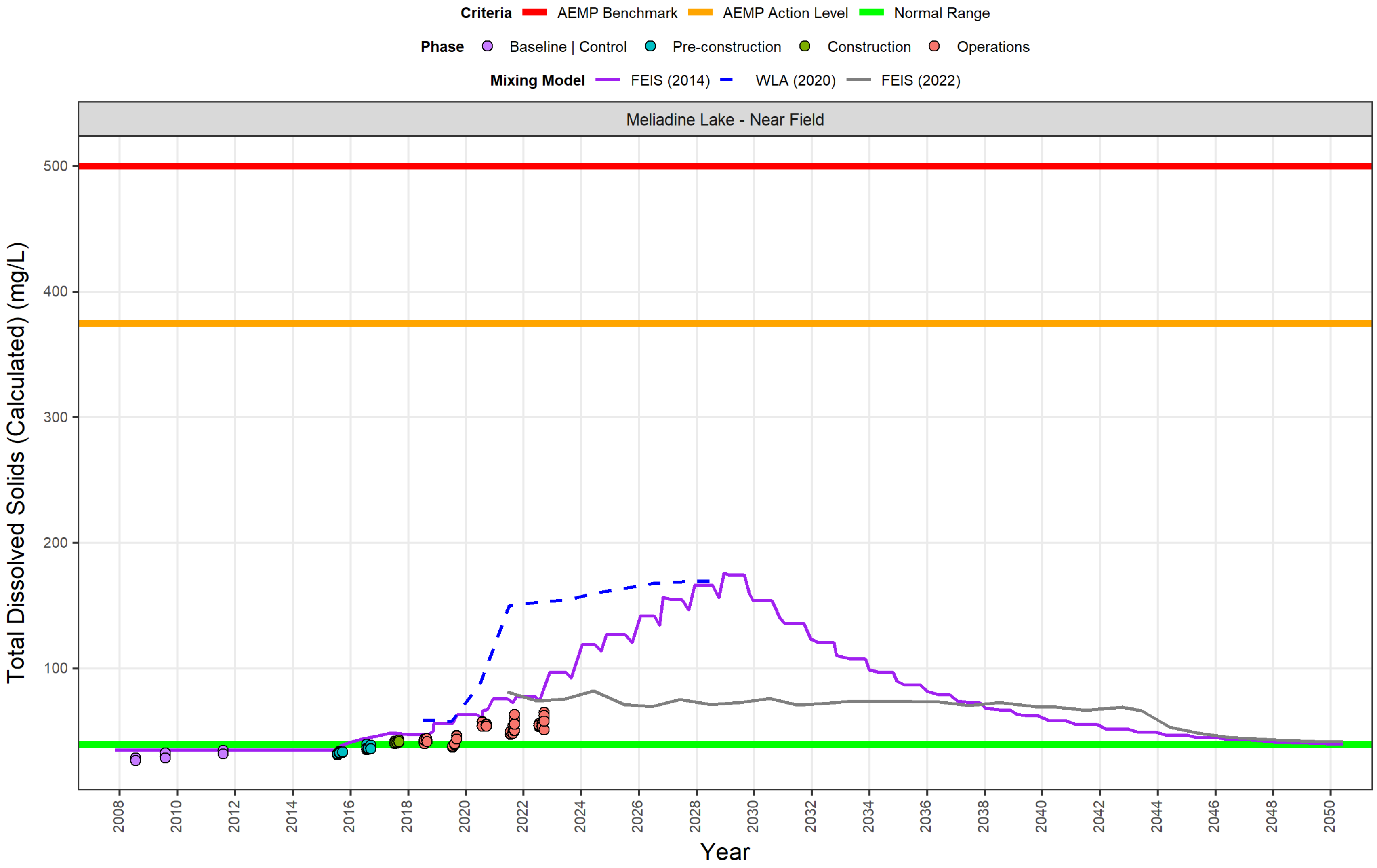


TECHNICAL COMMENT SUMMARY – WATER QUALITY IN MELIADINE LAKE

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᐃᒪᐅᑉ ᖃᓄᐃᓐᖓ ᑕᓯᕐᔪᐊᕐᒥ

- Water quality was predicted to change
- Concentrations of total dissolved solids (TDS) and constituent major ions (e.g., chloride) remain well below guidelines

- ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓ ᐃᓱᒪᒋᔭᐅᓚᐅᖅᑐᖅ ᐊᓯᔾᔨᕐᓂᐊᕐᒪᑦ
- ᑲᑎᖅᓱᖅᓯᒪᔪᑦ ᑲᑎᕐᓗᒋᑦ ᓄᖑᑎᖅᓯᒪᔪᑦ ᓯᑎᔪᑦ (TDS) ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑕᐅᓃᑦ ᐊᖏᓗᐊᖅᑐᑦ ᐊᐃᐋᓐ (ᐆᒃᑑᑎᒋᐸᓗᒍ, ᑯᓗᐊᕋᐃᑦ) ᓱᓕ ᑐᖏᓃᑦᑐᑦ ᒪᓕᒐᐃᑦ

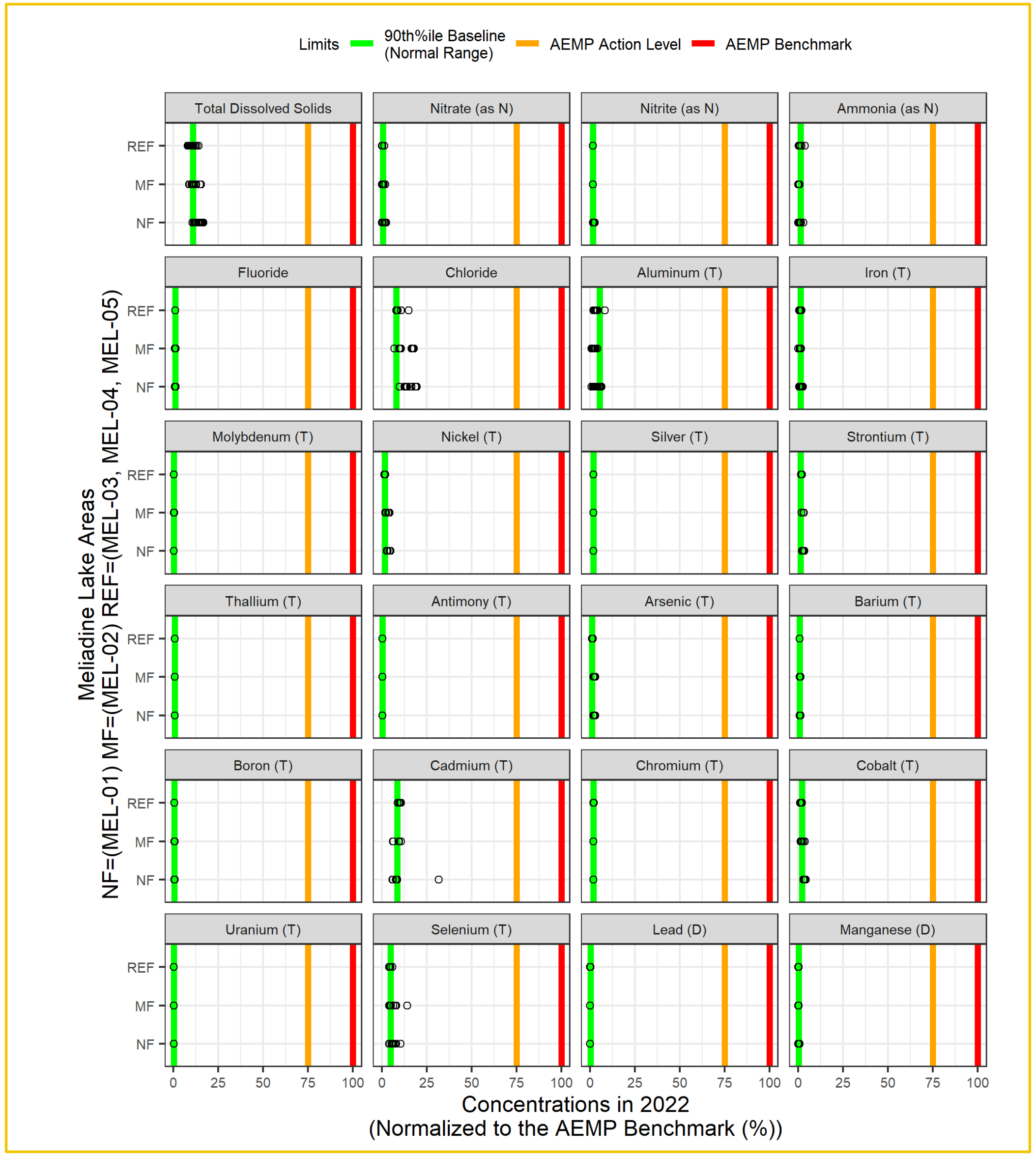


TECHNICAL COMMENT SUMMARY – WATER QUALITY IN MELIADINE LAKE

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᐃᒪᐅᑉ ᖃᓄᐃᓐᖓ ᑕᓯᕐᔪᐊᕐᒥ

- Concentrations of parameters with aquatic life and human health guidelines are low throughout Meliadine Lake, including in samples collected at 100 m to 250 from the discharge location.

- ᑲᑎᖅᓱᖅᓯᒪᔪᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᐋᓐᓂᐊᖅᑕᐃᓕᒪᓂᖓᑕ ᒪᓕᖓᖏᑦ ᐊᑦᑎᒃᑑᕗᑦ ᑕᓯᕐᔪᐊᕐᒥ, ᐃᓚᖃᖅᑐᓂ ᑲᑎᑕᐅᓯᒪᔪᑦ 100 ᒥᑕᒥᒃ 250ᒥᑕᒧᑦ ᑯᕕᖅᑕᖅᑕᐅᕗᖓᑦ ᐃᓂᖓᓂ.



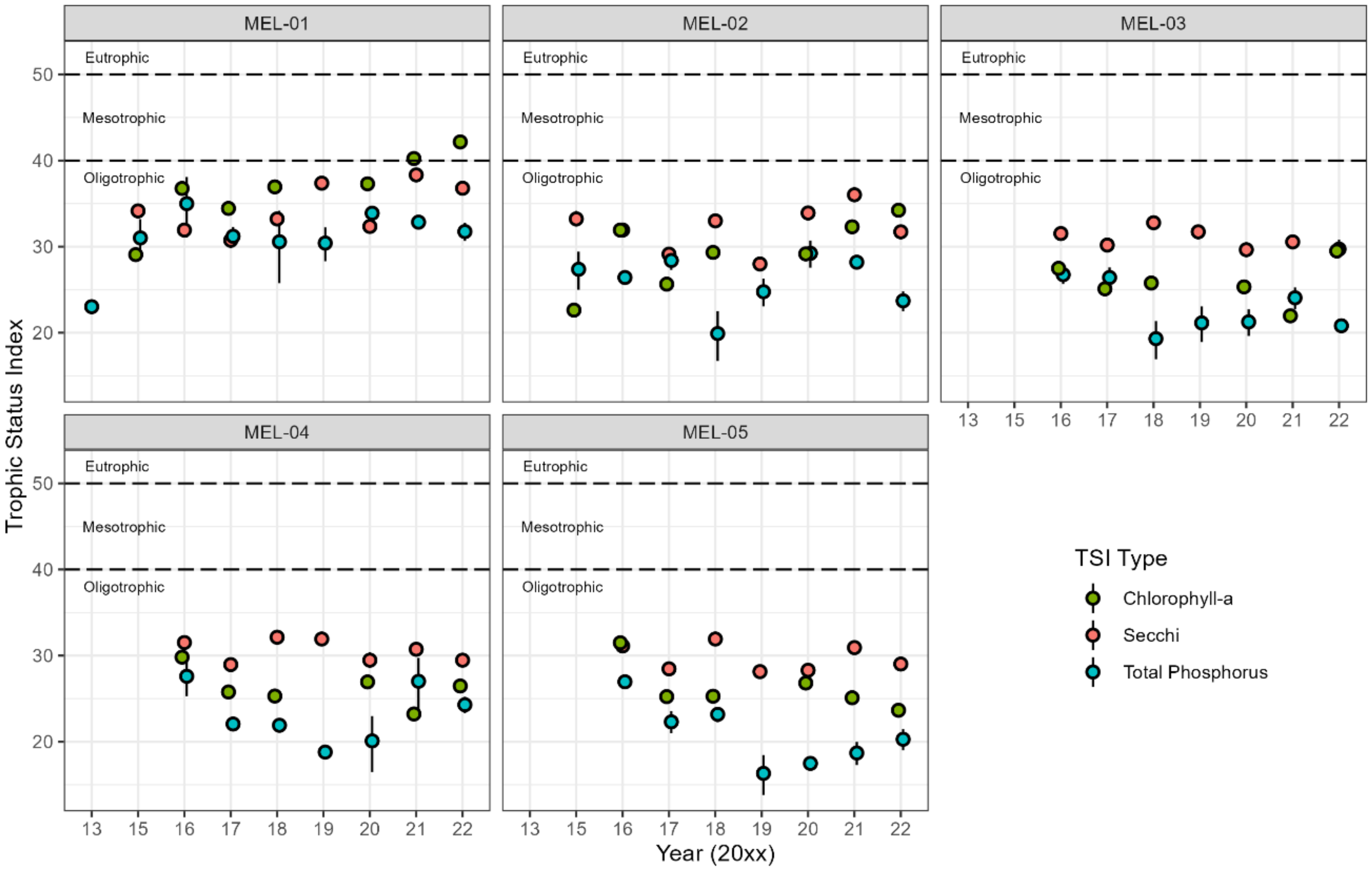
TECHNICAL COMMENT SUMMARY – HEALTH OF AQUATIC LIFE – PHYTOPLANKTON

ᐱᓕᕆᐊᒃ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᖃᓄᐃᓐᓂᖓᑕ ᐃᒪᕐᒥ ᐊᓘᔾᔨᕐᖏᑦᑐᑦ ᐱᕈᖅᑐᐃᑦ

AGNICO EAGLE

- Chlorophyll-a, an indirect measure of primary productivity, has increased in the East Basin in recent years, but phytoplankton biomass has remained stable.
- There is no evidence of widespread nutrient enrichment and algal blooms in Meliadine Lake.

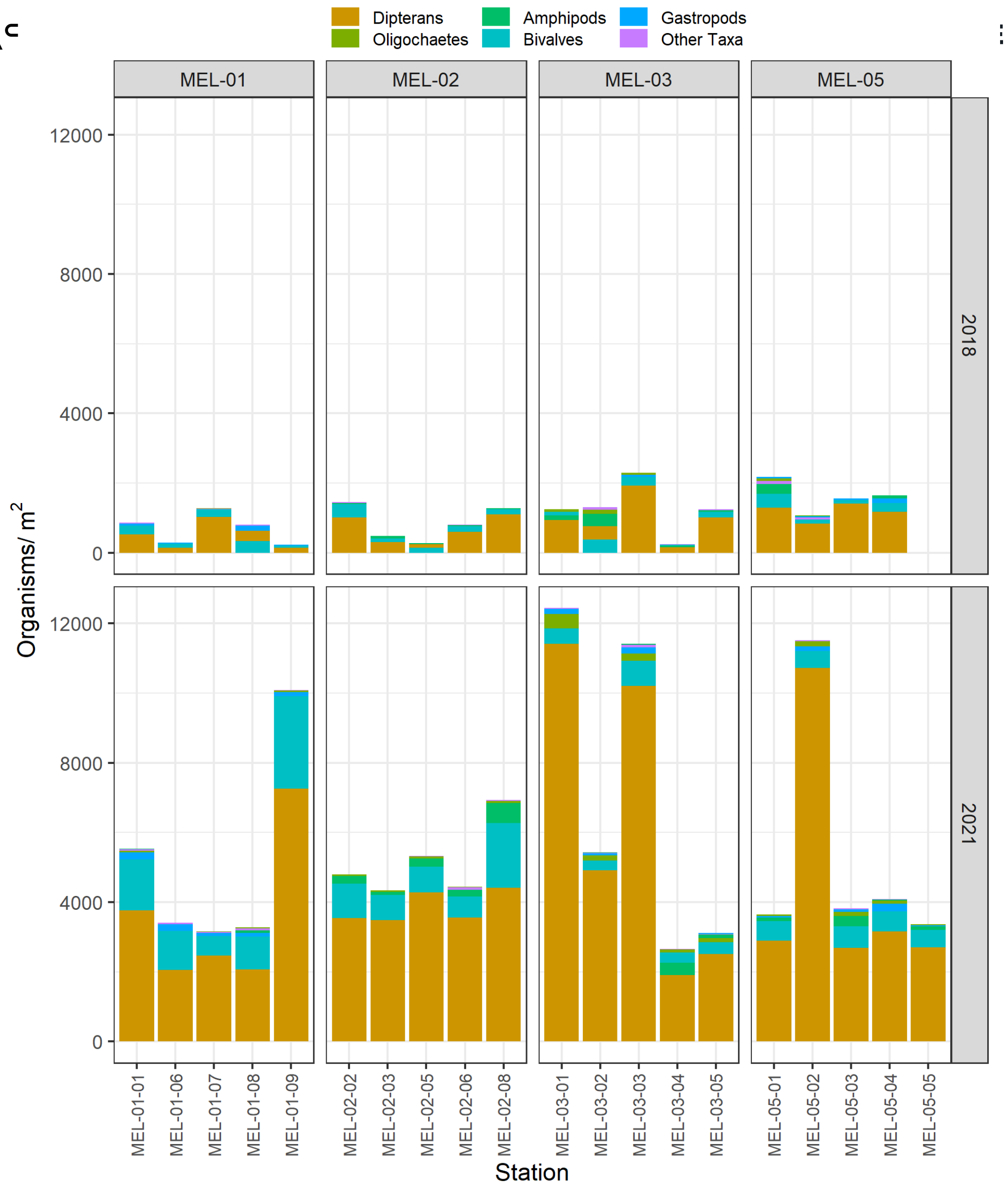
- ᑯᓗᐊᕙᐃᐅᒻ, ᐆᒃᑐᑕᐅᓯᒪᓂᖓ ᐱᓕᕆᐊᖑᓗᐊᖅᑑᑉ ᐱᓕᐅᖅᐸᓪᓕᐊᓂᕐᒧᑦ, ᐊᖏᓪᓕᒋᐊᖅᓯᒪᔪᖅ ᑲᓇᖕᓇᖓᓂ ᐅᑯᐅᖑᔪᑦ, ᑭᓯᐊᓂ ᐊᔾᔨᒌᖕᒋᑦᑐᑦ ᐱᕈᖅᑐᐃᑦ ᐊᓯᔾᔨᖅᓯᒪᖏᑦᑐᖅ.
- ᖃᐅᔨᓴᖅᑐᖃᖏᑦᑐᖅ ᐃᓚᒌᑦᑎᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐊᓚᓐ ᐱᕈᖃᑕᖅᑐᑦ ᑕᓯᕐᔪᐊᕐᒥ.



TECHNICAL COMMENT SUMMARY – HEALTH OF AQUATIC LIFE – BENTHIC INVERTEBRATES
ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᖃᓄᐃᓐᓂᖓᑕ ᐃᒪᕐᒥ ᐊᔾᔨᒌᙱᑦᑐᑦ ᐱᕈᖅᑐᐃᑦ

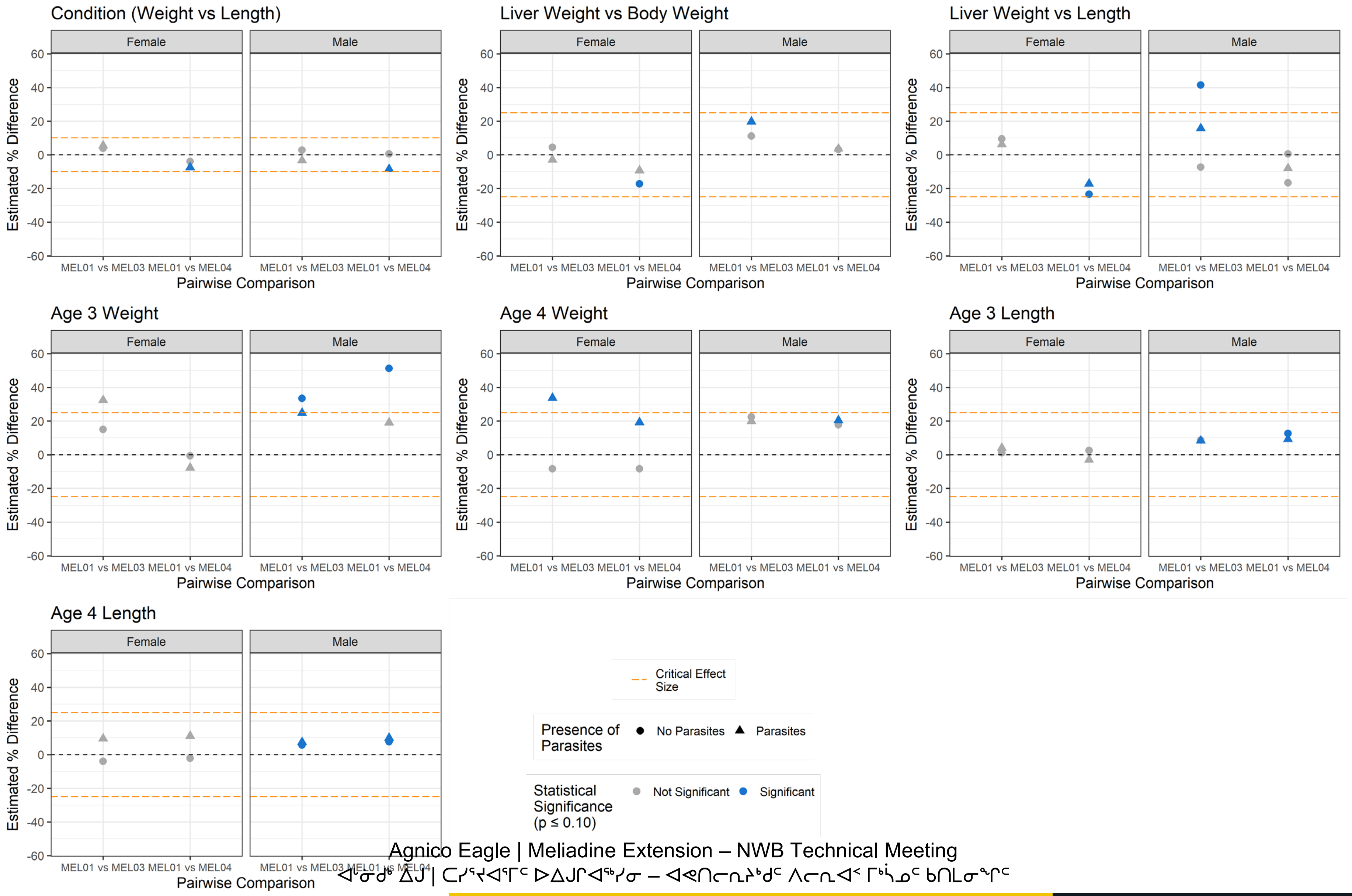
- Benthic invertebrate community abundance is highly variable from year-to-year.
- Abundance (# of organisms/m^2) was higher in 2021 compared to 2018 at all study areas.
- No statistical differences in abundance, richness, or diversity indices at MEL-01 (NF) compared to the reference areas (MEL-03 and MEL-05).
- Back-to-back monitoring cycles where no effects were observed (2018 and 2021).

- ᐆᒪᔪᕋᖨᑦ ᓄᓇᓕᑯᑎᖓ ᖃᐹᓯᐅᓂᖏᑦ ᐊᔾᔨᒌᙱᙱᓐᖃᑦᑎᐊᖅᑐᑦ ᐅᑭᐅᒥᒃ ᐱᖃᑖᓄᑦ ᐅᑭᐅᕐᒧᑦ.
- ᖃᐹᓯᐅᓂᖏᑦ (ᖃᐹᓯᐅᓂᖏᑦ ᐆᒪᓂᖃᖃᑎᒌᑦ) ᐊᖏᓂᖅᓴᐅᓚᐅᖅᑐᖅ 2021-ᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ 2018-ᒥᓂᑦ.
- ᖃᐅᔨᓴᖅᑕᐅᓃᑦ ᐊᔾᔨᒌᙱᓐᓂᖏᑦ ᖃᐹᓯᐅᓂᖏᑦ, ᐱᐅᓂᖏᑦ, ᐅᑯᓘᓐᓃᑦ ᐊᔾᔨᒌᙱᑦᑑᑕᐅᓂᖏᑦ MEL-01 (NF) ᐱᓕᕆᐊᖑᓚᐅᖅᓯᒪᔩᑉ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐃᓂᐅᔪᑦ (MEL-03 ᐊᒻᒪ MEL-05)
- ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐅᑎᖅᑕᖅᑐᑦ ᐊᑐᐃᓯᒪᙱᑦᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ (2018–ᒥ ᐊᒻᒪ 2021-ᒥ).



TECHNICAL COMMENT SUMMARY – HEALTH OF SMALL-BODIED FISH (THREESPINE STICKLEBACK)

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖄᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᖃᓄᐃᓐᓂᖏᑦ ᐃᖃᓗᐊᓛᑦ (ᑲᑭᓚᓴᐃᑦ)



TECHNICAL COMMENT SUMMARY – HEALTH OF LARGE-BODIED FISH (LAKE TROUT)

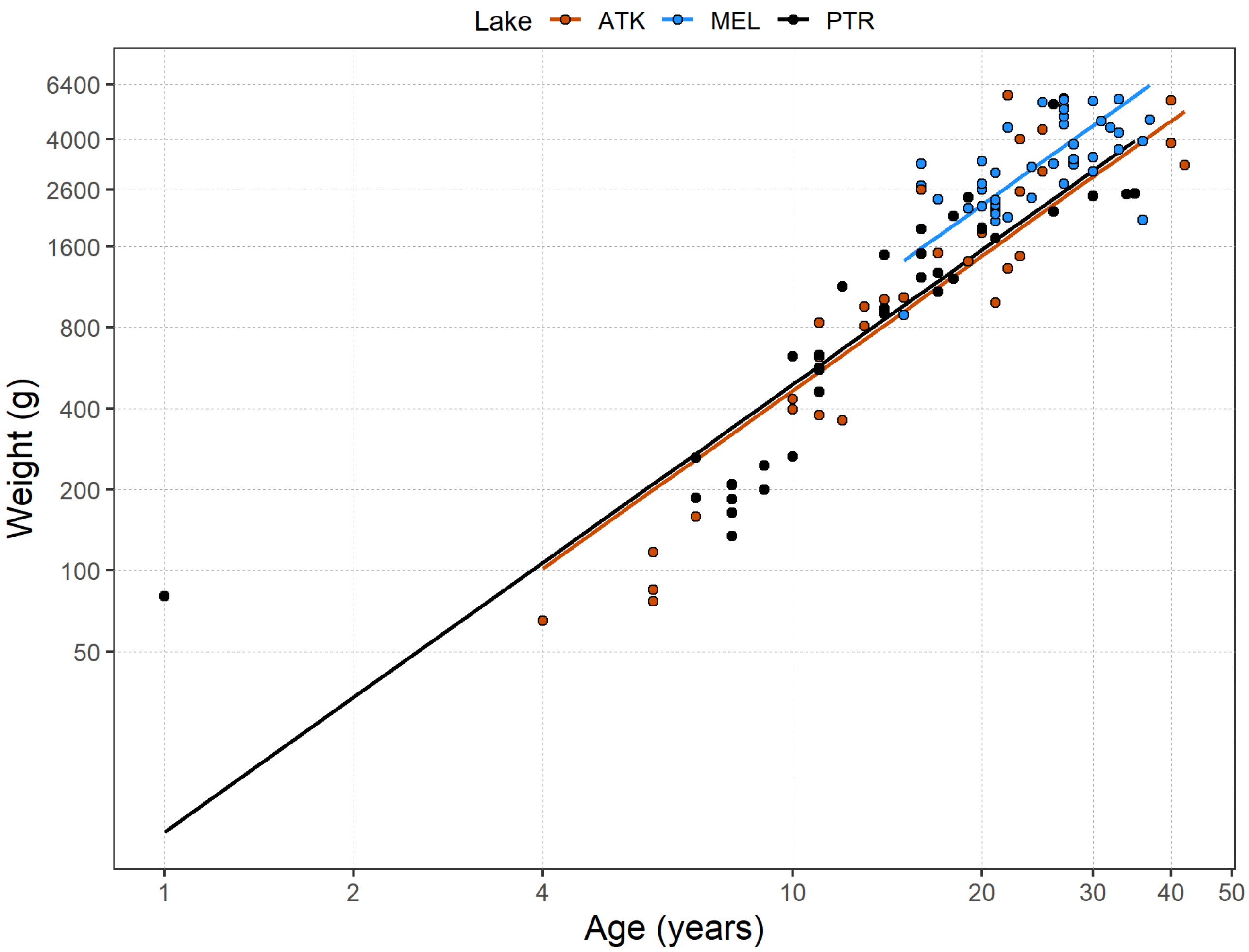
ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᖃᓄᐃᖕᓂᖏᑦ ᐊᖏᔪᒥᒃ ᑎᒥᓖᑦ ᐃᖃᓗᒃ (ᐃᓘᕋᖅ)

AGNICO EAGLE

- Lake Trout collected from Meliadine Lake tended to be older, longer, and heavier than those collected from both Atulik Lake and Peter Lake.

- ᐃᓘᕋᐃᑦ ᑲᑎᑕᐅᓚᐅᖅᑐᑦ ᑕᓯᕐᔪᐊᕐᒥ ᐃᓐᓇᐅᓂᖅᓴᐅᔪᑦ, ᑕᑭᓂᖅᓴᐅᐸᓗᑎᒃᓗ, ᐊᒻᒪᓗ ᐅᖁᒪᐃᖕᓂᖅᓴᐅᖃᑦᑕᖅᓯᒪᔪᑦ ᑲᑎᑕᐅᓯᒪᔪᓂᒃ ᐊᑐᓕᒃ ᑕᓯᕐᒥᑦ ᐊᒻᒪᓗ ᖃᒪᓂᕐᒥᑦ.

Dependent Variable	Independent Variable	p-value	% Difference		Critical Effect Size (%)
			Meliadine vs Peter	Meliadine vs Atulik	
Weight (log_{10})	Fork Length (log_{10})	0.84	1.13	1.99	10
Liver Weight (log_{10})	Fork Length (log_{10})	**0.053**	3.28	**19.8**	25
Liver Weight (log_{10})	Weight (log_{10})	**0.029**	0.75	**16**	25
Weight (log_{10})	Age (log_{10})	**0.01**	**33.7**	**34.7**	25
Fork Length (log_{10})	Age (log_{10})	**0.013**	**9.91**	**9.65**	25



TECHNICAL COMMENT SUMMARY – HEALTH OF MELIADINE LAKE

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᖅ – ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓ ᑕᓯᕐᔪᐊᕐᒥ

AGNICO EAGLE

TECHNICAL COMMENT SUMMARY – HEALTH OF MELIADINE LAKE

Agnico Eagle commitment (during the NIRB process):

- After submission of the NWB Annual report, and before annual discharge to Itivia Harbour, meet with KivIA and CIRNAC to:
  - Provide updates and advice on Meliadine Lake, and management of contact and saline water.
  - Review current and forecasted conditions (Meliadine Lake, contact water and saline water).
  - Schedule community open house to present the above information.
- Prior to the first annual meeting, Agnico Eagle shall update the Adaptive Management Plan to include a prioritized discharge strategy
- Based on modelling completed for the NIRB FEIS, monitoring to date, continued comprehensive monitoring, and the above commitment, a cap on the discharge quantity is not required

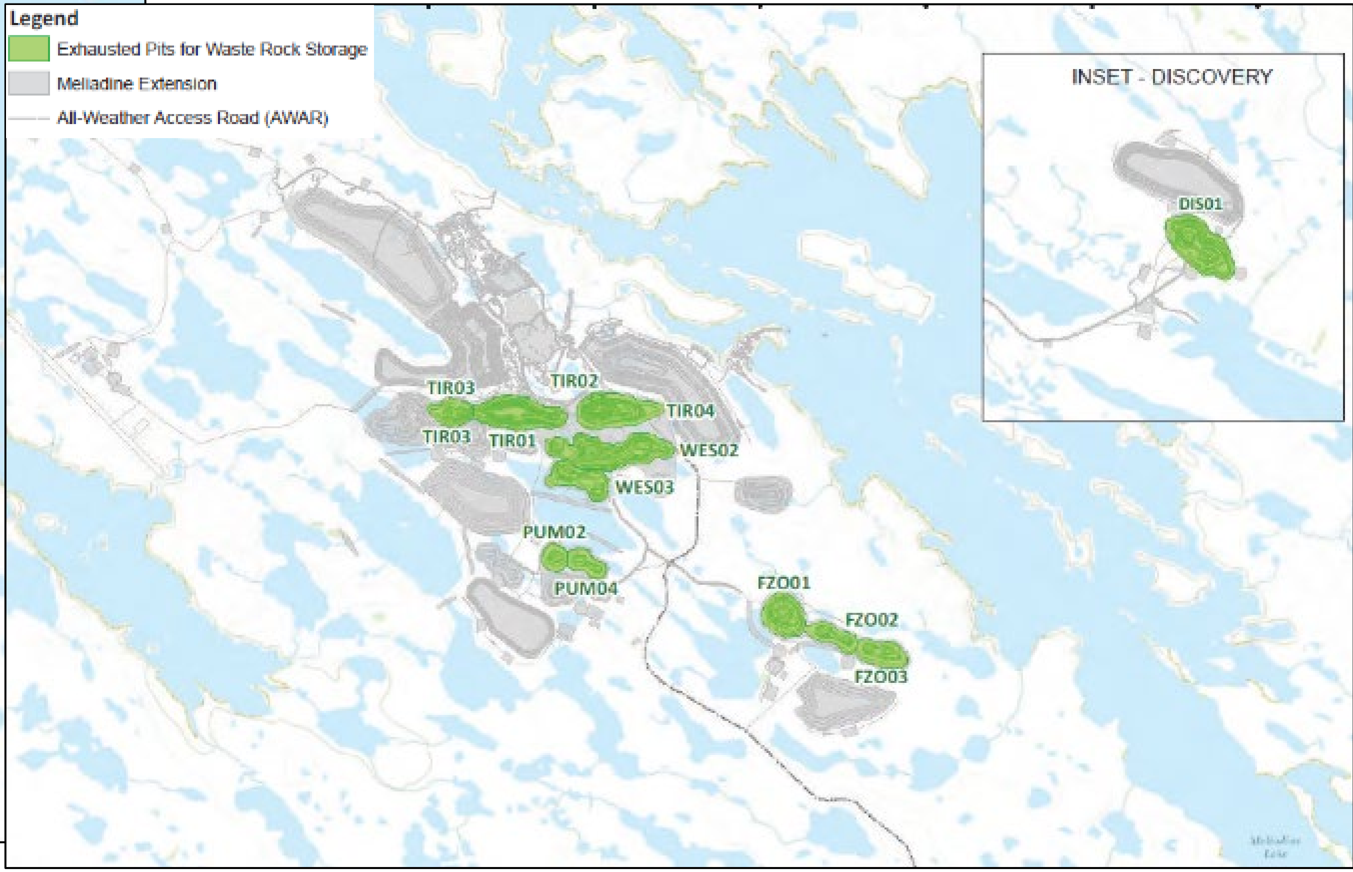
ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓅᖅᓯᒪᔪᖅ – ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓ ᑕᓯᕐᔪᐊᕐᒥ

ᐊᒡᓃᑯ ᐃᒍᒃᑯᑦ ᐱᓂᐊᕐᓂᕆᔭᖓ (ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᐱᓕᕆᐊᖓ)

- ᑐᓂᔭᐅᕌᓂᒃᑎᓪᓗᒍ ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔨᒃᑯᑦ ᐊᕿᒍᓕᒫᖅᓯᐅᑦ ᐅᓂᑉᑳᖓᓂ ᐊᒻᒪᓗ ᐊᕿᒍᑕᒫᑦ ᑯᕕᑦᑎᓂᖓ ᐃᑎᕕᐊᓄᑦ, ᑲᑎᒪᖃᑎᖃᖃᑦᑕᖅᑐᑎᑦ ᑭᕙᓪᓕᖅ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ ᐃᓄᓕᕆᔾᔪᖃᒃᑯᓐᓄᑦ:
  - ᐅᐸᒍᒥᒨᓕᖅᑕᐅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᐅᖃᐅᔾᔨᓂᖅ ᑕᓯᕐᔪᐊᕐᒥ, ᐊᐅᓚᑦᑎᔾᔨᖓᓐᓄᑦ ᐊᒻᒪᓗ ᑕᕆᐅᓕᒃ ᐃᒪᖅ.
  - ᖃᐅᔨᓴᖅᑕᐅᓗᓂ ᐅᐸᒍᒧᑦ ᐊᒻᒪᓗ ᖃᓄᐃᓐᓂᐊᕆᓱᕆᔭᐅᔪᑦ (ᑕᓯᕐᔪᐊᖅ, ᐊᒃᑐᐃᓯᒪᔪᖅ ᐃᒪᖅ ᐊᒻᒪᓗ ᑕᕆᐅᓕᒃ ᐃᒪᖅ.)
  - ᑎᑎᖅᑲᕐᒥ ᓇᓗᓇᐃᕐᓗᓂ ᓄᓇᓕᙱᓄᑦ ᑲᑎᒪᔾᔪᑕᐅᓚᔭᖅᑐᓂᒃ.
- ᑲᑎᒪᓚᐅᖅᖄᖅᑎᓐᓇᒋᑦ ᐊᕿᒎᑕᒫᖅᓯᐅᑎᓂᒃ, ᐊᒡᓂᑯᒃᑯᑦ ᐅᐸᒍᒥᒨᓕᖅᓯᒪᔪᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐃᓕᓯᓂᐊᖅᑐᑦ ᐱᔭᕆᐊᓖᑦ ᑯᕕᖅᑕᕐᓂᐅᑉ ᖃᓄᖅᑑᕈᑎᙳᓂᒃ
- ᑕᐅᑐᖅᑯᒍ ᕿ ᖃᐅᔨᕆᐊᖃᑦᑕᕐᓂᖅ ᐱᐊᓂᓚᐅᖅᑐᖅ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑭᙳᓪᓕᖅᐹᒥᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᓃᑦ ᐅᐸᒍᒥᒧᑦ, ᑲᔪᓯᒍᑎᒡᒍ ᖃᐅᔨᓴᖃᑦᑕᕐᒍᑎᑦ, ᐊᒻᒪᓗ ᕿᑭᓂᑦᑐᖅ ᐱᓂᐊᕐᓂᕆᔭᐅᔪᖅ, ᑯᕕᖅᑕᖃᑦᑕᕐᓂᖓ ᒪᑐᔭᐅᕆᐊᖃᙱᑦᑐᖅ.

TECHNICAL COMMENT SUMMARY – IN-PIT DEPOSITION ALTERNATIVE

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᓄᓇᒥᑦ ᐃᓗᑦᑐᖅᓯᒪᔪᒧᐊᖅᓯᓂᖅ - ᐋᖅᑭᒃᓯᓂᖅ



TECHNICAL COMMENT SUMMARY – IN-PIT DEPOSITION ALTERNATIVE

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᔪᓄᑦ ᓇᐃᓘᕐᓯᒪᔪᑦ – ᓄᓇᒥᑦ ᐃᓗᑦᑐᕐᓯᒪᔪᒧᐊᕐᓯᓂᕐ - ᐊᕐᕿᒃᓯᓂᕐ

- ᑲᑎᒪᓪᓗᐅᖅᖄᖅᑎᓐᓇᒋᑦ ᖃᓄᐃᓕᐅᕐᓂᖏᓐᓂᒃ, ᐊᒡᓃᑯᒃᑯᑦ ᐱᐊᓂᒐᔭᖅᑐᑦ ᐊᔾᔨᒌᙱᑦᑐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓂᑯᓂᒃ ᐅᑯᐊ ᐃᓚᒋᔪᒋᑦ:
  - ᐆᓇᕐᓂᖃᕐᓂᖅ ᖃᐅᔨᓴᖅᑕᐅᓂᖅ ᖃᓄᐃᓐᓂᖓ ᕿᐊᙳᐃᓐᓇᐅᔭᖅᑐᖅ ᐃᓗᑦᑐᕐᓯᒪᔩᑉ ᐃᓗᐊᓂ ᑕᓯᕐᒥ.
  - ᐃᒪᐅᑉ ᖃᐅᔨᓴᖅᑕᐅᓂᖓ ᖃᓄᐃᓐᓂᖓ ᓄᓇᐅᑉ ᖄᖓᓂ ᑯᕓᔪᖅ ᓇᒧᙵᐅᓂᖓ.
  - ᐃᒪᐅᑉ ᐃᒡᓗᕌᖕᓂᖓ ᐊᒻᒪᓗ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓ ᖃᐅᔨᓴᖅᑕᐅᓗᓂ ᐃᓗᑦᑐᕐᓯᒪᔩᑉ ᑕᓯᖓᑕ ᖃᓄᐃᓐᓂᖓ.
- ᐃᓚᒋᐊᕐᓗᒍ, ᐃᒪᐅᑉ ᐸᕐᓇᐅᑎᖓ ᐊᒃᑕᑯᓕᕆᓂᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ, ᐊᒻᒪᓗ ᐅᒃᑯᐊᖅᐸᓪᓕᐊᓂᖓᑕ ᐊᒻᒪ ᐅᑎᖅᑎᑎᕆᓂᓂᖓᑕ ᐅᑉᓗᒥᒨᓕᖅᑕᐅᓂᖓ

- Prior to proceeding with this activity, Agnico Eagle would complete various studies such as:
  - Thermal study to assess permafrost within the pit lake.
  - Hydrogeological study to assess groundwater flow to receiving environment.
  - Water balance and water quality model to evaluate pit lake quality.
- In addition, the Water Management Plan, the Waste Management Plan, and the Interim Closure and Reclamation Plan would be updated

TECHNICAL COMMENT SUMMARY – SECURITY

- Per Security Management Agreement discussion with KivIA and CIRNAC following Technical Meeting
- Main changes include:
  - Additional open pits and underground mining
  - Additional waste rock storage facilities
  - Adding Discovery deposit
  - Extended closure period
- Security updates are sequenced based on when mining activities are triggered

	Current Security	Meliadine Extension	Total Meliadine Mine
Grand Total	$69,687,246	$91,458,237	$161,145,486

ᐱᓕᕆᐊᑉ ᒥᒃᓵᓄᑦ ᐅᖃᐅᓯᐅᕙᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ – ᐅᐊᔅᓯᕉᑦ

- ᒥᐊᓂᖅᓯᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐊᖏᖃᑎᒌᒍᑎ ᐅᖃᖃᑎᖃᖅᓯᒪᔪᑦ ᑭᕙᓪᓕᖅ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᓂ ᐊᒻᒪ ᐃᓄᓕᕆᔨᑐᖃᒃᑯᓂ ᑲᑎᑕᓚᐅᖅᖄᖅᑎᓪᓗᒋᑦ
- ᐋᖅᑭᐅᒪᓂᖓᓂᒃ ᐊᓯᐊᙳᖅᑐᓂᑦ ᐃᓚᐅᕙᑦ:
  - ᐃᓚᒋᐊᖅᓯᒪᔪᑦ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖓᔪᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᐊᑖᓂ ᐅᔾᕈᒃᑕᕆᐊᖅ
  - ᐊᒃᑕᑰᖅᑕᐅᔪᑦ ᐅᔾᔭᖅᖃᓄᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓂᑦ
  - ᐃᓚᓯᔪᑦ ᐃᑎᕐᓚᐅᑉ ᓴᓂᐊᓄᑦ ᐃᓕᔭᐅᓯᒪᔪᖅ
  - ᐅᖓᓯᒃᓯᒋᐊᖅᑐᖅ ᐅᒃᑯᐊᕐᕕᒃᓴᖓ
- ᒥᐊᓂᖅᓯᓂᖅ ᐅᐸᓗᒥᒨᓕᖅᑕᐅᔪᑦ ᐱᓕᕆᐊᖅ ᒪᓕᒡᓗᒋᑦ ᐅᔾᕈᒃᑕᖅᑕᐅᔪᑦ ᐊᒃᑐᖅᑕᐅᓖᖓᑕ

	ᒫᓐᓇᐅᔪᖅ ᒥᐊᓂᖅᓯ	ᑕᓯᕐᔪᐊᖅ ᐅᐃᒍᕆᐊᕐᓂᖓ	ᑲᑎᓗᒃᑖᖅᓗᒋᑦ ᑕᓯᕐᔪᐊᕐᒥ ᐅᔾᕈᒃᑕᓇᐊᖅ
ᑲᑎᓗᒃᑖᖅᓗᒋᑦ	$69,687,246	$91,458,237	$161,145,486

Conclusions

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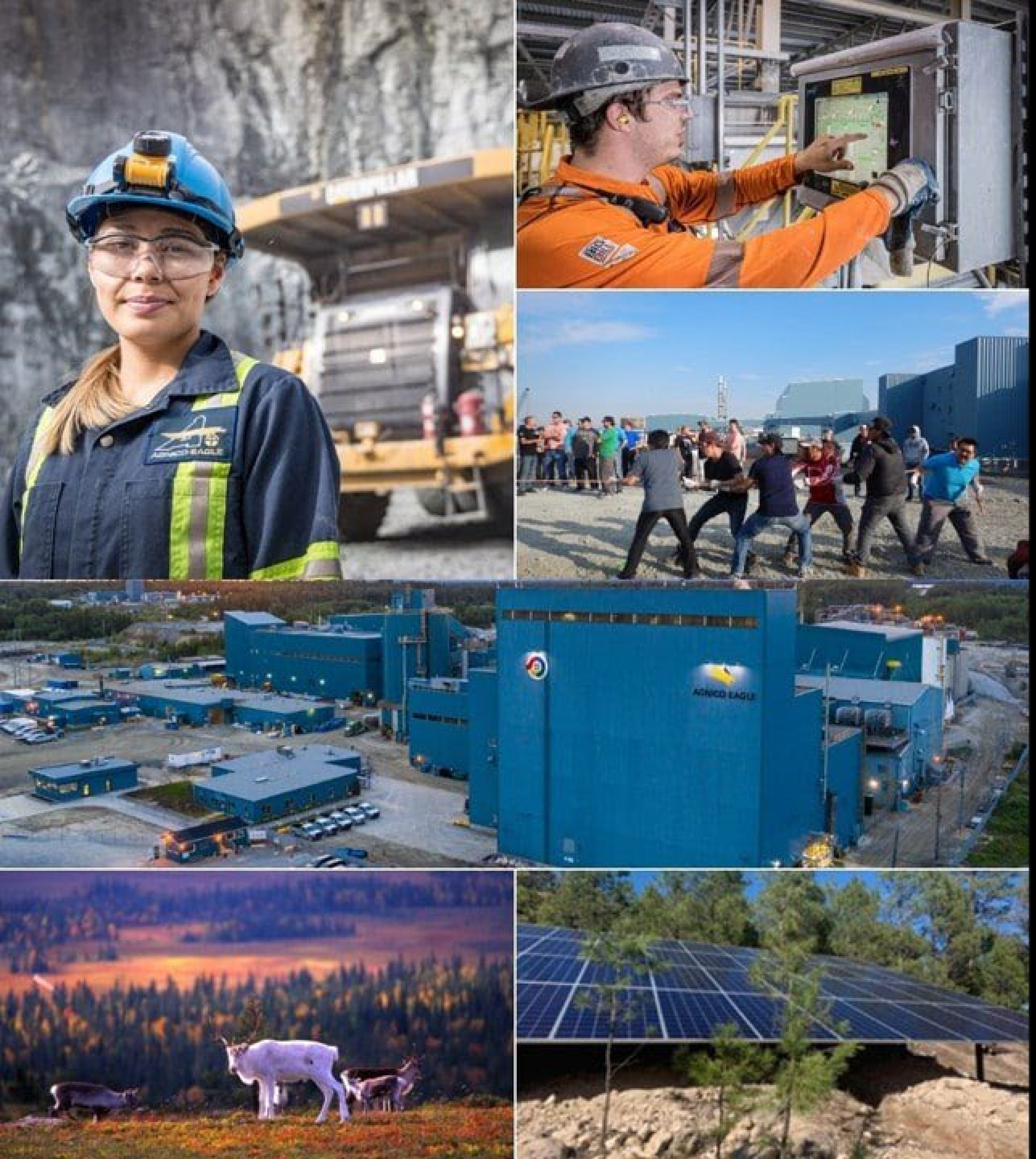
AGNICO EAGLE

MELIADINE EXTENSION - CONCLUSIONS

- Seeking approvals and permits to mine deposits not included in the current Water Licence
  - Initiate open pit mining at Pump, F Zone, Wesmeg, and Discovery deposits
  - Initiate underground mining at Pump, F Zone, and Discovery deposits
  - Extend existing underground mining of Tiriganiaq-Wolf
  - Extend the operational window to 2043
- Continue the approved activities
- Use/update existing management and monitoring plans

ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ – ᐃᓱᓕᑉᐸᓪᓕᐊᓂᖅ

- ᕿᓂᖅᑐᑦ ᐊᖏᖅᑕᐅᒋᐊᓕᖕᓂᑦ ᐊᒻᒪᓗ ᐱᔪᓐᓇᐅᑎᓂᒃ ᐅᔭᕋᒃᑕᕈᓐᓇᕐᓂᐊᕐᒪᑕ ᐃᒪᓕᕆᔨᒃᑯᑦ ᐊᖏᕈᑎᖓᓃᖏᑦᑐᒥ ᒫᓐᓇ
  - ᐃᓚᐅᓗᓂ ᓄᓇᒥᒃ ᐅᒃᑯᐃᖓᔪᒥᒃ Pump-ᒥᑦ, F Zone-ᒥᑦ, Wesmeg-ᒥᑦ, ᐊᒻᒪᓗ ᐃᑎᕐᓚᐅᑉ ᓴᓂᐊᓂ ᐱᑕᓕᖓᓂ
  - ᐃᓚᐅᓗᓂ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᖅ Pump-ᒥᑦ, F Zone-ᒥᑦ, ᐊᒻᒪᓗ ᐃᑎᕐᓚᐅᑉ ᓴᓂᐊᓂ ᐱᑕᓕᖓᓂᑦ
  - ᐅᐃᒍᒋᐊᕐᓗᒍ ᑕᐃᒪᐅᔪᖅ ᐱᑕᓕᒃ ᑎᕆᒐᓂᐊᖅ-ᐊᒪᕈᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ
  - ᐅᐃᒍᒋᐊᕐᓗᒍ ᐊᐅᓚᑕᐅᓂᐅᑉ ᐃᓚᑗᖓ 2043–ᒧᑦ
- ᑲᔪᓯᓗᑎᒃ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ ᐱᓕᕆᐊᑦ
- ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ



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Matna
Thank you

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