



AGNICO EAGLE

Meliadine Project

Saline Effluent Discharge to Marine Environment

WATERLINE - OPERATION AND REMOVAL/RECLAMATION



PRESNTATION OVERVIEW

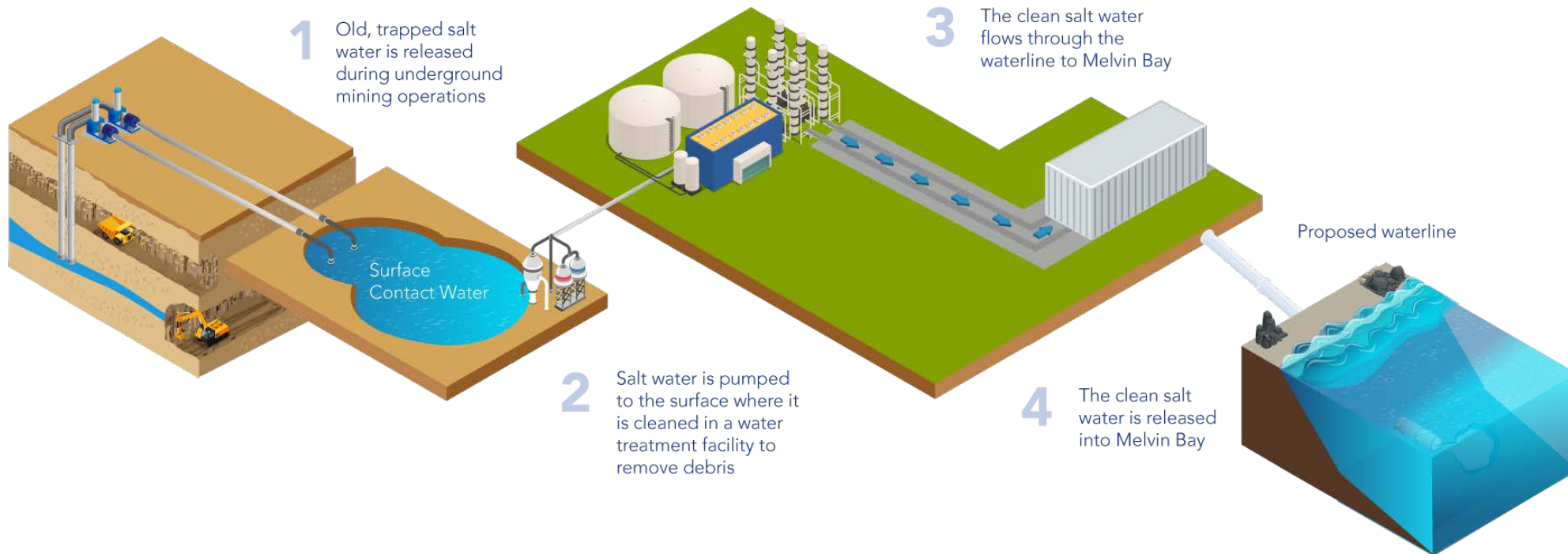


- Waterline operation
- Modelling and design
- Removal/Reclamation Plan
- Questions

WATERLINE OPERATION



WATERLINE PROJECT

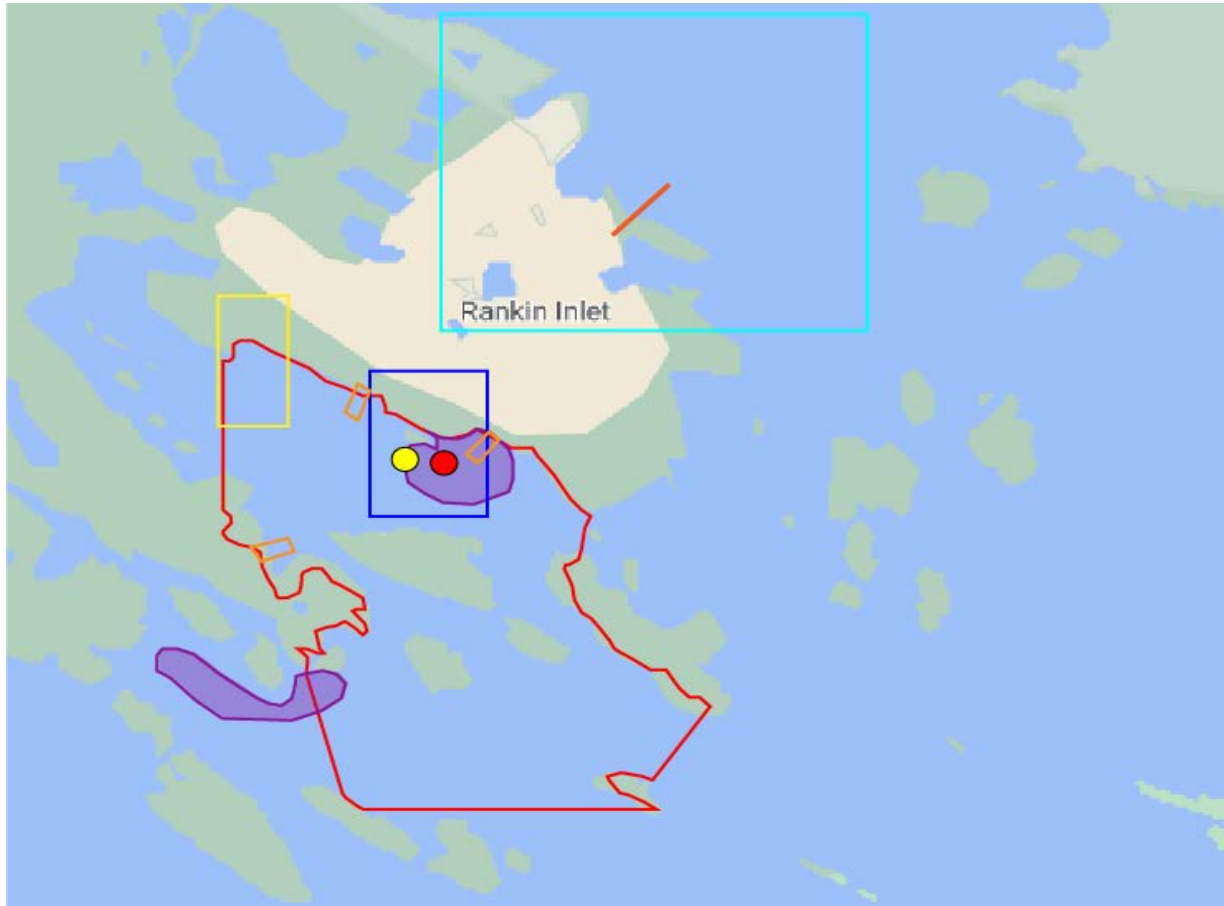


- The waterline project is an amendment to the Meliadine project approved in 2018.
- A 34-kilometer waterline from Meliadine to Itivia is proposed.
- 2 x 16-inch-high density polyethylene (HDPE, a type of plastic) lines
 - The amount of water being released into Melvin Bay would increase from 800 – 1,600 m³ per day to 6,000 - 12,000 m³ per day (around 1.6 - 3.2 million US gallons per day), and the alternative up to 20,000 m³ per day

MARINE ENVIRONMENT



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- Treated groundwater will be discharged through an engineered marine outfall
- Discharge volumes of 6,000 - 12,000 m³ per day, alternative up to 20,000 m³ per day
- Effects to marine valued components limited to nearshore where construction and installation occurs and primarily limited to the construction period of a few months
- Effects from the discharge are limited to the mixing zone
- Discharge not anticipated to have measurable impacts to water quality or other valued components beyond the mixing zone
- 3D modelling confirms the discharge will meet edge of mixing zone criteria

- BASELINE SAMPLING AREA - 2011
- BASELINE SAMPLING AREA - 2018
- MARINE LOCAL STUDY AREA - 2018
- DISCHARGE 1 - POTENTIAL DISCHARGE LOCATION INTO MELVIN BAY (OFF ITIVIA FUEL STORAGE FACILITY)
- DISCHARGE 2 - POTENTIAL DISCHARGE LOCATION INTO MELVIN BAY (OFF BYPASS ROAD)
- DISCHARGE 3 - POTENTIAL DISCHARGE LOCATION INTO HUDSON BAY (OFF CHAR RIVER BRIDGE)
- DISCHARGE 4 - INTO PRAIRIE BAY (OFF JOHNSTON COVE)
- DISCHARGE 5 - INTO PRAIRIE BAY (OFF MELIADINE RIVER)
- PROPOSED DIFFUSER LOCATION
- APPROVED DIFFUSER LOCATION (CURRENT)
- RANKIN INLET SEWAGE OUTFALL PIPE (APPROXIMATE LOCATION)



MODELLING AND DESIGN

SALINE WATER INFLOWS



Predicted total annual saline water inventory and total daily discharge rate into Melvin Bay (Average Year Scenario)

Year	Surface Water Inventory (m ³)	Total Discharge to Melvin Bay (m ³ /day)
2020	187,245	1,600
2021	333,953	1,600
2022	503,806	11,630
2023	277,768	11,515
2024	47,688	7,444
2025	0	7,987
2026	0	8,159
2027	0	7,729

MELVIN BAY DIFFUSER

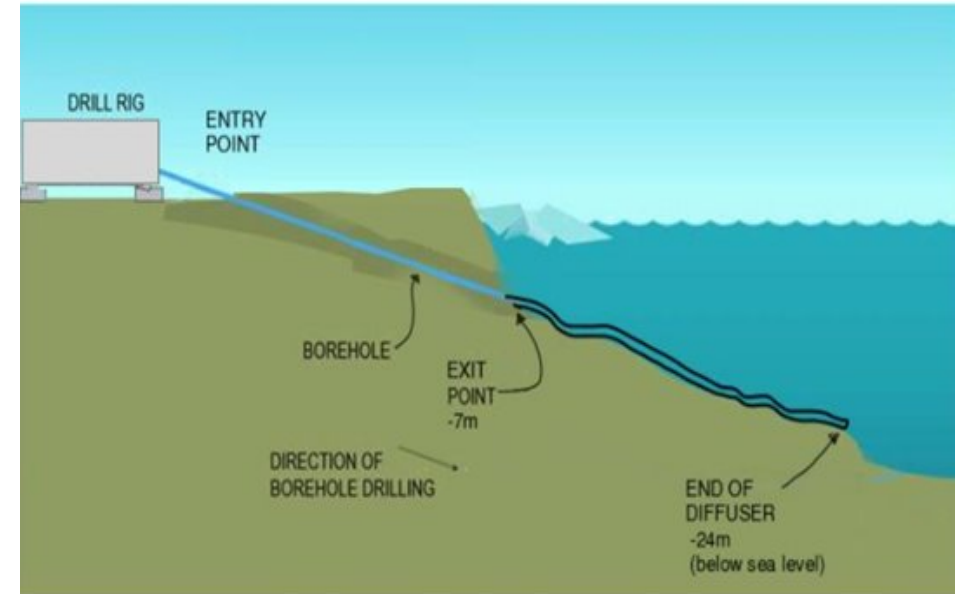


HORIZONTAL DIRECTIONAL DRILLING



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- HDD is the preferred method because:
 - Water discharge would not be impacted by ice erosion during this period
 - Will create less bed sediment disturbance and lower levels of suspended sediment
- HDD was the method used in Rankin Inlet for installation of the sewage discharge line to Hudson Bay.
- HDD will result in less debris in the water as the material being drill is recovered as the hole is being drilled.
- Drilling associated with the HDD will not produce more noise that what is already occurring including air transportation, nearby industrial activities, and community resupply activities





REMOVAL/RECLAMATION PLAN

REMOVAL/RECLAMATION PLAN



- Infrastructure will be dismantled and removed upon cessation of activities related to ocean discharge.
- Infrastructure will be removed consistent with the Interim Closure and Reclamation Plan
- Removal of all physical hazards

QUESTIONS ?

