



AGNICO EAGLE

Meliadine Project

Saline Effluent Discharge to Marine Environment

Introduction and Overview

COMMUNITY ROUNDTABLE

FEBRUARY 11-12, 2021



PRESENTATION OVERVIEW

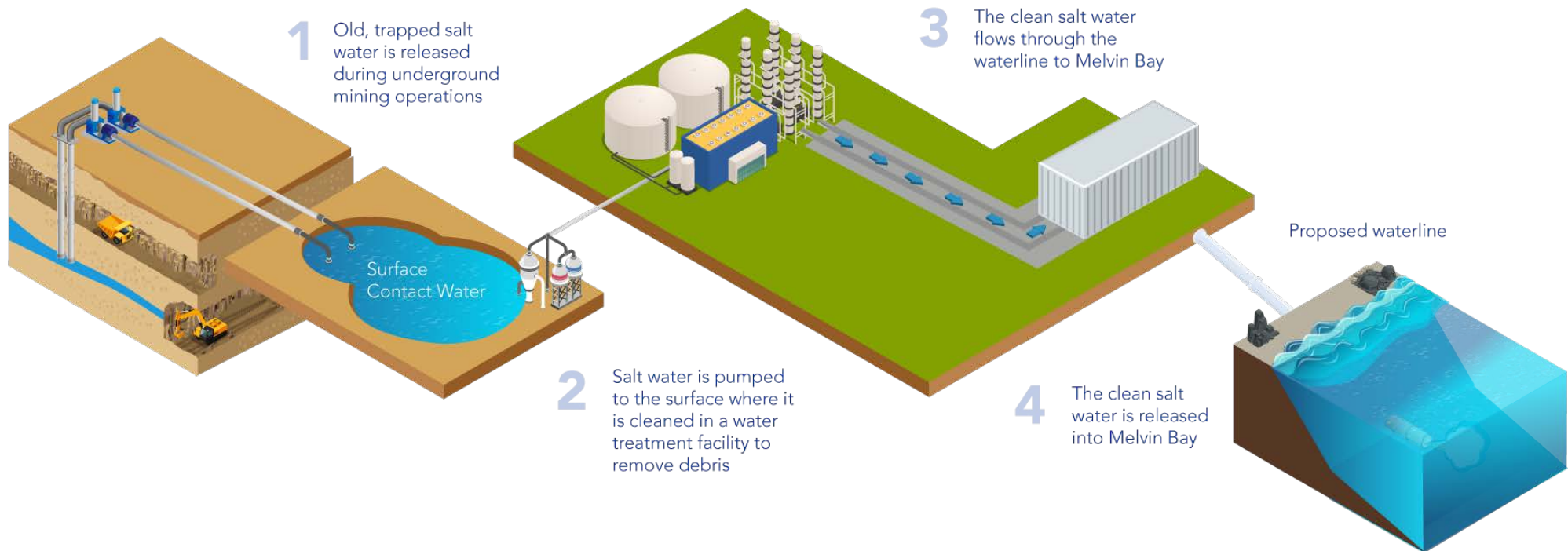


- Project design and rationale
 - 3D rendering video
- Description of project components
 - Construction;
 - Operation; and
 - Removal and reclamation
- Public engagement and community response update
- Alternative assessment
- Overview of the information requests and technical comments



PROJECT DESIGN AND RATIONALE

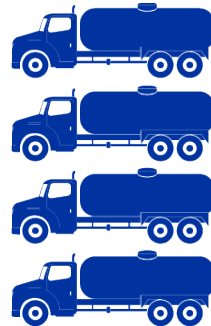
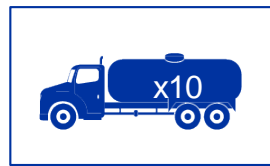
WATERLINE PROJECT



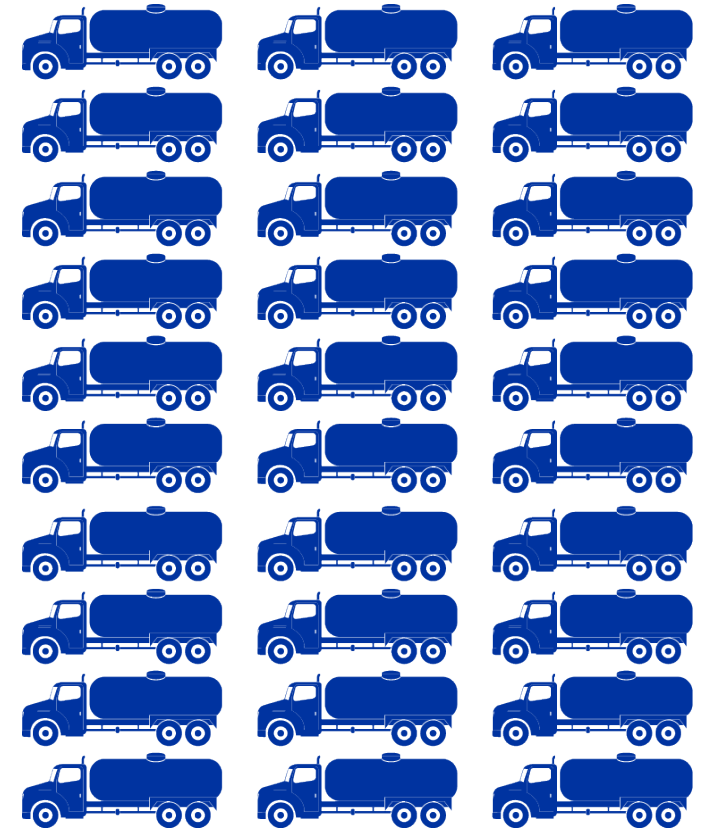
- The waterline project is an amendment to the Meliadine project approved in 2018.
- A 34-kilometer waterline from Meliadine to Itivia is proposed.
- 2 x 16-inch-high density polyethylene (HDPE, a type of plastic) lines
 - The amount of water being released into Melvin Bay would increase from 800 – 1,600 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

WATERLINE PROJECT

- Without a waterline, traffic on the road will increase to 150-300 trucks a day from the current 20 to 40 trucks.
- A waterline is better for the environment and safety than adding more trucks on the road.



Trucks required per day to transport current approved amount of water
20 to 40 trucks per day



Trucks required per day to transport increased amount of water
150 to 300 trucks per day

3D RENDERING VIDEO





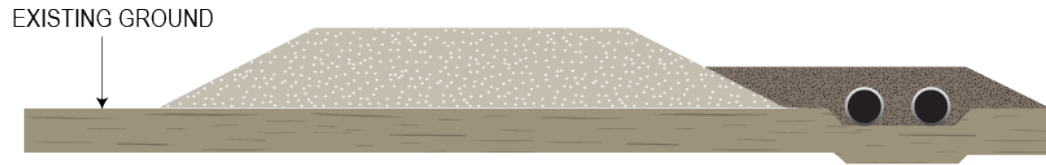
DESCRIPTION OF PROJECT
COMPONENTS

CONSTRUCTION

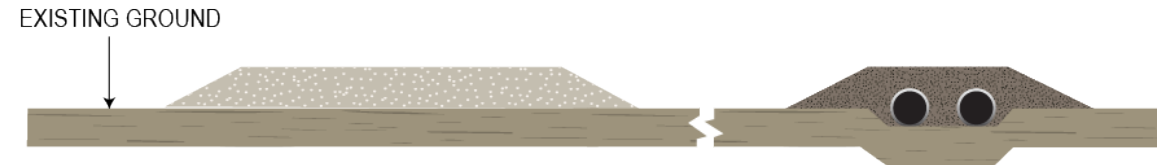


CONSTRUCTION

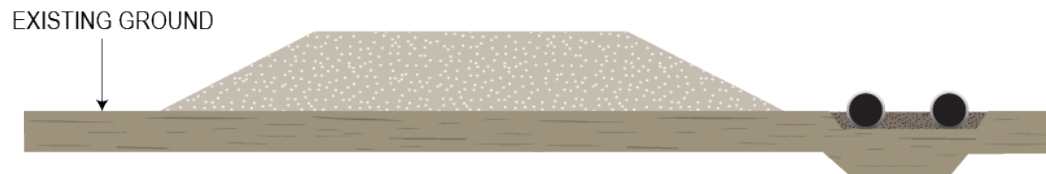
Waterline Typical Cross sections



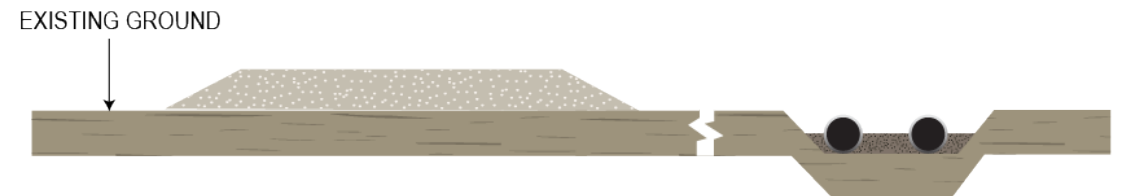
WELL DRAINED OVERBURDEN - ROAD EMBANKMENT TYPICAL SECTION 1



WELL DRAINED OVERBURDEN - ROAD EMBANKMENT TYPICAL SECTION 1



WET OVERBURDEN - ROAD EMBANKMENT TYPICAL SECTION 1



WET OVERBURDEN - ROAD EMBANKMENT TYPICAL SECTION 1

CONSTRUCTION

- The waterline will run adjacent to the approved All-Weather Access Road
- The waterline will be covered with esker material to allow caribou to cross easily
- Construction will be timed outside of the migration season



COSNTRUCTION



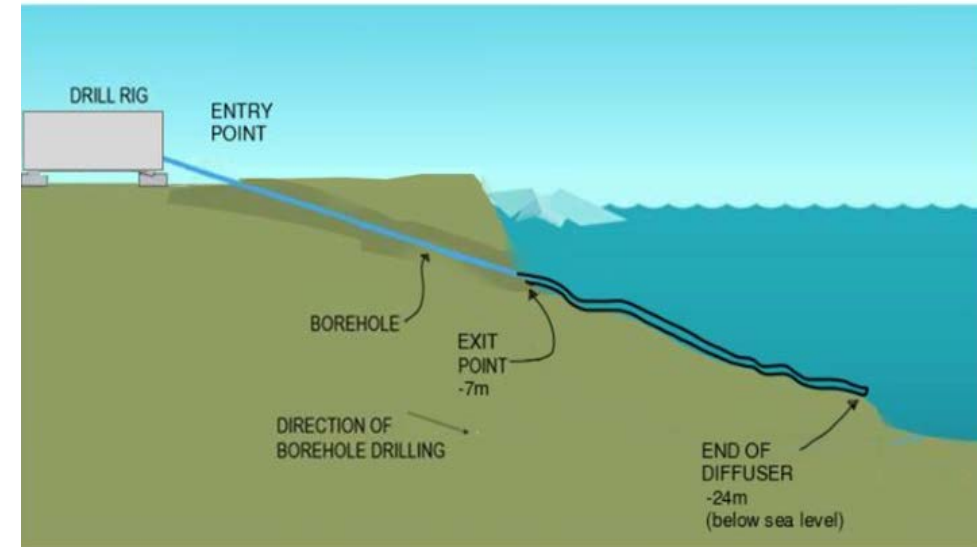
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- Waterline will be carefully positioned to allow for unobstructed flows during spring freshet conditions
- the waterline will run directly under, and secured to bridges, avoiding any potential disturbance to habitat below the high watermark
- Heavy machinery will not be used within the high watermark during installation

HORIZONTAL DIRECTIONAL DRILLING

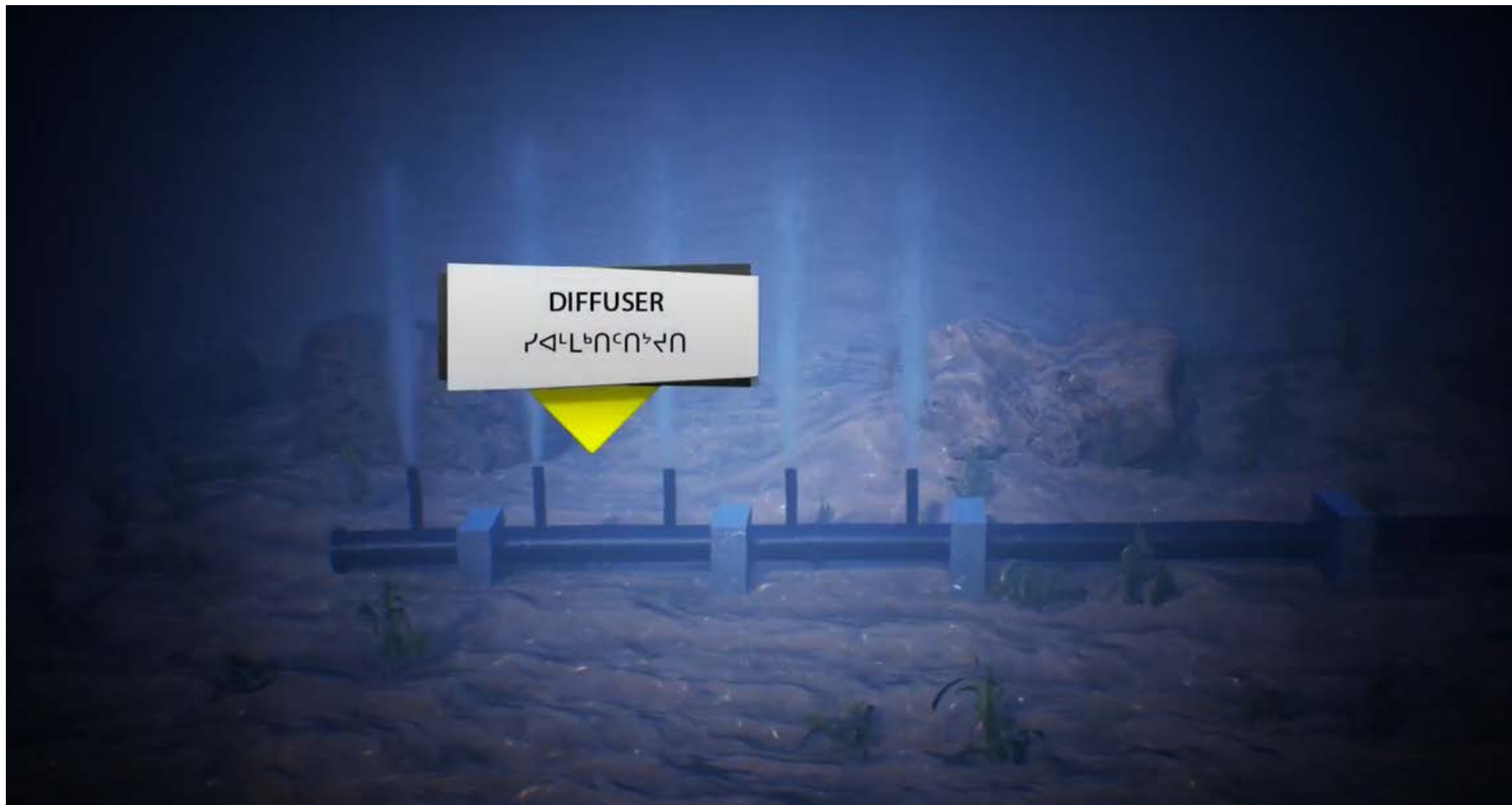
- HDD is the preferred method because:
 - Water discharge would not be impacted by ice erosion during this period
 - Will create less bed sediment disturbance and lower levels of suspended sediment
- HDD was the method used in Rankin Inlet for installation of the sewage discharge line to Hudson Bay.
- 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



MELVIN BAY DIFFUSER



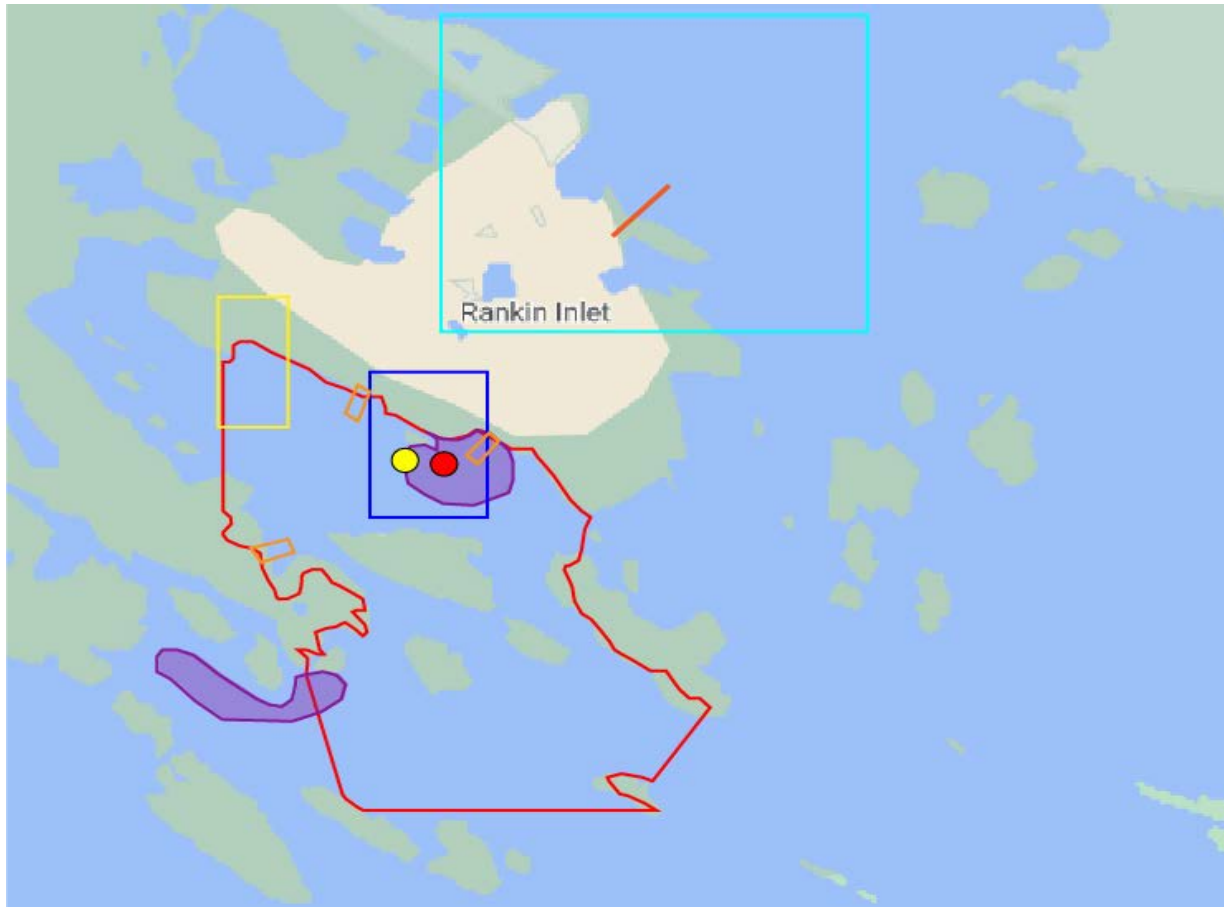
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MARINE ENVIRONMENT



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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)

OPERATION



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

MANAGEMENT PLANS



- Groundwater Management Plan- Appendix B
- Spill Contingency Plan- Appendix C
- Roads Management Plan- Appendix D
- Erosion and Sediment Control Plan for the Treated Groundwater Discharge- Appendix E
- Ocean Discharge Monitoring Plan- Appendix F

REMOVAL AND RECLAMATION



REMOVAL/RECLAMATION



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



PUBLIC ENGAGEMENT

AGNICO EAGLE'S CONSULTATION AND ENGAGEMENT



Agnico Eagle's public participation and consultation approach includes collaboration with:

- Impacted communities;
- Inuit organizations;
- Regional Inuit groups;
- Elders,
- Land users; and
- Other stakeholders.

The Nunavut Impact Review Board process is designed to be aligned with Inuit Quajimajatuqangit guiding principles including:

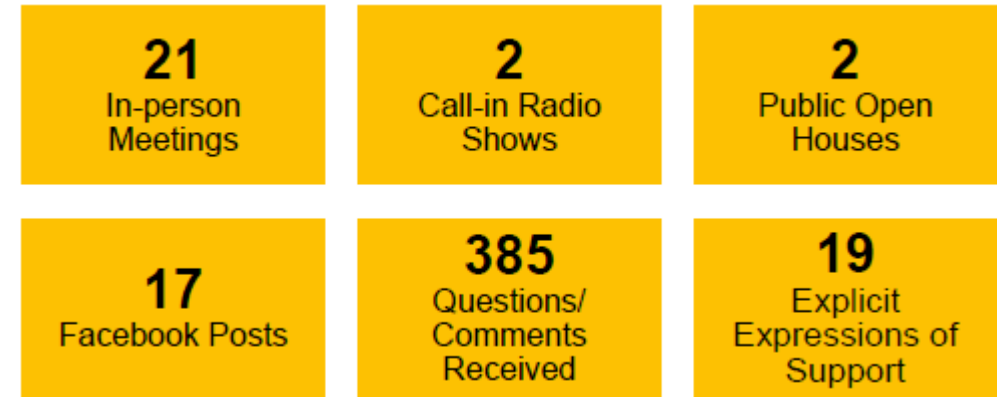
- Fostering good spirit by being open, welcoming and inclusive;
- Decision-making through discussion and consensus;
- Working together for a common cause: and
- Respect and care for the land, water and the environment.

WATERLINE PROJECT CONSULTATION

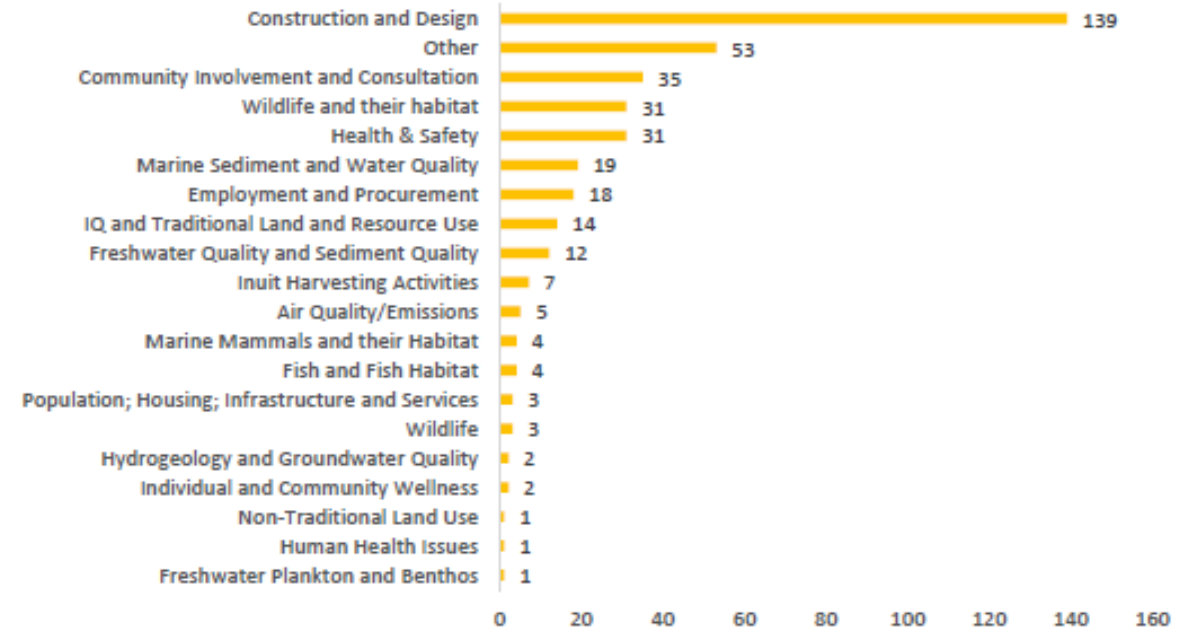


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- Consultations were held in March 2020, and a second round of consultations began in July 2020. The application is currently under review by NIRB. We anticipate some form of hearings later this year, and NIRB is seeking feedback on how to conduct the process.
- From the feedback received during the March consultations, Agnico Eagle discussed building crossings along the proposed waterline for caribou, ATVs, and snowmobiles
- In the second round of consultations, we heard that some people prefer the waterline to increased trucking, however, there is a lot of concern around impacts to caribou.
 - To address the impacts to caribou, Agnico Eagle is looking at different options to cover the waterline instead of crossings.
- Additional Focus Groups were held since August 28, 2020.



Questions & Comments Received by Valued Component/Theme



WATERLINE CONSULTATION



#	Feedback and commitments	
1	Use traditional Knowledge/IQ to identify areas for crossings structures or burying/covering locations	Elder representatives from the HTOs will be invited to site to inspect the All-Weather Access Road (AWAR) and identify locations where caribou crossing should be installed or where the waterline should be buried/covered
2	Build crossing structures	
3	Use western science to identify areas for crossing structures	a) Collar Study b) Road observations c) Camera study of the road d) Camera study of existing waterline e) Road material study
4	Have a long-term monitoring study that will inform adaptive management	a) Site Visits for Elders b) Tracking Caribou with GPS collars c) Camera Study d) Road monitoring site + HTO program
5	Toll-free number for the community members to report problem along the waterline	
6	Leakage detection system on the waterline to be incorporated	
7	In the area of Apache Pass the waterlines will be routed on the East side of the rock outcrop	
8	Markers will be placed on the waterline for winter ID	
9	Agnico Eagle will burry/cover between 80-90% of the waterline and will continue to work with the HTO, KIA, Elders and the community on site specific locations. This will replace the commitment 2 to build crossing if this the preferred mitigation method	

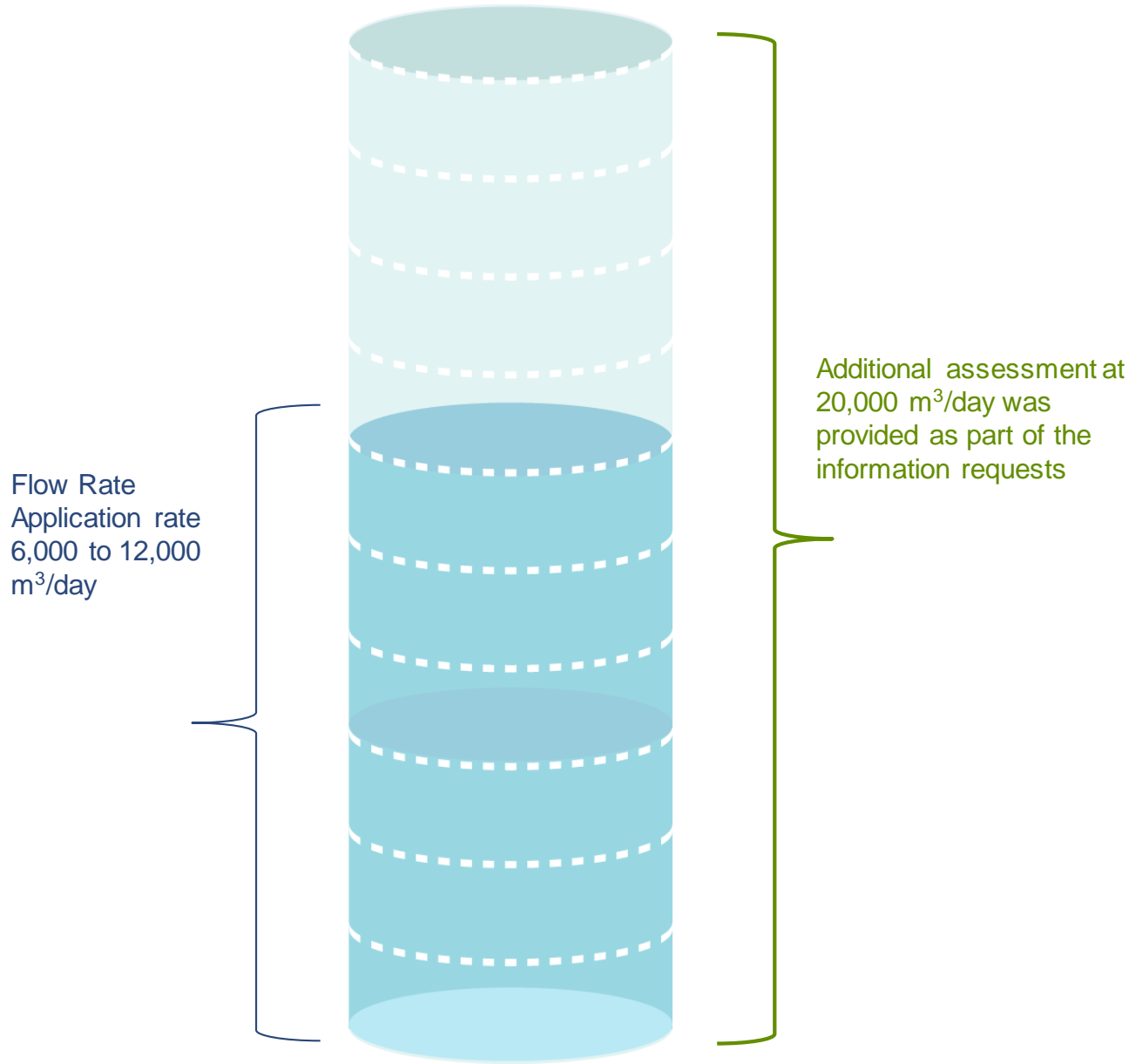


ALTERNATIVE ASSESSMENT

ALTERNATIVE: DISCHARGE VOLUME OF 20,000 m³/day



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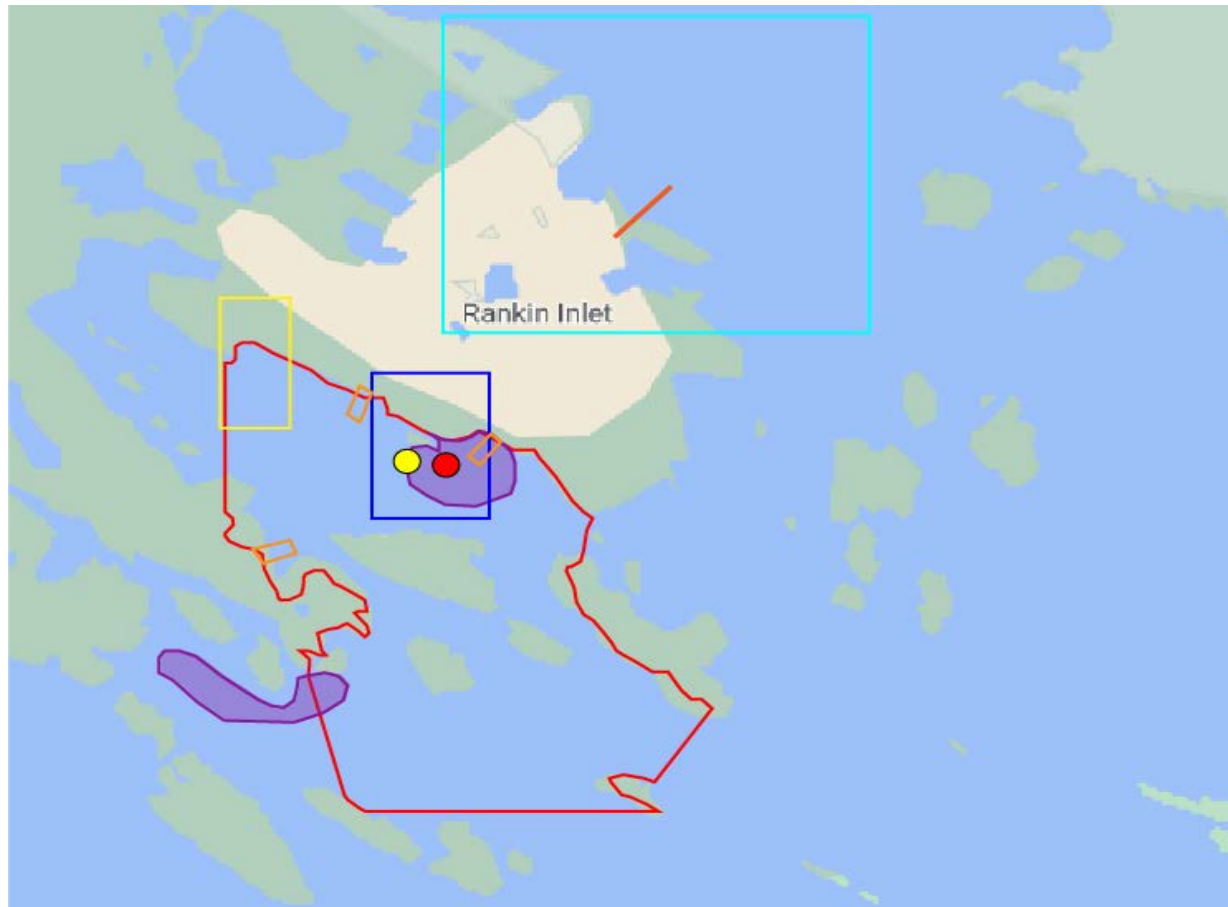
- Flow Rate- Application rate is 6,000 to 12,000 m³/day
- Alternative was considered to include diversion of surface contact water, including CP1 to manage larger volumes of water on-site.
- To limit effects from construction, the current design allows for an increase in discharge volume to 20,000 m³/day, with no additional construction.
- Modelling has confirmed that water quality will achieve dilution compliance within the mixing zone
- Additional assessment at 20,000 m³/day was provided as part of the information requests.

ALTERNATIVE: CONVEYANCE MODE FOR TREATED GROUND WATER EFFLUENT



- Investigated the potential benefits and disadvantages of using one or two waterlines for the conveyance of treated groundwater
- Selected two waterlines:
 - Limit the diameter of the waterline
 - Allowance for maintenance on one line while the other continues to operate
 - Facilitate crossing by ATV/snowmobiles and caribou
 - Capacity to manage planned and potential alternative flow rates

ALTERNATIVE: DISCHARGE LOCATION AND TIMING OF DISCHARGE



- Evaluated year-round discharge at current rate versus increased rate during open water
- Increase discharge window in Spring and Fall
- Different locations were considered

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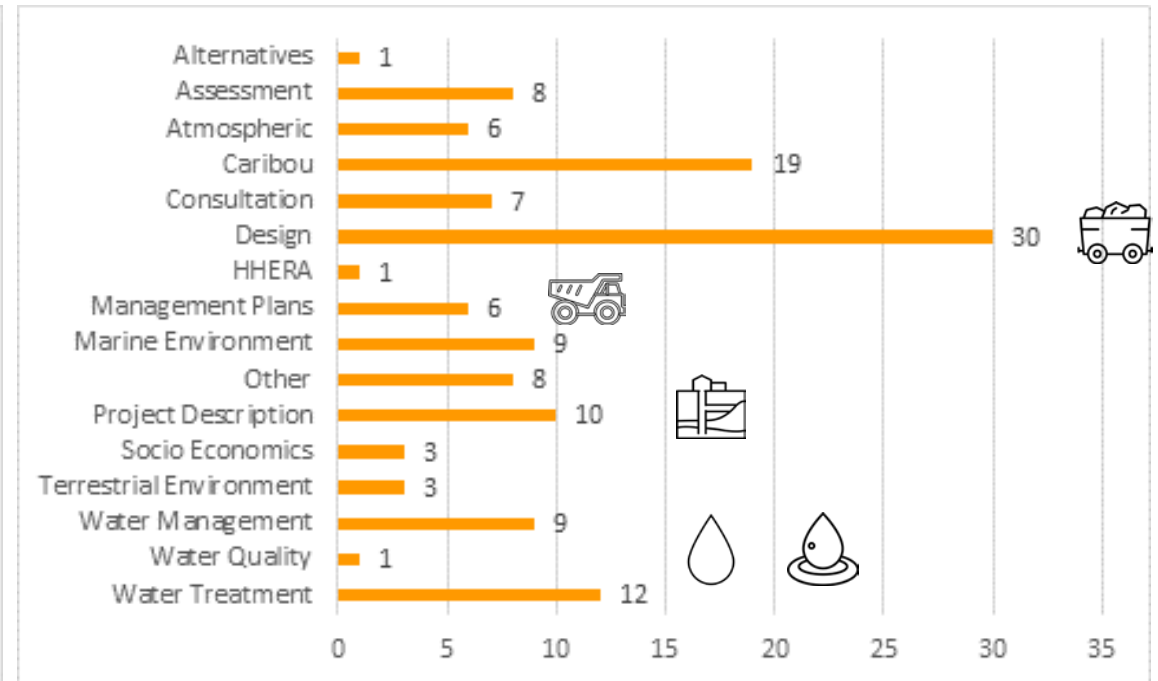
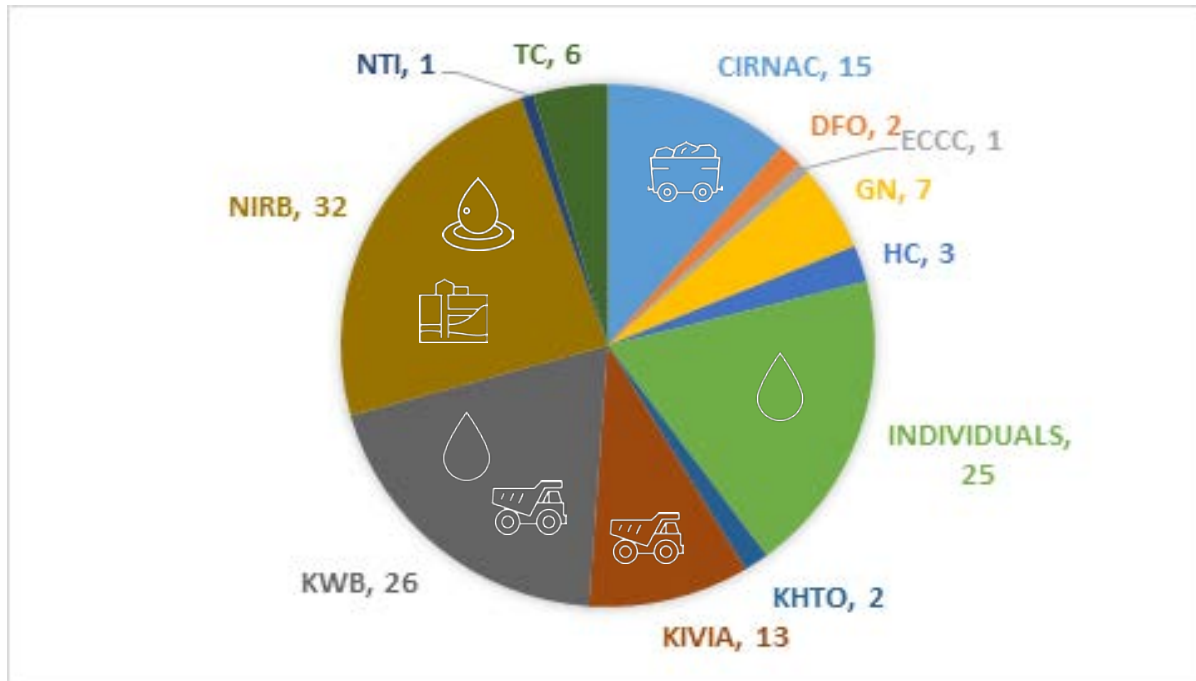



INFORMATION REQUEST

INFORMATION REQUEST – INTERVENERS, INDIVIDUALS AND THEMES



A total of 133 IRs were received

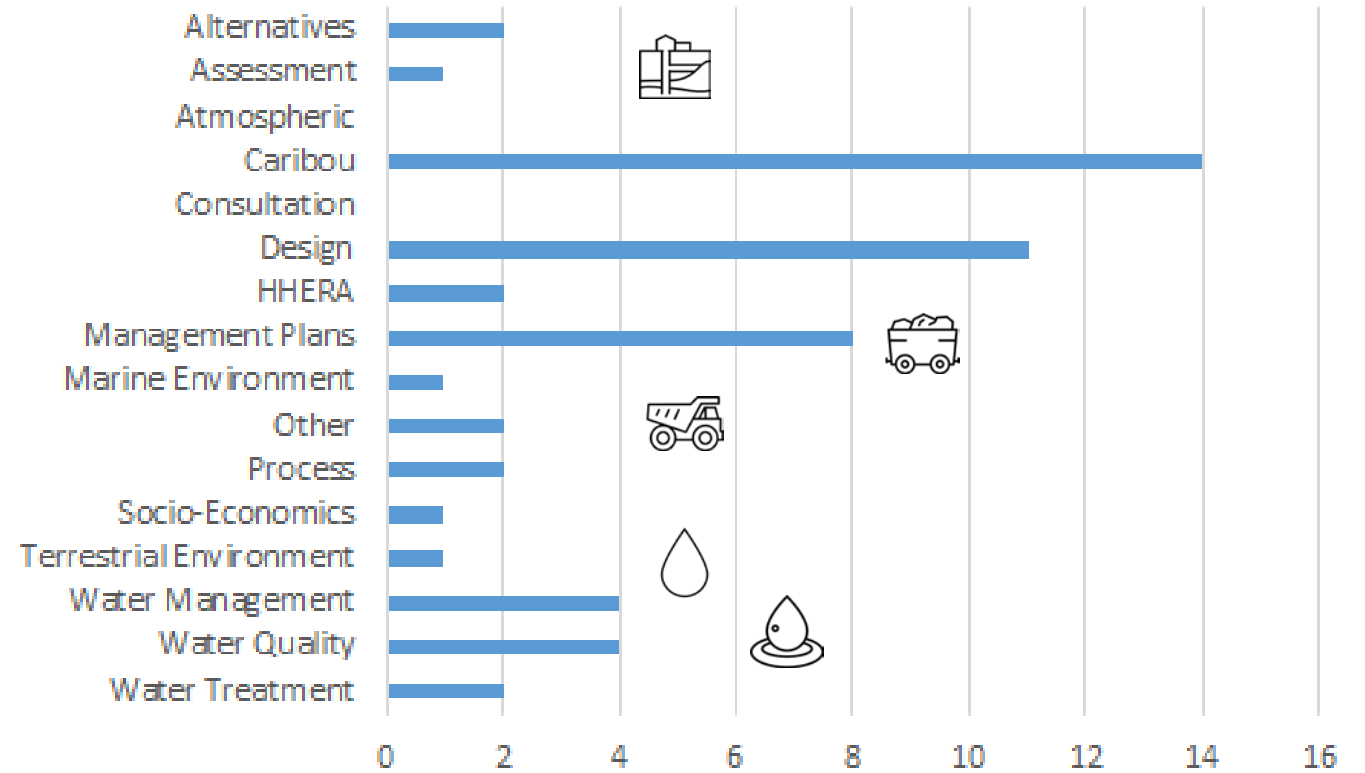
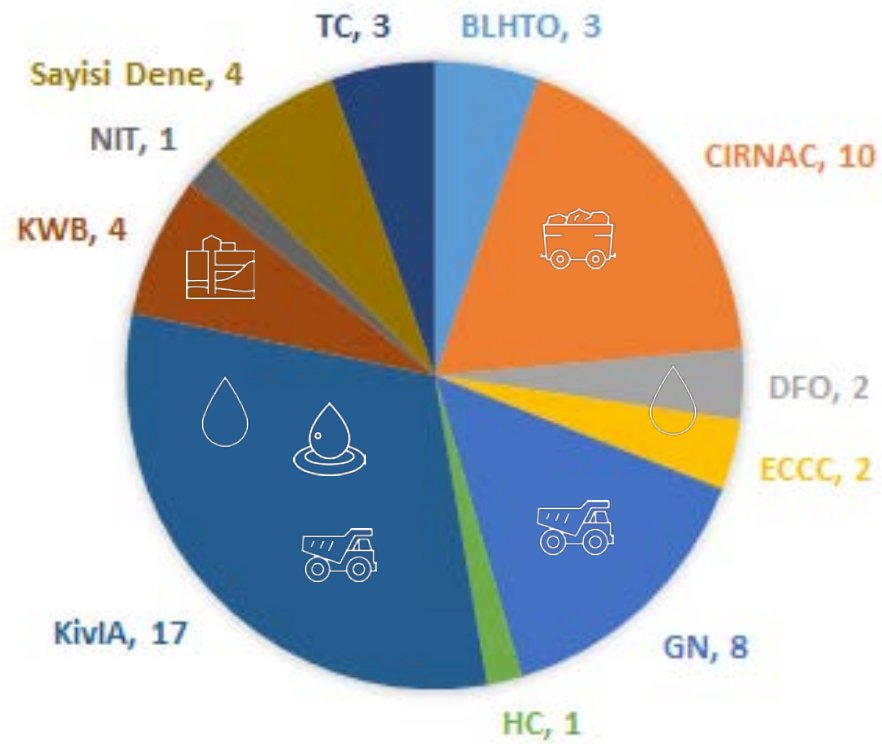




TECHNICAL COMMENTS

TECHNICAL COMMENTS

A total of 55 Comments were received



QUESTIONS ?

