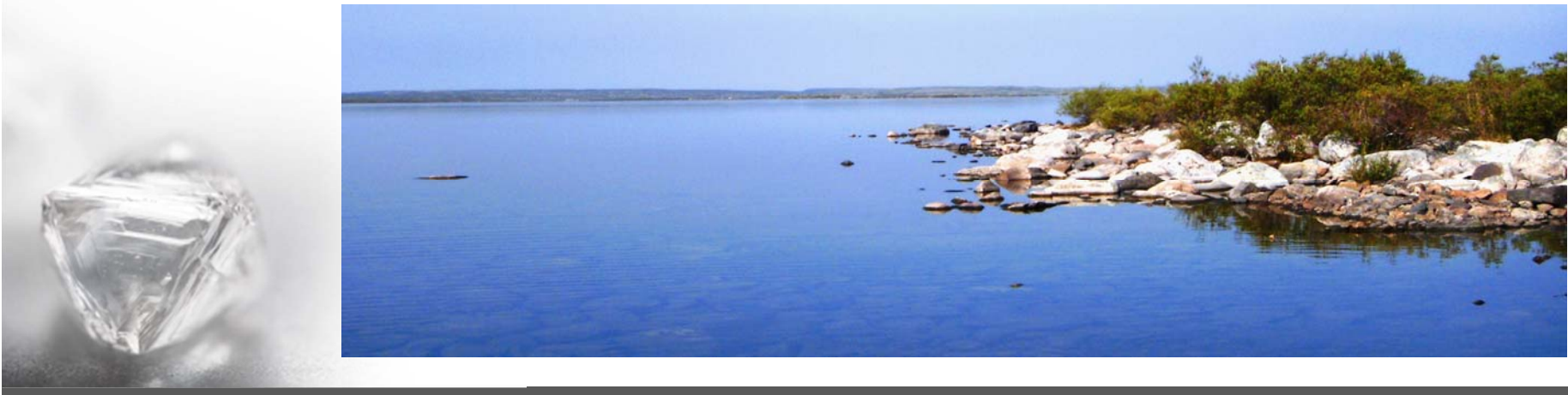


CONCEPTUAL AQUATIC EFFECTS MONITORING PROGRAM DESIGN PLAN FOR THE JAY PROJECT



Ekati Mine AEMP

- The existing AEMP for the Ekati Mine is focused on the current aquatic receiving environment, and includes the following components:
 - Hydrology
 - Water and sediment quality
 - Plankton, benthic invertebrates, fish health
- The AEMP will be expanded to include monitoring the effects of the Jay Project





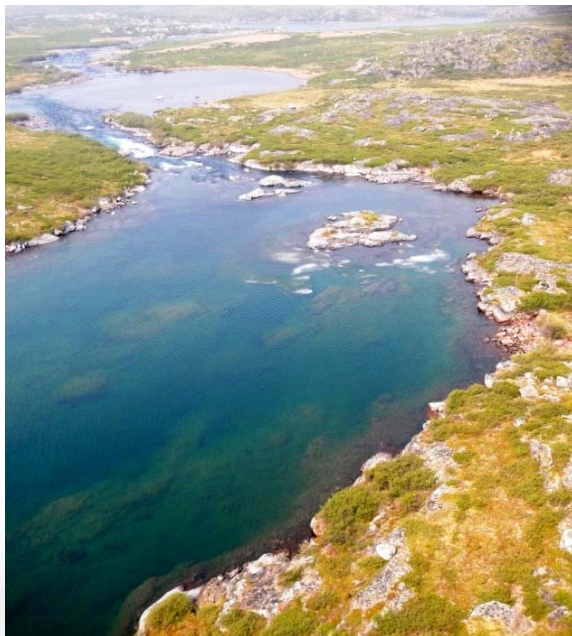
Conceptual AEMP for Jay Project

- A conceptual AEMP Design Plan was developed for the Jay Project
 - Provides an overview of scope of monitoring to be added to existing AEMP
 - The first iteration of the AEMP Design Plan covers dewatering and early operations (2016 to 2019) and no operational discharge
 - Operations extend to 2029 and there will be opportunities to adjust sampling design, as required by the Water Licence
- The AEMP Design Plan will be finalized during the Water Licence process with the WLWB, and will incorporate input from regulatory and community engagement activities





AEMP Objectives



- Determine the short- and long-term effects of the Project on the receiving environment
- Test the aquatic effect predictions made in the DAR or in other submissions to the WLWB regarding the impacts of the Project on the receiving environment
- Assess the efficacy of mitigation measures that are used to minimize the effects of the Project on the receiving environment
- Identify the need for additional mitigation measures to reduce or eliminate Project related effects





AEMP Study Design

- Predicted zone of influence
 - Lac du Sauvage (LDS), Lac de Gras (LDG), small lakes and streams near Jay Project infrastructure
- Monitoring areas
 - LDS: Near-field Area, North and Southeast transects, Narrows
 - LDG: existing Far-field 2 Area, LDG outlet (Coppermine R. – hydrology only)
 - Reference lake
 - Other lakes: Lake B1 (Christine Lake), Lake C1, Lake D3 (Counts Lake)
 - Streams: Stream C1, Diversion Channel



AEMP Study Design

LEGEND

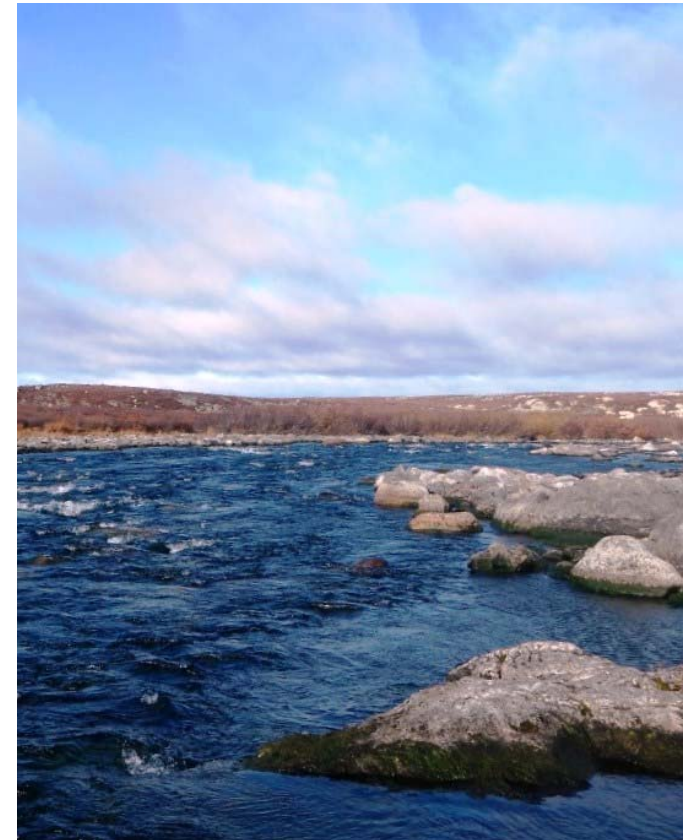
- EKATI MINE FOOTPRINT
- DIAVIK MINE FOOTPRINT
- PROPOSED JAY FOOTPRINT
- WINTER ROAD
- TIBBITT TO CONTWOYTO WINTER ROAD
- NORTHERN PORTION OF TIBBITT TO CONTWOYTO WINTER ROAD
- ESKER
- WATERCOURSE
- WATERBODY
- EXISTING EKATI AEMP SAMPLING LOCATION
- EXISTING EKATI AEMP SAMPLING LOCATION TO BE INCLUDED IN PROJECT AEMP
- PROPOSED SAMPLING LOCATION
- PROPOSED SAMPLING AREA





Study Design

- Reference lake selection
 - Desktop study to determine if there is an appropriate reference lake for the Project in addition to the existing Ekati reference lakes
- Monitoring frequency
 - Every 3 years for small-bodied fish
 - Annual for other components (seasonality assessed for hydrology, water quality, and plankton)





Data Analysis and Interpretation

- Data analysis will focus on:
 - Comparisons of AEMP results to DAR predictions
 - Comparisons of AEMP data to thresholds/benchmarks
 - Comparisons of AEMP data to range of natural variability
 - Assessment of spatial and temporal trends in relation to the mine discharge or Project facilities





Response Framework

- The AEMP will incorporate a Response Framework, as per WLWB guidance:
 - Expansion of the existing Ekati AEMP Response Framework
 - Goal is to systematically respond to monitoring results and apply further study and mitigation, if necessary to confirm results and prevent significant effects
 - Low Action level will be developed initially as per WLWB guidance
 - Exceeding the Low Action Level will trigger actions and reporting to the WLWB





Next Steps

- The expansion of the Ekati AEMP to incorporate the Jay Project will be finalized during the Water Licence process
- Input from regulators and communities will be incorporated as part of the engagement process

