



DE BEERS
GROUP OF COMPANIES

DE BEERS GAHCHO KUÉ WATER LICENCE AMENDMENT TECHNICAL SESSIONS PRESENTATION

Fish and Wildlife Habitat

Yellowknife (Northern United Place)
May 30 and 31, 2018

TOPIC 8 – FISH AND WILDLIFE HABITAT



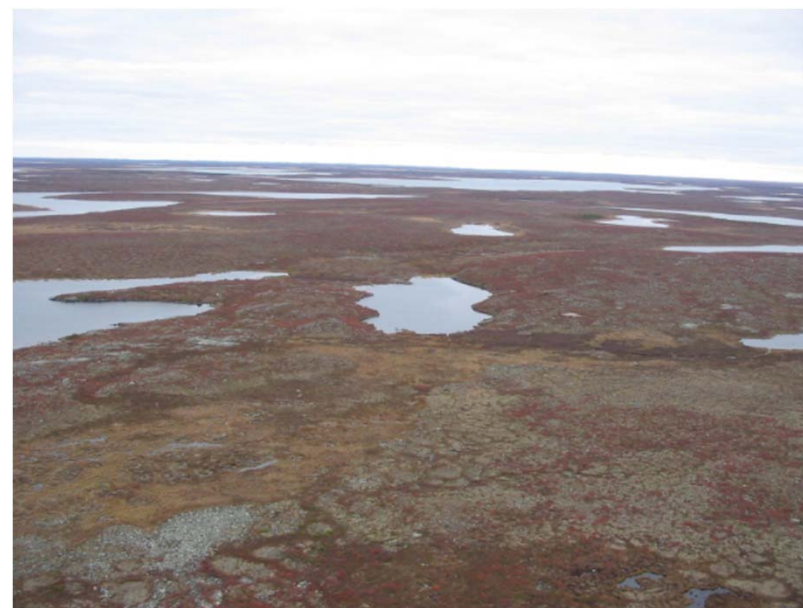
FISH AND FISH HABITAT – OFFSETTING PLAN UPDATE

- All of Kennady Lake (Areas 2-7 [670 ha]) included in *Fisheries Act* Authorization 03-HCAA-CA6-00057.1 for the Gahcho Kué Mine
- Authorization also stipulates that fish habitat will re-establish in Kennady Lake at closure
 - recognized that this area will be smaller due to extension of the mine rock pile into Area 5
- De Beers provided DFO with an update to the offsetting plan to account for the changes
 - Consistent with DFO's *Fisheries Protection Policy* and *Fisheries Productivity Investment Policy: A Proponent's Guide to Offsetting*, and existing *Fisheries Act* Authorization
- NHX-2



FISH AND FISH HABITAT – OFFSETTING PLAN UPDATE

- De Beers will continue to consult with DFO on quantification of losses and gains to demonstrate that gains from proposed offsetting measures (Redknife River project) will counterbalance losses predicted to occur from the Mine's activities
- Final Offsetting Plan will include offsetting measures as required by DFO to achieve equivalency
- A detailed monitoring plan will be designed in consultation with DFO
 - results will be used, if necessary, to adjust mitigation and offsetting measures and make design improvements as required
- De Beers will provide additional information to DFO related to design of the proposed closure diversion channel, including information related to fish passage and use, once further design details are available
- NHX-3, -4, -6; DFO-2



FISH AND FISH HABITAT – ENVIRONMENTAL SCREENING ASSESSMENT

- Baseline summary section provided in Section 2.4.6.2 of the ESA, which included a brief summary from the 2016 AEMP
 - Additional information including quantitative support found in Section 9 and Appendix 9A (downstream flow monitoring report) of the 2016 AEMP
 - At the time of preparation of the ESA, the 2016 AEMP was the most recent AEMP available; at the same time, sampling and reporting was being completed for the 2017 AEMP
 - Although 2017 data not included in the summary of operational monitoring results, the results for the fish community monitoring in Streams K5 and L2 were considered in the ESA
 - Mine plan amendment does not change the volumes of water and timing for flow mitigation; monitoring of the downstream Arctic Grayling population will continue as per the existing AEMP and approved Response Plan, and will be reported to the MVLWB under existing AEMP mechanisms
 - NHX-5; DFO-3



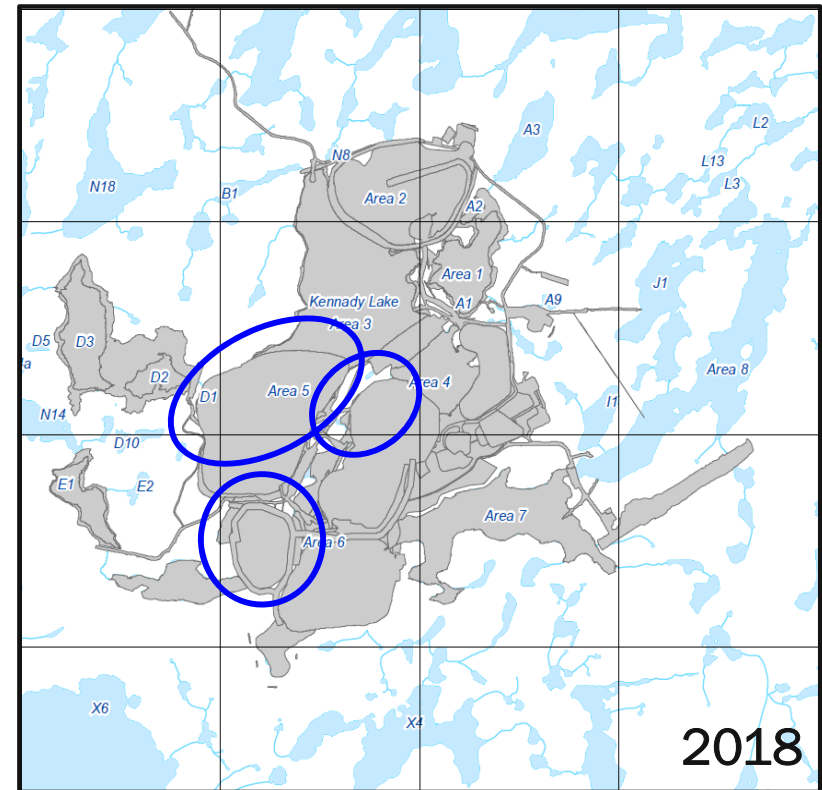
VEGETATION MONITORING – ENVIRONMENTAL SCREENING ASSESSMENT

- NHX-22 questioned the summary of 2016 Vegetation and Soil Monitoring Program (VSMP) Report in the ESA and referenced 2017 program results
- Currently, Mine-related effects from increased dust on plant species richness and abundance have not been statistically detected during 2 years of baseline and 2 years of construction/operation data
 - Dust deposition data from 3 sampling periods in 2017 pooled at each sampling area to investigate the relationship between dust deposition rate and distance from the Mine; predicted effect is negative regardless of season; pooling improves confidence to detect a negative effect
 - No conclusion was drawn from the effects of dust on vegetation in 2017
- Vegetation monitoring data will be collected and analyzed in future years (next cycle is 2018), and continue to increase the strength and confidence in testing the effects from the Mine and natural factors on plant communities



WILDLIFE HABITAT QUANTITY AND QUALITY

- Small increase in footprint in 2018 mine plan amendment
 - 4.3% (57.1 ha) from EIS and 1.8% (25.8 ha) from 2017 Amendment
 - On-land disturbance area specific to extended West Mine Rock Pile; negligible change
- Many wildlife effects pathways assessed in the EIS remain the same
- Change in sensory disturbance determined to be negligible
 - Mine operational period remains similar
 - Small increase in haul traffic, blasting, and FTEs during operation
 - Changes in magnitude and geographic extent of sensory disturbances likely to be unmeasurable relative to EIS because mitigation still effective
 - Will increase length of the closure period but site activity much lower than during Mine operations



WILDLIFE HABITAT QUALITY AND QUANTITY

- Effects on wildlife movement from presence of dykes assessed in EIS (residual effect assessed as negligible to wildlife populations)
 - 7 dykes planned to be permanent in 2018 UPD; presence of 7 dykes during post-closure predicted to have negligible influence on regional wildlife populations and do not alter conclusions of the EIS
 - NHX-35
- Sensory disturbance, which includes noise, assessed as a secondary pathway for wildlife in 2018 ESA
 - Limited additional sources of noise and other sensory disturbances (6 additional haul trucks and 40 additional staff)
 - Activities will occur primarily within core Mine area; not expected to result in measurable change in magnitude or spatial extent of sensory disturbance
 - Noise monitoring is completed at the Mine; future monitoring results can be compared to noise levels under existing conditions to verify predictions
 - NHX-36



WILDLIFE MONITORING

- Summary of wildlife monitoring surveys and schedule included in Table 1.1 of annual wildlife monitoring report (included in the response to NXH-31)
- Monitoring schedule updated based on 2018 mine plan amendment
 - Ongoing throughout construction, operations, and closure; operations expected to be 11.7 yrs, active closure 2 yrs, and refilling ~19 yrs; anticipated for 5 yrs after reconnection to downstream
- Monitoring of wildlife anticipated to occur during closure until relevant closure objectives achieved
- De Beers reviewed and provided comments on the draft Bathurst Caribou Range Plan; once approved, De Beers will review the WWHPP and WEMP in the context of the approved plan and update if required
- NHX-31, -32, -33, -34



DE BEERS
GROUP OF COMPANIES

THANK-YOU

