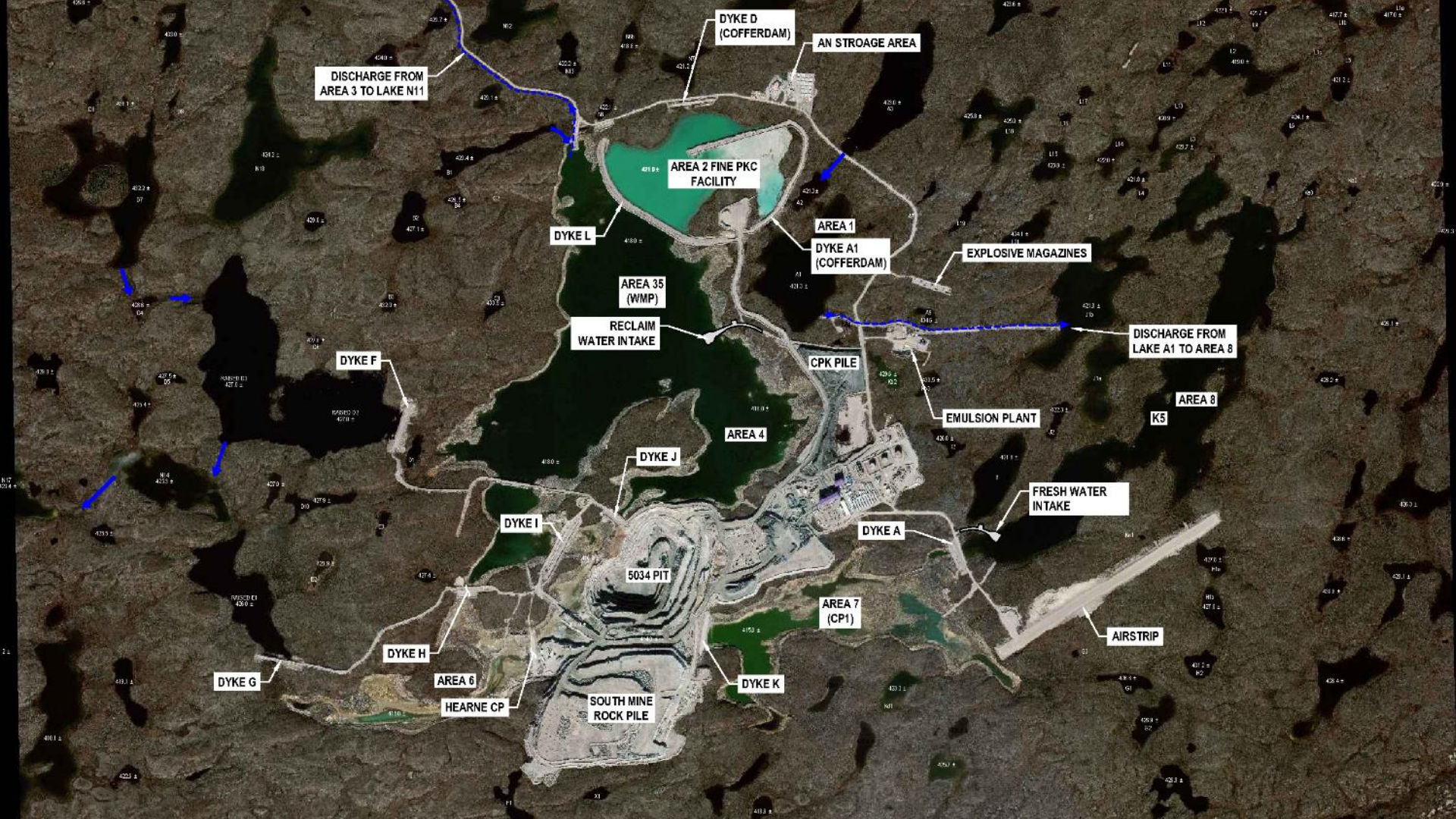


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# **DE BEERS GAHCHO KUÉ MINE UPDATE**

**NHX Governance Committee Yellowknife, NT  
April 19-20, 2018**



DISCHARGE FROM AREA 3 TO LAKE N11

DYKE D (COFFERDAM)

AN STROAGE AREA

AREA 2 FINE PKC FACILITY

DYKE L

AREA 1

DYKE A1 (COFFERDAM)

EXPLOSIVE MAGAZINES

AREA 35 (WMP)

RECLAIM WATER INTAKE

DISCHARGE FROM LAKE A1 TO AREA 8

DYKE F

CPK PILE

EMULSION PLANT

AREA 8

K5

AREA 4

DYKE J

FRESH WATER INTAKE

DYKE I

DYKE A

5034 PIT

AIRSTRIP

DYKE H

AREA 7 (CP1)

DYKE G

AREA 6

HEARNE CP

SOUTH MINE ROCK PILE

DYKE K

# YEAR 2 OPERATIONS UPDATE

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## Completed:

- AN Building

## In Progress:

- Mining in 5034 and Hearne Pits
- Dyke Construction continues (L, A1)
- South Mine Rock Pile Construction
- West Mine Rock Pile Initiation
- Land farm

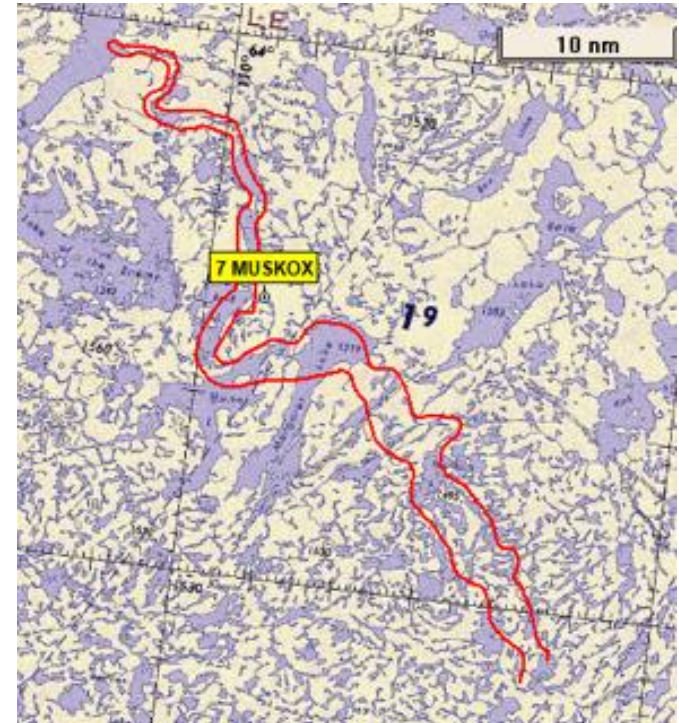
## Upcoming:

- New dust-control structure at primary crusher
- Winterizing of outdoor material handling system
- Composter to be installed and commissioned



## 2018 WINTER ROAD

- Aerial Reconnaissance Survey Completed (Jan 31)
  - Joseph Catholique & Dave Olesen
  - 7 Muskox, 1 fox, no caribou
- Road open from January 31 – April 1<sup>st</sup>
- Excellent ice conditions
- Snow berm surveys completed
- Caribou Behavioral Monitoring Program
  - Large group of caribou reported on Mackay Lake
  - Launched the program on GK road without hitting trigger
  - ~11 days of daily monitoring
  - Predominantly 2 groups of caribou along the road (~44 animals)
  - Results will be included in 2018 Wildlife Report



## YEAR 2 REGULATORY UPDATE

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### Submitted:

- Water Licence and Land Use Permit Amendment
- Aquatic Effects Response Plan to low action level exceedance for flow mitigation
- Notice of Aquatic Effects low action level trigger for nutrient enrichment and toxicological impairment

### Upcoming:

- Camp water intake request
- Aquatic Effects Response Plans
- Interim Closure and Reclamation Plan V.4
- Reclaim revision



# ANNUAL REPORTS

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De Beers produces several annual reports including:

- Annual Water Licence and Land Use Permit Annual Report (March 31)
- Annual Wildlife Report (March 31)
- Annual Closure and Reclamation Progress Report (March 31)
- Annual Aquatic Effects Monitoring Program Report (April 31)
- Annual Air Quality and Emissions Monitoring Report (April 31)

Digital copies are available on the MVLWB Registry and Printed copies can be provided if desired.

De Beers proposes to produce Plain Language Summaries, as we did for 2016 and present those at the next Gov Com meeting once all reports are finalized.

## 2018 REPORTABLE SPILLS

Date	Type	Volume	Details
February 12	Greywater	870 L	Pipe break under kitchen trailer – cleaned up, pipe replaced
March 7	Hydraulic Oil	800 L	Hydraulic hose on excavator pulled out of metal crimp fitting in pit. Hydraulic oil soaked up with absorbent pads..
March 29	Greywater	300 L	Cracked pipe break under kitchen trailer. Spill water vacuumed to waste water treatment plant. Pipe replaced

# WATER LICENCE AMENDMENT

## Operational

- Larger west mine rock pile (<100Mt)
- Slightly larger footprint (26 ha or ~2% increase)
- Adjustments to planned discharge
  - Discharge from Water Management Pond to N11 in Year 4
  - Discharge from Area 7 to Area 8 periodically
- Adjusted EQCs for Lake N11 and A8
- Additional mining equipment and operating hours
- Increased camp water intake (8,000m<sup>3</sup>/year)

## Closure

- Longer to refill Kennady Lake at Closure (~7 additional years)
- Watercourse required for closure to reconnect Watershed D to Kennady Lake





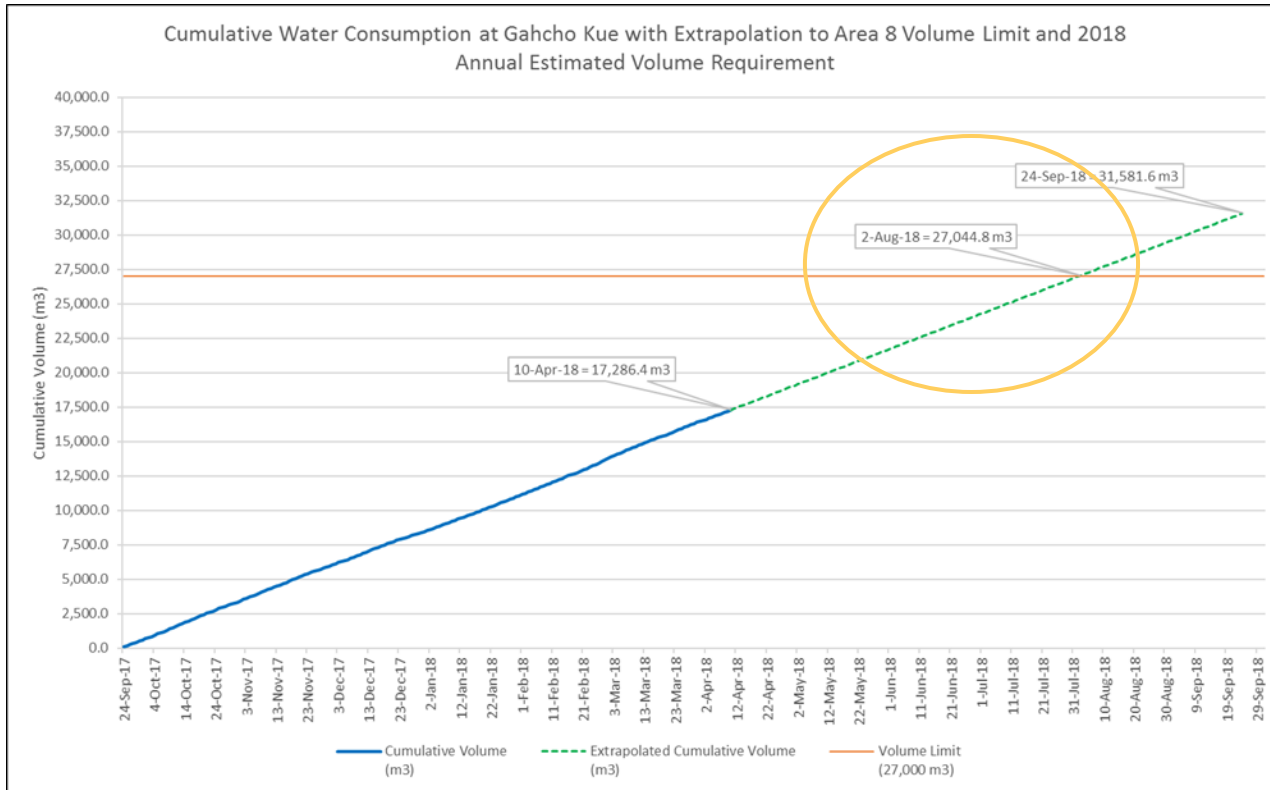
## SUMMARY OF W.L. AMENDMENT CHANGES

	W.L. Reference	W.L. 2005L2-0015 2014	W.L. 2005L2-0015 2018
Water Use for camp	Schedule 3 Part D, Item 1. b	27,000 m <sup>3</sup>	35,000 m <sup>3</sup>
Source of downstream flow mitigation	Scope	i.v.) operational discharge of effluent from the Water Management Pond to Lake N11 and Area 8 of Kennady Lake	xxii) operational discharge of collection pond water from Area 7 to Area 8 of Kennady Lake
EQC for A7	Part G, Item 31	Specific to discharge from WMP to A8	Allowance for discharge from A7 to A8
EQC for Lake N11	Part G, Item 30, 34	Table of values	Table of updated values and year 4 discharge
Inspection of Fuel Tanks	Part C: Item 58 a.	Examine all fuel storage tanks once per day	Examine all fuel storage tanks once per week
Definition of Modification	Part A: Scope and Definitions	Definition excludes expansion	Definition to include expansion

## SUMMARY OF W.L. AMENDMENT CHANGES

	W.L. Reference	W.L. 2005L2-0015 2014	W.L. 2005L2-0015 2018
Water Quality testing prior to discharge	Part G: Item 29	Water sampling from SNP 02 must be provided prior to discharge	Water from the SNP stations currently active within the WMP must be provided prior to discharge
Water Use	Part D: Item 2b	The annual quantity of water shall not exceed 3.45Mm3	If the 3.45Mm3 cannot be discharged within a given calendar year, the remaining amount may be discharged in the subsequent year

# INCREASED CAMP WATER INTAKE



Camp Water Intake:  
 Current = 27,000 m3  
 Required = 35,000 m3

# ENGAGEMENT 2018

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- Books In Homes - event in community schools, environmental staff available, NHX invited
- Summer Site Visits – Each community invited to send delegates for a site visit in August
  - Objective is for community members to see the site for themselves and provide feedback
  - Discuss wildlife crossings on road to Lake N11 and Dyke G
- Fish Tasting – annual event in September focussed on Elders and their observations about downstream fish
- NHX Site Workshop – NHX Governance Committee site tour/workshop. Potential topics:
  - NHX TK program – DBCI Scientific Program alignment?
  - Wildlife crossings over Lake N11 road and Dyke G
  - Other?



# WILDLIFE CROSSINGS

Propose to install wildlife crossings on our longer roads

- Road to Lake N11 & to Dyke G
- Design based on the Ekati crossings - gentle slopes with crushed gravel
- Propose to engage Indigenous Parties during the design during the summer site visits
- Propose to engage NHX during summer site workshop



