Mount Nansen Mine Remediation Project

Virtual Townhall

October 4, 2021

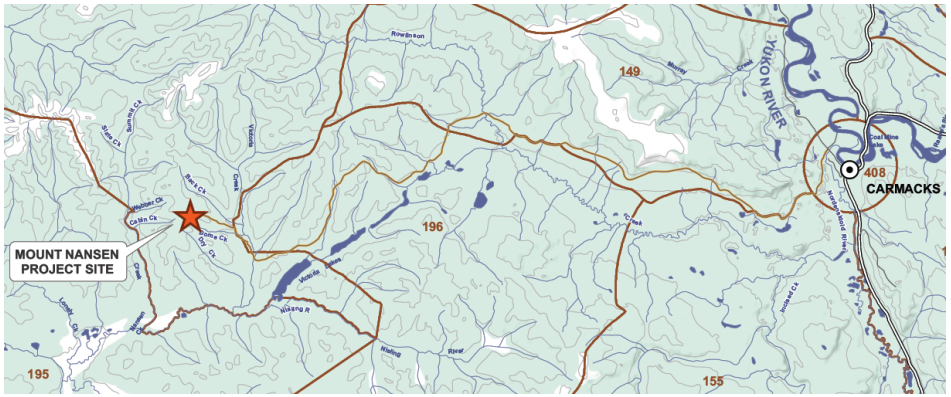
Today's Presentation

1. Project Overview
2. YESAA Process
3. Valued Components and Residual Effects

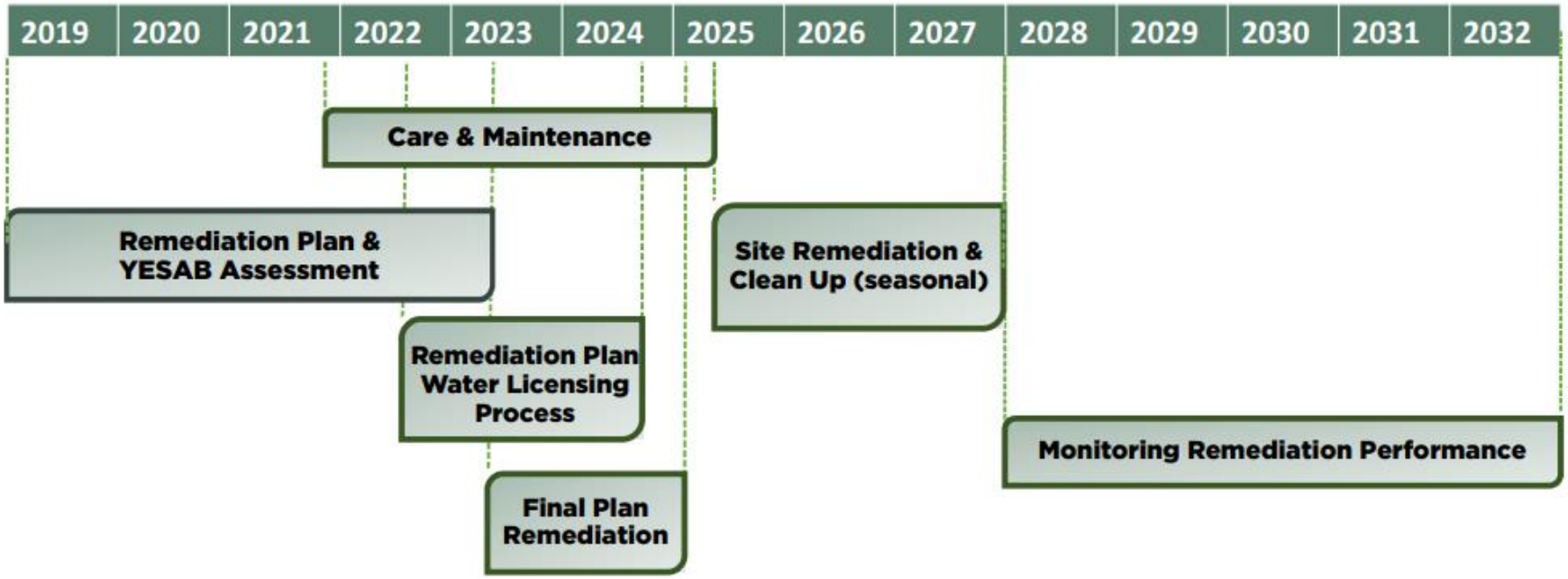
Mining at Mount Nansen

MOUNT NANSEN REMEDIATION LP

- Abandoned gold (and silver) mine 60 km west of Carmacks
- BYG Natural Resources Inc. mined the site 1996-99
- Shut down due to poor recoveries, tailings dam geotechnical stability issues, and water licence non-compliances



Schedule


2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
Care & Maintenance
Remediation Plan & YESAB Assessment
Site Remediation & Clean Up (seasonal)
Remediation Plan Water Licensing Process
Monitoring Remediation Performance
Final Plan Remediation

Remediation Objectives

MOUNT NANSEN REMEDIATION LP

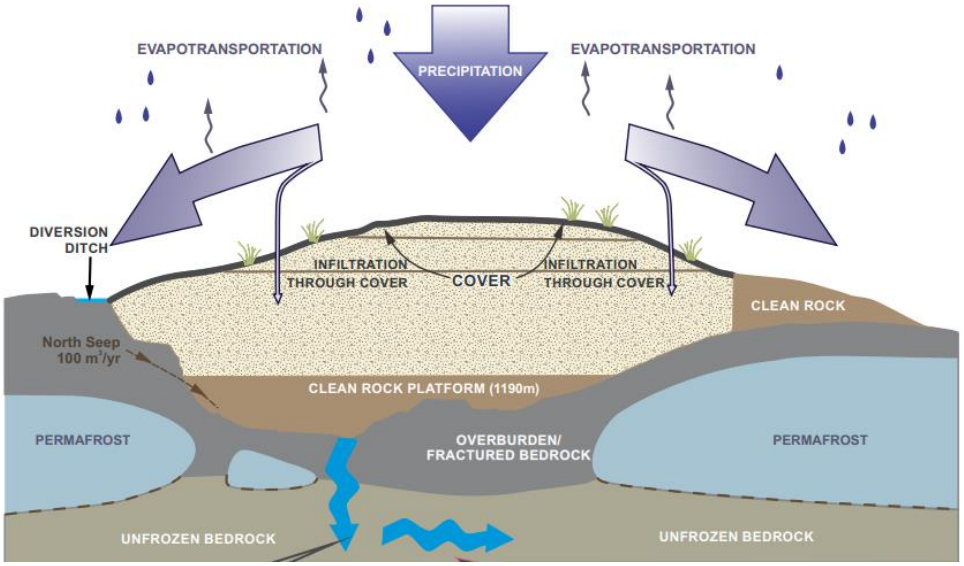
Canada, YG and LSCFN agreed to remediation / closure objectives in 2008:

- Protect **human health and safety**.
- Protect the **environment** including land, air, water, fish and wildlife.
- **Return the mine site to an acceptable state of use** that reflects original use where possible.
- Maximize local, Yukon and First Nation **benefits**.
- Reduce government liability and **risk**

Remediation Plan

MOUNT NANSEN REMEDIATION LP

- Move tailings, waste rock, and stockpiled ore to the Pit Containment Structure (PCS) (Season 1 & 2)
- Demolish mill buildings and other infrastructure (Season 2 & 3)



Remediation Plan

MOUNT NANSEN REMEDIATION LP

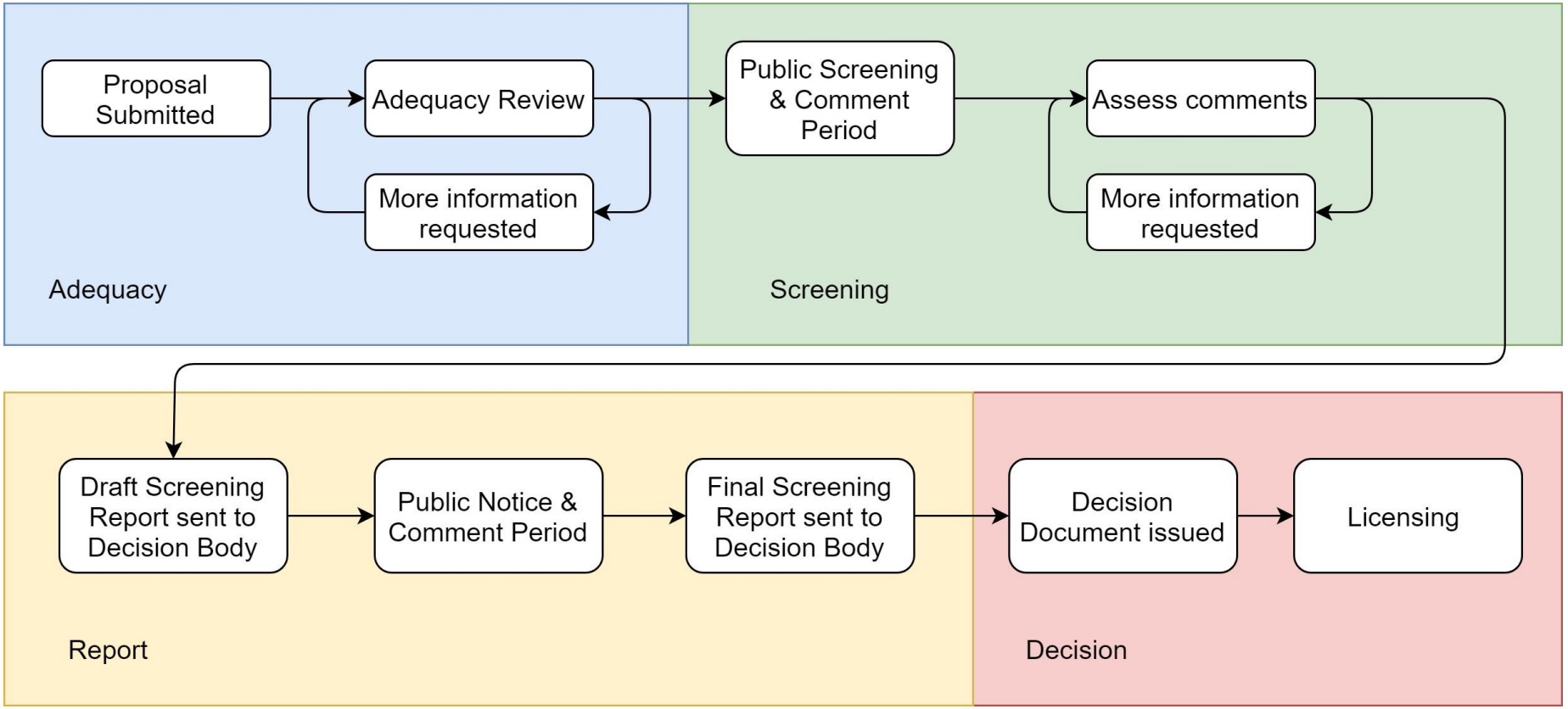
- Install cover on the PCS (Season 3)
- Dome Creek Valley restoration and general site revegetation (Season 3)

Yukon Environmental and Socio-economic Assessment Act (YESAA)

MOUNT NANSEN REMEDIATION LP

- Assesses the environmental and socio-economic effects of a project
- Proposal contains description of:
  - Current conditions of site
  - What activities are planned
  - Valued environmental and socio-economic components (for example: water quality, vegetation, wildlife, population and health of nearby communities)
  - How the project will affect the valued components and how big the effects will be

YESAA Process



YESAA Proposal

MOUNT NANSEN REMEDIATION LP

Part I: Introduction, Proponent Information and Consultation

- 1 Introduction
  - A1-1 Table of Concordance
- 2 First Nation and Community Consultation
  - A2-1 LSCFN and Carmacks Engagement Summary
  - A2-2 Stakeholders and Others Engagement Summary
  - A2-3 Issues Log
  - A2-4 MNRLP Consultation Log
- 3 Project Location

Part II: Project Description

- 4 Project Description
  - A4-1 Engineering Drawing Package
  - A4-2 Traffic Monitoring of the Mount Nansen Road
  - A4-3 PCS Cover Liquefaction and Dam Classification Memorandum
  - A4-4 Tailings Saturation Levels
  - A4-5 PCS Cover Settlement Analysis
  - A4-6 GHG Emissions Inventory
  - A4-7 Managing Accidents and Malfunctions

Part III: Existing Conditions and Effects Assessments for Environmental Components

- 5 Introduction to Environmental Components
- 6 Hydrometeorology
  - A6-1 Baseline Hydrometeorology Report
  - A6-2 Mount Nansen Hydrometeorology Monitoring Report
  - A6-3 Remediation Water Balance
- 7 Groundwater
  - A7-1 Hydrogeology Existing Conditions and Conceptual Model Report
- 8 Surface Water Quality
  - A8-1 Surface Water Quality Existing Conditions Report
  - A8-2 Water Quality Objectives
  - A8-3 Water Quality Model
- 9 Aquatic Resources
  - A9-1 Mount Nansen 2019 Aquatic Resources Assessment
  - A9-2 Mount Nansen Site Fisheries and Aquatics Existing Conditions Report
  - A9-3 Benthic Invertebrate Communities at the Mt. Nansen Site, Pony Creek
  - A9-4 Fish and Fish Habitat Assessment of Back and Pony Creeks Near the Mt. Nansen Mine Site
  - A9-5 Benthic Invertebrate Communities at the Mt. Nansen Mine Site

Part III: Continued

- 10 Terrain and Soil
  - A10-1 Contaminated Soils Site Specific Screening Criteria
  - A10-2 Mount Nansen Terrestrial and Aquatic Effects Study 2005-06
  - A10-3 Mt. Nansen Mine Reclamation Terrain Mapping and Material Search
- 11 Air Quality
- 12 Vegetation
  - A12-1 Mount Nansen 2019 Wildlife and Vegetation Assessment
  - A12-2 Mount Nansen Site Ecological Landscape Classification Report
  - A12-3 Mount Nansen Site: 2012-2014 Terrestrial Existing Conditions Report
  - A12-4 Human Heath and Ecological Risk Assessment for the Mt. Nansen Mine
- 13 Wildlife
  - A13-1 Mount Nansen: 2012 Winter Wildlife Tracking Study

Part IV: Existing Conditions and Effects Assessments for Socio-economic Components

- 14 Introduction to Socio-economic Components
- 15 Population and Health
- 16 Material Well-being
- 17 Capacity, Training and Education
- 18 Cultural Well-being
- 19 Sustainability and Legacy
- 20 Land and Resource Use
- 21 Heritage
  - A21-1 Heritage Resources Overview Assessment and Preliminary Field Reconnaissance, Mount Nansen Site
  - A21-2 Heritage Resource Impact Assessment, Mount Nansen Site

Part V: Additional Information

- 22 External Effects on the Project

Part VI: Management Plans

- 23 Conceptual Management Plans
  - A23-1 Remediation Monitoring, Surveillance and Reporting Plan
  - A23-2 Adaptive Management Plan
  - A23-3 Dust Management Plan
  - A23-4 Sediment and Erosion Plan
  - A23-5 Spill Contingency and Hazardous Material Management Plan
  - A23-6 Waste Management Plan
  - A23-7 Heritage Resource Protection Plan
  - A23-8 Water Management Plan
  - A23-9 Socio-economic Monitoring and Management Plan

Part VII: Summary, Acknowledgement and Certification

- 24 Summary and Conclusions
- 25 Acknowledgement and Certification

Legend

- X Section
- AX-X Appendix

Hydrometeorology

- Effects:
  - Neutral: return Dome Creek to natural flow
  - Adverse: more flow to Dome Creek while WTP running; flow stoppage during creek reconstruction
- Mitigations:
  - Sediment and Erosion Control Plan
  - PCS cover and diversion channels
  - Re-sloping and revegetation
  - Dome Creek rehabilitation

Groundwater

- Effects:
  - Positive for groundwater flow and neutral for groundwater quality: surface water diversion from PCS; reduced acid drainage; improved groundwater quality
  - Adverse: changes to groundwater flow, quantity, or level during work; PCS seepage
- Mitigations:
  - Water management during PCS construction
  - Relocating contaminants
  - PCS cover and diversion channels

Surface Water Quality

- Effects:
  - Positive: improved water quality of creeks, less contaminants in run-off
  - Adverse: potential spills and more solids in Dome Creek during remediation work
- Mitigations:
  - Relocate contaminants
  - PCS cover and diversion channels
  - WTP operation

Aquatic Resources

- Effects:
  - Positive: improved habitat and water quality
  - Adverse: changes to water quality and habitat during active remediation
- Mitigations:
  - Creation of PCS + cover
  - Dome Creek Valley restoration

Terrain and Soil

- Effects:
  - Positive for soil and neutral for terrain: return land to natural conditions, reduce erosion, and improve soil
  - Adverse: dust creation and soil compaction during work; permafrost loss
- Mitigations:
  - Move contaminated soil to PCS
  - Restore ecosystem
  - Create rough and loose surface
  - Dust Management and Sediment and Erosion Control Plans

Air Quality

- Effects:
  - Positive: reduction of dust and emissions post-remediation and removal of contaminant sources
  - Adverse: Dust and emissions during remediation work
- Mitigations:
  - Dust Management Plan
  - Revegetation
  - Relocate contaminants into PCS

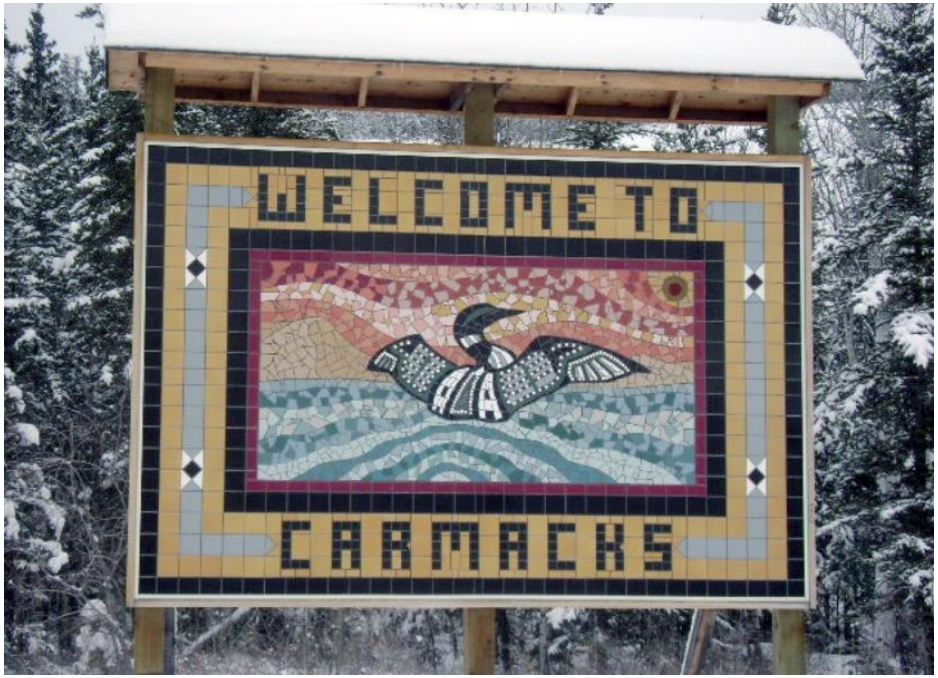
Vegetation

- Effects:
  - Positive: plant native vegetation and improve soil quality
  - Adverse: clearing vegetation for work, invasive species,
- Mitigations:
  - Remediation trenches
  - Rough and loose surface
  - Ecological Restoration Plan

Wildlife

- Effects:
  - Positive: more habitat and less contaminant exposure and mortality risk post-remediation
  - Adverse: habitat loss, contaminant exposure, and mortality risk during work
- Mitigations:
  - Time work to protect wildlife
  - Nest surveys
  - No-hunting policy (employees)
  - Enforce speed limits
  - Store food, fuel, and waste safely
  - Restore ecosystem

Population and Health



- Effects:
  - Positive for community well-being and H&S and neutral for family well-being: improved water quality and ecosystem; job opportunities
  - Adverse: working away from home; dust and traffic increases during remediation
- Mitigations:
  - Flexible work schedules
  - Enforcing traffic laws
  - Dust Management Plan

Material Well-being

- Effects:
  - Positive during remediation work and neutral post-remediation: improved water quality and ecosystem; job and business opportunities during remediation
  - Adverse: fewer job opportunities post-remediation
- Mitigations:
  - Hire local citizens and contractors
  - Improved water quality and ecosystem

Capacity, Training, and Education

- Effects:
  - Positive: increase job and training opportunities
- Mitigations:
  - Training for LSCFN and local citizens

Cultural Well-being

- Effects:
  - Neutral during remediation and positive post-remediation: improved water quality, ecosystem, and accessibility; direct funding to LSCFN
- Mitigations:
  - Flexible work schedules
  - Workplace cultural training

Sustainability and Legacy

- Effects:
  - Positive: training and job opportunities; connections made project review groups
- Mitigations:
  - Hire local contractors and workers
  - Direct funding to LSCFN

Land and Resource Use

- Effects:
  - Positive: improved water quality, ecosystem, and accessibility
  - Adverse: earth compaction; increased human presence
- Mitigations:
  - Create rough and loose surface
  - Revegetation
  - Monitoring

Heritage

- Effects
  - Neutral: reduced potential for future disturbance
  - Adverse: potential disturbance during earthworks
- Mitigations:
  - Assess disturbed areas that haven't already been assessed
  - Heritage Resource Protection Plan

What's Next?

How can you find out more about the project, about employment, contracting or training opportunities?

Jillian Chown

Mount Nansen Project Coordinator, Little Salmon Carmacks First Nation

(867) 333-3888

Kristina Gardner

Socio-economic Lead, Mount Nansen Remediation LP

(867) 332-6045

Email: info@mnrlp.ca

Web: www.mnrlp.com

What's Next?

MOUNT NANSEN REMEDIATION LP

1. Submitting the Remediation Project to the Yukon Environmental and Socio-economic Assessment Board
2. Ongoing Care & Maintenance
3. Detailed Design Remediation Plan development

- How can you participate?
  - Contact Jillian Chown or Kristina Gardner
  - Attend further community meetings
  - Sign up to receive updates
  - Follow us on Facebook: https://www.facebook.com/mnrlpyukon
  - See website www.mnrlp.com

Building a positive legacy

MOUNT NANSEN REMEDIATION LP

Together, we can clean up and reclaim the Mount Nansen Mine Site!