

# Imagining a Wildlife Park or Preserve as an Alternate End Land Use Option for the Mount Polley Mine

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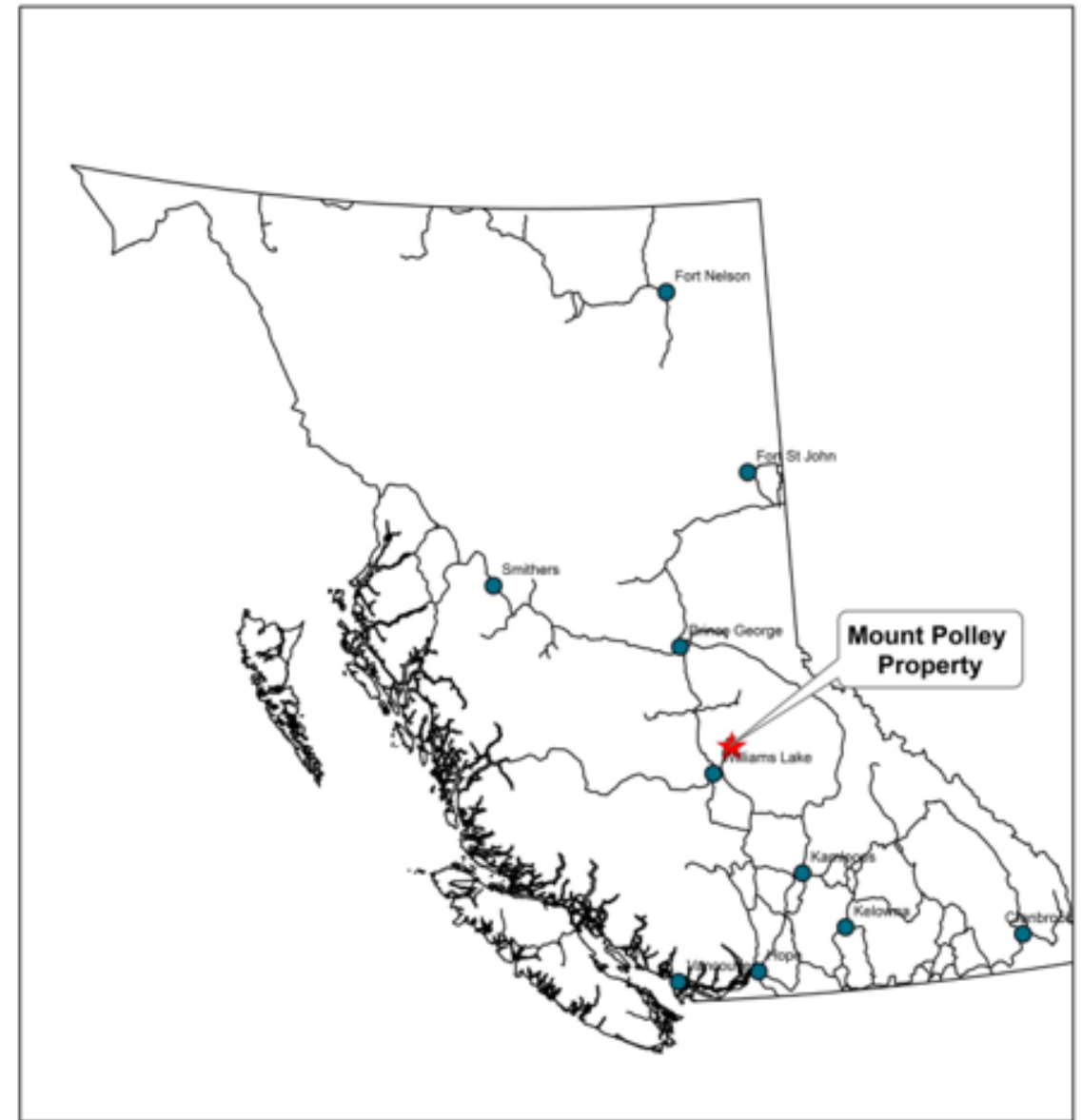
October 18, 2018



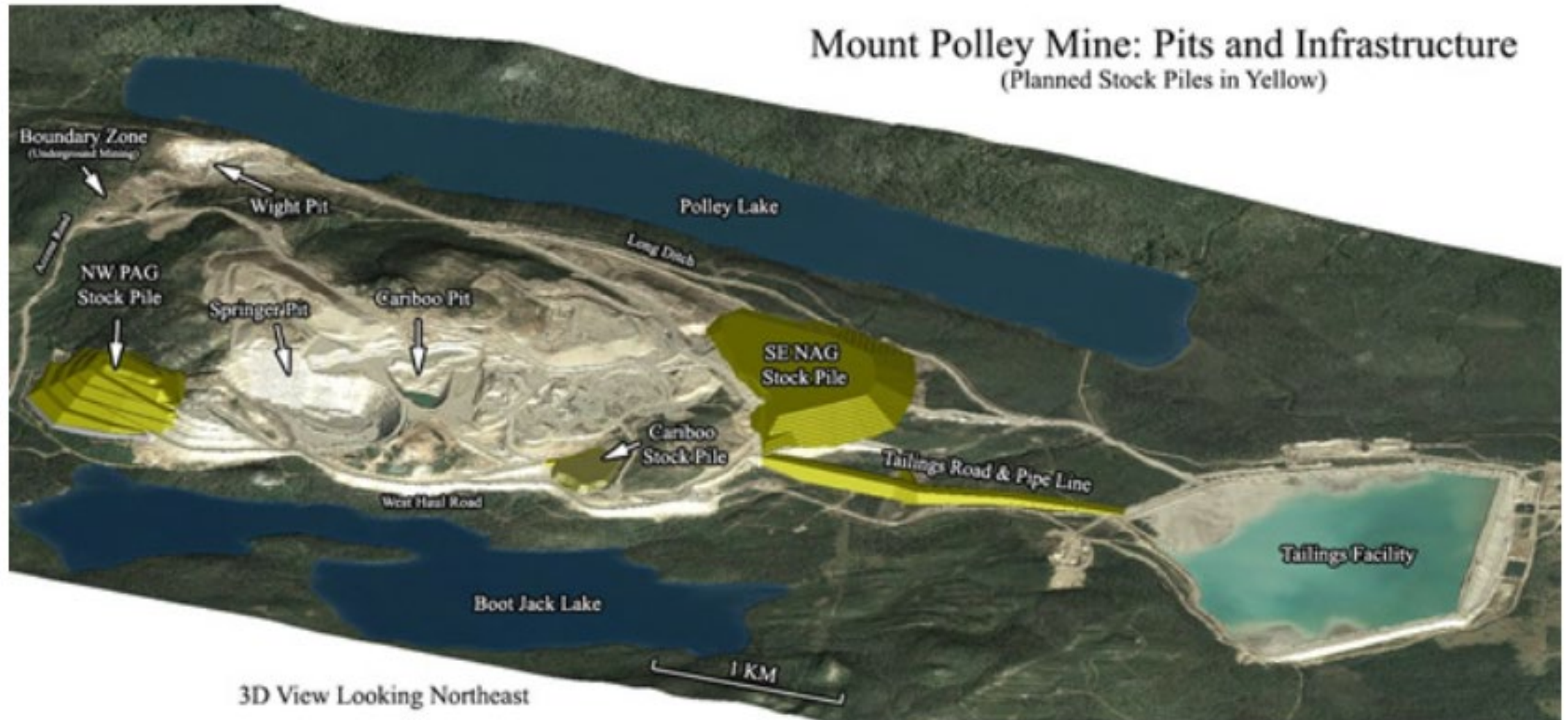
GOLDER

# Mount Polley Mine

- owned and operated by the Mount Polley Mining Company (Imperial Metals Corporation)
- open pit copper/gold mine
- 8 km southwest of Likely, BC
- 100 km northeast of Williams Lake, BC
- first ore in 1997
- end of Mine Life is 2020 (+6 years?)
- 1,301 ha



## Mount Polley Mine: Pits and Infrastructure (Planned Stock Piles in Yellow)



# Mount Polley Mine

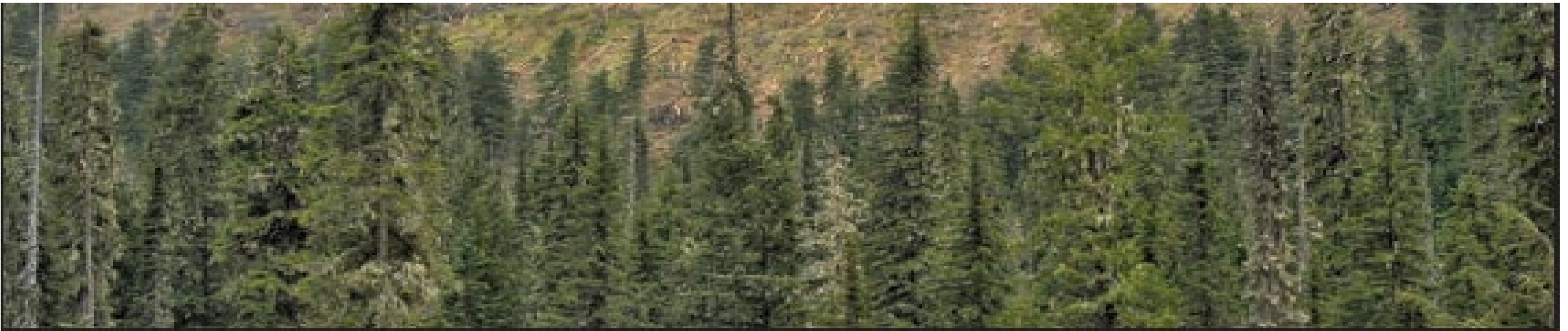
## ENVIRONMENTAL SETTING



- Interior Cedar Hemlock biogeoclimatic zone
- topographical high between Polley Lake and Bootjack Lake
- characterized by diverse site series (i.e., terrain capable of producing different vegetation based on topographical and moisture differences)
- average annual temperature is 4.3 °C
- average annual precipitation is 670 millimetres (mm), with approximately 215 mm falling as snow

# RECLAMATION STRATEGY

*“By reclaiming disturbed land to stable, functioning, locally appropriate ecosystems that can reasonably be expected to thrive on a specific landform or location, a variety of end land use objectives can be met.”*



# End Land Use Planning



Primary end land uses are **wildlife habitat** and **commercial forestry**, with secondary uses:

- hunting
- guide-outfitting
- trapping
- outdoor recreation
- sport fishing
- livestock grazing

# Alternative End Land Use Possibilities

## WILDLIFE PARK OR RESERVE

- “**wildlife park**” is an actively managed land base that may include tourism viewing opportunities and breeding or rehabilitation programs
- “**reserve**” is a land base that is protected from commercial logging and hunting/gathering outside of traditional use



## Supporting Attributes of the Mine Site

- diverse wildlife in the region, including species at risk (44 bird species and 10 mammal species in the project area, another 18 bird species in the surrounding) (Hallam Knight Piésold Ltd. 1996)
- diverse terrain in a relatively compact area
- low human population density
- proximity to recreation areas
- academic research centre in Likely



# Potential Benefits

- protected environment = increased biodiversity = rare and threatened species
- traditional land use
- unique habitats
- ongoing monitoring and adaptive management
- research, tourism, education, partnerships, cross-selling
- skilled employment



# British Columbia Wildlife Park (Kamloops, BC)

## BACKGROUND

*“biodiversity through education, research, captive breeding and rehabilitation services” (BC Wildlife Parks 2017).*



- Greater Kamloops Zoological Society
- on 106 acres of former farm land donated by the Molson's Breweries
- not-for-profit (volunteers and local businesses)
- rehabilitate injured wildlife
- research and breeding program
- Discovery Center featuring an Eco Gallery, Wildlife Education Centre, Reptile Exhibit, Gift shop and café

# British Columbia Wildlife Park (Kamloops, BC)

## APPLYING THIS CONCEPT TO MOUNT POLLEY

- Mount Polley Mine Site is much bigger
- animals with large home ranges, but increased costs
- mix of enclosures with an open area of mixed habitats - vegetation and wildlife reserve area
- interpretative trails
- engagement of academic institutions



Photo Courtesy of Martin Jalkotzy

# British Columbia Wildlife Park (Kamloops, BC)

## BENEFITS



- ongoing use of the reclaimed landscape and existing infrastructure
- tourism draw to the area
- local First Nations and stakeholders would make use of the land for traditional activities and be involved in the long-term direction and maintenance of the reclaimed Mine site
- provide employment
- some financial gains through admission fees and academic funding for use of the Mine site

<https://www.thompsonokanagan.com/>

# British Columbia Wildlife Park (Kamloops, BC)

## DRAWBACKS

- need ongoing funding to support operations and management
- funding would likely have to involve support of government agencies, as well as business and public donations, and volunteer efforts



<https://www.volunteerkamloops.org/job/seeking-animal-care-aides/wildlife-park/>

# Sherriff Creek Wildlife Sanctuary (Elliot Lake, Ontario)

## BACKGROUND

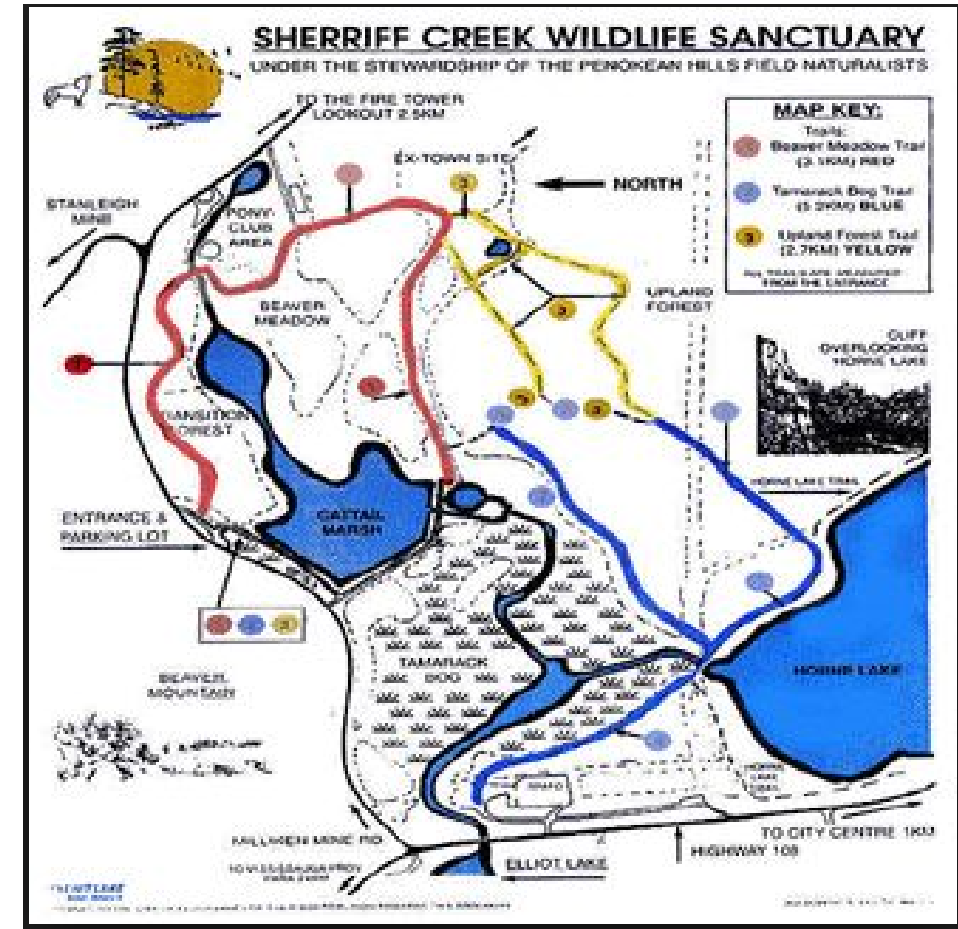
- a 182 ha wildlife sanctuary and interpretive centre
- decommissioned uranium tailings management area
- Penocean Hills Field Naturalists (PHFN) volunteer organization
- not-for-profit - financial contributor/owner, Rio Algom
- City of Elliot Lake provides funding and maintenance services (Mitchell & O'Neil 2017)



# Sherriff Creek Wildlife Sanctuary (Elliot Lake, Ontario)

## APPLYING THIS CONCEPT TO MOUNT POLLEY

- protected habitat for birds, mammals, reptiles and vegetation, and an outdoor recreational area for the public to practice activities such as hiking, nature viewing and bird watching
- self-serve public access
- significantly less inputs



<http://www.cityofelliottlake.com/en/visit/hike.asp>

# Sherriff Creek Wildlife Sanctuary (Elliot Lake, Ontario)

## BENEFITS

- tourism draw to the area
- local First Nations and stakeholders would make use of the land for traditional activities and be involved in the long-term direction and maintenance of the reclaimed Mine site
- provide employment
- relatively low inputs
- minimal long-term maintenance
- many habitats already be required as part of the reclamation plan for the Mine site.
- ongoing use of the reclaimed landscape and existing infrastructure



<http://www.tourismelliotlake.com/en/enjoy/sheriffcreekwildlifesanctuary.asp>

# Sherriff Creek Wildlife Sanctuary (Elliot Lake, Ontario)

## DRAWBACKS



- lack of direct financial benefits from public usage
- funding needs less than a wildlife park, some need of ongoing support through similar mechanisms (government agencies, business and public donations, volunteer efforts)

# Implementation



1. Determine which approach is most beneficial and sustainable.
2. Conduct a consultation program.
3. Adaptively manage the plan.
4. Develop a governing body including MPMC, local municipality, local business, First Nations, academic, and local citizens, responsible for creating the implementation model for the project.

# Challenges



Photo Courtesy of Martin Jalkotzy



Photo Courtesy of Martin Jalkotzy

- regulatory support of an alternate end land use
- First Nations and stakeholder agreement
- site size
- site location
- increased closure costs
- long-term funding
- seasonal limitations
- progressive reclamation

# Conclusions

- requires collaborative effort between MPMC, local municipality, local business, First Nations, academic, and local citizen representatives
- broad community support would be essential
- potential to become one of the largest wildlife parks or reserves in Canada and would provide a model of sustainable alternate land uses for mining projects around the world



