

Socio-economic Analysis of Designating the Proposed Archibald Lake Wilderness Area

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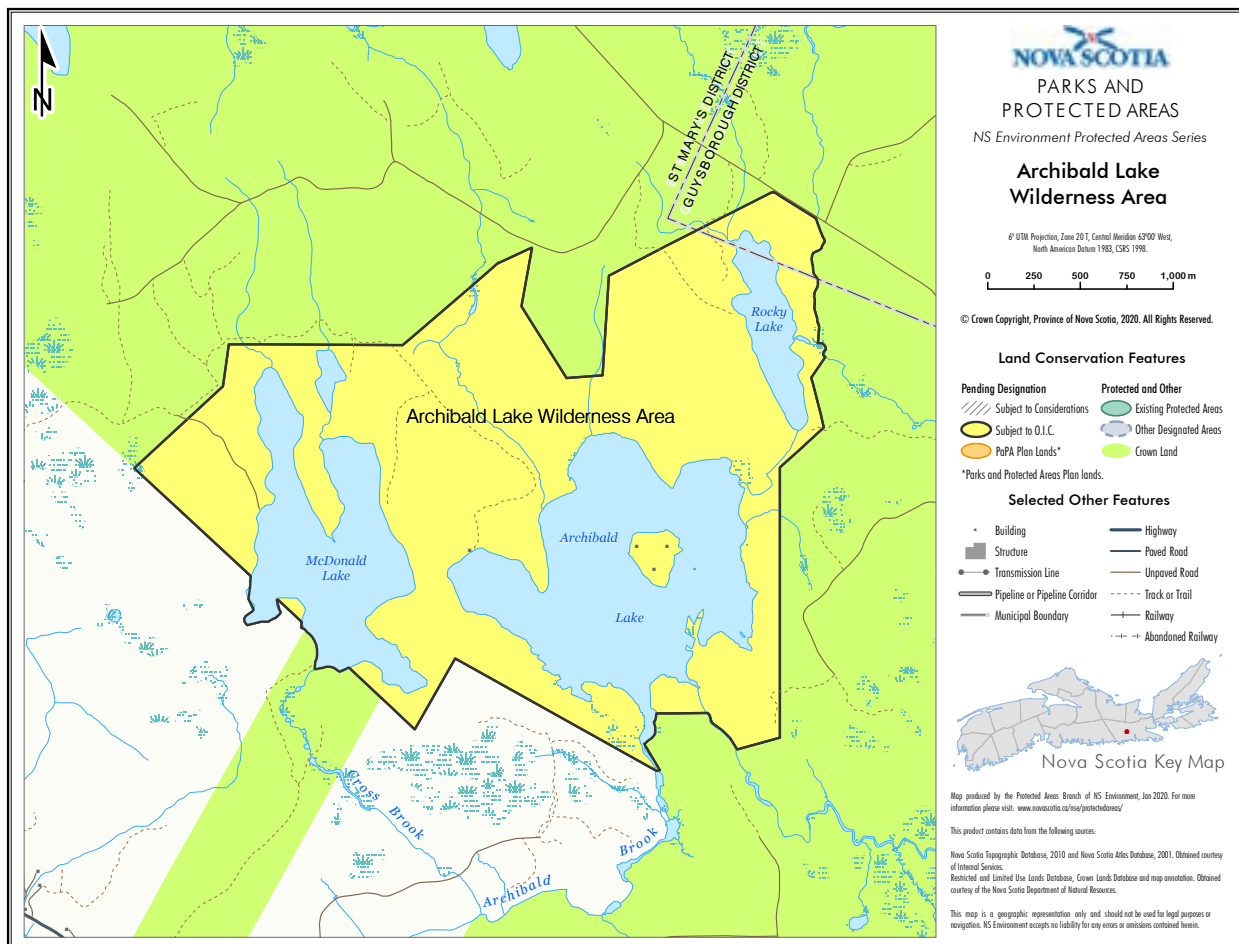
Overview

Before a new wilderness area can be designated, an analysis of the socio-economic impact of the designation must be completed and made available to the public. This is required by the Wilderness Areas Protection Act.

On January 10, 2020 the Province shared information and initiated public consultation on six proposed wilderness area sites, including a 684 hectare site at Archibald Lake, Guysborough County (Figure 1) (see: <https://novascotia.ca/news/release/?id=20200110001>). This formal consultation closed on March 9, 2020.

Completion of a socio-economic analysis of the proposed designation is required for the Archibald Lake site. The other five wilderness area sites included in the 2020 consultation were either part of a similar analysis included in the Province’s 2013 Parks and Protected Areas Plan or do not require such analysis because the site is an addition to an existing wilderness area, not a new wilderness area.

Figure 1 – Site Boundary Map Used for Public Consultation.



What follows is an analysis of the anticipated socio-economic effects of designating the proposed Archibald Lake Wilderness Area. This has been prepared by the Province, consistent with previous socio-economic analyses for planned new wilderness areas. The current analysis is based on publicly available information, published material, and internal expertise, and is informed by information received during the public consultation and consultation with the Nova Scotia Mi'kmaq. A summary of comments received through the public consultation is available for review at <https://www.novascotia.ca/parksandprotectedareas/about/background-links/> .

The analysis considers a range of social and economic benefits and costs of designation. The intent of the analysis is to help foster understanding and support informed discussion and government decision-making.

Anticipated Effects of Designation

1.1 ECOSYSTEM VALUES

The proposed Archibald Lake Wilderness Area consists of 684 hectares (ha) of provincially owned woodlands, lakes and several small wetlands in the watershed of Archibald Brook, a tributary of the St. Mary's River.

At its centre is a cluster of three lakes – Archibald Lake, McDonald Lake and Rocky Lake – with a combined area of about 240 ha. These are situated about 75 m higher in elevation than the St Mary's River, 2.5 km to the southwest. The watershed of Archibald Brook helps maintain water quality and flow in the lower St. Mary's River, a noted Atlantic salmon river. The watershed provides habitat for brook trout and other aquatic species, and the lakes support a recreational trout fishery, as confirmed by public consultation feedback.



About 262 ha of the 454 ha of forested land within the proposed wilderness area is classified as old forest under the Department of Natural Resources and Renewable's *Old-Growth Forest Policy for Nova Scotia*. Most of this forest consists of hardwood species and occurs primarily on the area's elongated hills, known as drumlins (Figure 2). Based on GIS analysis, the remaining woodlands are primarily mature or older hardwood forest on hills and mature softwood forest on flatter terrain. This forest provides habitat for species that depend on or prefer old forest and supports wildlife movement or migration across the landscape (ecological connectivity value). Older forests also store more carbon than younger forests, keeping this carbon out of the atmosphere and helping Nova Scotia meet its 2030 greenhouse gas reduction targets.

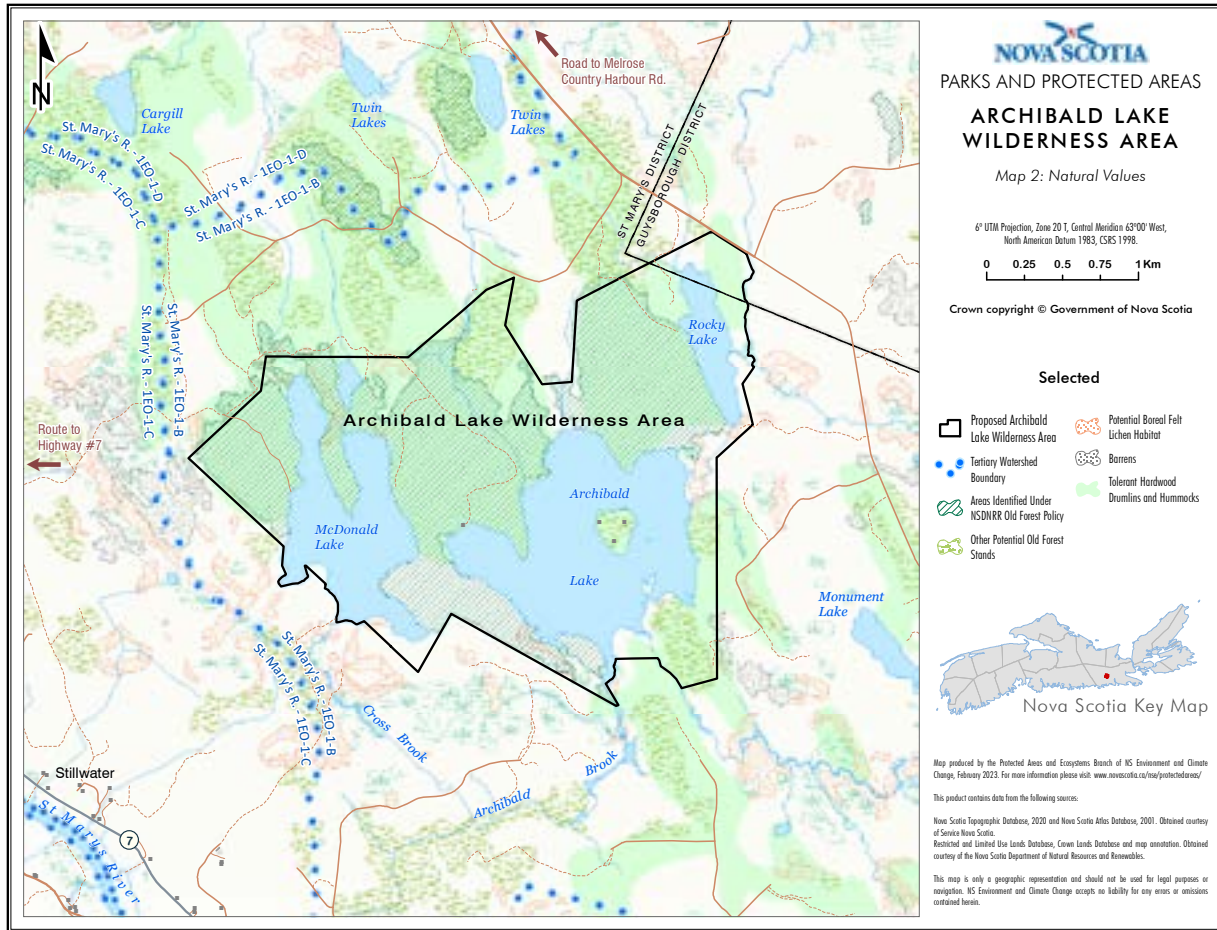


Figure 2 – Natural Values Map

Nearly the entire site consists of ecosystem elements which are poorly represented in Nova Scotia’s protected areas network, particularly the well drained, hardwood drumlins¹. It also overlaps with a mainland moose concentration zone delineated in 2012 by the Department of Natural Resources and Renewables (NRR) and is within core habitat for mainland moose identified in NRR’s 2021 [Recovery Plan for the Moose in Mainland Nova Scotia](#). The factors affecting decline of endangered mainland moose are complex and not fully understood. One trend is that mainland moose are typically faring best in areas with low road density². Protected areas contribute to maintaining or restoring low road density in parts of Nova Scotia’s landscape and may help moose in this and other ways.

Until recently, few data were available for species-at-risk near Archibald Lake area. In 2021-2022, the Canadian Parks and Wilderness Society – Nova Scotia Chapter

¹ Source: Internal analysis by Nova Scotia Environment and Climate Change

² Snaith, T.V. and Beazley, K.F. 2004. *The Distribution, Status and Habitat Associations of Moose in Mainland Nova Scotia*. Proc. N.S. Inst. Sci. Volume 42, Part 2, pp. 263-317.

(CPAWS-NS) sponsored a series of field surveys at the proposed Archibald Lake Wilderness Area with help of specialists from Acadia University, the Atlantic Canada Conservation Data Centre (ACCDC) and an independent contractor. The resulting report identifies a total of 26 species-at-risk documented in the area. This includes:

- five species listed under Nova Scotia's Endangered Species Act: mainland moose (endangered), Canada warbler (endangered), common nighthawk (threatened), blue felt lichen (vulnerable) and evening grosbeak (vulnerable).
- two at-risk plant species: Wiegands sedge and Appalachian polypody.
- twelve at-risk bird species
- old forest indicator lichen species as follows: blue felt lichen, northern coral lichen, corrugated shingles lichen, fringe lichen, slender monk's hood lichen and black-saddle pelt lichen.

Efforts are being made by researchers around the world to quantify the value of natural ecosystems to society, typically referred to as "ecosystem services". This includes the value of carbon storage and sequestration; water quality and storage; conservation of species and genetic resources; and maintenance of habitat for pollinators, wildlife and recreation, among other services. An example is a 2013 assessment by Global Forest Watch Canada of Nova Scotia's protected areas system which estimates an average annual value of \$5,827 / hectare for ecosystem services of the system . Another example is a 2017 assessment by TD Bank Group and the Nature Conservancy of Canada (NCC) , which estimates the value of ecosystem services of NCC's Long Tusket Lake lands, in southwestern Nova Scotia, at a minimum of \$26,250 / hectare annually. These local examples illustrate that the value of ecosystem services in Nova Scotia may be quite significant. Neither of these reports assess to what extent these values would differ if the lands were not protected.

³ CPAWS-NS, 2022. *Archibald Lake Wilderness Area: Summary of Field Surveys (July 2021 to February 2022)*, 36 pp.

⁴ Lee P, R Cheng and M Hanneman. 2013. *The Inclusive Wealth of Nova Scotia's Protected Areas: A Preliminary Estimate of Nature's Benefits. Global Forest Watch Canada Report #3; International Year of Sustainable Energy for All*. 94 pp. ISBN: 978-1-927430-00-2

⁵ TD Economics & Nature Conservancy of Canada. 2017. *Putting a Value on the Ecosystem Services Provided by Forests in Canada: Case Studies on Natural Capital and Conservation*. 37 pp.

Anticipated Effects of Wilderness Area Designation – Ecosystem Values

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Biodiversity conservation	<ul style="list-style-type: none"> • Old forest and low level of historic forest disturbance • Habitat for species that prefer or need older, undisturbed forest, including for movement across the landscape (ecological connectivity). • Habitat for endangered mainland moose and numerous other species-at-risk. • Productive aquatic ecosystems • Landscape ecosystem elements which are not well represented in protected areas system 	<ul style="list-style-type: none"> • Old forest areas identified under the Old Growth Forest Policy conserved in a manner consistent with that policy. • Existing biodiversity, including species-at-risk, managed in a manner consistent with existing Crown land approaches. • Possible fragmentation of terrestrial habitat and loss of old forest. • Potential disruption to aquatic habitat and ecological connectivity value. 	<ul style="list-style-type: none"> • Maintain and potentially increase native biological diversity. • Help protect habitat within St. Mary's River watershed. • Help sustain rare and vulnerable species. • Better represent examples of Nova Scotia's diverse landscapes within protected areas network.
Maintaining natural processes	<ul style="list-style-type: none"> • Range of ecosystem services provided by forests, lakes, and wetlands, especially for maintaining air quality, water regulation, and quality. 	<ul style="list-style-type: none"> • Potential adverse effects to ecosystem services should land use and development occur. 	<ul style="list-style-type: none"> • Help secure and maintain valuable ecosystem services such as air quality, water regulation, water supply, soil formation and erosion control.
Climate change mitigation and adaptation/ Supporting Nova Scotia's Greenhouse Gas Reduction Targets	<ul style="list-style-type: none"> • Existing carbon storage and sequestering function of older forest and wetlands. 	<ul style="list-style-type: none"> • Potential decline in carbon storage by forests and wetlands over time should land use and development occur. 	<ul style="list-style-type: none"> • Designation helps maintain high levels of carbon storage. Currently, the benefits of this are global. Nova Scotia may benefit more directly if carbon markets are established which recognize the role of land protection in storing atmospheric carbon.

1.2 COMMERCIAL VALUES

The proposed wilderness area includes harvestable forest and low-to-moderate potential for wind energy. Part of the area is currently subject to a mineral exploration licence and Archibald Lake had been identified as a preferred water source for a proposed gold mine at nearby Cochrane Hill which was subject to a joint federal and provincial environmental assessment (Joint EA) until August 2022. It also has value for research, education and nature-based tourism. Designation of a wilderness area at Archibald Lake will affect these values to varying degrees.

Forestry Resources

The Province has commitments to supply wood to various sawmills and a legal obligation of a Forest Utilization Licence Agreement (FULA) to provide wood to Port Hawkesbury Paper (PHP). The entire land base of the proposed wilderness area exists within the FULA area for PHP. Designation of Archibald Lake Wilderness Area would not allow for commercial forest harvesting within the wilderness area.

Most lands within the proposed Archibald Lake Wilderness Area do not have a history of forest management in recent decades. Records from StoraEnso (now PHP) and analysis of satellite imagery dating back to 1985 suggest that forest harvesting of any significance within the proposed wilderness area was limited to about 17 ha which was clear-cut in the 1990s. This harvesting occurred at the northeastern end of the proposed wilderness area, near the northern end of Rocky Lake. More recently, a small area within the proposed boundary, east of Archibald Lake, was also harvested (Figure 3).

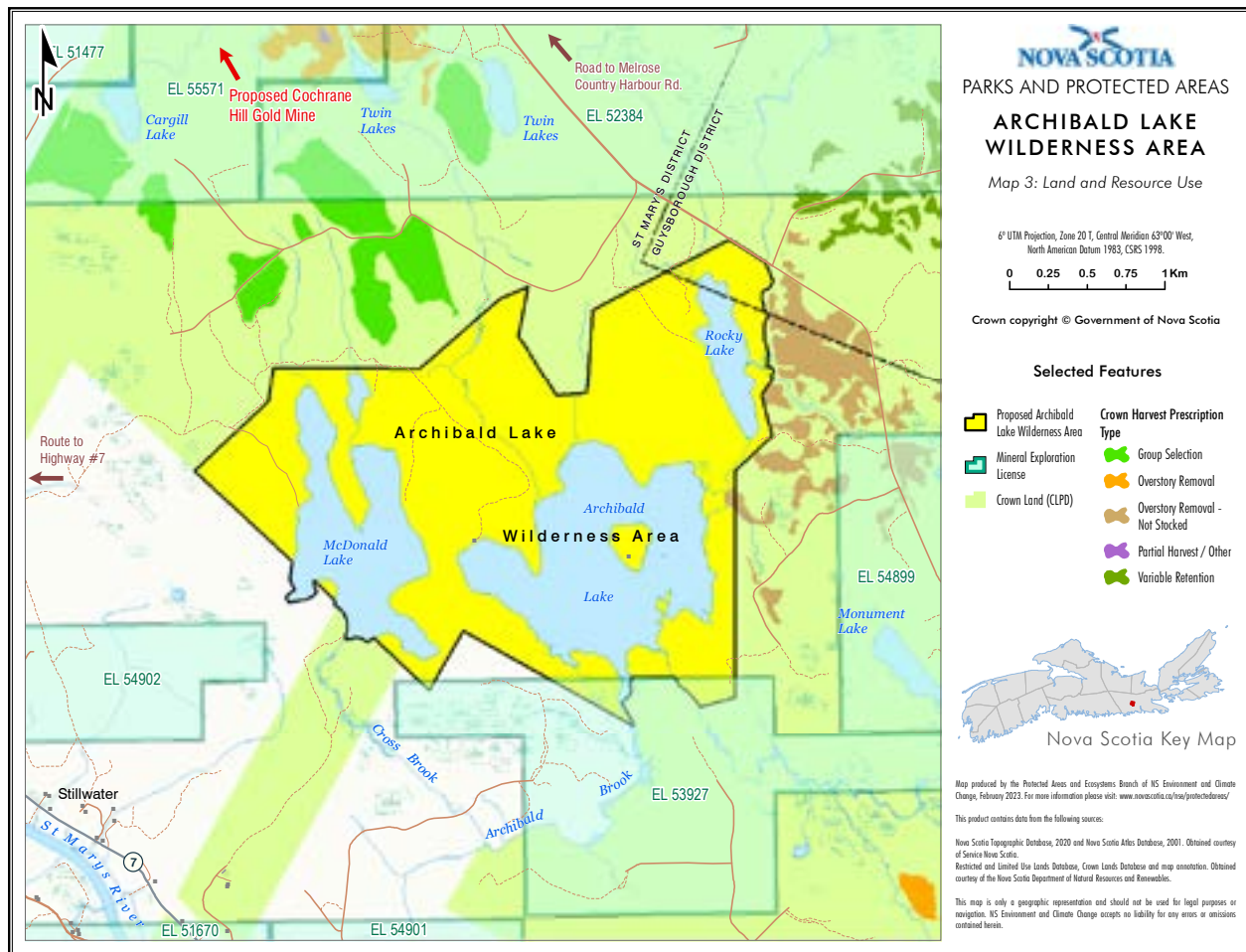


Figure 3 – Land and Resource Use Map

The remaining forests are mature to old, as the proposed boundary avoids almost all recently harvested areas on adjacent Crown lands. Of the 454 ha of forested land, 58% (262 ha) is classified as old forest under the Department of Natural Resources and Renewables' Old Growth Forest Policy and is considered off-limits to harvesting (see Figure 2). The remaining working forest lands within the proposed wilderness area total 133 ha, some of which are mature stands dominated by climax tree species, based on GIS analysis. After deductions applied for various restrictions at the operational level, approximately 83 ha of harvestable woodland (greater than 40 years old) remains. Recent inventories by the Department of Natural Resources and Renewables indicate approximately 11,588 m³ of softwood and hardwood on this land base at an estimated stumpage value of approximately \$165,000. With designation as wilderness area, these lands would no longer be available for forestry. They represent about 0.03% of the roughly 345,000 ha of operable Crown forestry lands in eastern Nova Scotia⁶.

⁶ Source: Internal analysis by Department of Natural Resources and Renewables

Mineral Exploration and Development

Designation will prohibit future exploration and potential mine development within the wilderness area, except where pre-existing mineral exploration licenses exist. About 13 ha within the southern portion of the proposed wilderness area overlap with existing mineral licences (see Figure 3 and table below).

Exploration Licence Details

Licence #	Licence holder	Overlap with proposed wilderness area (hectares)
# 53927	1156219 B.C. Limited	13 ha of 405 ha licence issued in 2017

Total overlap with proposed wilderness area = 13 ha

Exercise of these rights can be honoured under the Wilderness Areas Protection Act provided that, in the opinion of the Minister of Environment and Climate change, the activities do not degrade the wilderness area.

Based on mineral potential mapping initially developed in 2010⁷ by the Department of Natural Resources and Renewables, mineral potential at the proposed wilderness area ranges from medium to high. The highest mineral potential in the region occurs in east-west trending zones both to the north and south of the Archibald Lake area. There is currently considerable exploration activity in these high potential zones by a variety of exploration and mining companies. This includes a zone at Cochrane Hill, about 4.5 kilometres northwest of the proposed wilderness area, where Atlantic Mining NS Corp (AMNS) has proposed to develop an open-pit gold mine which was subject to a joint federal-provincial environmental assessment (EA) until August 2022. Archibald Lake has been proposed as a source of raw water for the proposed Cochrane Hill mine and for discharge of treated water from the mine site.

AMNS's project description, dated September 28, 2018, is available here: <https://ceaa-acee.gc.ca/050/evaluations/proj/80159?culture=en-CA>. The proposed mine was undergoing a joint federal and provincial environmental assessment (EA) until August 29, 2022, when the Impact Assessment Agency of Canada issued a Notice of Termination indicating that⁸ "The environmental assessment of the *Cochrane Hill Gold Project* has terminated. The proponent has not provided the Impact Assessment Agency of Canada with the required information or studies within the legislated time

⁷ *Geological Resource Atlas, Mineral Resource Potential, Central/Eastern Area of Nova Scotia by Nova Scotia Department of Natural Resources, Open File Map ME 2010-004 (Sheet 3 of 4), 2010, ISN: 22377*

⁸ See: <https://ceaa-acee.gc.ca/050/evaluations/proj/80159?culture=en-CA>

limit.” On January 4, 2019, Nova Scotia Department of Environment and Climate Change and the Impact Assessment Agency of Canada issued final environmental impact statement guidelines. The guidelines detailed what information is required in the EA document. As a result of the Notice of Termination issued by the Impact Assessment Agency of Canada in August 2022, the proposed mine is no longer subject to a legislated environmental assessment. As of the writing of this report there is no active registered EA process for this proposed mining project.

Nonetheless, the company has said publicly that it remains committed to the project and that project assessment work is ongoing. In December 2022, AMNS’s parent company St. Barbara announced that it is advancing Cochrane Hill to create an eastern production hub⁹.

The 2018 project description for the proposed mine identifies Archibald Lake as one of two options for sourcing raw water for mine operations and for discharging treated surface water runoff and seepage from the mine site.

In a presentation dated February 2022, AMNS projected that project investments and spending would total \$565 million over 14 years, and that 731 direct and indirect jobs will be created during the construction phase, generating \$16 million in tax revenue for the municipality, the province and Canada. Operating expenditures over the lifetime of the mine (~8 years) were projected to be approximately \$408.8 million, 32% of which would be for wages (321 jobs).¹⁰

In 2019, The Municipality of the District of St. Mary’s engaged a consultant to prepare an analysis of potential local economic impacts of the proposed mine, which would have an operational life cycle of 7-9 years. This analysis¹¹ predicts that the project would contribute close to \$100 million to Canada’s GDP and create about 220 full-time direct jobs over its lifetime, with most benefits at the provincial level. The analysis also estimated a tax contribution to the Municipality of the District of St. Mary’s of about \$328,000 per year. The relative share of jobs and other benefits within the District was predicted to be limited due to factors such as demographics and education levels.

One of the potential negative impacts identified in the report commissioned by the Municipality of the District of St. Mary’s is that the proposed mine could threaten the current sustainability and future growth of the tourism sector in the municipality.

⁹ See: <https://www.guysboroughjournal.com/?page=post&ID=1193>

¹⁰ See: <https://web.archive.org/web/20220203195520/https://www.saint-marys.ca/1697-economic-impact-of-cochrane-hill-mine-project-st-barbara/file.html>

¹¹ See: <https://www.saint-marys.ca/municipal-documents/973-cochrane-hill-gold-mine-econ-impact-final-with-notice-to-public/file.html>

Concern about possible impacts of the proposed mine on local tourism was also expressed in public consultation feedback on the proposed designation of Archibald Lake Wilderness Area.

The Mining Association of Nova Scotia (MANS), in public consultation correspondence received by ECC on February 3, 2020 suggested that a designation would discourage investment in mineral exploration and development throughout Nova Scotia.

Energy Resources

Designation would prohibit future energy development, however, the underlying rock types in the vicinity of Archibald Lake are not known to host petroleum resources. This part of Nova Scotia is not considered to have potential for petroleum resources, based on the Nova Scotia Onshore Petroleum Atlas¹².

The estimated mean annual wind speed in the vicinity of Archibald Lake is modelled to be about 4.89 m/s with mean wind energy of about 125 W/m²¹³. Based on this, wind energy potential within the proposed wilderness area is considered low to moderate. No existing energy-related licenses or rights overlap with the proposed wilderness area.

Tourism Values

Designation of a wilderness area secures the long-term environmental quality of an area, which is vital for nature-based tourism use, development, and marketing. Low impact outdoor recreational use is permitted in wilderness areas, and trails or other infrastructure for such recreation can be authorized. Examples of existing commercial tourism activities in Nova Scotia's wilderness areas are documented in this report: https://www.novascotia.ca/nse/protectedareas/docs/NS_Protected_Areas_Commercial_Benefits_Final_Report.pdf

No outfitting activities or other commercial tourism use of the Archibald Lake area were identified in the course of writing this analysis. The old forest and lakes of the proposed wilderness area could be attractive for some tourism-related use. The appeal of this area will likely depend on being linked to tourism development and marketing of the greater St. Mary's River watershed, as this could provide a critical mass of attractions to attract more and longer visitation.

¹² Nova Scotia's Onshore Petroleum Atlas project (2013-2017). <https://energy.novascotia.ca/onshore-atlas-version-1-2017>

¹³ Source: Wind Atlas produced by Environment and Climate Change Canada: <http://www.windatlas.ca/index-en.php>

Research and Education

Protected areas are ideal for education and long-term research on natural ecosystems. Designation of Crown lands at Archibald Lake will assure that any changes in ecosystems are not related to local land use and development. The older forest and other ecosystem elements which have become uncommon in Nova Scotia may make the area especially appealing for education or research. The site is reasonably accessible and could potentially be used for education or research by local schools or nearby Universities. Any expenditures or other economic impact related to such uses are typically considered as a type of commercial use.

Anticipated Effects of Wilderness Area Designation – Commercial Values

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Forestry Resources	<ul style="list-style-type: none"> Productive forest with potentially harvestable wood supply. Most of forest is considered old forest and is currently off-limits to harvesting. 	<ul style="list-style-type: none"> Limited, but continued economic benefits associated with forestry on lands outside old growth forest policy areas. 	<ul style="list-style-type: none"> Loss of wood supply available for forestry from small portion of area. Limited reduction in economic benefits associated with forestry.
Mineral Exploration and Development	<ul style="list-style-type: none"> Exploration activity and expenditures associated with regional exploration licences that overlap with a portion of Archibald Lake (about 13 ha within the proposed wilderness area). Archibald Lake had been identified as a site for sourcing raw water and discharging treated wastewater for the proposed Cochrane Hill Gold Mine. 	<ul style="list-style-type: none"> Continued economic benefits associated with exploration and maintenance of mineral rights. Possibility of realizing the full mining development potential of lands in and near the proposed wilderness area. Does not affect a future decision by a proponent to register a project pursuant to the relevant legislative authorities in pursuit of a pathway for potential EA approval. 	<ul style="list-style-type: none"> Designation of lands with overlapping mineral rights would limit exercise of these rights to activities which do not contribute to degradation of the wilderness area. Since new mineral rights cannot be granted where no existing rights are in place, there will be an unknown loss related to the discovery and development of potential deposits, which are currently unknown. Would limit mining-related development within the wilderness area. Risk of loss of economic activity.

Anticipated Effects of Wilderness Area Designation – Commercial Values

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Mineral Exploration and Development			<ul style="list-style-type: none"> • Potential to discourage investment in mineral exploration and development in Nova Scotia as a whole.
Energy Resources	<ul style="list-style-type: none"> • No existing development. • Low to medium wind energy potential. • No known potential for petroleum development. 	<ul style="list-style-type: none"> • Potential for energy development. 	<ul style="list-style-type: none"> • Loss of access to area for potential energy development
Tourism Values	<ul style="list-style-type: none"> • No known current tourism use, but some potential. 	<ul style="list-style-type: none"> • Value for nature tourism may be affected should competing land use and development occur. • Current use patterns likely to continue in foreseeable future, • Access to lands for potential tourism use that is compatible with Crown land management. 	<ul style="list-style-type: none"> • Potential increase in value for nature tourism as wilderness area is managed and promoted. • Potential loss of tourism values for activities incompatible with wilderness area designation.
Research and Education Values	<ul style="list-style-type: none"> • Little known recent use for research or educational purposes. 	<ul style="list-style-type: none"> • Research and education opportunities may increase or decrease, depending on type and purpose of research. • Continued access to lands for research and education use. 	<ul style="list-style-type: none"> • Overall increase in value, over time, of lands for education and research on natural ecosystems. • Continued access to lands for research and education use.

1.3 INDIVIDUAL USE VALUES

Individual use values are those values that occur directly to individual users, and for which there is no direct commercial sale for the use itself. This includes outdoor recreation involving the use of motorized vehicles (off-highway vehicles and other off-road vehicles), fishing, hunting and trapping, and wilderness (non-motorized) recreation (such as walking, canoeing, kayaking, camping, photography, and wildlife viewing).

Vehicle Use

Vehicle use is generally prohibited in wilderness areas but can be authorized under the Wilderness Areas Protection Act in certain circumstances. Off-highway vehicle (OHV), 4X4 truck or similar vehicle access can also be accommodated by not including specified access routes as part of the wilderness area.

Based on field assessments and consultation feedback, most vehicle use within the proposed wilderness area is for fishing and campsite lease access. More than five km of abandoned old logging roads or trails are used for access (Figure 4) via five separate routes, and mostly by all-terrain vehicle (ATV). The route to the north end of Archibald Lake is also used by 4X4 trucks. Motorboat use is common on the lakes. An old road that provides ATV access from Highway 7 to the Indian River road system is not within the proposed wilderness area boundary and would not be affected by wilderness area designation.

With wilderness area designation, it is expected that vehicle access will be maintained to each of the three lakes. To reduce environmental impact, access points may differ from those currently used for vehicle access. Within a wilderness area, the Minister of Environment and Climate Change may authorize motorboat use for sportfishing and campsite lease access.

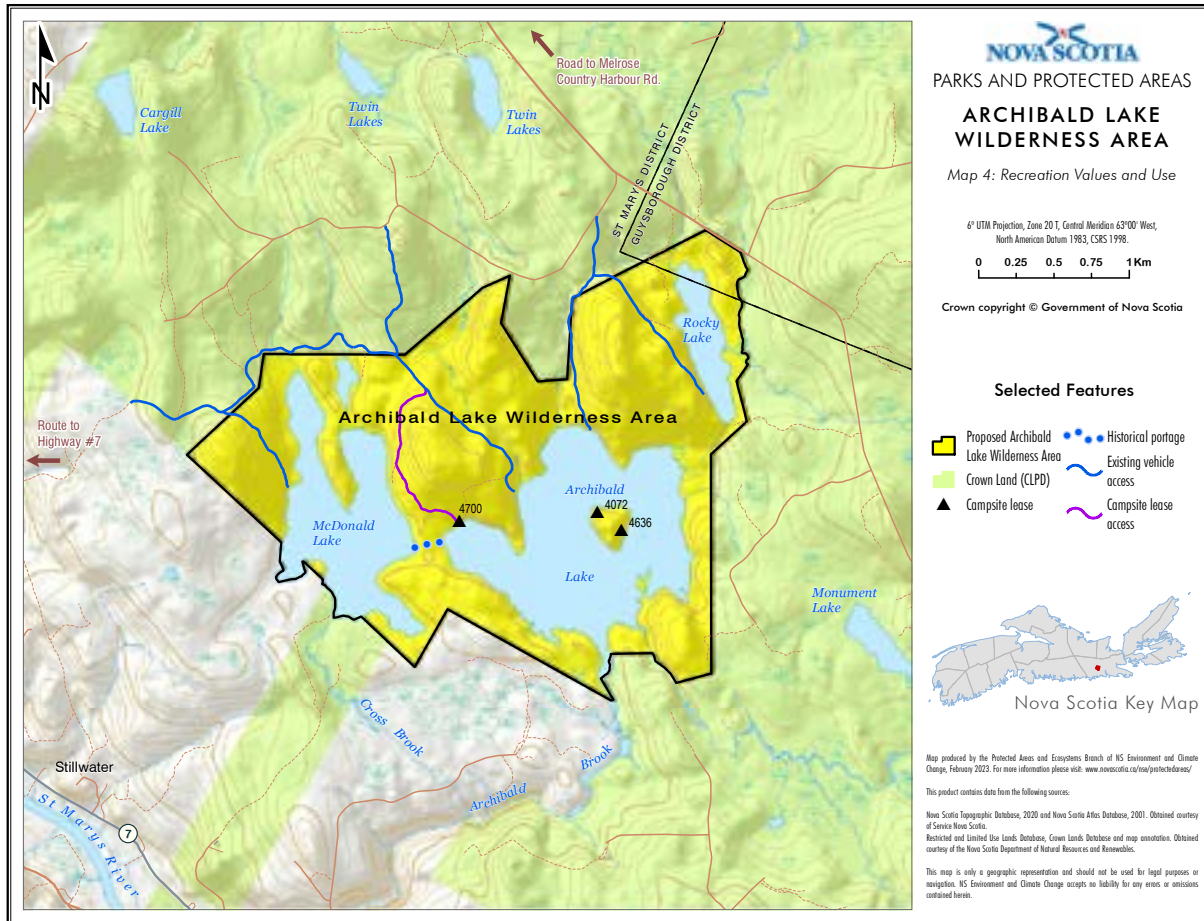


Figure 4 – Recreation Values and Use

Sport Fishing, Hunting and Trapping

The proposed Archibald Lake Wilderness Area is popular for angling and hunting, based on public consultation feedback. Since fishing, hunting, and trapping are generally permit-tered in wilderness areas, designation will have a limited impact on these activities. Use patterns may change somewhat, depending on the extent of vehicle access. Bear baiting is not permitted in wilderness areas.

Wilderness (Non-motorized) Recreation

Based on public consultation, it is understood that the area is currently used for non-motorized recreation, such as walking, canoeing, wildlife viewing and camping. The extent of such use is not clear. Wilderness Area designation will help secure the area for low-impact, self-propelled outdoor recreation opportunities in a wilderness setting, including hiking, walking, camping, canoe-ing, wildlife viewing, and other activities. Bicycle use can be authorized on designated trails. A historic portage between McDonald Lake and Archibald Lake can be maintained. Designation may lead to development of trails or other infrastructure to support recreation and nature tourism (see also Tourism Values section). Wilderness recreation in the area is likely to increase over time.

Campsite Leases

Three campsite leases are located in the proposed Archibald Lake Wilderness Area, all on Archibald Lake. If the area is designated, these would be honoured and converted to campsite licences when the leases come up for renewal. Though there are some minor differences, this licence is much like a campsite lease, but is issued under the Wilderness Areas Protection Act rather than under the Crown Lands Act.

Overland vehicle access to campsite leases can be licenced under the Act for maintenance or removal of structures. Motorboat access to campsite leases can be licenced for any purpose. Nova Scotia Environment and Climate Change has yet to develop a licensing program for campsite lease access in wilderness areas. In the interim, leaseholders may access their campsites by vehicle on existing and direct routes.

Adjacent (Private) Land

There are no inheld private parcels at the proposed Archibald Lake Wilderness Area that could be affected by designation. Several private parcels abut the southern boundary of the proposed wilderness area, including one with frontage on MacDonald Lake. Designation will not affect use or access to these properties.

Anticipated Effects of Designation – Individual Values *(continued)*

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Vehicle Use	<ul style="list-style-type: none"> Off-highway vehicle (OHV) and some 4X4 vehicle use occurs on more than 5 km of abandoned forest access trails /roads. Vehicle use is primarily for access to fishing and hunting opportunities and to access campsite leases. 	<ul style="list-style-type: none"> Current vehicle use is likely to continue, subject to changing land use, and applicable legislation and policies (e.g., Crown Lands Act, Off-Highway Vehicles Act). 	<ul style="list-style-type: none"> Loss of some OHV and 4X4 vehicle use. ECC intends to maintain vehicle access to each of the three lakes. This may differ somewhat from current vehicle access. Motorboat use allowed for fishing and campsite lease access.
Sportfishing, Hunting and Trapping	<ul style="list-style-type: none"> Moderate to high use for sportfishing. Some hunting, based on consultation feedback. 	<ul style="list-style-type: none"> Current use patterns likely to continue in foreseeable future, subject to Crown land, sportfishing, and wildlife management consideration. 	<ul style="list-style-type: none"> Use patterns may change due to modified vehicle access.

Anticipated Effects of Designation – Individual Values *(continued)*

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Sportfishing, Hunting and Trapping <i>(continued)</i>	<ul style="list-style-type: none"> Possible use for trapping –no mention of this in consultation feedback. 	<p>.</p>	<ul style="list-style-type: none"> Loss associated with potential bear baiting – no mention of this in consultation feedback. Bear baiting could still occur next to or near the wilderness area. Protecting habitat of the area may benefit some harvestable species in the long term.
Wilderness (Non-motorized) Recreation	<ul style="list-style-type: none"> Some existing outdoor recreation use, such as hiking / walking, camping, wildlife viewing, photography, as well as canoeing and other boating 	<ul style="list-style-type: none"> Potential decline in outdoor recreation uses and opportunities over time if land is developed. Continued access to area for outdoor recreation compatible with Crown land management. 	<ul style="list-style-type: none"> Protects land base for wilderness recreation use compatible with Wilderness Areas Protection Act. Possible increase in wilderness recreation use and value over time as the lands are managed and promoted for protected area goals.
Campsite Leases	<ul style="list-style-type: none"> Three existing campsite leases 	<ul style="list-style-type: none"> Campsite lease uses and access continue in accordance with provincial policies and Crown land management. 	<ul style="list-style-type: none"> Campsite leases will be honoured. These will be converted to campsite licences under the Wilderness Area Protection Act upon lease renewal Vehicle access by land and boat can be licensed. Access by land would be limited for maintenance, once a licensing program is developed for wilderness areas. In the interim, vehicle access is permitted on direct routes.

Anticipated Effects of Designation – Individual Values *(continued)*

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Adjacent Private Land	<ul style="list-style-type: none"> • No inheld private land (inholdings or lands surrounded by a protected area). • No access to adjacent private land 	<ul style="list-style-type: none"> • Not applicable – no private lands affected 	<ul style="list-style-type: none"> • Not applicable – no private lands affected

1.4 MI'KMAQ INTERESTS AND VALUES

Parks and protected areas, including wilderness areas, help protect lands that are important to the Mi'kmaq of Nova Scotia. The Province is aware that the lakes and some lands within the proposed Archibald Lake Wilderness Area are used and valued by the Mi'kmaq.

Wilderness area designations may affect the ability for Mi'kmaq to access areas for hunting, fishing, and gathering, which are Aboriginal and Treaty rights affirmed in Section 35 of the Constitution Act, 1982. Therefore, formal consultation on designations for Nova Scotia's parks and protected areas, including wilderness areas, have been ongoing between the Province and the Mi'kmaq of Nova Scotia since 2012. Through the consultation process potential impacts to Section 35 Aboriginal and Treaty rights are identified.

The Province will also continue to work with the Mi'kmaq of Nova Scotia to explore options related to Mi'kmaq use of the proposed Archibald Lake Wilderness Area and other existing or proposed protected areas in a manner consistent with legislative requirements and acknowledging the principles of the Mi'kmaq concept of Netukulimk. "Netukulimk means, as defined by the Mi'kmaq, the use of the natural bounty provided by the Creator for the self-support and well-being of the individual and the community by achieving adequate standards of community nutrition and economic well-being without jeopardizing the integrity, diversity, or productivity of the environment." Much of this work has occurred through a Mi'kmaq–Nova Scotia Protected Areas Selection and Management Technical Advisory Group, which was formed in 2011 for the purposes of considering Mi'kmaq use and environmental considerations into the overall process of protected lands designation and management.

Anticipated Effects of Designation – Mi'kmaq Interests and Values

VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Mi'kmaq Interests and Values	<ul style="list-style-type: none"> The Mi'kmaq of Nova Scotia use Archibald Lake for fishing and other traditional uses and use vehicles for access and outboard motors for fishing. 	<ul style="list-style-type: none"> Continued use of lands by the Mi'kmaq of Nova Scotia compatible with Crown land management. 	<ul style="list-style-type: none"> Overall benefit expected, though possible loss of value for select activities, such as building of hunting camps and resource development. Motorboat use will continue to be permitted for fishing. It is expected that vehicle access to the lakes will be maintained. Some

1.5 SOCIETAL VALUES

Societal values are those values that occur broadly to the benefit of all of society and are not attributed to an individual's use of the environment. This includes cultural and heritage values and existence values.

Cultural and Heritage Values

Designation of lands with cultural and heritage significance helps protect the province's uniqueness and diversity. It contributes to a sense of identity and community, in this case of communities near the St. Mary's River. Key indicators used to assess cultural and heritage values include archaeological significance and long-standing traditions of hunting, fishing and recreation.

As evident from public consultation feedback, the proposed wilderness area is a place of high value to local residents and users of the area. Its intergenerational history of fishing, hunting, camp use and other recreation was highlighted in numerous submissions. This history contributes to the cultural heritage of the province. Designation is expected to benefit cultural and heritage values of the proposed wilderness area.

Existence Values

Existence values are spiritual or psychological values which are not related to direct use of an area. People may hold values for particular natural areas simply because they exist, even though they may not visit or use the land in question.

Maintaining large natural spaces can strengthen cultural identity and heritage values and can inspire artists and others. They also represent a legacy for future generations, known as bequest value. The relationship between our health and time spent in nature is clear – time spent in nature is good for our wellbeing. A variety of submissions from the public consultation identified the importance of the proposed wilderness area for its intrinsic value, and so that it may be used and enjoyed by future generations. Designation will help conserve existence values associated with these lands.

Anticipated Effects of Designation – Societal Values			
VALUE	CURRENT SITUATION	WITHOUT DESIGNATION	WITH DESIGNATION
Cultural and Heritage Values	<ul style="list-style-type: none"> Area holds significant cultural heritage value to local residents and other recreational users, based on consultation feedback. 	<ul style="list-style-type: none"> Continued maintenance of some cultural heritage values through Crown land management. 	<ul style="list-style-type: none"> Protects outdoor and wilderness recreation heritage. More assured protection of any sites of cultural and archaeological value.
Existence Values	<ul style="list-style-type: none"> Old forest, healthy lakes, habitat for many species. Nova Scotians have a desire to maintain natural areas for use and benefit of future 	<ul style="list-style-type: none"> Potential loss of biodiversity and decline in some outdoor recreation values as resource 	<ul style="list-style-type: none"> Conservation and protection of existing ecosystems and species.

1.6 OTHER VALUES

Due to project scope and data limitations, the socio-economic analysis does not consider all possible values. For example, the impacts of designation on human health, value of adjacent land, and community or regional development are not evaluated.

