

## RUSHBROOK PROVINCIAL PARK EXPANSION

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### SUMMARY

A large tract of old-growth white and red pine in Ontario's Spanish Forest started growing after a stand replacing fire in the early 1860's. When logging of white and red pine reached the north Shore of Lake Huron in the 1870's-1880's, these forests were no more than two decades old and were passed over by lumbermen. Consequently, extensive tracts of virgin pine forest over 160 years-old remain in the Spanish forest, with scattered trees likely exceeding 300 years-old.

The area around Rushbrook and Shakwa Lakes in the Spanish Forest has been recognized since at least 1990 for high concentrations of old-growth white and red pine forests and a large contiguous pristine landscape. However, the provincial park that was created to protect this area does not include important recreational canoe routes, confirmed pristine watersheds, and significant tracts of old-growth forest.

This report maps an expansion of Rushbrook Provincial Park that incorporates the recommendations of the Great Lakes-St. Lawrence Round Table made during the Ontario Living Legacy Process (OLL), pristine watersheds, and an important canoe route loop. The proposed park more than triples the amount of old-growth forest protected in the existing park.

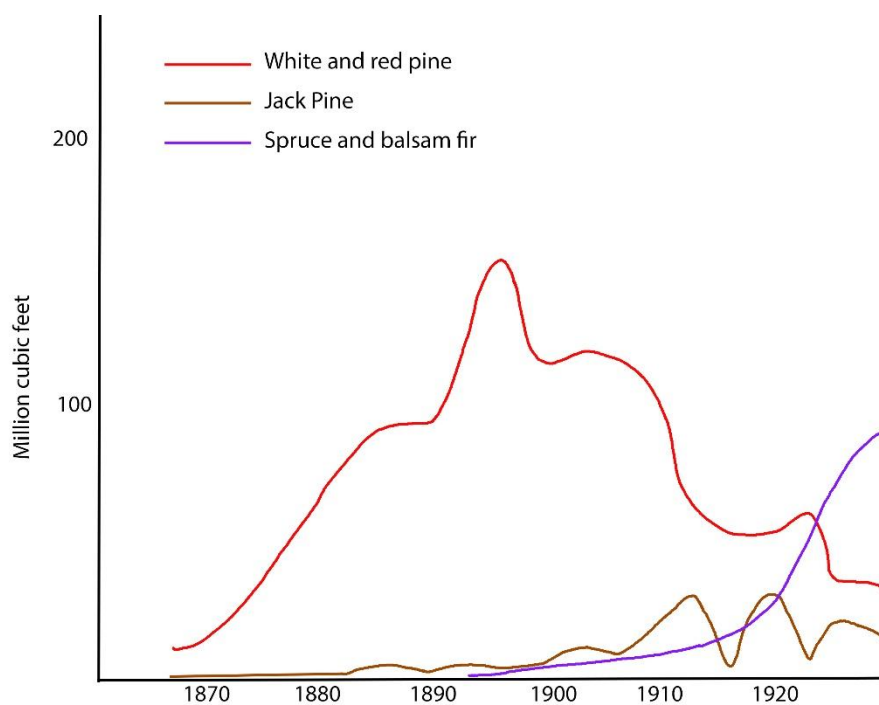
A larger protected area network is proposed that would connect Rushbrook Lake and surrounding parks and conservation reserves, protect 36% of old-growth pine in the Spanish Forest, and increase protected area to 12% in the management unit, from the current 10.9%.

## HISTORY OF THE SPANISH FOREST

White and red pine accounted for most of the timber harvested from Ontario through the nineteenth and early twentieth century (Figure 1), first in the form of square timbers exported to Britain then as sawlogs mostly exported to the U.S.A., which led to a general reduction in abundance of these species in parts of Ontario (Burgar, 1983; Head, 1975; I. D. Thompson et al., 2008). Until the 1870s logging was restricted to southern and eastern Ontario, with square timber harvest concentrated in the Ottawa Valley and export of saw logs and lumber from the north shores of Lakes Ontario and Erie (Burgar, 1983; Head, 1975).

In the late 1860's white pine logging began to expand to the Parry Sound area of Georgian Bay, to the north shore of Lake Huron by the 1870's (Burgar, 1983; Head, 1975), and likely only reached the forest above the elbow of the Spanish River in the 1880's (Thompson, 2025). The old-growth white and red pine forest now found in the Lower Spanish Forest escaped this logging because it had recently burned and would have been only a few decades old when lumbermen reached the area. Tree cores taken from points around Rushbrook and Marion Lake are relatively even aged, suggesting a stand replacing fire occurred in the early 1860s (Henry, 2018, unpublished data; AFER 1994, unpublished data). Scattered centuries-old survivor trees can still be found, with scars from the 1860's forest fire.

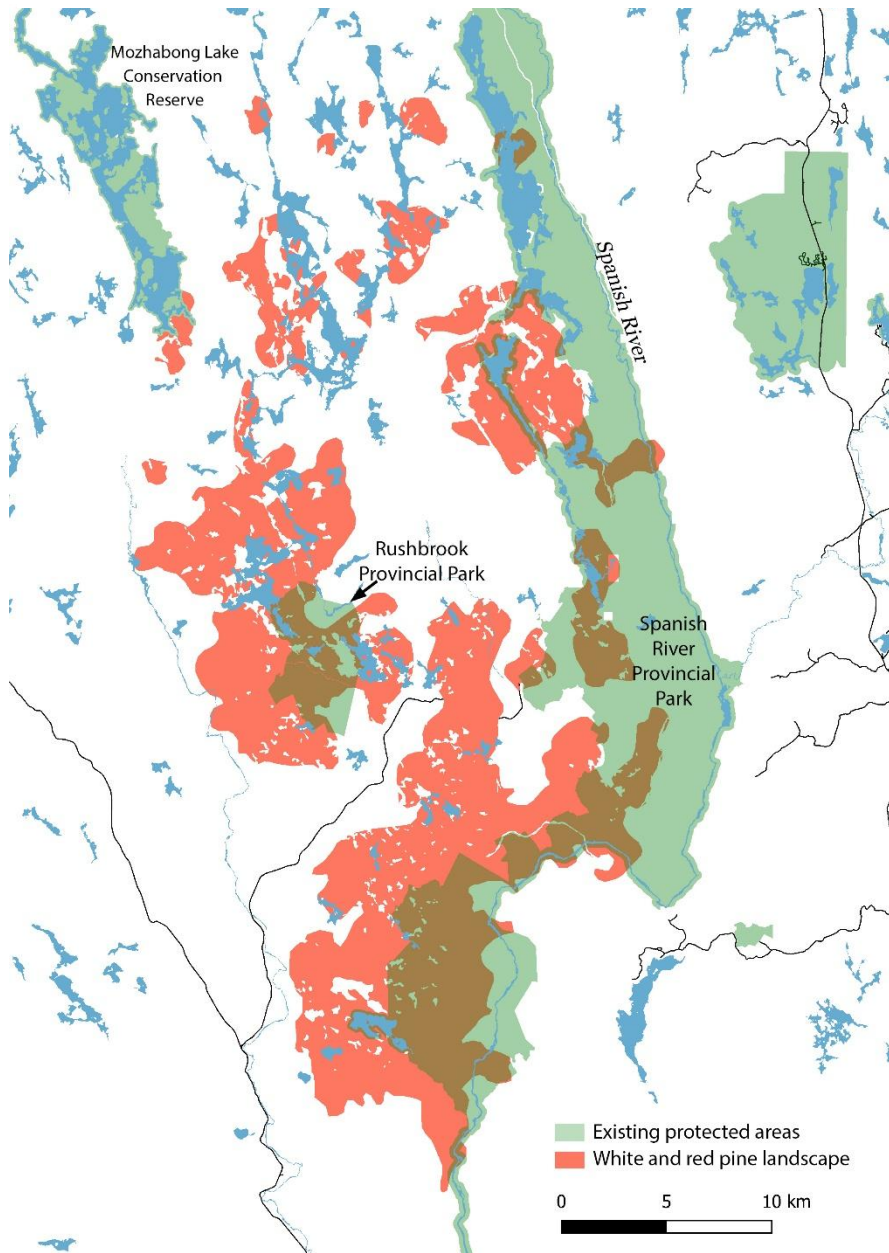
FIGURE 1 ONTARIO CROWN LAND WOOD HARVEST 1867-1930 (ADAPTED FROM BURGAR 1983)



The area around Rushbrook Lake was initially identified by Iles (1990) as a provincially significant area of old-growth white and red pine forest. Then a 1993 remote sensing study conducted for the Ontario Forest Research Institute showed that the Lower Spanish Forest had the largest concentration of white and red pine forest in the Province of Ontario (Figure 2; Spectranalysis, 1993). Quinby & McGuiness (1996) then used a survey of experts to show that it was the largest ancient white and

red pine forest landscape remaining in the world. From 1993 to 1995 Ancient Forest Exploration & Research

FIGURE 2 WHITE AND RED PINE FOREST AND EXISTING PARKS AND CONSERVATION RESERVES



(AFER) conducted field studies in the Lower Spanish Forest that confirmed the existence of two pristine watersheds adjacent to Rushbrook and Marion Lakes, and a third that was nearly pristine (Quinby & Suski, 1995). Additional watersheds to the south were identified but subsequently logged.

In 1997, Thomas Lee and Michael Henry presented to the Great Lakes-St. Lawrence Round Table at a public hearing, proposing protection for the pristine watersheds, recreational canoe routes, and a significant portion of the old-growth forest. Two years later in 1999, the Ontario Living Legacy was announced following a 2½-year public land use policy development process, originally called Lands for Life. When the Round Table recommendations were released, they included a 2,716 ha park stretching from east of Marion Lake to west of Shakwa Lake, including areas

of old-growth forest that occur within those watersheds and near Shakwa Lake, while leaving out some of the ancient watersheds and large areas of old growth (Partnership for Public Lands, 2001; Figure 3). However, when the final new parks maps were released, the Park was only 2,158 ha in size and excluded the lakes and rivers with the highest recreational value, as well as most of the pristine watersheds identified by Quinby and Suski (1995). The newly created Rushbrook Park also omitted most of the canoe routes, lakes, and rivers with high recreational value within the ancient forest (Figure 4).

FIGURE 3 RUSHBROOK PROVINCIAL PARK IN RELATION TO CONFIRMED ANCIENT FOREST WATERSHEDS AND ONTARIO LIVING LEGACY GREAT LAKES-ST. LAWRENCE ROUND TABLE RECOMMENDATIONS



FIGURE 4 RUSHBROOK PROVINCIAL PARK (EXISTING) AND RECREATIONAL CANOE ROUTES



## RUSHBROOK PARK EXPANSION

The existing Rushbrook Park doesn't conserve the ecological and recreational values it is intended to protect. An expansion to the park should include the following features:

- pristine watersheds identified and confirmed by Quinby and Suski (1995),
- the recommendations made by the OLL Great Lakes-St. Lawrence Round Table,
- a 200-meter buffer around Shakwa Lake,
- adjustments to boundaries to capture old-growth forest and high recreation value forest adjacent to Shakwa and Charcoal Lakes, and
- boundary adjustments to follow natural features, reduce the “cauliflower effect” of buffers, and reduce orphaned land area that would require crossing sensitive creeks or wetlands for forest harvest

The proposed expansion using these parameters (Figure 5) would increase the size of Rushbrook Provincial Park from 2,159 ha to 6,761 ha.

## PROTECTION OF OLD-GROWTH WHITE AND RED PINE FOREST

The total area of old-growth red and white pine (over 140 years old in 2025) in the Spanish Forest is 22,970 ha, according to forest resource inventory data. Of this 20,456 is marked as unlogged. The 2,514 ha of old-growth forest with logging is likely in the mid-stage of a shelterwood cut. Currently only 22% of the old-growth white and red pine in the Spanish Forest is protected in parks and conservation reserves. This doesn't account for old growth that was previously clearcut or where shelterwood cuts were already completed.

Rushbrook Provincial Park as it currently exists protects 720 ha of old-growth pine forest. The proposed park expansion would more than triple that to 2471 ha. This would increase the protected old growth in the Spanish Forest to 6541 ha, or about 30% (Table 1).

TABLE 1 PROTECTION OF OLD-GROWTH WHITE AND RED PINE FOREST IN THE SPANISH FOREST MANAGEMENT UNIT

<i>Old-growth white and red pine in the Spanish Forest</i>	<i>ha</i>	<i>%</i>
<i>All old-growth forest</i>	22970	100
<i>Intact unlogged old growth</i>	20456	89
<i>Currently protected in all parks and reserves</i>	5043	22
<i>Total protected with Rushbrook Provincial Park expansion</i>	6794	30
<i>Total protected with Rushbrook, Sinaminda, and Kennedy additions (Fig 10)</i>	8182	36

## RECREATION VALUE

Rushbrook (South Rushbrook Old Pine) Provincial Park was designated through Ontario's *Living Legacy Land Use Strategy* (OMNR, 1999) as a natural environment park, intended to protect high quality recreational and educational experiences in an attractive outdoor setting (Ontario Parks, 2006). While the Park boundaries recommended by the Round Table (Fig. 3) encompassed numerous recreational lakes, portages, hiking trails and campsites, the existing Park has low recreational potential, with five campsites and two portages.

FIGURE 5 PROPOSED RUSHBROOK PARK WITH INTACT WATERSHEDS AND LIVING LEGACY RECCOMENDATIONS

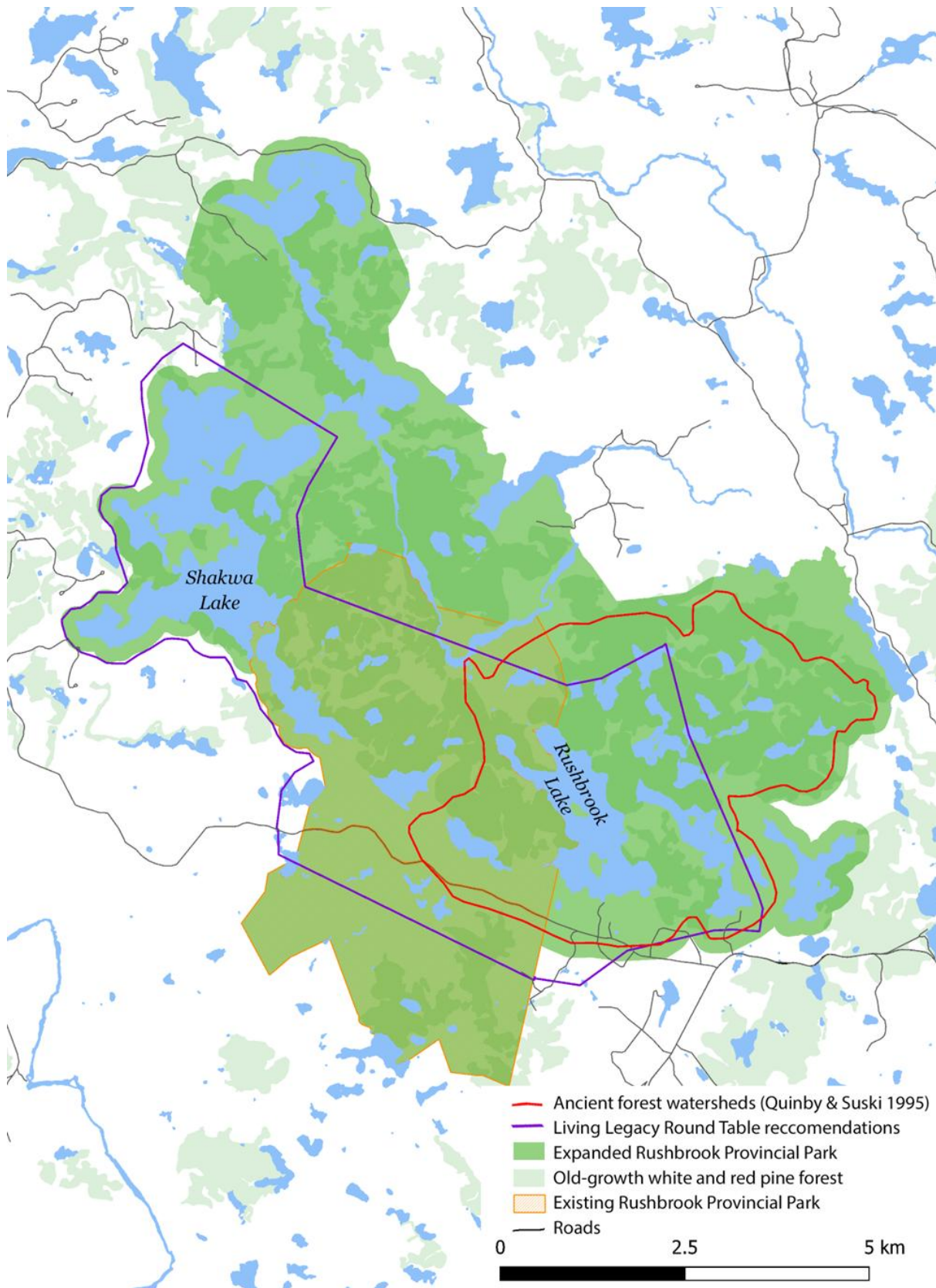
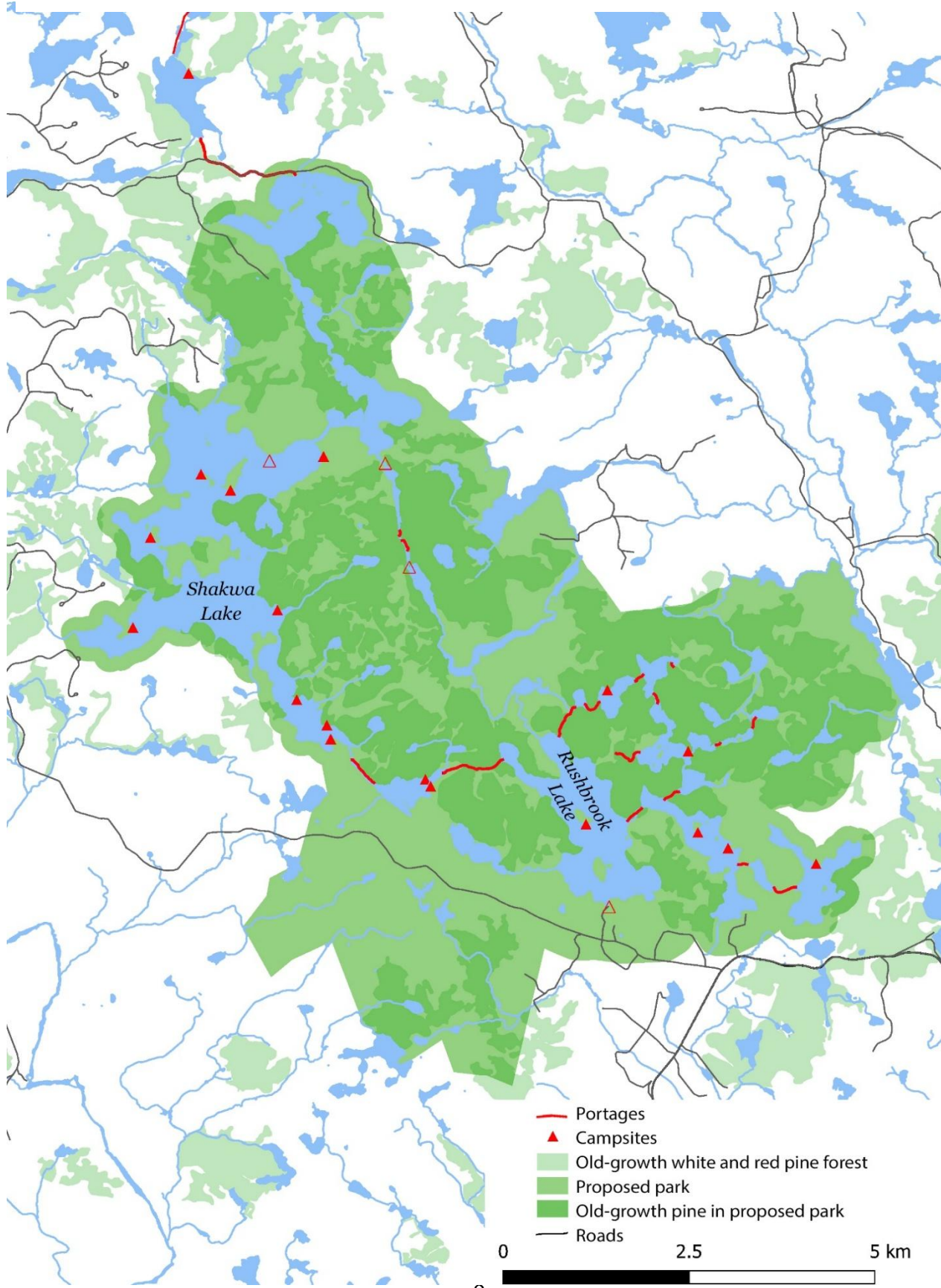


FIGURE 6 PROPOSED RUSHBROOK PARK, CANOE ROUTES, AND OLD-GROWTH WHITE AND RED PINE FOREST



The proposed Park expansion would protect an existing canoe route loop of seven lakes; several side canoe routes; and the connecting canoe route from Rushbrook Lake to Shakwa Lake, which connects to the Spanish River (Figure 6). With its linkages to the Spanish River Provincial Park, this expansion would create a world-class park, which provides opportunities for canoe trips from several days to over a week in length. The canoe routes within the proposed park alone total over 30 km in length, with at least 16 existing portages, 17 campsites and two hiking trails. The existing connecting canoe route to the Spanish River, which should be considered for additional protection, is also over 30 km in length with six portages and numerous campsites (Figure 10).

FIGURE 7 THIS WHITE PINE HAS A SCAR FROM A FIRE IN THE 1860'S



## ECOLOGICAL INTEGRITY, BIODIVERSITY

### CONSERVATION AND ECOSYSTEM SERVICES

Canada has pledged, under the global biodiversity targets for 2030 in the Kunming-Montreal Global Biodiversity Framework (UNEP, 2022) to “ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved.” Biodiversity should be considered at the species, ecosystem and genetic level (Woodley et al., 2012) and old-growth forest should be a priority for protection. Old-growth white and red pine forest was identified as an endangered ecosystem by Quinby (1993), and Mosseler et al. (2003) found that old-growth forests play an important role as reservoirs of both genetic diversity and reproductive fitness.

The existing park is bisected by a road that fragments the park into two relatively small portions. The proposed park expansion more than triples the largest unfragmented tract in the park from 1,372 ha to 5,920 ha in size.

Ecosystem services provide a variety of benefits to people. The Millennium Ecosystem Assessment (Hassan et al., 2003) categorizes them as *provisioning services* such as food, water, timber, and fiber; *regulating services* that affect climate, floods, disease, wastes, and water quality; *cultural services* that provide recreational, aesthetic, and spiritual benefits; and *supporting services* such as soil formation, photosynthesis, and nutrient cycling. The most significant ecosystem services provided by Rushbrook Provincial Park include:

- enhancing sustainable timber harvest by acting as a genetic reservoir via old-growth forest conservation (Mosseler et al. 2003),
- acting as a carbon sink, accumulating and storing large quantities of carbon over many centuries in old-growth forests (Luyssaert et al., 2008), and
- recreational, aesthetic, health and spiritual benefits provided to people through access to ancient and old-growth forests.

FIGURE 8 LARGE WETLANDS NORTH OF RUSHBROOK LAKE ARE PART OF THE CANOE ROUTE TO SHAKWA LAKE



All of these ecosystem services would be greatly enhanced by the proposed Park expansion. In particular, the recreational, aesthetic, and spiritual services of the Park are currently low, but would become very significant with Park expansion. Since old-growth forest protection is more than tripled with the park expansion, a commensurate increase in other ecosystem services and biodiversity conservation can be expected.

## ENVISIONING A PROTECTED AREA NETWORK FOR THE SPANISH FOREST

The Kunming-Montreal Global Biodiversity Framework emphasizes the maintenance and restoration of connectivity, as well as increasing protected area to 30% by 2030. To achieve either of these goals, and the underlying goal of biodiversity conservation, a network of protected areas will need to be created across Canada that includes areas of particular importance for biodiversity and ecosystem functions and services, such as old-growth forest. When we presented to OLL in 1999, our proposed Park boundaries for the Spanish River Provincial Park connected Rushbrook Lake to the Spanish River. This proposal was not

accepted and some of the connecting natural areas have since been subject to intensive logging and roadbuilding. Figure 10 shows a protected areas network that would connect these parks, conserve the recreational canoe route to the Spanish River, and help Canada meet its international commitments. The proposed protected area shown here includes:

- The Rushbrook Park expansion;
- a waterway park around Sinaminda Lake and connecting lakes to the Spanish River, widened in places for additional protection of old-growth pine forest;
- a connection to the Mozhabong Lake Conservation Reserve and adjacent old-growth pine forest;
- a sizeable area of roadless old-growth forest between Kennedy Lake and the Spanish River / Pogamasing Lake that should have been included in the Spanish River Provincial Park;
- old-growth pine to the east of Charcoal Lake that will enhance the integrity of Rushbrook Provincial Park

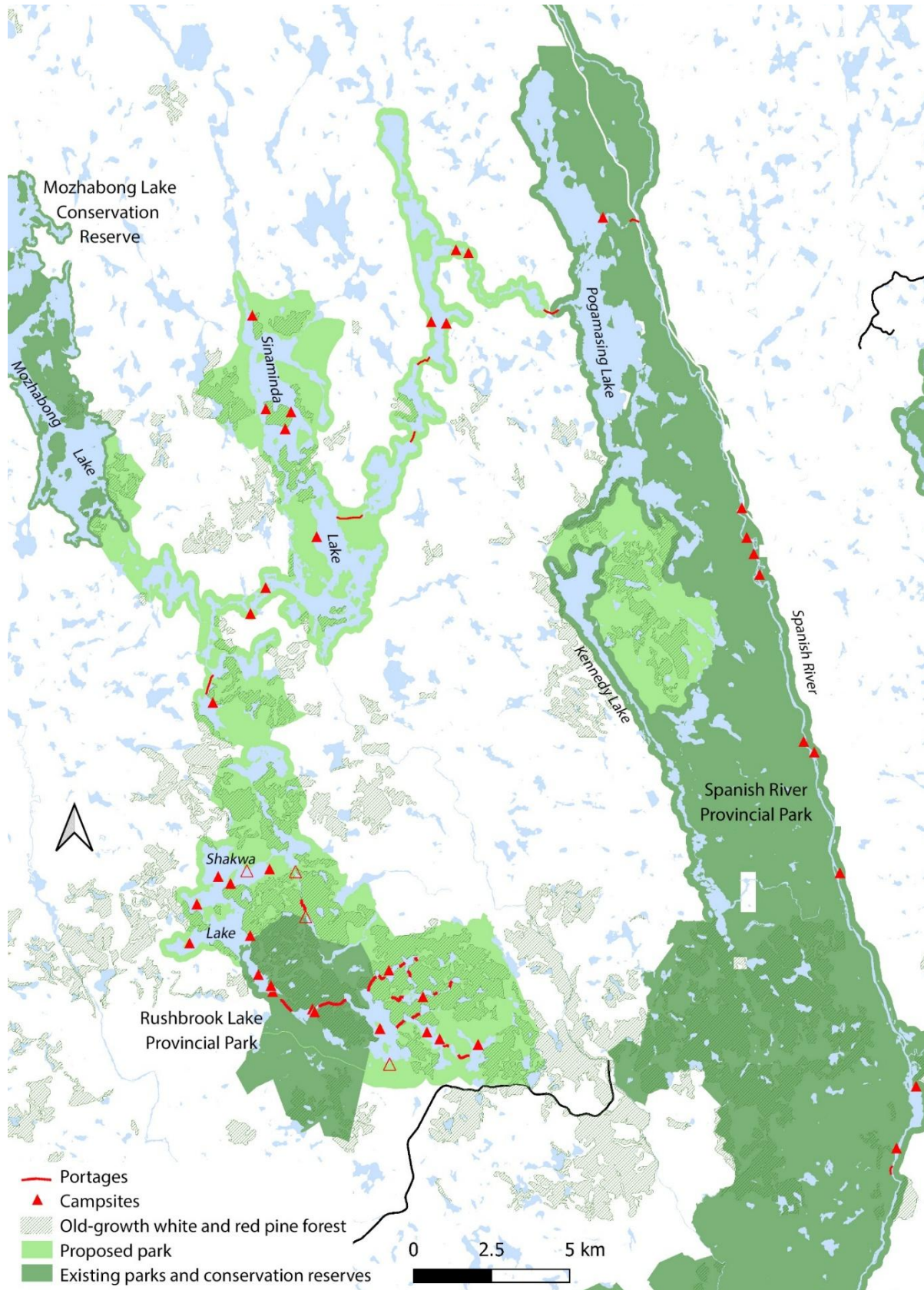
All of these additions total 13,438 ha, including 3,139 ha of old-growth forest. Currently 10.9% of the Spanish Forest Management Unit is protected in Provincial Parks and Conservation reserves. All the proposed additional protection would bring that to 12%, still far short of the 30% required.

Shapefiles for these protected areas are available at: <https://www.oldgrowth.ca/spanish-forest-parks/>

**FIGURE 9 160-YEAR-OLD RED PINE FOREST IN THE INTACT WATERSHEDS EAST OF RUSHBROOK LAKE**



FIGURE 10 A PROPOSED PROTECTED AREAS NETWORK IN THE LOWER SPANISH FOREST



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