

Environmental Impact Study

130 Lake Temagami, Island 992
44 & 50 Lake Temagami, Island 970

Geographic Township of Joan,
Municipality of Temagami

November 2020

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1.0 Introduction

FRi Ecological Services was retained to conduct an Environmental Impact Study (EIS) in support of a consent application located on two islands in Lake Temagami, Ontario. The application includes property on Island 992 and on Island 970, hereby referred to in this report as the study area, located in the Geographic Township of Joan within the Municipality of Temagami (Figure 1).



Figure 1: Location Map

A desktop review was conducted of the available background information related to natural heritage values within the study area. The following sources of information were consulted:

- Make-a-Map, Natural Heritage Values, MNRF
- District Species at Risk Tool – Geographic Township of Joan, MNRF (2015)
- Municipality of Temagami’s Official Plan (OP) (2013)
- Temagami First Nation (TFN) and TFN potential heritage areas map (2018)
- Provincial Policy Statement (PPS) (2020)
- Significant Wildlife Habitat Ecoregion 5E Criterion Schedule (2012)
- iNaturalist and eBird

Natural heritage categories were considered within the entire study area to determine if the proposed consent would be suitable for development consistent with the PPS and the Municipality of Temagami’s OP. Considerations included:

- Habitat of endangered and threatened species;
- Significant wetlands;
- Significant wildlife habitat;
- Areas of Natural and Scientific Interest; and
- Fish habitat

2.0 Ecological Land Classification

Ecological land classification or ecosites are determined by assessing the soil and vegetation characteristics of a site. To assess the presence of potential habitat and natural heritage features, including species at risk and significant wildlife habitat, the ecosites on the property were determined during the field investigations. There are four (4) natural ecosites found in the study area (Figure 2), including:

- G015Tt Very Shallow, Dry to Fresh: Red Pine – White Pine Mixedwood
- G101Tt: Fresh, Silty to Fine Loamy: Spruce-Fir Conifer
- G103Tt: Fresh, Silty to Fine Loamy: Red Pine – White Pine Mixedwood
- G116Tt Moist, Fine: Spruce – Fir Conifer

The majority of the lands are currently vacant and have been retained in a natural state, with the exception of an existing dwelling to the north on Island 992. Field investigations determined that Islands 992 and 970 have fine, mineral soils that range from very shallow to deep and fresh to moist. Representative georeferenced photos of the ecosites were taken and are contained in Appendix 1.



Figure 2: Mapped ecosites in the study area

3.0 Habitat of Endangered and Threatened Species

The District Species at Risk (SAR) Tool was reviewed for the Geographic Township of Joan and the Natural Heritage Information Centre (NHIC) database was queried for any confirmed observations in or adjacent to the study area. There are no confirmed threatened or endangered species observation within 2km of the study area. The species at risk with potential to occur in the township are summarized in **Table 1**.

Table 1: Species at Risk known to occur in the Geographic Township of Joan

Species	Designation
Eastern Small-footed Myotis	Endangered
Little Brown Myotis	Endangered
Northern Myotis	Endangered
Tricolored Bat	Endangered
Bank Swallow	Threatened
Barn Swallow	Threatened
Chimney Swift	Threatened
Whip-poor-will	Threatened

3.1 Species at Risk Bats

Little Brown Myotis, Northern Myotis, Eastern Small-footed Myotis, and Tricolored Bat are four bat species that have been listed as Endangered in Ontario. They are experiencing significant population declines because of a disease called White Nose Syndrome.

During the active season, bats feed on insects at night and roost during the day. They roost either individually (males) or in groups (females with pups), usually in warm, elevated spaces. Bats often choose human-created roosts such as attics and abandoned buildings as they offer optimum habitat for summer roosts and are usually close to water and open areas for foraging. Natural roosts include large hollow trees and spaces behind loose bark. All four species hibernate in caves and abandoned mines in October through April where temperatures remain above freezing and humidity levels are high.

For Little Brown Myotis and Northern Myotis, the *Species at Risk (SAR) Bats Technical Note*¹ lists the following ecosites which could have maternity roosts: G015 – G019, G023 – G028, G039 – G043, G054 – G059, G069 – G076 and G087 – G092. According to a 2008

¹ Technical Note, Species at Risk (SAR) Bats, Little brown myotis and Northern myotis. Regional Operations Division, June 2015.

study by Johnson *et al.*, Eastern small-footed bats most commonly use ground level rocks, talus slopes, rock fields and vertical cliff faces for their summer roosts.²

Little Brown Myotis (*Myotis lucifugus*)

According to the Significant Wildlife Habitat Technical Guide, Appendix G4, Table G4, Little Brown Myotis use caves, quarries, tunnels, hollow trees or buildings for roosting. Maternity colonies are most often found in warm dark areas, like barns, attics and old buildings. They overwinter in caves and mine adits (horizontal mine shafts) in Ontario. This species forages mainly over open areas including wetlands and near forest edges where insect densities are greatest.

Northern Myotis (*Myotis septentrionalis*)

Northern myotis are documented to roost in hollow trees or under loose bark. Males roost individually while females are found in maternity colonies of up to 60 adults. They overwinter in mines and caves similar to other species which hibernate in Ontario. Unlike Little Brown Myotis, Northern Myotis hunt primarily in forested areas, below the canopy.

Tri-colored Bat (*Perimyotis subflavus*)

During the active season, Tri-colored Bats can be found throughout older forested habitats. The species is known to form day roosts and maternity colonies in forests but may also be found roosting in barns or other anthropogenic structures. They forage for flying insects over water and along streams in the forest. Nearing the end of the summer, Tri-colored Bats will travel to their overwintering site, often situated underground or near a cave, where they swarm. This species typically overwinters in caves where they roost by themselves rather than as part of a group.

Assessment

The Ministry of Natural Resources & Forestry's recent Species at Risk (SAR) Technical Note (2015) lists forested ecosites which have the potential to function as or contain bat habitat based on specific criteria. The G103Tt ecosite qualifies as 'candidate SAR bat habitat' according to the technical note.

Ultrasonic recording equipment was placed to capture the open water and forested habitat where bats would most likely be found on the subject property. The Wildlife Acoustics equipment was deployed in candidate habitat for 42 consecutive nights; from June 8th to July 20th inclusive and was set to triggered recording from sunset to sunrise and the internal clock set with the GPS accessory to ensure absolute locational accuracy. The minimum trigger frequency (14kHz) was chosen to include the full echolocation range of all eight (8) bat species found in Ontario. The recordings were analyzed with

² Johnson, J.S., J.D., Kiser., K.S. Wareous., T.S. Peterson (2011) "Day-Roost of *Myotis leibii* in the Appalachian Ridge and valley of Western Virginia", "Northern Naturalist", 18(1):96-106.

Wildlife Acoustics Kaleidoscope Pro software and verified by an experienced biologist.³ One limitation of acoustic monitoring for bats is that pass counts only represent an index of the magnitude of activity rather than a population size estimate. For example, 16 passes from a single big brown bat and a single pass from 16 big brown bats would be tabulated identically for a given night or monitoring period. The number of passes for each bat species recorded on the subject property (500+ total hours of recording) are as follows:

Bat Species	SAR?	Total passes for recording period	Most passes in a single night	Average passes per night
<i>Silver-haired</i>	No (SWH)	4087	1088	99.7
<i>Hoary</i>	No (SWH)	131	11	3.6
<i>Big Brown</i>	No (SWH)	16	4	2.7
<i>Little Brown</i>	Yes	33	7	1.7

Only one SAR bat species was detected in the study area (Little Brown). The recorded passes and overall activity of Little Brown bats occurred on limited nights with no activity noted on several evenings when other species were active. Given the very low frequency of passes, it is unlikely that the study area supports critical habitat for any SAR bat species. Non-SAR bat habitat is addressed in Significant Wildlife Habitat discussions. Bats hibernate from October to April of any given year so to avoid impacts to bats, any site preparation including tree clearing should occur outside the bat active season. In conclusion, if tree removal takes place from October 1 to March 31 of any given year, no impacts to SAR bats or their critical habitat are expected as a result of the proposed development.

3.2 Bank Swallow (*Riparia riparia*)

As their Latin name suggests, Bank Swallows are most often found in riparian areas, specifically nesting along the steep, sandy banks of rivers. Less often, they use steep sandy slopes in aggregate pits/quarries and cut banks along roadways. They nest colonially, with males excavating a burrow prior to pair formation. Once pairs are formed, nest-building begins immediately in the excavated burrow.⁴

They are an aerial insectivore, eating a variety of insects on the wing; though sometimes they take land and water-based insects when they are available.⁵ They forage in open

³ When the acoustic recorder is triggered by a sound with the appropriate frequency and duration, a recording is saved. Each recording is a series of pulses which represent the bat echolocating. The pulse series is called a bat pass. The bat passes provide valuable information with respect to which species are present, and the relative abundance over time or compared to other sites. **It does not, however, give any indication of the actual number of individuals of a particular species.**

⁴ Garrison, Barrett A. 1999. Bank Swallow (*Riparia riparia*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/414>

⁵ <http://www.ontario.ca/page/bank-swallow>

areas, including lakes, ponds, rivers, meadows, fields, pastures, and bogs; occasionally over forests and woodlands. During the breeding season, adults are usually within 200 metres of their young for feeding purposes.

Assessment

Although the property is surrounded by open areas that could provide suitable foraging habitat, the shoreline is heavily treed and absent of sandy banks for nesting. There is no suitable nesting habitat. No further studies are required.

3.3 Barn Swallow (*Hirundo rustica*)

Barn swallows are an aerial insectivore, known to build nests on barns, bridges and other buildings especially in open areas near water. Open habitats including grasslands, fields, rights-of-way, shorelines and wetlands are particularly important for foraging. They live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures. Swallows prefer structures with rough-surfaced ledges where they can build their nests. The cup-shaped mud nests are the critical habitat feature used for egg laying, incubation, feeding, resting and rearing of young. Barn swallows will use artificial nest cups and ledges; and are known to use the same nests in subsequent years. They are often found in colonies with breeding taking place from May through August.^{6 7 8}

Assessment

The subject property on Island 970 is currently vacant with no historical structures present on the property that could support Barn Swallow nesting. Island 992 has existing structures and all were thoroughly surveyed for any active or inactive nesting activity. No nests or barn swallow activity was detected on the subject lands of Island 992 and no changes to any of the structures are proposed. Beyond these structures, suitable habitat for this species is not present on the property and therefore no further studies are required and no impact to barn swallows is anticipated.

3.4 Chimney Swift (*Chaetura pelagica*)

Chimney swifts are an aerial insectivore commonly seen foraging over open areas and wetlands. According to the Chimney Swift COSEWIC Status Report (2007), cavity trees with a diameter at breast height (DBH) greater than 50 cm are required for nesting. Common tree species hosting nesting or roosting sites are white pine, yellow birch and

⁶ COSEWIC. 2011. COSEWIC assessment and status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

⁷ http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_BRN_SWLLW_EN.html

⁸ Ontario Ministry of Natural Resources. 2013. General Habitat Description for the Barn Swallow *Hirundo rustica*. http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/document/mnr_sar_ghd_brn_swllw_en.pdf

sometimes aspen. Typically, however, swifts nest and roost in human-created structures such as brick chimneys. At times, especially during migration and inclement weather, roosts may host hundreds or even thousands of birds. The loss of artificial nest features (brick chimneys) has resulted in significant population declines over a short time period.

Structures functioning as nest features are usually occupied by a single breeding pair. Breeding pairs exhibit high site fidelity for structures used as nests and roosts and will continue to use these features as long as they are functional. In Ontario, swifts return in late April through early May and breed May through July. Migration begins in late August and is usually complete by mid-October.^{9 10 11 12 13}

Assessment

While the subject property and surrounding area does support large white pine and yellow birch trees, there are no anthropogenic structures which are most often used by Chimney Swifts for roosting and nesting. Acoustic bird song recording equipment was deployed in candidate habitat to capture bird calls daily from 5am until 8am and from 9pm to 10:30pm spanning from June 8th to July 20th inclusive. No evidence of Chimney Swifts was documented, and no impacts are expected.

3.5 Eastern Whip-poor-will (*Antrostomus vociferus*)

Eastern whip-poor-wills are found in a variety of open habitats and avoid areas where the forest canopy is extensive and closed. Breeding habitat is considered suitable when it contains features related to the following life processes: territory establishment, nesting, foraging and roosting. Whip-poor-wills typically select rock or sand barrens with scattered trees, savannahs, old burns, and open conifer plantations. These and other sites in a state of early to mid-forest succession are preferred for breeding.^{14 15 16 17}

Assessment

The search of background information confirmed no known observations of whip-poor-will proximate to the subject lands in the NHIC records, ebird.org observation database, nor in the Atlas of the Breeding Birds of Ontario. Both Island 992 and 970 were assessed for suitable, semi-open habitat with potential to support breeding whip-poor-wills. Given

⁹ OMNR. 2013. General Habitat Description for the Chimney Swift.

http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/document/mnr_sar_ghd_chmny_swft_en.pdf

¹⁰ http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=951

¹¹ http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_CHMNY_SWFT_EN.html

¹² Cink, Calvin L. and Charles T. Collins. 2002. Chimney Swift (*Chaetura pelagica*), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/646>

¹³ COSEWIC 2007. COSEWIC assessment and status report on the Chimney Swift *Chaetura pelagica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

¹⁴ Desy, G. 2010. Habitat Description, Whip-poor-will (*Caprimulgus vociferus*): Threatened. Ontario Ministry of Natural Resources. 16 pp. DRAFT.

¹⁵ Ontario Ministry of Natural Resources. 2013. General Habitat Description for the Eastern Whip-poor-will (*Caprimulgus vociferus*).

¹⁶ COSEWIC. 2009. COSEWIC assessment and status report on the Whip-poor-will *Caprimulgus vociferus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

¹⁷ Cink, Calvin L. 2002. Eastern Whip-poor-will (*Antrostomus vociferus*), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/620>

the relatively closed canopy and absence of open rock and sand barrens or wetlands on the properties, there is no suitable habitat for this species present on the subject lands. No further study required.

4.0 Significant Wetlands

There are no provincially significant wetlands on or within 120m of the study area.

5.0 Significant Wildlife Habitat

Significant wildlife habitat subcategories that were cross-referenced with preliminary habitat investigations for the subject lands included seasonal concentration areas, rare vegetation communities and specialized habitats for wildlife, habitat for species of conservation concern, and animal movement corridors. The Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E was used to identify potential significant wildlife habitat.¹⁸

Table 2: Potential Significant Wildlife Habitat

	Type	Potential SWH	Ecosite	Present?
1	Seasonal Concentration Area	Raptor Wintering Area	G015Tt, G101Tt, G103Tt, G116Tt	No
2		Bat Maternity Colonies	G103Tt	Potential
3		Deer Yarding Areas	G015Tt, G101Tt, G103Tt, G116Tt	No
4		Late Winter Moose Habitat	G101Tt	No
5	Habitat for Species of Conservation Concern & Rare Vegetation Communities	Special Concern Species	G015Tt, G101Tt, G103Tt, G116Tt	Potential
6		Old Growth Forest ¹⁹	G015Tt, G103Tt	No
7	Animal Movement Corridors	Cervid Movement Corridor	G015Tt, G101Tt, G103Tt, G116Tt	No

¹⁹ The SWH Criteria Schedule defines Old Growth Forest as stands >30ha in size where dominant trees species of the ecosite are >140 years old. Forest Management Plan geodatabases obtained from Lands Information Ontario denote the year when the leading species of the dominant and co-dominant trees in the forest stand or specific canopy layer started growing. For Island 992 and 970, the years indicated by this database are 1919 and 1959, respectively. This age of stand growth does not constitute SWH for either island.

5.1 Bat Maternity Colonies

The lack of SAR bat activity some nights and relatively low number of SAR bat passes overall give confidence in concluding the absence of species at risk bat maternity colonies on or near the property.

The number of silver-haired bat passes recorded likely indicate that it is probable a maternity colony of silver-haired bats may be present on the site. According to the Significant Wildlife Habitat Mitigation Support Tool (MNR, 2014), bats show very clear seasonal changes in behaviour and thus any removal of vegetation should be carried out when bats are absent (from October 1 to March 31). Each individual proposed severed and retained lot is quite large ranging from approximately 1.2 to 1.9 ha in size and will remain as water-access only (no new roadways will be developed as a result of the proposed development). Where clearing activities can occur outside the active season of any given year for silver-haired bats, impacts to any potential maternity colony/ies will be minimized.

5.2 Special Concern Species

There were eight potential special concern species listed for the study area, including Canada Warbler, Common Nighthawk, Eastern Wood Pewee, Monarch, Olive-sided Flycatcher, Snapping turtle, Wood Thrush, and Yellow-banded Bumble Bee. Only five of the listed species have some potential to exist in the study area based on the habitat present and are discussed in the following section.

Those species listed as *Special Concern* do not receive specific protection under the ESA, rather they are considered under the Significant Wildlife Habitat (SWH) framework. Proposed work which may impact special concern species should consider the provisions outlined in the 2020 PPS.

Canada Warbler (*Cardellina canadensis*)

Canada warblers are most often found in cool, wet, low-lying areas; including swamps, sphagnum bogs and moist forest edges and openings. They are often associated with sites that have a dense understory near open water, vegetation associations including alder and willow. Female Canada Warblers build a loosely constructed, cup-shaped nest on or near the ground in early May. The nest is well-concealed, often in thickets or areas with dense ferns. These are typically wet, mossy areas within forests and among ferns, stumps, and fallen logs. Nests have been documented in a variety of micro-habitats including within the recessed holes of upturned tree root masses, rotting tree stumps, and sphagnum moss hummocks. Eggs are laid at the end of May and fledglings are ready to migrate by the end of July to early August. Migration for Canada warblers peaks at the end of August to the beginning of September.

The loss of forested habitat on the wintering grounds is thought to be the primary reason for the Canada Warbler decline.^{20 21 22}

The proposed lots are large and the amount of vegetation clearing that would be required is very minimal and should have no negative impact on this species. Ensure that any vegetation clearing occurs outside the breeding bird window of April 15 - August 31.

Olive-sided Flycatcher (*Contopus cooperi*)

In the Ontario portion of its range, the Olive-sided Flycatcher breeds in the boreal forest, specifically riparian zones, bogs, cutovers and areas of recent fire. Olive-sided Flycatchers are a late migrant, arriving in Ontario from mid-May through mid-June. This late migration often results in migrating individuals incorrectly being identified as breeders. Olive-sided flycatchers are aerial insectivores, foraging above or near the top of the adjacent forest canopy. They use a technique known as 'sallying' to capture flying insects including bees, wasps, flying ants and less frequently moths from a perch. Coniferous trees, tall snags and semi-open areas for foraging are important features in a breeding territory. Males and females build open-cup nests usually in a conifer tree; approximately 1 meter away from the trunk of the tree and between 3 and 15 meters off the ground although there is some variability in nest heights. Typical clutch includes 3 – 4 eggs which incubate for approximately two weeks. Hatchlings are fed at the nest for another two weeks.²³

Olive-sided flycatchers were not heard during field visits nor were they heard on the recordings. No impacts are expected where vegetation clearing occurs outside the breeding bird window of April 15 - August 31. No impacts to Olive-sided flycatchers are expected to occur.

Eastern Wood Pewee (*Contopus virens*)

Eastern Wood Pewees are found in almost every forested ecosite in Ontario, usually associated with edge habitat and less often found in wetter sites. They are a medium-sized flycatcher with a signature 'pee-a-wee' call. Wood Pewees perch on dead branches in the mid-canopy and sally out after flying insects. Their diet includes flies, moths, bees, wasps, beetles, grasshoppers, and crickets. The pewee also eats small amounts of vegetable matter, including the berries and seeds of dogwood, blueberry, raspberry, and poison ivy.²⁴ They nest mainly in deciduous trees (saplings) including oak and maple, and less so in conifer, usually restricted to *Pinus* species. A small, inconspicuous cup nest is

²⁰ COSEWIC. 2008. COSEWIC assessment and status report on the Canada Warbler *Wilsonia Canadensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 35 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

²¹ Reitsma, Len, Marissa Goodnow, Michael T. Hallworth and Courtney J. Conway. 2010. Canada Warbler (*Cardellina canadensis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/421>

²² http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_CND_WRBLR_EN.html

²³ Altman, Bob and Rex Sallabanks. 2012. Olive-sided Flycatcher (*Contopus cooperi*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/502>

²⁴ http://www.allaboutbirds.org/guide/Eastern_Wood-Pewee/lifehistory

built along a branch, woven with grasses and other vegetation and covered with lichen. Their size and design provide superb camouflage. Pewees are territorial, averaging territories 2 – 8 hectares in size.

Significant population declines over the past 25 years are thought to be due to artificially high densities of white-tailed deer. No vegetation clearing is advised to take place during the breeding bird season between April 15 and August 31 as per the Environment Canada Nesting Calendar. No impacts to this species are anticipated and no further study is required.

Snapping Turtle (*Chelydra serpentina*)

Snapping turtles are found in the shallow waters of lakes, rivers and ponds. Snapping turtles occasionally emerge from the water to bask. They are omnivorous and feed on various aquatic plants and invertebrates, as well as fish, frogs, snakes, small turtles, aquatic birds and relatively fresh carrion. Approximately 90 percent of their diet consists of dead animal and plant matter, and this species plays an important role in keeping lakes and wetlands clean. Adult snapping turtles have few natural enemies, but both hibernating and young adults are occasionally victims of opportunistic predation by otters and mink. Raccoons, foxes, skunks and opossums often eat snapping turtle eggs. They occasionally move over land usually in search of suitable nest sites which are found in sunny, well-drained sandy locations.

There is limited suitable aquatic habitat for snapping turtles within the area of interest on the subject property. The absence of open-water marsh type wetlands and other critical habitat like open, well-drained substrate for nesting, further support the conclusion that critical habitat for snapping turtles is absent. No impacts are expected to snapping turtles or their habitat.

Wood Thrush (*Hylocichla mustelina*)

The wood thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech. Wood thrushes have some potential to be found using the property. Wood thrushes typically nest from May 20th to July 29th of any given year. The overall timing restriction for breeding birds should serve to avoid impacts to individual birds and eliminate impacts to nests and nestlings. Provided the suggested timing restrictions are respected, no negative impacts to wood thrushes are anticipated.

6.0 Significant Areas of Natural and Scientific Interest (ANSI)

There are no significant Areas of Natural and Scientific Interest on or within 120 metres of the site.

7.0 Fish Habitat

Islands 992 and 970 are located in the north part of Lake Temagami which has been identified as a cold water, lake trout lake. Pickerel and lake trout spawning shoals are known to be present several meters offshore from the Islands.

The entirety of both Island shorelines were investigated from the water by boat and recommended locations for dock placement were mapped. These recommended areas are located outside of areas with steep shoreline slopes. The identified envelopes provide sufficient depth of water offshore appropriate for boat docking and substrates consist of cobble, boulder and bedrock substrates (Appendix 1) with no critical fish habitat noted to be present along the immediate shoreline of either island.

A minimum 15-meter building setback applies to dwellings constructed in areas with R1 zoning, as per the Municipal Zoning By-Law. Vegetation removal within this setback area shall be restricted except to accommodate a shoreline activity area. Septic systems should be setback a minimum of 30m from the shoreline.

8.0 Temagami First Nations Heritage Areas

In January 2020, as part of the initial pre-screening for the EIS, FRi reviewed the mapping provided by Temagami First Nations (TFN) "Temagami First Nation/ Teme – Augama Anishnabai Islands 970, 972 Borden Site and High Potential Heritage Area Map", dated April 2, 2018. There were four unique values mapped on the subject and adjacent lands (within 120m of subject lands) identified in the TFN mapping (Figure 4). These values included areas (2) of medicinal plants, a potential traditional canoe building site, an area of fish netting, and spawning habitat.

On July 20th, 2020, FRi staff accompanied three TFN staff members and one TFN elder to the subject and adjacent lands to investigate high potential heritage areas on site and along the shoreline. The results of the field investigations and detailed information about each value are described in the following section

Medicinal Plants

Medicinal plants identified on the southern point of Island 992 by the TFN elder in the field include Labrador tea (*Ledum groenlandicum*), Wintergreen (*Gaultheria procumbens*), and Lowbush blueberry (*Vaccinium angustifolium*).

Labrador tea is used by TFN to treat sore throats, coughs, congestions, and assist with weight management. It is often consumed regularly and has a very mild flavor. Wintergreen is often used by TFN as an astringent or antiseptic and lowbush blueberry is consumed by TFN for its immunity boosting properties.²⁵

It is expected that the 15m minimum shoreline setbacks recommended will capture and preserve this value. The medicinal plant area on Island 970 was not confirmed during field investigations and it is unclear what value may have been present at this location in the past as mature cedars and vegetation typical of the entire shoreline were noted to be present through this area. It is likely that any values along this area of the shoreline will be preserved in the recommended 15m shoreline setback.

Canoe Building Site & Canoe Quality Birch Tree

[A] Although the presence of a potential traditional canoe building site was noted on Island 970, it is setback over 60m at its nearest point from the subject lands and no negative impacts due to the proposed development are expected. Regardless, a minimum 5m buffer is recommended to remain around this feature as identified on the TFN mapping.

[B] A canoe quality paper birch tree (*Betula papyrifera*) was identified to the north of the property on Island 970 in the field by TFN staff and it was requested that the tree be preserved (Photo 6, Appendix 1). To ensure preservation of this feature, it is recommended that there is no disturbance or damage to the tree's root system. By retaining tree and a naturally vegetated buffer with a radius equivalent to the tree's calculated Critical Root Zone (CRZ), any harm to the critical root system can be avoided and preservation of the feature can be achieved. Based on the observations by TFN field staff, the DBH of the tree was estimated to be approximately 20-30cm. Although the spread and the depth of root systems can vary among tree species type, location, climate, and soil type, a conservative calculation to determine the on the ground radius of the CRZ is 1.5m of CRZ per 10cm of DBH. Using the upper limit of the tree's suspected DBH, an appropriate buffer to protect the tree's CRZ would have a radius of 4.5m. This recommended buffer is shown in Figure 5

²⁵ Email correspondence with staff from Temagami First Nations Lands & Resources Office; October 29, 2020

Fish Habitat

Two high potential values were identified within Lake Temagami proper that fall within the lands adjacent to the subject lands: an area of spawning habitat and an area traditionally used for netting fish. A spawning shoal was identified in the narrows north of Island 992 and personal accounts of springtime fish spawning at this location was confirmed by the TFN elder present during the site visit.

There are no negative impacts anticipated to occur to these noted areas from the proposed development. The area identified for netting fish is located wholly outside of the subject lands and netting activities can still be carried out along the shoreline post-development. The spawning shoal located to the northeast of Island 992 (Heritage Area #5 in Figure 4) is located over 40m from the subject lands at its nearest point (Figure 5). There are no negative impacts anticipated to the form and function of this spawning shoal based on the proposed development. In addition to the recommended setbacks described in Section 7.0 of this report, feature-specific development setbacks are recommended in Table 3 and depicted in Figure 5.

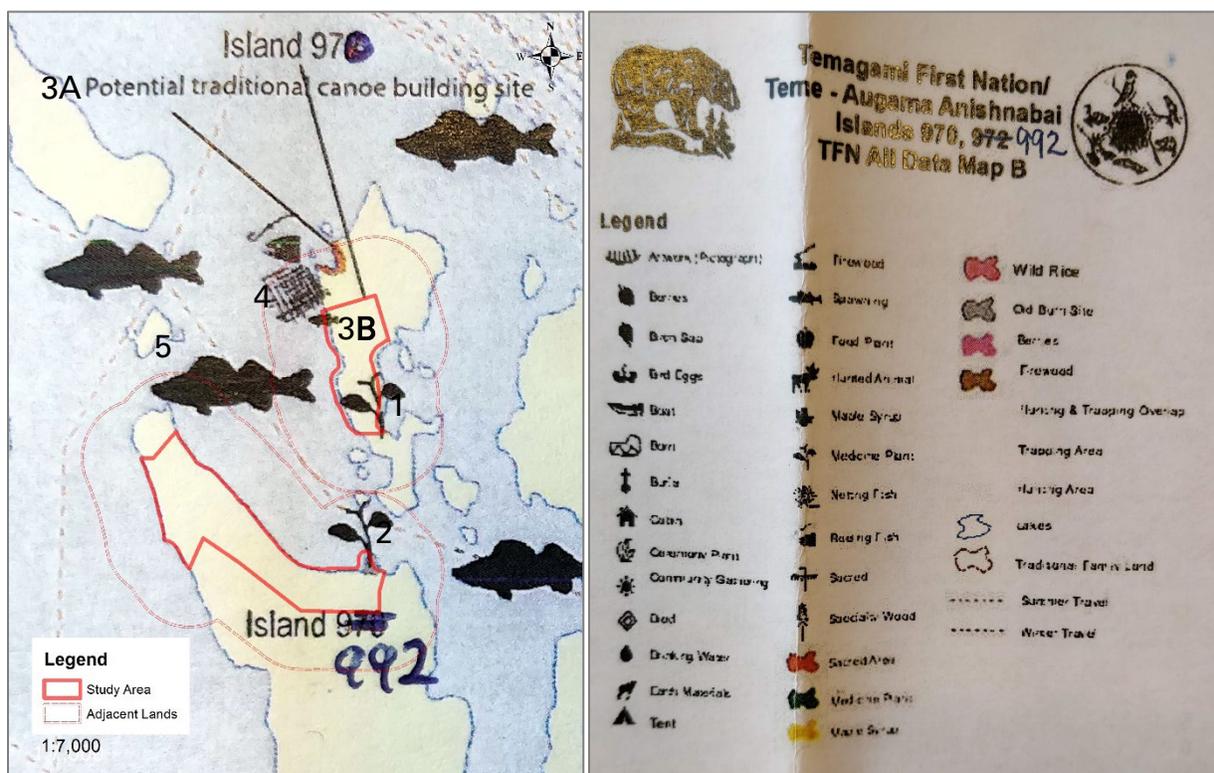


Figure 4: Excerpt from the Temagami First Nation/Teme-Augama Anishnabai High Potential Heritage Area map (left) and associated values (right; legend)

Table 3: Assessment of TFN/TAA high potential areas mapping and field investigations

# on Map	TFN Mapped Value on or adjacent	Distance from Subject Lands	Confirmed presence?	Recommended Setback	Species Considered
1	Medicinal Plants on Island 970	N/A	No	N/A	• N/A
2	Medicinal Plants on Island 992	0m	Yes	Contained within the recommended 15m shoreline setback or outside property boundaries	<ul style="list-style-type: none"> • Labrador tea (<i>Ledum groenlandicum</i>) • Wintergreen (<i>Gaultheria procumbens</i>) • Lowbush blueberry (<i>Vaccinium angustifolium</i>)
3	Potential Traditional Canoe Building Site (A)	60m+	Unknown	Feature + 5m buffer	<ul style="list-style-type: none"> • Eastern white cedar (<i>Thuja occidentalis</i>) • White birch (<i>Betula papyrifera</i>)
	Canoe Quality White Birch (B)	0m	Yes	Retain the tree and a naturally vegetated buffer encompassing its Critical Root Zone (CRZ); 4.5m radius out from the trunk	<ul style="list-style-type: none"> • White birch (<i>Betula papyrifera</i>)
4	Netting Fish	Unknown, partially within adjacent lands	Yes	N/A	<ul style="list-style-type: none"> • Lake Trout (<i>Salvelinus namaycush</i>) • Walleye (<i>Sander vitreus</i>)
5	Walleye Spawning	Unknown, partially within adjacent lands	Yes	N/A	<ul style="list-style-type: none"> • Walleye (<i>Sander vitreus</i>)

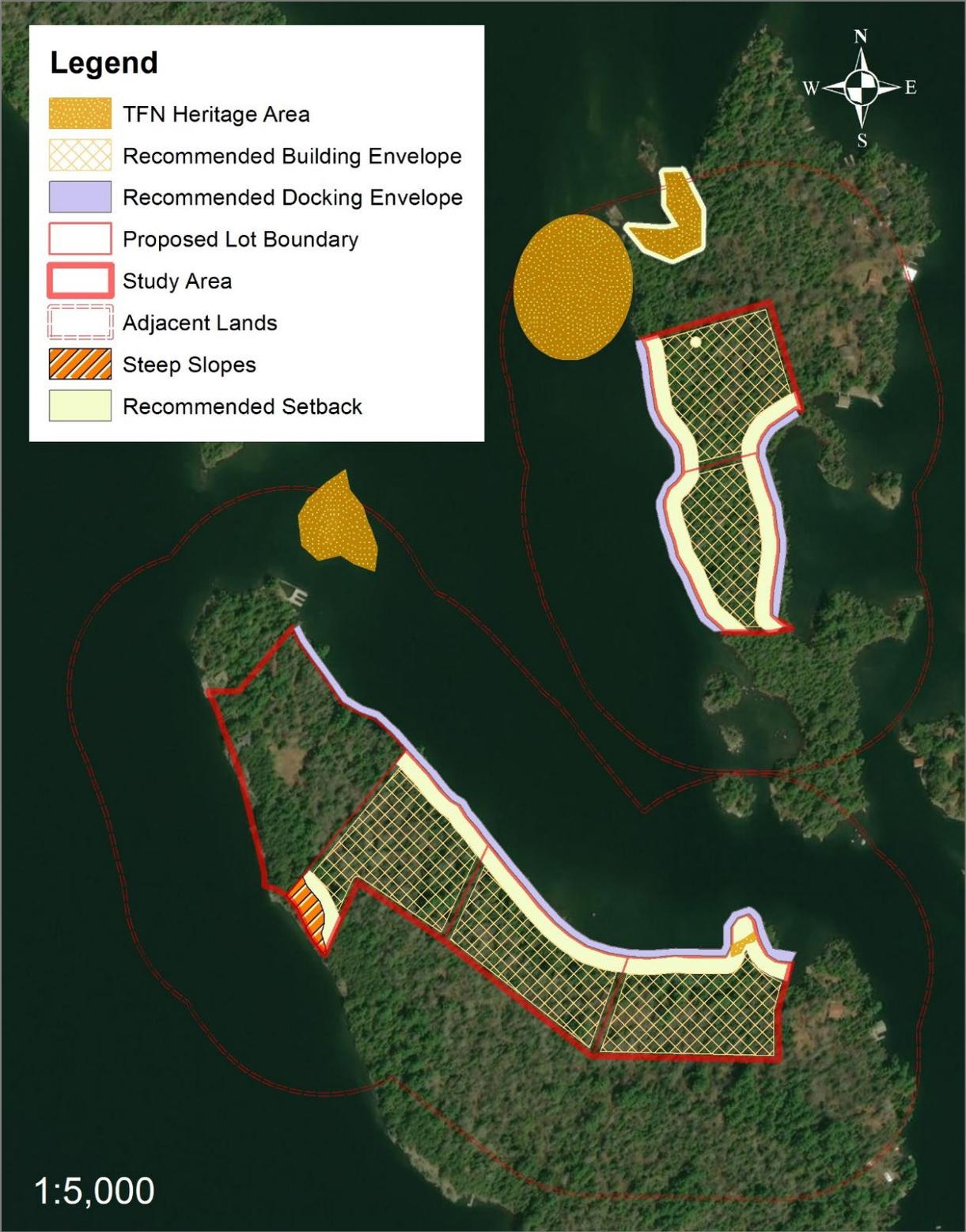


Figure 5: Confirmed features and the recommended setbacks, development envelopes, dock placement and proposed lot boundaries for Islands 992 and 970

9.0 Summary of Recommendations

The purpose of this EIS is to assess the suitability of development on Islands 992 and 970 from a natural heritage perspective. The natural heritage values identified and mitigation measures for the same outlined in this EIS will form the basis of a site plan for the subject lands. Although site plans are outside of the scope of this reporting, it is recommended that building envelopes, septic envelopes, and docking envelopes for each proposed lot respect the recommendations contained in this EIS to ensure that any potential impacts to values and features are avoided.

Based on background information, consultation, ecosite determinations, and site investigations the following overall mitigation measures are recommended:

1. All development should be setback a minimum of 15m from the shoreline with a naturally vegetated buffer retained
2. Where areas of steep shoreline have been identified, development should be setback a minimum of 30m from the shoreline with a naturally vegetated buffer retained in this area
3. All in-water work should occur from June 16th to August 31st of any given year for the protection of fish and fish habitat within Lake Temagami to avoid spring and fall fish spawning periods
4. Erosion and sediment controls to be employed during construction activities
5. Septic systems should be set back a minimum of 30m from the shoreline, outside of steep areas, and maintained regularly
6. Initial vegetation clearing is recommended to occur outside of the breeding bird and bat window; taking place from October 1 to March 31 of any given year
 - Site clearing and vegetation removal may be permitted on a small scale during the active season provided the site is 'swept' and confirmed clear of breeding birds and other wildlife by a qualified individual
 - Note that if a 'sweep' identifies the presence of breeding/active wildlife, that may result in adhering to the suggested timing
 - Once terrestrial site clearing and vegetation removal are completed, construction activities can proceed any time of the year
7. Delineation of setbacks prior to construction should be completed to ensure these areas are maintained
8. Temporary storage and excess materials used for construction should be managed such that they do not impact any recommended setbacks

10.0 Conclusion

In conclusion, the proposed consents on Islands 970 and 992 can proceed while minimizing or eliminating potential impacts to natural heritage features and functions on the subject lands. If the recommended mitigation measures are implemented, development within the study area will be consistent with relevant legislation as it relates to natural heritage features and areas.

Respectfully submitted,



Hannah Wolfram
Biologist

Appendix 1

Site Photos

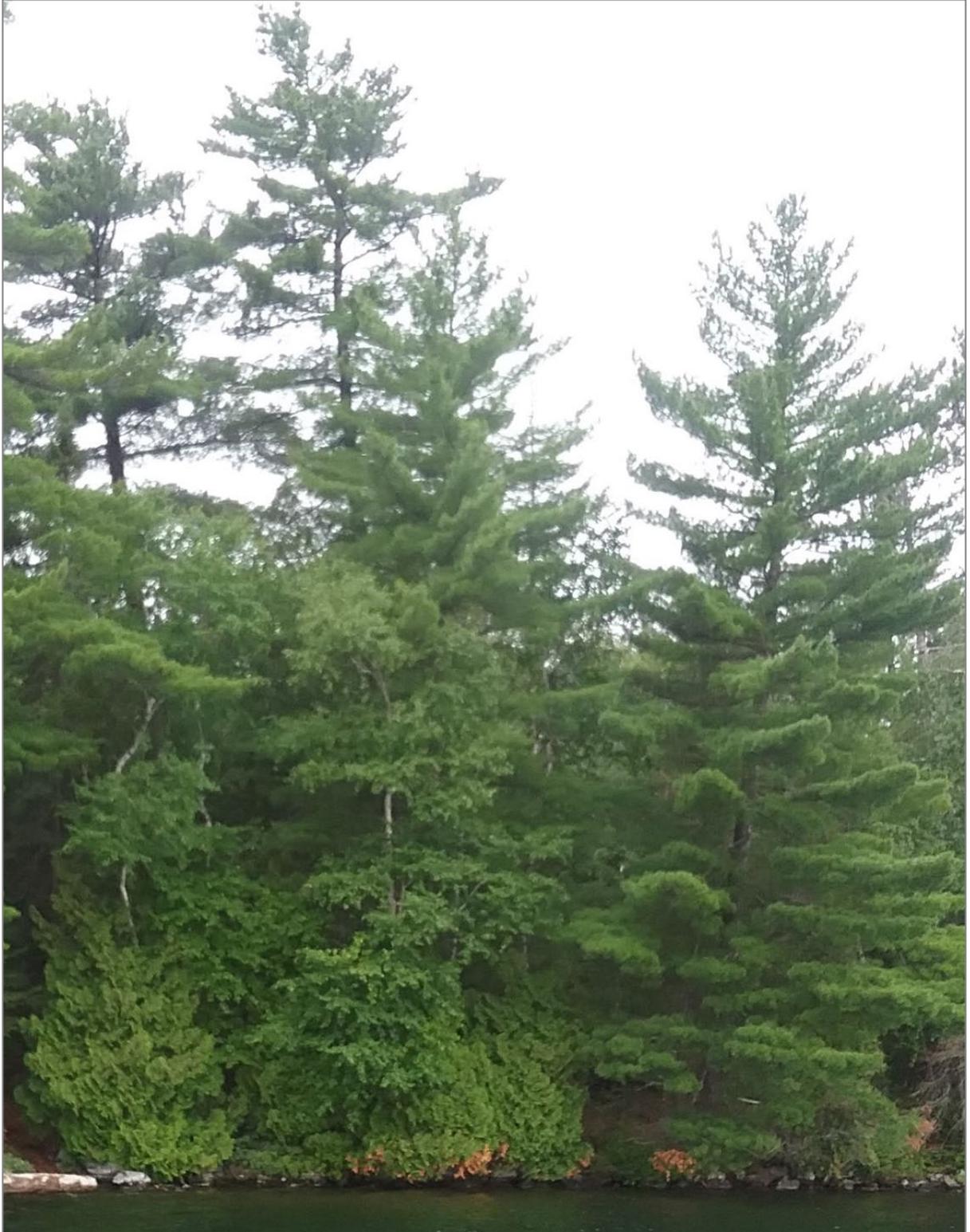


Photo 1: G103Tt: Fresh, Silty to Fine Loamy: Red Pine – White Pine Mixedwood



Photo 2: G101Tt: Fresh, Silty to Fine Loamy: Spruce-Fir Conifer



Photo 3: G015Tt Very Shallow, Dry to Fresh: Red Pine – White Pine Mixedwood

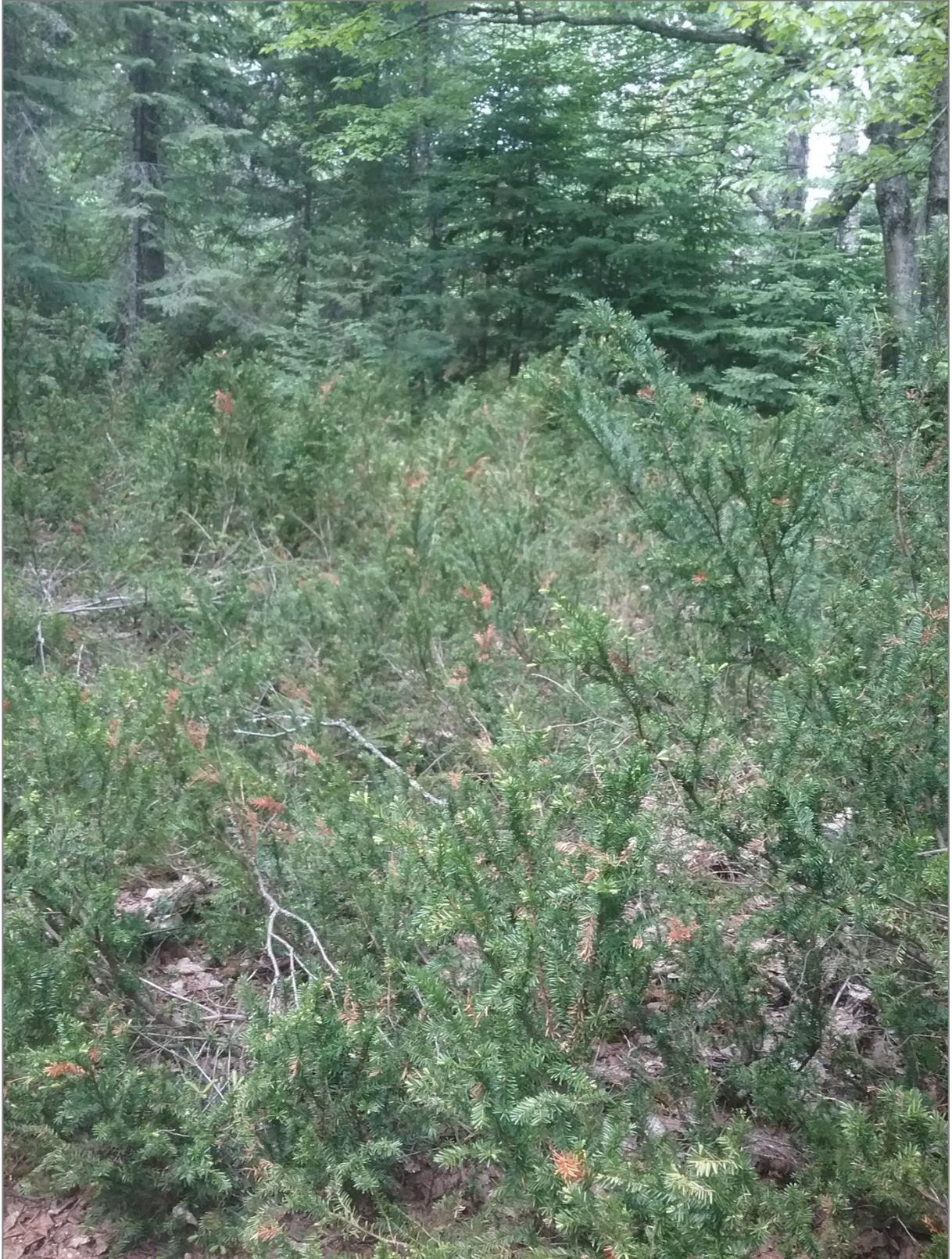


Photo 4: G116Tt Moist, Fine: Spruce – Fir Conifer



Photo 5: Representative photo of shoreline substrate



Photo 6: Canoe quality birch tree on Island 970

Appendix 2

Temagami First Nation (TFN) Consultation

Study Terms of Reference

Email Correspondence: Field Investigations with TFN

Email Correspondence: Draft EIS Feedback



Temagami First Nation
Bear Island, Lake Temagami, ON
P0H 1C0
sent via email

January 21, 2020

To Robin Koistinen,

Subject: Terms of Reference
Environmental Impact Study for the proposed consents located at:
130 Lake Temagami, Island 992
44 & 50 Lake Temagami, Island 970

FRi Ecological Services has been engaged to conduct an Environmental Impact Study (EIS) to identify and address the potential impacts of a proposed consent located on Island 992 and Island 970 (Figure 1). The work will be consistent with Section 2.1 of the Provincial Policy Statement (PPS 2014), the Municipality of Temagami's Official Plan (OP), and consider Temagami First Nation (TFN) potential heritage areas identified on TFN mapping and the Growth Plan for Northern Ontario (2011). The proposed EIS will identify values, impacts, and provide suitable mitigation associated with:

- a) Habitat of endangered and threatened species;
- b) Significant wetlands;
- c) Significant wildlife habitat;
- d) Significant areas of natural and scientific interest; and
- e) Fish habitat

This document will serve as the Terms of Reference (TOR) to assist in scoping the key values and the level of effort required in addressing the potential impacts to the natural heritage features and functions described above. The TOR will also serve to assist in scoping field investigations and reporting requirements for the study and pre-consultation summary. The following investigations are proposed for the subject property:

- Ecological Land Classification (ELC) of property and adjacent lands, where applicable
- Acoustic and ultrasonic monitoring of bird and potential bat species
- Species at Risk surveys and Significant Wildlife Habitat surveys where suitable habitat has been identified
- Fish habitat assessment and wetland boundary confirmation, where applicable

An initial pre-screening of the study area and adjacent lands has been completed to identify known features and functions. The pre-screening included a review of the MNRF SAR Tool

and the Natural Heritage Information Centre Database (NHIC) for observations of species at risk and potential natural heritage values.



Figure 1: Subject property location (inset) and overview map

Habitat of Endangered and Threatened Species

SAR Species with potential to be found in the geographic township have been included in Table 1, below.

Table 1. List of Potential Species at Risk

Species	Designation
Eastern Small-footed Myotis	Endangered
Little Brown Myotis	Endangered
Northern Myotis	Endangered
Tricolored Bat	Endangered
Bank Swallow	Threatened
Barn Swallow	Threatened
Chimney Swift	Threatened
Whip-poor-will	Threatened

It is expected that after the initial field investigations that some of the species-specific surveys, below, may not be applicable to the subject property due to lack of suitable habitat. The work plan will be adjusted accordingly. The standardized survey protocols proposed are outlined in Table 2.

Table 2. Standardized Survey Protocols

Survey Protocol	Species Covered
Technical Note Species at Risk (SAR) Bats – OMNRF June 2015 Leaf off cavity tree surveys and in-season acoustic/ultrasonic monitoring in suitable habitat	<ul style="list-style-type: none"> • All resident bat species • Chimney Swift roosts
Forest Bird Monitoring Program and passive acoustic monitoring	<ul style="list-style-type: none"> • All forest-dwelling songbirds
FRi Chimney Swift Natural Nests/Roosts – Habitat Use & Assessment Protocol (2014) and Ontario SwiftWatch Monitoring Protocol (2014)	<ul style="list-style-type: none"> • Chimney Swift

WETLANDS

Ecosite determination will describe and delineate any wetland areas, drainage patterns, and any non fish-bearing streams present on the subject lands.

SIGNIFICANT WILDLIFE HABITAT

Significant wildlife habitat will be considered during field investigations, including seasonal concentration areas, rare vegetation communities and specialized habitat for wildlife, habitat of species of conservation concern, animal movement corridors, and Traditional Ecological Knowledge (TEK). These investigations will be guided by the Significant Wildlife Habitat Technical Guide, Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E, and High Potential Heritage Area mapping provided by the Temagami First Nation (2018), found in Appendix A. Habitat for species at risk designated ‘special concern’ is regarded as significant wildlife habitat and there is potential for the following species of special concern: Bald Eagle, Canada Warbler, Common Nighthawk, Eastern Wood Pewee, Monarch, Olive-sided Flycatcher, Peregrine Falcon, Snapping turtle, Wood Thrush, Yellow-banded Bumble Bee. There is a record of snapping turtle on or within 1 km of the property according to the Natural Heritage Information Centre (NHIC) database.

AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSI)

There are no known Areas of Natural and Scientific Interest (ANSI) on or within 120m of the subject property.

FISH HABITAT

Field investigations will describe any critical fish habitat on and within the adjacent area of the subject property. The subsequent reporting will include mapping, address potential impacts, provide mitigation recommendations, and identify suitable dock locations located outside of areas of critical fish habitat.

WORK PLAN

The following Work Plan is proposed to achieve the desired results and adequately address the identified issues and meet the requirements of the PPS, *Endangered Species Act* and the OP, as follows:

Table 3. Proposed Work Plan

Timing	Description
January - March 2020	<ul style="list-style-type: none"> • Background information gathering; agency consultation; consolidation of available information and pre-field mapping • Temagami First Nation consultation and request for input • Leaf-off field investigations including cavity tree surveys (bats, Chimney Swift)
May 2020	<ul style="list-style-type: none"> • ELC (habitat) determination; early spring habitat investigations • Deploy passive acoustic monitors for birds and bats • Terrestrial habitat assessment for species at risk
June 2020	<ul style="list-style-type: none"> • Reptile nesting surveys • Fish habitat assessment, confirmation of ecosites and potential natural heritage areas, TFN accompaniment • Identification of suitable dock and septic system envelopes
June/July 2020	<ul style="list-style-type: none"> • Retrieve acoustic monitors and analyze recordings • Evening bat surveys and monitoring (if required); <i>(to be determined following cavity/snag surveys and passive acoustic monitoring analysis)</i>

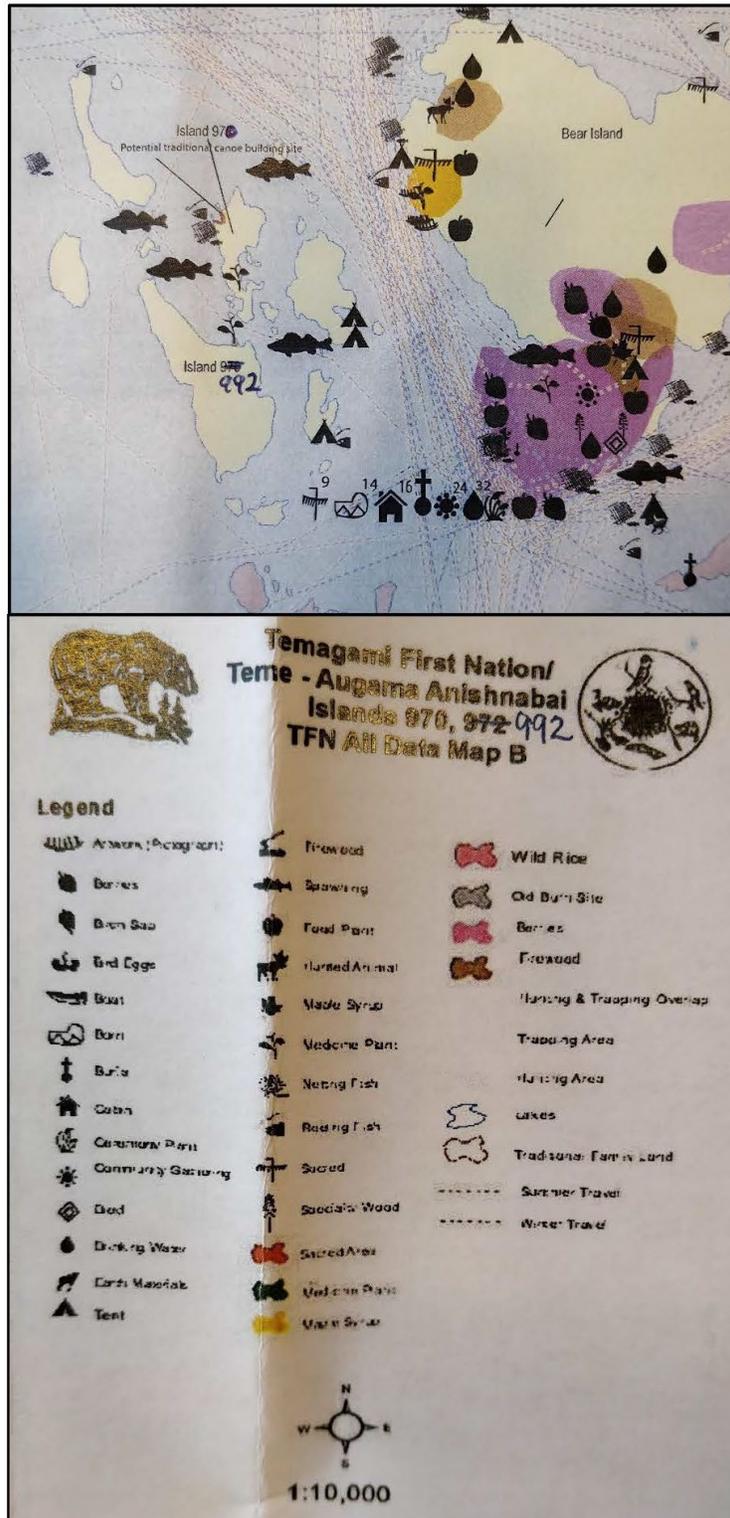
We invite you to share any other known natural heritage features, functions, or values with potential to be found on or within 120m of the study area (as shown in Figure 1) that are not included in the terms above. Based on your response, the timing and intensity of the field investigations will be further developed to ensure that the resulting Environmental Impact Study is comprehensive and accurate. If you require any further clarification regarding the study, please feel free to contact me at your convenience.

Respectfully Submitted,



Hannah Wolfram
Biologist

APPENDIX A: High Potential Heritage Area Mapping – Temagami First Nation (2018)



From: [Meghan Pilon, Natural Resources Technician](#)
To: [Hannah Wolfram](#)
Subject: RE: Lake Temagami EIS - Islands 992 & 970
Date: Friday, June 19, 2020 5:27:51 AM
Attachments: [image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)

Hannah,

Thank you for the background document and accommodating our schedule. We look forward to working with you on this Environmental Impact Study.

Have a Great weekend!

Meghan Pilon

Natural Resource Technician

resourcetech@temagamifirstnation.ca

P 705-237-8943 ext. 213

F 705-237-8959

TF 1-888-737-9884

TFN Band Office, General Delivery

Bear Island, Lake Temagami, ON P0H 1C0 | www.temagamifirstnation.ca



Temagami First Nation



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From: Hannah Wolfram <hannah.wolfram@fricorp.com>

Sent: June 18, 2020 11:18 AM

To: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>;

Alexandra Clarke <techassistant2@temagamifirstnation.ca>

Cc: Robin Koistinen <robin.koistinen@temagamifirstnation.ca>

Subject: RE: Lake Temagami EIS - Islands 992 & 970

Hi Meghan and Alex,

Thank you for your interest in the Environmental Impact Study for Islands 992 and 970 in Lake Temagami.

I have included a map and some background to give you a better idea of what we had proposed for the site(s) in the attached version of the terms of reference. I have tentatively scheduled field investigations for June 30th as per your availability below; however, it may be prudent for us to also establish a rain date for the week following in the event of thunderstorms.

I will be in touch closer to the 30th to discuss logistics and timing.

Looking forward to working with you on this!

Thanks,

Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRI Ecological Services
Tel: 705-476-0085 / Fax: 705-476-5631
1875A Seymour Street, North Bay, Ontario P1A 0C7
<http://fricorp.com>

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From: Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Sent: Wednesday, June 17, 2020 3:31 PM
To: Hannah Wolfram (FRI) <hannah.wolfram@fricorp.com>
Subject: FW: Lake Temagami EIS - Islands 992 & 970

Hi Hannah

Please see info below. Please contact Meghan Pilon directly about arrangements.

Thank you,

Robin Koistinen
Lands & Resources Director
Temagami First Nation
(705) 237-8600 Ext. 204
TF 1-888-737-9884
General Delivery

Bear Island, Lake Temagami, ON P0H 1C0 | www.temagamifirstnation.ca



Temagami First Nation



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From: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Sent: June 17, 2020 11:45 AM
To: Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Alexandra Clarke <techassistant2@temagamifirstnation.ca>
Subject: RE: Lake Temagami EIS - Islands 992 & 970

Hi Robin,

Alex and I would be available to assist with conducting the Environmental Inventory Study June 29 & 30th.

From: Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Sent: June 15, 2020 5:43 PM
To: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>
Cc: Hannah Wolfram (FRI) <hannah.wolfram@fricorp.com>
Subject: FW: Lake Temagami EIS - Islands 992 & 970

Good afternoon:

I think this would be great experience for you, they will be conducting an Environment Inventory Study. Please review your schedules and determine protocols that should be in place for the activity as it relates to COVID. I had provided the attached document to Meghan. Meghan, please rework the document so that it can apply as a TFN protocol for field work during the Covid...

Let me know what dates work best for you guys during that week.

Thank you,

Robin Koistinen
Lands & Resources Director

Temagami First Nation
(705) 237-8600 Ext. 204
TF 1-888-737-9884
General Delivery
Bear Island, Lake Temagami, ON P0H 1C0 | www.temagamifirstnation.ca



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From: Hannah Wolfram <hannah.wolfram@fricorp.com>
Sent: June 11, 2020 3:06 PM
To: Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: 'Karen Beauchamp' <karen@clearwaterplanning.ca>
Subject: RE: Lake Temagami EIS - Islands 992 & 970

Hi Robin,

I hope this email finds you well. As per our correspondence in early February, I wanted to follow up on the participation of TFN students in our field work for the EIS on Islands 992 and 970. I know you had mentioned that there may potentially be 2 or 3 students that would be well-suited with a strong interest in both the fisheries and natural heritage aspects of the EIS. I have tentatively scheduled the work to occur the week of June 30th to July 4th, however there is flexibility in the timing and we can work to accommodate any protocols and procedures that may be in place as well.

If you could pass along your thoughts on the potential dates, we can figure out next steps from there. Feel free to give me a call at the office if that's easier.

Much thanks,
Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRi Ecological Services
Tel: 705-476-0085 / Fax: 705-476-5631
1875A Seymour Street, North Bay, Ontario P1A 0C7
<http://fricorp.com>

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From: Hannah Wolfram <hannah.wolfram@fricorp.com>
Sent: Friday, February 07, 2020 9:30 AM
To: 'Robin Koistinen' <robin.koistinen@temagamifirstnation.ca>
Cc: 'Karen Beauchamp' <karen@clearwaterplanning.ca>
Subject: Lake Temagami EIS - Islands 992 & 970

Hi Robin,

It was great talking with you earlier this week thank you for taking the time to discuss the proposed approach for the EIS.

Your feedback and input on the project is valued and I just wanted to provide you with an update that the entirety of the lands (proposed retained and severed on both Islands) will be included in our field investigations as well as impact reporting and assessment.

We look forward to working with TFN in the upcoming field season and I will be in touch with you to coordinate our site visits.

Thank you,
Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRi Ecological Services
Tel: 705-476-0085 / Fax: 705-476-5631
1875A Seymour Street, North Bay, Ontario P1A 0C7
<http://fricorp.com>

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From: Victoria Winsor <landstech@temagamifirstnation.ca>
Sent: Tuesday, November 10, 2020 2:05 PM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Hannah,

That is the correct tree in the photo you have sent. I can confirm that to the best of my knowledge, the location is correct.

Wonderful work, thank you!
Victoria

From: Hannah Wolfram <hannah.wolfram@fricorp.com>
Sent: November 10, 2020 2:00 PM
To: Victoria Winsor <landstech@temagamifirstnation.ca>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Victoria,

Thank you for sending that over – I was able to use the time stamp of your photo (1:00:22pm on July 20, 2020) to narrow down the photos we have on file and was able to find a shot of the tree in our records (see attached – [taken at 12:59:07pm on July 20, 2020](#)). I then used the georeferenced photo to plot the location on the map ([attached](#)). Would you be able to confirm that this is the location of [the tree](#)?

Thanks,
Hannah

From: Victoria Winsor <landstech@temagamifirstnation.ca>
Sent: Tuesday, November 10, 2020 1:39 PM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Hannah,

I was able to find a photo I took of the tree, and have attached it. It is possible that it was on Island 970. To provide a size scale, I believe the tree would be around 20cmDBH, perhaps slightly larger.

Thanks,
Victoria

From: Hannah Wolfram <hannah.wolfram@fricorp.com>
Sent: November 10, 2020 1:22 PM
To: Victoria Winsor <landstech@temagamifirstnation.ca>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Victoria,

These were the only tree specimens that I have photos of in detail with vertical scars – could it be any of these? I do not have any photos of any white birch but photo 123956 was taken of a yellow birch.

Island 992 does not have any existing trails present on it but Island 970 does; could it be possible the tree was observed on Island 970?

Thanks,
Hannah

From: Victoria Winsor <landstech@temagamifirstnation.ca>
Sent: Tuesday, November 10, 2020 1:00 PM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Hannah,

One more thing – there was a vertical scar on the tree.

Thanks,
Victoria

From: Hannah Wolfram <hannah.wolfram@fricorp.com>
Sent: November 10, 2020 12:35 PM
To: Victoria Winsor <landstech@temagamifirstnation.ca>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Victoria,

Do you recall if the tree was on Island 970 or 992? Do you remember any distinctive features about the tree?

If I were to send you some photos do you think you would recognize the specific tree if it were contained in one of the shots?

Regards,
Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRi Ecological Services
Tel: 705-476-0085
1875A Seymour Street, North Bay, Ontario P1A 0C7
<http://fricorp.com>

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From: Victoria Winsor <landstech@temagamifirstnation.ca>
Sent: Thursday, November 05, 2020 11:28 AM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; 'Nancy Reid' <reid@utstat.utoronto.ca>
Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Hannah,

Unfortunately I had a technical error out in the field, so my approximation of where the tree is cannot be exact. I did not successfully record coordinates for this tree. I recall that the large white birch was around the north end of the island, on the south side of the trail. Unfortunately that is the full extent of my information.

Apologies for the lack of complete information – feel free to call or email with any further concerns.

Victoria Winsor

GIS Technician

landstech@temagamifirstnation.ca

P 705-237-8943 Ext 210

F 705-237-8959

TF 1-888-737-9884

TFN Band Office, General Delivery

Bear Island, Lake Temagami, ON P0H 1C0 | www.temagamifirstnation.ca



Temagami First Nation



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From: Hannah Wolfram <hannah.wolfram@fricorp.com>

Sent: November 5, 2020 11:09 AM

To: Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>

Cc: Meghan Pilon, Natural Resources Technician <resourcetechnician@temagamifirstnation.ca>; 'Nancy Reid' <reid@utstat.utoronto.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>

Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Alexandra,

Thank you for keeping us updated.

I know you had noted that you would like to have the tree left as is and remain standing and a birth left around it; however, without any details about the size or species, I don't have enough information to make an appropriate or suitable recommendation to preserve it. Was the location of the point correct in the map I had sent over? If so, I can use the location provided and have it reflected in the reporting and mapping once I receive confirmation from you.

If you have any other recommendations about how you would like to see this value addressed or how we can move forward on this, please let me know.

Thanks,
Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRI Ecological Services
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From: Alexandra Clarke <techassistant2@temagamifirstnation.ca>
Sent: Wednesday, November 04, 2020 10:23 AM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetechn@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>
Subject: Re: Island 990 and 992 - Temagami EIS (Reid)

Good Morning Hannah,

Yes the medicinal information is fine to include, it is readily available publicly.

That is the location information I received from a colleague, we have discussed it further and no one is sure where the birch was exactly. Unfortunately, we were not able to look for it yesterday as the weather conditions required that we return for safety reasons. I do not foresee another opportunity in the near future where we could visit the island.

Alexandra Clarke

Climate Change Team

techassistant2@temagamifirstnation.ca

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From: Hannah Wolfram <hannah.wolfram@fricorp.com>

Sent: Thursday, October 29, 2020 11:53 AM

To: Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>

Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>

Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Alexandra,

Thank you for the quick reply and for the medicinal descriptions, I will include your notes in the EIS if you feel it would be appropriate.

I've attached a map of the UTM coordinates that you've provided for the birch tree (green point on map) – could you please confirm this is correct location of the tree in question? It appears to be within the 120m adjacent lands off site and nearly 110m away from the property boundary - not an area that we visited while in the field. Perhaps your colleagues that were present with us could also weigh in on this?

Thanks,

Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

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From: Alexandra Clarke <techassistant2@temagamifirstnation.ca>
Sent: Thursday, October 29, 2020 10:37 AM
To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>
Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>
Subject: Re: Island 990 and 992 - Temagami EIS (Reid)

Good morning Hannah,

Yes I left a message the other week and spoke to one of your coworkers regarding your request.

We do not have the exact location of the canoe quality birch, it is **approximately 568,897E 5,202,936N in UTM**. Unfortunately, I was not able to get out to the location this week to confirm the exact location as unforeseen circumstances arose.

We would like to have the tree left as is and remain standing and a birth left around it. Perhaps you have some suggestions as to what would be a recommended birth around the tree - however I would suggest it be sufficient as that the tree would not need to be regularly pruned or interfere with hydro lines, line of sight to cell towers etc. if applicable.

In regards to the medicinal plants you have inquired about, I will not be able to provide very detailed information as it is Indigenous Knowledge and not my place, however I can give a brief description which I hope you find helpful:

Labrador Tea - sore throats, coughs, congestions, weight management. It is often consumed

regularly and has a very mild flavour (similar to chamomile).
Wintergreen - often used as an astringent or antiseptic.
Lowbush Blueberry - Immunity boosting.

Alexandra Clarke

Climate Change Team

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From: Hannah Wolfram <hannah.wolfram@fricorp.com>

Sent: Wednesday, October 14, 2020 8:44 AM

To: Alexandra Clarke <techassistant2@temagamifirstnation.ca>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>

Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>

Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Hi Alexandra,

Thank you. I've had a chance to consider your response and I am hoping that you'll be able to provide me with a bit more information on your comments so we can determine the best mitigation measures and path forward.

- With respect to comment #2:
 - could you or your colleagues who were on site provide us with the approximate location, which island, and type of birch tree (white, yellow) to cross reference with our records? If you could provide a map with the location of the tree that would be very helpful.
 - Would you happen to know the approximate diameter at breast height? Is this tree on the property or adjacent lands?
 - **How does TFN wish to see this value protected?**
- Would you be able to provide a description of the medicinal properties and uses by TFN of the plants identified by the elder (Labrador Tea, Wintergreen, Lowbush Blueberry) for inclusion in our reporting?
- Walleye spawning typically occurs in the early spring during the night so any anticipated increase in boat traffic is very unlikely to impact spawning activities of the species. Additionally, there is an in-water work timing restriction (that includes dock construction) from September 1 to June 15 of any given year that will further protect all fish species in the lake. I have added this in the reporting as well as specified the restrictions that apply to *terrestrial* clearing
- I have numbered the recommendations
- A detailed site plan will be underway shortly for the property

Kind regards,

Hannah



Hannah Wolfram / Biologist
hannah.wolfram@fricorp.com

FRi Ecological Services

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From: Alexandra Clarke <techassistant2@temagamifirstnation.ca>

Sent: Wednesday, October 07, 2020 12:15 PM

To: Hannah Wolfram <hannah.wolfram@fricorp.com>; Robin Koistinen <robin.koistinen@temagamifirstnation.ca>

Cc: Meghan Pilon, Natural Resources Technician <resourcetech@temagamifirstnation.ca>; Victoria Winsor <landstech@temagamifirstnation.ca>

Subject: RE: Island 990 and 992 - Temagami EIS (Reid)

Good Morning Hannah,

Below are our comments regarding the **Draft Environmental Impact Study 130 Lake Temagami, Island 992, 44 & 55 Lake Temagami, Island 970.**

1. The inclusion of Figure 4 is acceptable.
2. There was a canoe quality birch tree observed on site and discussed by the elder on one of the islands that was not noted in the report. These are rare finds and have a high cultural value. This value should be noted and preserved.
3. **“Figure 5: Confirmed features and the recommended setbacks, development envelopes, dock placement and proposed lot boundaries for Islands 992 and 970”** is not sufficiently detailed.

REQUESTS:

We request a more detailed and specific map that depicts and considers the following:

Specific structure locations, including but not limited to: dwelling, septic tank, dock.

Ideal Class IV Septic system location is highly important so that the best site for the septic is not occupied by the dwelling or other. Please include a map that clearly indicates the most ideal location for the septic systems. The current map is too broad and non-specific.

Specific dock locations are also important. There was no assessment noted regarding the future impact on fish spawning locations of the anticipated increased rate of aquatic traffic or human activity associated with the development.

I have noted that in section 9.0 Summary of Recommendations, this would be easier to navigate if numbers are used as opposed to bullets, the point regarding “once site clearing and vegetation removal are completed, construction activities can proceed any time of the year” that this could be clarified to indicate on land construction and not include in water work of ex. Docks to respect timing windows of nearby spawning fish.

Looking forward to hearing back from you.

Regards,

Alexandra

FRI Ecological Services Note:

The scope and reporting of this EIS identified constraint areas (features including recommended setbacks) within the subject lands based on our studies and current natural heritage legislation and policy documents.

FRI Ecological Services recommends that construction can proceed while minimizing negative impacts to any natural heritage features where development is located outside of constraint areas. **A detailed site plan for each lot identifying building, septic, and dock envelopes will be undertaken following the completion of this reporting, respecting the recommendations and constraint areas as discussed in this EIS.**