

## 5. Little Pic

### HEALTHY WATERS REPORT CARD

OFFSHORE	NA	ISLANDS	A
NEARSHORE	C	COASTAL WETLANDS	B
EMBAYMENTS & INSHORE	B	COASTAL TERRESTRIAL	A+
TRIBUTARIES & WATERSHEDS	B	<b>OVERALL B</b>	

Report card denotes general condition/health of each biodiversity target in the region based on condition/stress indices. See introduction to the regional summaries.



<b>A</b> Very Good	<i>Ecologically desirable status; requires little intervention for maintenance</i>
<b>B</b> Good	<i>Within acceptable range of variation; may require some intervention for maintenance.</i>
<b>C</b> Fair	<i>Outside of the range of acceptable variation and requires management. If unchecked, the biodiversity target may be vulnerable to serious degradation.</i>
<b>D</b> Poor	<i>Allowing the biodiversity target to remain in this condition for an extended period will make restoration or preventing extirpation practically impossible.</i>
<b>Unknown</b>	<i>Insufficient information.</i>



Woodland caribou inhabit the islands of Slate Island Provincial Park. Photo credit: Township of Schreiber & Township of Terrace Bay [www.terracebayschreiber.ca](http://www.terracebayschreiber.ca)

### Summary/ Description

The Little Pic regional unit is located on the northern Lake Superior shore. This regional unit extends from near the community of Schreiber in the west, to between Marathon and the Pic River in the east. This regional unit also contains the Slate Islands, which are designated as a provincial park. The Little Pic regional unit is 4,811.5 km<sup>2</sup> in size, including the associated nearshore waters. Communities in this regional unit include Marathon, Terrace Bay, Schreiber, Pays Plat First Nation and Rosspoint. The Little Pic regional unit contains one tertiary watershed, Little Pic, and eight quaternary watersheds. The watersheds in this unit are characterized by forests, primarily within provincial Crown Lands. The coast is dominated by rocky shores and cliffs and cobble beaches with scattered sandy beaches in sheltered coves. Coastal wetlands are very rare. Almost one-third of the coast is in protected areas.

**TABLE 5.1: Little Pic BY THE NUMBERS**

<b>Land and Water Cover</b>	<b>Region (km<sup>2</sup>)</b>	<b>Region %</b>	<b>Lake Superior Total (km<sup>2</sup>)</b>	<b>Notes</b>
Agriculture	4.36	0.08	1,441.07	
Developed	0.06	0.00	389.55	
Forest	4,632.13	86.67	107,747.13	
Associated Nearshore Waters	288.04	5.39	17,868.03	
Other	168.95	3.16	8,227.57	
Water (inland)	251.23	4.70	9,473.05	
<b>Total Area</b>	<b>5,344.77</b>	<b>100</b>	<b>145,146.40</b>	
<b>Coastal Features</b>	<b>Region</b>	<b>Region %</b>	<b>% of Lake Superior Total for Coastal Feature</b>	
Coastline (km)	416.66	NA	7.15	Based on SOLEC shoreline
Sand Beaches (km)	29.52	7.08	4.59*	*% of Lake Superior Total Sand Beaches
Coastal Wetlands ( km <sup>2</sup> )	1.02	0.27*	0.09 **	*% of Regional Coastal Area ** % of Lake Superior Total Coastal Wetlands
Natural Cover in Coastal Zone	351.32	93.78*	5.69**	*% of Regional Coastal Area ** % of Lake Superior Total Natural Cover in Coastal Area
Number of Islands	317	NA	12.0	
<b>Condition</b>	<b>Region</b>	<b>Region %</b>	<b>% of Lake Superior Total</b>	
Population Density (persons/km <sup>2</sup> )	0.75	NA		
Road Density (km/km <sup>2</sup> )	0.11	NA		
Number of Dams and Barriers	305	NA	1.3	
Artificial Shoreline (km)	3.03	0.73	1.33	
<b>Land Ownership &amp; Protection</b>	<b>Region (km<sup>2</sup>)</b>	<b>Region %</b>	<b>Regional Area (km<sup>2</sup>)</b>	
Private	124.95	2.47	5,056.74	Regional area based on landmass
Public/Crown	4,398.54	86.98	5,056.74	
Tribes/ First Nations	2.11	0.04	5,056.74	
Parks & Protected Areas (total)	531.14	10.50	5,056.74	
Parks & Protected Areas (coast)	108.50	28.96*	374.62**	*% of Regional Coastal Area **Regional Coastal Area (km <sup>2</sup> )

## Important Biodiversity Features

### Nearshore and Inshore Waters

- The Little Pic regional unit contains a number of sites of Important Habitat for Lake Trout and Lake Whitefish; these Important Habitat Sites are found in many areas along the coast (Lake Superior Binational Program Habitat Committee 2006). The Lake Trout Important Habitat Sites are also located around the Slate Islands (Lake Superior Binational Program Habitat Committee 2006) (Figure 5.1).

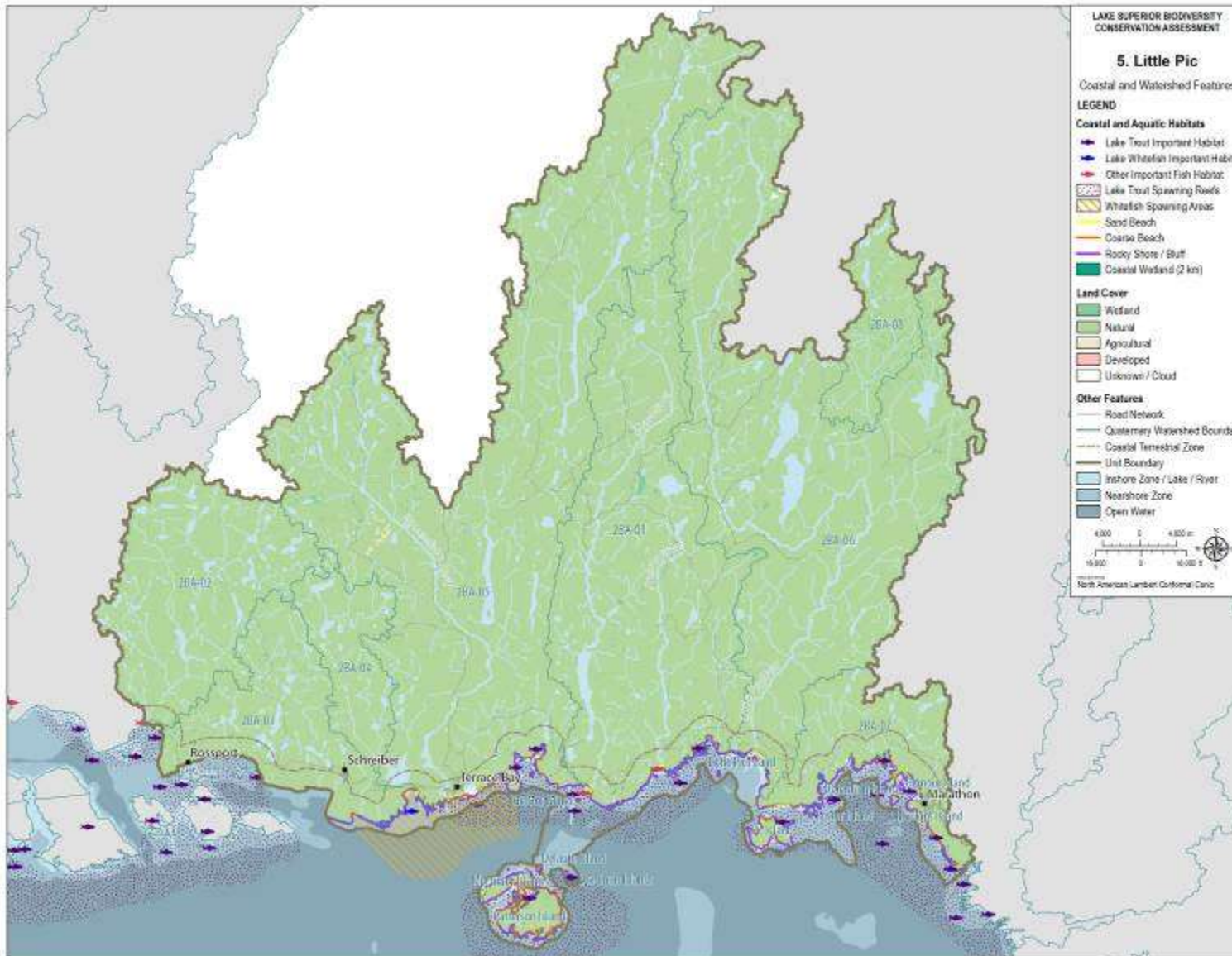
**Coastal Zone and Islands**

- Areas identified as Important Habitat Areas are found in this regional unit, including around the Slate Islands, Neys Provincial Park and Steel River Provincial Park. Several Important Habitat Sites are also found in the White Pic region (Lake Superior Binational Program Habitat Committee 2006) (Table 5.3, Figure 5.3).
- Craig's Pit Provincial Nature Reserve is an important migratory bird observation area, and contains bluffs and kettle holes. This area also contains examples of landform processes and themes which are environmental indicators from the Lake Minong stage and later (OMNR 2006I).

**Tributaries and Watersheds**

- Historically 21 tributaries in Lake Superior had Lake Sturgeon spawning runs (Lake Superior Lake Sturgeon Work Group 2012, unpublished data). One of these historical spawning tributaries, the Prairie River, is in the Little Pic regional unit. The population status in this river is considered extirpated (Golder Associates Ltd. 2011). However a 2011 lakewide juvenile Lake Sturgeon survey captured sturgeon off the Prairie River. The natal source of these fish is under investigation (Lake Superior Lake Sturgeon Work Group 2012, unpublished data).

Figure 5.1: Little Pic - Coastal and Watershed Features



**TABLE 5.2: Little Pic CONDITION AND TRENDS**

Target (Data Source)	Condition	Trends
Offshore <sup>1</sup>	NA	NA
Nearshore <sup>1</sup>	C (0.52)	Unknown
Embayments and Inshore <sup>1,2</sup>	B (0.62)	Unknown
Coastal Wetlands <sup>2,3</sup>	B (0.742)	Unknown
Islands <sup>4</sup>	A	Unknown
Coastal Terrestrial <sup>3</sup>	A+ (0.996)	Unknown
Tributaries and Watersheds <sup>2</sup>	B (0.71)	Unknown

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<b>B: Good</b>	<i>Within acceptable range of variation; may require some intervention for maintenance.</i>
<b>C: Fair</b>	<i>Outside of the range of acceptable variation and requires management. If unchecked, the biodiversity target may be vulnerable to serious degradation.</i>
<b>D: Poor</b>	<i>Allowing the biodiversity target to remain in this condition for an extended period will make restoration or preventing extirpation practically impossible.</i>
<b>Unknown</b>	<i>Insufficient information.</i>

1: Great Lakes Cumulative Stress (GLEAM 2012, Allan et al. 2013)

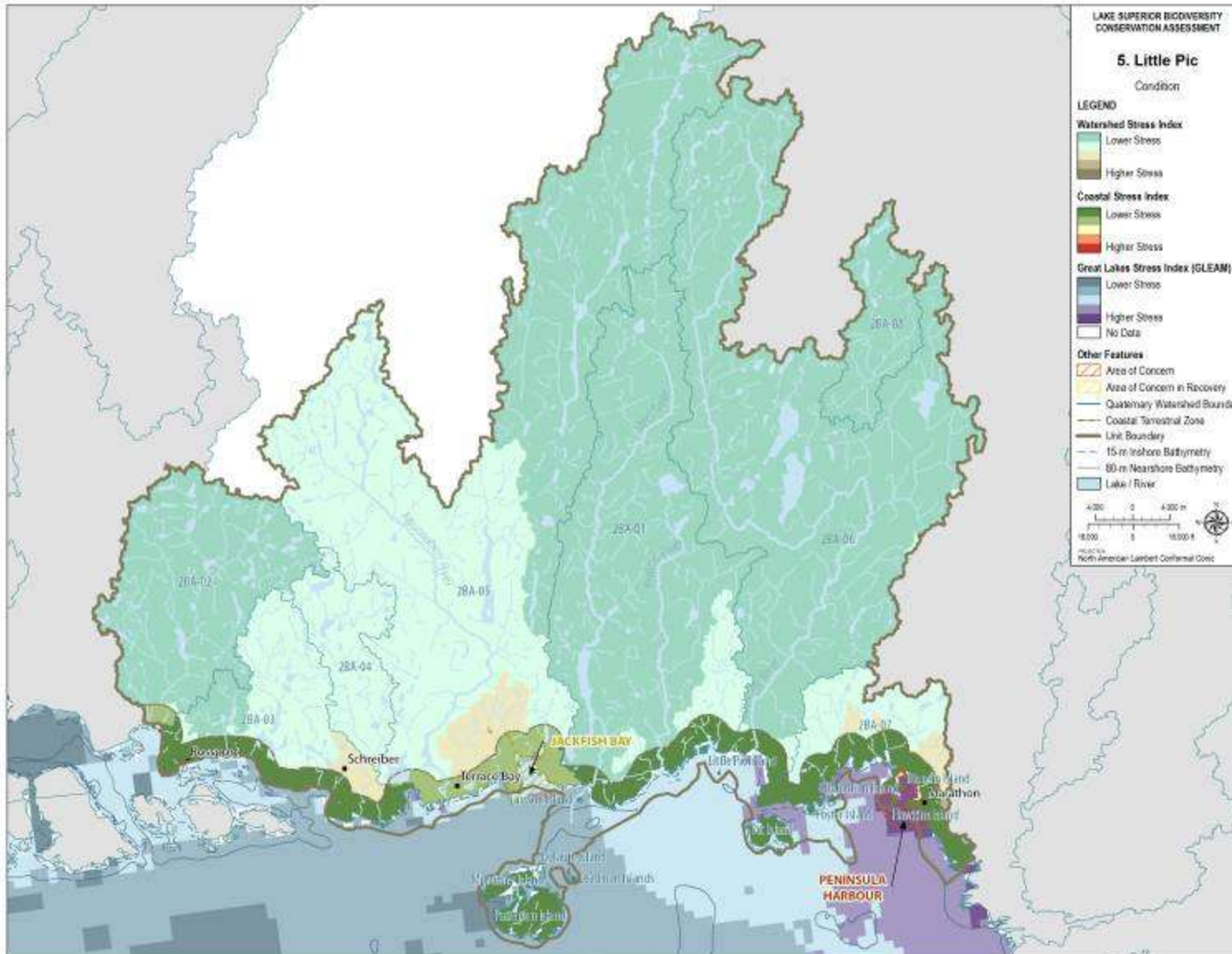
2: Watershed Stress Index (GLEI 2013)

3: Coastal Condition Index (developed for this report)

4 : Island Condition Score (Henson et al. 2010)



Figure 5.2: Little Pic - Condition



## Important Issues & Threats

- The Peninsula Harbour Area of Concern (AOC) is located in the Little Pic regional unit (Figure 5.2). Seven Beneficial Use Impairments (BUIs) were identified as impaired or requiring further assessment in the Peninsula Harbour AOC (Peninsula Harbour Remedial Action Plan Team 1991). In 2012 a layer of clean sand was placed on top of the most contaminated sediment in Jellicoe Cove. This process is called thin-layer capping, and it addresses several BUIs by creating clean fish habitat, stopping contaminated sediment from spreading, and reduces risk for fish, as well as other species, including humans (Environment Canada 2014a). Regulations implemented in the 1990s for the pulp and paper industry and sewage treatment plants also improved local water quality. All necessary actions to restore water quality and ecosystem health have been completed as of August 2012, and a monitoring plan is in place for the sediment remediation project. The Peninsula Harbour AOC will be delisted or designated an AOC in Recovery by 2019, based on the monitoring results (Environment Canada 2014a).
- The Jackfish Bay Area of Concern (AOC) was officially re-designated as an AOC in Recovery in May 2011 (Environment Canada 2014b). This AOC in Recovery is located in the Little Pic regional unit, near Terrace Bay (Figure 5.2). A pulp and paper mill contributed to degraded water quality, sediment, fish and fish habitat, among other impairments. Overfishing and the impacts of sea lamprey also reduced Lake Trout populations (Environment Canada 2014b). Eight beneficial use impairments (BUIs) were identified as impaired or requiring further assessment in the Jackfish Bay AOC (Jackfish Bay Remedial Action Plan Team 1998). Once environmental monitoring indicates that the five remaining BUIs have been restored, Jackfish Bay AOC in Recovery will be delisted (Environment Canada 2014b).
- In 2014 the Stillwater Mining Company announced that subsidiary Stillwater Canada Inc would reduce activities associated with the Marathon Platinum Group Metals-Copper Project near the north shore of Lake Superior, approximately 10 kilometres north of the community of Marathon Ontario. Future development will be contingent on an improved economic return from the project, and the results of limited exploration activities undertaken in 2014. An Environmental Assessment had previously been submitted, however the permitting process was suspended prior to the September 2014 announcement. Stillwater Mining Company has stated that Stillwater Canada Inc will maintain tenure of the project, look for opportunities to realize value from the project and maintain existing relationships with local aboriginal communities and municipalities (Stillwater Mining Company 2014).
- The Coldwell Wind Energy Project is a 66 wind turbine project in development (Brookfield Renewable Energy Partners L.P. 2013) approximately 20 kilometres northwest of Marathon, Ontario, near Neys Provincial Park and Red Sucker Point Provincial Nature Reserve (Brookfield Renewable Power Inc. No date).
- The Lower Lake Hydroelectric Project is a 10 MW hydroelectric project in development near Terrace Bay (Brookfield Renewable Energy Partners L.P. 2013).
- There is currently approximately 4,500 acres for sale on the Lake Superior coast, near Terrace Bay.

## Conservation In Action

### Parks & Protected Areas

- The Lake Superior National Marine Conservation Area (LSNMCA) of Canada includes a significant portion of the nearshore and inshore waters associated with the Little Pic regional unit, as well as some coastal lands (Parks Canada 2009). National Marine Conservation Areas protect and conserve representative marine areas for the benefit, education and enjoyment of the people of Canada and

## ***Lake Superior Biodiversity Conservation Assessment - Volume 2: Regional Unit Summaries***

the world. By law, each national marine conservation area must contain at least one zone that fosters and encourages the ecologically sustainable use of aquatic resources and at least one zone that fully protects special features or sensitive elements of ecosystems. Currently, the Lake Superior NMCA has proposed two zones that offer some protection for the Gunilda shipwreck (Nipigon and Jackpine regional unit), and Gapen's Pool Brook Trout Spawning Area (Nipigon and Jackpine regional unit) (C. Vis, pers. comm., December 18 2014).

- The LSNMCA extends beyond the nearshore water boundary associated with the Little Pic region, to the international boundary with the United States.
- Craig's Pit Provincial Nature Reserve (also in White/ Pic)
- Red Sucker Point Provincial Nature Reserve
- Neys Provincial Park
- Slate Islands Provincial Park
- Prairie River Mouth Provincial Nature Reserve
- Steel River Provincial Park
- Rainbow Falls Provincial Park
- Schreiber Channel Provincial Nature Reserve
- Lake Superior Shoreline Enhanced Management Area (also in Pic and White and Nipigon and Jackpine regional units)
- Terrace Bay Nature Reserve (Thunder Bay Field Naturalists)
- Schreiber Point Nature Reserve (Thunder Bay Field Naturalists)

### **Existing Programs & Projects**

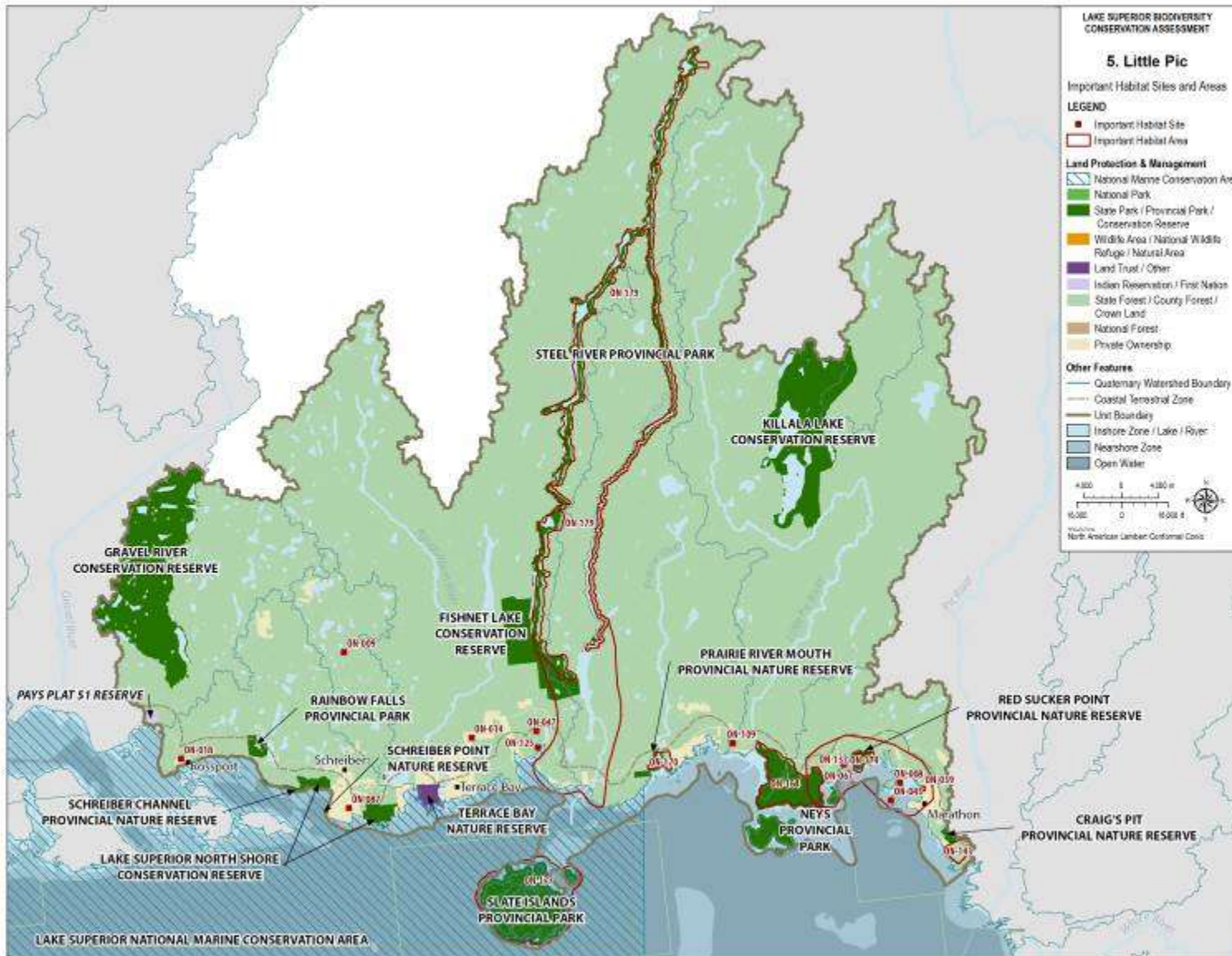
- The Slate Islands are the source of one of two Lake Trout brood stock gametes (Slate Island strain) used by the provincial fish culture system for Lake Trout rehabilitation stocking in Lake Superior (S. Greenwood, pers. comm., March 11 2013).
- The Ontario MNR Upper Great Lakes Management Unit (UGLMU) has established the Fish Community Index Netting (FCIN) program on Lake Superior. Started in 2009, the FCIN program represents an ecosystem-based fish community approach, which provides trend-through-time information on the fish community. Emphasis is on the commercially important species of Lake Trout and Lake Whitefish, but the shift is away from a single species approach, to monitoring of fish population dynamics (Thunder Bay RAP 2013). The FCIN program is underway in the Thunder Bay, Peninsula Harbour and Jackfish Bay AOCs, as well as in Nipigon Bay (no commercial fisheries) (M. Chase, pers. comm., June 3 2013).
- In July 2014 the Thunder Bay Field Naturalists (TBFN) purchased a large parcel near Terrace Bay. At nearly 1363 acres, the Terrace Bay Nature Reserve is the TBFN's largest nature reserve (B. Yurkoski, pers. comm., February 16 2015). The nature reserve includes a large area of the mainland including 10.5 kilometres of Lake Superior shoreline, as well as 15 small islands. The site features arctic-alpine disjunct plants, island based gull rookeries and a varied shoreline which includes exposed bedrock, cobble beaches, sand beaches. Inland raised boulder beaches can be found far from the current shoreline. The parcel is described as pristine Lake Superior shoreline (TBFN No date).
- Schreiber Point Nature Reserve (TBFN) is located in the Little Pic regional unit. It is 46 acres in area and is a Great Lakes Conservation Blueprint priority site (B. Yurkoski, pers. comm., February 16 2015).
- Peregrine Falcons have been reintroduced to Ontario, including in the Lake Superior basin, following their extirpation as a breeding species in Ontario in the early 1960s (Ontario Peregrine Falcon Recovery Team 2010).



**TABLE 5.3: Little Pic IMPORTANT HABITAT SITES AND AREAS**

<i>Code</i>	<i>Site/ Area</i>	<i>Important Habitat Site/Area Name</i>	<i>Key Features</i>
ON-008	Site	Beatty and Sturdee Coves	Colonial water bird nesting area
ON-009	Site	Big Duck Creek	Fish spawning habitat in Big Duck Creek; fish habitat
ON-014	Site	Blackbird Creek	Fish habitat (Brook Trout)
ON-018	Site	Nicholl Island Causeway	Spring and fall staging area for migratory birds
ON-039	Site	Golfcourse Creek	Fish spawning habitat
ON-045	Site	Hawkins Island	Colonial water bird habitat
ON-047	Site	Jackfish Lake	Former fish spawning areas
ON-067	Site	Mink Creek	Former fish spawning area
ON-087	Site	Schreiber Mine	Rare animal habitat (overwintering area for bats)
ON-109	Site	Sturdee Cove Shore	Fish spawning area
ON-125	Site	Tunnel Bay	Former fish spawning habitat
ON-137	Area	Peninsula Harbor	Former fish spawning area; colonial nesting bird habitat
ON-143	Area	Craig's Pit Nature Reserve	Environmentally Sensitive Area; hawk watch site; broken end moraine
ON-164	Area	Neys	Remnant Woodland Caribou population, dune and beach communities; Provincial Park
ON-170	Area	Prairie River Mouth Nature Reserve	Migratory fish habitat; sandbar, beach ridges, and dunes
ON-174	Area	Red Sucker Point Nature Reserve	
ON-177	Area	Slate Islands	Globally significant Woodland Caribou population, rare plant habitat
ON-179	Area	Steel River	Environmentally Sensitive Area; migratory waterfowl site; raptor and wading bird habitat; migratory fish habitat

Figure 5.3: Little Pic - Important Habitat Sites and Areas



## TABLE 5.4: Little Pic LIST OF SPECIES AND COMMUNITIES OF CONSERVATION CONCERN

At least 53 species and communities of conservation concern have been documented in the regional unit. 22 of these have viability rankings which indicate the species or community is currently present, or was at the date of last sampling. The viability rankings of these species varies from A to E (A – Excellent predicted viability, B – Good predicted viability, C – Fair predicted viability, D – Probably not viable, E – Verified extant). 31 species and communities were once known to occur here, but have current conservation ranks of H (Historical).<sup>6</sup>

<i>Present Records (Viability Rankings of A to E)</i>	
Scientific Name	Common Name
American Dune Grass - Beach Pea - Sand Cherry Dune Grassland Type	American Dune Grass - Beach Pea - Sand Cherry Dune Grassland Type
Bat Colony	Bat Hibernaculum/Nursery
<i>Botrychium ascendens</i>	Upswept Moonwort
<i>Botrychium pseudopinnatum</i>	False Northwestern Moonwort
<i>Botrychium spathulatum</i>	Spatulate Moonwort
<i>Carex atratifomis</i>	Scabrous Black Sedge
<i>Cerastium alpinum</i>	Alpine Chickweed
<i>Cystopteris laurentiana</i>	Laurentian Bladder Fern
<i>Euchloe ausonides</i>	Large Marble
<i>Falco peregrines</i>	Peregrine Falcon
<i>Haliaeetus leucocephalus</i>	Bald Eagle
<i>Huperzia appressa</i>	Mountain Firmoss
<i>Ichthyomyzon fossor</i>	Northern Brook Lamprey
<i>Juncus vaseyi</i>	Vasey's Rush
<i>Moehringia macrophylla</i>	Large-leaved Sandwort
<i>Oeneis macounii</i>	Macoun's Arctic
<i>Oplopanax horridus</i>	Devil's Club
<i>Oxytropis splendens</i>	Showy Locoweed
<i>Phacelia franklinii</i>	Franklin's Scorpionweed
<i>Rangifer tarandus caribou</i>	Woodland Caribou (Forest-dwelling boreal population)
<i>Saxifraga oppositifolia</i>	Purple Mountain Saxifrage
<i>Woodsia alpine</i>	Alpine Woodsia
<i>Historical Records</i>	
Scientific Name	Common Name
<i>Acipenser fulvescens</i> pop. 3	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)
<i>Anaptychia setifera</i>	A Lichen
<i>Antennaria rosea</i>	Rosy Pussytoes
<i>Botrychium acuminatum</i>	Pointed Moonwort
<i>Botrychium campestre</i>	Prairie Moonwort
<i>Botrychium hesperium</i>	Western Moonwort
<i>Bromus pumpellianus</i>	Pumpelly's Brome
<i>Bryum blindii</i>	A Moss
<i>Bryum pallens</i>	A Moss
<i>Cystopteris montana</i>	Mountain Bladder Fern

<sup>6</sup> Data included here were provided by the Ontario Ministry of Natural Resources and Forestry. Copyright Queen's Printer for Ontario (2012).

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Dryas drummondii	Yellow Mountain Avens
Erebia mancinus	Taiga Alpine
Great Lakes Arctic-Alpine Basic Open Bedrock Shoreline Type	Great Lakes Arctic-Alpine Basic Open Bedrock Shoreline Type
Grimmia teretinervis	A Moss
Grimmia torquata	A Moss
Listera borealis	Northern Twayblade
Myotis septentrionalis	Northern Myotis
Myurella tenerrima	A Moss
Peltigera collina	A Lichen
Porpidia diversa	A Lichen
Porpidia herteliana	A Lichen
Potamogeton confervoides	Alga Pondweed
Scapania gymnostomophila	A Liverwort
Splachnum rubrum	A Moss
Stereocaulon glaucescens	A Foam Lichen
Stereocaulon subcoralloides	A Lichen
Trichophorum clintonii	Clinton's Clubrush
Vaccinium ovalifolium	Oval-leaved Bilberry
Vertigo elatior	Tapered Vertigo
Vertigo paradoxa	Classification Uncertain
Zizia aptera	Heart-leaved Alexanders