

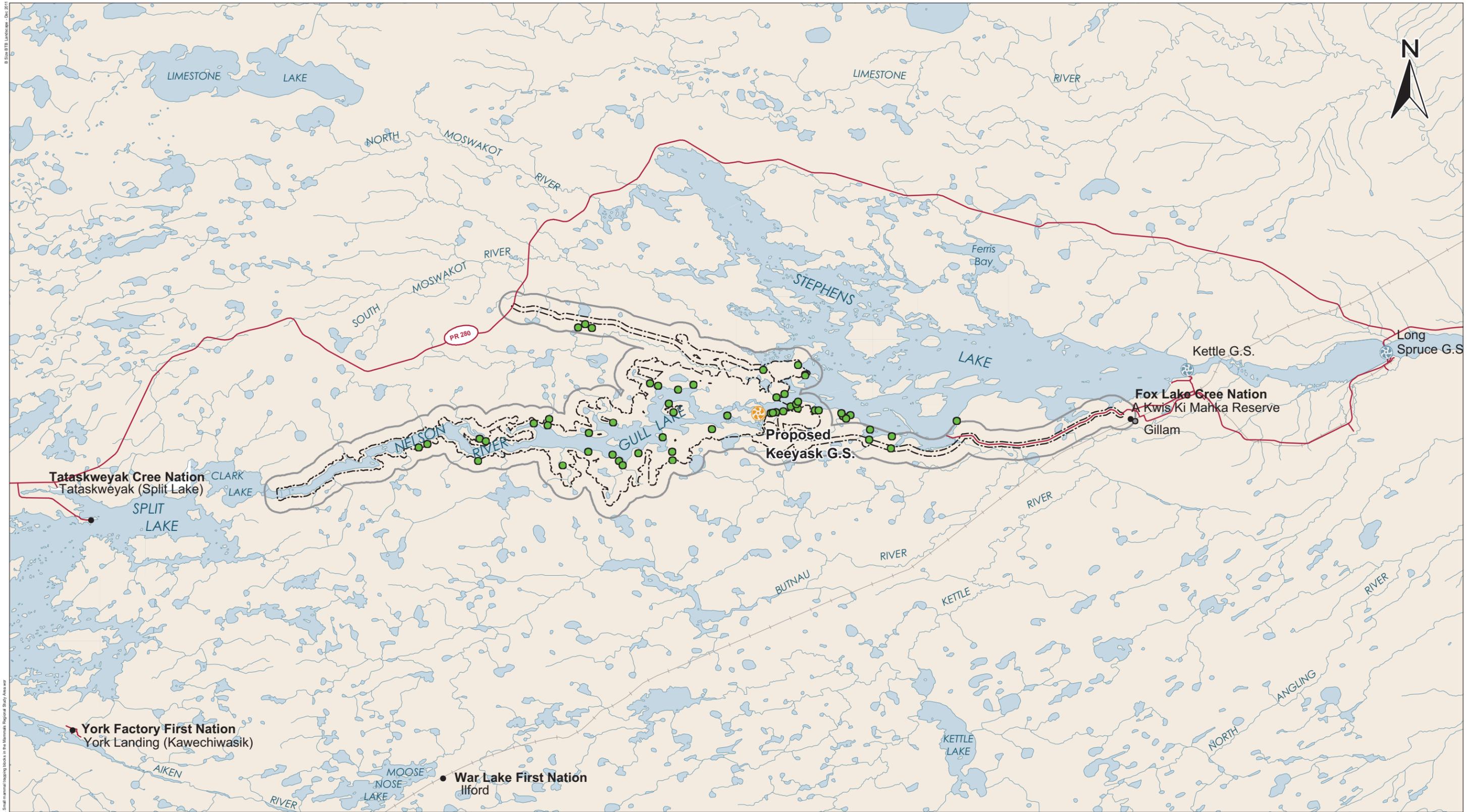


Keeyask Generation Project Environmental Impact Statement

Supporting Volume Terrestrial Environment



June 2012



B:\GIS\BTD_Landcover_Oct_2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammals\Map 7-11_Small mammal trapping blocks in the Marmans Regional Study Area.wor



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Trapping data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 07-MAY-12	REVISION DATE: 28-MAY-12
		VERSION NO: 1.0
QA/QC: APPROVED		

- Legend**
- Small Mammal Trapping Blocks**
 - Trapping Block
 - Study Areas**
 - ⊞ Small Mammals Local Study Area
 - ⊞ Small Mammals Regional Study Area

Small Mammal Trapping Blocks

2001-2004



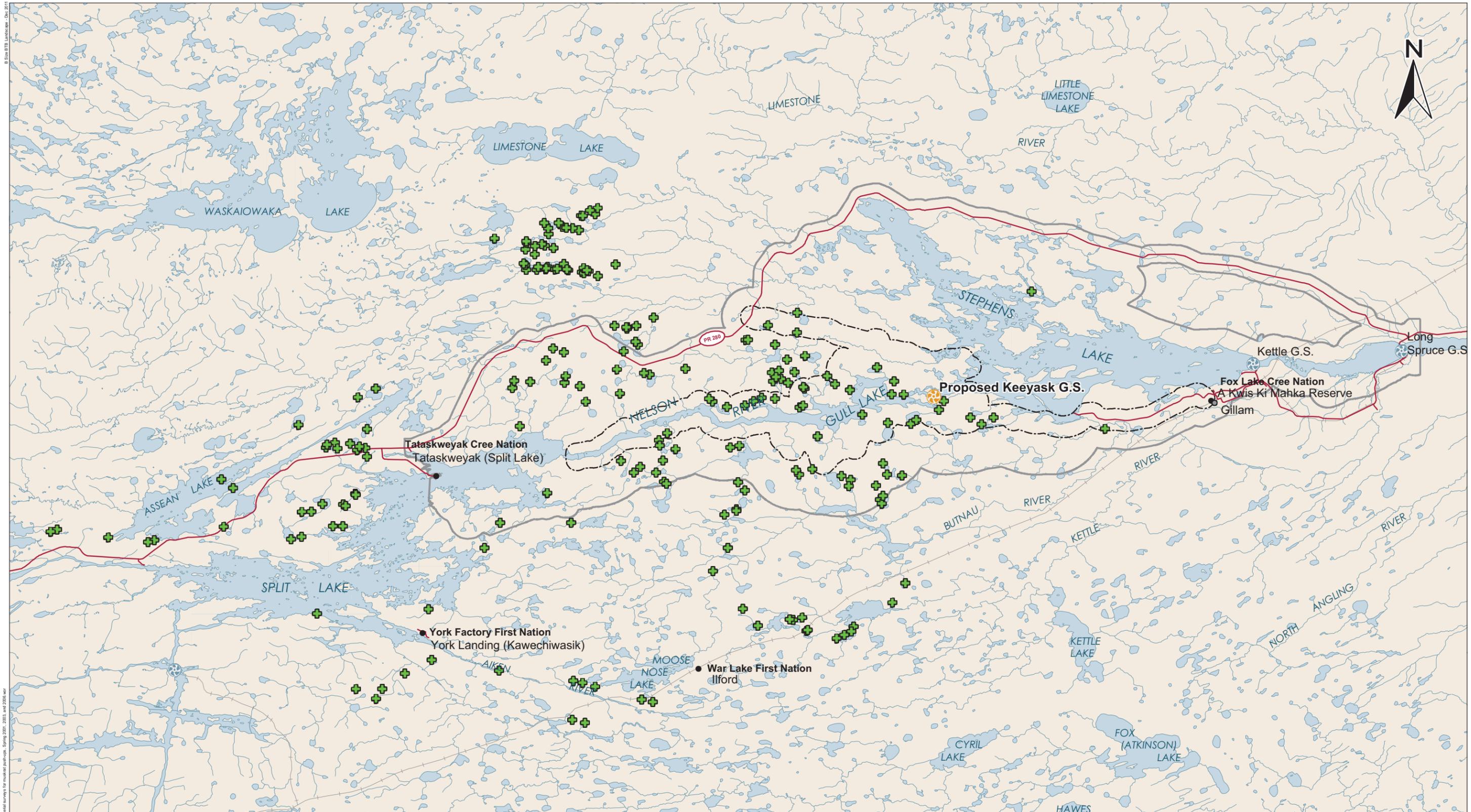
B:\Site\ITD_Limestone_Oct_2011
 File Location: Z:\Workspaces\Keeyask_GS\Support\Mammals\Map 7-12_02_Ground surveys for muskrat in the Regional Study Area_2006.mxd



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Survey data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 07-MAY-12	REVISION DATE: 07-MAY-12
		VERSION NO: 1.0
QA/QC: APPROVED		

- Legend**
- Muskrat Ground Survey**
- Muskrat Transect
- Study Areas**
- Furbearers Local Study Area
 - Furbearers Regional Study Area

Ground Surveys for Muskrat 2006



B:\Data\ITD\Landcover - Dec 2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammals\Map 7-13_Aerial surveys for muskrat push-ups_Spring 2001, 2003, and 2006.mxd

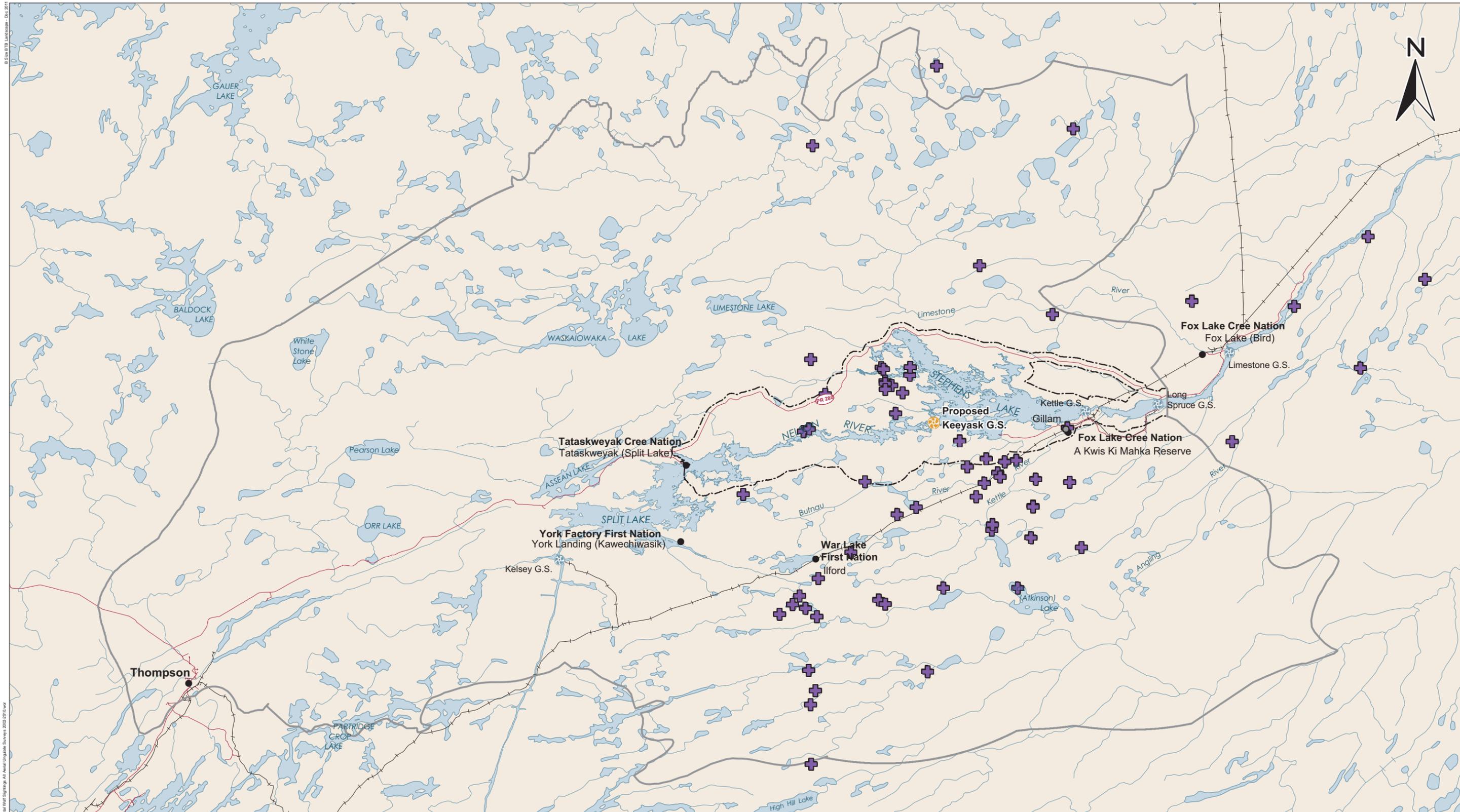


DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Muskrat data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 24-APR-12	REVISION DATE: 24-APR-12
		VERSION NO: 1.0
QA/QC: APPROVED		

- Legend**
- + Muskrat Push-up
- Study Areas**
- Furbearers Local Study Area
 - Furbearers Regional Study Area

Muskrat Push-ups

Spring 2001, 2003, and 2006



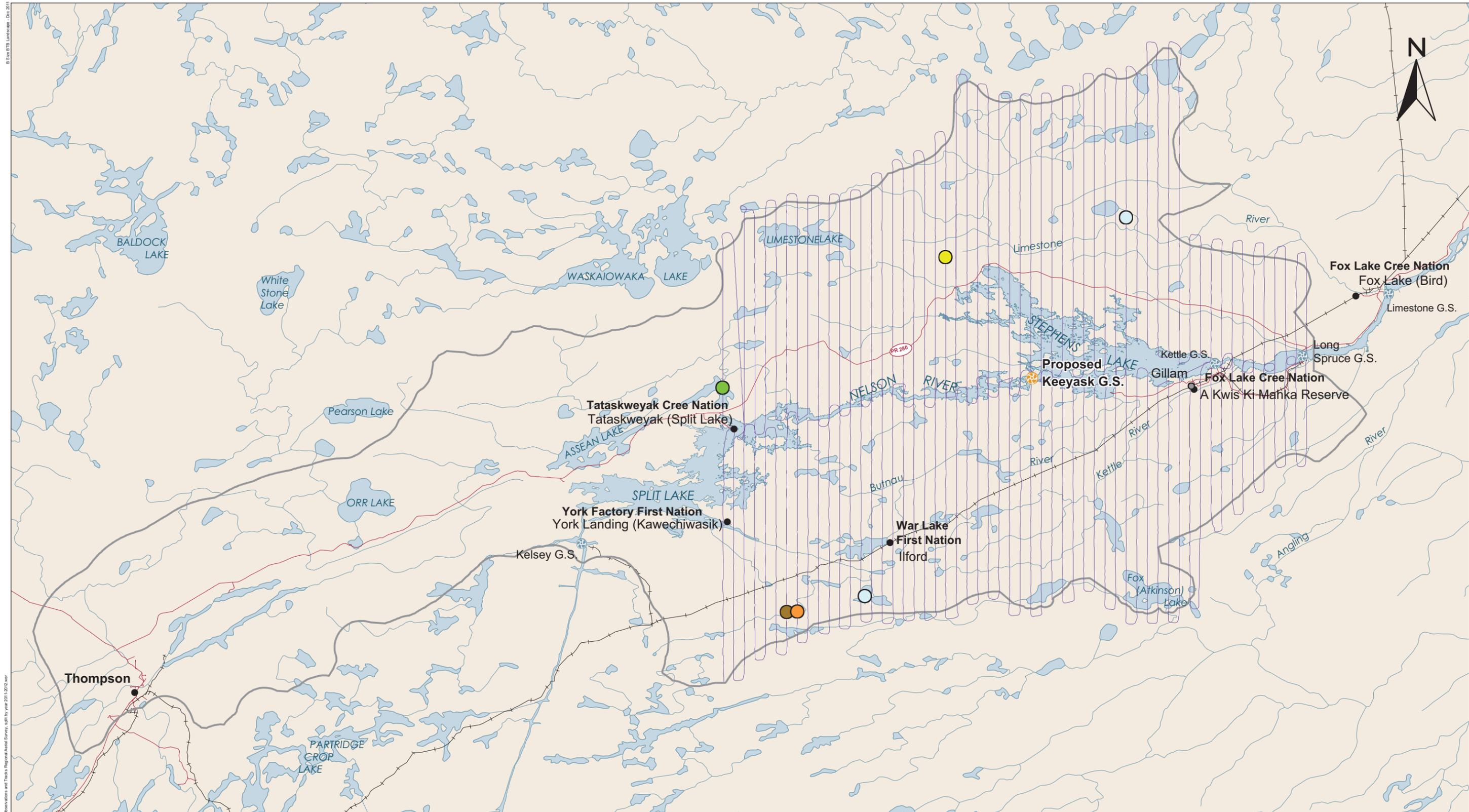
B:\BIA\BTL\Map\Map - Incident Wolf Observations - Dec 2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammals\IEIS\Map - Incident Wolf Observations - Dec 2011.mxd



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Wolf observations - WRCS; Roads - Manitoba Conservation; Water and rail - NTS.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 16-APR-12	REVISION DATE: 28-MAY-12
		VERSION NO: 1.0
QA/QC: APPROVED		

- Legend**
- Incidental Wolf Observations or Sign**
- Observation or Sign
- Study Areas**
- Large Carnivores Local Study Area
 - Large Carnivores Regional Study Area

Incidental Gray Wolf Observations 2002-2010



B:\Site 8170_Landscapes - Dec 2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammal\GIS\Map - Wolf Observations and Tracks Regional Aerial Survey_1211 by year 2011_2012.apr



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Flight lines and observations - WRCS; Roads - Manitoba Conservation; Water and rail - NTS.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 28-MAR-12	REVISION DATE: 28-MAY-12
	VERSION NO.: 1.0	QA/QC: APPROVED

Legend

Number of Observed Wolves

1 Individual	6 Individuals
3 Individuals	8 Individuals
4 Individuals	

- Aerial Survey Flight Lines**
- Flight Line
- Study Areas**
- Study Zone 5

Incidental Gray Wolf Observations

During Aerial Survey December 2011



B:\Site\ITD_Landuse - Dec 2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammal\GIS\Map - Wolf Observations and Tracks Regional Aerial Survey_1.pdf by year 2011_2012.apr



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Flight lines and observations - WRCS; Roads - Manitoba Conservation; Water and rail - NTS.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 28-MAR-12	REVISION DATE: 28-MAY-12
	VERSION NO.: 1.0	QA/QC: APPROVED

Legend
Number of Observed Wolves
● 6 Individuals ● 9 Individuals

Aerial Survey Flight Lines
 Flight Line
Study Areas
 Study Zone 5

Incidental Gray Wolf Observations

During Aerial Survey January 2012



B:\Site 1710_Limestone - Dec 2011
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammal\GIS\Map - Wolf Observations and Tracks Regional Aerial Survey_1481 by year 2011_2012.apr



DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Flight lines and observations - WRCS; Roads - Manitoba Conservation; Water and rail - NTS.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 28-MAR-12	REVISION DATE: 28-MAY-12
	VERSION NO.: 1.0	QA/QC: APPROVED

Legend

Number of Observed Wolves

○ 1 Individual ● 4 Individuals

Aerial Survey Flight Lines

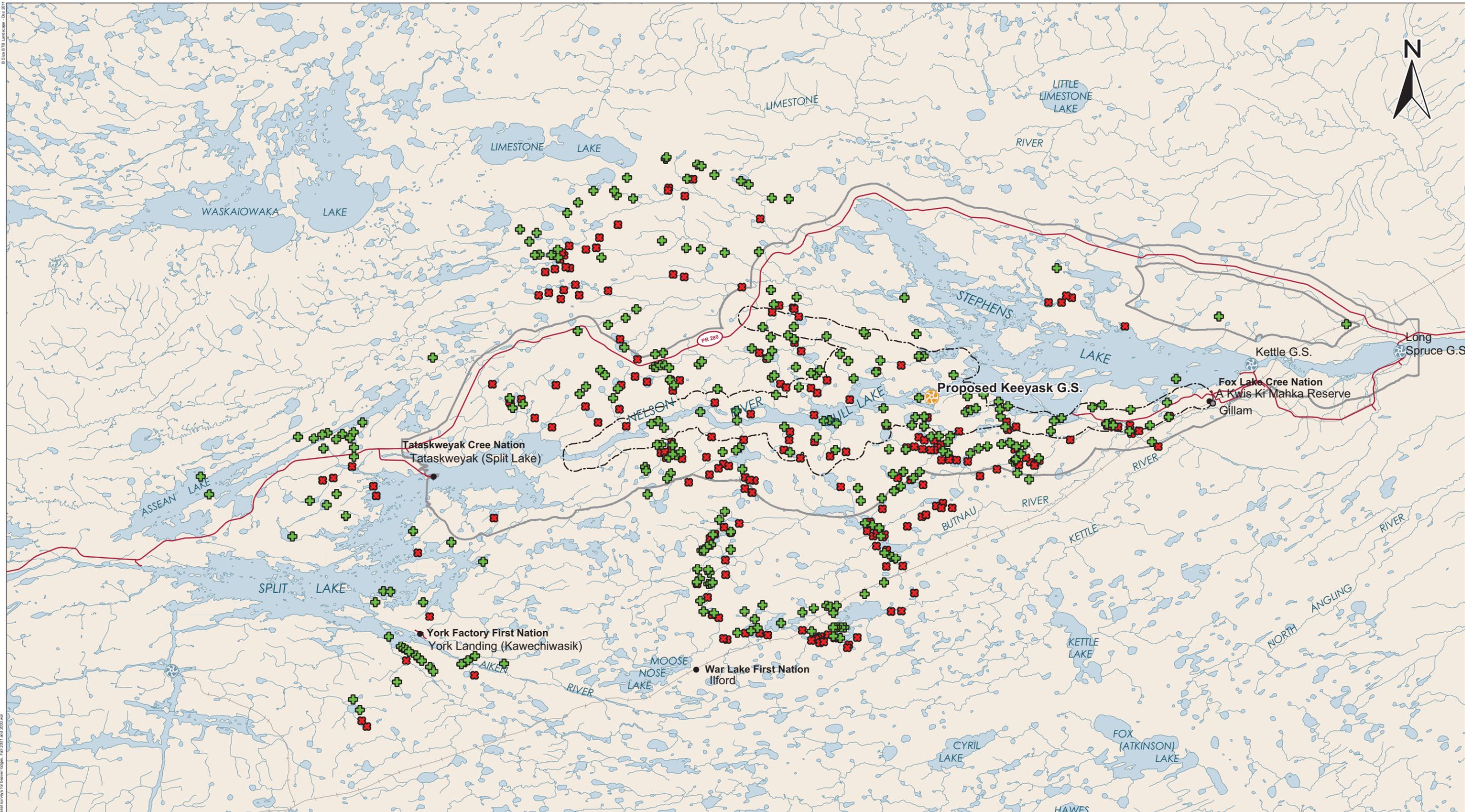
— Flight Line

Study Areas

□ Study Zone 5

Incidental Gray Wolf Observations

During Aerial Survey March 2012



B:\Data\ITB\Journals\Doc 2011
 File Location: Z:\Workspaces\Keeyask_GS\Support\Mammals\Map 7-18_Aerial Surveys for Beaver Lodges - Fall 2001 and 2003.vor

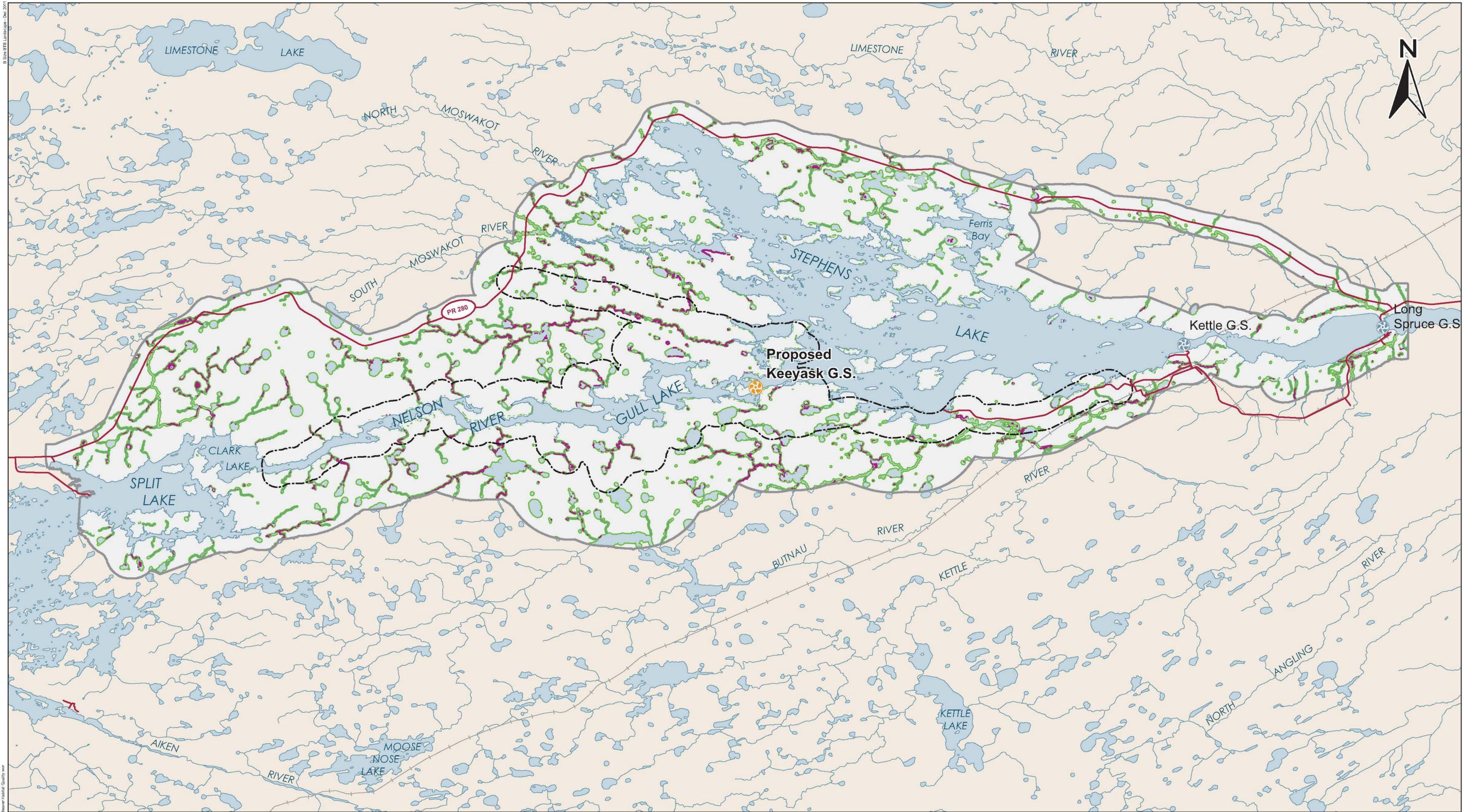


DATA SOURCE: Study areas and Nelson River shoreline - ECOSTEM Ltd.; Beaver data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 24-APR-12	REVISION DATE: 24-APR-12
		VERSION NO: 1.0
QA/QC: APPROVED		

- Legend**
- Active and Inactive Beaver Lodge Locations**
- + Active Lodge
 - x Inactive Lodge
- Study Areas**
- Beaver Local Study Area
 - Beaver Regional Study Area

Beaver Lodges

Fall 2001 and 2003



B:\Site\RTD\Map\Map_04c_2012
 File Location: Z:\Workspaces\Keeyask_GIS\Support\Mammals\Beaver\Habitat_Quality.mxd



DATA SOURCE: Study areas, habitat data and Nelson River shoreline - ECOSTEM Ltd.; Water - NTS; Roads and rail - Manitoba Conservation.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 15-MAR-12	REVISION DATE: 09-APR-12
		VERSION NO: 1.0
		QA/QC: APPROVED

- Legend**
- Beaver Habitat Quality**
- Primary Habitat
 - Secondary Habitat
 - Unsuitable Habitat

- Study Areas**
- Beaver Local Study Area
 - Beaver Regional Study Area

Note: Primary habitat size is slightly exaggerated to enhance visibility

Beaver Habitat Quality